

A History of Hundred Years of Nippon Suisan Kaisha, Ltd. (TEXT/PDF)

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Concerning Publication of this English Edition

Norio Hosomi
President and CEO
Nippon Suisan Kaisha, Ltd.



On May 31, 2011, Nissui celebrated the 100th anniversary of the founding of its predecessor, the Tamura Steamship Fishery Company. Looking back, these 100 years were marked by a continuing series of hardships. Yet Nissui survived to the present by overcoming each challenge that confronted it with the support of business partners in all fields and enduring purchaser loyalty for its products.

Just prior to this 100th anniversary, at 2:46 P.M. on Friday, March 11, 2011, the Great East Japan Earthquake struck an area off the coast of Japan's Tohoku region. The earthquake combined with a massive tsunami and an accident at Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Plant claimed a great number of lives and caused enormous damage along Japan's Pacific coast. The Nissui Group was no exception, as it suffered extensive damage to its business facilities along the Tohoku and Kanto coasts and lost the precious lives of employees and their loved ones.

Nissui responded by placing the highest priority on confirming the safety of and providing relief to its employees and their families in the devastated areas, while also extending assistance to communities. Moreover, the entire Group endeavored to shift control of manufacturing lines in damaged plants to meet the needs of customers and business partners, while at the same time providing fish sausages, canned goods, and other Nissui products as relief supplies to affected areas.

It was amid such traumatic circumstances that Nissui published *Nippon Suisan Hyakunen-shi* to present Nissui's story since its founding. Rather than simply presenting an account of the company, *Nippon Suisan Hyakunen-shi* is intended as a true history of its industry by examining advancements in Japan's society and fisheries industry and bringing in the views of outside experts.

After holding joint memorial services for employees and their loved ones lost in the Great East Japan Earthquake in June 2011, Nissui began presenting *Nippon Suisan Hyakunen-shi* to domestic clients, public libraries in Japan's prefectures, fisheries researchers, and others the following month. Given the strong positive response it received from readers in Japan, Nissui decided to translate *Nippon Suisan Hyakunen-shi* into English under the title *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.* for presentation

to concerned interests, research institutions, and researchers overseas.

In 2012, Nissui embarked on its next 100 years. Amid radical changes in people's lifestyles and consumption patterns in today's world, Nissui took its first step by putting forth a vision of the Nissui Group as a "manufacturer that delivers deliciousness, enjoyment, health, and beauty from the Earth and the sea" in its "Medium-Term Management Plan MVIP 2014", which was formulated in April 2012. (MVIP simultaneously stands for "Make Value through Innovative Plan" and "Most Valuable Impressive Player".) In executing the Medium-Term Management Plan MVIP 2014, Nissui is returning to the founding philosophies that were espoused by Kosuke Kunishi, a preeminent figure of the company's earliest days. As a basic policy, this plan establishes that Nissui will "give consideration to the sustainable utilization of marine resources and the preservation of the earth environment, continue to create diverse values from resources, including marine resources, and contribute to the active lives and a future full of hope for the people around the world".

It is our most earnest desire to utilize the support of business partners, loyalty of Nissui product customers, and labors of our forebears that are described in *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.* as a source of invaluable wisdom when setting the future course of the Nissui Group.

In this endeavor, we respectfully request the reader's encouragement and support.

November 2012

On the Publication of *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.*

Naoya Kakizoe
President and CEO from 1999 to 2012
(currently Board Adviser)
Nippon Suisan Kaisha, Ltd.



In May 2011, NISSUI celebrated the 100th anniversary of its establishment by Ichiro Tamura back in 1911. As one of the projects to celebrate the company's centenary, we decided to publish a "100-Year History" in which we would re-examine the company's evolution through the eyes of external experts, placing it in the context of developments in Japanese society and fisheries.

Of all Japanese industries, these last 100 years have been particularly turbulent for fisheries, tossed about on a sea of global upheaval. Our aim has been to verify this history as historical fact and create a narrative that could pass muster not only as a corporate history but also as the authentic history of a whole industry. This has certainly not been easy. NISSUI's bases both in Japan and abroad were utterly destroyed in the war, and historical documents were scattered or lost, making it particularly difficult to compile the prewar and wartime sections. That we have been able to publish this history is thanks in no small part to the cooperation received from so many—most notably the family and estate of our founder Ichiro Tamura. It also owes much to the efforts of corporate history researchers and their staff, who have verified the details of our history. As well as reporting on this achievement, I would like to express my sincere and heartfelt gratitude to all of these.

NISSUI started life when its founder Ichiro Tamura instructed Kosuke Kunishi, who had only just returned from studying in England, to go back and learn about trawl fisheries and how to build a trawler. Tamura had set his sights on the future potential of fisheries, and wanted to introduce the very latest technology. He named the new trawler *Minato Maru* and founded the "Tamura Steamship Fishery Company"—the forerunner of NISSUI—on 31st May 1911, which became the company's official founding date. In this History, I hope you will join us in retracing the footsteps of a small venture company which, though only possessing one fishing boat at first, eventually managed to catch up with and overtake the rest of the world.

While it undoubtedly took tremendous persistence for a Japanese person in Meiji times to catch up with the west, the History vividly depicts the way in which his actions were shaped by the strength of his determination to industrialize fisheries. Improving dietary habits was an essential element in making the Japanese nation more affluent. As the business eventually expanded into other countries of the world, Tamura's sense of mission in delivering fresh marine products to the Japanese people with minimum wastage was transformed into a service for people all over the world. In the process, he created a mission

that runs through the whole history of NISSUI.

Even when times change, there are some genes that we always pass on. In our case, those “genes” are “to develop a global supply chain for marine products”, “to give importance to quality, cost, R&D and marketing”, “to challenge and explore the advanced fields of our business”, “to effectively utilize global and marine resources in a sustainable manner and take good care of the environment”, and “to behave with integrity both as a company and as individuals”. These five form the philosophy at the heart of NISSUI. While continuing to reform and evolve our own business, we pledge that we will “contributing to a healthier and richer life for the people of the world by creating diverse values from marine resources and delivering them to customers”.

Together with global partners who share NISSUI’s aspirations and values, we are currently in the process of building a network for worldwide collaboration in the various functions of fisheries, aquaculture, processing, distribution and sales, R&D, and quality management. We call this network NISSUI Global Links. The various participants in NISSUI Global Links will continue to improve themselves, as carriers of fisheries for the new age who will be able to link “marine resources and people’s lives” through these functions. In doing so, they will meet the expectations of society and the public.

I am sincerely thankful for all those customers who have favored and chosen NISSUI products over the many years since we were first founded. I also feel a deep gratitude for the support of so many people in so many areas of our business. I would finally like to express my most profound respect for all the successive officers and employees of the company who have devoted themselves to their work with great dedication over the years.

As well as presenting this publication *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.* to all our associates, we have also decided to archive the historical materials and other data for public perusal in a historical museum (Nissui Pioneer Exhibition) remodeled from the Tobata Building, which was the company’s base in 1936. I would be more than happy if this could contribute to the advancement of society, fisheries and communities in future.

May 2011

Explanatory notes

1. *A History of Hundred Years of Nippon Suisan Kaisha, Ltd.* (hereafter “the book”) is comprised of a main body of text, a chronological table, basic data, and an index. Its content describes events taking place up to the end of December 2010.
2. The book is an English translation of the original Japanese *Nippon Suisan Hyakumen-shi*, which was published in 2011 in two parts: a “main volume” and a “compilation of historical data”. However, the English version is prepared as a single volume that contains a full translation of the main volume (with a new chronological table added to the end) together with photographs, figures, and tables relevant to the text that were taken from the compilation of historical data. The English version also adds a message by President Hosomi titled “Concerning Publication of this English Edition”.
3. The book not only describes the history of “Nippon Suisan” (hereafter “Nissui”) but also discusses the fisheries industry, food products industry, and maritime shipping industry from a broad industrial-historical perspective.
4. Tamura Steamship Fishery Company, Kyodo Gyogyo Kaisha, Ltd., and Nippon Kaiyo Gyogyo Tosei K.K. were direct predecessors of the present Nissui.
5. As a rule, Japanese personal names are provided in the order of given name first followed by family name. However, for people born in or prior to 1868 (the year of the Meiji Restoration), names are provided in the order of family name followed given name. An exception is made for paragraphs in which the names of people born before and after 1868 appear together; in such cases, all names are provided in the order of given name followed by family name.
6. Personal names are presented without honorifics (e.g., Mr., Mrs., etc.). Managerial titles for individuals are those that applied at the time of the relevant discussion. As a rule, corporate names are presented in their full form with appropriate prefixes or suffixes (e.g., K.K. [stock company], Co., Ltd. [limited company], etc.) when they first appear in the book; such prefixes and suffixes are omitted in later appearances.
7. Notation of years is based on the Western calendar.
8. As a rule, the names of countries, places, and regions appearing in the book are those in use at the present time. However, some country, place, and region names that were in use prior to World War II and remain in common usage today are noted together with their current official names when they first appear in the book.
9. With some exceptions, the tonnages of vessels appearing in the book are omitted. For details on vessels belonging to Nippon Suisan, please see the List of Group Vessels found in the Basic Data.

A History of Hundred Years of Nippon Suisan Kaisha, Ltd.

Section I

The Modernization of Japan and Japanese Fisheries

Chapter 1: The Dawn of Japanese Fisheries

Up to around 1905

Part 1 Prehistory: The Ancient, Medieval, Premodern and Modern Eras

1. From Fishing to Fisheries

The Early Days of Fisheries

Since our earliest beginnings, humans have enjoyed a highly varied diet. Marine products, particularly fish and shellfish, were consumed as food even before the Paleolithic (Old Stone Age). In fact, the acts of catching or harvesting fish, shellfish and seaweeds — in other words, fishing—have been regarded as important means of sustaining human life.

The history of fishing by inhabitants of the Japanese archipelago has been traced back to the Late Paleolithic (30,000–10,000 years before present). The Early Jomon period, when habitation started to become settled, saw a peak in climate warming, with an accompanying rise in sea levels and increased activity in ocean currents. These had the effect of enriching marine resources. Shell mounds on prehistoric village sites formed in coastal areas have yielded more than 200 types of shellfish including clams and oysters, mixed with the bones of fish (perch, black sea bream, red sea bream, tuna, shark), dolphins and sea lions, together with bows and arrows, harpoons, fish-hooks, nets and other fishing implements. These give us an idea of how people fished in those days, and chart the birth and progress of technology for processing and storing fish.

In the Yayoi period (around 300 BC-200 AD), plant-based foods came to occupy a greater proportion of the diet with the spread of rice farming, but fishing continued to flourish. Livestock farming already existed in this era, but the abundance of marine produce in the natural environment surrounding the islands meant that this never gained particular importance in Japan.

In around the 3rd century, there was a progressive shift towards the use of iron implements in Japan. With the spread of Iron Age culture, the material chosen for harpoons and fishing tackle changed from wood and animal bone or horn to iron; the shapes also became more diverse. From the Yayoi period onwards, people used fishing nets made of straw rope, while dip nets, drag nets and others were used to scoop fish out of the water. Fishing boats had by now evolved from simple hollowed-out log canoes into structured vessels capable of carrying several people, and took various forms depending on the purpose. The fishing grounds were coasts, rivers and lakes. Various fishing methods were devised and stood the test of time; these include diving, fish traps (bottle-shaped baskets with reversed prongs at the entrance, preventing fish from escaping once they had entered), *kaibori* draining (a

method of damming part of a river or lake, then scooping the water out to expose the fish), and fishing with the aid of cormorants. Historical documents also reveal that fishing at night with flares was already being practiced in those remote times.

In the Taika Reforms of 645, laws and institutions were reformed and reorganized under a system of centralized government. A kind of *corvée* taxation was introduced as part of this. Local speciality produce was now used for payments of tax in kind, and this included a variety of fish and shellfish. Also created at this time was the system of *mikuriya*, special fishing villages that would provide tribute to the court and shrines in the form of fish and shellfish. In other words, tributes took the form of foods presented to the ruling clan as a kind of tax. Fish and shellfish were not merely a food for the masses, but were regarded as important produce representing the wealth of the nation and the imperial family.

From the Nara period onwards, markets for the exchange or barter of marine produce appeared in the capital. With the formation of ancient Japanese society, there was a gradual shift from self-sufficient fishing to fisheries as a social division of labor. Owing to constraints on distribution, however, fishing grounds were limited to the Kinki region and part of the Seto Inland Sea. This caused an increasing tendency to overfish, and the imperial court occasionally placed restrictions on fishing. Under the influence of Buddhist doctrine, meanwhile, edicts were issued to prohibit the taking of life; this extended not only to animal meat but sometimes also included fish, causing hardship for fishing people.

Fisheries in the Medieval Period

With the growth of commerce and transportation in the Medieval period, demand and distribution channels for marine produce steadily increased. And as the monetary economy developed, small markets started to spring up all over the country. Fish and shellfish were widely handled by these markets, and organized fisheries came to be established against a background of expanding distribution. As the lives of the samurai class improved and trade with other countries became more active, the commercialization of fisheries grew increasingly pronounced. A wholesale market district was established in Kyoto in the mid-15th century and a fish market in Osaka at the end of the 16th century, with resultant booms in each case.

The growth of distribution via markets helped fisheries to thrive, particularly in the Kinki region, the Seto Inland Sea, and Tango on the Japan Sea side. Various styles of fishing with nets were practiced, with dragnets being used particularly extensively. In some regions, set nets were used. Nets were made of materials such as arrowroot vine, wisteria and straw rope. Some net fisheries took the form of cooperatives involving tens of fishermen working together, and this gave rise to a hierarchy led by head boatmen or team leaders. Fishing boats gradually grew larger, and coastal fishing grounds were also opened up. On the other hand, there were occasionally disputes between fishery operators over fishing grounds. Disputes were often resolved through third-party mediators, and fishery operators started to seek ties with landlords, estate stewards, or other figures of political authority in an attempt to secure powerful backing.

2. The Development of Fisheries Technology in the Premodern Period

Expansion of Fishing Grounds

The Edo period brought rapid growth to fisheries. This was because new fishing techniques were devised through the ingenuity of local fishermen around the

country.

Firstly, the establishment of the Tokugawa shogunate in Edo triggered the development of Edo Bay by fishermen from Osaka, while Kishu fishermen went to settle in Kujukuri on the Pacific coast. In the 17th

and 18th centuries, pioneering methods of fishing spread throughout the country when fishermen from western Japan went traveling in search of new fishing grounds. In the Kanto region, meanwhile, the so-called “Kanto fisheries” rose to prominence; these included four-boat lift net and mullet lift-net fisheries in Edo Bay, sardine drag nets in fisheries Kujukuri, and *makase* and *yabira* net fisheries in Boso. In Shikoku and Kyushu, there were similar resettlements of fishermen followed by the spread of fishing methods: eight-angle lift nets in Hizen, arrowroot nets in Nagato Toyoura, and bonito line fishing and whaling in Tosa, among others. Whaling was already an organized enterprise in the 17th century.

Advances in fishing methods not only compromised the local specialty of sardines and other pelagic fish, but also caused disputes over fishing grounds between fishing villages and between fishery operators. At first, the shogunate allowed each regional clan to take its own measures, but in 1742 it issued the “Kampo Edict”. This established the basic rule on fishing grounds that “shoreline fishing is a local matter, open seas are for association”. By this, it meant that shoreline fisheries were the collective property of local fishermen while offshore fishing grounds should belong to the fishery associations of each village. The latter were mainly fishing grounds that could be fished in small sailing boats, but because a number of villages would go out to fish in the same area, association fishing grounds were established and regulations were established by the villages or clans. After the issue of this “Kampo Edict”, fishing in open seas became free in principle, causing an expansion into new fishing grounds. Although this failed to stop the disputes, the principle involved seems to foreshadow the exclusive fishing rights prescribed in the Fisheries Law in the later Meiji era.

Meanwhile, as agriculture developed, dried sardines, dried herrings and other fish came to be used as fertilizer, giving rise to demand for fish-based fertilizers (fish fertilizers). This led to the design of nets specifically to catch fish used in fish fertilizers. Nets

adapted to the traits of individual fish species were now successively devised in various parts of the country. They included seine nets, lift nets, gillnets and purse seine nets. As for the material used, finer but more robust hemp yarn started to be used instead of straw rope and others from the Middle Edo period onwards, enhancing the precision of fishing catches. Line fishing also expanded from handline and rod fishing to include the new longline fishing.

Establishment of a Distribution Chain

In the “four category” hierarchy of social status (samurai, farmers, artisans, merchants), fishermen belonged to the class of “farmers”; they were called *hyakusho* (“peasants”), or sometimes *ura-byakusho* (“bay farmers”). Compared to agriculture, fisheries were low in self-sufficiency, the majority of their produce being destined for sale. Fish wholesalers sprang up in various cities at the beginning of the 17th century, when large-scale major fish markets were established in Kyoto, Osaka and Edo (in that order). As the impact of the earlier Buddhist prohibition on taking life started to wane, fish-based diets spread and demand for fish and shellfish increased markedly throughout the country. The growth of commerce and distribution then caused the distribution range of fish and shellfish to expand still further.

The establishment of a fish and shellfish distribution chain had its beginnings in the payment of taxes in kind to the shogunate and clans. Since delivering fish depended on special technology to preserve freshness, etc., fish wholesalers who took care of these functions were granted land for canals by the shogunate and clans, and enjoyed their exclusive protection. Armed with such privileges, fish wholesalers made advance payments to fishery operators, to fund their operations and guarantee the collection of consignments. In other words, this was a case of control and hierarchical affiliation through finance. While this format made fishery operators subordinate to fish wholesalers, it also made them try even harder to

improve fish catches. Meanwhile, the fish wholesalers also took a ten percent commission from the retailers, and are said to have garnered massive profits from interest on advances and by setting wholesale prices.

As the consignment volumes and types of fish increased, middlemen naturally started to mediate between wholesalers and retailers, while operators of ships called “*haya-mawari-bune*” (shorter distances), “*oshi-okuri-bune*” (longer distances) and others collected fish from the fishing grounds and transported them to the markets. Besides these, production source middlemen called “*isabaya*” mediated between fishery operators and wholesalers. Thus, a distribution chain consisting of fishery operators—production source middlemen—wholesalers—middlemen—retailers—consumers was formed. Fish and shellfish now came to be traded broadly, and this helped to stimulate fisheries in various parts of the country.

Meanwhile, a marine produce processing industry was also developing. The clans used to deliver local

specialty produce to the shogunate as “seasonal tribute”, and in many cases these were processed products that would keep fresh for a long time. Distribution by sea also became established on eastward and westward routes, eliminating differences in the consumption of marine produce between east and west.

In this way, fisheries underwent remarkable growth throughout the Premodern era, but they still retained elements that hindered the development of fishery technology and the freedom of fishery operators. For example, the feudal, closed organization of fishing villages that had continued since Medieval times; the cartel-like relationships between fishermen’s bosses and fishery business owners; and the collusion between these organizations and local powerholders, to mention but a few. Moreover, the isolationist policy pursued by the shogunate restricted fishing grounds to coastal regions, gradually causing Japan to fall further behind advanced fishery nations in matters technological.

3. Delays in the Modernization of Fisheries

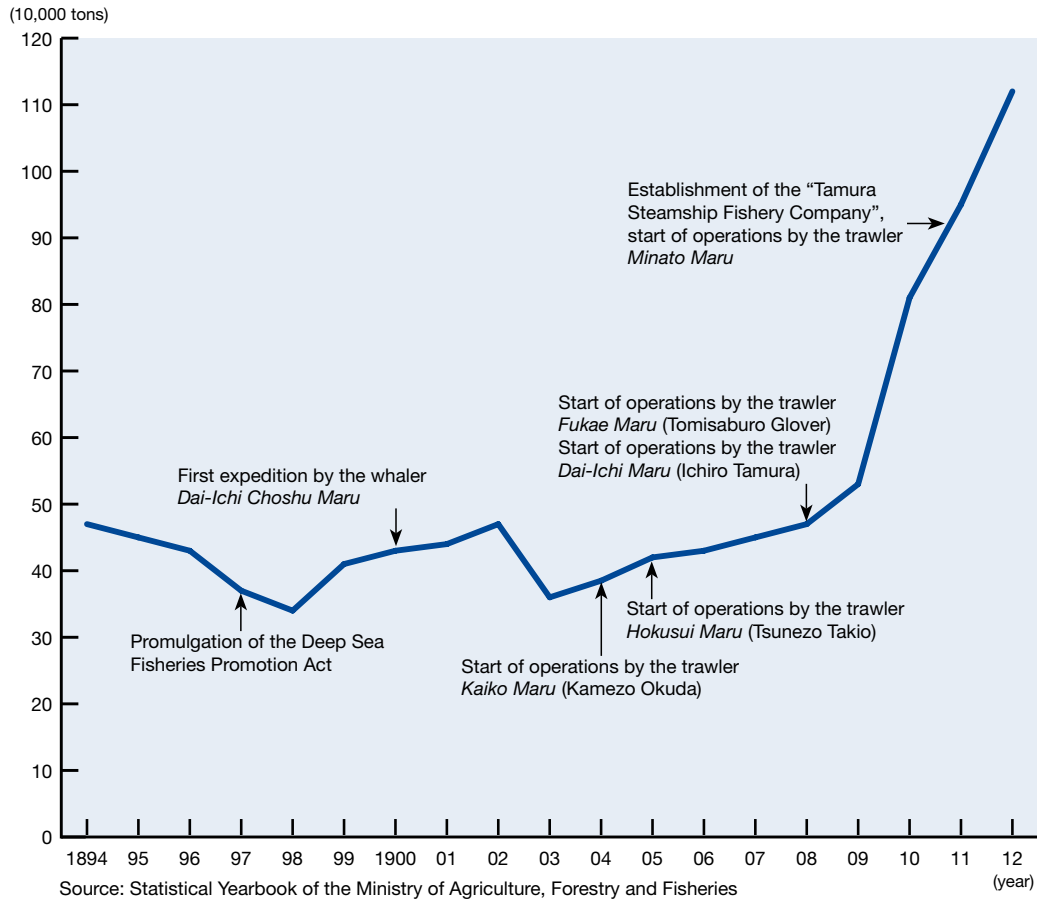
The Meiji Reformation and the Stagnation of Fisheries

The Meiji Reformation of 1868 ushered in a new government with the urgent mission of transforming Japan into a modern nation state. It began this process with a rapid succession of reforms to systems and institutions, including the abolition of feudal domains, the return of their lands to the government and the establishment of today’s prefectures in their place, the abolition of hereditary stipends, and land tax reform. The new government set out to absorb western culture across the board. It encouraged westernization in all aspects of life including diet, clothing and housing, and attempted to break the mold of conservatism. In terms of the economy, it implemented a series of measures aimed at modernizing industry under the banners of “Enrich the nation, strengthen the military” and “Encourage industry”. Here, particular focus was

placed on developing socio-economic infrastructure such as railways, shipping, communications, postal affairs and finance. These government measures resulted in a succession of powerful companies being established in the private sector, leading to a boom in corporate activity in the 1880s. In particular, light industries centered around silk making and spinning acted as a driving force for industry as a whole. These embodied Japan’s first industrial revolution and provided the nation’s flagship exports, underpinning a healthy economy that continued until the depression following the Russo–Japanese War (1904–05). Technology amassed through mechanized production in light industries in this period would result in the growth of heavy industries in later times.

Although Japanese industry in general enjoyed rapid growth, fisheries had not changed greatly since the Edo period and continued to stagnate. Despite an anticipated increase in fish and shellfish demand with

Trends in fish catches around Japan in the late Meiji era (1894–1912)



population growth, as well as the development of transport, improved diets, and so on, gross fishery output fell from 1,618,000 tons in 1894 to a mere 1,353,000 tons in 1905. Compared to 1894 figures, rice production in 1905 had risen to 138%, that of cotton to 309%, shipbuilding to 854%, and steel to 273%. But fisheries had slipped to 84%, showing just how poorly the sector was performing in comparison.

One problem that dogged fisheries at the time was their piecemeal nature. As of 1891, the population engaged in fisheries was 3,338,000 (887,000 households), but 70% of these (73% of households) combined fisheries with agriculture. Rights of occupancy and use of fishing grounds remained basically unchanged since the Edo period; they were the shared property of village cooperatives and farmers' collectives (including full-time fishermen). Nor was any great progress seen in fishing methods; operations barely strayed from the coastal waters, and more than 80% of catches consisted of herring and sardine for

use in fish fertilizers. Fishery operators risked exhausting resources by repeatedly overfishing too close to the coasts. Other indirect factors behind the regression of fisheries were the pollution of seawater due to the growth of industrial activity, and increasingly aggressive land reclamation projects. Norio Ninohei, while asserting that "not all fishery production was in a state of stagnation", highlights two causes behind the downturn of Japanese fisheries in the Meiji era—namely, (1) localized fisheries in narrow coastal fishing grounds, and (2) inefficient fishery technology. Ninohei describes the period of stagnant fishery production until the end of the Meiji era as "a time of repeated searches for modern fishery technology", in which desperate attempts were made to expand fishing grounds and increase the efficiency of fishery technology (*Nihon Gyogyo Kindaishi*, "Modern History of Japanese Fisheries").

Although Japanese fisheries had achieved significant growth in the Edo era, the pace of change was

leisurely compared to western countries following the Industrial Revolution. And at first, even the modernization policies of the new Meiji government had nothing worthy of the name when it came to fisheries.

Repercussions of State Ownership

The abolition of feudal domains and creation of prefectures in 1871 also signaled a collapse in the order of fisheries, controlled until then by each clan. This caused considerable confusion, as fishery operators then tried to protect their customary fishing rights independently. In February 1875, a Proclamation of the Grand Council of State abolished many petty taxes from the feudal era (including those on fishing), with the aim of standardizing taxation on a national scale. Then, in December of the same year, the Grand Council proclaimed and issued the Declaration on State Ownership of Seas and the System of Sea Area Lease Rights. These brought the seas around Japan under state control and introduced a system of permits

for fisheries. Now, the government would issue licenses to operators applying for special permission, in exchange for the payment of rental charges. This was based on the principle that the central government should manage marine resources through levies raised on licenses.

The result, however, was a flood of applicants for fishing grounds, including new participants, causing fishing ground disputes all over the country—whether between different villages, or between existing operators and newly participating merchants or former samurai, or even among the former peasant classes within villages. Overfishing intensified, and fish catches increased rapidly for a while before falling sharply. As a result, the system of state ownership and lease rights was abolished the following year, and former practices from the feudal era were permitted once more. In 1878, a Fisheries Tax was introduced. But a radical solution to the escalating disputes over fishing grounds would not come until 1901, when the Fisheries Law was enacted.

Part 2 Fisheries Administration and the Growth of Fisheries

1. Developing the Fisheries Environment

Early Days of Fisheries Administration

The official administration of Japanese fisheries began with the creation of a Fisheries Section in the Agriculture Promotion Bureau of the Home Ministry in 1877. It all started when Sekizawa Akikiyo was sent as a government representative to both the Vienna World Exposition in 1873 and the Centennial International Exposition (Philadelphia, U.S.A.) in 1876. There, he was made painfully aware of the gulf between Japan and western nations in their development of fisheries. After his return home, he urged Okubo Toshimichi, Lord of the Interior, to develop fisheries as a matter of utmost urgency.

With the creation of the Fisheries Section, the importance of fisheries came to be recognized within the government. In 1880, the Fisheries Section was upgraded to a Fisheries Division consisting of four sections (Coordination, Fishing, Seaweed Farming, and Propagation). When the new Ministry of Agriculture and Commerce was established the following year, the Division was transferred to the new Ministry, and a new Trial Manufacture Section was added. Then, with the launch of the inaugural Cabinet under Prime Minister Ito Hirobumi in 1885, the Division was again upgraded to the status of a Bureau. Now, under Agriculture and Commerce Minister Tani Tateki, Oku Seisuke was appointed Director-General

of the Fisheries Bureau and Somejima Sai as his Deputy, with Sekizawa as Senior Engineer and a staff just over 30 strong. The Bureau was divided into three divisions (Fishing Division, Trial Division, and General Affairs Division) together with a Fisheries Exhibition Center. With this, the organization of the Bureau as an authority for fisheries administration was complete.

As a consequence of the depression that started in 1890, however, the Fisheries Bureau was again downgraded to a Division as part of the government's policy of fiscal austerity. The Division now only had a few employees and came under the jurisdiction of the Agricultural Affairs Bureau as its 4th Division. Nevertheless, partly due to appeals by the Japan Fisheries Association (to be discussed later), the Fisheries Bureau was revived in 1897. And from this time on, the Bureau came to play a major role as fisheries increased in importance. In particular, Maki Naomasa, who served as the Bureau's Director-General for eight years from 1898, built the foundations of fishery policy from the end of the Meiji era into the following Taisho era. This included the implementation of the "Distant Water Fisheries Promotion Act" and the enactment of the "Fisheries Law" and "Foreign Territorial Waters Fishery Cooperatives Act", among others.

While organizing the structure of fisheries administration at home, the government sent officials and fishery representatives to world expositions and fisheries expositions held in Europe and America. There, they learnt fishing methods, manufacturing, aquaculture and other techniques, and eventually introduced them in Japan. Expositions provided an opportunity for each country not only to advertise its own industrial technology but also to acquire knowledge from other countries. Japan first exhibited marine products at the Berlin Fisheries Exposition of 1880. At the London Fisheries Exposition in 1883, Japanese representatives reported on the current status of Japanese fisheries and displayed marine products destined for export.

Within Japan, too, the government held the 1st Fisheries Exposition (Tokyo) in 1883 and the 2nd Fisheries Exposition (Kobe) in 1897. Here, the aim was to absorb knowledge from fishermen as well as giving guidance on new knowledge and technology. Meanwhile, a section on fisheries was added to the National Industrial Exhibition, aimed at industry in general, from the 3rd Exhibition in 1890 (Tokyo). The aquarium created for the 5th Exhibition in 1903 (Osaka) attracted large crowds of visitors every day.

Creation of the Japan Fisheries Association

In parallel with these government activities to promote awareness of fisheries, similar moves also started to appear in the private sector. A pioneer in this field was Suisansha, a company formed by a group of like-minded individuals (Nagai Yoshinosuke, Nakao Naoharu, Yamamoto Yoshikata, Hachiya Masakatsu, Shishido Hayata and Kawamura Yukio) in Hongo Haruki-cho, Tokyo, in 1881. Suisansha published Japan's very first fisheries journal *Naigai Suisan Zasshi* ("Domestic and Overseas Fisheries Magazine"), held meetings throughout Japan and gave guidance aimed at spreading knowledge and technology related to fisheries. The strength of their mettle can be seen in their publishing statement: "By publishing this magazine, we aim to enhance the accuracy of fishing methods, improve fishing gear and increase fish populations, and moreover announce new techniques and good methods to the world at large, and thereby help this industry to flourish and thrive..." ("Hundred-Year History of the Japan Fisheries Association Part I")

Besides this, Nagai and the others planned to organize private-sector core institutions (fishery-related bodies) all over the country. To do this, they went to fishery meetings in various parts of Japan to gather members, and even sought the participation of government officials. The creation of fishery-related bodies was modeled on similar efforts in America, France and Germany. This was based on the principle that Japan urgently needed to consolidate private-sector

knowledge and capital in promoting research on fisheries, and to make people aware of its importance. The Japan Fisheries Association, Japan's first central body of this sort, was founded in February 1882. Senior Vice Agriculture and Commerce Minister Shinagawa Yajiro was appointed its inaugural President, with Sekizawa, Masuda Takashi, Matsubara Shinnosuke and others from the Fisheries Bureau as Directors. Nagai and five others took care of practical matters, and *Suisan Zasshi* was continued as "Transactions of the Japan Fisheries Association". This was the forerunner of the monthly magazine *Suisankai* ("Fisheries World") that is still published to this day.

The Japan Fisheries Association linked up with the Fisheries Bureau to make proposals for the planning and content of fisheries expositions and the National Industrial Exhibition. It also played an important role in promoting fisheries by implementing various fishery-related measures, such as encouraging fishery stakeholders all over the country to collect exhibits.

Establishment of Fisheries Educational Institutions

A major legacy of the Japan Fisheries Association lies in its proposal that the government establish the Suisan Denshujo (Fisheries Institute, later to become the Fisheries Training Institute) in 1889. If fisheries were to move ahead, developing technology and training engineers were tasks of utmost urgency.

The first attempt to establish an educational institution came in 1887, when Fujikawa Sankei founded the Dai-Nippon School of Fisheries in Tokyo. However, a failure to attract willing investors and a resultant lack of funds forced the school to close after only a year. Then, in 1888, a three-year Fisheries course was set up in the General Course of Tokyo School of Agriculture and Forestry (now the Faculty of Agriculture, University of Tokyo). This also closed down after only one attempt to recruit students. Finally, after lobbying by the Japan Fisheries Association, the Fisheries Institute emerged out of

these failures. A schoolhouse was built in Mita Shikoku-cho, Tokyo, and Sekizawa was appointed schoolmaster. Most of the teachers were Fisheries Bureau employees, who received no extra remuneration for their services.

When the Fisheries Bureau was downgraded to the Fisheries Division in 1890, however, Sekizawa resigned and the Bureau staff employed as teachers were dismissed. The management of the Institute was now in disarray, and at one point closure was considered. But a crisis was averted through the efforts of Sekizawa's successor Murata Tamotsu, a member of the House of Peers. In 1893 Murata successfully negotiated an annual subsidy of 6,500 yen from the Ministry of Agriculture and Commerce, and expanded the Institute to an educational establishment offering three-year courses in the departments of Fishing, Manufacture and Aquaculture. In March 1897 the Institute was reorganized as a state-funded Fisheries Training Institute, subsequently moving to Fukagawa Etchujima, Tokyo in 1902. The move coincided with the establishment of manufacturing and research facilities, a laboratory and other buildings, while practical training in distant water fisheries was started using a training ship. The Institute not only trained large numbers of personnel engaged in fisheries, but also contributed to advances in technology with its research in various areas of fisheries. It later evolved into the Tokyo University of Fisheries, eventually becoming today's Tokyo University of Marine Science and Technology.

Meanwhile, back in 1907, a Fisheries Department was also created in Sapporo Agricultural College. Later to become the Faculty of Fisheries Sciences of Hokkaido University, the Department ranked alongside the Fisheries Training Institute as "the twin jewels of fisheries education", producing numerous instructors and technicians in the field. Again, in 1910 a Fisheries Department was created in the College of Agriculture of Imperial University (now the Faculty of Agriculture, University of Tokyo). With its focus primarily on biology, the new department pursued

studies in ichthyology, resource sciences and reproductive science, and produced many graduates.

Now Fisheries Training Institutes started to appear all over the country, starting with the Kyoto Prefecture Fisheries Training Institute in 1899, followed by others in Toyama and Miyagi Prefectures in 1900, Hokkaido (Otaru) in 1903, Okinawa (Naha) and Niigata Prefectures in 1905, Mie Prefecture in 1907, and Kagoshima and Nagasaki Prefectures in 1908. In the Taisho era, more were set up in Shizuoka, Chiba, Aomori Prefecture, Shimane and other prefectures, each having its own training ship and committed to training not only crews but also field technicians. Besides these, fisheries schools (forerunners of today's fisheries high schools) also came to be set up all over the country, starting with Obama, Fukui Prefecture and Miyako, Iwate Prefecture in 1895. Much later, in 1946, the Shimonoseki Branch of the Ministry of Agriculture and Forestry Fisheries Training Institute

(the forerunner of the National Fisheries University) was established in Shimonoseki, Yamaguchi Prefecture.

In parallel with these institutions for training fisheries-related technicians, other bodies for experimental research and instruction in fisheries also came to be established. There were two types of experimental body—the state-run Central Fisheries Experimental Stations and the Prefectural Fisheries Experimental Stations. Central Fisheries Experimental Stations were created inside Fisheries Training Institutes. The prefectural institutes, on the other hand, were established at the rate of one per prefecture, based on the “Regulations on Prefectural Fisheries Experimental Stations” issued in 1899, and at the cost of the local prefecture. There was a particular rush to establish Fisheries Experimental Stations between 1899 and 1903, and by the final years of the Meiji era, they existed in nearly every prefecture.

2. Enactment of the “Fisheries Law” and the “Distant Water Fisheries Promotion Act”

Enactment of the “Fisheries Law”

The Fisheries Bureau had the task of devising measures not only to promote fisheries but also to eliminate disputes over fishing grounds and maintain order. In May 1886, therefore, it decided to issue “Rules for Fishery Cooperatives”. Under these, fishery cooperatives would be established in each fishing village and made responsible for maintaining order in their own fishing areas based on their own autonomous rules. Cooperatives varied in size; some covered whole counties, while others only answered to a single village. Nevertheless, by the end of 1889 there were 329 of them, this increasing to 545 by 1892.

Unfortunately, the “Rules for Fishery Cooperatives” failed to function as the Fisheries Bureau had originally intended. Each cooperative merely attempted to extend its own sphere of influence, so that eventually there were even more disputes over fishing grounds and catches than there had been before. Such disputes

were particularly frequent in 1892 and 1893, some even resulting in bodily injury.

Murata Tamotsu had already submitted the first draft of a Fisheries Law to the 5th Session of the Imperial Diet in November 1893, starting a process of repeated debate and revision. But now, there was an increased desire to enact uniform legislation on fisheries as a radical solution to this state of affairs. Thus it was that, in April 1901, Japan's first legislation on fisheries was promulgated in the form of the “Fisheries Law” (now generally known as the “Former Fisheries Law”), which came into force the following July.

The Fisheries Law organized fisheries into four categories of rights (fixed-net fishery rights, demarcated fishery rights, special fishery rights and exclusive fishery rights). Exclusive fishery rights were subdivided into those based on traditional practices and those in nearby coastal waters permitted only to fishery cooperatives. Fishery operators were granted special licenses

to fish in accordance with traditional practice. The Minister and provincial governors were given powers of enforcement over fisheries. Fishery operators with addresses inside specific areas were permitted to establish fishery cooperatives, with the approval of the competent authorities, based on units of individual beaches and villages, i.e. areas smaller in scope than those recognized under the Rules for Fishery Cooperatives. These cooperatives would be the bearers of rights and obligations connected with the possession and exercise of fishing rights.

The basic thrust of the Fisheries Law, then, was to maintain existing practice. But this approach was not without its detractors. Among the deficiencies highlighted were that the Act lacked an element of physical collateral for fishing rights, and that the legal relationship with rights of association in fisheries was not clear. Besides, there was an emerging need to coordinate trawl and coastal fisheries due to the rapid development of offshore and distant water fisheries following the enactment of the “Distant Water Fisheries Promotion Act”. As a result, the Fisheries Law was thoroughly revised in 1910. Among other amendments, an element of modernity was added though maintaining traditional practices, while the aims of fishery cooperatives were expanded in scope.

Enforcement of the “Distant Water Fisheries Promotion Act”

Actually, the Fisheries Law had already been preceded, in April 1898, by the enforcement of the “Distant Water Fisheries Promotion Act”. While the purpose of the Fisheries Law was to manage and coordinate Fisheries Lawivity, the Distant Water Fisheries Promotion Act was aimed at technical innovation and skill enhancement to promote distant water fisheries, as the name suggests. Behind this lay a boom in whaling and hunting for otters and fur seals by western fishing boats in Japanese waters. As a result, the Japanese government needed to devise protective

measures for Japanese fisheries, fragile as they were, to drive out foreign ships as quickly as possible.

The Distant water fisheries Promotion Act consisted of 66 articles, the principal content being as follows.

- To promote distant water fisheries, the Treasury would disburse 150,000 yen every fiscal year.
- Subsidies were only available for operations in designated fishing grounds, using Japanese-registered vessels owned by Japanese nationals or by trading companies whose employees or shareholders were exclusively Japanese.
- The minimum weight of vessels eligible for subsidies was 50 tons for steamships (whether wooden or iron) and 30 tons for sailing ships; the maximum subsidy was 15 yen per ton per year for steamships, 10 yen per ton for sailing ships, and 10 yen per crew member.
- Fishing or hunting activity was restricted to whales, otters, fur seals, shark, tuna, bonito, cod, mackerel, yellowtail, squid and halibut.
- Locations for fishing or hunting were the China Seas, the Taiwan Strait, the East Sea, the Yellow Sea, the Korea Strait, the Japan Sea, the Sea of Okhotsk and the Pacific Ocean.

Thus, in line with its premise of stimulating public interest in distant water fisheries, the Distant Water fisheries Promotion Act encouraged the enlargement of fishing boats by issuing subsidies based on minimum tonnage. This meant that any Japanese national who had a fishing boat, regardless of qualifications or experience, was free to start distant water fishing. However, in fiscal 1898, the first year of the scheme, subsidies were only disbursed to 14 fishing boats engaged in hunting fur seals and otters, with a gross tonnage of only 876 tons. Moreover, of the 150,000 yen earmarked for subsidies, only 8,000 yen were actually allocated. This speaks volumes about the fragile capital status of fishery operators and the small size of fishing boats at that time.

From then on, recipients of subsidies gradually increased, expanding to 30 ships and 2,115 tons in

1904. However, the poor performance of unsubsidized fisheries led to an amendment to the Act in 1905; now, subsidy ratios were increased and the scope of subsidies widened to include fish processing and transportation businesses, among others. Further amendments were made in 1909 and 1910, and the scope further widened to include installation of refrigeration machinery. At the same time, operations that were thought to have benefited from subsidies already (otter and fur seal hunting, steamship whaling, steam trawler fisheries) were removed from consideration.

The Distant Water fisheries Promotion Act also provided that 10% of budgets should be allocated to supervising distant water fisheries and improving technology; support was also given for overseas secondment of young technical staff from the Fisheries Bureau. Furthermore, “Regulations for Trainees in

Distant Water Fisheries” were set out, and aspiring graduates from the Fishing course of the Fisheries Training Institute as well as private-sector technicians were also accepted. With this, many young technicians came to receive grants and pursue energetic research activities.

After this, amid a changing environment with advances in the motorization of fishing boats and increasing corporate ventures into fisheries, the Distant Water Fisheries Promotion Act was again amended in 1914, 1918 and 1923. The subsidy pot also increased year by year, until in the mid-1920s it contained more than 300,000 yen. This law was of immense significance not only in promoting fisheries but also in creating a climate for encouraging the introduction of technology and the modernization of fisheries.

3. Progressive Modernization of Fisheries

Motorization of Fishing Boats

The end of the Meiji era was a period of progressive development, both in fisheries administration and in the modernization of fisheries. Innovations were introduced across the board of fishery technology, including the motorization of fishing boats, mass production of fishing nets and introduction of trawl fisheries.

The motorization of fishing boats started in the Shizuoka area, where bonito fishing was well established. The experimental ship *Fuji Maru*, completed by the Shizuoka Prefecture Fisheries Experimental Station in March 1906 with the aid of a “distant water fishery subsidy”, was Japan’s first motorized fishing boat. *Fuji Maru* was a 25-ton ketch-type motorized sailing ship, fitted with a 20-horsepower union gas engine imported directly from the Union Gas Engine Aion Company in San Francisco. In June that year, it set off from Izu to conduct experimental bonito line fishing operations in the Ogasawara area.

At that time, Shichibei Katayama, a fishery operator from Yaizu, allowed a boatman from one of his own

ships to travel with the *Fuji Maru* as an apprentice. The boatman reported to Katayama that “Though the violent pitching of the ship makes the work difficult, fishing would be easy if a larger ship were built”. He was subsequently sent on other ships fitted with engines, but the reports were the same. So then Katayama hit upon the idea of fitting a Japanese-western hybrid vessel with an engine to prevent rolling (which causes pitching). In October 1907 he established the Tokai Enyo Gyogyo K.K. (“Tokai Distant Water Fisheries Co., Ltd.”) (capital 30,000 yen), a collective venture with other Yaizu shipowners, to promote the motorization of fishing boats. Meanwhile, the Yaizu Production Cooperative was established in Yaizu in June 1908 in line with the Industrial Cooperative Act, and shipowners in the area came to belong to one or other of these organizations.

Encouraged by the success in Yaizu, moves towards motorized fishing boats rapidly gathered momentum in Miyagi, Fukushima, Ibaraki, Chiba, Wakayama, Kochi, Kagoshima and elsewhere, and a series of experimental ships fitted with engines were built. This

was just when heavy industries were rising to prominence in an attempt to beat the recession after the Russo-Japanese War. Now, ironworks across the country started to produce engines for fishing boats. Most of the Yaizu fishing boats had installed union-type engines produced by ironworks in Osaka, but engines made by other Japanese companies were still technically imperfect. As a result, attempts to motorize fishing boats turned into a repeated process of trial and error.

Mass Production of Materials

The material used for fishing nets had changed from straw rope to hemp yarn in the Middle Edo period, but from the mid-Meiji era onwards, cotton also came to be used. Cotton had less tensile strength than hemp yarn, but lasted longer as it resisted friction and decomposition. Above all, though, its major characteristic was that it was cheaper. The transition to cotton became decisive from around the turn of the century, when cotton came to be supplied in bulk and at reasonable cost with the growth of Japan's spinning industry. By around 1912, all nets had been switched to cotton.

The work of weaving nets, meanwhile, had previously been undertaken by the fishery operators themselves or by farmers as a side job, although it was sometimes handled by cottage industry businesses called "*amiya*" or net weavers. But now, mass

production of raw yarn and the expansion of fisheries led to the development of net making machines. Net-making specialists who used these machines to mass-produce fishing nets now sprang up all over the country. As with engines, the rise of machine industries lay behind the appearance of net-making machines, and various different net-making machines were produced in this era. In particular, the Mie-style manual reef-knot net-making machine devised by Rihei Nishiguchi of Mie Steelworks became the mainstream of fishing net production. Using this machine, Ishikawa Prefecture became the principal source of thick-meshed nets, Shizuoka Prefecture of medium-meshed nets, and Aichi Prefecture of fine-meshed nets. Then, at the end of the Meiji era, *kaeru-mata-ami* nets (trawler-knot nets), which suffered less mesh slip than reef-knot nets, came to be mass-produced instead.

Meanwhile, in parallel with the transformation of fishing nets, Manila rope (rope made from Manila hemp grown in the Philippines) also came to be mass-produced domestically. Manila rope would soon be indispensable for trawling and seine fishing with drag nets, as well as fixed lift nets.

Thus, by the end of the Meiji era, a mechanism for supplying fishing nets and ropes as basic materials had been established in the major fishery bases all over Japan. Along with the motorization of fishing boats, this formed a major element of the infrastructure supporting the growth of fisheries in Japan.

Part 3 Introduction of Modern-Style Whaling

1. Japanese Whaling before Modernization

Establishment of Net Whaling

Whales have a very wide habitat range, and the Japanese archipelago is surrounded by their migration routes. Archeological finds in Jomon sites throughout Japan prove that people used to eat whale meat in prehistoric

times.

Whaling would have started when "drifting whales" (dead whales drifting on the sea) or "beached whales" (whales stranded on beaches at low tide) were pulled up to dry land. The carcasses would be cut up on the shore and the whale meat distributed, the fat and oil

extracted and used as fuel. Whales were seen as a “bounty of the sea” sent down from above. The Emperor Tenji (626–672) issued a decree forbidding the consumption of animal meat as an element of Buddhist belief, but whales were excluded from this, as they swam in the sea and were therefore considered to be fish.

It was not until the 17th century that full-time whaling operators started to appear. As the foundations of the Tokugawa shogunate solidified, some samurai warriors deprived of their stipends took up full-time whaling as an occupation that allowed them to manifest their martial prowess and courageous spirit. They formed whaling groups called “*kujiragumi*” all over the country. These were particularly active in Kii, Tosa, Nagato, Hizen, Iki, Tsushima and Awa. Whaling operations mainly targeted the right whale (*Eubalaena glacialis*), which is relatively lethargic and swims slowly, although humpback whales were also hunted secondarily. The fishing method at the time involved approaching a whale and spearing it with harpoons (harpoon whaling). This is thought to have started in around the mid-15th century. The harpoon method often ended in failure, with the whale unable to be caught even when speared with harpoons. Or it would be killed by the harpoons and sink to the bottom of the sea. Sometimes, the whale would escape anyway, it was simply too fast for the whaling boats.

Japanese whaling technology took a great leap forward in 1675, when Wada Kakuemon of Taiji in Kishu devised the “net whaling method” combining harpoons with straw nets. This method led to a dramatic fall in the failure rate. It immediately spread to other whaling bases throughout the country, and remained the principal whaling method for the next two centuries or more. During that time, whaling continued to thrive everywhere in Japan; at one point there were more than thirty regional bases for whaling groups.

Net whaling was a large-scale and complex activity that required a heavy concentration of ships and manpower. Whaling groups are said to have employed at least 500 workers (including day laborers), sometimes

rising to as many as 800. Systems of horizontal segmentation were built up using specialists in various fields. The head of the group required not only strong leadership but also the business acumen to manage and invest huge amounts of capital.

The Rise and Fall of American Whaling

In America, meanwhile, whaling had developed into a thriving industry. This was because sperm oil was used to make candles, an important export commodity. Whaling ships started to increase in size from the second half of the 1720s, and by the 1760s the 100-ton class was the norm. These ships would remain at sea for long periods while hunting mainly for sperm whales, gradually increasing their range of activity as they did. A major difference with Japanese whalers at the time was that the whales were cut up and processed on the broadside of the whaling ships. The main target was the whale oil; the whale meat was thrown overboard. In 1842, American whaling ships accounted for 652 of the worldwide total of 882 ships. This number peaking in 1846 at 735 ships with a gross tonnage of 233,000 tons and an average annual catch of 10,000 whales. In that same year, an explosive harpoon called the bomb lance, which used explosives to fire a killer harpoon into a speared whale, was invented in the U.S.A.

In the Pacific, whaling became particularly active from around 1820. When the U.S.A. sent Commodore Perry to forcibly end Japan’s self-imposed isolation in 1853, a major objective was to acquire material supply bases for American whaling ships operating in Japanese waters.

Having gained free and convenient access to Japanese ports with the opening of Japan, however, American whaling suddenly went into decline from around 1860. Following the discovery of crude oil in western Pennsylvania in the 1850s, whale oil had been replaced by kerosene as fuel for lamps. With the loss of demand, the price of whale oil collapsed, making whaling operations hard to maintain. Another major

factor was that whale populations had been dramatically reduced by excessive catches over many years.

Decline of Japanese Whaling

Japanese net whaling had enjoyed a long period of prosperity, but failed catches were increasingly frequent from the end of the 18th century, and the industry went into rapid decline from around the start of the Meiji era. The biggest reason for this was the flood of American whaling ships entering Japanese waters, as mentioned above. These caught not only sperm whales but also right whales, the principal target of Japanese whalers at the time.

Japan's whaling ships were not strong enough to resist the American whalers. Firstly, owing to Japan's self-imposed isolation from 1639 to 1854, there had been no source of information on overseas whaling. Added to this was a ban on the construction of ships carrying over 500 *koku* (equivalent to 75 tons); the technology for building large ships had not been accumulated. American whalers operating in Japanese waters were 300–500-ton sailing ships, but Japan's fishing boats, even in the Meiji era, weighed only about 20 tons at most.

Attempts by Nakahama Manjiro and Sekizawa Akikiyo

Against this backdrop, attempts were being made to adopt foreign whaling and search for new methods.

Nakahama Manjiro was a fisherman's son from Nakanohama in Hata-gun, Tosa Province (now Tosa Shimizu City in Kochi Prefecture). In January 1841, at the age of 15, he got caught in a storm while fishing and was rescued by an American whaling ship. The captain took a liking to him and adopted him as his son. Manjiro was taken to America, where he received an education in English, mathematics, surveying, navigation, shipbuilding and other subjects. He was even lucky enough to be taken round the world on a whaling expedition. After his return home in October

1852, he worked as a teacher at the Tosa clan school (Kyojukan) for a while. But when Perry's "black ships" arrived the following year, he was hired by the shogunate as an interpreter.

For some time after that, Manjiro gave guidance on navigation, surveying and shipbuilding at the request of the shogunate. He proposed that American-style whaling be operated directly by the shogunate, arguing that this would be advantageous in terms of national policy. Then in October 1857, he received an order to learn whaling methods. He repaired a ship presented to Japan by Russia, modified it into a whaling ship, and set sail from Shinagawa bound for Ogasawara. Unfortunately, he encountered a storm that not only damaged the ship but also washed the whaling equipment overboard. At the end of 1862, Manjiro purchased an American-style whaling ship, made himself captain, and once again took up the challenge of whaling in seas near Ogasawara. He is said to have caught two whales at this time. But because this came after the demise of American whaling and the foreign threat had diminished, his feat received little acclaim. Finally, partly due to the British bombardment of Kagoshima that year, the shogunate ordered him to return. Manjiro had no choice but to abandon his attempts at whaling.

As mentioned in Part 2 of this Chapter, Sekizawa Akikiyo was heavily involved in guiding Japan's embryonic fisheries administration. On an inspection tour of the Izu Islands in 1887, he discovered that whales migrated through nearby waters. He therefore carried out a trial operation using a whaling method he had learnt in America (using harpoons fired from a Pierce's gun). He also gave guidance in American-style whaling to Daigo Shinbei of Katsuyama in Boshu Province (the Daigo whaling group), who was already turning his attention to gun whaling. Sekizawa then established the Nippon Suisan company in Katsuyama, with the aim of fishing for whales and refining fish oil wax.

When Sekizawa retired from the Ministry of Agriculture and Commerce in 1893, the Nippon

Suisan company was experiencing managerial difficulties. So he took over the company and decided to go into whaling himself. The following year, when the Fisheries Research Department of the Ministry of Agriculture and Commerce decided to carry out trial

whaling for sperm whales near Kinkasan in Miyagi Prefecture, Sekizawa was commissioned to conduct the trials. He succeeded in catching two sperm whales with his own ship *Choju Maru*, thus achieving some notoriety as a whaleman.

2. Modernization and the Establishment of Nippon Enyo Gyogyo

The Threat from Norwegian-Style whaling

When Crown Prince Nicholas of Russia visited Japan as a goodwill envoy in 1891, he was accompanied (among others) by General Aleksei Kuropatkin, later to command Russia's armed forces during the Russo-Japanese War. On his way home, Kuropatkin spotted a large number of whales in the Korea Strait. This led to the establishment of the Russian Pacific Whaling Company in St Petersburg in the very same year, its purpose being to conduct whaling operations in seas around the Korean Peninsula. The company adopted Norwegian-style whaling, the latest method of the day. Using Vladivostok as an operational base, it leased berths in the three Korean ports of Ulsan, Changjon and Sinpo, and started operations across the whole of the Japan Sea from the coast of Karafuto (now Sakhalin) to the Korea Strait.

Norwegian-style gun whaling was invented in 1864 by Svend Foyn, captain of a Norwegian otter hunting ship, and commercialized in 1868. Though both methods used whaling guns, the American bomb lance method used the gun to launch an explosive harpoon that would kill off a harpooned whale. With the Norwegian method, the gun was used to release a harpoon on the end of a long rope. The company used iron steamships weighing around 100 tons, fast and highly maneuverable, to hunt for whales. Until then, whaling had targeted arctic whales, right whales and sperm whales, which were lethargic in their movement; these had diminished dramatically due to overfishing. On the other hand, the more agile blue whales and finback whales were difficult to catch. This problem was solved with the introduction of Norwegian-style

whaling. The method rapidly spread to whaling countries all over the world, and was the single most important innovation in whaling. In a word, it marked the birth of modern whaling.

The start of operations by Russian Pacific Whaling was a major threat. A drastic fall in the number of whales in Japanese waters was anticipated, and it was clear that Japanese whaling, which still relied on old-style net whaling, would decline even further.

Another threat appeared when whale meat from these Russian catches was brought in to Nagasaki Port and put on sale inside Japan. Between November 1898 and the following March, Russian Pacific Whaling caught 120 whales and landed 1,000 tons of whale meat at Nagasaki. By contrast, catches by Japanese whaling in the same period consisted of around 15 whales, and the volume of whale meat sold was no more than tens of tons. To make matters worse, the trading company Holme Ringer & Co., formed as a joint venture by English and Russian residents of Nagasaki, also started whaling in its own ships and selling whale meat in Japan. The sale of whale meat by foreign companies meant that enormous amounts of Japanese currency were flowing out of the country.

Russian Pacific Whaling also undertook surveys of the Japanese archipelago and the Korean Peninsula with the assistance of the Russian navy, presenting a further threat – this time military. Japanese experts now tried to explain the merits of Norwegian-style whaling to the old whaling groups, government authorities and others, and lobbied for the method to be introduced. However, colossal amounts of capital were required to obtain whaling ships, and as a result,

traditional whaling businesses were reluctant to introduce the new method.

Establishment of Nippon Enyo Gyogyo

It fell to a man called Juro Oka to open the way for the modernization of Japanese whaling.

Juro Oka was born in 1870 as the 5th son of Riemon Nishimura, owner of a saké brewing business in Nagoura, Abu County, Choshu Province (now in the outskirts of Hagi City, Yamaguchi Prefecture). In 1889 Juro entered Keio University, where he studied under Yukichi Fukuzawa. Although his studies only lasted one year, on his return home Fukuzawa told him “Your homeland of Nagato (Choshu) is only separated from Korea by a narrow strait of water; you should pay particular attention to fisheries in Korean seas, as the promotion of fisheries in Korea will be most critical and significant in future”. At the age of 21 he became the adopted son of Yoshisuke Oka, another saké brewer in a nearby village, and took the surname Oka. In 1896 he became a member of the local County assembly, then in 1897 was elected to the Yamaguchi Prefectural Assembly. When the Yamaguchi Prefecture Fishery Union was established in 1898, he was appointed its inaugural Chairman, and in that role strove to support local industries.

Masamori Fujita, Head of Industrial Promotion in the Yamaguchi Prefectural Offices, was in charge of researching Korean sea fisheries. When he reported to Oka about whales in the vicinity of Korea and operations by Russian whaling companies, Oka resolved to move into whaling himself. After resigning from the Prefectural Assembly in February 1899, he teamed up with Tosaku Yamada, another member of the Prefectural Assembly who was keenly concerned about the problems of whaling, Kanshichi Kawakita, a Dietmember with a similar interest in whaling, and others. Together, they would launch a new company engaged in Norwegian-style whaling.

The Inaugural General Meeting of the new company was held on July 20th, 1899. The company was

Juro Oka

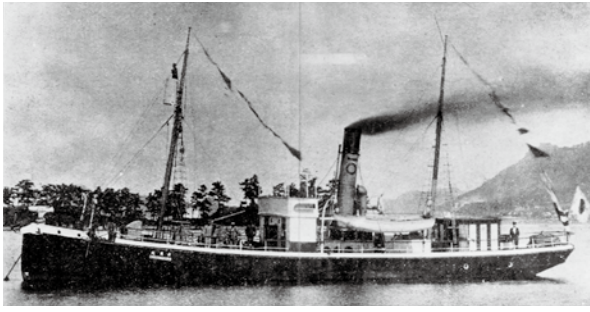


called Nippon Enyo Gyogyo K.K. (“Japan Distant Water Fisheries Co., Ltd.”), Yamada was appointed its President and Oka its Managing Director, and it was capitalized at 100,000 yen. The Head Office was established at Senzaki-Ura (now Senzaki Imaura-cho in Nagato City, Yamaguchi Prefecture), with a Branch Office in Shimonoseki. Nippon Enyo Gyogyo, together with its successor Toyo Gyogyo K.K. (Toyo Fisheries Co., Ltd.), is affectionately known as “Ichimaru Company”. “Ichimaru”, literally meaning “One-Circle”, is a reference to the family crest of the Mouri clan in the original Choshu Domain, consisting of the *kanji* letter for “one” with three circles beneath it.

Oka did not attend the Inaugural General Meeting, as he had already left for Norway when the company’s establishment had become certain in May 1899. In Norway, he studied Norwegian-style whaling and purchased whaling guns, harpoons and other whaling equipment in Kristiania (now Oslo). Then he traveled to whaling grounds in the Azores and a whaling base on the Massachusetts coast of northeastern America, before finally returning to Japan in December that year.

Opinions were divided as to whether a whaling ship should be sourced from a domestic or a Norwegian supplier, but in the end the contract was awarded to Tokyo Ishikawajima Shipbuilding & Engineering Co., Ltd. The new ship was launched on October 5th, 1899, with a gross tonnage of 122 tons and a speed of 11 knots. It was named *Dai-Ichi Choshu Maru* by Yajiro Shinagawa, Chief Secretary of the Japan Fisheries Association. It had a whaling gun with a bore of 3 inches (about 7.6 cm) and a barrel length of 6 feet (about 183 cm) installed on its bow, and was Japan’s first western-style whaling ship.

On January 28th, 1900, *Dai-Ichi Choshu Maru* set



Dai-Ichi Choshu Maru, built in 1899
The first iron-hulled whaler built in Japan

sail from Senzaki Port bound for Busan, accompanied by the factory ship *Chiyo Maru* and the transport ship *Bocho Maru*. By February 4th it had already succeeded in making its first catch, a huge finback whale, in the Korea Strait. Nippon Enyo Gyogyo could hardly have got off to a better start.

***Dai-Ichi Choshu Maru* Runs Aground**

But just then, Nippon Enyo Gyogyo ran into unforeseen difficulties. Soon after leaving port in February 1900, the *Dai-Ichi Choshu Maru* started to have engine problems of one sort and another. In March, the *Bocho Maru*, loaded with the meat from four finback whales, ran aground inside Ulsan Bay; and in the following month, a fire broke out on board while the ship was anchored in Shimonoseki Harbor. The fire destroyed part of her hull and the entire consignment of whale

meat—the company’s very first cargo. By comparison, the subsequent haul of 15 whales was reasonable enough; it meant that a shareholder dividend of 8% could be paid in the first business year (1st Term: July 1899–May 1900), to the relief of the shareholders. In December 1901, however, the *Dai-Ichi Choshu Maru* sailed into a storm off the coast of Korea and ran aground at Shiokushi-hama in Tongchon (now in North Korea). Oka himself supervised several attempts to refloat the vessel, but without success; in the end, the hull had to be abandoned. It was a major blow that threatened the very existence of the company.

Oka now took the decision to sell the *Bocho Maru* right away, and with the proceeds from this and a subsidy received from the Ministry of Agriculture and Commerce under the Distant Water Fisheries Promotion Act, met the cost of salvaging the ship and other expenses. He then converted the *Chiyo Maru* to a whaling ship, and also chartered another whaling ship (the *Olga*) from Holme Ringer in Nagasaki. Fortunately, the 4th term (June 1902–May 1903) was more fruitful in catches, with 89 whales caught in all. This offset the previous year’s losses and allowed for a small dividend. In the 5th term (June 1903–May 1904), two more whaling ships were chartered from Norway and the results were good, with catches of 101 whales.

3. Establishment of Toyo Hogeï and Amalgamation

Establishment of Toyo Gyogyo

When the Russo–Japanese War broke out in February 1904, three ships (including whalers) belonging to Russian Pacific Whaling were anchored at Nagasaki in Japan and Changion in Korea. These were seized by the Japanese army and moored in Sasebo Harbor. The disposal of the three ships then turned into a catfight between Oka’s Nippon Enyo Gyogyo and the founders of a company called Nikkan Hogeï Goshi K.K., only recently formed by 14 Diet members.

The government decided that the disposal of the

ships would be conditional upon an amalgamation between Nippon Enyo Gyogyo and the founders of Nikkan Hogeï. The two companies then reached a compromise on this basis, and a joint agreement was drawn up. In September 1904, Nippon Enyo Gyogyo was constructively dissolved and Toyo Gyogyo newly established with capital of 500,000 yen. The Inaugural General Meeting was held in Shimonoseki City, the Shimonoseki Branch Office of Nippon Enyo Gyogyo was made its Head Office, and Oka was appointed its President.

With the outbreak of the Russo–Japanese War,

Russian Pacific Whaling had forfeited its fishery concessions in Korea. In its place, Toyo Gyogyo obtained long-term concessions in the three ports of Ulsan, Changjon and Sinpo from the Korean government. As a result, whaling in Korean waters came to be monopolized by a single company.

Having consolidated its operational base in Korean waters, Toyo Gyogyo caught 245 whales and paid a shareholder dividend of 18% in its first business year (June 1904–July 1905)—a splendid result considering the context of the Russo–Japanese War. Now Oka and the others wanted to expand the fishing grounds, and conducted trial operations using Norwegian-style whaling along the Japanese coast. In particular, they succeeded in catching 111 whales in seas off Kinkasan, Inubo, Kii and Tosa on the Pacific side. Plants were therefore established in Ayukawa and Choshi, with a Branch Office in Tateyama, whereupon operations could start in earnest. Thanks to the expansion of fishing grounds, 403 whales were caught in the 2nd term. The company’s capital was increased to 2 million yen, and further expansion of business on the Pacific side was planned. Now, plants were opened in Kishu Oshima, Awa Shishikui, Tosa Shimizu and Tosa Kannoura. At the same time, steps were also taken to expand the company’s fleet; among others, the construction of two new whaling ships was ordered from

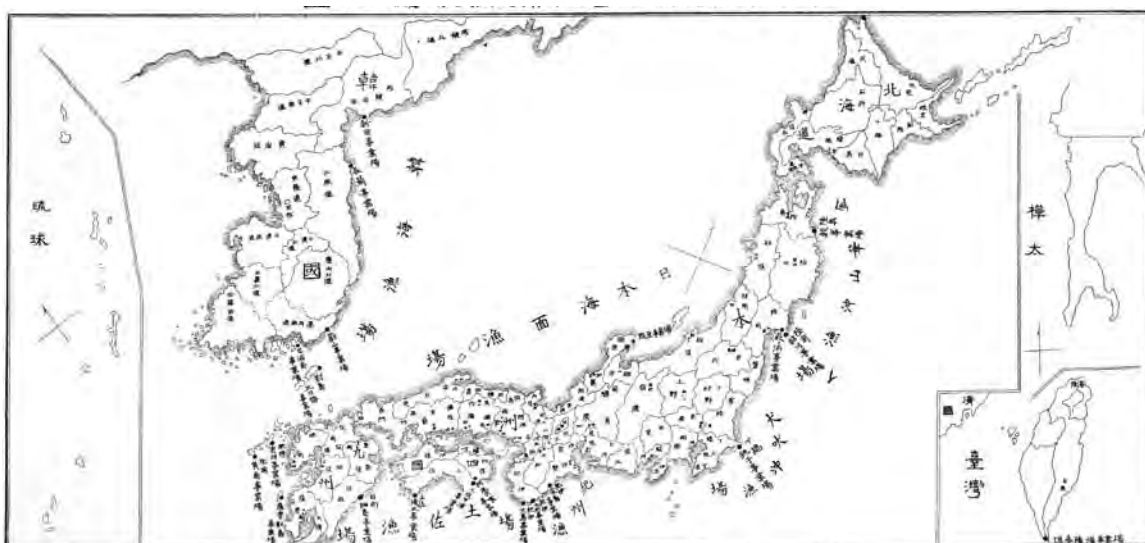
Norway while another whaling ship was bought. The 3rd term yielded catches of 633 whales; so many, in fact, that the flensing and processing operations could not keep pace and whale carcasses were reportedly sold at a loss without being cut up.

Proliferation and Amalgamation of Whaling Companies

The success of Toyo Gyogyo sparked a succession of new whaling startups in various parts of Japan. By 1908 there were twelve companies, possessing a total of 28 whaling ships, all using the Norwegian-style method of whaling.

However, as Japanese whaling began to boom, whales became overfished, gunners and crew members started to be headhunted, and disputes arose over the establishment of bases. Toyo Gyogyo itself was not unaffected by these developments; catches had plummeted from 547 whales in the 4th term to 187 in the 5th.

Anxious over the future of the whaling industry, Oka now set out to establish a Japanese Whaling Fisheries Association, and proposed that all whaling operators should be amalgamated in order to bring the situation under control. This idea found agreement with Naomasa Maki, the previous Director-



Map of whaling stations in the Far East (1910)
 Source: *Meiji-ki Nihon Hogeishi* (“Journal of Japanese Whaling in the Meiji Era”)

General of the Fisheries Bureau who now served as Chairman of the Japan Fisheries Association. At first, the other whaling operators showed little inclination to amalgamate, but with the solid backing of Maki, Oka did his best to bring them round. In June 1908, he held informal talks with all whaling operators in Miyajima. As a result, although not all were in agreement, the opinions of four companies (Toyo Gyogyo, Nagasaki Hogeigoshi K.K., Dai-Nippon Hogeigoshi K.K. and Teikoku Suisan K.K.) converged in favor of amalgamation.

In May 1909, the new company Toyo Hogeigoshi K.K. was established with capital of 7 million yen as an amalgamation of these four companies. Oka was appointed its President, while Maki was to assist in a consultancy role. The Head Office was in Osaka, with branches in Tokyo and Shimonoseki and a sub-office in Hakata.

Even after the launch of the new company, Oka continued his attempts to persuade the other whaling companies. By the end of 1909 he had succeeded in absorbing Tokai Gyogyo K.K. and Taiheiyo Gyogyo (the whaling division of Iwatani Shokai). These were followed in 1916 by Naigai Suisan K.K., Nagato Hogeigoshi K.K., Kii Suisan K.K. and others. With this, a conglomerate possessing 26 ships, with premises in 34 locations around Japan as well as on the coast of Korea, and making catches of more than 1,000 whales a year was formed to monopolize whaling in coastal waters. Meanwhile, a system of marketing was established when Isana Shokai (President Tosaku Yamada), a company with responsibility for sales of whale meat, was set up in Osaka. This ensured a virtual monopoly of markets all over Japan, making Toyo Hogeigoshi, quite literally, the No.1 whaling company in the far east.

Part 4 Emergence of Trawling

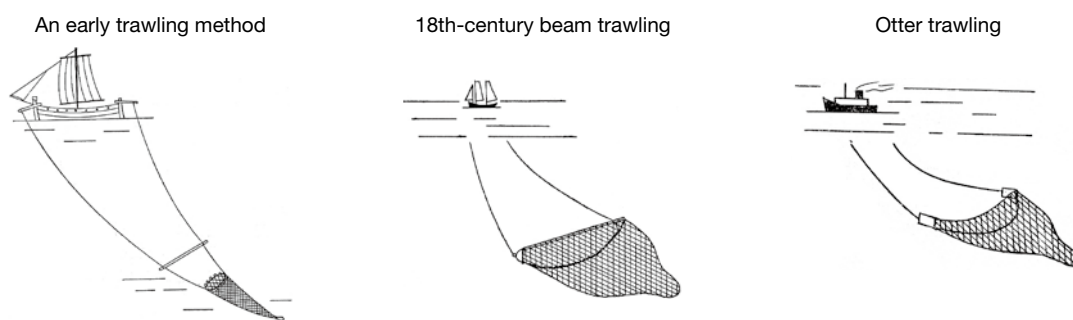
The Early Days of Trawling in Japan

Steam trawlers were first used by British fisheries in the early 1700s. Much later, in the late 1800s, otter boards were installed on each side of the net mouth, enabling the mouth to be expanded laterally. At the time, trawling was the most advanced method of fishing. The advance of the Industrial Revolution led to the motorization and enlargement of fishing boats, improved fishing nets and the development of ice-making technology. With all these features combined, the trawling method enabled operators to venture into distant waters and bring in much larger catches. As

such, it quickly spread through the countries of Europe.

Trawling in Japan was no exception to this trend. Unlike in Europe, however, it had not developed as a natural extension of traditional Japanese fisheries, but was imported as completely new technology from abroad (Great Britain). As a result, Japan skipped the sailing trawler stage previously experienced in Europe, and launched straight into trawling by steam.

In 1904, Kamezo Okuda, owner of Kakuyū Gyogyo Shukusei Shokai in Tottori Prefecture, decided to attempt trawling when he read of a tour by Mokuichi Shimoda of European and American fisheries. Shimoda



was an engineer in agriculture and forestry whose name is etched in Japanese fishery history as the man who developed distant water tuna fisheries. First, Okuda built a wooden steam trawler (152 tons) at the Ominato Shipyard in Mie Prefecture (engine supplied by Ishii Ironworks). The ship, named *Kaiko Maru* by Okuda, is thought to have been the first trawler ever built in Japan. The *Kaiko Maru* was formally launched at Ominato in September that year, and underwent trials in December. Then in June of the following year (1905), trial fishing was carried out near Hinomisaki and Tanabe in Wakayama Prefecture. However, defects were discovered in the design and structure of the ship and fishing tackle (for example, the net mouth would

not widen properly). The project was abandoned half-way, owing to a lack of operational experience and opposition from coastal fishermen.

Again, in 1905, Tsunezo Takio of Muroran in Hokkaido built the small wooden steam trawler *Hokusui Maru* (159 tons) with a distant water fishery subsidy and a grant from Hokkaido Prefecture. He used it to operate inside Uchiura Bay using Muroran as a base, achieving a modicum of success. After this, a succession of new small wooden steamships were built, or existing wooden ships converted for trawling. In the end, however, nearly all of them ended in failure (including the *Hokusui Maru*) owing to deficiencies in both ships and equipment.

Part 5 The Start of North-Sea Fisheries

1. Japan's Fisheries Move North

The Advance to Sakhalin and Collision with Russia

The Sea of Okhotsk and the Bering Sea, framed by the Kuril Islands, Sakhalin, the Kamchatka Peninsula and Alaska, are known as some of the world's finest fishing grounds. These are what we call the north-sea ("Hokuyo") fishing grounds.

It was in the 18th century that Japanese fishery operators first ventured into these waters. In 1751, the Matsumae clan, rulers of Ezo (Hokkaido) at the time, sent clansmen to Sakhalin to develop the fishing grounds there. The following year, two clan-operated fishing grounds were opened in Kushunkotan (later called Otomari) and elsewhere. As for private enterprise, Date Rin-emon and Suhara Koemon obtained licenses from the Matsumae clan as fishing ground subcontractors, and it was they who first opened the fishing grounds in Tobutsu (on the west coast). Levies from these fishing grounds were more than 60,000 *ryo* at their peak, providing a generous income for the Matsumae clan.

Meanwhile, Russia had continued to push

eastwards from the end of the 16th century. Initially, the main focus was on hunting and there was no interest in fisheries. It was from around the middle of the 18th century that Russians started fishing in seas north of Japan. They clashed with northward-bound Japanese operators at Kamchatka, a treasure store of salmon and trout, and this developed into a scramble for resources. By the beginning of the 19th century, Russia had sent warships to threaten the island of Iturup, taking fishing grounds from Japanese interests in Kushunkotan, Sakhalin. The weakened shogunate could do nothing about it, and the problems of fishing rights and territory in Sakhalin were carried forward to the Meiji government.

In 1870, the new Meiji government created a Sakhalin Development Commission and established state-operated fishing grounds in four locations. At the same time, private fishery operators moved into the area, and 311 fishing boats made the journey to Sakhalin in 1874. But then, as a measure to stabilize Russo–Japanese relations, the Meiji government withdrew its earlier proposal to create a north-south

division at 50° north latitude. In 1875, the government agreed to a Russian proposal for a Sakhalin-Kuril Exchange Treaty. With this, Sakhalin became Russian territory.

Under the Treaty, Japanese operators were permitted to continue fishing in the area for another seven years. As a result, some who had previously left Sakhalin returned there, and by 1882 there were 30 fishing grounds, 22 fishery bosses and 1,500 fishermen, with catches weighing 35,000 *koku* (5,250 tons). When the seven years were over, however, Russia imposed heavy taxes on fish catches leaving the area, changed its fishery regulations many times over, took control of the best fishing grounds and leased them to Russians. It was a deliberate policy of alienation. From 1902 onwards, fishing permits were granted exclusively to Russians, and the Japanese were left with only the traditionally permitted fishing grounds in southern Sakhalin.

Even so, the fishermen and general laborers employed by the Russians were all Japanese; the Japanese still had a hand in the control of fisheries.

Fisheries on the Coast of Mainland Russia

Like Sakhalin, the Nikolayevsk region on the continental side of the Sea of Okhotsk, and particularly the Lower Basin of the Amur River, was rich with resources of salmon and trout. Ventures into this region by Japanese fishery operators started in around 1870, increasing yearly thereafter.

The Russian government, sensing a threat in the gathering momentum, attempted to repel the Japanese by establishing provisional fishery regulations in 1879. The regulations prohibited fishing by Japanese, but since the majority of catches depended on the Japanese market, processing and exports by Japanese operators were tacitly accepted.

So now Japanese fishery operators leased fishing zones in the name of Russians, or continued to fish under the pretext of buying fish. Japanese fishing boats would carry fishermen, salt for preserving, fishing

nets, food and other provisions to Nikolayevsk, would loan these materials to Russians and have them engage in fisheries, then would buy up their catches and take them back to Japan. In other words, the whole operation was being managed by the Japanese side. Saké, sundry goods and other merchandise would also be loaded onto the ships for sale in Russia, and sometimes the fish catches were purchased with the profits from this activity.

The Russian government tacitly allowed this system to continue, because Russians at the time had low levels of management skill and technology related to fisheries; the region would have been impossible to develop if the Japanese had been squeezed out altogether. These operations increased from the second half of the 1890s, when Japanese fisheries in Sakhalin became difficult, and prospered until just before the outbreak of the Russo–Japanese War in 1904.

In the meantime, Japanese activity had been restricted in 1900, when the Russian government banned the employment of Japanese fishermen in the Nikolayevsk region in order to protect its own fishermen.

Fisheries on the Kamchatka Peninsula

In the Kamchatka region, meanwhile, the indigenous peoples had a long tradition of preserving salmon for their own consumption, whether by salt-drying or by fermenting fish in the ground. In the second half of the 1890s, however, entrepreneurs from mainland Russia started operating industrial-scale fisheries there. The main operators included Zubkov (14 fishing grounds), Kotik (26 fishing grounds) and Brunel (8 fishing grounds).

The leading company, Kotik, originally set out in 1891 with the aim of fur seal hunting, but when culls decreased in quality, turned its attention to fisheries. It then joined forces with Semenov-Denby, a company engaged in fisheries in Sakhalin, and expanded its salmon and trout business. Its first operation was in 1896, when it hired 46 Japanese fishermen to produce

Japanese-style salt-dried fish. From this operation, Kotik sent 7,000 salmon to Mitsui & Co. in Hakodate. Realizing the advantages of hiring Japanese workers, the company now did so in much larger numbers. Other Russian companies followed suit, and partly because the majority of catches were exported to Japan, the business model became hard to maintain without employing Japanese technicians or operating jointly with Japanese businesses. With the Russian government's ban on employing Japanese fishermen in 1900, however, Japanese-style salt-dried fish produced mainly by Russian companies came to an end that year.

In Japan, meanwhile, a survey report in 1894 suggested that the coast of the Kamchatka Peninsula offered superb salmon and trout fishing grounds. And when information came in from fishermen employed by Russian companies, followed by actual shipments of salt-dried fish in 1896, awareness of the Kamchatka Peninsula rapidly increased.

2. Establishment of a Russo–Japanese Fisheries Agreement

The Russo–Japanese War broke out in 1904, but peace talks were already underway in September of the following year. Japan's conditions included demands that Japanese fishing rights in the Japan Sea, the Sea of Okhotsk and the Bering Sea coasts be recognized; the Peace Treaty included a requirement that a Fisheries Agreement be signed.

The Russo–Japanese Fisheries Agreement was duly signed in 1907. It included provisions to the effect that, when undertaking fisheries and manufacturing in fishing zones leased through auction, both Russians and Japanese would receive equal treatment, and that

In 1899, Tokishiro Yoshimasu was the first to venture to Oloskoi, while Yujikeisaburo Saito sent two ships in collaboration with a Russian trader from Vladivostok. They returned to Japan carrying 500 *koku* in weight after only six months of operations. And the following year, fishery operators sent ships there in droves, having diverted them from Sakhalin and the Nikolayevsk area. Many of these had obtained fishing permits from the Russian government, but some were poachers.

Taken aback by these mass incursions of Japanese nationals, in 1901 the Russian government established a rule that both business owners and fishermen must have Russian nationality. Japanese owners got around this by replicating the tactics employed in Nikolayevsk (entering fish sale agreements with Russian entrepreneurs, employing Japanese fishermen but calling them seamen, etc.), and merely increased their presence in the area.

when exporting to Japan no export tax would be levied. The period of validity was 12 years.

Because Japanese fishery technology was more advanced in this period, the condition of equality even within Russian territory could be seen as advantageous to Japan. Under the Treaty, salmon and trout fisheries were officially permitted in coastal areas of the Kamchatka Peninsula and the Sea of Okhotsk, leading to a succession of new businesses moving into fisheries. This was the beginning of Japan's north-sea fisheries.

Chapter 2: The Rise of Modern-Style Fisheries — Creation of the Tamura Steamship Fishery Company 1905–1917

Part 1 Early Days of Trawling

1. The Start of Trawling

Thomas Albert Glover and the *Fukae Maru*

It was a man named Thomas Albert Glover who first introduced full-scale trawling to Japan. In 1908 he purchased an iron-hulled trawler from Aberdeen in Scotland and renamed it *Fukae Maru*, hired a Captain Ford and two other fishing experts and started operations in waters off the Goto Islands in May that year. Trawling gathered attention from that time on, quickly spreading throughout Japan.

Thomas Albert Glover was the son of Thomas Glover, a Scottish merchant and entrepreneur active in the late Edo and early Meiji eras. After studying biology (particularly in connection with fish) at the University of Pennsylvania, Glover returned to Japan in 1893 to take up employment with Holme Ringer & Co. The company, based in Nagasaki, was engaged in a wide range of fields, including tea, whaling and other fisheries, and trading. Then, in October 1907, Glover became director of the newly established Nagasaki Steamship Fishery Co., and by 1912 was in possession of six trawlers.

The success of Glover's *Fukae Maru* sparked a "trawl boom" in which a succession of trawlers were built or purchased. The government's view was that building trawlers would contribute greatly to the development of Japan's fisheries. As such, it initially issued subsidies under the Distant Water Fisheries Promotion Act, and placed no restrictions of any kind on operations. The result was that the number of trawlers increased

dramatically from two in 1908 to nine in 1909, seventeen in 1910, sixty-seven in 1911, and 139 (79 owned by companies and 60 by individuals) in 1912.

Moreover, the lack of any restrictions on operations meant that any business venturing into trawling could succeed in making a profit. In August 1910, the Japan Steam Trawler Fisheries Association was formed in Shimonoseki. Its purpose was to improve or develop steam trawler fisheries and promote the common interests of participating operators. Glover was persuaded to act as its Chairman.

Both Equipment and Knowledge Needed for Trawling

Trawling is a method of fishing that involves dragging a large bottom trawl net across the sea bottom. It promised large gains and was a coveted method for fishery operators. But trawlers depended on engines and equipment that could withstand the pressures of dragging nets through extensive areas of sea.

The method of trawling introduced from Britain involved dragging bottom trawl nets behind ships. However, greater efficiency in driving shoals into the nets could be achieved by fitting otter boards on the ends of ropes (warps) fed out from the bow and stern with the movement of the trawler, thus widening the net mouth laterally. The warps required a variety of equipment, including strong wire rope, a high-horsepower winch with which to reel it out and wind it

back in again, guiding rollers to lead the warps to both sides of the net and guide them in and out on the bow and stern, and a device for attaching and removing the otter boards. And on top of this advanced equipment, a wealth of knowledge and highly-trained fishing skills were needed in order to make use of it. A single trawler was said to cost as much as 100 longline ships, and therefore required a certain level of capital backing.

The wooden trawler *Kaiko Maru* had been built in 1904, but ended in failure owing to defects in the ship's body and equipment. In around 1907, *Hokusui*

Maru fished with some success in Uchiura Bay, Muroran. On board was Kosuke Kunishi, later to manage the Tamura Steamship Fishery Company, who at the time was on practical training with the Fisheries Training Institute. Kunishi later wrote of the attempts by *Kaiko Maru* and *Hokusui Maru*: "Early trawlers were structurally weak and poorly designed. They were incomplete as trawlers, and their fishing gear was also incomplete, while the fishing methods were nothing more than imitations" (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

2. Opposition to Trawling and Codification in Law

Anti-Trawling Movements

While the introduction of trawling was a major spur to the modernization of Japanese fisheries, it also dealt a serious blow to coastal and offshore fisheries. This was because there were no exclusion zones for trawling and trawlers operated close to the coasts. In Kansai and Chugoku, where bream longline fishing was particularly prominent, trawlers venturing into the fishing grounds would come alongside the longline fishing boats, sweep up the whole catch of bream in a single net, go to unload them at a fishing port and then return to the fishing grounds to continue fishing. This kind of activity was repeated continuously.

The livelihoods of coastal fishermen were severely threatened by this, and anti-trawling movements and disputes now started breaking out all over the country. In January 1908, *Kaiko Maru*, operating in seas off Choshi in Chiba Prefecture, was set on fire by Choshi fishermen while anchored at Hasaki, Ibaraki Prefecture.

Opposition movements by coastal fishermen gradually grew in scale, until a resolution was passed at a National Convention of Fishery Operators, to the effect that a "Petition on the Prohibition of Steam Trawler Fisheries" would be submitted to the government. The "Hundred-Year History of the Japan

Fisheries Association Part I" outlines the content of the petition as follows:

- Trawlers use steam power, extensively disturb the seabed, and operate unscrupulously in small reefs and the like, thereby ruining fishing grounds and interrupting fish breeding activity.
- Trawlers operate at depths of 20 to 70 fathoms, the traditional range of activity by coastal fishery operators, and this threatens the livelihoods of coastal fishery operators.
- This should be a time to find ways of protecting fish breeding, but activity such as trawling is designed merely for the profit of two or three capitalists. On what grounds, therefore, do the government authorities encourage fisheries such as these that will clearly lead to a decline in fish stocks?
- As seen in the recent ship-burning case in Chiba, fishermen in each prefecture are planning to form alliances and take extreme measures to eradicate trawlers. We therefore petition the government to ban steam trawler fisheries that rob fishermen of their livelihoods.

Conversely, a "Japan Fisheries Association Newsletter" dated April 10th, 1908, argues against the resolution by the National Convention of Fishery Operators:

"It stands to reason that large-scale fisheries will be

more profitable than small-scale fisheries, and it would not be appropriate for the government to ban large-scale fisheries that are finally in the process of growth and halt progress in the improvement of fishing tackle and fishing methods, just to protect certain small-scale fisheries. The impact of this should rather encourage research among coastal fishermen and bring improvements in their trading, storage, transportation and other aspects; calls to ban trawling are the narrow-minded ranting of those who do not understand the general trends of fisheries. However, trawling should not be unrestricted. It should be banned in inland seas, in bays, and along coasts. Even in open seas, exclusion zones should be established in fishing grounds where there are special circumstances. Before that, it is to be hoped that trawl fishery operators, after amassing sufficient experience in inland waters, should all move out to Korean Seas, China Seas and the Sea of Okhotsk...”

Enforcement of the “Regulations for the Control of Steam Trawler Fisheries”

The government, which had wanted to build up trawling as part of the modernization of fisheries, was now caught between the two stools of maintaining coastal fisheries and supporting trawling. By 1909, all major newspapers were reporting on this issue. Arguments both for and against trawling were published in the “Japan Fisheries Association Newsletter” and elsewhere. On April 4th, 1909, therefore, the government issued “Regulations for the Control of Steam Trawler Fisheries”, which came into force on June 1st that year.

The Regulations consisted of 12 articles, stipulating, among others, that the permission of the Minister of Agriculture and Commerce would be required for each vessel, applications would have to specify the operating area and be accompanied by copies of both the ship’s certificate of registration and its inspection certificate, the Ministry of Agriculture and Commerce would establish coastal exclusion zones, operators with

permits would have to submit business reports to the Ministry of Agriculture and Commerce each business year, and violators would be fined.

However, the very fact that the Control Regulations were established also meant that trawling had been legally recognized. Even the exclusion zones were mainly within bays and in the space between promontories, and there was no mitigation of the threat to trawlers by coastal fishermen. The penalties were also mild—up to 50 yen for violations and up to 100 yen for using unlicensed boats—and the method of policing in order to uncover violations was not specified. Behind these shortcomings lay the fact that many members of the government were advocates of trawling as a revolutionary new method of fishing.

This served to bolster the succession of businesses making startups in trawling. The enactment of the “Regulations for the Control of Steam Trawler Fisheries” had succeeded merely in fanning the anxiety of coastal fishermen, and led to a continuing spate of disputes all over the country. At the National Convention of Fishery Operators held in February 1910, a resolution was passed on expanding exclusion zones, limiting the number of ships, halting subsidies for coastal trawling, enacting specific methods of policing, and withdrawing permits from violators, among others; the government would be petitioned to amend the Regulations to incorporate these changes. This was just one of a number of organized opposition movements that sprang up around the country.

Trawling is a non-selective fishing method. As such, fishing grounds were rapidly ruined by overfishing. Infringements of exclusion zones, overfishing and other ills became rife, and the problem of pressure on coastal fisheries was re-ignited. Another problem that emerged was that seabed power cables linking Japan with China (mainly around Nagasaki) were frequently being cut by steam trawlers.

In view of these problems, the government decided to take up the demands of coastal fishermen and embark on sweeping limitation measures. Firstly, in October 1910 it removed trawling from eligibility for

subsidies under the Distant Water Fisheries Promotion Act. Then in January 1911 it removed steamships of 180 tons or less from eligibility for permits under the Regulations for the Control of Steam Trawler Fisheries. It also clarified the definition of trawling as referring to “fisheries undertaken by navigating in ships propelled by a screw propeller, using ‘otter trawls’ or ‘beam trawls’”, and limited the operating zones of newly licensed trawlers to waters west of 130° east longitude. In August that year, moreover, it expanded trawling exclusion zones. Exclusion zones were also established near seabed power cables linking Japan with China, mainly around Nagasaki. These exclusion zones were inside good fishing grounds in the East China Sea, the Yellow Sea and elsewhere, and when the fisheries patrol ship *Hisokucho Maru* was deployed and policing was strengthened in 1913, it came as a major blow to trawling.

Another issue was the depletion of resources. Most catches made by trawling at the time consisted of red sea bream, in particular. Because these fish grow slowly and live on the sea bottom, stocks rapidly diminished as a result of trawling. This in turn reduced the size of catches, so that fishing boats had to move further out to distant water areas in search of new fishing grounds. The capacity of refrigeration equipment could not keep pace with this, however, impairing the freshness of catches and reducing their prices.

The Trawl Boom and its Demise

Given the inherent nature of trawl fisheries, it was inevitable that they would eventually gravitate towards distant water. In fact, trawl operators lost no time in developing new fishing grounds in Korean waters.

In spite of the far-reaching government restrictions on trawling, there was no sign of abatement in the

vigor of the trawl boom. At the peak of Japanese trawling in 1912, there were 139 steamships in operation, making this a truly golden age for the industry. At the time, the cost of building a single steam trawler is said to have been 50–60,000 yen. But even with such a massive investment of capital, huge catches of high-quality fish that would quickly fill a ship to overflowing could be made by merely going out to new fishing grounds where nets had never been used and trawling the sea bed. The promise of immediate financial returns made trawling subject to expectations of high profit. And the attraction of this high profit sparked an almost abnormal trawl boom as soon as the method was introduced to Japan.

Amid this frenzied trawl boom, many who started up businesses had not previously worked in fisheries management, but were lured from other sectors by the high profitability of trawling in the early days. Trawling at the time was often undertaken by fish wholesalers or businesses that had previously had little to do with fish. In fact, it was not unusual to find rice wholesalers, doctors and others from Osaka and Kobe as trawler owners.

As a result, trawl operators were not always sufficiently prepared or equipped with sufficient knowledge for this type of business; they often had only poorly formed business plans for the future.

In many minds, this led to grave misgivings over the future of the newly emerging trawl fisheries. And it was not long before these misgivings became hard reality; the trawling industry, still heady with its initial success, suddenly turned to a downward slide, entering a period of severe crisis in which it was forced to reduce scale and reorganize.

Part 2 Founding of the Tamura Steamship Fishery Company

1. Ichiro Tamura and Kosuke Kunishi

Ichiro Tamura

Ichiro Tamura was born in Hagi, Abu-gun, Choshu Province (now Hagi City, Yamaguchi Prefecture) in January 1866 as the third son of Shozaburo Kuhara.

His father Shozaburo was the elder brother of Denzaburo Fujita, founder of the Fujita Gumi company. Together with their eldest brother Shikataro Fujita, he was involved in running the Fujita Gumi business together with Denzaburo from February 1873 onwards. After the Meiji Restoration, Denzaburo Fujita made a fortune out of military procurement. Fujita Gumi later rose to prominence in the Kansai business community through a variety of interests, including mining, agriculture and forestry, as well as land reclamation in Kojima Bay.

Three of Shozaburo Kuhara's sons—Ikuta, Ichiro and Fusanosuke—survived into adulthood (his second son Asazuchi died on April 10th, 1864). Ikuta and Ichiro were adopted into the houses of Saito and Tamura, respectively, while Fusanosuke continued the Kuhara line, according to the custom of inheritance by the last-born son. Fusanosuke initially worked at the Kosaka Mine, the center of Fujita Gumi's business operations. He left the company in 1905, but only after reviving the mine by updating the smelting process when it had been in danger of closure. In December that year, Fusanosuke purchased the Akasawa Mine



Founder Ichiro Tamura

from Ibaraki Prefecture, changed the name to Kuhara Kogyosho Hitachi Kozan (Hitachi Mine of Kuhara Mining) and took his first step as an independent entrepreneur. The business grew from that point, becoming the Kuhara Mining Company with capital of 10 million yen in September 1912. Some years later, in December 1928, it would be reorganized as the public listed company Nippon Sangyo Co., Ltd.

Back in 1880, Fusanosuke's eldest brother Ikuta was adopted into the family of Goichi Nakano, who included the governorship of Yamaguchi Prefecture among his previous appointments. Ikuta revived Goichi's former family name of Saito and became a major landowner in Kobe. Fusanosuke's second brother Ichiro, in turn, was adopted by his mother Fumi's family (Tamura) in 1895. The Tamura family had lived in Hagi for generations, and had been appointed *kawase goyokiki* (money exchange tradesmen) by the Choshu Clan in 1803. Their high social standing is illustrated by the fact that they donated 80 pieces of silver when the Hagi area suffered disastrous damage due to torrential rains in 1850.

As time went on, Ichiro's spirit of independent enterprise merely intensified. He even tried his hand at papermaking, sericulture and other fields, but was unsuccessful. His bitter experiences during this period served to hone his disposition as an entrepreneur, and later led to the emergence of a highly talented individual.

For some time, Ichiro had been interested in the future potential of fisheries, and on inheriting a share of his father Shozaburo's fortune, he discussed the idea of investing capital in the industry with his younger brother Fusanosuke. As a result, they resolved that the elder would take to the sea, the younger to the land—in other words, Ichiro would venture into fisheries, which were not even established as an industry



“Tamura Kan” lecture hall the elementary school in Katagiri, Nara Prefecture



The lighthouse at Ako in Hyogo Prefecture

at the time. From that time on, he and Fusanosuke were to help each throughout their lives, firstly as business advisors, and later, when Fusanosuke entered the political world, as supporters.

Ichiro was certainly not without his philanthropic side, and made numerous donations and contributions to worthy causes. He donated a lecture hall to the elementary school of Katagiri in Nara Prefecture, where he lived; he also contributed to the cost of building a lighthouse in Ako, Hyogo Prefecture, where shipping accidents were commonplace. He donated 5,000 *tsubo* of land (about 4 acres) in Fushimi, Kyoto, site of the birth of Dogen (founder of the Soto Sect of Buddhism), and contributed to the construction of Tanjoji (“Birth”) Temple there.

Of the 1 million yen inherited from his father in 1907, Ichiro made investments in three sectors: 500,000 yen in a Korean seafood trading and pollack liver oil manufacturing business, and in north-sea herring, salmon and trout fisheries; and 300,000 yen in trawl fisheries. For the Korean business, he established a branch (Tamura Shoten) in Busan, and sent Kenkichi Ueki, who had only just joined the company, to do business through the agency of the Korean Fisheries Association, among others. Success was unforthcoming, however, and so in 1912 he sent Ueki to Nikolayevsk in Russia, there to gain a foothold in north-sea fisheries.

After the Meiji Reformation, fisheries along the coasts of the Korean Peninsula were undeveloped, very much like coastal fisheries in Japan. For those engaged in fisheries mainly in western Japan, these

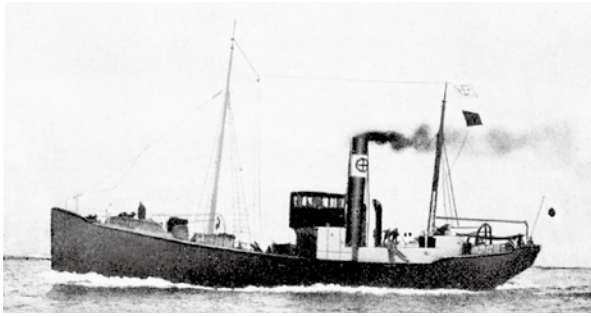
waters could be accessed via the Goto islands, Iki, Tsushima and other intermediate islands. These were extremely effective as bases for fishing operations. Consequently, operators in western Japan had been actively venturing out to those parts since the beginning of the Meiji era.

The rights situation became clearer with the signing of the Japan–Korea Treaty of Amity in 1876 and the Japan–Korea Trade Regulations in 1883, followed by the issue of detailed provisions under the Japan–Korea Fishing Regulations of 1889. In 1900, Korean Fishing Cooperatives were established in each prefecture, and a Federation of Korean Fishing Cooperatives was formed as a collective body for these. These examples merely illustrate the height of interest in coastal areas of the Korean Peninsula at the time.

In 1890 there had been 718 fishing boats venturing into Korean waters, but this number continued to increase thereafter. According to estimates for 1911, they had burgeoned to 5,000 fishing boats sent by 171 fishery organizations in 27 prefectures, employing 42,000 people.

Ichiro Tamura’s motivation to enter fisheries and his initial attempt to establish a business presence on the Korean Peninsula should be seen in the context of this trend.

In November 1908, six months after the *Fukae Maru* and at the urging of his relative Juro Oka, Ichiro Tamura built a 199-ton iron-hulled steam trawler at the Sakurajima Works of the Osaka Iron Works company (later to become Hitachi Zosen Corporation). He named the ship *Dai-Ichi Maru*.



Dai-Ichi Maru, Japan's first iron-hulled trawler

This was not only the first iron-hulled trawler to be built in Japan, but also the first steamship to obtain a license under the “Regulations for the Control of Steam Trawler Fisheries”. However, despite carrying out trial operations in the Seto Inland Sea, the outcome from *Dai-Ichi Maru* left much to be desired. Conversely, the *Fukae Maru*, the ship purchased by Thomas Albert Glover in Scotland six months earlier, was already operating with significant success. Ichiro Tamura came to the conclusion that the difference between the *Dai-Ichi Maru* and the *Fukae Maru* was inexperience in design and fishing methods. In July 1910, therefore, he sent Kosuke Kunishi to Great Britain, an advanced trawling nation, to build a trawler there.

Kosuke Kunishi

Kosuke Kunishi was born in Kobe, Hyogo Prefecture on February 10th, 1887, as the third son of Heita Nomi, a samurai from Yamaguchi Prefecture. He was adopted by Sukeju Kunishi, another samurai from Yamaguchi Prefecture, in August 1893. His adoptive father Sukeju was the elder brother of his natural mother Ume, and was the son of the younger sister of Yahachi Aikawa,



Kosuke Kunishi during his stay in Britain

father of Yoshisuke Aikawa (later to achieve fame as founder of the Nissan Konzern conglomerate). When Sukeju passed away suddenly in March 1896, the remaining Kunishi family became dependent on the Aikawa family.

When Kunishi graduated from Yamaguchi Middle School in March 1904, he confided to Yoshisuke Aikawa, who had graduated from Tokyo Imperial University the previous year, his wish to go into fisheries in future. Aikawa then met with Shinnosuke Matsubara, Director of the Ministry of Agriculture and Commerce Fisheries Training Institute, and Naomasa Maki, Director-General of the Ministry's Fisheries Bureau. On confirming the future potential of fisheries, he recommended that Kunishi enter the Fisheries Training Institute.

Cautious by nature, Kunishi also consulted his relative Kaoru Inoue (a Meiji and Taisho era politician) and Kusuyata Kimura of the Mitsubishi *zaibatsu* (President of Mitsubishi Joint Stock Company from 1920 to 1935), who had married Aikawa's elder sister. Only then did he enroll in the Fisheries Course (Regular Course) of the Ministry of Agriculture and Commerce Fisheries Training Institute. On graduating from the Course in July 1907, the Ministry arranged for him to become a trainee in distant water fisheries in August. He then enrolled in the Distant Water fisheries Course from the Fisheries Training Institute. In February of the following year, the Ministry sent him to Europe for practical training in distant water fisheries, whereupon he received training in steam trawler fisheries in both Britain and Germany.

Returning to Japan after studying overseas for 18 months, Kunishi graduated from the Distant Water fisheries Course and took up employment in yellowtail large lift-net fisheries operated by Ichiro Tamura in Tsutsu, Tsushima. Finally, he was sent back to Britain in July 1910 to oversee the construction of a trawler commissioned there and to bring it back to Japan.

2. Establishment of the Tamura Steamship Fishery Company

Construction of *Minato Maru*

On his return to Britain, Kosuke Kunishi ordered a trawler from the Smiths Dock shipyard in Middlesbrough, Yorkshire.

The trawler was completed in March 1911. The main specifications were as follows:

Gross tonnage: 188.84 tons

Length: 33.53 m

Beam: 6.4 m

Height: 3.58 m

Max. speed: 9.96 knots (ca. 18 kph)

Range: 2,500 nautical miles (4,630 km)

Horsepower: 410 hp

The trawler, named *Minato Maru*, took just over two months to complete the journey to Japan, with Kosuke Kunishi himself on board.

Also on board was the fishing master Hardisty, a captain hired by Kunishi in England. Levels of ship handling and fishing methods by Japanese operators at the time were still quite low; Kunishi aimed to increase these levels through Hardisty's guidance. Kunishi would later explain his rationale at the time as follows:

“I thought I should stop immersing myself vainly in various pointless surveys and research without testing my actual abilities. Before all else, I should go to England and have the most advanced trawler built there. To operate it, I would recruit a captain with the most experience in his country, make him a leader, and thereby train superior new people. Then with that ship and those people, I would first produce something on a par with England, then make further improvements and advances to adapt to circumstances in Japan. As well as being the safest and most reliable measure, this would also be the way to make best use of the characteristics of Japanese people” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Then, with the arrival of *Minato Maru* in May 1911, Ichiro Tamura established the Tamura Steamship

Fishery Company in Shimonoseki City, Yamaguchi Prefecture, making Kunishi responsible for full-scale trawling operations. Later, Aikawa described the situation at the time thus: “To support his (Kunishi's) work from the very beginning, I introduced him to Kuhara as a potential source of capital. Kuhara then used his elder brother Tamura's capital to establish the Tamura Fishery Company, which he then developed as a business” (ibid.).

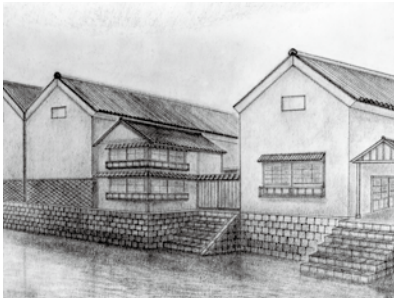
Ken-ichi Katsuno, an employee at the time, recalls the newly-launched Tamura Steamship Fishery Company:

“When the Tamura Steamship Fishery Company was first created, we rented a two-story house measuring about 12 *tsubo* (ca. 48 square meters), with a fairly spacious rented storehouse. The house had been built near the coast as a retreat for the family of a man named Kokichi Hirotaki, a goods wholesaler of 18 Kannonzaki-cho, Shimonoseki City. To enter the premises from the street, you had to cross over from the earth floor of the shop to the kitchen and pass in front of the gloomy storehouse. On the other hand, you could see the sea right outside the window and the view was wonderful. It was also very convenient for communicating with berthed ships. The office and kitchen were downstairs, with a single room upstairs. It had cupboards and an alcove, and there was no inconvenience to those of us who lived there (Kunishi, Katsuno)” (Conversation with Ken-ichi Katsuno).

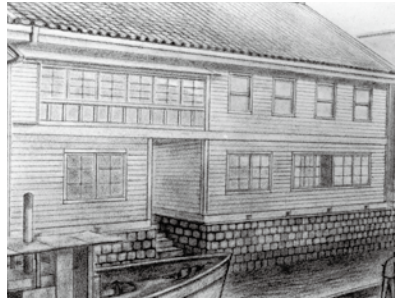
It was from this two-story rented house that



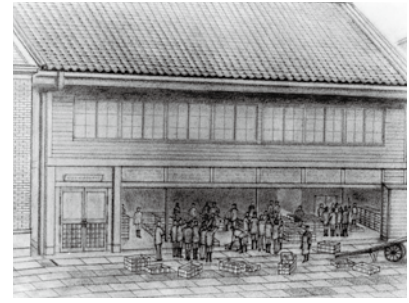
The *Minato Maru*, built at the Smiths Dock shipyard in England (completed in March 1911)



The Kannonzaki Office at the time of the company's founding in 1911



The company moved to the Hanano-cho Office in 1917, and was based here until 1929.



The street side of the Hanano-cho Office was a fish market.

“Nippon Suisan” would be conceived.

Katsuno describes Kosuke Kunishi’s work ethic at the time with the following anecdote: “One day we made a huge catch of gurnard. Usually the ship would return to port with the fish packed in cases on board, but because this would have taken too long, *Minato Maru* docked at 8 o’clock that night with the catch loose on deck. When he saw that, Kunishi said “Let’s pack it through the night”. The captain agreed, saying “Other companies also had ships out there, and they have all made big catches. They’ll be back here by tomorrow morning”. Kunishi changed into working overalls, and mucked in together with the crew to spend all night packing the fish into crates, then shipped them to market early the next morning and sold them off at high prices. The gurnard brought into port later by the other ships went for half the price”.

Again, on Kunishi’s earnest attitude to his work, Keizo Tamura, adopted son of Ichiro Tamura and 2nd President of Nippon Suisan, recalls: “He would board the trawler himself and go to the fishing grounds, catch the fish, bring it back and unload it, then take it himself to the market and sell it. And once he had finished that work, he would board the trawler again and go back out to the fishing grounds. That was how enthusiastic he was about working in the trawling business. (part omitted) The other trawl operators all said he was uncooperative, but the way Kunishi worked—well, at the time it was called it the Tamura Steamship Fishery Company, but I think the fact that it could always make a profit was solely because Kunishi would take it upon himself to do everything from catching

the fish to selling them” (ibid.).

The Tamura Policy of Not Selling Ships

The trawling boom in Korean waters and elsewhere now entered a period of crisis. This was due partly to the devastation of fishing grounds caused by the proliferation of fishery operators and overfishing, and partly to the strengthening of government regulations. Of 139 ships at the peak in 1912, four were scrapped in 1913; only 40 out of 131 licensed ships were actually engaged in operations in 1914, illustrating the sheer speed with which the industry declined.

Operators in the industry now tried to overcome this crisis with one of two quite different measures. One was that “If vessel tonnage could be increased slightly, and superior ships with sufficient speed and cruising range could be achieved, I recognize no need for pessimism over the future of this industry...” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*). In other words, this was a positive response. The Tamura Steamship Fishery Company managed by Kosuke Kunishi was at the forefront of this approach, and in fact, continued to make steady profits and maintain solid business.

The other measure was designed to strengthen business through corporate amalgamation. The idea here was that “the only thing is to rally together like-minded trawler owners, to add new personnel and capital to form a large organization, to reform business management and coordinate ship movements, thus making sales of fish catches more profitable and

reducing costs” (ibid.). In fact, a corporate amalgamation was planned in line with this principle; in November 1914, eleven businesses merged to form Kyodo Gyogyo Kaisha, Ltd. (capital 2 million yen), the largest single business in the industry with a total of 18 steam trawlers.

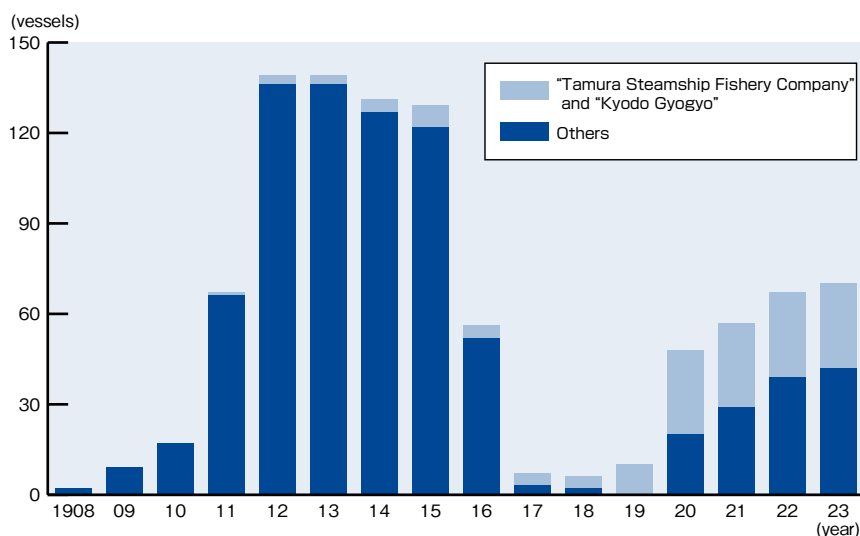
But then, just as the search for ways of beating the crisis continued, World War I broke out—a double-edged sword for trawl operators. For the war heralded a hitherto unknown boom in the marine shipping world, cargo space became scarce and ship prices soared. Steam trawlers could easily be converted to cargo ships, while their excellent mobility made them ideally suited as minesweepers and lookout ships for submarines. This led to a surge in demand for steam trawlers among shipping companies, as well as in Britain, France and other allied nations; now, steamships that cost 50–60,000 yen to build were being sold for 250–260,000 yen. Some operators, suffering under financial difficulties and feeling anxiety over the future, gave up on fisheries. Instead, they now competed to sell the steamships they had competed to build during the boom years. The buyers were shipping companies and allied nations. It was “an odd phenomenon whereby the fallen giants of yesterday become the upstart rich of today” (Takashi Katsuta, ed. *Suisan Nijunen Shi*, “Twenty-Year History of

Fisheries”, 1932). As a result, the number of steam trawlers, standing at 139 ships at their peak, had fallen to 56 or less than half by 1916.

That year, however, fish prices were suddenly inflated due to the booming wartime economy. For trawl operators, this was a once-only opportunity for recovery. But by that time many operators had already chosen the path of selling their ships rather than rebuilding their business, and had withdrawn from the industry. Many of these had not originally been based in fisheries, but were speculative operators that had merely jumped onto the bandwagon of the trawl boom.

Amid these changes, the Tamura Steamship Fishery Company alone chose a business path that differed from the others. Rather than following other operators in selling their ships during the war, it adopted a consistent policy of not selling ships. Quite the contrary, in fact, as it actually attempted to strengthen its fleet. As a result, the Tamura Steamship Fishery Company owned four out of only six trawlers remaining in Japan by the war’s end in 1918. And so, in the period of greatest prosperity for trawl operators between the final stages of the war and the period immediately following it, the four ships owned by the Tamura Steamship Fishery Company were operating freely in seas that were already emptied of competitors; the seas were theirs and theirs alone.

Trends in numbers of steam trawlers (1908–1923)



Source: Fisheries Bureau, Ministry of Agriculture and Forestry, *Present Status of Steam Trawl Fisheries* (1936), others

Part 3 North-Sea Fisheries and Management of the Ship Business

1. Ichiro Tamura and North-Sea Fisheries

The Start of North-Sea Fisheries and Founding of “Ichi-I Gumi”

In the early days of the Meiji era, north-sea fishing grounds centering on Sakhalin were rich in a variety of fish; besides salmon and trout, crab, herrings and cod, they offered other important produce such as whales and kelp. Japan and Russia were continually in dispute over territorial rights to Sakhalin, and had continued to cohabit the area with no clear boundary markers.

In 1875, a degree of settlement was achieved under the Treaty for the Exchange of Sakhalin for the Kuril Islands. However, this brought considerable anguish to the many private capitalists who had invested in Sakhalin and undertaken fishery activity there. Although some vested interests were retained, their dissatisfaction under the rule of the Russian government was to continue for a long time to come.

A major turning point in the situation regarding north-sea fisheries came with victory in the Russo–Japanese War. This was because Japan thereby acquired territorial rights to the southern half of Sakhalin. On the subject of fishing rights, however, the only provision was made in Article 11 of the Treaty of Portsmouth:

“Russia engages to arrange with Japan for granting to Japanese subjects rights of fishery along the coasts of the Russian possession in the Japan, Okhotsk and Bering Seas”.

A Russo–Japanese Fisheries Agreement was concluded on this basis in 1907. It consisted of 14 articles and a supplementary protocol, providing for the definition of Russian and Japanese fishing rights, fishing areas, fishing methods, traffic, transportation, taxation, nationality of workers, and equal treatment of Russians and Japanese, among others.

Full-scale north-sea fisheries were to commence against this international and social backdrop.

It was around 1907 that Ichiro Tamura himself ventured into north-sea fisheries. Hearing that Isaburo Yonebayashi was having trouble with his herring fishery business in Sakhalin, Ichiro approached him with a proposal for joint operations.

The proposal bore fruit, and the joint venture was to be called “Ichi-I Gumi (The Ichi-I Group)”. “Ichi-I” was made up of the “Ichi” of Ichiro Tamura and the “I” of Isaburo Yonebayashi. Tamura did not manage the business in person, but appointed Setsutarō Nakayama to do so in his stead.

Nakayama was born in 1873 as the son of a samurai from Okayama Prefecture. He barely managed to graduate from Osaka Commercial School and spent a time in coal trading and other pursuits before establishing the Osaka Woolen Mill Company in 1903. The company made a huge success out of military demand arising from the ensuing Russo–Japanese War. Having secured his own business capital, Nakayama then visited Sakhalin and realized the potential of north-sea fisheries. At the time, Nakayama was a member of the Kuhara Mining management team, but on finishing his work in mining for the company, was recommended to join Ichi-I Gumi.

Tamura decided to engage Nakayama in Sakhalin herring fisheries, and at the same time appointed him to oversee the management of Ichi-I Gumi. The business then grew rapidly. The reason for this was that the management method differed significantly from that of other businesses.

At the time, most north-sea fisheries adopted a system of “advance purchase”. Here, the norm was that the supply of all fish catches would be promised to marine produce traders in Hakodate, which would furnish the purchasing capital, fishing tackle and nets

needed for operations. With this system, most of the profit went into the pockets of the traders, while the actual fishery operators could not accumulate capital.

In contrast, Ichi-I Gumi insisted on using its own capital, and was therefore free of this yoke.

At first, Ichi-I Gumi's main interest lay in Sakhalin herring fisheries, but as little success was forthcoming, it immediately switched to salmon purchasing in Nikolayevsk, Russia. In 1912, Kenkichi Ueki was sent to take charge of the work. Ueki was a graduate of the Fisheries Training Institute, and had worked as an instructor at the Fisheries Training Institute of Toyama Prefecture. He would later become the 3rd President of Nippon Suisan. Also in 1912, Ichi-I Gumi won a contract for estuarine fishing grounds in Kamchatka, and now ranked alongside Tsutsumi Shokai and Yushutsu Shokuhin K.K. (Exported Foods Co.) in importance.

In the following year, 1913, there were 231 fishing zones in Russian territory fisheries. Ichi-I Gumi operated 13 of these, more than Tsutsumi Shokai, making it a leading operator in the north-sea region. In the same year, it set up two canneries in Nikolayevsk. Products from these factories were exported via Mitsubishi Corporation.

As Ichi-I Gumi's business had shifted to salmon fisheries soon after its establishment, the connection with Yonebayashi's herring business became diluted and Yonebayashi left the company. In 1914, Tamura changed the name from Ichi-I Gumi to Nichiro Gyogyo Kaisha, Ltd., capitalized at 2 million yen. Ichiro Tamura owned 15,000 shares and Fusanosuke Kuhara 10,000. The President was Ichiro Tamura, the Executive Director Setsutaro Nakayama, the Director Hideo Nishimura and the Auditor Eikichi Sasano.

Nichiro Gyogyo's business went smoothly from the very first year. World events conspired in the company's success; for in this year, World War I broke out, stimulating demand. Exports of canned products were brisk and a profit of 300,000 yen was posted in the first business year, producing a 10% dividend. In the

2nd term, despite a decrease in catches, a dividend of 12% was secured. However, this profit was mainly from the construction and sale of new ships, as well as subleasing to shipping companies of chartered ships under long-term agreements for transportation to the Kamchatka fishing grounds.

In terms of equipment, canning machinery was imported from America, while the company had 25 fishing zones in Kamchatka and 41 in total, if those in Sakhalin and Iturup are included.

In the 3rd term, despite an expansion of fishing zones, catches of Sakhalin herrings were poor while transport and material costs became inflated. As a result of these and other factors, profits from fisheries were lower at 215,000 yen. The company's results were further affected by the transfer of the highly profitable ship business to the newly established Nippon Kisen K.K. (Japan Steamship Co.).

Sale of Nichiro Gyogyo and Withdrawal from North-Sea Fisheries

Tamura decided to withdraw from Nichiro Gyogyo as early as 1916. Two major factors can be seen behind this decision.

The first was that north-sea fisheries had a strong element of speculative enterprise, and stable catches were difficult to achieve. In 1916, the 3rd business term, catches in fishing grounds on the east coast of the Kamchatka Peninsula fell by half. At the same time, productivity in canned foods held the key to profits in north-sea fisheries, but the fact that the company started this later than other companies also became a problem. To achieve long-term, stable profits, massive investments of capital would be needed, but there was little prospect of the political stability required to achieve this.

The second major factor was the soaring inflation of ship prices caused by World War I. Setsutaro Nakayama had chosen the path of investing capital in shipbuilding and dealing in ships rather than continuing north-sea fisheries as they were.

At an Extraordinary General Meeting of Shareholders held in November 1916, a business diversification plan was laid out. The company's capital would be increased from 2 million yen to 5 million yen, while the business objective would be changed from "Fisheries, and manufacture and marketing of marine products" to "Fisheries, and manufacture and marketing of marine, agricultural and forestry products", this even extending to "livestock farming".

But the plan was never fully pursued. For when Osaka stockbroker Tokuzo Shima offered by buy out Nichiro Gyogyo in December that year, the offer was readily accepted. A shareholder dividend of 486,000 yen was paid out, representing the whole amount left after deducting fishing ground amortization costs and statutory reserves from the total of 561,000 yen profit for that business year, added to profits carried over from the previous term.

2. Ichiro Tamura and the Ship Business

Establishment of Nippon Kisen and the Ship Business

Ichiro Tamura's decision to withdraw from north-sea fisheries was based on the advice of Setsutarō Nakayama and Kenkichi Ueki, whom he had entrusted with managing the business. It was their judgment that, rather than investing in north-sea fisheries, there would be greater profit in concentrating capital in the shipping business and buying (or building) and selling ships.

Capital had been earmarked for purchasing rights to yellowtail fixed net fisheries, planned for the winter months when north-sea fisheries were in low season. Nakayama persuaded Tamura and Kuhara to purchase a secondhand ship with this capital and charter it to shipping companies. In the process, he succeeded in buying a ship for 750,000 yen and selling it for 2 million yen, and with the proceeds established Nippon Kisen in 1915. Besides President Tamura and Executive Director Nakayama, the company only had five employees, and was more like a ship broker than a shipping business. To make the business run even more smoothly, they would need to engage in building and selling ships. This was how the plan to purchase Osaka Iron Works materialized.

Founded in 1881 by Irishman Edward Hazlett Hunter, Osaka Iron Works was a western-style shipyard that started shipbuilding operations at Sakurajima, Nishi-ku, Osaka in 1890. *Dai-Ichi Maru*, the first

trawler built by Tamura, was one of its products.

Along with a capital expansion plan for Osaka Iron Works, Nippon Kisen had a majority shareholding in the company by 1918, and thus succeeded in bringing it under its wing. Osaka Iron Works built 16 ships weighing a total of 79,828 tons over the three years from 1916, gaining enormous profits amid the wartime scenario.

As Kenkichi Ueki recalled: "Our plan to build 60,000 tons a year and 300,000 tons in 5 years did not proceed completely as we had wanted. Osaka Iron Works was busy with other orders too, and could not produce on time. This made us think that our work would not go according to plan, and so to free up the shipyard, we bought a majority share in Osaka Iron Works and made it a subsidiary of Nippon Kisen. (part omitted) When we could produce 300,000 tons, Nippon Kisen's business was at its peak. We would build ships and sell them, or buy ships and sell them, and things just got better and better. (part omitted) When things were at the peak, we earned as much as 200 million yen in the old money" (*Ueki Memoirs*).

However, after the end of World War I, the Kuhara Shoji trading company run by Fusanosuke Kuhara ran into difficulties, and Tamura injected a large part of the profit gained from Nippon Kisen in an attempt to save it. As a result, Nippon Kisen had to be dissolved in 1921.

Ichiro Tamura had invested a fortune in fisheries, but was not directly involved in running the business,

leaving everything to managers he could trust — north-sea fisheries to Setsutarō Nakayama, trawling to Kosuke Kunishi.

Once fishing rights in Russian coastal territories had been secured following the Russo–Japanese War, Nakayama persuaded Tamura to move into north-sea fishing grounds. But the outcome fell short of expectations, and when he noticed the boom in the shipping and shipbuilding sector on the outbreak of World War I, he quickly withdrew from fisheries and switched industries.

Kosuke Kunishi’s attitude towards business management differed from that of Nakayama. Kunishi was earnestness personified: he immersed himself solely in trawling, and did not drink, smoke or attend parties. Sometimes known as “steel-reinforced concrete”, he was a methodical, plain entrepreneur, a man of few words, driven by a strong spirit of study.

Tamura’s business was later to converge around Kunishi, who was to become the driving force behind the largest fisheries corporation in Japan before World War II—Nippon Suisan.

Chapter 3: Industrial Expansion and Technological Innovation — Growth of “Kyodo Gyogyo”

1918–1933

Part 1 Establishment of “Kyodo Gyogyo”

1. The Postwar Depression and Fisheries

Postwar Depression, Corporate Integration and Mergers

The end of World War I in November 1918 also spelt the end of the wartime boom economy. Industries instantly turned to recession, but bottomed out after less than six months, returning to positive growth from around April 1919. This was due to a number of factors: the terrible devastation suffered by European countries in the war meant that there was no immediate obstruction to imports from Japan, and this helped the shipping industry to recover quickly. Again, the raw silk market rediscovered its vitality due to an upturn in America, the only nation to profit from the Great War.

But the improvement in fortunes could not last for ever. Stockmarket collapses in both Tokyo and Osaka in the spring of 1920 triggered the arrival of a fully fledged postwar depression. Various commodity prices

also plummeted. The slump, called “*gara*” (a crash) at the time, brought many companies to bankruptcy, including the raw silk export giant Mogi Sobei Shoten and 74 affiliated banks. The tumble in the price of raw silk, in particular, not only delivered a direct blow to the sericulture industry, which had been one of Japan’s leading industries since the Meiji era, but also robbed impoverished farming villages of their biggest side income.

Businesses tried to weather the storm by withdrawing from many commodity markets and creating syndicates, among other moves. The government and Bank of Japan issued coordinated statements, and embarked on bail-out loans by releasing large amounts of capital. Although the government’s relief measures were inflationary in nature, the postwar depression nevertheless subsided after only six months. However, the Japanese economy thereafter was not to experience another proper economic boom, even as times moved

on to the Showa era.

Between the end of the Great War and the beginning of the Showa era, there was a progressive climate of corporate integration and mergers amid the recession. *Zaibatsu*-related companies suddenly increased in power and swallowed up weaker companies. The “bubble businesses” that had appeared during the wartime boom nearly all vanished. In that sense, the postwar depression actually helped to reorganize industry. In various sectors, there were increasingly active moves to form cartels with which to regulate production, sales routes, prices and so on, in a bid to survive the recession.

As this situation continued, the magnitude 7.9 Great Kanto Earthquake struck on September 1st, 1923. It dealt a devastating blow to Tokyo and Yokohama, the beating heart of the nation, with damage extending to and around the Kanto region. The ensuing fires and aftermath left around 133,000 people dead or missing.

The government announced a 30-day moratorium on all payments, and took other steps including arranging for the Bank of Japan to issue special loans in the form of “earthquake bonds”. Even so, the losses suffered as a result of the earthquake further aggravated the business of private companies. But the government and Bank of Japan, fearing corporate bankruptcies, continued bailout loans even while knowing that the companies were insolvent. As a result, the earthquake bonds turned into bad debts.

From Financial Depression to the Great Depression

The Emperor Taisho passed away as 1926 neared its end, and on December 25th the Showa era was born. But in practical terms, Showa started in the following year (1927).

The Showa era started during a time of financial depression. A slip of the tongue by Finance Minister Naoharu Kataoka in March 1927, to the effect that the Tokyo Watanabe Bank had folded, triggered a run

on the bank followed by closures and bankruptcies of small banks all over Japan. The Suzuki Shoten company in Kobe, which had enjoyed sudden growth in the Great War boom, collapsed as a result of withdrawn earthquake bonds. Suzuki Shoten’s main bank was the Bank of Taiwan, which owned more bad debts than any other. The government tried to issue an emergency order to bail out the Bank of Taiwan, which was now in a state of financial crisis. But the request was rejected by the Privy Council and Prime Minister Reijiro Wakatsuki was forced to resign, along with his entire Cabinet.

A new Cabinet was now formed under Giichi Tanaka, and the new Finance Minister Korekiyo Takahashi decided to impose a three-week moratorium by government order. He also instructed the Bank of Japan to issue special loans with losses of 500 million yen guaranteed by the government. The moratorium was very effective, bank runs subsided, and the situation eased. With this, a crisis of confidence in banks was averted.

Many banks went under in this financial depression, while deposits became progressively concentrated in the five big banks of Mitsubishi, Mitsui, Sumitomo, Dai-Ichi and Yasuda. Both the banks, in their wish for overseas exports of excess capital, and industry, which sought an economic recovery, next hoped for the gold embargo to be lifted. The global trend was for a return to the gold standard, which had been abandoned during World War I. America had achieved this in 1920, Germany in 1924, Britain in 1925 and France in 1928. Japan, however, had missed its chance as a result of the repeated depressions and other problems.

The Cabinet of Osachi Hamaguchi, formed in July 1929, made returning to the gold standard a central pillar of its policy. Despite opposition from some parts, this was achieved in January 1930. But the timing was not good. In America, a depression had been triggered by a devastating stockmarket crash the previous October. At the time, hardly anyone predicted that this would be the start of a Great Depression that

would sweep the world. Japan was not spared its impact; under the weight of a gradually worsening global economy, Japan fell into an unprecedented depression of her own (the Showa Depression).

The first thing to happen was a sharp outflow of gold and a stockmarket crash. Raw silk, which was dependent on America, also collapsed and exports failed. The economy was plagued by a vicious deflationary spiral of falling commodity prices and receding demand, while mining and manufacturing output fell dramatically and unemployment rose. There were no jobs for university graduates, prompting the common

saying “But I went to university!”. In medium, small and micro capital, cases abounded of factory owners disappearing overnight and wages not being paid.

The Great Depression also had a direct impact on rural areas. In 1930, raw silk prices were continuing to hit new lows, and rice prices also collapsed. And in 1931 harvests failed in Tohoku and Hokkaido.

This era of recession and depression started to improve with the Manchurian Incident of 1931 and the rise of industries catering to military demand. But this was also the start of a period of war.

2. From the Tamura Steamship Fishery Company to Kyodo Gyogyo

Purchase of Kyodo Gyogyo Shares and Corporate Merger

Due to a dramatic decline in the number of steamships, the government now amended the “Regulations for the Control of Steam Trawler Fisheries” in January 1917 with a view to reviving trawl fisheries and consolidating growth. The amendment restricted the number of steam trawlers to 70 ships, and limited new shipbuilding to superior vessels with at least 200 tons in weight, a speed of at least 11 knots, and a cruising range of at least 2,000 nautical miles. Moreover, in view of European experiences in World War I, it also included additional provisions for reinforced structures that could be of use for military purposes as reserve vessels in the event of an emergency.

Among the permitted number of 70 ships for trawling, there were some companies that did not actually have ships in operation, despite holding rights. One of those was Kyodo Gyogyo, which possessed 18 ships and the largest share of existing rights.

Kyodo Gyogyo had been established in 1914 as an amalgamation of five companies concerned over the possibility of a future crisis in trawling (Naigai Suisan, Kasuga Gyogyo, Daiwa Gyogyo, Shimonoseki Suisan and Mitsuuroko) and six individual operators (Eima Takatsu, Shozo Tanaka, Tokichi Okazaki, Shin

Machida, Yoshiharu Fukuhara and Senjiro Itakura).

With its Head Office in Tokyo and branches in Osaka, Shimonoseki and Nagasaki, Kyodo Gyogyo was the leading business in the industry with 25 trawlers in its possession. But although the company’s capital was 2 million yen, the paid-up capital of 500,000 yen only included 50,000 yen in cash; the remaining 450,000 yen had been converted to shares as payment for ships owned by each of the participants.

Serving as the company’s President was a man named Shaku Hoshino. His business interests lay in printing and publishing; he was a President in name only. Instead, it was Managing Director Eima Takatsu who held the real power.

Takatsu had graduated from Tokyo Imperial University before working for an oil company. Then he was adopted as a son-in-law by the head of Takatsu Shoten, a Kobe firm with a wide range of interests in civil engineering, construction and trade. Takatsu eventually inherited the business. After the Russo-Japanese War, he was appointed President of Kobe Kisen K.K., of which the Takatsu family was the major shareholder.

The shipping industry was in dire straits at the time, and so Takatsu pulled out of that business and sold the company’s ships. With the proceeds, he purchased a foreign trawler and moved into trawling. Now he

invited Jinpachi Hayashida and Chiyoma Iwamoto, who had learnt trawl fishing methods in Britain after graduating from the Ministry of Agriculture and Commerce Fisheries Training Institute. With them, he created a new Takatsu Shoten Fisheries Department and launched the business.

Like other trawl operators, the Takatsu Shoten Fisheries Department also built a factory where the fishing nets used by the company's own ships were made and repaired. The nets dyed and prepared at the factory were Japan's very first "Manila nets", using technology learnt by Iwamoto in the UK. This would lead to Takatsu Shoten's core business.

When Kyodo Gyogyo was founded in November 1914, the four ships owned by the Takatsu Shoten Fisheries Department were transferred to Kyodo Gyogyo, while Hayashida, a central player in founding the company, was made a Department Manager. With this, the Takatsu Shoten Fisheries Department was dissolved, and the net-making division led by Iwamoto became an independent entity in the manufacture and sale of fishing nets and fishing tackle. For this, it started life anew under the name of Takatsu Shoten Net-Making Department.

At the time, around 60 trawlers weighing less than 300 tons (mainly those of Kyodo Gyogyo) were based at Shimonoseki, and nearly all the fishing nets and fishing tackle for these were supplied by the Takatsu Shoten Net-Making Department. Although most trawl operators supplied their own fishing nets, as more and more trawlers became integrated under Kyodo Gyogyo, their supplies of fishing nets were also taken over by the Takatsu Shoten Net-Making Department.

Under the guidance of Takatsu and Hayashida, Kyodo Gyogyo made a profit in its first business year, but was forced into tight financial straits owing to a lack of startup capital. Despite the healthy situation of Takatsu Shoten, the company had its hands tied by loan repayments and other pressures.

Thus, at the beginning of fiscal 1916, two years after the company's establishment, it started to implement

radical reforms. As part of this, a proposal to sell the company's ships was included in the business plan for the following fiscal year. The initial aim was only to sell ships that were "relatively unsuited to fisheries", but a sudden change of direction saw eight of the company's ships sold to the French government and a resolution to liquidate the company.

The reason for the change was the inflation of ship prices due to World War I. Added to this, Takatsu, who had advocated a policy of not selling ships, died at the age of 44 in September 1916. His death had a major bearing on the change to a policy of selling the majority of Kyodo Gyogyo's fleet.

The Managing Director Jinpachi Hayashida, a close confidant of Takatsu, was vehemently opposed to the idea of liquidating the company. Ultimately, to reflect Hayashida's opinion, it was decided that Kyodo Gyogyo would survive as a company, but the sale of the eight ships went ahead leaving only one ship remaining, and the directors in favor of the sale all resigned.

With Kyodo Gyogyo now in this situation, the Tamura Steamship Fishery Company set out to acquire the company in 1917, and had bought up more than half of its shares in the space of less than a year. The Tamura Steamship Fishery Company initially reorganized and renamed itself "Nippon Trawl K.K.", then in this guise planned an absorption-style merger with Kyodo Gyogyo. Having achieved this, it would go on to construct new steam trawlers based on Kyodo Gyogyo's authorization to apply for a business startup license.

To do this, however, it had to prepare documents certifying the merger for each of Kyodo Gyogyo's 18 ships. Furthermore, it was discovered that the issue of licenses was conditional upon evaluation of the applicant's business record and experience. Nippon Trawl had no business record, but Kyodo Gyogyo was already recognized by the Ministry of Agriculture and Commerce and other related bodies. In that case, it was clear that Kyodo Gyogyo would have the advantage over Nippon Trawl. Therefore, the plan was changed so that Nippon Trawl would be merged into

Kyodo Gyogyo, which continued to be used as the company name.

Growth to Japan's Biggest Trawling Operator

In May 1919, the Tamura Steamship Fishery Company changed its organization to a public limited company and renamed itself “Nippon Trawl K.K.” (capital 700,000 yen, all paid-up). In September that year, “Nippon Trawl” was merged into Kyodo Gyogyo, which had previously been acquired by the company and its capital reduced to 300,000 yen in 1918. Now the capital was again increased by 4 million yen to 5 million yen. Hisazo Matsuzaki, former Director-General of the Fisheries Bureau in the Ministry of Agriculture and Commerce, was welcomed as the company's President, while the Managing Directors were Kosuke Kunishi and, from the old Kyodo Gyogyo, Jinpachi Hayashida. The Head Office would be located in Kobe and a Sales Office in Shimonoseki.

With this, the new Kyodo Gyogyo held the rights for 25 ships—7 from the Tamura Steamship Fishery Company and 18 from the old Kyodo Gyogyo. Now

it embarked on building new ships in a determined drive to reinforce its fleet. The *Rokko Maru* in 1919 was the first of a series of new ships to be built. By the end of 1920, the company possessed 28 ships, accounting for 60% of all 48 ships licensed at the time.

Most the new shipbuilding contracts were awarded to Osaka Iron Works, an affiliate of Nippon Kisen. This was very soon after the end of World War I, when shipyards were finding themselves out of work. In just over two years, the company built 25 ships, at a cost of 200,000 yen per ship totaling 5 million yen in all. The cost was financed with 20,000 of Kyodo Gyogyo's shares.

“At the time, new ships were being completed at a rate of about one per month. One after another, new ships covered with bunting would sail around the waters outside the Shimonoseki Office; times were really good. Nor did we have any trouble manning the ships with crews, as people who had previously worked for the company and had plenty of experience applied for the jobs” (*Conversations with Ken-ichi Katsuno*).

With this, Kyodo Gyogyo became Japan's biggest trawling operator, in both name and substance.

The 25 trawlers built by Kyodo Gyogyo

Name	Gross tonnage	Year built	Location	Shipyard
Ibuki Maru	225.79	Nov. 1919	Kobe	Mitsubishi Zosen
Rokko Maru	225.79	Nov. 1919	Kobe	Mitsubishi Zosen
Hayama Maru	219.58	Nov. 1919	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Niitaka Maru	221.38	Nov. 1919	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Hoei Maru	219.47	Dec. 1919	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Benten Maru	221.38	Dec. 1919	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Tokiwa Maru	221.82	Jan. 1920	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Chihaya Maru	219.97	Feb. 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Rikuzen Maru	221.82	March 1920	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Nunobiki Maru	219.90	Feb. 1920	Osaka	Sakurajima Works, Osaka Iron Works
Rumoi Maru	220.49	March 1920	Osaka	Sakurajima Works, Osaka Iron Works
Otowa Maru	220.49	March 1920	Osaka	Sakurajima Works, Osaka Iron Works
Wakakusa Maru	220.15	April 1920	Osaka	Sakurajima Works, Osaka Iron Works
Kasuga Maru	219.46	April 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Yoshino Maru	220.42	April 1920	Osaka	Sakurajima Works, Osaka Iron Works
Takao Maru	220.00	April 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Reisui Maru	219.15	April 1920	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Sonobe Maru	220.25	April 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Tsukushi Maru	220.32	Aug. 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Nemuro Maru	220.15	Sept. 1920	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Naruo Maru	216.24	Dec. 1923	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works
Arashiyama Maru	219.11	Oct. 1920	Mitsunoshcho, Hiroshima Pref.	Bingo Works, Osaka Iron Works
Musashi Maru	227.02	Sept. 1920	Yokohama	Uchida Shipyard
Ujina Maru	227.02	Sept. 1920	Yokohama	Uchida Shipyard
Noshiro Maru	216.55	Oct. 1923	Habu-cho, Hiroshima Pref.	Innoshima Works, Osaka Iron Works

Source: Kyodo Gyogyo Sales Reports

Moves into the Distribution and Marketing Sectors

The system of trading on fish markets in the Taisho era took a form that favored fish wholesalers. Fish prices in consumption areas were decided between wholesalers and middlemen, and the fishery operators themselves basically had no choice but to “let matters take their course”.

“In all kinds of marketing organizations, it is true of any product and any industry that there are too many “middlemen traders” mediating between the producers and the end consumer. This causes too much wastage, as well as resentment that the retail price is unreasonably high compared to the wholesale price. However, there is no product in which this is more extreme in degree, or in which there is more wastage and siphoning off between the stages of production and consumption, than fresh fish” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Kosuke Kunishi was later to point out the evils and wastage in the traditional trading system, but his first step was to physically experience and observe trading in fish markets for himself.

The Tamura Steamship Fishery Company, while promoting steps to develop and enhance trawling, was also searching for inroads into the marine produce distribution and marketing sectors. The first step in this direction came in 1917, with the capitalization and purchase of a majority share in Yamagami Gumi K.K., which together with Hayashikane Shoten K.K. had formed a powerful presence in fish purchasing on the coasts of the Korean Peninsula.

Hayashikane Shoten, the first of the two to be

Business scale of the former Yamagami Gumi as of 1918 (according to the Financial Report)

Ships (transporters):

6 steamships, 48 motorized ships, 39 sailing ships,
total 93 ships

Real estate & buildings:

4 locations in Shimonoseki, 37 in Korea, 2 others

Sales outlets:

Tokyo, Nagoya, Kyoto, Tenma, Kizu, Kobe, Shimonoseki,
Hakata

established in Korea, was founded in 1880. The Nakabe family, into which the founder Ikujiro Nakabe was born, were originally fishermen from Hayashi Village in Akashi-gun, Harima Province. Four generations before Ikujiro, the head of family had resettled to Akashi castle town. There, he had started a fresh fish trading business under the name “Hayashiya”, based on the name of the family’s original village. The head of family had been named “Rihei” for generations, but Ikujiro’s grandfather was called Kanematsu, and with him the business name also changed to Hayashikane. When it was first established, Hayashikane was engaged as a fish brokerage in Zakoba, Osaka, but also undertook the business of transporting fresh fish to market from seas near Akashi, bonito from Tosa and other marine produce.

The opportunity for Hayashikane to take a leap forward came in 1905, when it bought the light steamship *Awaji Maru*. This ship was used as a tugboat for the traditional *oshi-okuribune* craft that relied on oars and sails. It vastly shortened the journey between Akashi and Osaka from the 10–15 hours needed until then. This made it possible to purchase fish cheaply, after the other *oshi-okuribune* had sailed from Akashi in time for the start of auctions at market, then to transport it to market in Osaka and sell it for the same prices as the competitors, thereby securing wide profit margins.

Following this success, the construction of the motor-powered fresh fish transport ship *Shinsei Maru* later that year produced another boost in the company’s fortunes. The 12-ton, 8-horsepower *Shinsei Maru* also had a fish preserve, and was therefore well suited to transporting live fish. It could carry twice as much cargo as existing ships and took half the time to arrive; its range of activity even extended to the Japan Sea.

Armed with this *Shinsei Maru*, in 1907 Hayashikane ventured out to the Korean Peninsula. Its main business involved providing capital to fishermen going out to seas around the Korean Peninsula and buying their fish catches. Until then, it had taken three days

and nights to transport fish back to Japan, but by using this high-performance fresh fish transport ship, the company succeeded in cutting the transportation time to one-third. Now, fish purchasing on the Korean Peninsula grew into Hayashikane's main business. In 1919, it had as many as 300 transport ships plying the seas, including new state-of-the-art ships in the 50–60 ton class.

Hayashikane's success spawned followers, one of which was Yamagami Gumi.

Yamagami Gumi was a joint venture founded in around 1907. Its capital was provided by Osaka fish wholesaler Heikuro Sagiike of Kanpei Shoten, and its transport ships by fish merchants and fishery operators from Nushima in Hyogo Prefecture (including the Nushima cargo boat wholesaler Tsurumatsu Yamano). Together, these formed the "anonymous association" Yamagami Gumi in 1912, with its Head Office in Shimonoseki.

It also opened a Branch Office on the Korean Peninsula, stepped up fish purchasing business in these waters, and at one point had five 200 to 300-ton class transporter steamships and at least 40 motorized ships in service. Even then, business was so brisk that the number of vessels seemed a little short. The company's range of fish collection extended from the whole of the Korean Peninsula to Bohai Bay. Not only that, but it endeavored to transport mainly high-grade fish, and came to rank alongside Hayashikane in importance. Besides fish purchasing, meanwhile, it was also engaged in coastal fixed-net fisheries and purse seine fisheries.

In 1916, the business was reorganized as a public limited company with capital of 500,000 yen (400,000 yen paid-up), with the aim of expanding its business. And in the following March, a capital injection of 800,000 yen was made to take the capital to 1.3 million yen. At this time, since Kosuke Kunishi was an acquaintance of Yamagami Gumi Director Yojiro Shiraishi, Ichiro Tamura provided an investment of 900,000 yen in all (the capital increase of 800,000 yen and a shortfall of 100,000 yen from the 1916

capital increase). This was funded by profits from the sale of ships when Tamura withdrew from north-sea fisheries. In June 1917, the company name was changed to Nippon Suisan K.K., and a company emblem was created from a stylized image of "日", the first character of "Nippon Suisan". This emblem was registered as a trademark, and these would be handed down as the company emblem and trademark of Nippon Suisan.

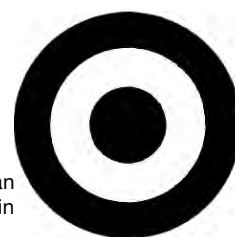
Since the company has a different genealogy from today's Nippon Suisan Kaisha, Ltd., in this book it will go under the name "former Yamagami Gumi" to avoid confusion.

The former Yamagami Gumi appointed Hisazo Matsuzaki as its President, Tsurumatsu Yamano, Yojiro Shiraishi and Kosuke Kunishi as Directors, and Ichiro Tamura as an Advisor. According to the Financial Report of July 1918, the business scale was as follows.

- Ships (transport ships): 6 steamships, 48 motorized ships, 39 sailing ships, total 93 ships
- Premises and buildings: Shimonoseki 4 locations, Korea 37 locations, 2 other locations
- Sales outlets: Tokyo, Nagoya, Kyoto, Tenma, Kizu, Kobe, Shimonoseki, Hakata

After the capital increase, a disagreement over the business aims arose between one of Yamagami Gumi's founders, Tsurumatsu Yamano, and the Tamura Steamship Fishery Company. Yamano asserted that the company's business should always center on providing capital and purchasing fish. He resigned in January 1918, going on to start his own independent fish transport business.

Company emblem of Nippon Suisan (formerly Yamagami Gumi) created in 1917



Reorganization of Yamagami Gumi and Establishment of Nippon Gyomo Sengu

In September 1919, Hisazo Matsuzaki resigned as President of the former Yamagami Gumi in order to be appointed President of Kyodo Gyogyo. In his place, Soji Yamawaki, already President of Takatsu Shokai K.K., took the presidency as a concurrent post. Yamawaki immediately set to work on reorganizing the former Yamagami Gumi, selling off many of its ships as well as simplifying its business content. He separated off the various business divisions as independent companies, and reorganized the former Yamagami Gumi itself into a public limited company that would oversee all of these. Later, in November 1926, it was to merge with Kyodo Gyogyo, becoming the latter's Investment Department. The companies under Yamagami's management were as follows.

[Sales Sector]

August 1920 Establishment of Chuo Suisan Hanbaisho K.K.: Sales division of former Yamagami Gumi made independent. Mainly sales of fresh fish in Kyoto, Osaka and Kobe.

May 1921 Establishment of Kyodo Suisan Hanbaisho K.K.: Sales division of former Yamagami Gumi made independent. Wholesale and retail sales of fresh fish in the Tokyo area.

[Transport Sector]

March 1920 Establishment of Marushin Unso ten K.K. (later Marushin Unyu K.K.): Sales division of former Yamagami Gumi made independent. Land haulage of fresh fish and others. Head Office in Osaka, branches in Tokyo, Kyoto, Kobe, Okayama, Shimonoseki, etc. At the time, fresh fish



Chiyoma Iwamoto, inventor of the "Iwamoto on-board rapid freezer"

dispatched from Shimonoseki amounted to 130,000 tons per year, but in a sector crowded with 11 transport companies, Marushin Unso ten accounted for a quarter of that total.

March 1921 Establishment of Nissen Gumi K.K.: Marine transport of fresh fish from the Korean Peninsula and the north-sea region.

[Processing Sector]

June 1921 Establishment of Nippon Chikuwa Seizosho K.K. (later Nippon Gyoryo K.K.): Jointly capitalized by Kyodo Gyogyo and former Yamagami Gumi. Manufacture of kamaboko, chikuwa and fish meal.

[Fishery Sector]

June 1922 Establishment of Asahi Suisan K.K.: Large lift-net (fixed net) fisheries division of former Yamagami Gumi separated and made independent. Operation of fixed net fisheries on the Korean Peninsula (North Hamgyong Province) (4 locations), Kochi Prefecture (3 locations) and Wakayama Prefecture (1 location).

Conversely, when the new Kyodo Gyogyo started business in August 1919, the Takatsu Shoten Net-Making Department was incorporated in the Kyodo Gyogyo Group and reorganized as Takatsu Shokai K.K. (now Nichimo Co., Ltd.). Its capital was 150,000 yen, its President Soji Yamawaki, and its Executive Director Chiyoma Iwamoto. Of a total of 3,000 shares, the main shareholders were Takatsu Ryutaro (600 shares), the former Kyodo Gyogyo (400 shares), and Kosuke Kunishi (300 shares).

Again, in June 1920, the company name was changed to Nippon Gyomo Sengu Kaisha, Ltd., and Kosuke Kunishi became the majority shareholder. The aim in doing so was to move away from dependence on the new Kyodo Gyogyo and develop business broadly towards Japanese fisheries as a whole. This company has played an important role in the development not only of Nippon Suisan but also of Japanese fisheries in general.

The company also endeavored to integrate the former Kyodo Gyogyo and the Tamura Steamship

Fishery Company, and laid the foundations for the growth of trawling. It also produced numerous talented individuals, including Soji Yamawaki, who succeeded in a north-sea venture using crab processing ships; Jinpachi Hayashida, instrumental in establishing the former Kyodo Gyogyo in a bid to rescue trawl fishery operators; Chiyoma Iwamoto, who developed the flat-tank on-board rapid freezer; and Shizuo Minoda, later to become Nippon Suisan's Executive Director, among others.

Kyodo Gyogyo succeeded in moving into the first crab processing ship business through Hokuyo Suisan K.K., which it established in January 1926. Then in November that year it absorbed both Hokuyo Suisan and the former Yamagami Gumi, including capital increases. Now, Chuo Suisan Hanbaisho took over the company name "Nippon Suisan" which had been used by the former Yamagami Gumi until then. However, this company also has a different genealogy from the present Nippon Suisan proper, and will therefore be called "the former Chuo Suisan Hanbaisho" to avoid confusion.

Towards the Creation of a General Fisheries Company

Kyodo Suisan Hanbaisho, a major intermediary responsible for sales by Kyodo Gyogyo in the Tokyo area, was located in Tsukiji Market. It handled 12,000 tons of marine produce in 1926, accounting for 6.2% of a total of 194,000 tons coming into the market that year. The average volume handled by a single wholesaler at the time was 250 tons. Another sales intermediary, Chuo Suisan Hanbaisho, had its Head Office in Osaka, with outlets in the ten cities of Shimonoseki, Hiroshima, Okayama, Kobe, Osaka, Kyoto, Kishiwada, Otsu, Nagoya and Shizuoka. It also had branch offices in the four cities of Fukuoka, Omuta, Kure and Toyohashi. In this way, fish caught by Kyodo Gyogyo were brought to market through single channels in both east and west Japan. In 1926, Chuo Suisan Hanbaisho handled 1.4 million cases of fishery

products. Both of these companies were capitalized at 1 million yen. A sales structure of this kind was vital in order to provide markets with dependable supplies of fresh fish caught in bulk by trawlers.

As well as increasing its capital to 15 million yen in 1928, Kyodo Gyogyo had in the meantime rapidly expanded its organization across all sectors of fisheries production, processing, transportation and sales, and was to become Japan's biggest general fisheries company as the Showa era moved on.

The main companies established by Kyodo Gyogyo between the end of the Taisho era and the early Showa era were as follows.

December 1923 Nippon Gyoryo: Name changed from Nippon Chikuwa Seizosho.

November 1925 Nippon Trawl: Subsidiary of Tokyo Ishikawajima Shipbuilding & Engineering, became an affiliate through share acquisition (distinct from previously mentioned company of the same name).

November 1925 Hoyo Gyogyo K.K.: Successor to the anonymous association Shichida Gyogyo-bu of Shimonoseki. With the addition of 2 fishing boats owned by Nissen Gumi and 4 newly built vessels, it started paired steamship bottom trawl net fisheries with 14 ships divided into seven pairs. Bottom trawl net fisheries were also known as "*oki-teguri*" (offshore hand trawling), a fishing method traditionally practiced in Japan. Kyodo Gyogyo also ventured into set net fisheries as well as trawling.

November 1926 Nippon Suisan K.K. (formerly Chuo Suisan Hanbaisho): Company name changed from Chuo Suisan Hanbaisho.

June 1927 Chuo Reizo K.K.: Chuo Reizoko (taken over by Obayashi Gumi from Himuro Gumi) split off and established independently. The company had refrigerating equipment on the coast near the Kizu estuary in Osaka, with refrigerating capacity of 25 tons and ice-making capacity of 40 tons.

July 1927 Horai Suisan K.K.: Established to expand

into steamship bottom trawl net fisheries based in Taiwan. Built 4 ships in the *Horai Maru* class and operated in the South China Sea.

November 1927 Nippon Kosen Gyogyo K.K.: Mother ship-type crab fishery. Launched via the first amalgamation of crab fisheries.

These affiliates were managed by Kyodo Gyogyo's Investment Department, and can be divided by business sector as follows.

- Fisheries: Nippon Trawl (trawl fishery), Hoyo Gyogyo (west-water two boats trawling), Asahi Suisan (fixed net fisheries), Nippon Kosen Gyogyo (mother ship-type crab fishery)
- Processing: Nippon Gyogyo (*chikuwa*, *kamaboko* and meal production)
- Transportation: Nissen Gumi (shipping), Marushin Unsoten (land haulage)
- Sales: Former Chuo Suisan Hanbaisho (sales in Kyoto, Osaka and Kobe areas), Kyodo Suisan Hanbaisho (sales in Tokyo area)

To a certain extent, then, the foundation for the Kyodo Gyogyo Group to be transformed into a “general fisheries company”, covering everything from fishing to processing, distribution and sales, had been

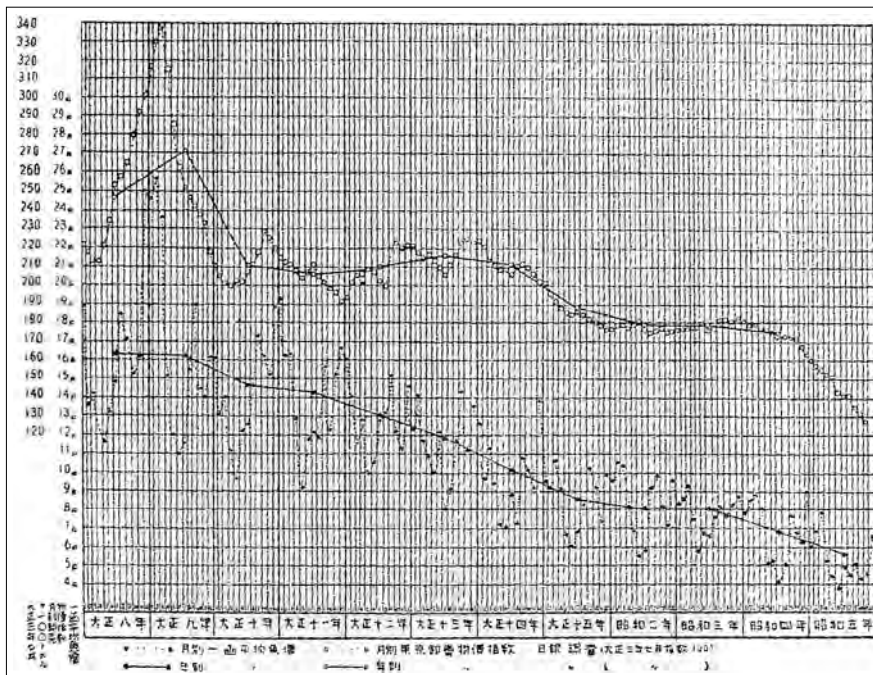
established by the beginning of the Showa era. Kyodo Gyogyo was at the core of this, and the growth of the trawl business now held the key to the success of the whole venture.

Slumping Fish Prices and Measures Aimed at Progression

A series of financial crises—the recession after World War I, the confusion following the Great Kanto Earthquake, the Showa Depression, and the worldwide Great Depression—had drawn the Japanese economy into a protracted scenario of negative growth. The result was that, in Japanese society throughout the 1920s, unemployment was prevalent in both urban and rural areas.

These recessions and depressions also had an impact on trawling, with fish prices continuing to fall at a rate of around 10% every year. As of 1922, the price was 14.98 yen per case, but by 1926 it was less than 10 yen, and by 1930 it had fallen to 5.92 yen, a decline of more than 60%. It continued to fall thereafter, until in 1932 it was 4.29 yen, less than 30% of the 1922 level. Operators now tried to cope with tumbling prices

Comparative statistics for average fish prices and the consumer price index by month and by year (1919–1930)



Source: *Anthology of Writings and Speeches of Mr. Kosuke Kunishi* Top: Consumer price index Bottom: Fish prices

through cost-cutting measures (such as reducing anchorage time), while making every effort to introduce the latest technology and thus expand catch efficiency. In 1922, the total catch was 380,000 cases, but by 1926 this had grown to 430,000 cases and by 1930 to 770,000 cases, more than twice the 1922 figure. The increase in catches between 1924 and 1925 resulted from the introduction of the V-D fishing method, more efficient than the otter trawl system used until then. After 1928, the increase was due to the modernization of fishing boats.

Falling fish prices hit coastal fisheries particularly hard. Coastal fishery operators contracted by fish wholesalers had no power to control the market, leading to a widening disparity in fortunes. As the leading power in trawling, Kyodo Gyogyo had the ability to

influence markets, for example by securing sales channels for the former Chuo Suisan Hanbaisho and adjusting prices. This was why its business had continued to grow even in lean times.

From this point, however, a number of processes would still be required before the target set by Kosuke Kunishi could be met—namely, that “Fisheries in the new age will require us to seek unexploited fishing grounds all over the world, and to supply their produce to the world. To this end, I believe that developing fisheries on an industrial scale will be more important than anything else” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

The relocation to Tobata Fishing Port became a reality at just this point in time.

Part 2 Establishment of Tobata Reizo and Relocation to Tobata Fishing Port

1. Reclamation of Dokai Bay and Tobata Reizo

Shimonoseki as a Base for Fisheries

The city of Shimonoseki, the location of Kyodo Gyogyo’s fisheries base, had proposed a plan to refurbish its fishing port. In 1919, however, a conflict of opinion arose on this matter between the city authorities and fishery operators.

The plan was to allocate a budget of 7 million yen over 17 years from 1929, half of the cost being funded by the national treasury and half by prefectural bonds. The bonds would be redeemed by charges on fishing port users over a period of 20–25 years. During the refurbishment works, moreover, the West Port area of Shimonoseki was designated as a cargo landing site for fishery operators. The problem was that the tidal currents there were fast, leading to concerns that it would be too dangerous for ship maneuvers or port access by trawlers.

In May 1923, Kosuke Kunishi sent a letter to Rintaro Yamazaki, Mayor of Shimonoseki, pointing out that,

as hardly anyone involved in the city administration had any experience of fisheries, they were unlikely to understand the essence of the fishing port problem; they had been too hasty in securing funding for the fishing port, and as a result, the users’ burdens would be too heavy. He also conveyed his opposition to a construction plan that disregarded the interests of fishery operators.

Nevertheless, the fishing port refurbishment plan would eventually go ahead, despite the opposition from Kunishi and other fishery operators.

Kyodo Gyogyo now started preparations with an eye on Tobata as a base to replace Shimonoseki. A man who had a decisive impact on this was Yoshisuke Aikawa, later to serve as President of Nippon Sangyo Co., Ltd.

Yoshisuke Aikawa and Tobata City

Granted its municipal charter in 1924, the city of



From the right: Machine room, office, pump room and landing yard. In the foreground, the site scheduled for construction of Tobata Seikan.



Work in progress in the rapid freezing room

Tobata had pursued a policy of attracting big business with infrastructure development since its days as a town (Tobata-cho). Once a station had been opened here in 1902, the Railways Ministry built a quay exclusively for cargoes of coal, followed by exclusive piers for Asahi Glass Co., Ltd. and Toyo Iron Works Co., Ltd.

Tobata was a place with meaningful connections for Yoshisuke Aikawa. After founding the Tobata Foundry Co. in 1910, he drew up a plan to build an ironworks here in 1915. For this, he acquired a total of about 627,000 *tsubo* (about 500 acres) of land from Tobata-cho, and the reclamation rights to about 620,000 *tsubo* at sea. In 1916, he established the Tobata Iron Works Co., Ltd., and started work on building a factory. In 1918, however, the company merged with Toyo Iron Works, which was keen to acquire land.

In 1920, Tobata-cho proposed a plan for port terminal facilities to accompany the reclamation of the Ichimonji coast in Dokai Bay, and applied for permission for the reclamation work in October that year. The original proposal was for a quay-front water depth of 12 *shaku* (about 3.6 m), but this was later changed to 20 *shaku*, with 600,000 yen invested to create 7,300

tsubo (about 24,000 m²) of reclaimed land. A water depth of 20 *shaku* was an important condition if it was to be used as a base for trawlers.

The reclamation work was started 1921 and completed in March 1926.

Eighteen months later in December 1927, Tobata Reizo K.K. was established with Aikawa as President and capital of 1 million yen. It was decided that all of the reclaimed land would be used as the company's premises.

As he shuttled back and forth between Tobata and the Tokyo Head Office of the Tobata Foundry Co., Aikawa occasionally dropped in to Shimonoseki to talk things over with Kunishi. They both shared the conviction that Tobata was in an excellent natural location at the entrance to Dokai Bay, and that an ideal fishing port could be established there, given the right facilities. They felt that a fishing port depended not only on sufficient water depth to calm wave motion, but also on good links between sea and land. If they were to operate distant water fisheries rationally as a corporate concern, they would need centralized freezing, refrigeration and processing facilities to regulate supply and demand at low cost, not to mention sufficient terminal facilities to ensure the smooth landing and transportation of catches. Moreover, the facilities would have to function as a convenient base for loading fishing nets, ships' gear, crushed ice, fuel, food provisions and others needed for distant water fisheries.

With the completion of the reclamation work and the establishment of Tobata Reizo, the conditions were all in place for Tobata to become a new, modern fisheries base for Kyodo Gyogyo. Until then, Dai-Nippon Seihyo K.K. had been relied upon to provide all the ice needed for ice storage, essential for storing fish catches. The completion of Tobata Reizo's ice making factory and cold store now offered prospects for a leap to new horizons.

Promotion of Refrigeration, Freezing and Ice-Making Business

Refrigeration and freezing technology had been introduced by Hayashikane Shoten from the early 1920s, but not by Kyodo Gyogyo or Nichiro Gyogyo until after 1926.

Between 1920 and 1924, Hayashikane Shoten installed a large refrigeration and ice making factory on Hikoshima Island in Shimonoseki City, using it as a base for fisheries and marine product processing. Over the following several years it then built cold stores in five locations including Hikoshima, Aomori and Korea, and also constructed a series of refrigerated transport ships for movements of fish catches from 1922 onwards. The introduction of cold stores and refrigerated transport ships helped to improve Hayashikane Shoten's volume of fresh fish shipments. Nichiro Gyogyo's introduction of refrigeration technology from 1926 also contributed to an upturn in business performance.

Kyodo Gyogyo started directly operating its own cold store in November 1926, when it absorbed the former Yamagami Gumi. In 1927, Kyodo Gyogyo acquired Chuo Reizoko in Osaka, which Himuro Gumi was in the process of building. Himuro Gumi was a refrigeration company set up by Setsutaro Nakayama in 1920, but soon found itself in fierce competition with Kuzuhara Refrigeration Co. (the first company in the sector to attempt the production, storage and distribution of frozen fish on land), leading to the collapse of both companies in 1926. Chuo Reizoko had a quay where trawlers and refrigerator ships could berth directly alongside, as well as freezing, refrigeration and ice making facilities. It was used as a base for processing and unloading frozen fish and processed marine products. Chuo Reizoko was reorganized in June 1927 to become Chuo Reizo K.K. The completion of Tobata Fishing Port meant that the company had general bases in both major consumer bases and production source areas, greatly expanding the options for methods of processing and

transportation.

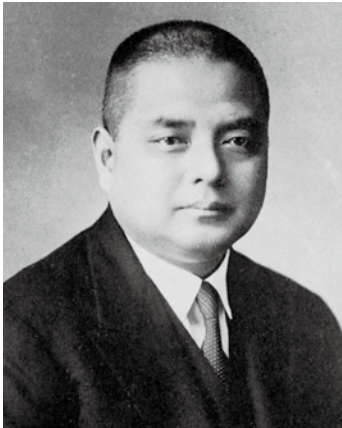
From around this time Kyodo Gyogyo started to realize that innovations in refrigeration technology were vital as a means of raising the value of fish catches. The greatest factors behind rising costs accompanying the expansion of fish catches were the costs of transportation and crushed ice for refrigeration. On the other hand, cutting transportation costs depended largely on introducing refrigeration technology, while efficiently combining haulage and refrigeration depended largely on the location and equipment capacity of the fisheries base. In this way, innovation in refrigeration technology became necessary.

Tobata Reizo now planned to build a 150-ton ice-making factory and a cold store with the equivalent of a 100-ton ice-making capacity. Work on these was started in December 1927 and finished in April 1929. And from that May onwards, Kyodo Gyogyo's trawlers docked at Tobata to load coal and crushed ice for refrigeration, before setting off on fishing expeditions. From its first year of operation, Tobata Reizo supplied the crushed ice used by Kyodo Gyogyo at cheaper prices than when procured from outside the Group. The work of loading crushed ice onto fishing boats was also made considerably more efficient by using ice chutes, among other equipment.

Kyodo Gyogyo used 70,000 tons of crushed ice every year, all supplied by Tobata Reizo. Until then, Kyodo Gyogyo had purchased ice from Dai-Nippon Seihyo, the largest ice-making company at the time, at a price of 7.5 yen per ton; but the price from Tobata Reizo was only 6 yen. Tobata Reizo then started selling its excess output to external buyers, and its price competitiveness triggered demands by fishery operators that other companies reduce their prices. This came as a serious blow to Dai-Nippon Seihyo; the company's profits plummeted and it was unable to pay a dividend in the second half of 1930.

Tobata Reizo's operations would also bring Kyodo Gyogyo's problem of fishing port relocation to the fore.

In April 1929, Tobata Reizo installed a rapid



Kosuke Kunishi

freezing device called the UM-type. The device had been developed jointly by an engineer called Takeshi Murayama, from Kyodo Gyogyo's Hayatomo Fishery Institute, and L.N. Udell, an engineer with the US company Frick. It used calcium chloride as a coolant for the first time in Japan. Fish frozen using this method, together those frozen at sea, completely dominated the markets.

Incidentally, the "strawberry freezing method" developed by Shunro Kato at Tobata Reizo was patented in 1930.

2. Kyodo Gyogyo Relocates to Tobata

Once Tobata Reizo had started operations, Tobata City hurriedly built a port railway between November and December 1929 as an exclusive line connecting with Tobata Station. On the day the port railway was completed, Kyodo Gyogyo announced that it would relocate its fisheries base from Shimonoseki to Tobata. On the relocation, Kosuke Kunishi gave the following instructions to his staff.

"The key to success in business lies in adapting to the times and being the right people for the industry"; "The company could be destined for bankruptcy unless we finalize the relocation to Tobata" (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

"Taking this relocation to Tobata as a turning point,

I look forward to the completion of fishing port facilities in this area. I hope that we will all cooperate together in striving to rationalize the sundry aspects of fisheries, clearly show that the group of people we have formed is conducting business in a way that is most adapted to the times, not only in Japanese fisheries but also in industry in general. And with spirits full of optimism, I hope that we will form and settle in a micro-society that is pleasant to live in, with permanent harmony in labor relations and stability of business, and with each individual helping and encouraging the other; and I would like to make the completion of this tangibly and intangibly significant project our hope and our goal, and even if said fishing



Tobata Fishing Port as initially planned

port facilities are not the largest in scale, to make them something of which we can be proud both inside and outside the company, as being most advanced in content and substance, and share the resultant benefits and pride among all of us” (ibid.).

This was not Kosuke Kunishi’s only view on the relocation to Tobata. For he also felt that establishing a fishing port close to the consumer base and supplying fresh and cheap seafood products to the masses working in the Kitakyushu industrial belt and Chikuho mines would stimulate the active energy of these people and would in one sense foster the growth of state industries, and therefore, that landing all catches at Tobata rather than going via Shimonoseki would be the best measure.

Tobata Fishing Port thus became the new base for Kyodo Gyogyo trawlers. It was equipped with functions for fishing, ice making, refrigeration and freezing, processing, distribution and sales in the fisheries industry, and served as a base for supplying marine products to Kitakyushu and other consumer bases.

Kyodo Gyogyo’s relocation started with the Trawl Department in December 1929 and was complete in May 1930. In February 1929, meanwhile, as well as Tobata Seikan K.K., Tobata Uoichiba K.K. and other companies newly brought under the company’s wing, affiliated companies managed by the Investment

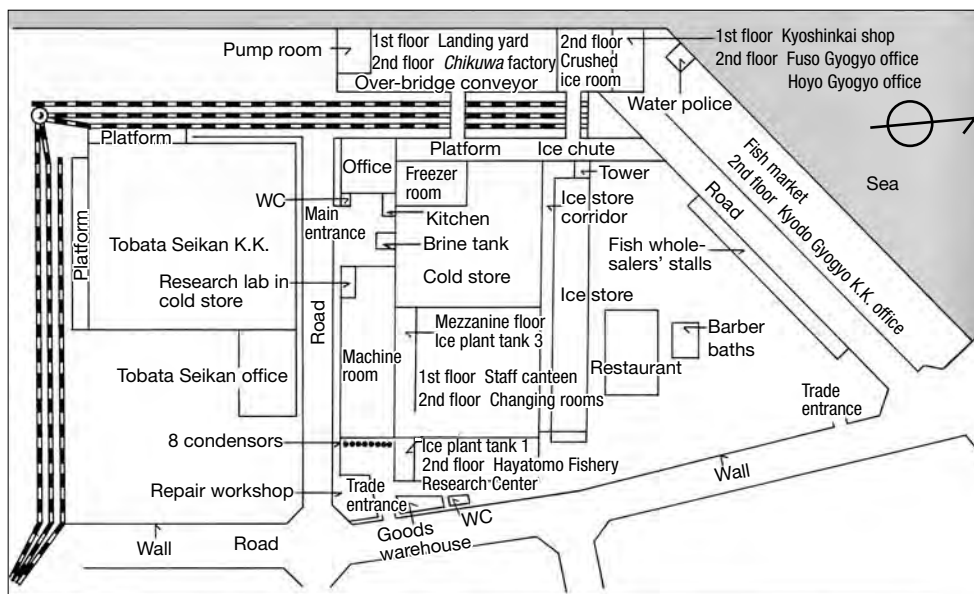
Department and other partner companies had also completed their relocation to Tobata by May that year.

This meant that, of Shimonoseki’s population of 100,000 at the time, about 10,000 people connected with Kyodo Gyogyo (including their families) would resettle in Tobata.

First of all, Tobata Fishing Port was in an excellent location. It was within reach of the East China Sea, the Yellow Sea and other fishing grounds, and, along with Wakamatsu on the opposite shore, was a shipping port for Chikuho coal. This made it convenient for stocking up on coal, the main fuel of trawlers at the time. What’s more, both the largest consumer market of Kitakyushu and the Chikuho coal mining belt were lined up behind the port. And finally, the calm waters of Dokai Bay were safe for both ship maneuvering and anchorage.

The quay, suitable for both small and large fishing boats, was about 230 m in length and 6 m deep, with a water surface area of 50,000 m².

On a total site covering 4,500 *tsubo* (15,000 m²), onshore facilities consisted of an ice-making and cold store measuring 1,500 *tsubo*, a cargo landing yard of 500 *tsubo*, a fish market of 300 *tsubo*, company offices of 400 *tsubo*, a fish meal factory of 300 *tsubo*, a box making factory of 300 *tsubo*, and research facilities of



Tobata Fishing Port Construction Drawing

120 *tsubo* arranged in integrated fashion. Besides these, the No. 1 shed covering 400 *tsubo* was a trawler cargo landing yard and the No. 2 shed with 100 *tsubo* was a hand trawler cargo landing yard.

Other facilities included an 18-meter floating pier, six berthing buoys, three unloaders with an hourly capacity of 1,000 large cases, one over-bridge conveyor with the same capacity, three wagon loaders with an hourly capacity of 300 large cases, one electric truck,

five electric hoists, four electric capstans, one wagon shunter and one cable transporter. Also, the privately-established Tobata wireless telegraph station for fisheries was equipped with a tall antenna as well as powerful transmitters and receivers. These facilitated communications not only with trawlers and hand trawlers in the East China Sea, Yellow Sea and South China Sea, but also with ships operating far away in South America, thus supporting efficient business operations.

Part 3 Development of Overseas Fishing Grounds and Growth of the Business

Expansion into Overseas Fisheries

Kyodo Gyogyo now decided to make a positive move in search of new fishing grounds overseas. The decision was backed by new technological realities: the introduction of wireless telegraph equipment had improved operational efficiency, the use of diesel engines had extended the range of operations, and the installation of on-board rapid freezing equipment had made it possible to keep fish catches fresh.

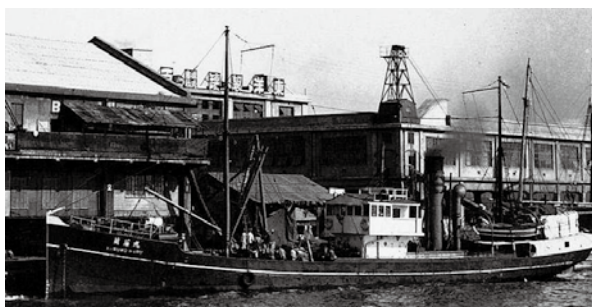
Moves to develop overseas trawling grounds were triggered when the *Karumo Maru* fished near Tonkin in the South China Sea in 1928. In the following year, 1929, the *Kushiro Maru* discovered superior fishing grounds in the Bering Sea, whereupon fleets were sent there in quick succession. Then in 1930 the *Taihoku Maru* fleet went out to fish in the north sea, producing canned king crab as well as fish meal from Alaska pollack, flounder and other demersal fish. Fish meal, made by heat-processing fish, removing the oil content

and adjusting moisture, was used as animal feed and fertilizer.

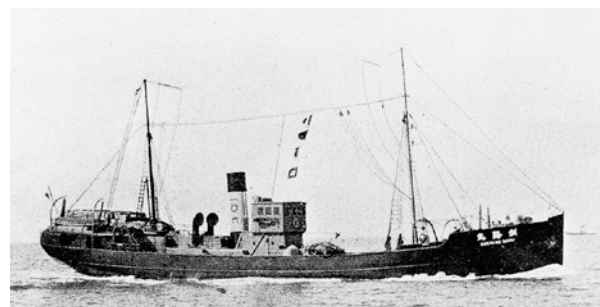
The basic rationale was outlined by Kosuke Kunishi: “We Japanese, in the current chaotic state of international affairs, need to fully manifest the fishery technology that is our forte, endeavor to go out and develop fishing grounds all over the world, acquire their resources using the actual capacity we now have or an enhanced capacity, and not only in international waters, but even in territorial waters, to collaborate with people in the countries to which those territorial waters belong and strive to engage in fisheries in a spirit of co-existence and co-prosperity” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

As international tension mounted in the build-up to World War II, Kyodo Gyogyo embarked for the world’s fishing grounds with this kind of belief in international harmony.

In July 1932, Kyodo Gyogyo established Nanbei



Karumo Maru



Kushiro Maru

Suisan K.K. with capital of 1 million yen. In November, Executive Director Naoki Imai and some employees traveled to Argentina, where they would ask the Argentine government for permission to conduct fisheries and seek the government's cooperation in fishing operations there. Kyodo Gyogyo was then asked to export frozen fish and shellfish to Argentina and to conduct sales trials in the country, and this led to a fishing license being granted in 1933.

To conduct business in Argentina, Kyodo Gyogyo pressed ahead on the premise of tying up with two local trawling firms that shared the same business territory, and negotiations with the two companies started. After more than two years of talks, the Compañía Argentina Comercial e Industrial de Pescheria (CACIP) was established as a joint venture between Nanbei Suisan and Argentina in July 1936, with capital of 100,000 peso. In the same year, the trawler *Himeji Maru* was sent to Argentina, where it operated from a base in Buenos Aires. Later, the *Kushiro Maru* would also operate in Argentina. However, owing to a worsening economic situation there as well as opposition from local fishery operators, operations were discontinued shortly before the Pacific War, after three years of activity starting in 1938.

The liquidation of Nanbei Suisan was decided by a resolution of the General Meeting of Shareholders on June 1st, 1939, whereupon all of its assets were to be taken over by Nippon Suisan.

In 1935, the state-of-the-art trawler *Minato Maru* set out on an expedition to Baja California on the west coast of Mexico, where it opened up shrimp



Minato Maru

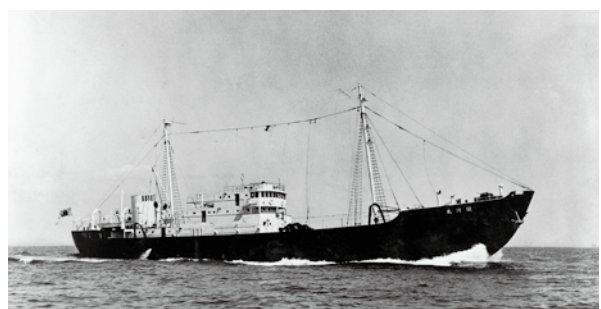
fishing grounds. At the peak, the *Suruga Maru* was fishing there together with 3 trawlers and 9 west-water trawling boats. As west-water trawling boats had no freezing equipment, the caught shrimp were frozen on board the *Suruga Maru*. In about a year's operations from 1939, some 2,200 tons were produced for US and Japanese markets. Shrimp produced by the *Minato Maru* were called "Minato shrimp", and were highly prized along with the "Taisho shrimp" (oriental shrimp) caught in the East China Sea.

As Japan-US relations worsened year by year, a variety of problems arose in foreign money transfers, friction with trading companies (Mitsui & Co., Mitsubishi Corporation) over US domestic sales of shrimp, etc., intensified competition with the entry of Hayashikane Shoten, and so on. In the end, the Ministry of the Navy recommended a discontinuation of fishing operations in August 1940, and the company withdrew from the business.

"Since opening up sales routes overseas is a matter of extreme urgency in view of Japan's present situation, we will now establish a company under the name Sankyo Suisan Co., Ltd. as a joint venture capitalized

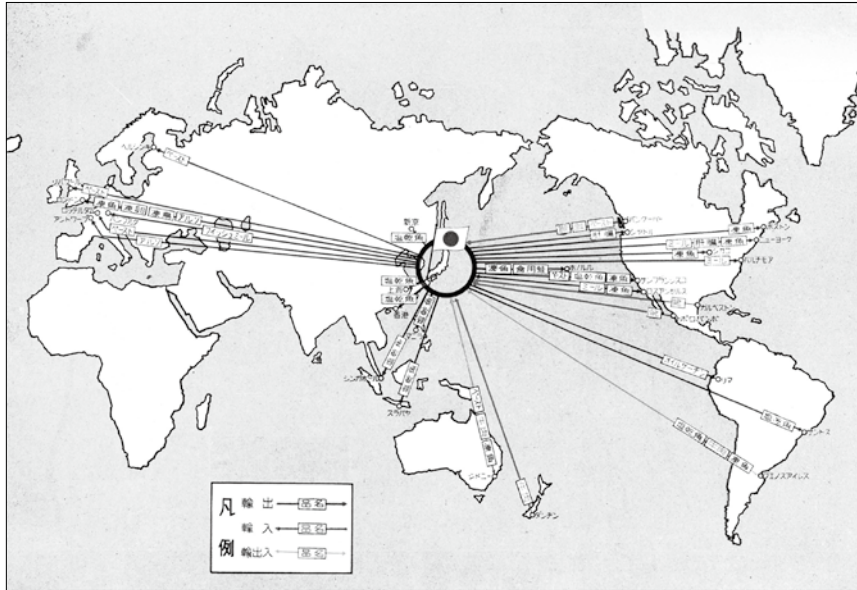


Himeji Maru



Suruga Maru

Sphere of trade in 1937



half and half between Mitsubishi Corporation and Kyodo Gyogyo with Kyodo Suisan K.K. As the situation gradually becomes clearer in future thanks to research on overseas markets, the state of sales channels, etc., I think we can expect considerable activity with a view to a major leap forward in future” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

As a Kyodo Gyogyo affiliate specializing in the export of marine products to European and American markets, Sankyo Suisan was established in 1931 in a 50:50 deal with Mitsubishi Corporation. The original purpose was to export frozen fish to overseas markets amid depressed domestic prices. After its establishment, Sankyo Suisan exported fish liver, frozen tuna, edible frogs and other frozen products, but eventually all of Kyodo Gyogyo’s whale oil, canned king crab and others were exported via Sankyo Suisan. Sankyo Suisan

subsequently merged with Nippon Suisan and became the forerunner of the Trade Department.

In November 1934, Kyodo Gyogyo established Nanyo Suisan K.K., based in Zamboanga in the Philippines (at the southwestern end of Mindanao Island). Nanyo Suisan developed bonito and tuna fisheries, subcontracting the local company Seafood Corporation to make the fish catches, which it then processed and canned. The company was seized by the Americans in December 1941.

In 1935 the trawler *Shinkyo Maru* made an expedition to seas northwest of Australia. Based in Singapore, five trawlers were sent out to fish, part of their catches being landed at Singapore and sold in surrounding regions, the rest being sold in Japan.

Shinkyo Maru further expanded the scope of fisheries research, and from 1936 started business in Singapore through a tie-up with Tai Cheung Ltd. Tai Cheung was a Singapore company mainly engaged in tuck-net fisheries by Okinawan fishermen. The tie-up with Kyodo Gyogyo enabled it to start full-scale fishing in the Gulf of Siam, the Bay of Bengal, Australian waters and elsewhere, while also conducting trial operations off Karachi and in the Persian Gulf. However, the business in Singapore had to be shelved



Shinkyo Maru

after only just over two years, as a boycott by ethnic Chinese made landings and sales impossible. There were still hopes of a new business based in Colombo, but this too was scrapped in 1937 due to mounting international tension amid developments in the Sino-Japanese War.

In 1927, Kyodo Gyogyo established Horai Suisan for west-water two boats trawling in Keelung, Taiwan. Horai Suisan possessed four *Horai Maru*-class west-water trawling boats equipped with 150-horsepower diesel engines. It also set up cold stores in Keelung and Kaohsiung, where, as well as producing ice for its own use, it also kept fresh fish in chilled storage and supplied it around the island, shipping the surplus to Japan. Then in 1929, the four companies of Horai Suisan, Kyodo Gyogyo, Hoyo Gyogyo and Nippon Trawl, in partnership with Mitsui & Co., established Horai Gyogyo K.K. to conduct fisheries with a base in Hong Kong, and started fishing in the East China Sea. In 1934, Kyodo Gyogyo absorbed Horai Suisan, while in 1936 it took over all business interests of Horai Gyogyo.

Introduction of Foreign Sales Techniques

The driving force behind the expansion of the Kyodo Gyogyo Group's sales network lay in sales techniques introduced from America by Kosuke Kunishi in around 1928. Promotional activity that informed consumers of the meaning and characteristics of products had not existed until then, but was vital to stimulating demand. Kosuke Kunishi quickly realized the importance of these techniques, which were in their infancy even in America at the time. Japanese consumers were still not familiar with marine products rapidly frozen and brought back by diesel trawlers from distant water fisheries, and Kunishi realized that promotion was the first necessity. Kunishi himself described the situation as follows.

“We who are engaged in fisheries must of course strive to reap a rich harvest of foods from the oceans

and supply them liberally. At the same time, however, owing to past customs and convention, or public ignorance, the true value of those foods so painstakingly assembled and manufactured by the producers is not recognized, the purpose of their use is not understood and they are carelessly discarded. In this case, what we need most of all is to devise appropriate ways of promoting them and ensuring that their true value is fully understood; we must strive to have these richly tasteful foods provided for the sake of people, in particular, who have not enjoyed this type of food in the past – in other words, the so-called working classes and non-productive classes that are most numerous in our contemporary society. And as well as enriching our supply, this must also be promoted as the shared mission of all of us who are engaged in fisheries. Moreover, there should not be the slightest difference between this mission and the proselytizers who explain the ways of Shintoism or Buddhism to people who do not receive the provisions necessary for spiritual comfort. In other words, it is an extremely significant act that could be likened to a kind of missionary work...” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

“When selling fresh or normal ice-stored refrigerated fish and shellfish, trademarks are too difficult to attach, and as a result, there is no way of applying the power of advertising to them. Consequently, there is no means of stimulating and increasing demand for sales of live and fresh fish, ice-stored or refrigerated fish and shellfish; sales are invariably a question of supplying varieties that consumers are habitually accustomed to eating, based on the consumers' spontaneous demand alone. However, once packaged fish appear, the suppliers are able to display their own trademark on the packaging or container in question, and as a result, promotional material can be aimed directly at the consumer for the first time, using the power of advertising. This enables us not only to plan proactive increases in consumption but also, from the consumers' point of view, to obtain quality guarantees from

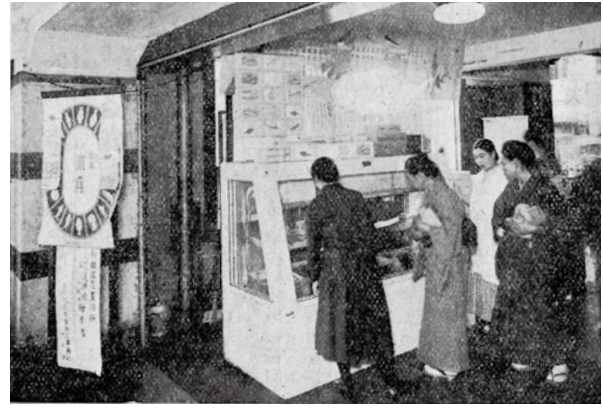


Nissui Food Store (a shop opened in 1928 at the corner of Sakaisuji Street and Imabashi in Osaka)

each producer based on the trademark. And once the consumer is satisfied, the inconvenience currently experienced in having to examine the quality each time when purchasing fresh or refrigerated fish no longer exists; moreover, products can be bought at fixed, standard prices, and this has brought fish into the ranks of contemporary goods for the first time” (ibid.).

“We should broadly research markets and costs, and move into areas where there is any potential for gain, but with all due care and diligence. As for products, on the other hand, we should carry out planned advertising within a given budget range for any product for which advertising is effective. Then, when this produces effects, we should use it for further publicity, and in the process come closer to the consuming masses, step by step. We should also, moreover, acquire sales channels in overseas markets” (ibid.).

Frozen fish sales activity started with employee education, triggered by Kyodo Gyogyo’s relocation to Tobata. First of all, Kyodo Gyogyo and its affiliates opened seafood canteens for their staff. These not only served as social facilities for the employees, but were also the first step in gaining awareness of frozen



Developing direct sales channels to the retail trade “Nippon Food Industries Company News” Issue No. 10 (Oct. 15, 1935)

fish, new products that had not existed until now. The employees tasted their companies’ processed marine products in the staff canteens, thereby not only gaining knowledge of fish but also deepening their understanding of their companies’ products. In the employees’ homes, meanwhile, Friday was known as “Fish Day”, and frozen fish from the trawlers would be delivered to them. After repeated efforts such as these, the frozen fish delivered to the navy, a major buyer, had grown to nearly five times the 1930 total of 90 tons by June 1931.

Full-scale development of domestic retail markets started in 1932. The former Chuo Suisan Hanbaisho altered its previous business policy of mainly targeting fish markets in major cities; now it opened sales bases in provincial cities and embarked on building direct sales routes in major consumer bases. At the same time, it held advertising campaigns, tasting sessions, cookery classes, and other publicity activities designed to spread awareness of frozen fish, mainly in fish markets and among other people connected with markets.

As a result of these efforts to expand sales routes and develop markets, market prices for frozen fish started to rise, while both demand and consumption increased. In some places, frozen fish even commanded higher prices than fresh fish.

Part 4 Amalgamation of Mother Ship-Type Crab Fisheries

1. The Rise of Mother Ship-Type Crab Fisheries

Crab Fisheries Start in Earnest

Ten years after Ichiro Tamura withdrew from north-sea fisheries in 1916, Kyodo Gyogyo, having acquired capital power and leadership in the industry, again turned its attention to the north sea in 1926. This time, the focus of that attention was the mother ship-type crab fisheries industry.

Crab fisheries had boomed thanks to increased demand for canned king crab in western countries. Canned king crab was specialty produce of Japan, and was first exported in around 1907. From then on, coastal crab fisheries in Hokkaido and Sakhalin thrived. In those days, canned king crab was produced by coastal fishermen mainly using gill nets to catch crabs, the catches then being bought up by cannery operators who would process the crabs in factories on land.

In 1920, the *Kureha Maru*, a training sailship of the Toyama Prefecture Fisheries Training Institute, succeeded in producing 287 cases of canned king crab at sea off the west coast of the Kamchatka Peninsula. In so doing, it overturned the standard theory that crab meat should be washed in freshwater and succeeded in using seawater instead, thus paving the way for the later commercialization of crab factory ships.

In the following year, Teiji Wajima, who had been running a king crab cannery in northern Kuril, started mother ship-type crab fishery with the 300-ton+ sailing ship *Kiku Maru* and the 389-ton steamship *Kita Maru*. With these two vessels, he succeeded in producing 2,759 cases in seas off Primoriye. This triggered a boom in mother ship-type crab fishery; in 1922, three mother ships were operating off the west coast of the Kamchatka Peninsula, but in 1923 the number had risen to fifteen, with early signs of excessive competition.

The production output also showed an abnormally large increase from 33,000 cases in 1923 to 40,000 cases in 1924, 105,000 cases in 1925 and 219,000 cases in 1926 (at the time, each case contained eight dozen half-pound cans).

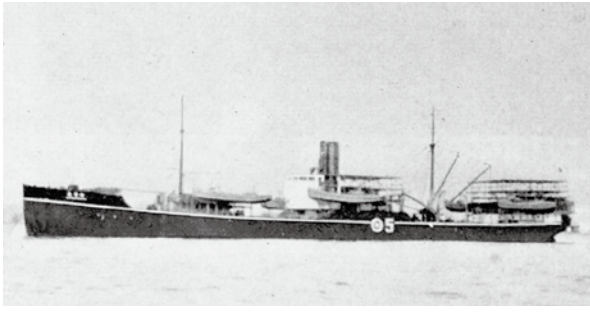
Resources of crab are prone to depletion, owing to the crabs' narrow range of mobility. Sudden increases in production also caused market confusion. In 1923, the "Regulations for the Management of Factory-Ship Crab Fisheries" were enacted (amended in 1934 to "Regulations for the Management of Mother Ship-type Crab Fisheries"), bringing these fisheries under the license of the Ministry of Agriculture and Forestry. Meanwhile, the Factory-Ship Crab Fisheries Association was launched to start regulating production and sales. And in 1925, Kani Kanzume Kyodo Hanbai K.K. was established to regulate prices for canning.

Kenkichi Ueki and Crab Fisheries

Kenkichi Ueki joined Tamura Shoten (a company set up by Ichiro Tamura in Busan, Korea) in 1910. In the two years before that from 1908, he had worked as an instructor at the Toyama Prefecture Fisheries Training Institute. The *Takashi Maru*, built at the Institute in 1909 with Ueki's involvement, was later involved in king crab cannery. The Director of the Toyama Prefecture Fisheries Training Institute had strongly recommended the crab business to Ueki, as it had



3rd President Kenkichi Ueki



Jingu Maru

future potential, and Ueki was now waiting for a chance to set up a business.

In January 1926, Kyodo Gyogyo established Hokuyo Suisan K.K. using the rights to two crab mother ships owned by former Yamagami Gumi President Soji Yamawaki. With this, two large mother ships (*Itsukushima Maru* and *Jingu Maru*) were sent to fish at Sopochnui on the west coast of the Kamchatka Peninsula from April to August. As a result, the two ships produced 21,000 cases and 19,000 cases of canned crab, respectively, and succeeded in bringing back a profit of 600,000 yen.

In November 1926, Kyodo Gyogyo absorbed Hokuyo Suisan, adding two more crab mother ships

(*Moji Maru* and *Toyokuni Maru*) to its fleet. In 1927, it fished with these four ships, producing 86,000 cases. The company had a total of 16 licensed ships in that year.

Meanwhile, Hayashikane Shoten had fished at Mororokke off the west coast of the Kamchatka Peninsula using the recently purchased *Hakuai Maru* in 1927, producing a good yield of 23,000 cases. With the entry of Hayashikane Shoten and Kyodo Gyogyo, the industry had 17 factory ships and an output of 330,000 cases that year, rising to 520,000 cases including those produced on land. What was more worrying, however, was that 70,000 of these cases were excess to requirements.

This made it clear that, if free competition were allowed to run its course, it would inevitably lead to the devastation of fishing grounds and market confusion due to oversupply, and that, in order to prevent this, there was no option but to integrate. Some operators recommended this course of action, and the government was also resolved to give guidance in that direction.

2. The Integration of Crab Fisheries

1st Integration—Two Companies: Nippon Kosen Gyogyo and Showa Kosen Gyogyo

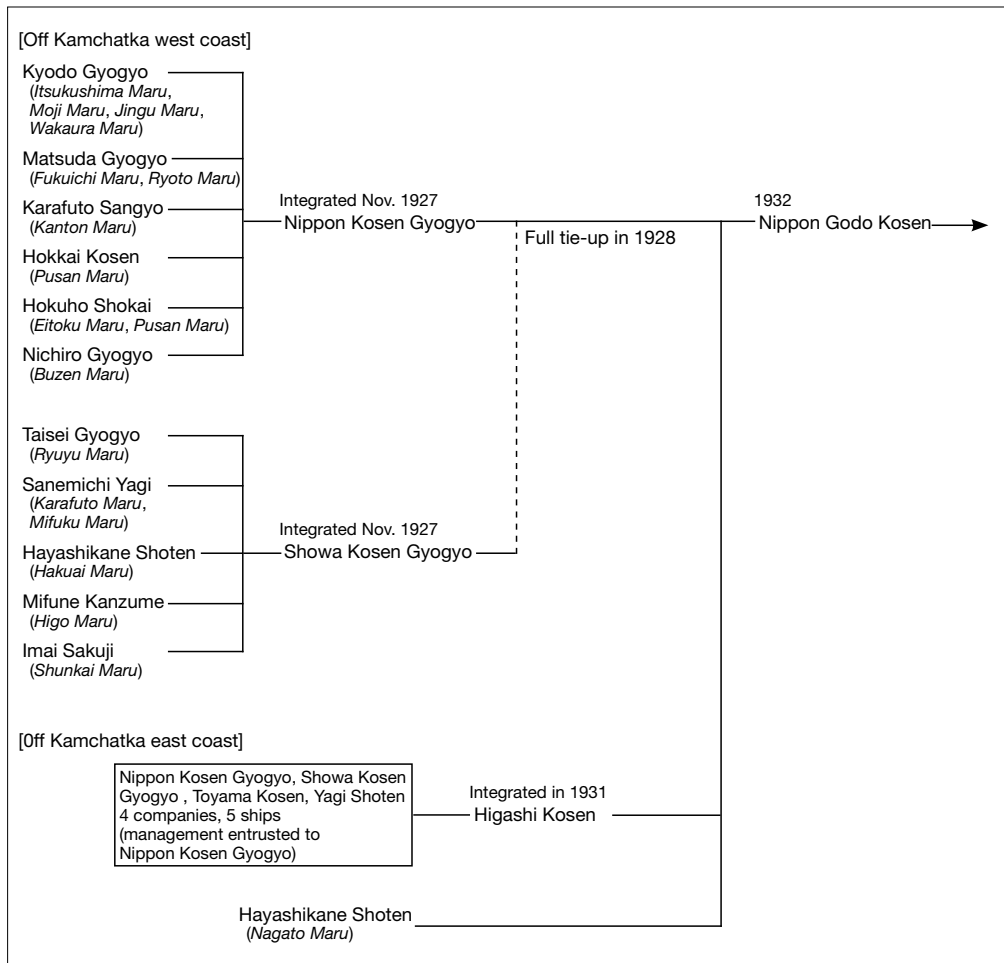
At the end of the Taisho era (1925), the Kitami and Rishiri districts had played a pioneering role in land-based king crab canneries. Owing to excessive fishing over a protracted period, however, resources had become exhausted and the Hokkaido prefectural authorities had imposed a five-year ban on crab fisheries from 1927. Even the Sakhalin coastal fisheries, which had once produced 110,000 cases a year, were now in apparent decline with only 4,000 cases. If unregulated operations were to continue unabated in crab fishing grounds off the west coast of the Kamchatka Peninsula, it was thought inevitable that those fishing grounds would sooner or later suffer the same fate as

the coastal fishing grounds.

To prevent market confusion caused by pointless competition, all companies engaged in crab fisheries were now integrated into two conglomerates—the Nippon Kosen Gyogyo group affiliated to Kyodo Gyogyo, and the Showa Kosen Gyogyo group affiliated to Hayashikane Shoten—following a government recommendation in November 1927.

The companies and mother ships included in each group were as follows.

Nippon Kosen Gyogyo (President: Kenkichi Ueki): Capital 3 million yen, 6 companies, 11 factory ships, licensed output 194,600 cases—Kyodo Gyogyo (*Itsukushima Maru*, *Jingu Maru*, *Moji Maru* and *Wakaura Maru*), Matsuda Gyogyo (*Fukuichi Maru* and *Ryoto Maru*), Karafuto Sangyo (*Kanton Maru*),



Source: Nobuo Okamoto, *Kindai Gyogyo Hattatsu Shi* "History of the Development of Modern Fisheries", 1984

Hokkai Kosen (*Pusan Maru*), Hokuho Shokai (*Eitoku Maru* and *Pusan Maru*) and Nichiro Gyogyo (*Buzen Maru*).

Showa Kosen Gyogyo K.K. (Presidents: Michitomo Iwakura and Sanemichi Yagi): Capital 2 million yen, 5 companies, 6 factory ships, licensed output 112,326 cases—Hayashikane Shoten (*Hakuai Maru*), Imai Sakuji (*Shunkai Maru*), Mifune Kanzume (*Higo Maru*), Taisei Gyogyo (*Ryuyu Maru*) and Sanemichi Yagi (*Karafuto Maru* and *Bifuku Maru*).

It was decided that fishing operations in 1928, after the companies were integrated, would be 10% lower in output than the year before. Nippon Kosen Gyogyo sent 9 ships and Showa Kosen Gyogyo 5 ships, this total of 14 ships producing 310,000 cases.

2nd Integration— Alienation of Hayashikane Shoten

After the integration into two groups, many of the mother ships added to Showa Kosen Gyogyo performed poorly. This prompted a full tie-up between the two groups in the second half of 1928, centering on Kyodo Gyogyo, which had received a significant number of Showa Kosen Gyogyo shares. With this, the number of mother ships, 17 in 1927, was downsized to 14 the following year. Keizo Tamura was appointed Chairman of Showa Kosen Gyogyo. The downsizing only involved the two companies operating in fishing grounds off the west coast of the Kamchatka Peninsula; i.e. Nippon Kosen Gyogyo and Showa Kosen Gyogyo.

However, no sooner had the crab factory ship industry off the west coast of Kamchatka at last achieved

its long awaited amalgamation and entered a period of relative calm, than a movement that threatened to spark a renewed flurry of activity started off the east coast. That was in 1929, when the Sanemichi Yagi factory ship *Hachiro Maru* started fishing off there. Though at a disadvantage compared to the west coast, the ship produced a respectable haul of 21,000 cases, triggering a spate of license applications in the following year (1930). Six ships from five companies started fishing there, but with the exception of one ship that changed course to seas near Alaska in mid-operation, all of them suffered losses due to poor catches. But the one that changed course to seas near Alaska—Nippon Kosen Gyogyo's *Taihoku Maru*—produced a good yield of 29,000 cases.

Meanwhile, 13 ships fished off the west coast that year, so that a total of 19 ships were operating off the east and west coasts of the Kamchatka Peninsula. Between them, they achieved the phenomenal output of 405,000 cases, including those produced on land. This created huge inventories, dealing a serious blow to the industry.

In March 1931, four of the five companies operating off the east coast—Nippon Kosen Gyogyo, Showa Kosen Gyogyo, Toyama Kosen and Yagi Shoten (the fifth was Hayashikane Shoten, which opposed amalgamation)—were integrated with the establishment of Higashi Kosen K.K. (capital 1,900,000 yen). Nippon Kosen Gyogyo was responsible for its management. Virtually all crab fisheries now came within Kyodo Gyogyo's sphere of influence, and the latter's de facto business control was complete. Now Nippon Kosen Gyogyo voluntarily restricted its operations, aiming to sustain resources, regulate product supply and demand, and recover international trust. As a result, fishing operations by Higashi Kosen in 1931 were suspended, owing to the need to restrict production of canned crab, as well as the extremely poor profitability of fishing off the east coast of the Kamchatka Peninsula and in seas near Alaska.

In 1931, Hayashikane Shoten, which had not taken part in the amalgamation, sent *Nagato Maru* to fish

in Bristol Bay, Alaska, producing 33,000 cases. However, since the licensed output there was only 23,000 cases, the surplus of 10,000 cases became subject to administrative disposal, resulting in a reduction of future licensed output.

Integration Complete, Establishment of Godo Kosen

In April 1932, Nippon Kosen Gyogyo integrated Showa Kosen Gyogyo, Higashi Kosen and all mother ship-type fisheries of Hayashikane Shoten, forming a new company named Nippon Godo Kosen K.K. Now the number of ships sent out on fishing operations could at last be reduced, and comprehensive production adjustments could be made.

In fact, Nippon Godo Kosen had already reduced its factory ships to seven to protect resources in 1932, and its output was only 173,500 cases.

Kosuke Kunishi's rationale on crab resources was the same as that of protecting coastal fishery resources by trawling in deeper seas. In the case of crab resources, he felt that "This company is voluntarily and appropriately reducing its output, both with a view to protecting crab breeding and in deference to sales policies" (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*). As this shows, Kyodo Gyogyo voluntarily engaged in conserving resources using the method of "voluntarily reducing production".

Most sales of canned king crab were for export, those to America accounting for 50–60% and those to the UK for about 30%, the remaining 10% or so going to countries like Australia, France and Denmark.

Nippon Godo Kosen was merged into Kyodo Gyogyo in 1936, and in the following year Kyodo Gyogyo was renamed Nippon Suisan. From then on, it continued crab fisheries as the company's north-sea division. In the meantime, it continued planned fishing operations while striving to rationalize business, improve quality and expand sales channels, achieving good results in the process. As the wartime regime took hold, however, Japan–US relations worsened,

and in 1939 output was restricted owing to poor exports. In 1941 fishing operations were suspended,

and in 1942 only two fleets were dispatched, after which operations had to be stopped altogether.

Part 5 Innovations in Trawlers

1. Adoption of New Fishing Methods

The V-D Method

Trawling technology and fishing boat equipment made remarkable advances from the Taisho to early Showa eras (1912 to 1920s). The innovation and development of technology were major factors behind the expansion of trawl operations from coastal areas to the East China Sea, the South China Sea, and further to the “world’s seas” beyond the equator and the international dateline.

Although trawling in itself, as a fishing method using bottom trawl nets, was developed in Britain, it is very similar to the “*utase-ami*” (small sailing trawl) method traditionally practiced in Japan.

At the beginning of the 18th century, the “beam trawl” method using a crossbeam to widen the mouth of a towing net had first appeared in Britain, but the crossbeam was only 15 meters wide at most. From the end of the 19th century, otter boards came to be used to expand the mouth of the net. The trawling method first introduced to Japan (otter trawl) used these otter boards. Later, the otter boards were separated from the net mouth, and “ground cables” about 100 meters long were used to connect them to the mouth. These ground cables, together with the otter boards, maintained contact with the sea bed while the trawler moved along. This new method came to be adopted in Japan from around 1925. It was known as the V-D method, so named because the patent was owned by V.D. Co. Ltd. of Britain.

With this method, the otter boards and ground cables would rake along the sea bed, stirring up a cloud of sediments to drive the fish back into the net. In other words, with the V-D method, the net mouth

was effectively widened to the distance between the otter boards.

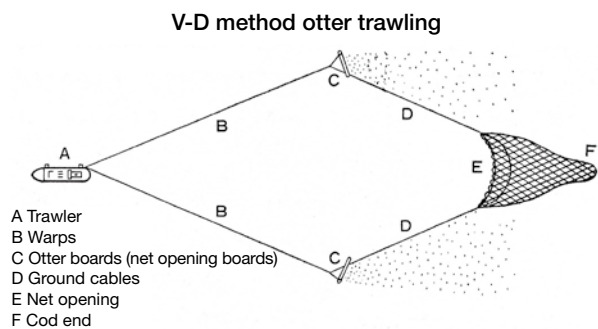
With conventional otter trawl, the net mouth measured 24 meters and the height in the center was 1.2 meters. But with the V-D method, the distance between the otter boards was 69 meters and the height was 7.8 meters, thereby increasing fish catches. In the first half of 1925, for example, Kyodo Gyogyo produced 190,000 cases, but in the second half, when it adopted the V-D method, this increased to 200,000 cases. By the second half of 1926, it had increased again to 220,000 cases. Thereafter, improved versions were developed to replace this V-D method.

Single Quarter Rope

In around 1931–32, Kyodo Gyogyo devised a method of operating with a single quarter rope, which it commercialized from around 1934.

The method of hauling nets in use until then involved pulling nets to the side of the ship and hauling the main net up by hand. This meant that, because the mouth of the main net had to be closed first before operating the winch, two quarter ropes had to be used.

The single quarter rope method used only one rope,



as the name suggests. When the fishing nets were pulled close to the side of the ship, the main net mouth was closed and the quarter rope was immediately engaged with the winch to haul up the net. This

eliminated manual hauling of nets, thus economizing on labor and vastly reducing the time needed to haul up nets. The single quarter rope method was used by all Kyodo Gyogyo ships up to around 1939.

2. Technical Innovations in Fishing Boat Equipment

Wireless Telegraph Equipment

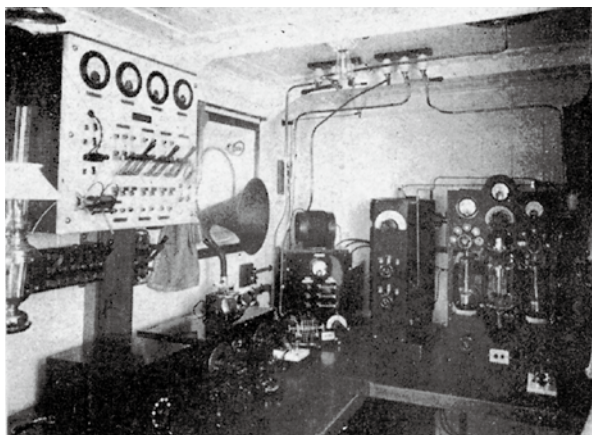
Three technical innovations in trawler equipment opened the way for operations in distant water fishing grounds: the installation of wireless telegraph equipment, the conversion of the *Kushiro Maru's* engines to diesel in 1927, and the adoption of on-board rapid freezing equipment in 1930. This was the start of a new era for trawling. Much of the basic and applied research in this connection was carried out by the Hayatomo Fishery Institute, Japan's first private-sector fisheries research institute, and the resultant equipment was subsequently fitted in Kyodo Gyogyo's trawlers in stages.

In 1921, wireless telegraph equipment was fitted in the *Ujina Maru* and *Musashi Maru* (both built in 1920), the first time this had happened to private trawlers in Japan. This made it possible to transmit two types of radio wave (1,364 and 500 kilocycles) from both main and auxiliary equipment, using spark-gap transmitters with antenna power of 0.3 kilowatts. Later, the equipment was fitted on all ships in very quick order, while a private wireless telegraph station

was set up in Tobata Fishing Port, site of Kyodo Gyogyo's relocation.

The impact of wireless communication spurred remarkable development in the rational management of fisheries. Ships could now maintain uninterrupted communication even in mid-operation. This not only helped to prevent shipping accidents thanks to relays of information such as weather and sea conditions between sea and land, but also made it possible to regulate output and prices by relaying the state of fish catches from sea, or fish prices in various locations from land bases.

The adoption of wireless communication also made it possible to establish a cargo allocation center in Osaka and inform it of the going prices by telephone, then, the next morning, compare this with the types and volumes of fish catches to be brought back to port, and finally determine how much of which fish should be sent to which market. Ships could also use secret codes to notify each other of fishing grounds, enabling them to operate in fishing grounds where the value was highest, thus increasing output.



Wireless room on a trawler of the day

Diesel Trawlers

The Fisheries Bureau vessel *Hokusui Maru* was the first fishing boat to be fitted with a diesel engine in 1918, but the first fully commercialized diesel trawler was Kyodo Gyogyo's *Kushiro Maru*.

At the time, west-water trawling was approaching the peak of its development, and the *Kushiro Maru* was built at the Mitsubishi Zosen Nagasaki Shipyard in 1927, based on a plan to expand fishing grounds south of the Taiwan Strait. With a speed of 11.8 knots, a 750 horsepower engine and a cruising range of 40

days, it could carry out trawl operations in water depths of up to 360 meters. It also had a valve-type wireless telegraph system with a communication range of 1,600 kilometers, a radio telephone with a range of 80 kilometers, an electric-powered trawl winch, and other state-of-the-art equipment.

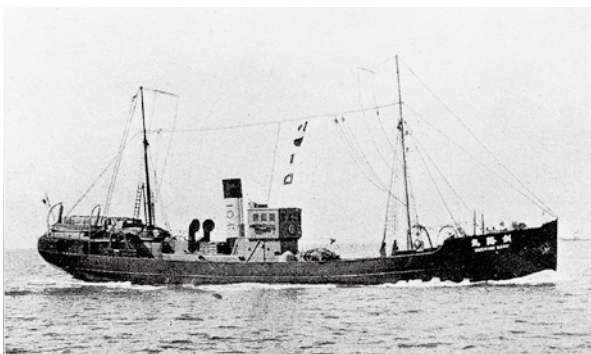
The method of lighting was also improved. Conventionally, internal lights and working lights on deck were mostly oil or gas lamps. After the construction of the *Kushiro Maru*, however, lighting was gradually converted to electricity, which reduced the hazards of night work and improved efficiency. One crew-member has the following recollection from those days: “The glass chimneys of the oil lamps had to be cleaned, so we had no time to rest even during our time off. But once the lamps were changed to electricity, things became much more convenient”.

Diesel trawlers were economically superior for the very fact that they aimed for distant water fishing grounds. Compared to steamships, not only was the cruising range more than doubled, but they could also carry twice as many cases of fish while achieving a fuel consumption saving of 20%.

In 1929, the *Kushiro Maru* went north to fish in the Bering Sea, and south to the seas off Annam, reaping as much success as had been expected.

On-Board Rapid Freezing Equipment

In conventional trawling, fish catches could be refrigerated with ice alone. Given the increased days of operation, however, this was no longer enough to keep



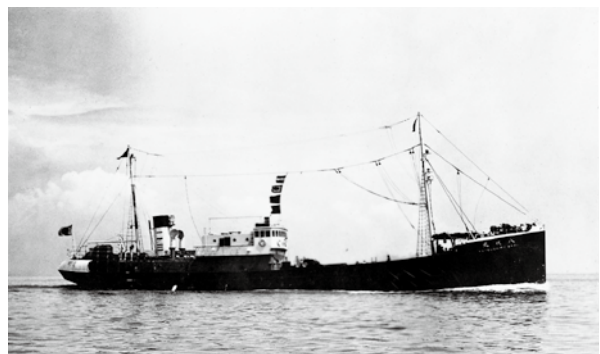
The first private diesel trawler *Kushiro Maru* (completed in 1927)

catches fresh when using diesel trawlers. Trawlers could not have fished in the “seven seas” of the world with wireless communication and diesel engines alone; the technology would not have been complete without the commercialization of on-board rapid freezing equipment.

Built in 1927, the *Kushiro Maru* was fitted with the very latest American-style refrigeration equipment of the day, but it failed to deliver the expected results. Therefore, superior on-board rapid freezing equipment was developed following further research by the Hayatomo Fishery Institute.

This equipment was first fitted on the *Yatsushiro Maru*, as well as on five diesel trawlers in the same class, between May and October 1930. As Kosuke Kunishi recalls: “We Japanese trawl fishery operators had, for the previous 20 or so years, restricted ourselves to fishing grounds in the East China Sea and the Yellow Sea, and had primarily focused on internal markets as sales routes for these catches. However, we felt confined by these fishing grounds as a result of various circumstances, and attempted to venture out to the north sea or the South China Sea. To meet our objectives, we led the world in striving to complete diesel trawlers and on-board rapid freezing equipment, and succeeded in doing so” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Kunishi goes on to state: “As a result of research on freezing, it was discovered that, if we used a method of rapid freezing, the tissues of fish and shellfish would not be destroyed, and it would be possible to freeze them in fresh condition. When we learnt this, we were



The diesel trawler *Yatsushiro Maru* fitted with the Iwamoto on-board rapid freezer

motivated to conduct further research at Kyodo Gyogyo on using these results in actual fisheries. And before long, we had completed a design for on-board rapid freezing equipment that no country in the world had yet succeeded in developing. As a result, by using diesel trawlers fitted with this freezing equipment, not only could we fish in fishing grounds anywhere in the world, but we could also freeze the fish and

shellfish in live condition straight after catching them” (ibid.).

The adoption of on-board rapid freezing equipment dramatically improved the ability to keep fish catches fresh, and at the same time made it possible for fish to be standardized as products and systematically supplied to markets.

Part 6 Efforts to Develop Fishery Science — Establishment of the Hayatomo Fishery Institute

1. The First Private Sector Fisheries Research Institute

As a Research Arm of Kyodo Gyogyo

In February 1920, the Hayatomo Fishery Institute was established as a research arm of Kyodo Gyogyo and associated companies—and as Japan’s first ever private-sector fisheries research institute—in Hanano-cho, Shimonoseki, following a proposal by Kosuke Kunishi.

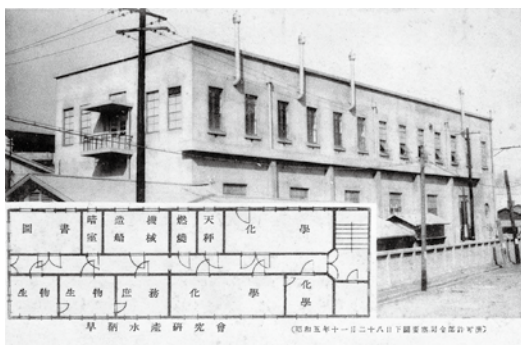
Kyodo Gyogyo President Hisazo Matsuzaki served concurrently as the Institute’s Chairman, Kosuke Kunishi and Jinpachi Hayashida as the two Executive Directors, and Soji Yamawaki as the Auditor, while Chiyoma Iwamoto and others were responsible for planning and promotion. In reality, the Institute itself had the strong character of a research and advisory body for Kunishi. The name “Hayatomo” was derived from “Hayatomo no Seto”, the narrowest stretch of

the Kanmon Straits.

The following outline was drawn up to define the surveys and research targeted by the Institute.

- (1) Surveys of fishing grounds together with research on fish species
- (2) Research on marine product manufacture and refrigeration methods
- (3) Research on fishing nets, tackle and methods
- (4) Shipbuilding and design of machinery and equipment
- (5) Surveys on domestic and overseas fisheries
- (6) Surveys and research on other business ancillary to fisheries

Members of the research team at the time of establishment included Toshio Kumada (marine biology, fishing ground surveys), Tahei Iiyama (fish catch processing and treatment), Tatsunosuke Tajima (fishing



The Hayatomo Fishery Institute as of 1930



The specimen room at that time

boat machinery) and Takeo Horie (shipbuilding). They were soon joined by Shu Suzuki, designer of ship's machinery, and fishing boat designer Eijiro Kaneko.

In 1921, Keizo Tamura (Kyodo Gyogyo's 2nd President) became Chairman, and more up-and-coming researchers joined the Institute's lineup. Ichiemon Yoshida (from the freezing and refrigeration equipment field) joined in 1923, Zenpei Ogura (fisheries chemistry) in 1924, and Hisatoshi Marukawa (marine biology) in 1926.

At the time of its establishment, the Institute consisted only of a research lab (15 *tsubo* or 50 m²) and a specimen room (15 *tsubo*); the research was mainly carried out within the various divisions of associated companies.

This Hayatomo Fishery Institute was run with funding and equipment donated by Ichiro Tamura, as well as Kyodo Gyogyo and associated companies that benefited from the research.

Research Results Contributing Greatly to the Growth of Fisheries

When the Hayatomo Fishery Institute was first launched, Japanese fisheries were in the process of modernization; the motorization of fishing boats and mass production of fishing nets were in progress, and it was becoming increasingly possible to venture into offshore waters, and further, to distant water fishing grounds. In tandem with this, there was an increasing need to incorporate rational, scientific methods into surveys on fishing grounds and fish species, improvements to fishing methods and fishing tackle, freezing and preservation technology, and so on.

2. Outline of Research

Fishing Boat Department

The first requirement for fishing in distant waters was to have fishing boats with a large cruising range. The

The Hayatomo Fishery Institute played a major part in some aspects of this—for example, promoting the introduction of diesel trawlers when trawling was in its developmental stage, or developing on-board rapid freezing equipment.

In 1930, Kyodo Gyogyo completed its relocation from Shimonoseki City to Tobata City in the expectation of further development. At the same time, the Hayatomo Fishery Institute also relocated to Shioizaki in Tobata City, and started activity as a fully-fledged research institution consisting of three departments (Fishing Boats, Chemistry and Biology). In April 1932, it changed its name to Hayatomo Fishery Research Center, and the former Group's Chairman Keizo Tamura continued to serve as the Center's Director.

The Center's facilities consisted of a biology lab measuring 16 *tsubo* (53 m²), a specimen room of 10 *tsubo*, a chemistry lab of 16 *tsubo*, a freezing equipment lab of 16 *tsubo*, a combustion chamber of 4 *tsubo*, a balance room of 4 *tsubo*, a machine design room of 7 *tsubo*, a library of 10 *tsubo*, and an office of 7 *tsubo*.

Besides this, the Senzokujima Laboratory was set up in Senzokujima, Amakusa-gun, Kumamoto Prefecture. Here, research on kuruma prawn aquaculture was carried out under Motosaku Fujinaga from May 1933. The facilities in this case consisted of a shrimp production lab of 4 *tsubo*, a seawater analysis lab of 2 *tsubo*, and a seed shrimp farming pond of 150 *tsubo*, among others.

The Hayatomo Fishery Research Center was taken over by the Nissan Fishery Institute Co., Ltd. in 1935, and would later evolve into the Nippon Suisan Central Research Laboratory and Nissui Pharmaceutical Co., Ltd.

Kushiro Maru, Japan's first commercial diesel trawler operated by a private company, had more than twice the cruising range of a steamship; with the development and commercialization of on-board rapid

freezing equipment, it could supply fresh fish catches from fishing grounds in distant foreign oceans, in bulk and at reasonable prices.

The two trawling innovations of diesel engines and on-board rapid freezing equipment had originally been conceived and planned by Kosuke Kunishi. Diesel trawlers were designed by the two engineers Shu Suzuki and Eijiro Kaneko. By fitting trawlers with diesel engines, they ushered in a new era for Japanese trawling and laid the foundations for broad expansion into overseas fishing grounds.

These two engineers handled the design or modification of numerous fishing boats under commission, not only from associated companies but also from other fishery companies, thus contributing greatly to the improvement of vessel formats and improved performance of engines.

Chemistry Department

(1) Research on refrigeration and freezing methods

On-board rapid freezing equipment was developed in 1930, three years after the *Kushiro Maru* was built.

The hold of the *Kushiro Maru* was fitted with refrigeration equipment imported from America, but the resultant loss of moisture from the fish had a negative impact on product value; conventional ice storage could actually do a better job. Storing unfrozen fish inside a hold cooled by a freezer was not a good way of maintaining freshness. Because the fish were frozen gradually, the moisture inside their body cells would

form large crystals during the freezing process; these would then break through the cell walls, destroying the firmness of the flesh. On thawing, this moisture would be released, ruining the taste. This problem was solved by rapid freezing. The failures described above were necessary steps in the development of on-board rapid freezing equipment. Kunishi himself suspected as much, writing: “When refrigerating, the hold should be cooled to around 1 or 2 degrees centigrade, so that crushed ice gradually starts to thaw” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

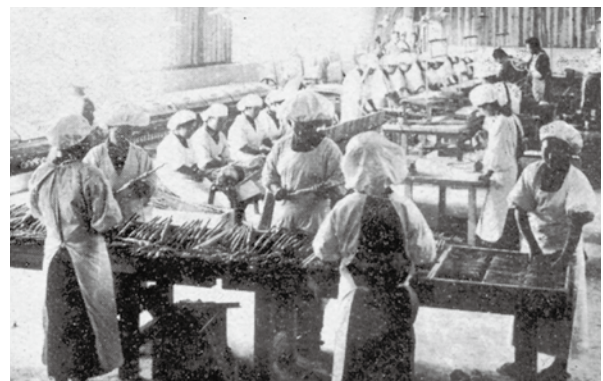
The Hayatomo Fishery Institute had started research on refrigeration and freezing equipment for general use and for fishing boats in around 1927. But Kosuke Kunishi strongly urged the Institute to promote development, as he saw rapid freezing at sea as a vital element in developing remote fishing grounds and expanding operations.

The Institute now oversaw the installation of the Kaohsiung and Keelung cold stores of Horai Suisan, established in Taiwan in 1927, as well as refrigeration and freezing equipment installed on the bottom trawlers *Horai Maru*, *Takasago Maru*, *Takao Maru* and *Koshun Maru*. These were also the first fishing boats to use 150-horsepower diesel engines.

On-board rapid freezing equipment was developed after this. The brine-drip freezing equipment used for on-board rapid freezing was an invention of the engineer Zenpei Ogura. His invention was patented not only in Japan but also in Britain, America and France.



Iwamoto on-board rapid freezer
Each tank could be raised or lowered individually



Scene at a *chikuwa* factory

A total of twelve patents and utility model rights were obtained in connection with freezing technology at this time, including brine-drip freezing equipment.

Subsequently, on-board rapid freezing equipment was installed in all ships between the end of 1933 and the beginning of 1934 under the name of the “Iwamoto on-board rapid freezer”. This device developed by Chiyoma Iwamoto consisted of a stack of flat tanks containing brine as a coolant (calcium chloride solution). The device occupied minimal space as the individual tanks could be moved up or down, and the pitching of the vessel could not interfere with the work as the brine was sealed inside the tanks. This offered a level of perfection that could be seen as the prototype of today’s flat tanks.

On-board rapid freezing equipment could freeze fish in a short time inside trawlers, and made it possible to keep fish fresh longer. It was a major step towards “From the oceans to the dinner table” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*), the ideal of fisheries targeted by Kyodo Gyogyo.

(2) Research on *chikuwa* and fish meal

“Processing fish into forms such as *chikuwa*, *kamaboko* or *tempura* like *satsuma-age*, and thereby expanding sales of fish catches, must be one method that we fishery producers should use, bearing in mind the present state of collapsing fish prices” (ibid.).

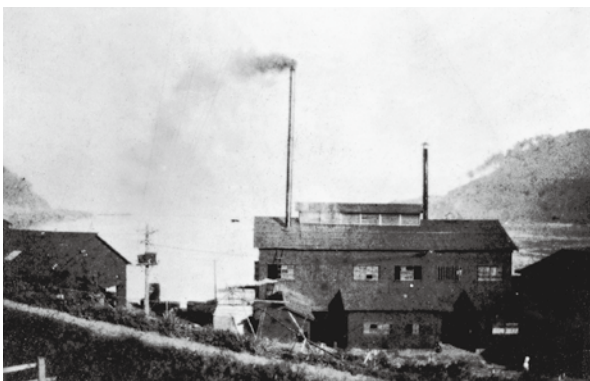
Kosuke Kunishi targeted industrial production of *chikuwa* (a kind of white fish sausage made of *surimi* or ground fish meat), which until then had remained

within the domain of the home, as a step towards adding value to marine resources.

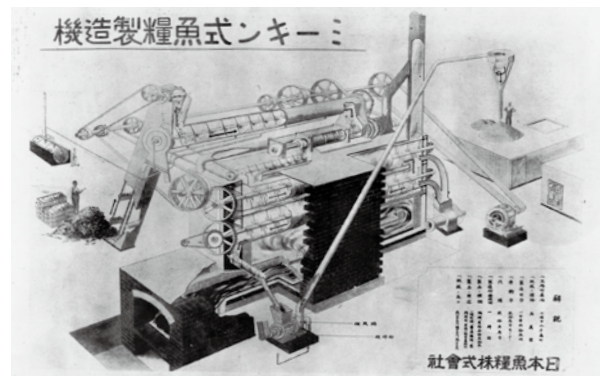
The man appointed to research and commercialize this was Tahei Iiyama, who was invited to join Kyodo Gyogyo from the Ministry of Agriculture and Commerce in 1920. At the time, the raw material for *surimi* products west of Kansai consisted of firm-bodied white-meat fish such as lizardfish, caught in the Seto Inland Sea and the East China Sea. But in order to make *surimi* products from fresh west water fish such as croaker, gurnard and shark that were not suited to the dinner table, Iiyama introduced manufacturing machinery modeled on factories in the Sanriku region. Sanriku had a long history of making *chikuwa* from fish including Kamchatka flounder, Alaska pollack and shark. Iiyama also invited the “Association of Chikuwa Craftsmen” (led by Kouemon Doi) from Watanoha in Miyagi Prefecture to participate in this venture. Kyodo Gyogyo then established the Nippon Chikuwa Seizoshō in 1921, thereby marking its full-scale entry into the manufacture and sale of *chikuwa*.

But now a problem arose. “It was how to deal with residues of the bone known as the ilium... Proper *chikuwa* cannot be made without somehow processing these residues. I decided to consult Mr. Kunishi” (Tahei Iiyama, *Suisan ni Ikiru* “Living in Fisheries”).

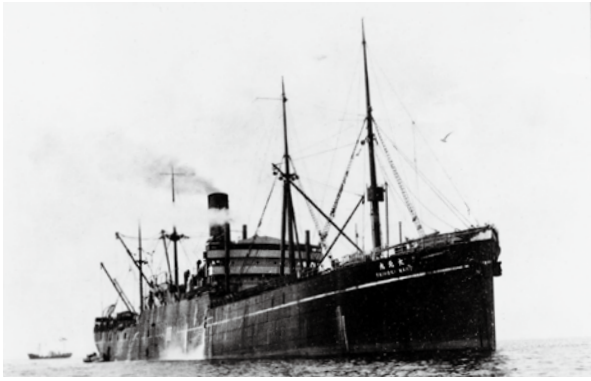
As a result, Iiyama decided to make fish meal out of inedible fish parts arising from the manufacture of *chikuwa*. To this end, he introduced a Meakin fish meal machine made by the U.S. company California



The Nippon Gyoryo fishmeal factory
(Odo, Hikoshima Island, Shimonoseki City)



Meakin fish meal machine



The factory ship *Taihoku Maru* sets out with its two meal-making machines

Press, and started producing fish meal in 1922.

Kunishi commented on these developments as follows:

“Of fish that are particularly cheap in price, we shall make *chikuwa* and use all the residues to make fish meal... By so doing, every single part of cheaply priced fish including their residues will become useful commodities, nothing will be thrown away, and we shall use up the precious resources of the sea without any waste” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Kunishi also states that, if the rationale on making full use of these marine products could be applied to factory ship fisheries, “All fish catches could be completely processed as products, and factory ship fisheries could thereby be perfected” (*ibid.*). Later, he installed a Meakin fish meal plant on the crab factory ship *Taihoku Maru*, and started producing meal from flounder and Alaska pollack.

Iiyama also started work on developing fish sausages in 1931. After the war, he was made the inaugural Director-General of the Fisheries Agency. Even after his retirement, he spent many long years contributing to the fisheries industry, earning the moniker *Suisan O* (“Wise Man of Fisheries”).

(3) Research on other fishery products

Research on various fishery products was started by the Chemistry Department, newly created in 1930. Attention was particularly focused on inventions for extracting seasonings from fish meat, with patents

obtained in Britain, France, Canada and other countries. Besides these, research was also carried out on fish meat extracts, compressed dried fish, hardened oil, margarine and others.

Meanwhile, food processing through the use of freezing technology was another important subject of research. This was because researchers sent to America in 1928 reported on a growing industry in the manufacture and sale of fresh frozen fish meat blocks. Other important research topics included reforms to methods of processing trawl catches and the use of by-products. Finally, studies were started on freezing various foods besides frozen fish, including fruits, vegetables and livestock products, and the possibility of their commercialization.

(4) Research on fish oil

“The future rationalization of fisheries will depend on the results of scientific research. It is hard to predict whether the substances we now discard as waste will become precious drugs or industrial raw materials as a result of research” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

As if to reflect these thoughts, research aimed at processing and using fish oil was started in 1934. This would later blossom as research on EPA (eicosapentaenoic acid) and the fine chemicals industry, for which this research provided a springboard.

Research on fish oil at the time was basic research aimed at using the oil as a paint material. The results were reported in the *Journal of the Society of Chemical Industry* No. 444 as “The Impact of Refinement Methods on the Properties of Oil Polymerization”.

Biology Department

The Biology Department conducted surveys on fishing grounds and research on fish species. It also produced fish charts that would later be compiled into an *Encyclopedia of Fish*.

(1) Surveys on trawling

Precise scientific surveys were made from the angles of oceanography and fish ecology, with the aim of expanding fish catches and discovering unexploited fishing grounds.

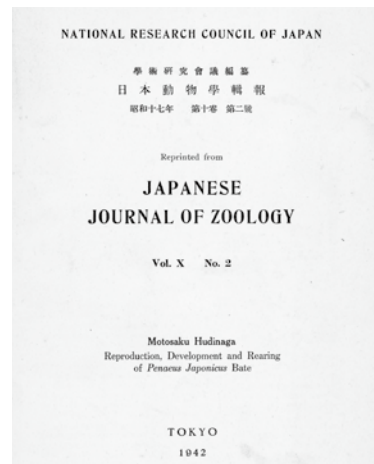
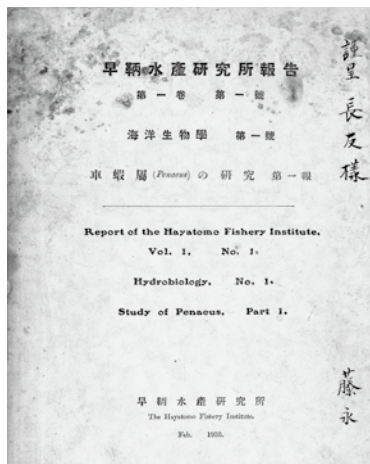
●Surveys in Bohai Bay and the northern Yellow Sea

These sea areas were important fishing grounds, with abundant populations of bream, croaker, olive flounder, drumfish, gurnard and other demersal fish, as well as shrimp. Surveys were continued annually, but particularly large-scale surveys were conducted in 1931, in collaboration with testing laboratories in relevant locations. Based on the results of these surveys, trial operations were actually carried out by six trawlers. The catches were good, bringing recognition for the outcome of the surveys and research. These surveys played a significant role in establishing fisheries in these sea areas.

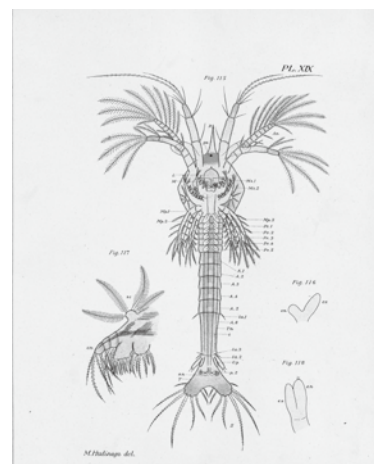
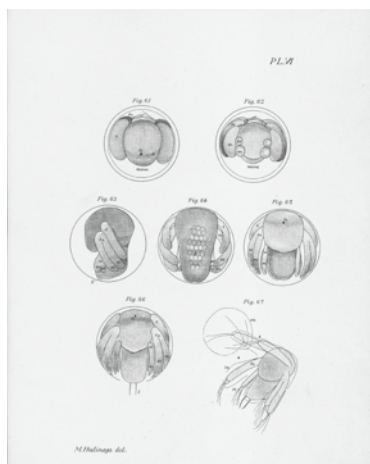
●Surveys in the East China Sea and the southern Yellow Sea

At the time, these sea areas were the main fishing zones licensed as trawling grounds. The principal fish catches consisted of red sea bream, crimson sea bream, yellow sea bream, flounder, olive flounder, croaker, drumfish, mackerel, butterfish, conger and stingray, among others. The different types of bream had particularly high market value and were important fish. When surveys were therefore carried out with emphasis on bream varieties, it was discovered that they spawned north of a line running between Shanghai and Jeju Island, and that they migrated in shoals between there and the growth habitats. This finding made a great contribution to the trawling industry.

●Surveys in the Gulf of Siam, the Java Sea and elsewhere



M. Fujinaga’s research thesis reproduced in “Report of the Hayatomo Fishery Institute” (Feb. 1935) and “Japanese Journal of Zoology” (1942)



Illustrations from the thesis

In the summers of 1932 and 1933, surveys were conducted aboard the *Shonan Maru*, a survey vessel of the Governor-General of Taiwan. The possibility of coastal fisheries was recognized, although the South China Sea, the Gulf of Siam, the Strait of Malacca, the Java Sea and others were deemed unsuitable as trawling grounds.

(2) Surveys on Taisho shrimp (oriental shrimp) fishing grounds

Taisho shrimp resembled kuruma prawns in various aspects, including their shape and taste; they also had a high market value, and were attractive as targets for trawling. In 1922–1923, Taisho shrimp were first mixed with trawler landings, whereupon surveys were conducted to gauge their potential as fish catches. In the 1924 survey, Taisho shrimp were found to reside along coasts for very short periods in all four seasons. From 1925 onwards, wide-ranging surveys were made by vessels from both private and public sectors. These surveys culminated in successful trawling for Taisho shrimp in Bohai Bay in spring and autumn.

(3) Research on kuruma prawn production

Although Taisho shrimp trawling was successful, there was one researcher who realized the limits to naturally growing marine resources, and opened the way for active aquaculture of kuruma prawn. His name was Motosaku Fujinaga.

In April 1933, the Senzokujima Laboratory was opened in Senzokujima, Amakusa-gun, Kumamoto

Prefecture. Here, Fujinaga started research on kuruma prawn production from May that year. In July, artificial spawning was achieved for the first time in the world, and in 1939 complete aquaculture was successfully carried out.

Thereafter, research on kuruma prawn would be continued by the Nissan Fishery Institute, but in 1941, Fujinaga's degree thesis "Reproduction Development and Rearing of *Penaeus japonicus* Bate" won the Japan Prize of Agricultural Science.

Fujinaga worked for Nippon Suisan until the end of the war. Then, when the Fisheries Agency was created after the war, he became the Director of its Research Institute following a request by Tahei Iiyama, inaugural Director-General of the Agency and also originally from Nippon Suisan.

(4) Collection of fish and marine biological specimens

From among the fish and other marine species obtained during fishing operations, those that were of particular value both scientifically and industrially were collected as specimens. These included fish from waters off Europe and America and crustaceans from southern oceans, and were permanently available for public perusal.

A particularly noteworthy endeavor was that of Kumada. As the person responsible for marine species and fishing ground surveys, he took the initiative in traveling on trawlers to make detailed sketches of the coloring and shapes of various fish in situ, thus recording their appearance in their natural condition. The original drawings of these fish and marine species, titled *Gyofu*, numbered more than a thousand. They were published before the war as *Nanyo Shokuyo Suisan Zusetsu* or "Illustrated Guide to Edible Marine Produce of the Southern Oceans" (*Gyofu* 149pp, publ. 1941) and *Nanyo Yudoku Gyoshu Chosa Hokoku* or "Survey Report on Poisonous Fish in the Southern Oceans" (*Gyofu* 77pp, publ. 1942), among others. After the war, *Nippon Suisan Gyofu* or "Guide to Japan's Marine Produce" (*Gyofu* 394pp) was published in 1961. The *Gyofu* created by Kumada later became



A *Gyofu* fish drawing

one of Japan's four great fish guides. They would be discovered by Keizo Shibusawa (grandson of Eiichi Shibusawa), who, at the same time as serving as Governor of the Bank of Japan and Minister of Finance, had tremendous enthusiasm for researching

the folklore of the marine produce and fisheries industries.

Another major achievement of Kumada is that he standardized the names of fish, which tended to vary from region to region.

Part 7 Modern Labor Relations in Trawling

1. Kosuke Kunishi's Management of Fisheries Business

Management of Trawling Business

The trawling industry as it stood in the late Meiji era was created by 26 corporate organizations and 35 individual businesses. The largest of the former were Hakata Kisen K.K. with 10 ships, Fukuhaku Enyo Gyogyo K.K. with 7 ships, and the Nagasaki Steamship Fishery Co. with 6 ships. As for individual operators, Shin-ichi Hara was the largest with 6 ships. The Tamura Steamship Fishery Company had only 3 ships under the name of Kosuke Kunishi, and at the time was merely a medium-scale concern. Two major factors caused this to transform into the largest trawling concern at the beginning of the Showa era. One was that the Tamura Steamship Fishery Company acquired the outstanding talent that was Kosuke Kunishi; the other was that labor relations were founded on Kunishi's concept of the industrialization of fisheries. This was the difference between management by ordinary shipowners of the time and the Tamura Steamship Fishery Company, and this is what provided a major foundation for growth.

During its rise to prominence, trawling was often managed by fish wholesalers as owners of fishing boats and fishing tackle, or by wealthy industrialists with

no connection to fisheries. It was not unusual, in fact, for rice wholesalers, doctors and others in Osaka and Kobe to be shipowners.

They would directly hire boatmen, who would then hire fishermen in turn; the shipowners would merely remain on land and collect their shipowners' dividends. For this reason, if the business was going poorly they would immediately withdraw their capital. Or when ship prices rose during the Great War, they would simply cash in on their assets.

Trawling operations by the Tamura Steamship Fishery Company were completely different in their style of management. Rather than taking the easy route of using the old system of master and apprentice boatman, the company took determined steps to establish a modern system of labor relations. This was the big difference between ordinary shipowners of the day and the Tamura Steamship Fishery Company, and it was this that formed a major foundation for the growth of the company. Fishermen were mainly recruited from the Shimane area, but they were directly employed by the Tamura Steamship Fishery Company, and did not have an employment relationship with the boatmen.

2. Kyodo Gyogyo's Labor Environment

Employees' Motivation Spurred by Mutual Aid System

Particularly worthy of mention are the company's labor-related measures. In July 1920, the year after Kyodo Gyogyo was launched, a mutual aid society for employee recreation and welfare called the "Kyodo Gyogyo Kyoshinkai" was formed. Its purpose was to "promote the common welfare of the society's members, to provide mutual aid for the members and their families in the event of injury or illness, and to provide felicitations or condolences in times of good or bad fortune", and at the same time "to encourage employees to express their hopes to Head Office freely, and to facilitate the communication of wishes between Head Office and the employees". The Chairman would be the President of Kyodo Gyogyo, assisted by six officers, and the membership reached around 1,000 (1927). A membership fee of 1.5% of the annual bonus (for land-based workers) or of the performance-based commission (for sea-based workers) would be charged, and the company would match these amounts with equal contributions to operate the society.

The society undertook a number of secondary activities, including an agency for life and non-life insurance, a tax payment cooperative, a land cooperative and a housing cooperative. It engaged in a range of highly specific services including arranging members' weddings, funerals and other formal occasions, insurance work, assistance with savings, advice on land and housing, administrative work on further education, moving house, etc., arranging doctors and hospitals, and so on.

Meanwhile, as well as launching a system of mutual aid in 1927, the society also oversaw the construction of compact housing and seaman's homes, opened sea-food canteens, and so on. These amply express the spirit of "creating a micro-society that is easy to live in" and "sharing both the benefits and pride between all of us" in the "Declaration" set out upon the reloca-

tion to Tobata.

This bore fruit in raising employee morale, creating a sense of responsibility and solidarity, improving production efficiency, and motivating technical innovation. Even in times of recession, Kyodo Gyogyo could gradually enhance its corporate standing; behind this could be said to lie the fact that the employees' willingness to participate was centered on the guidance of a leader with the philosophy and driving force of Kosuke Kunishi.

Re-employment of Retired Seamen and Improved Conditions for Active Seamen

On average, trawlers in 1927 operated for 14 days per trip, fishing for about 10 days, with a round-trip of 4-7 days to and from the fishing grounds. They towed nets for about 5 hours per session, completed between 35 and 40 towing sessions per trip, and caught 500 to 800 large cases each containing 60 kg of fish. Given that there were 23 or 24 trips every year, the crewmembers spent virtually every day of the year at sea.

Ships were anchored at port for 27 or 28 hours. During this time, fish catches would be unloaded, then food provisions, drinking water, crushed ice, coal and other requisites would be loaded in preparation for the next trip. The engines would also have to be serviced. Conventionally, unloading and loading operations were the work of the crew members. This made it hard for them to recuperate sufficiently on land while the ship was docked, and was therefore an area that required improvement.

In May 1927, the mutual aid system was established with a view to hiring sea-based workers who had reached retirement age, workers who had been injured or fallen ill at work, and retired workers deemed particularly suitable by the company, among others. These would be engaged in work necessary for the company, while also promoting welfare, including relief from unemployment. After the relocation to Tobata,

positive moves were made to subcontract port entry and departure operations by trawlers.

As a trawler entered port, mutual aid workers would be mobilized to undertake all operations including ship handling and mooring, unloading of fish catches, loading of food, crushed ice and coal, etc., and tidying the ship interiors. As well as giving the crew members ample rest for 24 hours while the ship was docked, this also had the effect of providing an income for the mutual aid workers.

These improvements by no means reduced the severity of the work at sea, however. As one crew member recalled, "Once, in around 1932, we towed nets 28 times during an eight-day trip, until the ship was full of ribbonfish. Day after day, we made huge catches with no time to sleep, and I was in bed for only 3 hours 58 minutes during the whole eight days. Of course, this does not include the number of times I fell asleep while working. But then, no sooner had we returned to port than we were off again only 24 hours later".

When the first towing was finished, the fish piled up on deck would be sorted into cases while the second towing was in progress. Then, as soon as the sorting was complete, nets would be hauled up for the second time. The nets would be emptied on deck then immediately cast again, followed by sorting, and this work was repeated continuously around the clock. During this time, the crew would never sleep for two consecutive hours. This may have been acceptable during the day, but working at night, before the lighting system changed to electric lamps, meant working in the dim light of oil lamps, with many associated dangers. It was not until around 1934 that all ships' lighting was changed to electricity.

In this way, the sweat of the trawler workers' brow was an important driving force that launched Kyodo Gyogyo through the world of trawling.

Training Fisheries Workers

"The success of fisheries in the new era of reorganization

will depend on workers who can adapt to it. To that end, therefore, we will need to select those with the right qualities, and give them the knowledge and training essential for their work" (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Kosuke Kunishi identified the training of human resources, irrespective of their qualities, as an important means of rationalizing fisheries. In particular, he actively recommended that the sons of coastal fishermen should aim to become crew members in distant water fisheries, thus adapting to the new age.

In April 1927, the Shimonoseki Fisheries Employee Training Center was established with the aim of training superior seamen. The Center consisted of a Deck Department and an Engines Department, each offering a Preparatory Course and a Main Course.

The Preparatory Courses accepted 20 higher elementary school graduates every year and gave practical training for one year, including three months of coursework. The Main Courses, meanwhile, accepted trainees who had completed the Preparatory Course or had equivalent academic ability and on-board experience. It gave practical training for three years, including six months of coursework. The aim was to train the managerial seamen of the future.

Incidentally, when trawling was first introduced to Japan, some ship's captains had no knowledge of fisheries, and would therefore be accompanied by chief fishermen. But now that ship's captains had become proficient in fisheries, Kyodo Gyogyo quickly abolished the system of chief fishermen. This was one of the characteristics of Kyodo Gyogyo's on-board labor organization.

In the steamship era, trawlers generally had crews of 16–17, consisting of 4 senior seamen and 12–13 ordinary seamen. With the change to diesel engines, however, trips became longer and equipment more complex. To reflect this, crews increased to 20–21 men, with 6 senior seamen and 14–15 ordinary seamen, including the addition of 2 freezer operators.

Soon, graduates of the Shimonoseki Fisheries Employee Training Center came to account for the

majority of crew members—ordinary seamen as well as senior seamen. This was another characteristic of Kyodo Gyogyo.

Upon the company's relocation to Tobata in 1930,

the Shimonoseki Fisheries Employee Training Center was renamed the Tobata Fishing Boat Staff Training Center.

Chapter 4: Emerging *Zaibatsu* and Fisheries —Nippon Sangyo and Nippon Suisan 1931–1940

Part 1 Kyodo Gyogyo's Expanding Business Sectors

1. Kyodo Gyogyo and Market Distribution

Affiliated Businesses Stand Side by Side

After the relocation to Tobata in 1930, the Kyodo Gyogyo Group had business interests in three main sectors: (1) trawl fishery, west-water trawling, mother ship-type crab and other fisheries, (2) ice making, refrigeration, freezing and marine product processing, and (3) sales of marine products. The company was joined by associated companies and affiliates standing side by side.

Kyodo Gyogyo's fisheries division absorbed the whole business of Nippon Trawl in January 1931, having acquired shares in that company in 1925. Then in December that year, the herring fixed-net fishery company Godo Gyogyo K.K. was established. At Tobata, mainly Kyodo Gyogyo but also others including the west-water two boats trawling company Hoyo Gyogyo and Fuso Gyogyo K.K. were engaged in fisheries. In 1934, the Kyodo Gyogyo Group reached a scale whereby it owned 53 ships or 72% of Japan's total of 74 trawlers.

The necessary fishing nets, fishing tackle and ship's gear were supplied by Nippon Gyomo Sengu, fish cases by Nippon Gyokan K.K. (formerly Kagotora Seikan K.K.) and crushed ice by Tobata Reizo.

Fish catches unloaded by conveyor were transported

and distributed by Marushin Unsoten and Kosoku Reizo Kisen K.K. And the fish were delivered to the consumers through a sales network including the 30 sales outlets of the former Chuo Suisan Hanbaisho, as well as companies like Kyodo Suisan Hanbaisho in Tokyo.

Meanwhile, parts of the fish catches were processed into *chikuwa*, *kamaboko* and paste (canned fish) at the Nippon Gyogyo factory, while other residues were made into meal. Other parts were frozen by the company's freezing equipment and delivered to consumers in that form. Fish rapidly frozen at sea by deep-sea fishery ships were similarly delivered to consumers via Tobata Reizo's freezing and refrigeration facilities.

Sankyo Suisan exported frozen and canned fish, and later, whale oil too.

Canned king crab already enjoyed a good reputation on overseas markets as specialty Japanese produce. It was produced by Nippon Godo Kosen, which operated crab factory ships in the Sea of Okhotsk and the Bering Sea. The empty cans used for this were made by Tobata Seikan.

In fiscal 1931, Japan's national railways handled some 597,000 tons of fresh fish inside Japan, of which around 65,000 tons or 11% were dispatched from Tobata Station; the Kyodo Gyogyo Group accounted

for the majority of these catches.

Expanding Sales of Frozen Fish

Behind the dramatic expansion of Kyodo Gyogyo's frozen fish production lay technical innovations such as the commercialization of diesel trawlers fitted with rapid freezing equipment, and the practice of reducing costs in the fishery business. Tobata Reizo, in charge of processing, also installed UM-type rapid freezing equipment, and from 1929 started trial manufacture and production of frozen marine products, frozen fruit, frozen vegetables and livestock products.

On the back of these developments, Kyodo Gyogyo set up direct sales organs (Kaiko Shokai K.K.) in Tokyo, Osaka and other major consumer bases, providing direct sales access to major consumers.

In response to this, the former Chuo Suisan Hanbaisho also switched to a policy of direct sales to consumers from 1931 onwards. In large cities, sales routes for direct marketing of fish frozen at sea, processed marine products and others were developed with a main focus on the army, restaurants and other major consumers. In the regions, meanwhile, sales networks were rapidly expanded by setting up sales outlets and branch offices.

Kosuke Kunishi had acutely felt the need to reform fish market distribution from the days of the Tamura Steamship Fishery Company. In August 1921, based on experience of over-the-counter selling and other formats until then, he declared the view that "a fundamental policy needs to be established with regard to fish markets".

The gist of this was that the root cause of spiraling fish prices lay in the lack of a government policy on regulating fish prices. Having pointed this out, Kunishi cited four possible solutions: "economic fishing port development", "building more refrigerated freight wagons, boosting the transportation capacity of railways, and reducing railway transportation costs for fresh fish", "improving the system and facilities of fish markets", and "improving the retail system".

Of these, he submitted his "Views on a Guideline for Creating Central Markets" in June 1922, when an Outline on the Creation of Central Markets as a measure to improve the system of fish markets was being deliberated by the Home Ministry's Advisory Committee for Social Services. As a representative of fisheries producers, Kunishi also appealed that promoting cost reductions and aiming to develop fisheries should be urgently addressed, while taking steps to stabilize the national lifestyle by keeping prices of essential foods at appropriate levels. Based on this opinion from Kosuke Kunishi, the Japan Fisheries Association submitted "Opinions on Central Wholesale Markets" to the Home Ministry.

In outline, it asserted that, if the national government and local authorities were to construct central markets at the rate of one per district in principle, create independent inspection bodies, restrict numbers of middlemen and retailers through a system of qualifications and public authorization, and organize autonomous unions by authorized middlemen and retailers, among other measures, not only would the current proliferation of wholesale operators be corrected, but also monopolies by single operators would be abolished, achieving fair distribution and smoother trading.

In March 1923, the Central Wholesale Market Law was enacted and promulgated. However, the Central Wholesale Market created by the city of Kyoto ahead of the rest of the country in 1927 was, partly due to the city's fiscal constraints, far removed from that hoped for by Kunishi and other fisheries producers. The city's policy on accommodating operators had been changed from one of selecting operators to one of accommodating all of them, and from a multiple system of wholesalers to a single system. The policy of accommodating all operators had arisen from the city's wish to avoid compensating existing operators. But this was later interpreted as a preferential right for existing wholesale operators, and merely resulted in alienating fisheries producers.

Hereafter, central wholesale markets were

successively created in 1930 (Kochi City), 1931 (Osaka City and Yokohama City), 1932 (Kobe City), and 1935 (Tokyo City). Central wholesale markets in a

form consistent with Kunishi’s proposal would not be introduced until after the war.

2. Creation of a Refrigerator Network

The relocation to Tobata, completed in 1930, was an important starting point for Kyodo Gyogyo’s business expansion. For the necessary conditions were now all in place, with the associated companies handling fisheries development, processing and distribution all concentrated in a single fisheries base. Previously, the peripheral businesses had been run by subsidiaries around the core of Kyodo Gyogyo, but now Kyodo Gyogyo embarked on a strategy of reorganizing and integrating same or similar businesses in order to promote the industrialization of fisheries. By doing so, Kyodo Gyogyo aimed to become a general fisheries company handling large-scale production, processing, storage and distribution.

In the marine product processing sector, firstly, Tobata Reizo changed its name to Godo Suisan Kogyo

K.K. in May 1932. In August that year, it absorbed the two companies of Chuo Reizo and Nippon Gyoryo by merger, adding ice making, refrigeration and freezing business to their existing marine product processing. In addition, Horai Suisan’s Takao cold stores and Asahi Suisan’s facilities on the Korean Peninsula were all absorbed, and the Head Office was moved from Tobata to Osaka. Land-based businesses previously operated individually by individual companies were now concentrated in Godo Suisan Kogyo.

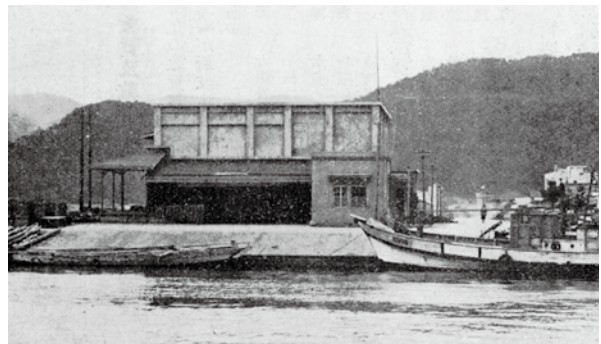
“In both the past and the present, Japanese fisheries have been unable to pull away from the realm of instability. Almost the only measure to turn this into a stable business without sharp fluctuations in fish prices, and to correct the present situation in which we cannot preclude misgivings of immense instability



Head Office and emblem of Nippon Food Industries



Hachinohe Refrigeration Plant



Tsuruga Refrigeration Plant

in that area, is to create a large-scale, controlled network of refrigerator facilities in principal locations throughout Japan. When there are big fish catches and a risk of falling into oversupply, this network should be used to buy up appropriate volumes at fixed prices, thereby preventing a collapse in fish prices; and when there are reports of a supply shortage, these should be released and distributed to the public as inexpensively as possible” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

However, a large investment of time and money would be needed to form this with the company’s own capital equipment. Therefore, it was considered ideal to make corporate acquisitions the basic strategy. Godo Suisan Kogyo had already become the core of land-based business, and by adding and enhancing a

refrigerated warehouse network to it, a greater leap forward could be expected. Kosuke Kunishi had conceived the idea of creating a refrigerated warehouse network.

In July 1933, Godo Suisan Kogyo negotiated a merger with Dai-Nippon Seihyo, which, despite being the largest force in the ice-making industry, was becoming structurally weak. The talks fell through, however. So then Godo Suisan Kogyo, on completion of the Tokyo factory in December that year, decided to build another new factory in Osaka.

In May 1934, Godo Suisan Kogyo renegotiated an absorption merger with Dai-Nippon Seihyo, changing its name to Nippon Food Industries K.K. (capital 15 million yen).

Part 2 The Challenge of Antarctic Whaling

1. Moves into Antarctic Whaling

Signing of the First International Whaling Convention

Mother ship-type whaling in the Antarctic was quickly developed by Norway. This sparked moves by whaling ships from all over the world, vying with each other for the Antarctic’s abundant store of whales. With the Antarctic now transformed into an international fishing ground, biologists started to warn of the threat of extinction due to overfishing. Some politicians, meanwhile, were concerned over a decline of whaling, and “Developing sources of marine wealth” was adopted as a theme for the Economic Expert Committee set up within the League of Nations in 1924. Triggered by talk in the Committee on the danger of baleen whale extinction, the need to propose international rules for the protection of whales was confirmed in 1929.

The League of Nations Expert Committee then drew up a “Draft International Convention to Regulate

Whaling”, modeled on a Whaling Act passed independently by Norway. The Agreement was signed at an international conference held in Geneva in September 1931. Although it was signed by 25 countries, the Agreement could only come into force once it had been ratified by at least 8 countries including Norway and Britain. As a result, it did not actually take effect until 1935. Japan had attended the conference in Geneva as an observer, but did not sign the Agreement.

At just that time, the European whale oil market fell into disarray owing to oversupply and the impact of the global Great Depression. Now Norwegian and British companies voluntarily imposed restrictions on operating seasons and production. In response to these trends, the inaugural International Whaling Conference was held in London in June 1937, resulting in the adoption of a Whaling Agreement. Although it was signed and ratified by western states, Japan refused to sign, calling it premature. It was not until 1939 that

Japan formally signed the International Whaling Agreement. Before long, however, the war situation had deteriorated, and the International Whaling Agreement came aground while ratification procedures were still in progress.

In connection with the International Agreement, Kosuke Kunishi was concerned that European countries would try to shut out Japanese interests in order to maintain whale oil prices. In his own words, “Most whale oil is transported to European markets, where it is used to make margarine, while the oil and fat industry that uses this whale oil consists of so-called world-beating companies in this industry, like Unilever of Great Britain. If the Japanese were to venture further into the industry and rival these companies in future, they would probably find some way of imposing a boycott on Japanese whale oil”. Furthermore, “Should we eventually be compelled to sign the Agreement, we would have to accept extremely disadvantageous terms unless we had significantly built up our existing capability by that point. For this reason, it is deemed necessary, more than anything else, to expand our existing capability as soon as possible” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*). Once Nippon Suisan had moved into Antarctic whaling, the business was promoted and expanded at a rapid pace. This was because, at the same time as being for the company’s own business expansion, Kunishi saw it as his mission to elevate Japanese fisheries to a level of international superiority.

Toyo Hogeï Purchases the *Beltana*

The Japanese boom in coastal whaling from the end of the Taisho era to the beginning of the Showa era (early to mid-1920s) caused whales to migrate away from coastal waters and swim offshore. As they did, the limits of coastal whaling started to become apparent, and there was a growing groundswell of opinion in favor of sending large mother ships out for Antarctic whaling. Besides, information was coming in to the effect that Norway and Britain had already built up

impressive track records in the Antarctic. In response, Toyo Hogeï sent a survey team led by its Director Tatsusaburo Shibuya and others to Europe. Tatsusaburo Shibuya had been involved in whaling since around the middle of the Meiji era, when Norwegian-style whaling was first introduced to Japan. He was one of the pioneers who promoted Antarctic and north-sea whaling, and continued to devote himself to whaling thereafter as well.

The team’s mission was to survey the state of European whaling and new fishing grounds, as well as searching for a vessel that would be suitable as a whaling mother ship. This was in 1929, five years after Norway had started its experiments with Antarctic whaling. That year, 26 whaling mother ships were sent to the Antarctic. Of these, Norway sent 18, Britain 5, and Argentina and others sent 3, these numbers increasing annually. This is thought to have reinforced Toyo Hogeï’s feeling that there was no more time to be lost in catching up.

The team came across a ship called the *Beltana* at the P&O Steam Navigation Company in London. The *Beltana* had a gross tonnage of 11,220 tons, was fitted with 220,000 cubic feet (1 cubic foot = 28.4 liters) of refrigeration equipment, and was built with great precision. It was well-suited to refurbishment as a whaling mother ship, and was also reasonably priced.

Reasonable as it was, this was still a huge investment for Toyo Hogeï in those days, and there was a heated debate about whether to buy or not. But after much deliberation, it was decided that the purchase would go ahead, for a number of reasons: Norway, a leading whaling nation, had already found considerable success in the Antarctic; the Antarctic had some excellent fishing grounds; and being in a monopolistic position in terms of whaling, Toyo Hogeï had the national duty of embarking on Antarctic whaling.

The handover was successfully completed in May 1930, and work started on designing the refurbishment. But just at that moment, the worldwide Great Depression struck. To make matters worse, 1931–1932

were years of bumper catches and surplus production by Norwegian whaling, causing a dramatic collapse in whale oil prices. Most Norwegian fleets were forced to remain idle in the following year, 1933. To meet this situation, Toyo Hogeï decided to temporarily postpone the refurbishment of the *Beltana*. The ship was moored off Ashiya in Kobe in the hope of a market

recovery, but prospects of an upturn failed to appear. After remaining moored for about two years, the ship was sold for scrap for 330,000 yen, nearly the same as the original purchase price. This was the stroke of bad luck that preceded Japan's first success in Antarctic whaling.

2. Establishment of Nippon Hogeï

From Toyo Hogeï to Nippon Hogeï

Having gained momentum with its success in mother ship-type crab fisheries, Kyodo Gyogyo now turned the spotlight on Antarctic whaling as its next business venture. Feeling it prudent to invest the capital earned from crab fisheries in the promising Antarctic whaling business, Kenkichi Ueki asked Komao Baba, a former classmate and now a factory supervisor at Nippon Godo Kosen, to investigate. Komao Baba would later board the whaling mother ship the *Antarctic*, renamed the *Tonan Maru*, as captain of a fleet bound for the Antarctic.

Kosuke Kunishi had already felt the need to move into Antarctic whaling at the earliest possible juncture. As mentioned above, Norway and Britain were already operating in the Antarctic at the time, and other countries were also waiting for an opportunity to do the same. Kunishi was concerned that, if these countries were to exercise their vested rights, Japan could find herself shut out of the Antarctic.

Around the time that Toyo Hogeï purchased the *Beltana*, Kosuke Kunishi had once discussed with that company the possibility of jointly operating mother ship-type Antarctic whaling. By 1933, he was convinced of the need for Japanese whaling to shift to mother ship-type Antarctic whaling, and talks between the two resumed. As a result, their views concurred on forming a collaborative relationship, but the question remained as to whether they should continue to operate as separate companies or whether they should merge their businesses. With mediation by Tatsunosuke

Takasaki, Managing Director of Toyo Seikan, negotiations between Keizo Tamura of Kyodo Gyogyo and Toichi Kuwata of Toyo Hogeï led to a decision that Kyodo Gyogyo would absorb Toyo Hogeï and set up a new company. Toyo Hogeï initially resisted the loss of a company name steeped in tradition, but placed greater priority on aiding the growth of Japanese fisheries through whaling, and embarked on the merger from a national interest point of view.

Just before this, talks on a merger between Kyodo Gyogyo and Nippon Sangyo were concluded, and Toyo Hogeï was also to be taken under the wing of Nippon Sangyo. In May 1934, Nippon Sangyo established Nippon Hogeï K.K. with capital of 20 million yen for the purpose of Antarctic whaling. The Chairman was to be Yoshisuke Aikawa, the President Man-ichiro Hara, and the Directors Toichi Kuwata, Tatsusaburo Shibuya and Kosuke Kunishi. Nippon Hogeï thus set out on the path of developing mother ship-type whaling in Japan, based on a philosophy of combining the personnel, experience and technical capability of Toyo Hogeï with the capital power of Nippon Sangyo and Kyodo Gyogyo's capacity for supplying a wealth of marine resources to Japanese dinner tables.

Purchase of the *Antarctic*

Nippon Hogeï started to prepare for Antarctic operations right away, but faced a number of hurdles in its attempt to move into the new territory of Japan's first Antarctic whaling. The biggest problem was

a fundamental one: Should the company really be venturing into Antarctic whaling when the prospects of financial success were so uncertain? And if deciding to go ahead, another major issue for consideration was whether to build a new mother ship or just modify an existing ship, or whether to purchase a new mother ship. This was just at a time when the international situation was growing increasingly precarious. The business environment could hardly have been described as favorable, with a ban on imports of secondhand ships by the Japanese government, difficulties in business deals and negotiations due to worsening market conditions in Europe, and so on. Although snags were inevitable whichever option was chosen, a decision was made to purchase a mother ship and immediately embark on Antarctic whaling. Behind this lay Yoshisuke Aikawa's determination that "being newly established as a national enterprise, Nissan should not be overly concerned with profit but should engage in business that no one else could fulfil" (Nobuo Okamoto, *Kindai Gyogyo Hattatsu Shi* "History of the Development of Modern Fisheries").

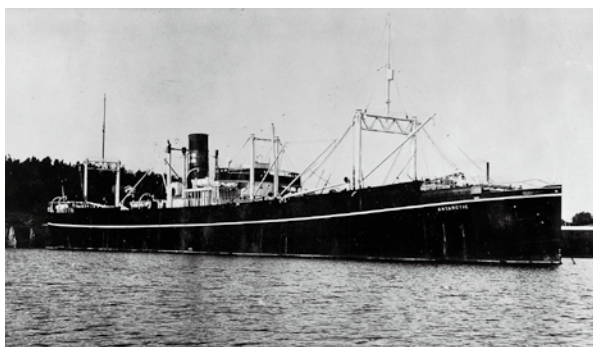
At around that time, a Norwegian mother ship, the *Antarctic*, was put up for sale. Nippon Hogeï decided to purchase the ship and five auxiliary whaling ships in a single lot. The government had imposed a ban on secondhand ships, but the purchase in this case was exceptionally permitted due to the special circumstances as a whaling mother ship. A purchase contract was drawn up through the Kobe firm All Shokai Guenner Gran for a total price of 56,000 pounds

sterling (about 900,000 yen), and the import permit from the Japanese government was obtained without problem. But then Norway suddenly passed a law prohibiting the overseas sale of whaling mother ships, and the deal seemed to have run aground. However, when it was pointed out that the contract had been concluded some days before the law was promulgated, the Norwegian government narrowly approved the sale after diplomatic lobbying by the Japanese government.

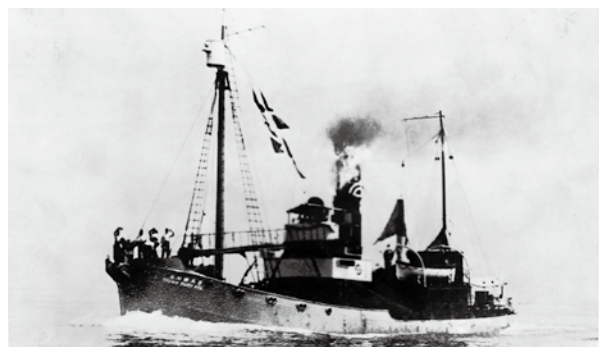
Japan's First Antarctic Whaling Goes Ahead

The next question was which whaling grounds to aim for—the Antarctic or the north sea. Norway and other countries had already achieved success in Antarctic whaling, but for Japan, the Antarctic was unknown territory when it came to fisheries. As with previous plans, therefore, the aim was to gain experience of whaling in the north sea, and only when a complete system was in place, to venture into the Antarctic. At the time, the Antarctic was regarded by some as "an ocean of intense cold, dotted with icebergs, beyond a stretch of rough and stormy seas"; many thought it too reckless to go straight into Antarctic whaling. But the opportunity to take up the challenge of Antarctic whaling was to arrive with unexpected speed.

The *Antarctic* was moored at Tonsberg in Norway, and the five whaling ships in a southwest African fishing village called Walvis Bay. The proposed plan was for the *Antarctic* to sail southwards down the west coast of Africa, where it would join up with the



The *Antarctic* (later *Tonan Maru*)



The whaler *Showa Maru No.5* (formerly the *Galicia*), a member of the *Tonan Maru* fleet
Purchased together with the *Antarctic*

whaling ships, then round the Cape of Good Hope and cross the Indian Ocean before navigating to Japan. In the process, the idea was mooted that, since sailing due south from the Cape of Good Hope would take them within touching distance of the Antarctic, going there to inspect conditions *in situ* before returning to Japan would be useful when planning future whaling operations. A decision was therefore made to conduct trial whaling in the Antarctic, as this could contribute to the cost of the voyage. This was a bold decision driven by a strong awareness that it was important to start Antarctic whaling as soon as possible, despite the potential risks. Behind this decision is thought to have lain a firm confidence in operating fleets, from the experience of crab mother ship operations in the north sea.

Having made this sharp about-turn and decided to fish in the Antarctic, Nippon Hogeï urgently set about recruiting crew members. The mother ship (the *Antarctic*) was to be captained by Shozo Kobayashi, with Yasushi Nagayama as Chief Engineer. These two, accompanied by Tatsusaburo Shibuya, went to Norway via America, followed by a team of mother ship crew members traveling via India. Another group made its way to Walvis Bay, where it would take over the whaling ships and carry out repairs. Finally, whaling ship crew members and flensing workers also set off for Africa on the *Hakuai Maru*, taking food provisions, fishing tackle, cold weather gear and other requisites with them.

Both the mother ship and the whaling ships were all repaired and preparations for fishing completed at a rapid pace, whereupon the *Antarctic* was transferred to Japanese registration and renamed the *Antakuchikku Maru*. Although it was exceptional for a vessel that had so quickly been readied for fishing operations to be given a certificate of Japanese registration, the Ministry of Communications and Transportation provided full cooperation, having judged it to be a matter of national importance. Once the necessary inspections had been carried out during the repair period, the registration certificate was

obtained without problem. In addition, several highly experienced Norwegian engineers were hired and taken on board, and a system of education for crew members was put in place. With preparations completed at this quick pace, the *Antakuchikku Maru* departed from Cape Town bound for the Antarctic Ocean, accompanied by three of the five whaling ships, as the other two were too dilapidated.

The fleet arrived in the Antarctic fishing grounds ten days later on December 23rd, 1934, and carried out a whaling survey until early in the New Year. The record of *Antakuchikku Maru* in this period was as follows.

- 213 whales caught (125 blue whales, 83 finback whales, 4 humpback whales, 1 sperm whale)
- 2,159 tons of whale oil extracted

This record was significantly inferior compared to the subsequent full-scale operations. Nevertheless, bearing in mind that the work had started in mid-voyage after a sudden change of plan, and that the first whaling trial had still been achieved without hindrance, there could have been few complaints with this opening performance. The fishing ground surveys carried out *in situ* brought valuable information for subsequent Antarctic whaling. Moreover, the crew members had gained confidence in the success of Antarctic whaling, and that was the best outcome of all.

The collected whale oil was exported from Kobe Port for the Netherlands. As luck would have it, the whale oil market was depressed and the price received was not exactly favorable, but the quality was traded at the highest standard available.

From the establishment of Nippon Enyo Gyogyo in 1899 until that of Toyo Hogeï, Nippon Hogeï had gathered ample experience in the technology of the modern Norwegian whaling method. It had moreover experienced mother ship operations by Nippon Godo Kosen, and had succeeded in trial operation of Antarctic whaling with the *Antakuchikku Maru*. Although Norwegian engineers had given guidance during this voyage, subsequent operations were to rely on all-Japanese crews.

The Second Expedition by the *Tonan Maru*

Buoyed by its first whaling expedition, Nippon Hogeï immediately started preparing full-scale operations for the next year, 1935. Because it was a factory ship originally fitted in Norway, the *Antakuchikku Maru* had no equipment for producing anything other than whale oil, and only produced 30.6 tons of salt-cured whale meat. *Antakuchikku Maru* returned to port at Kobe on March 21st, but prior to that, on the 12th, had been renamed the “*Tonan Maru*”. After its return, the ship was repaired and refurbished, including new facilities for storing edible whale meat.

On September 30th, 1935, the *Tonan Maru* departed from Osaka with Komao Baba as captain of the fleet, hunted whale until the following March and returned on April 8th. In this second expedition, there were no Norwegians on board, the crew being exclusively Japanese. The outcome was a catch of 639 whales, producing 7,358 tons of whale oil. Of the latter, some 5,000 tons were not taken back to Japan but exported directly from the Antarctic to Europe.

3. Antarctic Whaling Evolves into a National Enterprise

First Expeditions by the *Tonan Maru II* and *Tonan Maru III*

In August 1936, two months before Hayashikane Shoten’s *Nisshin Maru* expedition, Nippon Hogeï started building the *Tonan Maru II*. On completion, it had a gross tonnage of 19,262 tons, making it the largest steamship in Japan at the time. For the shipbuilder, Osaka Iron Works, this was a major project of unprecedented scale, even causing the company to expand its slipway on starting the construction. In September that year, Nippon Hogeï and Nippon Godo Kosen were both merged into Kyodo Gyogyo, which changed its name to Nippon Suisan the following March.

In advance of the construction of the *Tonan Maru II*, Kyuhei Suzuki (later to become the company’s 4th

In response to the *Tonan Maru*’s success in the Antarctic, Nippon Hogeï’s long-time rival Hayashikane Shoten immediately decided to embark on Antarctic whaling. Loth to fall any further behind Nippon Hogeï, it commissioned a rush construction job from Kawasaki Shipbuilding Corporation, and in the short space of five months, the *Nisshin Maru* was completed on September 28th, 1936. As a result, the third whaling expedition in fiscal 1936 saw two fleets operating in the Antarctic; the *Tonan Maru* was joined by a Hayashikane Shoten fleet led by the new whaling factory ship *Nisshin Maru*.

For its part, Nippon Hogeï now hurried to build a second and a third *Tonan Maru*. It had decided to boost its fleets in view of the first *Tonan Maru*’s operating record, hampered by its limited capacity and equipment mainly designed for whale oil. The rapid catch-up strategy by Hayashikane Shoten certainly provided a stimulus. In fact, Japan’s Antarctic whaling acted as a positive spur that energized these two, and also led to improvements in technology.

President) met with Norwegian engineers in Europe to discuss the ship’s design. A problem with previously attempted whaling mother ships was that the righting moment was too strong, causing violent rolling and resultant interference with the work. To overcome this, it was found that a 1.9-meter tween deck should be installed between the tank top and the factory deck. Although this would reduce the righting moment, it would also reduce rolling and improve the ship’s safety, thus increasing the efficiency of work on board. It was also found that a capacity of about 2,000 tons would facilitate the production of salt-cured whale meat. This was a valuable piece of information for starting full-scale production of whale meat along with whale oil. The adoption of such advanced technology and equipment enabled the company to build a massive vessel in excess of 19,000 tons. The *Tonan Maru II*



Tonan Maru II and the whaler *Takunan Maru* in the Antarctic Ocean



Tonan Maru III transferring whale oil to the tanker *Itsukushima Maru* in the Antarctic Ocean

was successfully launched in May 1937.

Hardly pausing for breath, Nippon Suisan then set to work on building the *Tonan Maru III*. This was another giant whaling mother ship with a gross tonnage of 19,209 tons, on the same scale as the *Tonan Maru II*. The *Tonan Maru III* was completed in September 1938.

Hayashikane Shoten, meanwhile, had completed the *Nisshin Maru No.2* in 1937, sending two fleets from that year's Antarctic expedition onwards. Then Kyokuyo Co., Ltd. was established in September and its ship the *Kyokuyo Maru* was completed in October 1938, starting Antarctic whaling in the same year.

Kyokuyo had been founded by Tosataro Yamaji in 1937. In 1919, he had established Sumatera Rubber Development, running a business for the production of natural rubber, a scarce commodity in Japan, and researching the development of fat and oil resources. While doing so, he turned his attention to Antarctic whaling. In October 1936, he applied for a business license as the Sumatera Development Whaling Department, which was granted in February 1937.

These developments at the time were colorfully reported in the newspapers and other media as competition to build giant ships, making it a big topic of discussion all over Japan. In particular, the construction of the *Tonan Maru II* and *III* was seen as an epoch-making venture in the shipbuilding industry. *A 75-Year History of the Hitachi Zosen Corporation* states that "Together with the *Nisshin Maru*, under construction by Kawasaki Shipbuilding at the time, these were the largest steamships in Japan, with the

special structure of whaling factory ships, moreover being built in Japan for the first time; for Hitachi Zosen, this was truly an epoch-making project". The *Tonan Maru II* was actually 2,000 tons heavier than the *Chichibu Maru*, lauded as the "Queen of the Pacific" at the time. Its displacement of 35,000 tons was also fully 2,000 tons larger than the super-dreadnoughts *Mutsu* and *Nagato*, while the launch weight of 9,800 tons more or less rivaled the gross weight of the iron framework used to build the National Diet Building in Tokyo.

The fact that such an impressive system had been put in place only four years after the *Tonan Maru* ventured out on Japan's first Antarctic whaling expedition reveals the strength of Nippon Suisan's resolve for Antarctic whaling. It provides evidence of the importance placed on Antarctic whaling, as a business imbued with Nippon Suisan's ideal of acquiring marine resources from the world's oceans and providing richly nutritious food for Japan's dinner tables.

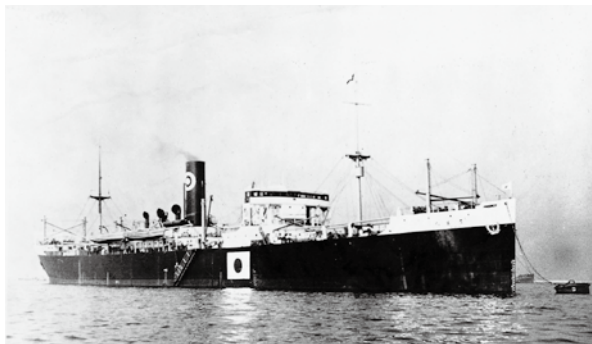
In September 1937, the *Tonan Maru II* set off for the Antarctic. The recorded outcome was a catch of 1,833 whales and production of more than 20,000 tons of whale oil. Such a large output of whale oil was made possible by the power of 12 steam-type oil extraction devices called *quaner* boilers. In the year after the first expedition by the *Tonan Maru II*, the *Tonan Maru III* set off on its first expedition to the Antarctic. The *Tonan Maru III* caught 1,378 whales and produced 15,713 tons of whale oil.

Full-Scale Production of Red Whale Meat and the Start of the Tanker Business

Up to this point, whaling mother ships had mainly produced whale oil and brought back a limited supply of salt-cured whale meat. But the ultimate goal of Antarctic whaling by Nippon Suisan was to mass-produce frozen whale meat and deliver it to Japanese dinner tables.

Producing frozen whale meat depended on the existence of freezing factory ships. A decision was therefore made to purchase the secondhand refrigerator ship “*Narenta*” from Britain. After docking at Osaka in March 1939, the *Narenta* was refurbished at the Sakurajima Works of Osaka Iron Works and renamed the “*Kosei Maru*”. The *Kosei Maru* was then introduced for Antarctic whaling in 1939. Particularly noteworthy in its refurbishment was the addition of an Iwamoto on-board rapid freezer (freezing capacity about 100 tons per day), and the installation of a freezing hatch that could store 5,000 tons of whale meat. Executive Director Chiyoma Iwamoto, the designer of this rapid freezing equipment, traveled to the Antarctic on the ship and oversaw the production of frozen whale meat in a faultless system. Incidentally, this ship, assigned to the fleet of the *Tonan Maru II*, produced 4,923.9 tons of edible whale meat.

Nippon Suisan sent the tanker *Itsukushima Maru* for her maiden voyage to the Antarctic in January 1938. With the production of sperm oil added to the existing finwhale oil, whale oil output had been increasing briskly, and the need for bulk transportation



The freezer mother ship *Kosei Maru* (formerly the *Narenta*)

by dedicated tankers had become a pressing issue. Tanker ships were introduced so that the large volumes of whale oil produced in the Antarctic could be loaded onto the *Itsukushima Maru* and exported to Europe more efficiently.

While the *Itsukushima Maru* played a great part in exporting whale oil, once the whale oil was offloaded in Europe the ship would return to Japan empty. Effective measures to make use of this were then studied. As a result, it was decided that crude oil would be loaded at Panama on the return journey, and this would then be brought to Japan. The *Itsukushima Maru* had originally been introduced with the aim of efficiently exporting large quantities of whale oil. At the same time, however, it led to the company’s involvement in the crude oil and heavy oil loading and transportation business. It was a pioneer of the tanker business in Japan.

Expansion of Japanese Influence in the Antarctic and Interruption of Antarctic Whaling

With a succession of whaling mother ships constructed by Nippon Suisan and Hayashikane Shoten, Japan sent six fleets for Antarctic whaling in the years 1938–1939.

In the previous year, 1937, Norway possessed 9 mother ships, Britain 10, Germany 6, Japan 4, America 1 and Panama 1. In other words, Japan had already established a significant presence in Antarctic whaling. And Japan’s increase from four to six fleets in operation from 1938 drew attention not only from inside Japan but also from the rest of the world. Nippon Suisan owned half of these with three fleets; moreover, the scale and equipment of the *Tonan Maru II* and *III* were overwhelming.

So now Japan’s long-awaited challenge on Antarctic whaling with six fleets could start, but the growth in yield that year fell short of expectations. Given that some fleets were hunting for the first time, this is thought to have been because more emphasis was being placed on safe operations.

Operations in 1939–1940 finally produced more satisfying results, partly due to the development of new fishing grounds; good yields were obtained from the Balleny Islands and the Ross Sea east of 140° east longitude. Another major factor was that the output of both whale oil and whale meat had risen dramatically thanks to Nippon Suisan's introduction of the tanker *Itsukushima Maru* and the freezer mother ship *Kosei Maru*.

Even better results were to be achieved in the 1940–1941 operations. World War II broke out in September 1939, triggered by Germany's invasion of Poland. When Germany formed the Triple Axis with Italy and Japan the following September, America hardened its

stance towards Japan. Operations continued amid mounting international tension. With the onset of the wartime regime, moreover, controls became more intense, hindering the procurement of human resources and materials. Nevertheless, the six fleets still went through with Antarctic whaling. As it transpired, this year's expedition was to be the last before the war.

With the outbreak of the Pacific War, Japan's six Antarctic whaling mother ships, including the three owned by Nippon Suisan, were requisitioned one after the other in 1941–1942 for use as navy tankers. Their fate was to be sunk in allied attacks. Of the other whaling ships, 67 were either sunk or went missing.

4. Expeditions to the North Sea

Establishment of Hokuyo Hogeï and Interrupted Operations

All companies had applied for whaling in the North Pacific, as the whaling grounds were relatively near and the whaling season was in summer, thus not overlapping with Antarctic whaling. Considering the state of resources, however, the government limited its issue of licenses, and in 1936 decided to permit operations by only one mother ship.

In response to this, Hokuyo Hogeï K.K. (capital 300,000 yen, increased to 1.5 million yen in 1940) was established that March with joint capitalization by Nippon Suisan, Taiyo Hogeï K.K. and Kyokuyo. Before starting operations, Hokuyo Hogeï sent the trawler *Yuki Maru* to the north sea for a fishing ground survey in July 1937. Sailing northwards through the Bering Sea along Kamchatka to reach the Arctic Ocean, the ship followed a course along Alaska to the north of the Aleutian Islands on the return journey, conducting thorough surveys along the way. In the process, a total of 547 whales were spotted, leading to the conclusion that the north sea provided excellent whaling grounds.

It was not until June 1940 that an actual whaling

expedition was sent to the north sea, the Nippon Suisan mother ship *Tonan Maru* leaving port in the company of four whaling ships. It had taken nearly three years from the end of the survey to the actual expedition. One reason for this is thought to have been that international whale oil prices had collapsed.

This first whaling operation lasting 80 days in the north sea produced catches of 673 whales, 4,577 tons of whale oil and 1,486 tons of whale meat, among others. In the following year, the *Tonan Maru* and seven whaling ships operated for 60 days, during which time 579 whales were caught, and 4,000 tons of whale oil and 3,655 tons of whale meat and others were produced. Like Antarctic whaling, however, operations were interrupted by the deterioration of the war situation.

Coastal Whaling by Nippon Hogeï

While putting energy into Antarctic whaling, Nippon Hogeï still continued its traditional coastal whaling operations. Overexploitation and exhaustion of resources had caused the Regulations for the Management of Whaling to be enacted in 1909,

limiting licenses for coastal whaling to no more than 30 ships. In 1934, an amendment to the Regulations brought this number down further to 25 ships. Of these, 19 were owned by Nippon Hogeï, 4 by Tosa Hogeï K.K. (a Hayashikane Shoten affiliate), 1 by

Enyo Hogeï K.K. (ditto), and 1 by Ayukawa Hogeï K.K. (Kyokuyo). In other words, 76% of licensed ships were concentrated in Nippon Hogeï, and this licensing ratio would not change until after the war in 1947.

Part 3 Participation in Nissan Konzerne

1. Birth of the Newly Emerging *Zaibatsu*

Emerging from the Wartime Boom and the Great Depression

The outbreak of World War I in 1914 sparked an economic boom in Japan. Both domestic and overseas demand suddenly increased, and private companies embarked on massive business expansion. This was especially true of the newly emerging companies, and particularly the new *zaibatsu* conglomerates whose business had blossomed somewhat later than the old *zaibatsu*. These new *zaibatsu* included Suzuki, Kuhara, Kawasaki (Shozo) = Matsukata, Shibusawa, Iwai, Nomura and Murai. The older conglomerates of Mitsui, Mitsubishi and Sumitomo had developed their business in diverse sectors as general *zaibatsu*, and had mainly moved into heavy chemical industries during the World War I boom. By contrast, the new *zaibatsu* focused on ventures and expansion in the sectors of overseas trade, shipping, shipbuilding, steelmaking and banking, with a force to rival that of the old *zaibatsu*.

But everything changed after the war, when the postwar “rebound depression” plunged the Japanese economy into new lows with astonishing rapidity. This was followed by the Great Kanto Earthquake on September 1st, 1923, the ensuing Showa Depression, and finally the global Great Depression triggered by the catastrophic Wall Street crash of 1929. As a result of these events, the Japanese economy was in a state of chaos.

Characteristics of the New *Zaibatsu*

Amid the economic turbulence between World War I and the Showa Depression, the three great *zaibatsu* of Mitsui, Mitsubishi and Sumitomo and the five other *zaibatsu* of Yasuda, Asano, Okura, Furukawa and Kawasaki (Hachiemon) had continued to expand their business foundations without any negative impact on their status. Comparing the business scale of the various *zaibatsu* in terms of paid-up capital, as of 1928 Mitsui and Mitsubishi were overwhelmingly the largest, followed by Yasuda and Sumitomo, with Asano, Okura, Kawasaki and Furukawa lagging considerably behind (*Nihon Keieishi*, “Japanese Business History/New Edition—From the Edo Period to the 21st Century”, Yuhikaku). Although the old *zaibatsu* were equally affected by the postwar depression, they effectively invested the capital gains made during the Great War boom in their principal business sectors, or quickly liquidated loss-making divisions, and thereby succeeded in strengthening their economic muscle. On the other hand, Suzuki, Kuhara, Murai and others were to taste the bitter pill of bankruptcy. Factors separating winners from losers included failures in banking business, speculation and diversification strategies.

The decline was particularly severe for the Suzuki *zaibatsu* (Suzuki Shoten), which came to its demise with the Showa Depression. Suzuki Shoten had been founded back in 1874. After obtaining sales rights to Taiwanese camphor oil, it had consolidated its power

through the Taisho era with a succession of corporate acquisitions. It had continued to make speculative buyouts during World War I, reaping massive profits, but had been hit hard by the “rebound depression”. It was then quickly driven to bankruptcy following the famous “Watanabe Bank collapse” gaffe by the Finance Minister of the day. Similarly, Kuhara Mining (discussed in more detail later) also trod the path of decline, influenced by an unstable economy.

Little affected by these violent ups and downs of the Taisho *zaibatsu*, organizations called “new *zaibatsu*” or “new *Konzerne*” now started to build a solid status for themselves. These had first appeared between the final year of Meiji and the Taisho era, and had formed groups of companies between the time of the Mukden Incident and the first half of the Sino–Japanese War. Specifically, the new *zaibatsu* included Nippon Sangyo (Nissan), of which Nippon Suisan would become an affiliate, as well as Nitchitsu, Mori, Nisso and Riken. The new *zaibatsu* were to rival the existing *zaibatsu* around the time of the Sino–Japanese War, but their management methods and corporate activity were very different from those of the existing *zaibatsu*.

While the existing *zaibatsu* mainly revolved around family-owned capital, the new *zaibatsu* took the form of public stock companies, and the ratio of family share ownership was generally not so high. Another

big difference compared to the old *zaibatsu* was that they did not include financial institutions among their affiliates. This made them dependent on other ways of raising funds from the public, and this, in turn, was one reason why they took the form of public stock companies.

Again, while the existing *zaibatsu* were general corporate conglomerates, the new *zaibatsu* were corporate groups with a main focus on heavy chemical industries. The new *zaibatsu* made bold challenges in new business areas that had not previously existed in Japanese industry. Many of their founders were men from technological backgrounds, who provided personal leadership in actively developing innovative business.

Because the new *zaibatsu* developed their business in heavy chemical industries, they became strongly linked to military supply industries. Their ties with the military and reformist bureaucrats inevitably grew stronger; later, Nissan would achieve huge business expansion in Manchuria and Nitchitsu in Korea. The new *zaibatsu* promoted the public offering and deconcentration of stock, and by conducting business in previously unknown sectors, aimed to contribute to the national interest. As their businesses continued to expand, they stoked a burning sense of rivalry vis-à-vis the conservative existing *zaibatsu*.

2. Background to the Founding of Nippon Sangyo

The Rise of Fujita Gumi

Fujita Gumi can trace its beginnings back to 1869, when Denzaburo Fujita, thought to have worked in logistics for the *kiheitai* irregular militia in the Choshu Clan (now Yamaguchi Prefecture), started manufacturing army boots. Denzaburo Fujita was the uncle of Nippon Suisan’s founder Ichiro Tamura. Denzaburo persuaded his eldest brother Shikataro Fujita and his elder brother Shozaburo Kuhara to join him in setting up Fujita Gumi in 1881. In 1884, when the Matsukata

policy of austerity was in full swing, Fujita Gumi bought up the Kosaka Mine from the government. With moral support from his clansman, the Meiji elder statesman Kaoru Inoue, Denzaburo Fujita succeeded in obtaining a loan from the Mouri family, rulers of the Choshu Domain, thereby acquiring business capital. At the same time as operating the Kosaka Mine, Fujita Gumi also put energy into the Kojima Bay land reclamation project, and created the vast Fujita Farm. Fujita Gumi then promoted its business expansion on the twin axes of mining and farming.

The former fell into difficulties, however, as output from the Kosaka Mine left something to be desired, and moreover, silver prices were in a downward trend. Fujita Gumi decided to close the Kosaka Mine, entrusting the administrative procedures to Fusanosuke Kuhara, Denzaburo Fujita's nephew and Ichiro Tamura's younger brother. Kuhara had graduated from Keio University before joining the Morimura Gumi group, but was transferred to Fujita Gumi on the orders of Kaoru Inoue. Though entrusted with the closure of the Kosaka Mine, Kuhara found future potential in the mine's black ore deposits, and appealed directly to Kaoru Inoue that the mine should remain active. The Kosaka Mine was consequently brought back from the brink in line with Fusanosuke Kuhara's designs. This not only averted a management crisis in Fujita Gumi, but also served to make it independent from the Mouri family, which had provided its startup capital.

Establishment of Kuhara Mining

While Fusanosuke Kuhara was devoting his energies to reconstructing the Kosaka Mine, a dispute over the succession of Fujita Gumi's business had arisen following the death of Shikataro Fujita and the retirement of Shozaburo Kuhara. Fusanosuke Kuhara decided to resign from Fujita Gumi, and used the capital allowance paid by Denzaburo Fujita to purchase the Akasawa Copper Mine. He then named it the Kuhara Kogyosho Hitachi Kozan (Hitachi Mine of Kuhara Mining) and opened it for mining operations. This was in 1905. Kuhara introduced the latest technology into the Hitachi Mine and increased its output of copper, then went on to purchase mines all over the country. As a result, copper output by Kuhara Kogyosho (Kuhara Mining) in 1912 rose to become the third highest in Japan. That year, the Kuhara Mining Co. was established with capital of 10 million yen.

During World War I, which broke out two years later, Kuhara Mining acquired a succession of non-ferrous metal mines all over Japan and in Korea, achieving remarkable growth. Equipped with the vast sums earned in this way, together with the massive amount of capital obtained through capital increases, Kuhara now embarked on business diversification. The business scope of Kuhara Mining extended to maritime shipping, shipbuilding, steelmaking and trade. As major shareholders, the Kuhara family had brought other companies under its wing besides Kuhara Mining—notably Hitachi, Ltd., Kuhara Shoji, Nippon Kisen, Osaka Iron Works, Godo Hiryo and Kyoho Life Insurance—and now formed a massive conglomerate, one of the biggest Taisho *zaibatsu*.

It could not maintain this momentum, however, and its fortunes suddenly turned downwards in the rebound depression after World War I. The main reason for its poor business performance was a downturn in the performance of Kuhara Mining. On top of falling copper prices and increased manufacturing costs, an increase in imports of American copper, backed by that country's superior technology, caused grave damage not only to Kuhara Mining but also to the Japanese copper mining industry in general. Another reason was the poor performance of Kuhara Shoji. Kuhara Shoji had failed in speculative trading of sundries amid the maelstrom of the rebound depression, and had recorded enormous losses. And although Kuhara Shoji's debts were resolved through personal guarantees from Fusanosuke Kuhara, the various affiliates of the Kuhara family, which owed much to the reputation of Fusanosuke Kuhara, fell into a serious financial crisis.

Taking personal responsibility for the critical situation of Kuhara Mining, Fusanosuke Kuhara now withdrew from its management, entrusting its reconstruction to his brother-in-law, Yoshisuke Aikawa.

3. The Birth of Nissan Konzerne

Yoshisuke Aikawa Reconstructs Kuhara Mining

Yoshisuke Aikawa was born into a samurai family in the village of Ouchi, Choshu Province, in 1880. As his mother was a niece of Kaoru Inoue, he was brought up in the Inoue household, where he benefited greatly from the tutelage of Kaoru Inoue. Aikawa had five sisters and one younger brother. The sisters married, variously, Mitsubishi Chairman Kusuyata Kimura; Fusanosuke Kuhara; Taichi Kaijima (the Kaijima family ran the Chuo Kasai Shogai Hoken insurance company, which would later become an affiliate of Nissan Konzerne); Tatsugoro Inoue, younger brother of Dr. Tatsuji Inoue, Director of the Inoue Eye Hospital in Kanda Surugadai, Tokyo; and Shin-ichi Kondo, son of Rikusaburo Kondo, President of Furukawa Gomei Kaisha. Yoshisuke's younger brother Masasuke married the eldest daughter of Kotaro Fujita, eldest son of Shikataro Fujita, and succeeded to the Fujita family (Fujita of Tokyo). Yoshisuke Aikawa himself married the eldest daughter of Tojiro Iida, owner of Takashimaya Iida Gomei Kaisha. Yoshisuke Aikawa thus built relations of kinship with some of the most eminent entrepreneurs and families of the day, and the majority of these alliances were mediated by Kaoru Inoue.

On graduating from the Mechanical Engineering Department in the Faculty of Engineering at Tokyo Imperial University, Yoshisuke Aikawa went incognito to join Shibaura Engineering Works (the forerunner of Toshiba Corporation) as a mechanic. His aim in doing so was to gain factory floor experience with which to become independent and pursue his own business in the future. While working at Shibaura Engineering Works, he went to visit other factories in the Tokyo area on his days off. After visiting nearly 200 factories, he came to the conclusion that the latest technology in mechanical engineering could not be found in Japan, and so decided to travel to America.

Having crossed the Pacific in 1905, Yoshisuke Aikawa worked in America as an apprentice for a metal casting company. Through his experience there, he discovered a means of successfully domesticating the production of malleable cast iron. He became convinced that, by combining the latest American technology with the innate manual dexterity and locomotive agility of the Japanese, he could make internationally competitive products that were superior to those of American companies.

On his return to Japan, Yoshisuke Aikawa, with the backing of Kaoru Inoue, established the Tobata Foundry Co. (the forerunner of Hitachi Metals, Ltd.) in Tobata, Kitakyushu, in 1910. Tobata Foundry successfully emerged from the teething troubles of its startup period, thanks to the support of related families, and became established in domestic production and exports of malleable cast iron. The business proceeded smoothly, and achieved management independence via World War I. As Yoshisuke Aikawa's business involvement increased, however, he started to feel that there were limits to his method of centralized management, whereby he himself would manage and control every aspect of the business. This, he felt, needed to be corrected both in terms of personnel and with a view to developing diversified strategies in future. In 1922, therefore, he established Kyoritsu Kigyo K.K. as a shareholding management body through which to introduce a method of decentralized management, and placed Tobata Foundry and other acquisitions under its umbrella as affiliates. However, Kyoritsu Kigyo was unable to serve fully as a management body, owing to a lack of capital power. There was no option but to take capital from affiliates that had surplus funds and divert it to the other companies. As a result, the Tobata Foundry, which had capital power, strengthened its influence. The Konzerne-type management with Kyoritsu Kigyo at its center, as envisaged by Yoshisuke Aikawa, could not be materialized.

It was amid this situation that Yoshisuke Aikawa

was appointed to reconstruct Kuhara Mining in place of Fusanosuke Kuhara. After examining the company down to the minutest detail, Aikawa realized that the only possible solution was to settle its debts internally among the related families and owners, and thus requested assistance from each related family. The Kaijima, Fujita of Tokyo, Tamura, Aikawa, Saito (Fusanosuke Kuhara's eldest brother Ikuta Saito was a Director of Kuhara Mining) and other related families all rallied to the call, approving appropriate levels of financing.

The Birth of Nissan Konzerne

Once the debts of Kuhara Mining had been consolidated, Yoshisuke Aikawa was appointed the company's President in 1928. Having learnt his lesson from the failure of Kyoritsu Kigyo, Aikawa now established the concept of a public holding company. By listing the company's shares, he planned to increase shareholders among the general public, obtain capital broadly from the stockmarket and thus ease financing problems. He also planned to enhance management and supervisory functions to ensure the success of the diversification strategy. In this way, Aikawa aimed to develop a multi-sector, compound corporate business strategy. He announced this business management format under the name of a public holding company, as a "holding company that has its foundations in the masses" (*Ginko Sosho* Vol. 21, "New Capitalism and Holding Companies", Tokyo Ginko Shukaisho, 1934). To bring this to reality, he presented a proposal to the General Meeting of Shareholders. The proposal, which was approved in December 1928, outlined the following three points.

- Kuhara Mining will be reorganized as a holding company.
- The company's shares will be made publicly available.
- The company name will be changed to Nippon Sangyo Co., Ltd.

As a result, the Nippon Sangyo holding company would later reign supreme as the core company of

Nissan Konzerne.

At first, however, Nippon Sangyo had considerable hurdles to overcome. Because around 70% of the total investment was diverted to Nippon Mining Co. (the forerunner of JX Holdings, Inc.), which had been split off and made independent as a successor to Kuhara Mining's business, the company was heavily influenced by Nippon Mining's business performance. The Showa Depression hit Nippon Mining directly, and this consequently led to a deterioration of Nippon Sangyo's business performance.

Nippon Sangyo failed to pay a dividend for five consecutive terms from the first half of 1930 onwards, but the company's business recovered dramatically as a result of the renewed ban on gold exports in 1931 and government measures to raise the sale price of mined gold from the following year onwards. This upturn in the external environment provided a powerful stimulus for Nippon Mining, which, as Japan's biggest gold mining company, accounted for around 30% of the value of Japan's mined gold. Nippon Mining's share price, which at one point had fallen to 11.9 yen, rose to 130.5 yen in the first half of 1933. Yoshisuke Aikawa capitalized on this to start a withdrawal from the structure of dependence on Nippon Mining and to spread risk through a strategy of diversification.

Nippon Sangyo immediately put shares in its two companies Nippon Mining and Hitachi, Ltd. up for sale. Having thus acquired numerous shareholders, the two companies then made capital increases through rights issues, and succeeded in expanding their business capital. Nippon Sangyo allocated the capital obtained through share sale profits to new businesses and proceeded with diversification. It embarked on aggressive corporate absorption mergers based on exchanges with its own soaring shares, then successively separated the companies off as subsidiaries.

As a result, Nippon Sangyo was able to expand its business into diverse sectors besides its existing mining (Nippon Mining) and engineering businesses (Hitachi, Ltd. and Hitachi Denryoku), including chemical

industries (Nippon Kagaku Kogyo and Nippon Oil & Fats), automotive engineering (Nissan Motor), audio industries (Nipponophone and Victor Talking Machine Company of Japan) and fisheries (Nippon Suisan).

Now developed into a major business conglomerate, Nippon Sangyo succeeded in increasing its number of shareholders as planned. The number grew from about 20,000 in the second half of 1934 to about 30,000 one year later, passing 50,000 in the first half

of 1937. Of these, some 98% were ordinary shareholders with holdings of less than 500 shares; the shareholding ratio of these ordinary shareholders was actually more than 50%. The shareholding ratio of those connected with the Kuhara and Aikawa families decreased in inverse proportion to this, falling from around 40% at the time of Nippon Sangyo's establishment to around 5% at the end of the first half of 1937. Nippon Sangyo had succeeded in transforming itself into a public stock company.

4. Nippon Suisan Becomes an Affiliate of Nissan Konzerne

Establishment of the Nippon Sangyo Fisheries Department and the Birth of Nippon Suisan

One of the main reasons for Nippon Sangyo's diversification was to avoid the risk of structural dependence on mining (Nippon Mining). To pay dividends to large numbers of shareholders, it was vital that the share price be kept stable and high. To achieve this, the time lag between investment and returns had to be made as short as possible, and the format of a general business group needed to be perfected quickly. In other words, the most pressing task was to produce immediate profit, and to acquire companies engaged in business sectors not linked to the market risks of mining. The company that came to the fore amid this process was one that boasted a monopolistic scale in the fisheries industry—Kyodo Gyogyo.

The reasons why Yoshisuke Aikawa turned his attention to fisheries have been described as follows:

“Since Nippon Mining was a mainstay for Nippon Sangyo as a public holding company, another company that could substantially match Nippon Mining was also needed, from the perspective of diversification. While the search for that company continued, the idea of fisheries is said to have been mooted. Specifically, a food industry furnished by marine products. Rice could not be industrialized, and livestock products would also have been difficult to industrialize, given Japan's shortage of open land. The seas, on the other

hand, were a wellspring of food for human consumption, and proud industries still remained there. Moreover, fisheries and related food industries could provide another mainstay for Nissan, from the opposite end of the business spectrum to mining” (Hideyoshi Wada, “*Nihon Konzerne Zensho* (VI), *Nissan Konzerne Dokuhon*”, 1937).

In July 1933, Yoshisuke Aikawa was appointed Chairman of Kyodo Gyogyo. At the same time, President Hisazo Matsuzaki bowed out, his place being taken by Keizo Tamura, the adopted heir of Ichiro Tamura. In the second half of that year, Nippon Sangyo owned 89,660 shares in Kyodo Gyogyo, 36,300 shares in Nippon Godo Kosen and 33,800 shares in Godo Suisan Kogyo. Nippon Godo Kosen was a company mainly engaged in mother ship-type crab fishery, while Godo Suisan Kogyo, the forerunner of Nippon Food Industries, was engaged in ice making, freezing, refrigeration and marine product processing,



Kyodo Gyogyo Chairman Yoshisuke Aikawa (right) and President Keizo Tamura

among others.

In June 1934, Nippon Sangyo created a Fisheries Department with the aim of overseeing its fisheries-related business. Kosuke Kunishi was appointed Managing Director and was made Manager of the Fisheries Department.

The Nippon Sangyo Fisheries Department energetically set about expanding and integrating the companies under its umbrella. First, it increased the capital of the west water two boats trawling company Hoyo Gyogyo from 2 million yen to 10 million yen, allowing it to take over Kyodo Gyogyo's trawling division. The following July, it absorbed Kyodo Gyogyo, Toyo Hogeï and Dai-Nippon Seiho into Hoyo Gyogyo, Nippon Hogeï, Nippon Food Industries, respectively, and then changed the name Hoyo Gyogyo to "Kyodo Gyogyo".

With the aim of centralizing business and rationalizing management, Nippon Godo Kosen and Nippon Hogeï were merged with Kyodo Gyogyo in September, while at the same time all Nippon Food Industries shares were transferred to Kyodo Gyogyo and steps taken to integrate its business. Then in January 1937, Kyodo Gyogyo took over all operations of the former Chuo Suisan Hanbaïsho. This meant that Kyodo Gyogyo now controlled the ice-making, freezing, refrigeration, canning and *chikuwa* manufacturing businesses of Nippon Food Industries, together with the fish and processed marine product sales of the former Chuo Suisan Hanbaïsho. Two months later in March 1937, Kyodo Gyogyo absorbed Nippon Food Industries, increased its capital to 91.5 million yen, and changed the company name to "Nippon Suisan



The Nissan Building
Nippon Suisan moved its Head Office here from the Maru Building in August 1937.

Kaisha, Ltd.”

And now, Nippon Suisan was to start life anew as an affiliate of Nissan Konzerne. That August, Nippon Sangyo relocated to the “Nissan Building” in Shiba Ward, completed at a total cost of about 5 million yen. The Nissan Building was an 8-story building with a single basement, and was home to Nippon Sangyo and other affiliates of Nippon Suisan. Nippon Suisan itself had its Head Office on the 6th floor of the building.

Nippon Suisan was by that time Japan's largest fishery company. In September 1938, moreover, it absorbed Shinko Suisan K.K., a company engaged in the mother ship-type fishmeal business, increasing its capital to 93 million yen. In December, it established Kyodo Gyogyo K.K. to conduct buying, selling and leasing of ships as well as other aspects of maritime shipping business, and transferred ships owned by Nippon Suisan (*Tonan Maru II and III, Itsukushima Maru* and others) to the company.

Nippon Suisan also invested actively in companies that had a close connection with Nippon Sangyo's business. By around 1940, the targets of its investment included fisheries companies with business expansion strategies overseas—notably, the west-water two boats trawling company Nitto Gyogyo K.K., the mainly trawl-based company Hinode Gyogyo K.K., and Nichiman Gyogyo K.K., which engaged in west-water two boats trawling in Dalian, China, and also had a marine product sales network in northern and north-eastern China. They even included the sister company Nippon Gyomo Sengu, which was engaged in the manufacture and sale of fishing nets and ship's gear, supplies of fuel oil for fisheries, etc.

In this way, Nippon Suisan became a general fisheries company with four divisions—the fisheries division (trawl fishery, west-water trawling, mother ship-type crab fishery, mother ship-type whaling, coastal whaling, etc.), the processing division (ice-making, freezing and refrigeration together with marine product processing), the sales division, and the investment division.

An Important Wing of Nissan Konzerne

As a result of Nippon Suisan's business expansion in its aim to become a general fisheries company, it came to have 46 subsidiaries. Besides Nippon Suisan, Nippon Sangyo also included Nanbei Suisan and the Nissan Fishery Institute as fishery-related subsidiaries directly under its wing. Nanbei Suisan was engaged in fisheries and associated business, as well as trading in marine products and others in South America, as the company name suggests ("Nanbei" = South America). The Nissan Fishery Institute, previously called the Hayatomo Fishery Research Center, was a survey and research body dedicated to fisheries. It was established in 1935 following Yoshisuke Aikawa's appeal for the industrialization of research labs.

With this, the number of fishery-related affiliates in Nippon Sangyo came to 60 in all, consisting of 3 parent companies (including Nippon Suisan) and 57 subsidiaries. Collectively, their capital amounted to 118.23 million yen.

The ratio of Nippon Mining's dividend income to that of Nippon Sangyo as a whole was 84.6% in the Second half of 1932, but fell by more than half to 41.7% in the first half of 1937. In terms of Nippon Suisan alone, this rose from 10.6% (the total of Kyodo Gyogyo, Godo Kosen and Nippon Food Industries) in the second half of 1934 to 26.7% in the first half of 1937. This reveals that fisheries centering on Nippon Suisan contributed greatly to the withdrawal from structural dependence on Nippon Mining, as targeted at the time of Nissan Konzerne's establishment.

Establishment of Nippon Oil & Fats Co., Ltd.

Nippon Suisan also played a major role in Nippon Sangyo's expansion into the chemical sector. Nippon Food Industries had taken over the business of companies including Velvet Soap K.K., seen as a long-standing presence in the soap industry, in order to make effective use of fish oil as a by-product of fishmeal processing. In March 1937, it absorbed fishmeal

companies and others to establish Nippon Oil & Fats Co., Ltd. When Dai Nippon Artificial Fertilizer Co. came under the wing of Nippon Sangyo two months later, its subsidiary, the oil and fats major Godo Yushi K.K., was merged and the company name changed to Godo Yushi on June 1st, 1937. But soon afterwards, on June 25th, it was renamed Nippon Oil & Fats Co., Ltd.

Nippon Oil & Fats carried out aggressive diversification and business expansion, adding explosives and textile divisions to the existing four divisions of oil and fats, paint, fisheries and soybeans. Under the wartime regime, the company was designated under procurement for military demand, taking it further into the manufacture of oil and fat products, explosives and others. And as the wartime regime intensified, the textile, soybean processing, marine product processing and other productive divisions were separated off in order to boost priority production in the oil and fats industry. Meanwhile, the chemical division of Nippon Mining was taken over before the end of the war, the new company being named Nissan Chemical Industries, Ltd. After the war, the company was designated as subject to measures under the Economic Deconcentration Law, but filed an objection, which was accepted. The company was now allowed to draw up its own reorganization plans independently. As a result, the chemical division remained in Nissan Chemical Industries, while the oil and fats, paint, explosives and welding divisions in combination were consolidated as Nippon Oil & Fats. From that time on, Nippon Oil & Fats expanded its business by venturing into petrochemicals, chemical agents, foods,



Nippon Food Industries, fish food factory in Shimpo

anti-corrosives and other businesses, and promoted globalization. On its 70th anniversary in 2007, the company changed its name to Nichiyu K.K. (NOF Corporation). It is now engaged in a wide range of business from biotechnology to space development.

The Centralized Management System of Nissan Konzerne

With such a large number of companies acquired as a result of its diversification strategy, centralized management of subsidiaries now became a major challenge for Nippon Sangyo. Although Nippon Sangyo was the controlling body for its subsidiaries, it had adopted the principle of encouraging their independence. Nevertheless, a certain degree of centralized management was unavoidable, bearing in mind that so many different companies had been acquired in such a short space of time. The company therefore set up a Supervision Department for centralized management of subsidiaries, and imposed vertical control through this. Although several subsidiaries were unhappy with this control, it seems that Nippon Suisan was not necessarily one of them. Nippon Suisan's 2nd President Keizo Tamura states that he took a positive approach to the inspection of the company's settled accounts by the Auditing Section of Nippon Sangyo's Supervision Department, as a marker of business improvement.

In around 1936–1937, Nippon Sangyo carried out a structural reorganization in its management of subsidiaries. First, it abolished the system of block-based control by the Mining, Engineering and Fisheries Departments. Instead, it appointed the Presidents of the main subsidiaries as Nippon Sangyo directors, then created Senior Boards of Directors at Executive Director level or higher within its subsidiaries, to be attended by Nippon Sangyo directors whenever appropriate. This was a method adopted by Nippon Suisan in the past, and had spread throughout the Konzerne because it produced good results. The creation of these Senior Boards of Directors meant that

managerial authority was significantly delegated to the subsidiaries.

Meanwhile, in a bid to strengthen horizontal links between the subsidiaries, the Nissan Thursday Group was formed in September 1934. This was an informal discussion group for full-time directors of the subsidiaries, its purpose being to promote friendly relations and exchanges of information between them and thereby to help build a cooperative structure. Later, eligibility for membership was extended to include personnel in the department manager and section manager class.

By carrying out this vertical management via the Supervision Department (upgraded from a Supervision Section at the time of the structural reorganization) and Senior Boards of Directors, combined with horizontal management by the Nissan Thursday Group, Nippon Sangyo increased the solidarity of the Konzerne. Nippon Suisan made use of horizontal management by Nippon Sangyo to gain tremendous cooperation from the latter in terms of both capital and business management. Moreover, by engaging in meaningful exchanges with some of Japan's most renowned subsidiary companies, it took steps towards promoting public welfare through fisheries.

Kosuke Kunishi and Yoshisuke Aikawa

Kosuke Kunishi, the man at the helm of Kyodo Gyogyo, was related to Yoshisuke Aikawa; Kunishi had lodged with the Aikawa family while at Middle School. Kunishi was earnest in nature and worked hard at his studies, and Aikawa looked out for him as he would a younger brother. When Kunishi left Middle School, he thought of going on to study at the Fisheries Training Institute, and sought Aikawa's advice. Aikawa went to the Institute in person and spoke to its Principal, as well as listening to the views of fishery experts. In the process, he came to have confidence in the importance and future potential of fisheries, and urged Kunishi to do all he could to develop the industry in Japan. Kunishi duly attended

the Fisheries Training Institute, and on graduating, expressed a desire to travel abroad as a practical business trainee of the Ministry of Agriculture and Commerce. Here, he sought the help of Kaoru Inoue, who supported him in achieving his goal. And when, on returning to Japan, he mentioned that he wanted to buy a trawler, it was Aikawa who introduced him to Ichiro Tamura. The meeting between the two would culminate in the establishment of the Tamura Steamship Fishery Company.

Again, around the time when Aikawa launched Nippon Sangyo, it was none other than Kunishi who introduced him to three important figures—Hiroya Ino, later to become Executive Director of Nippon Suisan and after that Minister of Agriculture and Forestry; Jiro Shirasu, who made his name as a close associate of Shigeru Yoshida after the war; and Tatsunosuke Takasaki, Toyo Seikan founder and inaugural Director-General of the Economic Planning Agency.

Kunishi had an insight that these three would be of assistance to Aikawa. And in fact, they all went on to make huge contributions to Aikawa's business development.

The Mutually Cooperative Relationship Between Nippon Sangyo and Nippon Suisan

Kosuke Kunishi decided to take Kyodo Gyogyo under the wing of Nippon Sangyo because he fully endorsed Yoshisuke Aikawa's idea of a "public holding company".

He saw significance in a public holding company in terms of receiving a supply of funds from the general public, gaining public support by paying dividends, and thus sharing its fate with ordinary people. Transferring shares to Nippon Sangyo in its aim to create a public holding company, and moving forward as a member of Nippon Sangyo, would bring Kyodo Gyogyo many new shareholders and give the public more opportunities to have a say in running the company. That was an ideal scenario for Kunishi, who saw fisheries as an enterprise of national and social significance in connection with food. Furthermore, capital power was a vital tool for gaining international competitiveness and thereby standing on a par with advanced fishery nations; in that sense, too, operating under the massive conglomerate of Nippon Sangyo was the way forward.

Again, Aikawa's understanding and passion for Japanese fisheries worked perfectly for the business expansion of Nippon Suisan. With the absolute support and capital backing of Aikawa as a "commander-in-chief", Nippon Suisan greatly enhanced the feasibility of promoting public welfare, as targeted by Kunishi.

It was partly thanks to the strong relationship of mutual trust between Aikawa and Kunishi that Nippon Suisan entered the fold of Nissan Konzerne. And because Nippon Suisan was now a subsidiary of Nippon Sangyo, not only did it become Japan's foremost general fisheries company, but it also played a full part as a member of Nissan Konzerne.

5. Expansion into Manchuria and Subsequent Withdrawal

Nippon Sangyo Moves into Manchuria

When the Sino-Japanese War broke out in July 1937, Japan's wartime regime was further intensified. The government of Manchukuo (a puppet state created by Japan in northeastern China) and the Kwantung Army (a unit of the Imperial Japanese Army stationed in Manchukuo, forming the nucleus of Japanese rule

there) wanted to build a supply base. To this end, they were hurriedly developing projects mainly in the mining sector and the construction of railway lines by the South Manchuria Railway Company (a national enterprise formed after the Russo-Japanese War in 1906, and dissolved on the conclusion of World War II). With a view to expanding the project scale and further reducing construction times, Nippon Sangyo

was chosen as the project implementer. Nippon Sangyo was chosen because it had a mining division, and an automotive engineering division in particular. The fact that Nippon Sangyo was a public stock company also found favor with the Kwantung Army, which was hostile to the *zaibatsu*. And of course, Yoshisuke Aikawa's business acumen and the consummate perfection of his project plans in Manchukuo were highly valued at the time.

A number of circumstances lay behind Nippon Sangyo's acceptance of the request from the military. One was that, as the clouds of war darkened, it had become difficult to raise capital from the domestic stockmarket, while tax was now payable on dividends received and capital gains on share trading. With its functions as a public stock company restricted, and anxious over the prospects of business expansion in Japan, Nippon Sangyo found a lifeline in developing its business in Manchuria.

In November 1937, Nippon Sangyo relocated to Hsinking in Manchukuo (now Changchun, Jilin Province, China). It changed its company name to "Manchurian Industrial Development Company" and received funding from the Manchukuo government, making it a semi-private, semi-public national enterprise. As his condition for relocation, Aikawa succeeded in being granted six privileges, including guarantees of principal and an annual dividend of 6% for new investment in Manchukuo, exemption from dual tax, and freedom in its dividend policy. For Nippon Sangyo, which could relocate to Manchukuo without losing its rights to control of subsidiaries, the move to Manchukuo seemed like the start of a bright future.

Once Nippon Sangyo's relocation to Manchukuo was decided, Nippon Suisan and other subsidiaries in Japan renamed the Nissan Thursday Group the "Nissan Informal Discussion Group". Then in September 1938, shares in Godo Tochi K.K., a subsidiary of the Manchurian Industrial Development Company, were taken over from the Company, and its company name was changed to "Nissan K.K.," as a

parent-like body with subsidiaries.

Even after Nippon Sangyo's move to Manchuria, the various subsidiaries in Japan intensified efforts aimed at solidarity. One of these was the opening of the Tokyo Nissan Kosei En (Welfare Park), a recreation and welfare center that could be used by all companies related to Nippon Sangyo. Aikawa, as President of the Manchurian Industrial Development Company, a national enterprise, was prohibited from concurrently being an officer of Nissan Konzerne. But he had continued to serve as an unpaid officer, in reward for which he was to be paid an allowance of 1 million yen on retirement. Aikawa donated this allowance to fund a facility to be shared jointly by the employees of Nippon Sangyo's associated companies and their families, something he had long envisioned. Part of this capital was used to create the Tokyo Nissan Kosei En in 1940, and Nissan took responsibility for running it. As the war situation advanced, however, it became difficult to operate public benefit and social projects. In 1942, therefore, the Nissankai corporate juridical person was established with Aikawa as its Chairman, and it was entrusted with running the Tokyo Nissan Kosei En. When first launched, Nissankai had 17 corporate members, including Nippon Suisan as well as Nissan, Hitachi, Ltd., Nippon Mining and others, revealing the strength of solidarity in the Konzerne. Around the time when Nippon Sangyo was attempting to develop its business in Manchukuo, the various subsidiaries remaining in Japan maintained a cooperative structure amid the harsh climate of war, and took measures for survival.

Withdrawal from Manchukuo

Yoshisuke Aikawa crossed to Manchuria with ambitions of building a massive business conglomerate straddling both Japan and Manchukuo, improving Japan-US relations and bringing the Sino-Japanese War to a conclusion. From the outset, however, he found himself in a harsh business environment.

Resources in Manchukuo were scarcer than he had been led to believe, and he faced undue interference from special corporations already established there. For these and other reasons, the progression of business in Manchukuo was hampered from the start. It was almost as if the Kwantung Army had sweet-talked Nippon Sangyo into its Manchurian venture.

Yoshisuke Aikawa foresaw difficulties in building heavy industries in the country, and drew up a new plan to develop Manchukuo as an agricultural nation instead. But this was immediately rejected by the Kwantung Army. Aikawa's idea for industrial-scale farming ran counter to the fundamental aim of the Kwantung Army—to divide up arable land so that as many Japanese people as possible could resettle in Manchuria in coming times.

The business environment in Manchuria grew harsher still. Nippon Sangyo had drawn up plans to introduce foreign (particularly American) capital in Manchukuo, but this could not be achieved owing to worsening relations between Japan and the United States. Another plan was to introduce machinery from Germany, an ally, but this also ended inconclusively. Moreover, intervention by the Kwantung Army grew stronger by the day, until it was no longer possible to conduct business independently. Before long, the original plan to build heavy chemical industries in Manchukuo had been shifted to one of creating a supply base for raw materials and resources. When the Important Industrial Organization Ordinance was issued in August 1941 and it was clear that management authority would be severely restricted, Nippon Sangyo (the Manchurian Industrial Development Company) decided to withdraw from Manchukuo.

In making the decision to withdraw, Yoshisuke Aikawa is thought to have been greatly influenced by the advice of Jiro Shirasu. Shirasu had been involved in the management of Nippon Suisan since his appointment as a Director on March 31st, 1937; he was also to serve as a Director of Teikoku Suisan Tosei K.K. (Teikoku Marine Products Control Company),

Jiro Shirasu



to be established later. Jiro Shirasu had plenty of overseas experience, notably through a period of study in Britain, and foresaw a quick defeat for Japan if it were to start a Pacific War. No one wanted to believe him, but Yoshisuke Aikawa paid serious attention to Shirasu's theories.

In June 1941, Aikawa established Manchuria Investment and Securities Ltd. with joint capital from 18 leading Japanese life insurance companies. His aim in doing so was to regain management authority over the group of Japanese affiliates from the control company. Stock in Manchuria Investment Securities consisted of 355,000 shares without voting rights at 1,000 yen each, and 5,000 shares with voting rights. The Manchukuo government imposed conditions of an annual guaranteed dividend of 5% and repayment of principal after 10 years on the former; these were to be underwritten by life insurance companies seeking to invest in strong-performing military supply companies. The 5,000 shares with voting rights were to be owned by Nissan. Yoshisuke Aikawa succeeded in retrieving controlling rights in Nissan Konzerne (i.e. the subsidiaries in Japan), appointed Tatsunosuke Takasaki as his successor in the Manchurian Industrial Development Company, and entrusted all subsequent administration to him.

Thus, Nippon Suisan and the other subsidiaries in Japan were liberated from the grip of the Manchurian control company, but would later be at the mercy of the government and the military as the wartime regime intensified.

Part 4 Evolution into Japan's Largest Fisheries Company

1. The Establishment of Nichiman Gyogyo and the Start of Controls on Marine Products

Establishment of Nichiman Gyogyo

In 1935, Kyodo Gyogyo took over the business of Hazuki Shoten K.K., which had previously been engaged in west-water trawling based at Dalian (now Dalian City in Liaoning Province, China), and established Nichiman Gyogyo. In October that year, the Dalian Sales Office together with all northern and northeastern China business under its jurisdiction were transferred to Nichiman Gyogyo.

From its base at Dalian, Nichiman Gyogyo engaged in shrimp purchasing business using 20 bottom trawlers mainly in the Bohai and Yellow Seas. It also undertook manufacturing and sales in Manchuria and northern China.

Since Manchuria was geographically less endowed with marine resources than Japan, freezing and refrigeration facilities needed to be enhanced to meet the demand for marine products, mainly from Japanese nationals resident there. Including Nichiman Gyogyo, there were only two companies in Manchuria engaged in the freezing business, and frozen fish sales became a major mainstay of the company's operations.

Nichiman Gyogyo's frozen fish sales in Manchukuo started with deliveries to the military after the Mukden Incident, but it also made sales to ordinary consumers. The company set up branch offices in six main Manchurian cities, and set out a system whereby it could distribute fresh marine products with reliable quality anywhere. The frozen fish sales business in Manchuria was indeed one that embodied Nippon Suisan's ideal of "producing and supplying marine products as daily life necessities, just like supplying water through a tap".

In April 1942, Nippon Suisan transferred its Manchuria branches and the business under their jurisdiction to Nichiman Gyogyo, in a measure to

centralize its business in Manchuria. With the onset of the controlled economy, however, Nichiman Gyogyo was to transfer the ships in its possession along with onshore facilities and other assets to the Minami Manshu Kaiyo Gyogyo K.K. in October 1944, and in the following January, was merged into "Nippon Kaiyo Gyogyo Tosei K.K."

Outbreak of the Sino-Japanese War and Business Strengthening in Manchuria and China

When the Sino-Japanese War broke out after the Marco Polo Bridge incident in 1937, productivity came to be concentrated in military supply industries. With the creation of Manchukuo as a state, Japan was already promoting the establishment of a Japan-Manchukuo economic bloc. Now, the Sino-Japanese War provided a premise for proposing an economic bloc policy in China, with a view to addressing the further expansion of war costs and enhancing the provision of materials. In response to this, Nippon Suisan would promote a strengthening of its operations on the mainland.

As part of the company's measures to strengthen business in Manchuria, a Manchuria Sales Office was newly created in August 1939. The Manchuria Sales Office split off the sales operations of the recently established Nichiman Gyogyo and took over all of its business except fisheries, and set out to strengthen the sales network in Manchuria. Then, to promote its business in China, the company set up Sales Offices in northern and central China. As a base for the southern China area, it created a Guangdong Branch Office and placed it under the jurisdiction of the Taiwan Sales Office.

Meanwhile, the company created a Dependent Territories Department as a general communication body for business development in Manchuria and

China. As well as managing the Sales Offices and Branch Offices, the Dependent Territories Department also served to enhance communications between the various bases. It took the principle that freezing and refrigeration equipment should be used to ensure that Nippon Suisan's overseas business involved not only marine products but also a wide range of foodstuff provisions; eggs and livestock products were also actively traded.

Start of Mother Ship-Type Tuna Fisheries in Southern Seas

On October 30th, 1939, Nippon Suisan established Tobu Suisan K.K. with capital of 1 million yen. With its Head Office in Taiwan's Hualian port town (now Hualian City), it engaged in mother ship-type tuna fisheries, as well as fish market agency, freezing and other business on the east coast of Taiwan.

In 1940–1941, Tobu Suisan fished for tuna in the Indian Ocean and other south sea areas, using the *Oi Maru* and *Kitakami Maru* as mother ships and 6–7 catcher boats. Sadly, though, operations were halted just before the start of the Pacific War.

Canned Crab Sales under Wartime Control

Government control of marine products before the war consisted of measures designed to increase output at first, but was then extended to production, distribution and exports.

After the dissolution of Kani Kanzume Kyodo Hanbai (crab cannery and joint sales by factory ship processors and land-based processors) in 1933, canned crab (processed both by factory ships and on land) had been distributed to markets via several sales channels. The government, through the mediation of the Ministry of Agriculture and Forestry (forerunner of the Ministry of Agriculture, Forestry and Fisheries), then created Kani Kanzume Hanbai K.K. in June 1939. By so doing, it wanted to address export promotion as well as military demand, and to reorganize

sales control bodies to cope with shortages of both materials and labor. With the establishment of Kani Kanzume Hanbai, cooperative sales by factory ship and land-based processors became centralized, and the system of sales under wartime control took shape.

The government now stepped up efforts to prepare systems in readiness for a war scenario, and strongly promoted exports aimed at improving the balance of payments and strengthening the economy. Agricultural products were earmarked for promotion of exports, while positive efforts were also made to export canned seafood. In response to this, the National Federation of Export Cannery Fishery Cooperatives was launched in 1939 with the aim of centralizing export inspection work and securing commodity distribution, overseas market surveys, and so on. Its members were 10 related fishery cooperatives, and it led to stronger controls on canned exports.

In September 1939, Britain and France declared war on Germany following the German invasion of Poland, signaling the outbreak of World War II. The confrontation between the Triple Axis of Japan, Germany and Italy against the allied nations of America, Britain, France, Russia, China and others would soon develop into a conflict of unprecedented proportions that would sweep through the whole world. Tension inside Japan now rose to new heights. The Ministry of Agriculture and Forestry issued an ultimatum on prices of agricultural, forestry and marine products, etc., while an Outline on Controlled Distribution of Production Materials for Agricultural, Forestry and Fishing Villages was decided. In this and other ways, controls on agricultural, forestry and marine products were increasingly tightened.

Marine products were considered important not only as food but also as military supplies, and despite coming under various controls, Nippon Suisan applied itself to the business with a view to meeting the spectacular growth in demand. With the start of the Pacific War in 1941, the Fishery Control Ordinance was imposed in the following year, forcing the company to operate under a completely controlled economy.

Nationwide Expansion of the Ice-Making, Refrigeration and Freezing Business

Kyodo Gyogyo had decided to proceed with development aimed at a nationwide presence for the refrigeration sector, to accompany the national expansion of its sales sector. In March 1937, Kyodo Gyogyo changed its company name to “Nippon Suisan Kaisha, Ltd.,” then absorbed Nippon Food Industries and made it Nippon Suisan’s refrigeration sector. With this, Nippon Suisan had a total of 325 ice-making, refrigeration and freezing plants, including direct operation and investment companies, and thus now covered all principal areas of the country. The facility scale was a daily output of 8,000 tons, accounting for 50% of the whole country’s ice making capacity. Cold stores arranged in important cities and major fishing ports all boasted the very latest equipment, and also included Japan’s only dry ice-making factory.

At around that time, a keener awareness of hygiene began to take root, along with changes in lifestyles, and started to spread throughout peoples’ daily lives. Nippon Suisan had been investing energy in building a refrigerator network with the aim of providing fresh, tasty marine products to every part of the country. But now, with signs of increased requirements related to hygiene, it anticipated growth in demand for frozen products, and further accelerated its efforts to improve and increase equipment.

Formation of a Frozen Fish Sales Network

The sales outlets in 8 locations taken over from Yamagami Gumi in 1919 had been boosted to 42 in 1936 and 48 in 1937, and now extended to all major cities across the country.

Together with the nationwide expansion of the refrigerator network, a frozen fish sales network was also formed. Of the fresh fish caught by trawlers and fish frozen by on-board rapid freezing equipment, 40% were sold via direct sales outlets and just over 30% were processed as frozen products, or else used for

export or as raw materials for *chikuwa*, etc. The fact that less than 30% were sold to markets and other indirect outlets shows the strength of the company’s sales network.

Z Process Quick Freezing Equipment — The Z Process

The Z process (Z process quick freezing equipment) was invented by the American M.T. Zarochentsev. When his son W.M. Zarochentsev visited Japan in 1937, Nippon Suisan decided to introduce the process and acquired the rights to use it.

The details of the usage rights included the Z process quick freezing equipment, the Z process registered trademark, and patents for methods of pre- and post-processing frozen foods. It was hoped that using the process would help to improve the status of frozen products, while the trademark was respected on overseas markets and its use would promote exports.

Although there have been several methods of using brine (calcium chloride solution) as a refrigerant for freezing since that time, this was a method of freezing by applying brine directly to the product in spray form. It was called the Z process after the initial Z of Zarochentsev, the inventor.

Nippon Suisan thoroughly tested this device at its cold stores in Misaki, Nemuro and Takao (Taiwan). Because the brine was sprayed all over the targeted product, it required a considerable amount of surrounding space, and for this and other reasons it was used in land-based plants rather than at sea. Nippon Suisan’s Director Jiro Shirasu was put in charge of planning an overseas strategy for the device, and in June 1938, he went to Takao with Zarochentsev. There, he took part in a project for freeze-processing tiger shrimp farmed at Tainan, which he called “Horai shrimp” and sent to Japan. In 1939, frozen swordfish freeze-processed at the Misaki cold store were exported to America. But when the Pacific War started, all of the equipment was transferred to “Teikoku Suisan Tosei” established under the Fishery Control Ordinance.

2. The Death of Kosuke Kunishi and Subsequent Development of Nippon Suisan

The Death of Kosuke Kunishi

On April 2nd, 1938, Kosuke Kunishi died of heart disease. He was 52 years old.

It was just over a year after Kyodo Gyogyo had joined the Nissan Konzern and set sail anew under the name Nippon Suisan.

Making it his mission to establish fisheries as a national enterprise, Kunishi had conceived numerous businesses and personally brought them to fruition, starting with the Tamura Steamship Fishery Company and ultimately leading to Nippon Suisan. Of course, he could not have done this without the financial support of those around him, not to mention the cooperation and efforts of others who also devoted themselves to fisheries. Nevertheless, the driving force behind Nippon Suisan, a company that has played a large part in developing Japanese fisheries, was unmistakably Kunishi's sense of mission and passion for fisheries. Without those attributes, it would be no exaggeration to say that Nippon Suisan, and therefore also Japanese fisheries, would not have risen to the status they enjoy today.

Kunishi's attitude towards fisheries went beyond the realm of individuals or single companies; it started from a sense of social mission. Kunishi took every opportunity to explain to those around him the ideal that should be sought in fisheries, leaving them all with the shared impression of the strength of his will, as well as his perspectives on the state and the world.

Yoshisuke Aikawa, for example, said the following about Kunishi's personality during a Buddhist memorial service to mark the first seven days after his death.

"Only recently, (Kunishi) was repeatedly advocating nutritious foods; I myself heard him talk about them time and time again. But even then, the starting point was always the social concept of promoting welfare, not of the individual, but of ordinary people,

in other words the masses" (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

Another friend of many years' standing, Toichi Kuwata, recalled the following memory of Kunishi.

"The phrase 'food patriotism' was Kunishi's creation, and it symbolized his belief in the state. Since last year, he was advocating that we start a communal kitchen business for nutritious food. He was proposing the creation of a huge national policy body that would handle everything from improving the physique of the people and promoting their welfare to enhancing productivity by increasing the workforce, replenishing the labor force in farming and fishing villages depending on prevailing circumstances, and preventing the decline in birth rates and the increased birth of feeble or sickly children that would normally arise after a period of conflict" (*ibid.*).

In various respects, Kunishi had been a driving force behind Nippon Suisan and Japan's fishery industry, and on his death, the people around him could not hide a sense of despair. But their minds were united in the thought that the best memorial to Kunishi would be to promote the state enterprise he had envisaged and to achieve his ideal through Nippon Suisan.

Kunishi was succeeded by Hiroya Ino, who resigned as Vice-Minister for Agriculture and Forestry to take up the post of Director.

Nippon Suisan Just Before the Pacific War

The economic climate remained harsh in the early Showa era, with exposure to the Showa Depression followed by the worldwide Great Depression. During this time, Nippon Suisan engaged in diverse business interests, aggressively expanding its bases not only in Japan but also in Manchuria, Taiwan, northern China and central China. As of 1940, the year before the Pacific War broke out, its capital was 93 million yen. It had its Head Office in the Nissan Building in Shiba

Ward, Tokyo City, as well as 2 branches, 7 sales offices, 46 branch offices, 25 sales outlets, 18 offices, 27 whaling stations and 255 ice-making, refrigeration and other plants. Its employees numbered about 6,100 working on land and about 7,100 at sea. The company owned a total of 237 ships, consisting of 134 vessels connected with trawling and west-water two boats trawling, 27 connected with crab fisheries, 44 connected with whaling, and 32 other ships.

The business territory had expanded broadly into ice-making and sales, in addition to various fisheries. The company had opened up unexploited fishing grounds around the world, and had extended its sales channels not only across Japan but also in Hong Kong, Singapore, Rangoon, Calcutta and other parts of Asia, as well as Los Angeles in the U.S.A. and Buenos Aires in South America.

As a result of this diverse expansion of fisheries, Nippon Suisan was now delivering its uniquely characteristic products all over the globe—high-quality

canned crab and Antarctic whale oil from mother ship-type fisheries, whale meat from coastal whaling, fresh fish, frozen fish and South China Sea frozen bream, Taisho shrimp from Shandong coastal waters, Minato shrimp from Baja California, and whale and sharkskin from trawling and west-water two boats trawling, among others.

Nippon Suisan became Japan's top fisheries company 26 years after the Tamura Steamship Fishery Company was founded in 1911. Arguably, this success resulted solely from promoting fisheries from a national point of view but with a global perspective. Later, as tension mounted in the years before the Pacific War, Nippon Suisan would find the meaning of its existence more than ever in the form of a social and state enterprise. And just as Japan would enter a harsh period of change in the wake of the Pacific War, Nippon Suisan would also face trials exceeding all imagination.

Section II

The Pacific War Era and Postwar Reconstruction

Chapter 1: The Controlled Economy and Fisheries in Wartime

1940–1944

Part 1 Conversion to a Planned Economy and Changes to Industry

Expansion of Heavy Industries, Shift to Military Demand and Planned Economy

The outbreak of the Sino–Japanese War in July 1937 triggered a sudden surge in the war footing, and Japan hurriedly introduced a controlled economy. Two months later in September, the Temporary Fund Adjustment Act was promulgated to ensure priority allocation of capital to military supply industries. This meant that the permission of the government was required whenever loaning equipment funds or offering and receiving securities. Another new law was the Act for Temporary Measures on Exports and Imports etc., whereby the government restricted or prohibited the export and import of specific products, and intervened in the use or transfer of said products. With the outbreak of World War II in 1939 and the formation of the Triple Axis between Japan, Germany and Italy the following year, Japan's trade forcibly shrank. As a countermeasure, the government vigorously promoted the concentration of resources in important industrial sectors.

As transportation of commodities became more active with the start of hostilities in World War II, Japan (which depended on foreign sources for many strategic materials including iron ores, oil, rubber and foods) was confronted with the problem of securing its shipping capability. Moreover, as the concept of a

Greater East Asia Co-Prosperty Sphere was developed at the start of the Pacific War, the importance of transporting commodities grew ever greater, and demand for ships grew to astonishing proportions. Plans to mobilize commodities and measures to regulate supply and demand were drawn up, with a view to securing raw materials such as steel and related industrial products, mainly for the military demand sector. At the same time, controls were imposed on maritime shipping. Other measures included setting official prices for transportation costs and charter fees, a ban on free transactions, and collective transportation of commodities.

A state of surplus demand continued in shipbuilding, and measures to regulate supply and demand through planned shipbuilding were started. The government now set out to expand production facilities, and supported technology development, assisted with capital procurement where appropriate, and provided low-interest loans of shipbuilding capital. Vessels were standardized for mass production, and in April 1942 the first wartime standard ships based on ten ship types were decided. To further promote mass production, the second wartime standard ships with significantly simpler designs were decided in December. But the shortage in production capacity inevitably created difficulties. There were many reasons for this, but an absolute shortage of steel materials had a particularly

large impact. The government addressed this with limited consumption allocations and planned production. The targets were far from met, however, and shipbuilding plans had to be repeatedly revised.

Expansion of the War and its Impact on Fisheries

Oil and steel materials were vital for fisheries, and these depended heavily on imports, as well as being important materials for military demand. As the war-time regime took shape, it was inevitable that less oil and materials would be allocated to fisheries. And to add to these woes, oil and steel prices became inflated, dealing a direct blow to the business of all fishery companies.

What made things even worse for the industry was that, with the outbreak and progression of World War II, imported products were refused by European markets. Furthermore, the Treaty of Commerce and Navigation between the United States and Japan expired in 1940, and Japanese products started to be squeezed out of American markets as well. The government amended the Enforcement Regulations of the Trade Control Ordinance in July 1941, shortly before the start of the Pacific War, and imposed severe regulations on food exports. Now steps were taken to switch salmon, trout, canned king crab and others to domestic consumption and military demand, and the export destinations shifted to China, Manchukuo and the Kwantung Leased Territory (now part of Dalian City in Liaoning Province, China). Exports were also made to Germany, Italy, Thailand, Indonesia, the Philippines, Burma and elsewhere, but with the exception of Germany and Italy, nearly all of this was to meet military demand. The result was that, with the start of the Pacific War, ways of obtaining foreign currency grew even more limited.

As the war increased in severity, military demand started to increase. Japan fell into a food shortage, and supplementing and stockpiling foods became an urgent task. The fishery companies bore the expectation of expanded production, but even if they wanted

to go out on fishing operations, imports of fuel oil, fishing nets and other fishery requisites had been interrupted, and they were forced into an extremely difficult business environment.

Restrictions on Deep-Sea Fisheries

As the war situation progressed, restrictions came to be imposed on deep-sea fishing operations.

In west-water fisheries, there were more than 600 licensed ships with bases inside Japan as of 1939. Even in Korea, the Kwantung Leased Territory, Taiwan and other overseas locations, there were more than 550 ships. With the start of the Pacific War, however, the sea areas subject to operations became increasingly fraught with danger. The number of requisitioned ships also increased, and under government control, the number of licensed ships itself was restricted. By the end of the war, the number of ships had decreased dramatically and fish catches by west-water fisheries had fallen to less than a tenth of the 1941 level. Nevertheless, while the fishery majors were forced to suspend almost all fishing operations except coastal whaling, west-water fisheries continued operations right up to the end of the war, even as hostilities raged around them.

In Nippon Suisan's west-water fisheries, only 3 out of 61 licensed fishing boats were able to operate in 1945. For Hayashikane Shoten, it was 4 out of 8 licensed ships.

In mother ship-type crab, salmon and trout fisheries, exports of canned products became restricted as Japan-U.S. relations worsened. Moreover, output also fell owing to the requisitioning of fishing boats, and operations were consequently abandoned.

In the spring of 1941, the six Japanese whaling fleets on their way home from the Antarctic were refused a request to refuel in Java, leaving them stranded. Indonesia was a Dutch colony at the time, and the Dutch government had imposed sanctions against Japan. On rerouting to Singapore, the ships somehow managed to obtain fuel oil and return to port in Japan.

However, the incident prompted a decision to suspend the following year's Antarctic whaling expeditions. In response, the whaling companies now switched their attention to coastal whaling. Although catches gradually decreased after the start of the war, even at the end of the war more than 500 whales were caught.

Fisheries Administration Shifts to a Policy of Controlled Economy

Under these circumstances, the fishery industry had no choice but to change. In peacetime, the main focus of fisheries administration lay in boosting production, improving quality and developing fisheries in order to raise national living standards. But in a time of war, its more pressing challenge was to carry out planned production and rational distribution to maintain food supplies, and to do so efficiently with limited resources.

In October 1941, the government disbursed a total of 3,440,000 yen for emergency measures designed to ensure high levels of productivity in fisheries, despite regulations on oil consumption. The main targets of assistance included a shift to less oil-consuming fishing methods, or a shift from oil to charcoal gas burning engines, and the installation of sail power equipment on ships.

Meanwhile, the ships owned by fishery companies were successively requisitioned, including most large

vessels used by deep-sea fisheries. And as the war situation worsened, more sea areas became too dangerous to enter; even if the companies had any ships capable of operating, it was becoming increasingly difficult to send them out. The focus of active fish catch production was gradually narrowed down to coastal fisheries and freshwater aquaculture. To avoid a squeeze on the nation's food self-sufficiency, the government now actively supported coastal fisheries in the East and South China Seas as part of its policy for increased output. Fishing boats in the Kumamoto, Hiroshima, Kagawa and Okayama areas formed fleets and engaged in barracouta troll line, flounder gill net, bream bottom line and other fisheries from bases in Haikou and Yulin on Hainan Island. As Hainan was also home to Hayashikane Shoten's refrigeration equipment, production activity in the area continued until nearly the end of the war.

Despite these various measures to cope with difficulties, the business environment for fisheries merely continued to deteriorate; the requisitioning of ships and increasing severity of the war forced unplanned suspensions of operations, personnel were enlisted for military service, and commodities and fuel were becoming palpably harder to obtain. Full intervention by the government became unavoidable, and fisheries were soon to be radically reorganized and controlled with the aim of securing and stockpiling food to meet military demand.

Part 2 The Choice of Nippon Suisan

1. Moves Towards the Fishery Control Ordinance

“Serving the Nation with Food” is Made the Company Motto

In January 1941, Nippon Suisan President Keizo Tamura issued a circular to the effect that “Serving the Nation with Food” would be made the company's motto. In his statement, he wrote “Everyone is aware

that our Nippon Suisan has taken the stance of ‘Serving the Nation with Food’ ever since its inception, and in conducting its business, has worked tirelessly in pursuit of diverse profit. ... This company's employees feel pride in being members of an Imperial industry that can shoulder this supreme national mission ...”



2nd President Keizo Tamura

In other words, even before “Serving the Nation with Food” was named the company motto, it was Nippon Suisan’s sense of mission and tradition. The fact that the company sought out fishing grounds all over the world in order to provide large volumes of fish inexpensively and promote the health of the nation, and aimed for general fisheries covering everything from production and processing to storage and sales, originated from a wish not only to deliver seafood products to the nation’s dinner tables, but also to win pre-eminence in the world of Japanese fisheries.

On establishing the company motto, Keizo Tamura said, “We should think of the state before all else, and if required by the state, we must even engage in unprofitable operations”.

Enforcement of the National Mobilization Law and Delays in Controls on Marine Products

With the promulgation of the National Mobilization Law in April 1938, the government was given a mandate to pass laws for the control and deployment of human and material resources. From then on, a series of edicts and ordinances based on the Law were issued, and controls on the production, distribution, prices, import and export of a whole range of commodities became a reality.

In 1940, official prices were set for all marine products, and materials and canning came under control at the same time. In the following year, fresh fish were placed under state control, followed in January 1942 by marine products. It took longer for controls to be imposed on marine products than on other

commodities; rice, barley, wheat, fruit and vegetables, among others, had already been placed under control in 1940. The delay in controls on seafood products, despite the fact that they were important commodities in terms of military demand, resulted from the sheer variety of fresh fish and processed products, etc., as well as the complexities of the system of control.

Integration of Ocean Fisheries Starts

Japan’s withdrawal from the League of Nations in 1933 triggered a process of isolation from the international community. A series of blockade measures were taken against Japan; in particular, trade with America and Britain was banned and Japan’s assets there were frozen. China and the Netherlands also aligned themselves with these measures, and economic and trade sanctions by these four countries forced Japan into what was known as “ABCD encirclement” (ABCD = “American, British, Chinese and Dutch”). This came as a major blow to fisheries, which depended on imports for fishing nets and ropes, fuel oil and other production materials, as well as materials for shipbuilding, etc.

Even amid such harsh conditions, however, an important task for fisheries administration at the time (1937) was to vigorously promote measures for food self-sufficiency in Japan and China. To this end, it was essential that the shortage of materials and manpower be filled and seafood products be efficiently procured; moreover, steps had to be taken to sustain and nurture fisheries. State control was a measure forced by this kind of necessity.

In August 1941, the Important Industrial Organization Ordinance was issued with the aim of centrally mobilizing the economic power of the state through direct intervention by the government. A series of national control bodies were formed for important industries, and the fishery industry was one of them. The government divided fisheries into ocean fisheries and coastal fisheries, and first embarked on building a control system for the former. After the start of the Pacific War in December that year,

however, priorities shifted to measures for food self-sufficiency in the Greater East Asia Co-Prosperity Sphere.

The Minister of Agriculture and Forestry at the time was Hiroya Ino. After the death of Kosuke Kunishi, Ino had joined Nippon Suisan as an Executive Director, but resigned in August 1940 and was appointed Minister of Agriculture and Forestry in the 2nd Kono Cabinet the following June. In that capacity, Ino invited representatives of ocean fishery companies to an informal meeting in which he explained the need for state control of ocean fisheries. Given the nation's readiness for war, the representatives were only too aware of that need. They agreed with the government's idea, and it was decided that a Fisheries Control Preparation Committee would be set up to prepare a concrete proposal for the control system. Twelve men were chosen as the committee's members: from Nippon Suisan, they included Kenkichi Ueki and Shizuo Minoda; from Nichiro Gyogyo, Tsunejiro Hiratsuka, Shintaro Shinto and Hatsushiro Miyake; from Taiyo Hoge, Kenkichi Nakabe; and from Hayashikane Shoten, Shishiroku Ito.

Agriculture Minister Ino's idea was to establish a company for centralized control of production plans, material distribution, supplies and sales, with capital from the existing fishery companies, and in addition, to create an ocean fisheries control company that would conduct actual fishing operations as a subsidiary of the former. However, the proposal tabled by the Committee was far removed from this. The existing companies insisted on the control association method, whereby a control association would be set up as a supervising body but the existing structure would remain intact. As such, they hardened their stance of wanting to avoid the establishment of a national enterprise through integration of the industry.

Once before, in 1935, the government had attempted to impose state control of north-sea fisheries. At the time, Nichiro Gyogyo was in favor of the proposal, but it was blocked by opposition from Nippon Suisan and Hayashikane Shoten. Then in the spring of 1940,

20th Minister of Agriculture and Forestry
Hiroya Ino



a cross-sector informal meeting on the issue of the control of north-sea fisheries was held. This time, Ino, an Executive Director of Nippon Suisan at the time, opposed the control of north-sea fisheries alone, and argued that all ocean fisheries should be integrated. Yusaku Nishimura, himself a Managing Director, agreed with Ino's view. At this time, then, Hiroya Ino had already conceived the idea of integrating all ocean fisheries. However, the fractious relationship between the fishery companies and the government, not to mention differences in the various companies' plans, also surfaced at the same time.

Discussions on the control of ocean fisheries in 1941 also looked likely to follow the same pattern. That is, discord between the government and the fishery companies was combined with uncertainty among the fishery companies to make the situation even more complicated.

In the face of opposition from the Fisheries Control Preparation Committee, Agriculture Minister Ino invited three of the Committee's members—Kenkichi Ueki, Tsunejiro Hiratsuka and Kenkichi Nakabe—to his official residence for informal talks. His intention was to have a cozy chat with the principal members of the Committee in which he would persuade them to accept the government's proposal. But the respective positions remained entrenched; the three resolutely insisted on the proposal of establishing a control association above the existing companies. Agriculture Minister Ino took the diametrically opposed view, and declared his readiness to force the establishment of a national enterprise through corporate amalgamation, even if the private sector refused to cooperate. Neither side yielded ground, and the fractious

relationship merely became clearer. Realizing the limits of cross-sector negotiation, Ino concluded that the Ministry of Agriculture and Forestry would have to unilaterally draw up its own concrete proposal for corporate integration.

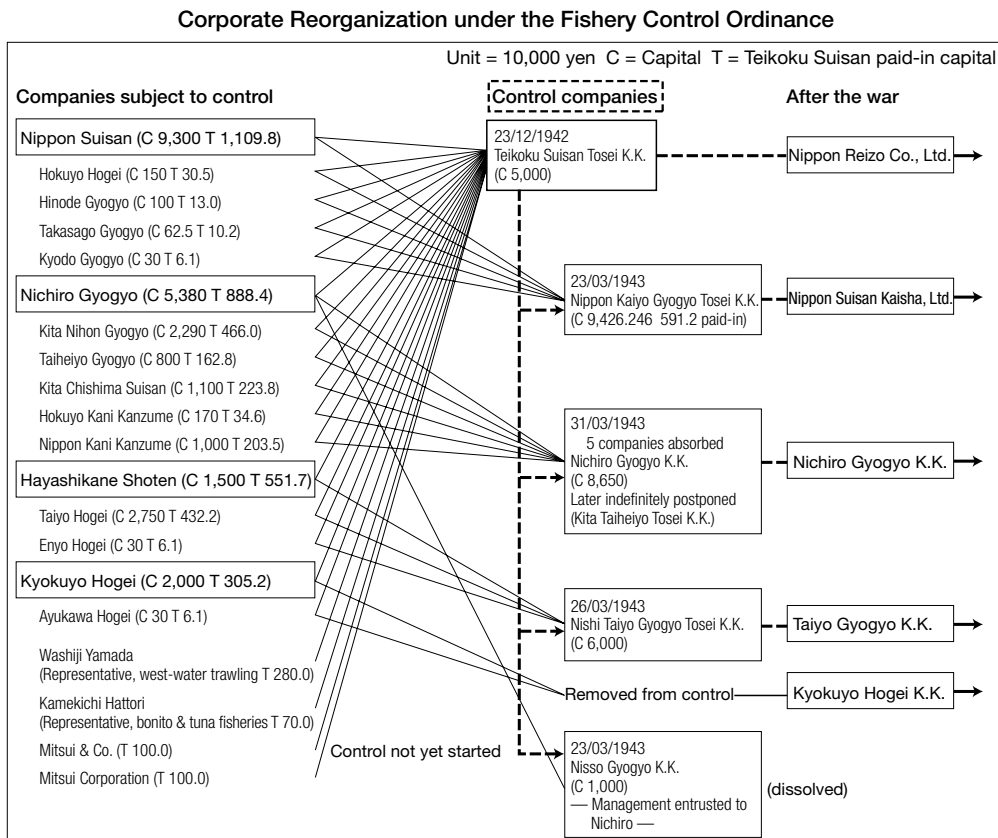
Fishery Control Ordinance Issued, Control Takes Shape

Although the Fishery Control Ordinance was decided by the Cabinet in December 1941, it took another year before the central control body, Teikoku Suisan Tosei K.K. (Teikoku Marine Products Control Company), could be established. This was because Nippon Suisan and other civilian fishery companies had expressed opposition to the government’s proposal for control, and the process of adjusting positions was time-consuming. Considering the histories, business territories and background to market dominance of the three biggest companies—Nippon Suisan, Nichiro Gyogyo and Hayashikane Shoten—it should be no

surprise that the adjustment process had a rocky ride, owing to the uncertainty between them.

The government took a surprisingly long time to draw up a concrete proposal; it was not until the Fishery Control Ordinance was issued in May 1942 that the full content of fishery controls became clear. In fact, the content was more or less exactly the same as the idea extolled by Hiroya Ino from the very beginning. Specifically, Teikoku Suisan Tosei would first be established as the central control body, capitalized with assets (ships, freezing and processing facilities, etc.) from companies connected with ocean fisheries. To achieve planned production, the company would take care of distributing materials for fisheries, processing, storage and sales, as well as finance, research, etc. Next, an ocean fisheries control company under its control would be established through amalgamation of the fishery companies, and the company would engage in actual fishery production by leasing ships from Teikoku Suisan Tosei.

The range of fisheries undertaken by the ocean



Source: 100-Year History of the Japan Fisheries Association

fisheries control company would consist of five types: (1) north-sea fisheries = salmon and trout (mother ships, northern Kuril, Soviet territory) and crab (mother ships, land-based), (2) whaling (mother ships, North Pacific, Antarctic) and coastal whaling, (3) steam trawling, (4) west-water trawling west of 130° east longitude, and (5) bonito and tuna fisheries, together with related ice-making, refrigeration and freezing, and salmon, trout and crab canneries. Although coastal fisheries were excluded, the broad area of control encompassed the north-sea, South Pacific and Antarctic oceans, as well as Korea, Taiwan and Sakhalin. The 16 fishery companies that had previously undertaken these operations would be condensed down to just one. Nevertheless, in terms of capital, the three companies of Nippon Suisan, Nichiro Gyogyo and Hayashikane Shoten accounted for around 90% of the entire capital of the 16 companies, and the government's proposed control would, as it

2. Control of Ocean Fisheries

Internal Division within Nippon Suisan

There was, however, a sharp internal division within Nippon Suisan over the proposal for a single ocean fisheries control company presented by Agriculture Minister Hiroya Ino. On one side was the anti-nationalization faction led by Vice-President Kenkichi Ueki, and on the other, the reform faction led by Executive Director Yusaku Nishimura.

Kenkichi Ueki was completely and utterly opposed to the idea of entrusting fisheries management to the public sector. For he knew very well, from his long years of experience in fisheries, that public intervention in the private sector was very difficult and did not necessarily produce good results. In addition to his reputation, both internally and externally, as the foremost figure in mother ship-type crab fisheries, one of the major mainstays of Nippon Suisan's business, his pride and feelings towards having single-handedly run the company, in essence, since the death

were, signify an amalgamation of these three companies.

By contrast, the proposal tabled by the fishery companies was for all ocean fisheries to be integrated in separate blocks capitalized by Nippon Suisan, Nichiro Gyogyo and Hayashikane Shoten, under the supervision of a control association entrusted with running the entire industry. The point of contention in discussions with the government was whether to amalgamate into a single ocean fisheries control company, or into separate blocks centering on the major fishery companies.

The most hard-line opponent to the government's single company amalgamation proposal was Hayashikane Shoten. Nichiro Gyogyo's opposition was also quite vehement, though not to the extent of Hayashikane Shoten. In other words, Nippon Suisan was the most cooperative of the three.

of Kosuke Kunishi, gave him an element of dislike for government intervention. He consistently stressed his opposition to corporate amalgamation.

Yusaku Nishimura, on the other hand, resonated with Hiroya Ino's conception of a national enterprise, and adopted the stance that reform was necessary. When the earlier north-sea fisheries control proposal had surfaced, Yusaku Nishimura had concurred with Ino's proposal for total control of ocean fisheries, and he maintained that assertion. Nishimura believed that Nippon Suisan depended on the nation for its existence, and that when the nation was fighting a war for its very survival, notions like an individual company's profit or self-preservation were matters of no consequence.

After a fierce debate, Nippon Suisan converged on the reform faction's proposal, itself based on the government's proposal. Although the inclination to oppose corporate amalgamation was deeply rooted, it was a conclusion reached after envisaging all possible

scenarios and taking them all into account.

Conflicting Positions of the Fishery Companies

The other companies continued to be unanimously opposed to Nippon Suisan's stance of advocating the government's proposal. The feeling was that Nippon Suisan was using its capital power and previous track record in a plan to take the other companies under its control. There was even a flurry of speculation that the company was taking advantage of the emergency situation to collude with the government in seizing hegemony.

The large fishery companies, in particular, feared that their supremacy in their own business territories could collapse, and hardened their stance against the government's proposal. Ikujiro Nakabe of Hayashikane Shoten went in person to Agriculture Minister Ino and the authorities to present his view, and even produced a pamphlet calling for a revision of the government's proposal. The smaller companies also went around petitioning the Ministry of Agriculture and Forestry, the Ministry of Finance and the military authorities, as there was a very real possibility of being absorbed by the larger companies.

One reason for the differences of opinion between the companies was that, when the controls started in 1937, the purpose of control was to strengthen the system of food self-sufficiency in Japan, Manchuria and China, but that after the start of the Pacific War in 1941, its scope expanded to the Greater East Asia Co-Prosperity Sphere. As a result, the expectations and roles demanded of fishery operators became geographically wider and more important. But in spite of this, the environment for undertaking fisheries merely worsened as the war situation progressed. It was understandable that the companies would turn to self-preservation under such circumstances.

When the negotiations had run aground, it was Tatsunosuke Takasaki, Vice-President of the Manchurian Industrial Development Company, who set out to broker a deal. Takasaki showed understanding

of the fishery companies' claims, and reached the conclusion that integration in a single company would be difficult. He proposed a plan to Agriculture Minister Ino whereby ocean fisheries control companies should be established for different blocks of major fishery companies, and that, beneath a central fisheries control company, three ocean fisheries control companies centered on Nippon Suisan, Nichiro Gyogyo and Hayashikane Shoten should be established.

To avoid any further delay and confusion, Agriculture Minister Ino accepted this proposed compromise. He then took the opportunity to attempt a centralization of north-sea fisheries, a matter of concern for some time. But Nippon Suisan raised objections. In the end, it was decided that mother ship-type crab fisheries would be separated off, northern Kuril and mother ship-type salmon and trout fisheries would be integrated in Nichiro Gyogyo, and Soviet territory fisheries would be continued separately from the three companies with the establishment of Nisso Gyogyo K.K.

It was in August 1942 that an outline of the control of ocean fisheries took firm shape after all these twists and turns. Teikoku Suisan Tosei, as the central control body, would be established by December 31st that year, and four ocean fisheries control companies—Nippon Kaiyo Gyogyo Tosei K.K. centered on Nippon Suisan, Kita Taiheiyō Gyogyo Tosei K.K. centered on Nichiro Gyogyo, Nishi Taiyō Gyogyo Tosei K.K. centered on Hayashikane Shoten, and Nisso Gyogyo K.K. in charge of Soviet territory fisheries—would be set up by August 1943. Agriculture Minister Ino invited representatives of 16 related companies to his official residence to explain the finally decided proposal, and the companies all pledged their cooperation.

Now, at last, the views of both public and private sectors seemed to be converging on a consensus. But from that point on, further turbulence would arise over the establishment and running of the new companies.

The general appraisal of this process of fishery control was that the government's proposal originally

tabled by Hiroya Ino had been accepted in a watered-down form. In his autobiography “*Moshiogusa*”, Ino looked back over those times, and said he was accused of putting his weight behind Nippon Suisan because he had originally been an employee of Nippon Suisan. But Ino himself by no means considered his own role in arranging the control to have been a failure. His reason for this assertion was that, although the ocean

fisheries control company was eventually divided, his original purpose was fulfilled by the companies being comprehensively united under Teikoku Suisan Tosei. Besides, he explained, the process could not be called a failure because the three big companies all recovered and continued their characteristic businesses after the war, and because Teikoku Suisan Tosei was still continuing its business as Nippon Reizo Co., Ltd.

3. Teikoku Suisan Tosei

Establishment of Teikoku Suisan Tosei

On September 9th, 1942, an order for the establishment of Teikoku Suisan Tosei under the Fishery Control Ordinance was issued to 16 companies—Nippon Suisan, Nichiro Gyogyo, Hayashikane Shoten, Taiheiyo Suisan, Kita Chishima Suisan, Kita Nihon Gyogyo, Taiyo Hogeï, Kyokuyo Hogeï, Hokuyo Hogeï, Ayukawa Hogeï, Enyo Hogeï, Nippon Kani Kanzume, Hokuyo Kani Kanzume, Hinode Gyogyo, Takasago Gyogyo and Kyodo Gyogyo. The Inaugural General Meeting was held in the Nissan Building on December 23rd, and the company’s establishment was registered on the 24th. With this, at long last, Teikoku Suisan Tosei came into being. Its capital was 50 million yen, mainly in the shape of asset financing from the 16 companies. For this, Nippon Suisan supplied its refrigerator ship *Kosei Maru*, Nichiro Gyogyo supplied *Shiina Maru* along with 8 other ships, and Taiyo Hogeï supplied its vessel *Banshu Maru No.7*. All of these were refrigerator ships. Once the capital amount of these assets had been determined by an Asset Financing Evaluation Committee, the shortfall was made up with allocations according to the capital scale of each company.

As capital amounts, Nippon Suisan companies provided 11,696,000 yen, Nichiro Gyogyo 19,791,000 yen and Hayashikane Shoten 9,900,000 yen. Besides these, Mitsubishi Corporation and Mitsui & Co. were each asked to provide 1 million yen as cooperative capital.

On the personnel side, the company’s president was to be former Minister of Agriculture and Forestry Yoriyasu Arima, while other posts were to be filled by personnel from fishery companies and coastal fisheries, the National Federation of Fisheries Cooperative Associations, etc. Senior military personnel were included among the company’s consultant directors. From Nippon Suisan, Yusaku Nishimura was appointed executive director, and Junji Hayashi, Jiro Shirasu and Shoichi Kaneko as directors.

At the time of its launch, the company had a large internal organization consisting of 8 departments and 40 sections, in addition to examination rooms, testing labs and research facilities. With the deterioration of the war situation, however, it was forced to revise its organization, shrinking to 3 departments and 22 sections. Meanwhile, the country was divided into four control regions (west, central, east and north), managed by the executive director and the vice-president.

The regional organization consisted of 8 branches inside Japan and 4 in overseas territories, with branch offices under direct management of the Head Office in 3 locations and 254 factories below these. This was more or less a straight continuation of Nippon Suisan’s organization. But soon, communications would be hampered by air raids, and 10 branch offices were set up beneath the domestic branches to prepare emergency systems. The overseas establishments would also be forced to change their structure as the war situation shifted.

Transfer of Refrigeration Equipment from Nippon Suisan

With the aim of opening for business on April 1st, 1943, Teikoku Suisan Tosei started negotiating with the companies on the purchase of refrigeration plants and the transfer of sales facilities. Normally, this kind of facility would have been requisitioned by the government and the usage rights granted to Teikoku Suisan Tosei, or else transferred from the companies via asset financing. Owing to the difficulty in negotiating the establishment of the national enterprise, however, the remaining adjustment procedures were postponed to a later date.

Teikoku Suisan Tosei and Nippon Suisan came to an agreement that all of the latter's freezing and sales business would be taken over intact by Teikoku Suisan Tosei as of March 31st, 1943. Nippon Suisan transferred 248 factories and 29 sales outlets for a price of 59,058,000 yen. Rather than a cash settlement, the payment would be divided into seven yearly installments in the form of a special debtor's loan.

Hayashikane Shoten initially refused to transfer facilities, on grounds that its refrigeration plants and fisheries formed a single business. After negotiations, it was finally decided that, of its ten refrigeration plants, three in Shimonoseki would be operated directly by Nishi Taiyo Gyogyo, and the other seven would be leased to Teikoku Suisan Tosei on a limited term lease. These seven would be leased back from Teikoku Suisan Tosei and would, in essence, continue to be used exclusively by Hayashikane Shoten. Moreover, Teikoku Suisan Tosei was to make no direct intervention in the sales sector.

As a result, the internal organization of Teikoku Suisan Tosei was based around the facilities transferred from Nippon Suisan. After the war, in December 1945, Teikoku Suisan Tosei would be renamed Nippon Reizo. At this time the refrigeration plants leased from Hayashikane Shoten were immediately returned, but the facilities and ships sold or forcibly provided by Nippon Suisan and Nichiro Gyogyo were not returned,

with a few exceptions.

Teikoku Suisan Tosei Starts Business

On April 1st, 1943, Teikoku Suisan Tosei at last opened for business. As many as 3,582 employees (excluding those working at sea) were transferred from the various companies to Teikoku Suisan Tosei, and the majority of them were from Nippon Suisan.

The Head Office was installed on the 4th floor of the Maru Building in Marunouchi, Kojimachi City, Tokyo, before moving to a building in Minato 3-Chome, Chuo City, in June 1944.

Although Teikoku Suisan Tosei was described as an ordinary limited liability company in its Articles of Incorporation, its original Articles of Organization specified that it would be subject to government supervision and constraints based on the Fishery Control Ordinance. Article 2 of the Articles of Incorporation states that "The purpose of this company shall be to conduct business necessary for comprehensive control of fisheries", identifying it as a private company whose prime significance lay in pursuing profit.

When the company started business on April 1st, the president issued a circular titled "On the Start of Business", setting out the matters agreed with the fishery companies and the basic principles of the company's management. Then, on the 16th, the Head Office staff received their instructions from President Yoriyasu Arima in the Lecture Hall of the Nissan Building. Arima appealed that fish catches should be increased in line with the national economy and national policies, and that, to this end, the employees should disregard the philosophies of their original companies and establish the corporate culture of Teikoku Suisan Tosei in a state of harmony, based on the background to the company's establishment.

By this time, Japan's war situation had already turned to a considerable disadvantage. Japanese forces had suffered a crushing defeat at the Battle of Midway in June 1942, had retreated from Guadalcanal in February 1943 and had been wiped out on Attu Island

in May that year.

Amid these developments, a number of vessels in mid-operation were sunk by enemy fire, and supplies of production commodities like oil, fishing tackle and fishing nets continued to diminish. Output fell sharply. Now, the collection and processing of agricultural, livestock and marine products based around refrigeration plants and coastal fisheries came to play a major role in the food supply. Positive use was made of the refrigeration plant network in collecting and processing agricultural, livestock and other products.

In July 1943, Teikoku Suisan Tosei was designated as a control body for north-sea salt-dried salmon and trout and as a distribution control body for canned marine products (salmon, trout and crab). It was also designated as a central distribution organization for ocean fishery commodities and as a distribution control body for empty cans for canning food. And in the following month, it was designated as a collection body for animal oil and fats (whale oil). To fulfill this series of distribution operations more efficiently, it now stepped up its investment and loan activity.

Teikoku Suisan Tosei was successful in sales of frozen fish, frozen vegetables and frozen meat, etc., particularly in Korea, Manchuria, northern China and central China. These operations had originally been developed by Nippon Suisan, but when Teikoku Suisan Tosei took over, the business content was expanded. The company would take bulk orders for products such as frozen and dried fish from buyers (mainly the military) inside Japan, and would supply them via refrigeration plants around the country. Besides seafood products, it also actively collected and distributed others including frozen meat, frozen vegetables and frozen eggs.

By 1944, however, shipments from within Japan had almost completely ceased. As a result, the company itself undertook fishing operations in Bohai Bay and the Yellow Sea coast, processed the fish catches and thereby maintained the supply of processed marine products. It also promoted the handling of livestock

meat, agricultural processed products and others.

As the food situation became increasingly tight, the need arose to concentrate commodity supplies around the Peking area. Thus, in 1944 the Peking branch was liquidated and the Kahoku Suisan Tosei Kyokai or Association for Control of Northern China Fisheries (later renamed Kahoku Suisan Chikusan Tosei Kyokai) was established. Teikoku Suisan Tosei capitalized the company through asset financing, and at the same time sent its employees on secondment.

Teikoku Suisan Tosei newly developed business in southern regions, which played a pivotal role in military terms. Japan was making aggressive moves towards the south, and ensuring a reliable supply of food to the area was an important duty in which failure would not be tolerated.

Although it was relatively easy to procure rice in Japanese-occupied Malaya and Java, sources of animal protein were harder to obtain. Another challenge was to strengthen the system of stockpiling by refrigeration plants.

The military commissioned all of these operations from Teikoku Suisan Tosei. Specifically, the request was that Teikoku Suisan Tosei would undertake all of the work of delivering marine products and other foods in the southern military administrative region to the military. The management of refrigeration plants, canning factories and other onshore facilities owned by Nippon Suisan and Hayashikane Shoten would be transferred to Teikoku Suisan Tosei from April 1st, 1943 onwards, and Teikoku Suisan Tosei would use these facilities to run its own ice-making, refrigeration and freezing business.

To meet the request from the military, Teikoku Suisan Tosei established branches and branch offices as appropriate in various locations, and as well as operating refrigeration plants, it also took care of operating ice-making factories, fish farms, marine product processing plants, and agar factories, among others.

4. From Nippon Suisan to “Nippon Kaiyo Gyogyo Tosei”

Establishment of Nippon Kaiyo Gyogyo Tosei

Nippon Suisan and its subsidiaries Hinode Gyogyo, Kyodo Gyogyo, Hokuyo Hogeï and Takasago Gyogyo were now ordered to form a new company called “Nippon Kaiyo Gyogyo Tosei K.K.” by the end of August 1943. A committee was quickly formed to prepare for the establishment. The committee was chaired by Keizo Tamura, with Kenkichi Ueki as vice-chairman, and Tatsusaburo Shibuya, Yusaku Nishimura, Rokuro Masui, Fumio Matsuo, Susumu Masui and Shizuo Minoda as members.

On December 29th, 1942, Nippon Suisan held an Extraordinary General Meeting of Shareholders in advance of the establishment of Nippon Kaiyo Gyogyo Tosei, due in the following year. Documents prepared by the Establishment Committee concerning the establishment of the company were presented and approved by the Meeting. According to these documents, the shares of capital in the new company would be 93 million yen from Nippon Suisan, 222,000 yen from Hokuyo Hogeï, 640,000 yen from Hinode Gyogyo and 400,000 yen from Takasago Gyogyo. Because Nippon Suisan held all of Kyodo Gyogyo’s shares, Kyodo Gyogyo’s share of capitalization in the merger was zero.

On March 27th, 1943, Nippon Kaiyo Gyogyo Tosei held an Inaugural General Meeting of Shareholders, and on the 31st, the company’s registration was complete. Keizo Tamura was elected president and Kenkichi Ueki vice-president. The capital was 94,262,000 yen.

Nippon Kaiyo Gyogyo Tosei took over all of Nippon Suisan’s business, including mother ship-type crab business, mother ship-type whaling, steamship whaling, steam trawler business and west-water two boats trawling business. It also took over 10 trawlers, 6 hand trawl vessels, 3 transport ships, whaling equipment and others from the other four companies. However, Antarctic whaling had already been sus-

pending in 1941, while the mother ship-type crab business was made idle in 1943.

All land-based facilities and plants, ice-making, refrigeration and freezing business, together with sales business, had been transferred to Teikoku Suisan Tosei, and now all ocean fishery business was taken over by Nippon Kaiyo Gyogyo Tosei. From that time on, Nippon Kaiyo Gyogyo Tosei sold fish and products to Teikoku Suisan Tosei, which controlled the distribution of marine products.

Keizo Tamura said that the change from “Nippon Suisan” to “Nippon Kaiyo Gyogyo Tosei” was not merely a change of company name or organization; rather, it signified a change from a profit-making company oriented towards its shareholders, to one oriented towards the state. In that case, he said, since Nippon Suisan had always conducted its business with orientation towards the state under the company motto of “Serving the Nation with Food”, the fact that Nippon Suisan had now been transformed to a company based on the Fishery Control Ordinance should arguably mean that it had become a national enterprise in both name and substance. He went on to say that the company should be aware of its serious mission as a national enterprise, a quasi-state organ, and should perform its business in line with state objectives while remaining in accordance with national policy.

Although Nippon Kaiyo Gyogyo Tosei had been established by Nippon Suisan absorbing the other four companies and increasing its capital by 1,262,000 yen to 94,262,000 yen, most of the ships it acquired had been requisitioned by the navy, and its assets nearly all existed on paper only. The only actual contribution to increased productivity came in the form of three trawlers and four hand trawl ships. Other business that could be continued was limited to steamship whaling with bases inside Japan, in Korea and Sakhalin, north-sea fisheries centering on Kamchatka, and west-water otter and two boats trawling in the East China Sea and the Yellow Sea. Nippon Kaiyo Gyogyo Tosei

took its first step as a company amid this harsh business environment.

In February 1944, based on the Company Control Ordinance, Nippon Kaiyo Gyogyo Tosei along with more than ten other companies established Minami Nippon Gyogyo Tosei K.K. based in its Taiwan Sales Office, with capital of 50 million yen and 57% of its shares owned by Nippon Kaiyo Gyogyo Tosei. Nippon Kaiyo Gyogyo Tosei provided asset financing in the form of 43 fishing boats and 17 ice-making and refrigeration plants under the management of the Taiwan Sales Office, as well as onshore facilities and associated rights. The Head Office was established in Taipei, with branches, branch offices, factories and other facilities distributed throughout Taiwan; others were set up in Guangdong, Hong Kong, Shantou, Hainan, Haiphong, Timor, Okinawa and elsewhere. The company engaged in a wide range of operations, including west-water trawling, ice-making, refrigeration and freezing, and sales.

Other Control Companies and Control of Coastal Fisheries

Preparations for establishing the other three control companies besides Nippon Kaiyo Gyogyo Tosei now went ahead, in line with the Fishery Control Ordinance. In some cases, the original plans were significantly changed before they came to fruition.

In March 1943, Hayashikane Shoten with Taiyo Hoge and Enyo Hoge established Nishi Taiyo Gyogyo Tosei K.K., capitalized at 60 million yen. The company would be engaged in mother ship-type whaling, steamship whaling, trawling and west-water two boats trawling.

Meanwhile, Nichiro Gyogyo and five other companies were ordered to establish Kita Taiheiyō Gyogyo Tosei K.K. However, Nichiro Gyogyo was desperate to avoid coming under the Fishery Control Ordinance at any cost. It decided that it would first merge all six companies into Nichiro Gyogyo as a parent company, based on the Corporate Liquidation Ordinance, in

which guise they would become the control company. It also planned to obstruct its assets and fishing zones in Soviet territory fisheries from moving to the control company. Its assertion here was that separate diplomatic negotiations would be needed to change the registered ownership, and that it would be disadvantageous to Japan–Soviet relations if the “Nichiro” (= Japan–Russian) part of its name ceased to exist. Nichiro Gyogyo carried out further mergers, etc., at the end of July, taking control of all north-sea operations except mother ship-type crab fisheries. Consequently, the establishment of the control company, scheduled for the end of August, was postponed indefinitely, and the name of Nichiro Gyogyo was to remain unchanged.

Nichiro Gyogyo and two other companies were then ordered to establish Nisso Gyogyo K.K., mainly for Soviet territory fisheries, which they duly did in March 1943 with capital of 10 million yen. However, this was nothing more than a paper company, and in reality Nichiro Gyogyo remained in control of Soviet territory fisheries.

Thus, a system for fish catches and production was completed with the various control companies set up around the core of the three giants of ocean fisheries.

Now the government embarked on the control of coastal fisheries, as distinct from that of ocean fisheries. At the same time as promoting the control of ocean fisheries, Agriculture Minister Hiroya Ino moved to propose the integration of coastal organizations. The Fisheries Organization Act was promulgated in March 1943, and based on this, the Central Fisheries Association was established in September that year. The Association took over all the business of the National Federation of Fisheries Cooperative Associations, as well as its claims, debts, rights and obligations, and was established with capital from 44 organizations. The Central Fisheries Association successively absorbed control companies for fisheries-related commodities and fishery products, and was to rule as the controlling organization for coastal

fisheries.

The Central Fisheries Association guided and promoted production, as well as vigorously controlling products and the distribution of commodities. However, the commodity distribution performance in fiscal 1944 was only a third of the planned figure, while the trading performance fell as much as 100 million yen short of the target of 267 million yen. A decrease in requisitioned vessels combined with a weakening of the workforce and material supplies led to a fall in fisheries output.

No matter how many attempts were made to forcibly apply controls, the business environment still grew increasingly harsh with changes in the war situation, and this had a direct impact on fish catch performances.

Management of Nippon Kaiyo Gyogyo Tosei in the Closing Stages of the War

As the likelihood of Japan's defeat grew stronger with each passing day, Japanese ships were being sunk everywhere, while air raids and bombing were making the seas around Japan increasingly dangerous. Fisheries were not spared the ravages of war, with fishing operations in Japanese waters out of control by 1944; by 1945, even going out in surfboats was life-endangering.

Nevertheless, Nippon Kaiyo Gyogyo Tosei stoically pushed on under the banner of "Serving the Nation with Food". Though greatly depleted, it continued its west-water fisheries, steamship whaling and north-sea fisheries along the coasts of Hokkaido. And although fish catches fell from 39,572 tons in 1943 to 29,399 tons in 1944 and 9,821 tons in 1945, a shareholder dividend of 10% was resolutely maintained each term until the end of the war.

A total of 154 Nippon Kaiyo Gyogyo Tosei vessels

with a gross tonnage of 134,920 tons were sunk, captured or seized during the war years from 1941 to 1945. Of the requisitioned vessels, the *Tonan Maru* (used in support of Antarctic whaling) was sunk off Indochina in November 1943, followed by the *Tonan Maru III* off Truk Island the following February and the *Tonan Maru II* in the South China Sea in August. Besides these, the mother ship *Kasato Maru* and 55 trawlers including *Ryokai Maru* and *Suruga Maru* all failed to return. The only vessels that were not requisitioned and survived were antiquated whaling ships, trawlers and west-water trawlers.

Altogether, 681 employees are known to have lost their lives in the war.

In 1943, fearful of American air raids, Kenkichi Ueki proposed that the Head Office be evacuated to Shinshu in central Japan. Most of the management team unquestioningly believed in Japan's supremacy, however, and Ueki's proposal was rejected. In May 1944, the Nissan Building, which housed the Head Office of Nippon Kaiyo Gyogyo Tosei, was commandeered by the Imperial navy, and the company's Head Office was relocated to the Hokuryu Building in Maki-cho, Kyobashi City, Tokyo. Ueki again urged that, at the very least, part of the Accounting Department and the Shares Section should be evacuated in preparation for emergencies. As a result, the accounting documents and share certificates were moved to Nikko and Karuizawa in September that year. In May 1945, the Head Office was destroyed in an air raid, and a temporary office was set up in Shimo-Takaido, Sugunami City, Tokyo. Only the part of the Accounting Department and the Shares Section that had been evacuated the previous year, along with the Whaling Division and the Ship Division that had been relocated that December, were spared destruction in the raid.

Part 1 War Damage and Food Crisis

The End of the War and the Ensuing Food Crisis

On August 14th, 1945, the Japanese government accepted the terms of the Potsdam Declaration. The following day, Emperor Hirohito announced Japan's unconditional surrender. The war was over.

The war had brought disastrous consequences to the Japanese economy. Enemy air raids had reduced not only large cities but also many smaller provincial cities to piles of rubble. The physical damage wrought on facilities, housing and other infrastructure was estimated at 65.3 billion yen, excluding the loss of weapon-related property. If the war had never taken place, the gross national wealth should have grown from an index of 100 in 1935 to 135 in 1945, but had in fact stopped at 101. This meant that a full 25% of the nation's wealth was lost in the war (Shiro Yamazaki, *Nihon Keizaishi* "History of the Japanese Economy", New Edition).

While defeat in the war brought the production of military supplies to a complete halt, the increased issue of Japanese banknotes to pay for extraordinary military expenditure, etc., led to spiraling inflation in Japan. Although the transition from military demand production to civilian demand production advanced at a rapid pace, the work was slow to progress because civilian demand production had been reduced to a minimum during the war. Moreover, the necessary commodities were in severe shortage, and the recovery of production was hampered by tremendous difficulties.

Shortages of food and everyday requisites had a hugely damaging effect on people's lives. The General

Headquarters of the Supreme Commander for the Allied Powers (GHQ) promoted the production of daily requisites, but the recovery of civilian demand production did not proceed as smoothly as had been expected. Although GHQ had banned import and export activity in September, soon imports of the minimum requirement of daily commodities were permitted.

Food shortages had a particularly severe impact on people's lives. The causes of this serious food crisis were a shortage of minimum requisites and deficiencies in food control immediately after the end of the war. No reliance could be placed on imports, moreover, as there was a worldwide food shortage, and a breakthrough was not easy to find.

No food was being distributed in urban areas, placing them in a harsh situation. The Engel's coefficient (ratio of food expenditure to general consumer expenditure) of workers before the war was in the mid-30% range, but after the war it climbed up to about 70% among workers in urban areas. Late or failed deliveries were commonplace. This encouraged black market trading, causing massive inflation of food prices.

It was in fiscal 1948 that domestic food production recovered. Then, when worldwide food production turned upwards and imports increased, Japan's food crisis gradually subsided. Not only did the disparity in the food situation between urban and rural areas shrink, but late deliveries also became a thing of the past. Nevertheless, although the total supply of staple foods at last showed signs of a recovery, qualitative sufficiency was still a long way off; it would still be several more years before the calorie supply would

return to prewar levels.

War Damage to Fisheries

The Pacific War also left deep scars on Japanese fisheries. The damage incurred by fisheries lay in the loss of processing, ice-making, refrigeration and other onshore facilities, fishing boats and fuel, and fishing grounds.

During the war, Japan's worsening situation had led to damage that vastly outstripped the number of vessels built. And as the shortage of ships became acute, the military started to requisition many of the remaining civilian vessels for transporting troops or military supplies. This soon came to include fishing boats, large vessels being used for military supplies and troop transport, and bottom trawlers as minesweepers. By October 1944, a total of 1,700 fishing boats weighing 330,000 tons had been requisitioned (Hiroshi Tanaka, "Compendium of Principal Japanese Industries, New Edition: Fisheries—Taiyo Gyogyo"). If we include fishing boats wrecked or sunk due to direct damage from air raids, 20% of all fishing boats and 50% of the gross tonnage were lost.

Meanwhile, the heavy oil used as fuel for fishing boats fell into short supply, as did cotton, Manila hemp and other materials for fisheries. Taking the prewar level as an index of 100, by 1944 these had fallen to 6.26, 1.56 and 13.3, respectively.

The damage to processing, refrigeration and other

onshore facilities was also considerable. Ice-making, refrigeration, freezing and ice storage facilities were targeted by strategic bombing, and the damage rate due to the war in 1943 was 46% for ice-making, 44% for refrigeration, 30% for freezing and 46% for ice storage. In 1946, the year after the war ended, the number of ice-making facilities had decreased from 999 in 1940 to 520, and ice-making capacity (tons per day) had fallen to around 48.8%.

Teikoku Suisan Tosei, which had taken over nearly all of the land-based assets previously owned by Nippon Suisan, lost 42% of the equipment capacity in its domestic refrigeration plants due to war damage.

The loss of fishing grounds was also severe, nearly all international fishing grounds developed by Japanese fishery companies before the war being now inoperable. Lost fishing grounds extended over a very wide area, including the coast of the Soviet territory Primoriye, the east and west coasts of the Kamchatka Peninsula, the Sea of Okhotsk, the Bering Sea, the Sakhalin coast, the Japan Sea, the East China Sea, the Yellow Sea, the Bohai Sea, the coast of Taiwan, the Gulf of Tonkin, sea areas from the Philippines to Micronesia, off the northwest coast of Australia, off French Indochina, and from the Gulf of Siam to the Indian Ocean. The total area of these lost fishing grounds extended to 78,947 square miles, from which the gross output was 384,326 tons.

Part 2 The GHQ Occupation Policy and Fisheries

1. Dissolution of *Zaibatsu*, Agrarian Reform, Labor Reform

Dissolution of *Zaibatsu* and Promotion of Democracy Through Public Office Purges

Economic reforms by GHQ had a huge impact on the Japanese economy after the war. The GHQ reforms consisted of three major elements: dissolution of the

zaibatsu, agrarian reform and labor reform.

The dissolution of the *zaibatsu* was implemented under the perception that the *zaibatsu* were linked to the military and had contributed to the adoption of militarism in Japan. In November 1945, GHQ ordered the dissolution of holding companies and decided to

close the Head Offices of the big four *zaibatsu* (Mitsui, Mitsubishi, Sumitomo and Yasuda), establish a Holding Companies Liquidation Committee, and prohibit the sale of assets by the Head Offices and *zaibatsu* family members. In line with this, the Head Office general management functions of the big four *zaibatsu* were terminated, and *zaibatsu* family members and Head Office directors were made to stand down.

The scope of dissolution was now widened, and under the Holding Companies Liquidation Committee Order issued in April 1946, a total of 83 companies including the Head Offices of smaller *zaibatsu* besides those of the big four *zaibatsu*, as well as other functioning companies having the nature of a holding company, were designated as holding companies and were either liquidated or their shareholdings disposed of. With this, Nissan (Aikawa), Furukawa, Asano, Okura, Nomura and others that had formed corporate groups lost their dominance. Direct subsidiaries of the big three *zaibatsu* (Mitsui, Mitsubishi and Sumitomo) and giant corporations such as Nissan (Aikawa) were also targeted by the dissolution policy. Further steps were taken, such as the abolition of monopoly laws, elimination of monopolies, and elimination of inter-company share ownerships, and with these the dissolution of the *zaibatsu* became more wide-reaching.

The dissolution of the *zaibatsu* also targeted power vested in individuals. Altogether, 56 individuals in 10 *zaibatsu* designated as *zaibatsu* families (Mitsui, Mitsubishi, Sumitomo, Yasuda, Nissan, Okura, Furukawa, Asano, Fuji and Nomura) were forced to stand down, and interlocking directorships among subsidiaries were prohibited.

To achieve a permanent end to militarism as demanded by the Potsdam Declaration, GHQ issued orders for a purge of public officials in January 1946. Public office purges started with war criminals and professional soldiers, but also extended to politicians and others. In January 1947, the purge of undesirables from public office was revised, with the scope now

broadened to target people who had been engaged in the economy and media at central level, as well as leaders at local level. This included some of the top businessmen of the day, while the purge also targeted the officers and auditors of monopoly corporations and companies deemed to fall under excessive concentration of economic power. As a result, more than 2,000 business leaders were purged, including the entire management of Nippon Suisan. The reinstatement of anyone connected with the *zaibatsu* was then made impossible by their elimination from economic positions in June that year, followed by the enactment of the Law for the Termination of Zaibatsu Family Control in January 1948.

In November 1945, the Japanese government issued the Restricted Companies Ordinance to increase the rigor of *zaibatsu* dissolution. This was designed to control attempts to evade dissolution by preventing companies targeted for dissolution from carrying out demergers for their own convenience. On being designated as restricted companies, they required the permission of the Minister of Finance for sales or gifts of movable property, real estate, securities, etc., or other acts giving rise to the transfer of rights, and borrowing of capital, receipts of deposit repayments, or other similar acts, thus vastly restricting their corporate activity.

Agrarian Reform, Labor Reform and Labor Disputes, Deconcentration Policy

Agrarian reform was imposed by forcing landowners to sell off tenant farmland and at the same time promoting cash payment of tenant farm rents. Tenant farmland purchased by the government was then sold to tenant farmers at reasonable prices. This brought the ratio of tenant farmland to the total farmland area down to 9.9% from 45.9% before reform. At the same time, it dismantled the landowning class, empowered small farmers and increased farm household incomes.

The main aims of the labor reforms were to activate

labor unions and the middle classes while reducing the influence of *zaibatsu* and other large corporations, and to prevent “social dumping” by raising wages. Another intention was that increased worker incomes would stoke domestic demand and prevent military expansion due an improved balance of payments.

The enactment of the Trade Union Law in December 1945 sparked a rash of labor disputes all over the country. The Labor Division of GHQ’s Economic and Scientific Section (ESS), concerned over this increased activity, prepared a new draft of the Law, as a result of which the Labor Relations Adjustment Act, mainly designed to prevent and resolve labor disputes, became law in September 1946.

Before this, in May 1946, the labor unions had demanded the creation of a Labor Protection Act. In response, the Labor Protection Division of the Ministry of Health & Welfare drafted a Bill, and in April 1947 the Labor Standards Act came into being.

The spate of labor disputes following the enactment of the Trade Union Law came against a background of consumer anxiety due to food shortages, growing inflation, labor uncertainty and other social problems.

A common form of dispute at the time was that of a struggle for control of production. This was a means of waging a conflict whereby the workers themselves would attempt to wrest control of the sites of production. It came with a large number of demands, including control of personnel administration, participation in management, and creation of management councils. These struggles for control of production were highly effective, and management councils were created in numerous companies in line with labor agreements concluded from summer 1946 onwards. Management councils were bodies for joint decision-making based on discussion between labor and management. When discussions failed to bear fruit, collective bargaining was implemented. Although the matters discussed mainly concerned labor conditions, they sometimes

also extended to management principles, personnel, production plans and other wide-reaching management issues.

The method of labor-management discussion through management councils came to an end with the progressive rationalization of management triggered by the “Dodge Line” in March 1949. In May 1949, the Trade Union Law was amended to prohibit automatic extensions of labor agreements. Matters related to management rights were placed outside the scope of collective bargaining, and the involvement of unions in personnel administration was diluted. The function of management participation through management councils was also lost, and they became simple discussion and consultation bodies. This resulted in the abolition of management councils in many companies, and a switch to production councils or labor councils was promoted.

An important mainstay of postwar reform by GHQ was the elimination of large monopoly corporations and the creation of competitive markets.

In April 1947, the Antimonopoly Act was enacted to maintain the effects of dissolution of the *zaibatsu*. It was a more rigorous version of the U.S. Antitrust Law, and prohibited cartel and trust activity by limiting private monopolies and unfair trade, banning unfair competitive practices, and so on. It also forbade holding companies and share ownership by operating companies, and made it impossible to form business combines.

The scope of the deconcentration policy gradually widened, extending from the *zaibatsu* to other large corporations. In May 1946, GHQ decided to demand war reparations of 15 billion yen. The Special Measures Act for War Reparations was enacted in November 1946, leading to losses of 91.3 billion yen, mainly in the military supply industries. As measures to bail out companies that had been brought to the verge of bankruptcy by these reparations, the Enterprise Reorganization Act and the Financial Institutions’ Reconstruction and Readjustment Act were enacted in October 1946. The main thrust of these two

reconstruction laws lay in calculating special losses associated with war reparations and special losses to deal with losses arising after defeat in the war, and implementing reorganization plans to establish future business infrastructure; they were originally intended to rescue companies. As standards for applying the Enterprise Reorganization Act, the Antitrust and Cartel Division of ESS cited the abolition of Head Office structures, regional decentralization of large corporations, separation of unaffiliated businesses, and dismantling of vertical and horizontal connections. As a result, many companies started to split themselves voluntarily. In other words, the two reconstruction laws, while ostensibly designed for company bailouts, were used as a measure for company splits. Furthermore, in December 1947, GHQ promulgated

and enforced the Economic Deconcentration Law, making 325 companies subject to the deconcentration policy.

Eventually, as the Cold War took hold, America changed its policy towards Japan. The focus shifted from a demilitarization policy to one of economic reconstruction, and the deconcentration policy took a back seat. Based on a judgement that the Economic Deconcentration Law was delaying the reconstruction of the Japanese economy, financial institutions were removed from the scope of application under the Economic Deconcentration Law, and designation removal procedures were put in motion to bring the number of targeted companies down to 20 or less. In the end, the Economic Deconcentration Law only applied to 18 companies.

2. Postwar Control of Marine Products

Abolition of the Fishery Control Ordinance and the Impact of Renewed Control

The “Law for the Abolition of the National Mobilization Law and the Wartime Emergency Measures Act” was promulgated on December 20th, 1945. As well as abolishing the National Mobilization Law, this also abolished, annulled or revoked a number of laws, ordinances and edicts in connection with wartime control. This marked the end of the foundation upon which the wartime regime had been formed across the country.

When supplies dried up due to food shortages after the war, significant volumes of fresh foods came to be traded on the black market. The central wholesale market authorities, concerned over the worsening situation, asked the Japanese government to abolish controls at the earliest possible juncture. As well as a request to halt the rampancy of black marketeers, this also embodied hopes for an increased intake of stocks. In response, the Japanese government presented GHQ with a proposal to abolish the wartime regime, and in September 1945, as a transitional measure for abolition

of the Fishery Control Ordinance, it was decided that measures would be taken to improve the efficiency of marine product distribution. The fact that moves to abolish the Control Ordinance were set in motion only one month after the end of the war signaled an intention to break through the food crisis as soon as possible through the strength of private business. Among the specific details were that the names of the fishery companies would be changed and they would be made limited companies based on the Commercial Code; sales of marine products would be undertaken via shipment control associations in the respective source areas; and the distribution of commodities, coordination of labor, and communication and collaboration between the companies would be carried out by setting up organizations. This sparked a sharp increase in buying at source and spurred inflation of black market prices, which were already above the official prices.

This situation was unacceptable to GHQ, which moved to reimpose controls in a bid to stabilize public order. On April 1st, 1946, the Marine Products Control Order came into force, bringing marine

products under central control once more. However, the official prices were unrealistically low, exposing the business of fishery companies to a harsh environment. The only sector to scrape a meager profit was east-water trawling; the rest all fell into deficit. Losses were particularly severe in trawling and west-water trawling. According to an announcement by the Deep-Sea Trawling Association at the time, for fishery companies to remain healthy, prices in trawl fisheries needed to be about 1.7 times and those in west-water trawling about twice the official prices.

Easing and Abolition of Postwar Control

Restrictions on marine products were gradually eased as the Japanese economy recovered. The Ashida Cabinet formed in March 1948 changed restrictions on the distribution of fresh fish and shellfish to restrictions on the distribution of fresh marine products in July, and removed high-grade fish from the targets of control. This was based a judgment that, since the consumption of high-grade fish was limited in volume, it would have little direct impact.

Restrictions on other foods were gradually abolished from around 1949 onwards. Output volumes of marine products at last showed signs of increasing, and in October 1949, the government amended the restrictions on distribution of fresh and processed marine products and eased controls on marine products. With this, products with good freshness and quality become available for distribution as rationed goods, and free competition was permitted within the controls, including goods for ordinary distribution and non-controlled goods.

However, as marine products were still being traded at prices higher than the official prices, it would still take time before controls could be completely abolished. One factor that delayed abolition was that inflation of fishery producers' prices was expected to result when imported commodity subsidies were stopped.

By 1950, prices of marine products had fallen to a level below that of the official prices. That April, controls on the distribution and prices of marine products were abolished. They were the last of all fresh foods to reach this point.

Part 3 Resumption of Fisheries

1. Establishment of the MacArthur Line and Permission for Shipbuilding

GHQ Policy on Fisheries

The main aim of GHQ policy in the early stages of the occupation was to demilitarize Japan and establish democracy; reconstructing and sustaining the Japanese economy were of secondary importance. Nevertheless, preventing famine, disease and social unrest due to food shortages were also important tasks. To this end, measures taken for fisheries were aimed at promoting the reconstruction and modernization of fisheries while taking steps to protect marine resources, so that the people of Japan could receive an adequate supply of food.

As well as increasing output, GHQ positively promoted measures and guidance on conserving and managing marine resources. Nippon Suisan had until then been engaged in voluntary regulation of crab fish catches, while some other fishery companies had also operated with consideration for marine resources. Nevertheless, there was a low awareness of conserving resources in the fisheries industry as a whole. GHQ took the view that this kind of approach by the Japanese fisheries industry was causing a sense of distrust among other countries, and thus gave guidance to various experts and other important people related to fisheries.

Establishment of the MacArthur Line

After Japan's formal surrender aboard the USS *Missouri* on September 2nd, 1945, navigation by Japanese vessels was forbidden, making operations by fishing boats impossible.

This unduly extreme regulation was merely a short-term military measure, however; on September 14th, wooden ships were permitted to navigate within 12 nautical miles (about 22 km) from shore. This did not mean, however, that ships could navigate freely within the permitted range, as each individual voyage had to be cleared by SCAJAP (Shipping Control Authority for Japanese Merchant Marine). Although fishing could now resume, this served as a major obstacle to Japanese fisheries.

No ships were allowed to use guns with barrels of 2 inches (about 5cm) or more, creating a problem for coastal whaling, where whaling guns with 1-meter barrels were used. Eventually, it was judged that "whaling guns have no rifling grooves and therefore cannot be said to have a barrel as such", and whaling guns were thus exempted from the ruling.

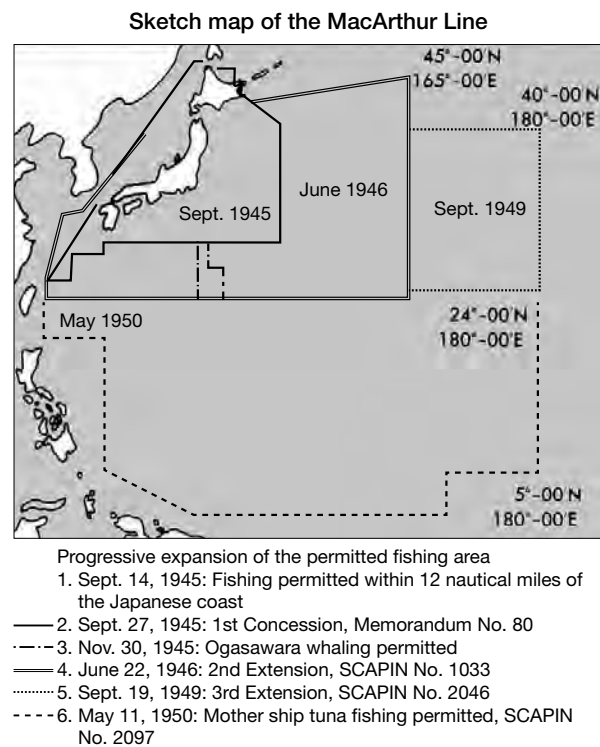
These constraints were somewhat eased by the first concession presented by the "MacArthur Line" on September 17th, 1945. The purpose of the MacArthur Line was to expand the fishable area available to Japan while eliminating the cumbersome procedures applied until then. Provided a fishing permit was obtained in advance, vessels could now operate within an area of just over 630,000 square nautical miles without having to be cleared each time.

The fishing area initially permitted by the MacArthur Line was defined by a northernmost point at 45°30' north latitude near Cape Nosappu in Hokkaido, a southernmost point at 26° north running south of Okinawa, and an easternmost point at 123° east longitude. This made it possible to fish in most areas within three nautical miles of the coasts of Japan, including Hokkaido.

Although the restrictions had been vastly eased, there were still many problems; for example, there

were good fishing grounds outside the Line in the Yellow Sea, while there were some places that obstructed navigation by fishing boats. Fishery operators gradually became frustrated with the narrow range of fishing grounds, and requested, via the Japanese government, that the Line be expanded. The naval authority in the U.S. Department of state, the body in charge of deciding policy on Japanese fisheries at the time, accepted the request in a bid to solve Japan's food shortage. As a result, the fishing area gradually expanded until the Line was finally abolished in 1952.

The expansion of fishing grounds under the first concession was designed to eliminate obstructions to navigation in the La Pérouse Strait and Nemuro Strait, and was carried out in September 1945. This made operations along the Hokkaido coast possible, and fisheries output increased slightly. As the food shortage was still not resolved, the Japanese government petitioned GHQ to expand the fishing area as far as the Yellow Sea and the East China Sea. The request was turned down, however, as the areas in question adjoined Chinese and Soviet territorial waters and therefore posed a security problem, and because



Japanese fishing fleets had not completely exhausted marine resources in the existing area of operation.

In September 1945, whaling operations in the Ogasawara Islands were permitted between December 1st that year and March 31st, 1946.

The second expansion came in June 1946. Japanese fishing boats were quickly increasing in number at around this time, and fish catches inside the permitted area had become limited. Meanwhile, tuna fishing boats, trawlers and other such vessels were not suited to operating in fishing grounds inside the Line, and were being forced to operate inefficiently. Moreover, animal protein intake among the Japanese people remained seriously deficient. In view of this, fishing grounds were newly added in eastern and western waters, and the operational area was expanded to about double the size. But even now, west-water trawling and bottom trawl grounds were still too constricted, and the majority of promising fishing grounds for trawling and bottom trawl fisheries in the East China Sea, the Yellow Sea and elsewhere remained outside the operational area.

In September 1949, the third fishing ground expansion was carried out. At the time, there was ongoing debate in the U.S.A. as to whether American taxpayers should bear the cost of occupying Japan. Marine products imported into Japan were first bought up by the American government and then redistributed inside Japan, and GHQ, thinking it imperative to increase Japan's food self-sufficiency, expanded the operational area for fisheries. The area expanded greatly eastwards, and at latitudes south of 40° north, operations became possible up to 180° east longitude.

The fourth expansion took place in May 1950. Tuna operations in the East China Sea, permitted in the 2nd expansion, had resulted in overfishing, and as a measure to prevent this, the Japanese government had limited fishery activity that year. As this would lead to a supply deficiency, the operational area was then extended to the Equator and operations by mother ship-type tuna fishing boats were permitted. And although these concessions were accompanied by

numerous constraints—including a requirement to fly markings, submit fishing logs, be accompanied by government and GHQ monitors, etc.—with this, Japanese tuna fisheries could now reach as far as the Equator.

With each passing year, operational waters within the MacArthur Line were steadily expanded, and operations were permitted in view of the food situation inside Japan. Although the MacArthur Line helped Japanese fisheries output to recover to a certain extent, it also undeniably restricted free fishing activity by Japanese fisheries for around seven years until it was abolished in 1952.

GHQ Permits Shipbuilding

Japanese fisheries had lost countless ships during the war, and reconstruction depended on building new fishing boats. In December 1945, the Japanese Cabinet decided on a plan to build wooden ships totaling 120,000 tons and steel ships totaling 210,000 tons, and submitted a request to GHQ. GHQ took a positive view and granted the request.

The specific plan was, first of all, to build 795 ships weighing 95,172 tons in three stages over the course of 1946. West-water trawling boats accounted for 73% of the total in the first stage, while in stages two and three, bonito and tuna fishing boats were most numerous with 64%. The majority of applicants in the first and second stages were major fishery companies, but many smaller companies and individual shipowners were included in the third stage.

The company that built most vessels at this time was Taiyo Gyogyo. It had been given permission for a total of 209 ships, accounting for around 26% of the total number built. Following this were Kawanami Kogyo K.K. with 77 ships and Marutoku Taiyo Gyogyo K.K. with 70. Of these, Nippon Suisan would later absorb the Kawanami Kogyo Fisheries Department as a measure to secure vessels.

In the spring of 1947, fishery operators asked GHQ to permit a fourth stage of shipbuilding. The numbers

requested were 135 bonito and tuna fishing boats, 58 west-water trawling boats and 22 transport ships, totaling 215 ships in all. Most of these had already had budgets and materials allocated on the assumption that permission would be given; construction work had already started in some cases.

However, the company's plans were thrown into disarray by the Herrington Statement in June that year. At a press conference, W.C. Herrington, Chief of the Fisheries Division in GHQ's Natural Resources Section, made it clear that the fourth stage of fishing boat construction would only permit the construction of 22 transport ships weighing 2,000 tons, that the fishing boats under construction were liable to be transferred as reparation in kind, and that there was no intention to permit the construction of ordinary fishing boats, except wooden ships of less than 100 tons, for the foreseeable future.

The Shipping Bureau and Fisheries Bureau of the Ministry of Transport petitioned GHQ to tone down the Herrington Statement. Opposition was also expressed by the private sector, a cross-sector joint

coordination committee was set up, and there were signs of a social problem in the making. GHQ now allowed the construction to go ahead under the nominal condition that the new vessels would replace dilapidated ones, thus bringing the problem to a conclusion of sorts.

As well as giving the go-ahead for shipbuilding, GHQ also instructed that the present status of vessels be ascertained and managed. In response to this, Emergency Fishing Boat Control Regulations were promulgated in October 1945, and all fishing boats of 5 tons and above were registered. Then in October 1947, an order for "Registration and Marking of All Japanese Fishing Boats" was issued, and now even fishing boats of less than 5 tons had to be registered. The Fisheries Bureau promulgated Regulations on Fishing Boat Registration, added an additional budget of 12.3 million yen, and provided other forms of support to promote the registration work. By the end of March 1948 all fishing boats had finally been registered, whereupon the status of all fishing boats in Japan became known for the first time.

2. Resumption of West-Water Trawling and Whaling

Resumption of West-Water Trawling

West-water fisheries were sustained without interruption throughout the war, despite gradually shrinking in scale. Immediately after the war, however, they were forcibly interrupted by the GHQ restrictions on navigation and the establishment of the MacArthur Line. West-water were resumed thanks to the government's mediation with capital for new shipbuilding after the establishment of the MacArthur Line in 1945.

In 1947, Japan had 56 trawlers and 895 west-water trawling boats, both already higher than prewar levels. But there was still a shortage of the commodities needed to propel these boats. Supplies of heavy oil, the source of motive power, were only 44% of the required level, while those of the timber and nails needed to make fish cases were only 63% and 14%,

respectively. Supplies of ice were even less adequate, with a meager 6%–7% of requirements being supplied, owing to a deterioration in the electric power situation. And although the lineup of vessels was in place, the capacity utilization ratio of west-water trawling in 1947 was only 56%, owing to the shortage of commodities.

Although the utilization rate of west-water fishing boats was poor, the number of vessels themselves had increased sharply. As a result, fish catches by west-water two boats trawling had already surpassed prewar levels within five years, and continued to increase thereafter. West-water otter trawling also recovered, but the number of ships was low and fish catches did not reach prewar levels, gradually declining from this peak.

Catches by west-water fisheries during this time increased in the case of squid, yellow croaker and conger, but those of the high-priced red sea bream and

yellow porgy decreased, and a tendency towards resource depletion became problematic. Some operators even started to cross the MacArthur Line in search of resources.

To address this problem, the Japanese government promulgated the Act for Preventing Depletion of Fishery Resources in May 1950, the first step in a downward revision of vessel numbers designed to protect marine resources. Based on the number of vessels at the end of 1949, trawlers were to be reduced by 23% and bottom trawlers by 33%, these thereby decreasing to 58 and 697 ships, respectively. Coupled with the “Dodge recession”, small to medium operators and companies that had shifted from other industries to start up in fisheries after the war now withdrew, or were forcibly absorbed into large companies, leading to an ongoing reorganization of the industry.

Amid a state of confusion, the various companies developed measures such as concentrating their best ships in the best fishing grounds, in an attempt to secure fish catch volumes. The value of landings at bases in Nagasaki, the center of west-water fisheries, was 2,026,440,000 yen from September 1949 to August 1950, but 2,003,180,000 yen from September 1950 to August 1951. Thus, despite the harsh operating environment, companies were able to keep the decline in output performance to a minor decrease in value.

Resumption of Ogasawara Whaling and Antarctic Whaling

Ogasawara whaling had continued until the year before the end of the war, but was interrupted with the American occupation of the Ogasawara Islands. The door to a resumption of operations was opened when Taiyo Gyogyo applied to GHQ for permission to operate. Although flensing of whale carcasses on land was not allowed, operations over a sea area of 30,000 square nautical miles, including the Ogasawara Islands, were permitted from December 1st, 1945 to the following March 31st only. Taiyo Gyogyo set out with a former navy transport ship as the mother ship

leading two whalers, and caught 113 whales. Nippon Suisan also expressed an inclination to send an expedition during this permitted fishing season, but was unable to prepare ships in time and so had no choice but to postpone its plans.

In June 1946, the fishing zone was expanded and the whaling grounds came inside the MacArthur Line, making it possible to send expeditions with permission from the Japanese government. However, these were limited to expeditions using mother ships, as entry within 12 nautical miles of the islands as well as landing and negotiating with the islanders were forbidden.

The resumption of Ogasawara whaling gave rise to hopes among fishery personnel that Antarctic whaling might also be resumed. The food supply in Japan was still inadequate at this time, and the Ministry of Agriculture and Forestry appealed to GHQ for a resumption of Antarctic whaling. GHQ took a positive stance on this appeal, as it felt that a resumption of whaling would lead to the acquisition of foreign currency through exports of whale oil. On August 6th, 1946, permission was granted to Nippon Suisan and Taiyo Gyogyo to send one fleet each for Antarctic whaling.

Taiyo Gyogyo's President Ikujiro Nakabe had long yearned for a resumption of whaling in the Antarctic, and was eager to revive it. As soon as Ogasawara whaling had been resumed, Nakabe had started making preparations in anticipation of a resumption in the Antarctic. Taiyo Gyogyo purchased a half-finished wartime standard ship that had been retained as stock at the Nagasaki Shipyard of Mitsubishi Heavy Industries, and quickly proceeded to refurbish it. The ship was named *Nisshin Maru No.1*, and was sent to the 1st Antarctic whaling expedition as a mother ship.

Although Nippon Suisan also had various problems to solve, it decided to refurbish the damaged tanker *Hashidate Maru* and use it for expeditions. With this, Japan could now send two fleets on whaling expeditions.

The Postwar Scheme of International Whaling

The postwar scheme of international whaling was first set in motion at the International Whaling Conference held in London in January 1944, the year before the war ended. The decision to hold the Conference was made after lobbying by Britain and Norway, which had foreseen an impending crisis over resource depletion due to overfishing since before the war. The Conference was attended by representatives from seven countries—Britain, Norway, America, Canada, New Zealand, Australia and the Union (now Republic) of South Africa.

Based on the Conference's main theme of conserving resources, a proposal to limit the number of whales caught was tabled. Before the war, the International Whaling Convention and International Whaling Agreement had merely restricted whaling seasons and whale body length. Since the various whaling countries had increased their fleets to ensure catches, these agreements were barely effective. To address that problem, steps were taken at the London Conference to restrict the numbers caught.

The system adopted to reduce numbers was based on the Blue Whale Unit (BWU). Since it was difficult to place restrictions on all of the numerous types of whales, each species would be converted to its equivalent in blue whales to calculate the BWU. To make this calculation, 1 blue whale was taken as the equivalent of 2 finback whales, 6 sardine whales and 2.5 humpback whales. In addition, the annual catch was limited to 16,000, two-thirds of the prewar annual average.

Along with the BWU system, the “Olympic

method” was also adopted. According to this method, whaling was only permitted within dates prescribed by the International Bureau of Whaling Statistics as the start and end of the whaling season. Within that season, each country could conduct whaling freely up to the overall limit on numbers caught. The International Bureau of Whaling Statistics would forecast the date on which this limit was reached, based on weekly reports on numbers caught by each country. It would then would set the date for the end of the season based on this, and notify the countries one week in advance.

Contrary to their intentions, however, both the BWU system and the Olympic method resulted in excessive whaling by each country, and resources continued to decrease. Nevertheless, these attempts earned a degree of praise, in that imposing a direct restriction on the number of whales caught was in itself a major step forward.

In December 1946, the International Whaling Conference was held in Washington. Among others, the Conference led to the adoption of the International Convention for the Regulation of Whaling and the establishment of the International Whaling Commission (IWC), thus paving the way for subsequent developments in the scheme of international whaling. The International Convention for the Regulation of Whaling set out the IWC system, consisting of one member for each participating country, while the regulations adopted at the Conference could be implemented without needing to be ratified by each country. The International Convention for the Regulation of Whaling came into effect in 1948; Japan joined in 1951.

Chapter 3: Reconstruction of Fishery Companies

1945–1950

Part 1 Relaunch of Nippon Suisan and Company Reconstruction After the War

Revival of the Nippon Suisan Company Name

With the abolition of the Fishery Control Ordinance in December 1945, Nippon Kaiyo Gyogyo Tosei relocated its Head Office to Inari-cho, Asakusa City, Tokyo on December 1st and changed its trading name back to “Nippon Suisan Kaisha, Ltd.”. The name “Nippon Suisan” was thus revived after a hiatus of 2 years and 8 months, and the company was to start life anew as a fishery company with fishing at its core.

Nippon Suisan had incurred very great damage in the war. As a consequence of pursuing business in line with national strategy under the motto of “Serving

the Nation with Food” during the war, it had suffered enormous losses of ships and overseas assets. As of 1941, Nippon Suisan possessed 236 ships weighing a total of 162,091 tons, but 65% of the ships and 83% of the tonnage were lost in the war. The surviving fishing boats were nearly all antiquated.

Losses of overseas assets and fishing grounds also had a huge impact. The former included 77 fishing boats but also 93 sales offices and premises of associated companies in Manchuria, northern, central and southern China, Taiwan and elsewhere, 232 items of machinery, as well as coal, fishing tackle, consumables, etc., resulting in lost assets worth 30 million yen at

Vessel damage/Damage to ships

Division	Ships owned (1941–45)		Ships damaged (1941–45)		Damage ratio
	Number	Gross tonnage	Number	Gross tonnage	
Trawling	136	29,745	101	25,023	84%
Northern Seas	25	38,174	12	31,772	83%
Whaling	75	94,172	41	78,125	83%
Total	236	162,091	154	134,920	83%

Loss of overseas assets

Item	Details of loss	Monetary value
Fishing boats	Total 77 vessels/Cost price 63,677 yen/Depreciation 41,912 yen	21,765yen
Land	Total area 106,839 <i>tsubo</i> (1 <i>tsubo</i> = about 3.3m ²)	219,887yen
Buildings	Total area 12,772 <i>tsubo</i> /Cost price 777,294 yen/Depreciation 162,607 yen	614,687yen
Structures	Total 93/Cost price 189,100 yen/Depreciation 24,985 yen	164,115yen
Machinery & equipment	Total 232/Cost price 184,693 yen/Depreciation 65,189 yen	119,504yen
Fixtures	Cost price 38,750 yen/Depreciation 9,529 yen	29,221yen
Securities	875 shares/15,988,993 yen/Government bonds 51,674 yen/Corporate bonds 2,960 yen	16,043,627yen
Investments & loans	Investments 1,213,052 yen/Loans 10,871,637 yen	12,084,689yen
Stocked goods	Coal/Fishing gear/Consumables, etc.	15,380yen
Receivables		67,602yen
Advance payments	Reserves	50689yen
Cash & deposits		581,327yen
Total		30,597,493yen

the time.

Under the wartime Fishery Control Ordinance, Nippon Suisan had transferred all of its refrigeration, freezing, processing and sales business to Teikoku Suisan Tosei, and had been divided into the two companies Nippon Kaiyo Gyogyo Tosei and Minami Nippon Gyogyo Tosei. Teikoku Suisan Tosei became independent as Nippon Reizo after the war, and for Nippon Suisan, which had developed the whole sequence of fishery operations from fisheries to refrigeration, processing, storage and sales before the war, the loss of these functions presented a major hurdle to achieving early reconstruction. Furthermore, other negative factors (such as being targeted under the Deconcentration Law and public office purges) mounted up, with the result that the company was playing catch-up with the other companies in their postwar reconstruction.

In January 1947, Keizo Tamura, Kenkichi Ueki and Shizuo Minoda were targeted by the purge of public officials and had to resign their posts. In their place, Executive Director Susumu Masui stepped up as President, but in 1948, Masui was also purged, along with Executive Director Tadao Katsuragi, Managing Director Shigeo Kuboi and Auditor Shigeji Matsuda. Masui was central to promoting the company's reorganization plan in conformity with the Economic Deconcentration Law, and was moreover an indispensable element in conducting Antarctic whaling, Nippon Suisan's lifeline at the time. For these reasons, Nippon Suisan requested a one-year moratorium for Masui. It was permitted, but next Masui was forced to stand down in June 1949 under the Law for the Termination of Zaibatsu Family Control. For about a year after that, the President's chair at Nippon Suisan was vacant. This brought a huge burden on the company's management, given the already difficult situation presented by the period of postwar reconstruction.

Again, in February 1948, Nippon Suisan was named as a designated corporate entity under the Economic Deconcentration Law, and was required to divide into three separate companies.

In March that year, Nippon Suisan drew up a reorganization plan based on a division into three companies called Company A, Company B and Company C. The aim was to canvass suggestions for the company names internally at a later date. But just as the division plan was being formulated, developments in the Cold War started to shift America's stance on Japan. The possibility arose that restrictions aimed at Japan could soon be lifted. Masui explained the situation inside and outside the company to GHQ, and tried to get the division postponed. As a result, Nippon Suisan managed to avoid the division into three companies, and could continue on the path ahead as a single company.

Delays in the Resumption of Fishing by Nippon Suisan

Nippon Suisan resumed coastal whaling as well as trawling and west-water two boats trawling as part of its west-water businesses in 1945, followed by Antarctic whaling in 1946. However, for its west-water otter trawling, north-sea mother ship-type crab fishery and others in which it had built up experience over many years, it could hope for no expansion in the operational area until the MacArthur Line was abolished in April 1952.

In view of these circumstances, Nippon Suisan started preparing for a resumption of business by making maximum use of its surviving vessels in coastal fisheries. It sent some of its trawlers to Hokkaido, where they fished for flounder and Atka mackerel, as well as carrying out set net fisheries and squid angling from a base in Hakodate. The company used its ingenuity in various ways, such as converting herring carriers, used during the herring season, for use as other transport ships outside the fishing season.

One factor behind the delay in the company's resumption of fishing was that it had adopted a negative approach to new shipbuilding. In the first concession for shipbuilding in May 1946, Nippon Suisan had only been permitted to build 14 ships, including

trawlers and west-water trawling boats. When it came to large ships, the *Kaiko Maru* was at last built in 1948, but no others from then until 1950. There were two main reasons for this.

The first was that, on December 8th, 1945, Nippon Suisan became the first company in the industry to be designated as a “restricted company”. In August 1946, moreover, it was designated as a special accounting company under the Act on Emergency Measures Concerning Companies’ Accounting and the Enterprise Reorganization Act.

The second reason was that the company had been reluctant to build new ships, out of fear that ships could be confiscated for war reparations. Immediately after the war, the American government and GHQ had presented a proposal for severe reparations in kind, with the aim of demilitarizing Japan and weakening her capacity for economic dominance. While he was serving as President, therefore, Kenkichi Ueki maintained a cautious stance towards building new ships. Ueki would later describe this stance as follows in his *Ueki Memoirs* (serialized in “The Suisan Keizai” Newspaper):

“Thinking about it, ships would have been perfectly suited to reparation in kind. In particular, the Americans were worried about a lack of oil in those days, and they dearly wanted tankers for carrying oil. A ship could be taken to America, but buildings and railways did not so easily lend themselves to reparations. I could not bear the thought that we would go to the trouble of building a ship only for it to be taken away as reparations. We would have gone under. That was my worry”.

Having lost about 83% of its prewar vessel tonnage as a result of the war, Nippon Suisan needed to add more fishing boats before it could resume fisheries. To avoid the risk of newly built ships being confiscated for war reparations, therefore, the company attempted to boost its fleet by using overseas assets that had been salvaged after the war. One such measure involved using ships owned by Nansei Suisan K.K. (formerly Minami Nippon Gyogyo Tosei). Nansei Suisan had

been established in 1950 with capital of 30 million yen, and had inherited 20 or more ships as well as employees from the former Minami Nippon Gyogyo Tosei. Nippon Suisan owned 17% of its shares, and the ships owned by Nippon Suisan (*Tatsuta Maru* and *Tenryu Maru*) were used by switching nominal ownership between Nippon Suisan and Nansei Suisan as circumstances demanded.

In March 1951, 3 trawlers were acquired from Nichibeï Suisan, followed by another trawler and 11 west-water trawling boats from Nansei Suisan in September that year.

In November, the Kawanami Kogyo Fisheries Department was absorbed, and the company now owned 5 trawlers and 20 west-water trawling boats. These ships were kept at the Tobata Branch. Kawanami Kogyo, a shipbuilding company established in 1936, had created a Fisheries Department in March 1946 and started fishery operations, mainly in west-water trawling. It took a positive stance on building fishing boats, and in the three stages of shipbuilding concessions in 1946, it built and sold 77 new ships, second only to Taiyo Gyogyo.

The number of ships owned by Nippon Suisan was still inadequate, even with this series of measures. In spite of numerous management efforts, Nippon Suisan’s performance did not recover as expected, and it was overtaken by Taiyo Gyogyo.

Relaunch of Teikoku Suisan Tosei

During the war, Teikoku Suisan Tosei had wielded considerable power in its business in Asian colonies and occupied territories. The assets invested in that business were on a par with the total asset value of refrigeration plants inside Japan, and the profits accounted for around 70% of all company earnings. The establishment of Teikoku Suisan Tosei had not been without its ups and downs, and even after establishment, it still faced problems such as the conflicting aims of fishery companies. In its overseas business development, in particular, it faced an uphill struggle

to fulfil its mission as the war situation unfolded.

With the end of the war on August 15th, 1945, all business sites owned by Teikoku Suisan Tosei overseas were seized; the employees cleared the remaining work while preparing for repatriation with nothing but the clothes on their backs. Employees stationed in northern Korea were captured by the Red Army, some falling victim to starvation and cold. In Sakhalin, too, branches were seized as the Red Army advanced, their employees forced into a life of captivity. In northern China, several lost their lives due to malnutrition caused by food shortages. The employees cleared the remaining work in a harsh environment in which death was their neighbor, and repatriations from abroad continued until 1947.

On November 24th, 1945, Teikoku Suisan Tosei tabled proposals for amendments to its officers and to its Articles of Incorporation at an Extraordinary General Meeting of Shareholders. And on December 1st, the company was relaunched as Nippon Reizo.

The process of deciding the new name “Nippon Reizo” was beset with disagreement. Many in the company wanted the name to be “Nippon Food Industries”, recalling the foundation upon which Nippon Suisan’s old network of refrigeration and freezing equipment was built, in the sense of going back to basics and rebuilding brick by brick. But the major shareholders, including Nippon Suisan, Nichiro Gyogyo, Taiyo Gyogyo and Kyokuyo Hoge, recommended “Nippon Reizo” as a company name that would refer directly to the company’s business (“Reizo” = refrigeration). Ultimately the major shareholders had their way, and the name “Nippon Reizo” was adopted at the Extraordinary General Meeting of Shareholders.

All 16 of Teikoku Suisan Tosei’s directors and auditors agreed to resign upon completion of their mission, and their retirement was decided at the Extraordinary General Meeting of Shareholders. The resignation of Executive Director Yusaku Nishimura was sincerely regretted. New officers were elected; Junji Hayashi became president, Yajiro Miyata executive director,

and Kohei Iesaka managing director.

According to the business aims expressed by Kojiro Kimura, who was appointed a director at that time, the state of Nippon Reizo at the time of its launch was pitiful. The company’s performance was extremely poor owing to a wartime business strategy that had disregarded profitability, while large volumes of assets, materials and equipment had been lost in the ravages of war. Not only that, but the company had more than twice as many employees as it needed, and its finances were being squeezed. The only thing that supported Nippon Reizo in its relaunch amid this awful environment was the thought that the refrigeration business was extremely important for Japan’s reconstruction, and that it was indispensable to the lives of the Japanese people. This much can be discerned from the closing line of Kimura’s business aims:

“My sincere hope is that each of our employees will change from the negative mood that has prevailed until now to a positive one, overcome the obstacles facing our business with a spirit of courage and protect our precious workplaces, and help to stabilize the lives of the people, as well as breaking through this difficult situation and striving for a revival of the company’s fortunes” (*“A Quarter-Century of Nippon Reizo Co., Ltd.”*).

Having relaunched the company, procuring recovery funds and operating capital became an urgent task, and borrowings in 1948 were as high as 552 million yen. To enhance its capital structure, Nippon Reizo made its first capital increase that year. But owing to the difficulty in equity underwriting—for example, Nippon Suisan and many other shareholders were prohibited from increasing their shareholding—employees, family members and business partners were asked to underwrite. A second capital increase was made the following year, taking the new capital to 500 million yen. With this, at long last, a glimpse of the road to reconstruction could be seen.

Taiyo Gyogyo's Losses and Reconstruction Strategy

The requisitioning of fishing boats during the war caused Taiyo Gyogyo to lose 80% of the vessels it had previously owned. It also lost all its facilities, equipment, rights and other property in Korea, Kuril, Sakhalin, Taiwan, Manchuria, China, southern territories and elsewhere; the combined value of these losses was said to be as high as 100 million yen.

Despite suffering such tremendous losses, Taiyo Gyogyo had the most ambitious reconstruction strategy of the three major companies, and started work on mass construction of fishing boats immediately after the war had ended. President Ikujiro Nakabe had foreseen the postwar food shortages, and was resolved to build ships quickly in order to increase the output of food. At a Board Meeting on September 15th, 1945, a proposal to build 16 trawlers and 30 west-water trawling boats was approved, and orders were immediately sent to the shipyards.

Fishery companies were officially permitted to build fishing boats from May 1946 onwards, and between the first and third phases of construction a total of 776 fishing boats weighing 92,916 tons were built. Of these, Taiyo Gyogyo built 14 whaling ships, 184 trawlers and west-water trawling boats, 10 bonito and tuna fishing boats and 1 transport ship, totaling 209 ships in all. By the middle of 1946, Taiyo Gyogyo had already reached the same level of vessel ownership as before the war.

This policy of quick and proactive fishing boat construction provided a major impetus for the company's early reconstruction. From 1946 to 1947, Japan fell into an unprecedented food crisis, and fish prices became vastly inflated. The bigger the fish catches,

the greater the profit that was created, leading to a "fisheries boom". And although this boom was beginning to run out of steam by around 1948, Taiyo Gyogyo still succeeded in pocketing huge earnings by building fishing boats ahead of the other companies. Moreover, mass construction of fishing boats immediately after the war also helped the company to avoid the effects of later rampant inflation, taking it to a position of even greater superiority within the industry.

Nichiro Gyogyo's Losses and Reconstruction Strategy

The most serious war damage suffered by Nichiro Gyogyo was the loss of its north-sea fishing grounds, the basis for its very existence. When the war ended, Nichiro Gyogyo immediately forfeited all of its vast overseas assets in Kamchatka, northern Kuril and Sakhalin, as well as the north-sea fisheries. On the other hand, it still had its many employees and the plentiful fishing nets and tackle they brought back from Kamchatka. As such, the strategy adopted by President Tsunejiro Hiratsuka was to start west-water trawl, Hokkaido coastal, bonito and tuna fisheries.

Having lost its north-sea fishing grounds, it was imperative that Nichiro Gyogyo's business activity take it into other fishing grounds. It had great difficulty operating in unfamiliar fishing grounds, and it had not positively developed the profitable Hokkaido coastal fisheries. The only activities to produce immediate effects just by using the materials and equipment to hand were Hokkaido coastal fisheries, and the business by no means proceeded according to plan. Nichiro Gyogyo's revival would depend on that of north-sea fisheries in 1952, when the allied occupation ended.

Part 2 Resumption of Fishing Operations by Nippon Suisan

Trends in West-Water Fisheries

Nippon Suisan resumed its west-water fisheries in 1945. However, its fleet of west-water otter trawling boats at the end of the war consisted of only four antiquated steam trawlers that had escaped requisitioning; its west-water trawling boats had also been reduced to four pairs and eight ships. With the expansion of the MacArthur Line and concessions for shipbuilding, it took the opportunity to build the 530-ton class trawler *Tone Maru*, the 350-ton class trawler *Saga Maru* and five 100-ton class west-water trawling boats in 1946. It went on to complete four 100-ton class west-water trawling boats in 1947, followed by the trawler *Shinano Maru* and four west-water trawling boats in 1948. As some of its trawlers and west-water trawling boats came out of requisitioning at the same time, Nippon Suisan's vessel ownership recovered to 11 trawlers and 37 west-water trawling boats. But even this was far from the prewar record of 62 trawlers and 72 west-water trawling boats. Moreover, the impact of heavy oil and other material shortages meant that only 10 trawlers and 28 west-water trawling boats actually operated in 1948.

Ships owned by Nippon Suisan were included in the ship reduction measure introduced to protect marine resources in 1950, when 2 trawlers and 16 west-water trawling boats were liquidated. Nippon Suisan now concentrated on priority operation of its superior vessels and took steps to increase efficiency, among other measures.

The performance of west-water fisheries between October 1950 and March 1951 amounted to an output of 11,416 tons with a value of 525,500,000 yen, a huge improvement on the figures of 6,678 tons and 317,140,000 yen for the same period one year earlier.

1st-5th Antarctic Whaling Expeditions and the Start of Maritime Shipping Business

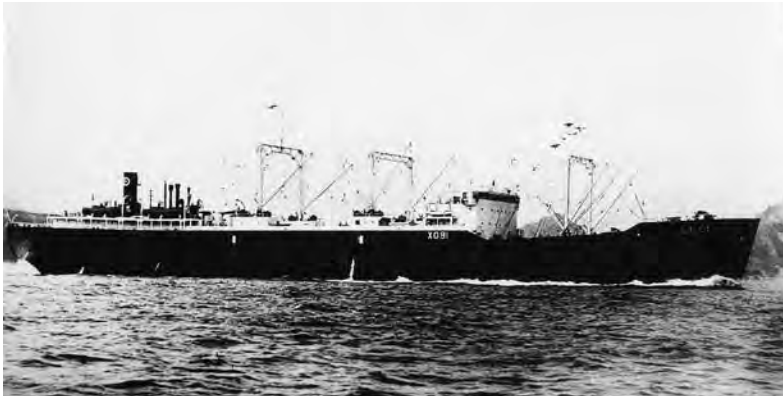
On August 6th, 1946, GHQ gave permission for Nippon Suisan and Taiyo Gyogyo to send one fleet each on Antarctic whaling expeditions, in an attempt to ease the critical postwar food situation.

Compared to Taiyo Gyogyo, which had been preparing steadily for a resumption of Antarctic whaling, Nippon Suisan was at first lukewarm towards the idea. Not only had it delayed new ship construction out of fear that ships could be confiscated for reparations, but official prices for whale meat were low at the time; the company had judged it highly likely that whaling would be a loss-making business.

The Ministry of Agriculture and Forestry had highlighted Antarctic whaling immediately after the war as an industry that would provide sources of meat, oil and fats, as well as helping to acquire foreign currency through whale oil exports. Considering an expedition with just one Taiyo Gyogyo fleet to be inadequate, the Ministry urged Nippon Suisan to take part in Antarctic whaling, promising that it would raise official prices for whale meat and would make food provisions available to expedition members at distribution



The west-water trawling boats (operating in pairs) *Yashima Maru* (top) and *Toyoshima Maru*, both completed in 1946



The salt-curing mother ship *Tadotsu Maru*



The whaler *Koyo Maru No.2*, completed after the war in 1947



The whaling mother ship *Hashidate Maru*

prices.

In response to this request, Nippon Suisan at last resolved to resume Antarctic whaling, but now the problem was that its postwar whaling fleet had decreased to only nine vessels. The company decided to urgently set about acquiring whalers, and started work on repairing and refurbishing its existing ships.

First, it refurbished the tanker *Hashidate Maru*, which had been bombed at Takao in Taiwan and now remained moored at Osaka docks, as a whaling mother ship in October 1946. It then chartered the *Tadotsu Maru* from the Vessel Management Association, which had continued its central management of merchant vessels and seamen after the war (and was reorganized as the Civilian Merchant Marine Committee in 1950) in January that year, and refurbished it as a salt-curing mother ship.

In November 1946, the 1st Antarctic whaling expedition, consisting of nine ships with the *Hashidate Maru* as the mother ship, set out from the port of

Osaka. It produced 391.5 BWU, 3,700 tons of whale oil and 1,608 tons of salt-cured whale meat. The 2nd expedition sent a larger fleet, increasing the number of vessels to twelve. Whale oil production was higher than in the previous expedition with 6,775 tons, but the whaling catch fell to 383 BWU. These accounted for more than half of Nippon Suisan's gross sales in that period.

However, neither the 1st nor the 2nd expedition met the original targets, owing to a lack of ships and equipment. So now the plans were enhanced and made as rational as possible, including detailed study of the fleet composition with the primary objective of increasing output. In the 3rd Antarctic whaling expedition from November 1948, the fleet consisted of the mother ship *Hashidate Maru*, the freezer ships *Tadotsu Maru* and *Settsu Maru*, and the tanker *Gyokuei Maru*, joined by two 1,000-ton class freezing transport ships and seven 350-ton class whaling ships. The whale catch was 504 BWU, while 8,900 tons of whale oil and 15,504 tons of whale meat were produced, yielding an output close to the planned target.

In the 4th expedition the following year (1949), one freezing transport ship and one whale scouting ship were added to make a fleet of 15 vessels. The outcome was a catch of 632 BWU, 12,200 tons of whale oil, 1,463 tons of frozen whale meat, and 2,059 tons of salt-cured whale meat, the total output being higher than before. The Dodge recession drove spending power down, however, while the abolition of the Marine Products Control Order caused prices of whale

oil and whale meat to fall. The impact of these was that, although the output was higher, profits were below the planned amounts.

In the 5th expedition in 1950, another whaling ship was added to bring the fleet to a total of 16 vessels. Catches of baleen whales decreased to 550 BWU, but the number of sperm whales caught increased from zero the previous year to 243. Compared to the previous year, sales of whale oil and whale meat increased, while on the other hand the value of whale meat sales fell owing to a slump on the market. The saving factor was that the Oil & Fats Distribution Corporation purchased the whale oil at a high price.

Meanwhile, because whaling mother ships had a large capacity for storing whale oil, they could also be used as tankers to carry heavy oil.

In October 1946, Nippon Suisan had refurbished the *Hashidate Maru* and converted it to a whaling mother ship, but the *Hashidate Maru* was not only active in Antarctic whaling. When GHQ allowed Japanese tankers to take on cargoes of heavy oil in the Persian Gulf in 1948 for the first time after the war, the *Hashidate Maru* set out for the Middle East in August that year. Imports of crude oil from the Middle East increased sharply from that time on, and it was the *Hashidate Maru* that set the pattern for this. Before the war, crude oil would be loaded onto the *Itsukushima Maru* in Panama on the way home from the Antarctic and brought back to Japan, this being the pioneer of the tanker business in Japan. This was continued as the tanker business after the war.

Even after the resumption of fishing, Nippon Suisan's business still had not stabilized. In 1949, therefore, it applied for inclusion in the 5th shipbuilding plan. This time, the focus was to be on reconstructing and improving ocean-going vessels, with a view to reinforcing business management via the maritime shipping business. From that time on, the company was to put energy into the maritime shipping business.

Expansion into Ogasawara Whaling and Resumption of Mother Ship-Type Tuna Fishing

Following the permission to resume fishing on November 30th, 1945, Taiyo Gyogyo had resumed Ogasawara whaling in 1946, and Nippon Suisan followed suit in 1947. Nippon Suisan joined Kyokuyo Hogeï in an expedition to Ogasawara, using the former navy's No. 13 transport ship as a mother ship. Then from 1948, Nippon Suisan used the *Kaiko Maru* as a mother ship in a two-way joint expedition with Kyokuyo Hogeï in 1948 and a three-way expedition with Kyokuyo Hogeï and Taiyo Gyogyo in 1949. In 1950, Nippon Suisan and Taiyo Gyogyo ceded mother ship-type whaling rights in seas around Ogasawara to Kyokuyo Hogeï, whereupon that company continued operations as a monopoly business.

Nippon Suisan had owned 19 whaling ships at the end of the war, but when it was named a designated business operator under the 1948 Deconcentration Law, it transferred eight ships to the other companies. Specifically, three ships were transferred to Kyokuyo Hogeï in 1948, one to Nitto Hogeï in 1949, two to Nippon Kinkai Hogeï in 1950 and another two to Kyokuyo Hogeï in 1951. At first, Nippon Suisan claimed that its operations did not amount to a monopoly, on account of the importance of whaling to its management and its contribution to Japanese whaling. However, out of consideration for companies that could not take part in Antarctic whaling expeditions, and taking account of improved efficiency if the number of ships were trimmed, it accepted the order to reduce its ships.

Kyokuyo Hogeï used the *Baikal Maru* as a mother ship in its 1950–1951 operations, but because Ogasawara coastal waters had always been low in resources of whales, did not achieve the anticipated results. The path to north-sea whaling would be opened when the “Treaty of Peace with Japan” came into effect in the following year (1952), whereupon fishery companies would all find a source of renewed vigor in north-sea whaling.



Odawara Research Center
The building at rear left is the processing plant

The expansion into Ogasawara whaling also provided the stimulus for a resumption of mother ship-type tuna fishing. When the *Kaiko Maru* fleet went to Ogasawara for a whaling expedition in 1949, it also fished for tuna inside the MacArthur Line north of 24° north latitude, but the results were not encouraging.

In May 1950, mother ship-type tuna fishery operations were permitted in certain fishing grounds outside the MacArthur Line. Various companies moved in and tuna fisheries expanded, but Nippon Suisan was not a direct participant; its involvement consisted merely in leasing the *Kaiko Maru* to Hoko Suisan.

In the following year, 1951, Nippon Suisan resumed tuna fisheries using the freezer ship *Settsu Maru* as a mother ship and 27 catcher boats. Its performance in fish catches was good, with 3,750 tons equivalent to a third of catches by all fleets. On the profit side, however, the news was not so good, owing to a slump in exports to America and stagnant fish prices.

With the abolition of the MacArthur Line in 1952, the company concentrated on expanding fishing



Manufacturing underway at the Tobata Refrigeration Plant

grounds, and sent the *Kaiko Maru* as a mother ship with 10 catcher boats to the Banda Sea in Indonesia. The results were not impressive, however, with fish catches of only 2,130 tons. A two-year slump then led to a temporary suspension of the company's mother ship-type tuna fishing from 1953.

Nippon Suisan did not restart tuna fishing until 1956 and onwards. That was when increased demand for fish sausages and canned products made securing tuna (as the raw material for these) an urgent task. It was a resumption designed to expand the processed food business.

Resumption of the Processing Business

From around the autumn of 1945, Yamato Suisan K.K., an affiliate of Nippon Suisan, started producing *tsukudani* (fish or meat simmered in soy sauce) using desalinated salt-cured whale meat from sperm whales mixed with amino acid soy sauce, at a small scale factory within its Odawara research facilities and a factory rented at Mikawashima, Tokyo. When the ban on Antarctic whaling was lifted in August 1946, it also resumed the manufacture of processed products from whales caught in the Antarctic. In 1947, Yamato Suisan started producing "honey meat" and "whale bacon", made by smoking whale meat marinated in amino acid soy sauce.

Nippon Suisan also produced honey meat and whale bacon in 1947, using the former cargo ship *Harada Maru* moored at the quayside in Osaka docks as a factory.

Again, it started producing canned whale *yamatoni* (fish or meat stewed in sweet soy) at Yamato Suisan's Odawara factory from 1948, and in the following year made canned products at its Hakodate factory. In 1950, Nippon Suisan dissolved Yamato Suisan and brought the Odawara factory under its direct control, starting the production of canned whale meat.

On January 1st, 1946, the Tobata Refrigeration Plant was returned to Nippon Suisan from Nippon Reizo. Of all the assets originally transferred to Teikoku

Suisan Tosei, this refrigeration plant was the only onshore facility returned to Nippon Suisan.

The company resumed the production of *chikuwa* at the Tobata Plant in 1946, but this was discontinued in 1954 due to the increased production of fish sausages from October 1952 onwards.

In a complete transformation from its diverse business content before the war, Nippon Suisan started its postwar reconstruction with fisheries only. Nevertheless, to expand the distribution and

consumption of marine products, it was vital that the land-based sector be established as a second core of its business. In that sense, it was important to resume the processing business. The starting point was the single facility of the Tobata Plant, with a refrigerating capacity of 1,600 tons, ice-making capacity of 250 tons per day and freezing capacity of 10 tons per day. From this modest start, the company would pursue its strategy for reconstruction with slow and steady steps.

Part 3 The Road to Management Reconstruction

Shareholder Equity Enhanced

Nippon Suisan's shareholder equity ratio at the end of fiscal 1945, the year the war ended, was around 40%. The company had to depend on borrowings for nearly all the cost of developing its business, starting with locating a Head Office but also including the arrangement of ships and materials, hiring staff, and so on. Cash reserves for the resumption of Antarctic whaling and massive borrowings for refurbishing mother ships were particularly necessary, with the result that the shareholder equity ratio at the end of fiscal 1949 had fallen to around 20%. The figure subsequently recovered to 30%, but hovered around that level for a while afterwards.

In 1950, the company started borrowing from the Reconstruction Finance Bank and the Occupation Assistance Investment Fund, allocating the capital mainly for purchasing equipment. It also started borrowing from the Japan Development Bank in the following year. Loans from the Reconstruction Finance Bank and the Occupation Assistance Repayment Fund were repaid in 1952, but repayments to the Japan Development Bank continued for another ten years. As for operating capital, particularly that for Antarctic whaling expeditions, the company relied on co-financing from commercial banks through the mediation of the Bank of Japan.

While taking out loans, the company also focused

on boosting its shareholder equity. It made a paid-in capital increase of 205,578,000 yen in November 1948, followed by another of 350 million yen in November 1949. It also made a further paid-in capital increase of 700 million yen in 1953.

The company's corporate acquisitions, starting with the absorption of the Kawanami Kogyo Fisheries Department in 1951, continued with the establishment of Nagasaki Shipyard Co., Ltd. in the following year, and the acquisition of refrigeration plants owned by Hakodate Teion Soko K.K. in three locations (Hakodate, Aomori and Ominato) in 1953. In the same year, it established the new company Hakodate Teion Soko K.K. (a different company). It also purchased all the shares of Kyowa Yushi Kogyo K.K. and made the latter its sperm whale oil processing division.

In 1945, when the Nippon Suisan company name was restored, its capital amounted to 94,262,000 yen. This was increased to 350 million yen in February 1949, 700 million yen in November that year, and 1.4 billion yen in 1953.

Implementation of the Dodge Line and the Ensuing Dodge Recession

In December 1948, the American government instructed GHQ to curb inflation in Japan and to establish a single exchange rate in line with the "Nine Principles of Economic Stabilization". To see this

through, Joseph Dodge, Chairman of the Detroit Bank, came to Japan in February 1949 and proceeded to implement a rigorous policy for economic stabilization called “the Dodge Line”. Government subsidies including new financing by the Reconstruction Finance Bank and price differential subsidies were scrapped and a single exchange rate established. Although the effect of the Dodge Line was to completely halt Japan’s postwar inflation, it also caused instant deflation owing to its extreme monetary tightening policy. Cash flow crises caused a series of corporate bankruptcies and unemployment increased. Labor disputes over staff cuts broke out all over the country, and labor-management conflicts arose in many places.

The Dodge Line and the ensuing recession also had a significant impact on fisheries. Firstly, the abolition of price differential subsidies caused prices for fishery-related commodities to rise, and the cost of fisheries increased massively. At the time, most fishery-related commodities depended on imports, but the prices for cotton and Manila rope were particularly high, and those prices had been kept artificially low by the price differential subsidies. The abolition of the price differential subsidies instantly caused a three-fold rise in prices.

Secondly, there was a huge fall in fish prices. The Dodge recession had reduced consumer purchasing power, and demand for marine products was stagnant. On the other hand, fisheries output was rising year by year. This led to an oversupply and a collapse of marine product prices all over the country. The abolition of control on marine products in April 1950 merely exacerbated the situation, and many small and medium fisheries operators were faced with the prospect of bankruptcy or withdrawal from the industry.

Nippon Suisan’s Crisis and Personnel Reorganization

Deflation caused by the Dodge Line came as a major headache for Nippon Suisan. Price cuts forced the

company to restrict its production of whale meat and whale meat processed products, which accounted for 40% of its sales turnover in 1950, and this had a disastrous impact on its business performance.

The savior of this situation came in the form of whale oil purchases by the Oil & Fats Corporation. The Corporation was responsible for distributing oil and fats after the war, and proactively purchased whale oil from Nippon Suisan and Taiyo Gyogyo. In May 1950, it was decided that 27,000 tons of whale oil produced in the 4th Antarctic whaling expedition would be purchased by the Corporation. What’s more, the purchase price would be significantly higher than that paid in the same period of the previous year. The impact of reduced whale meat prices due to the abolition of control on marine products had led Nippon Suisan and Taiyo Gyogyo to borrow expedition funds of 3.3 billion yen from commercial banks in the autumn of 1949, but purchases by the Oil & Fats Corporation at high prices allowed them to repay these loans.

Although Nippon Suisan had thus survived the immediate crisis, the marine product market had still not recovered and restrictions on fishing grounds remained harsh. Another pressure on the company’s balance sheet was its payroll for 4,000 employees, including those repatriated from abroad at the war’s end. Nippon Suisan now resolved to undertake a sweeping personnel reorganization as a reconstruction measure aimed at radically solving this situation.

On May 16th, 1950, Nippon Suisan proposed a rationalization plan including 1,151 redundancies (266 office staff, 564 seamen, 321 workers) and criteria for reorganization, pay cuts and other measures to its labor unions at a meeting of the Central Production Council (previously known as the Management Council).

The first Nippon Suisan labor union had been the Tokyo District Labor Union, formed in October 1946. This was followed by a series of others: the Tobata Branch Labor Union (formed in November 1946), the North Sea Division Employees Union (December

1946), the Osaka Sales Office Employees Union (December 1946), the Whaling Division Labor Union (August 1947), the Trawl Division Seamen's Union (March 1947), and the Whaling Division Seamen's Union (February 1948). In March 1947, the Federation of Nippon Suisan Labor Unions (hereinafter "the Federation") was formed. The Federation served to coordinate the positions of individual unions on important issues related to labor conditions, as well playing a role in collective bargaining and holding management council meetings.

The labor unions vehemently opposed the proposed series of personnel reorganization measures. Discussions by the Central Production Council and regional production councils, as well local and central collective bargaining sessions, were continued from the time of the rationalization plan proposal until June 25th. No compromise could be reached, however, and so the company announced that it would enforce named redundancies on June 30th, 1950.

Outraged by this unilateral decision, the labor unions went on strike in protest. The company now negotiated with each union separately in an attempt to reach a settlement. As discussions with each union progressed, solidarity among the unions began to falter. Each union in turn signed a compromise agreement, whereupon, for the company at least, the problem was resolved. Throughout this series of union activities, doubts had come to be raised over the usefulness of the Federation, and following a ballot of union members, it was dissolved at a meeting on August 28th, 1950.

In the end, Nippon Suisan dismissed 972 employees (242 office staff, 432 seamen and 298 workers) or 26% of its total workforce. A total of 96,660,000 yen was paid to compensate the dismissed workers, of which 23,660,000 yen came from shareholder equity and the remaining 73,000,000 yen was furnished by loans from the Industrial Bank of Japan, Nippon Kangyo Bank and the Hokkaido Takushoku Bank.

This large-scale personnel reorganization had the effect of reducing Nippon Suisan's payroll from 1,146.5

million yen to 850 million yen, a saving of nearly 300 million yen. The decision to dismiss employees who had been instrumental in the company's growth to that point had not been taken lightly. But the fruits of that decision opened the way for a reconstruction of Nippon Suisan's management.

Salvaging of the *Tonan Maru III*

Since the first permission for Antarctic whaling in 1946, five expeditions of two fleets had been sent, each producing significant results and helping to ease the food situation after the war. Even before the Peace Treaty came into effect in 1952, the fishery companies had anticipated an increase in the number of fleets permitted to operate in the 6th Antarctic whaling expedition in 1951, and had taken steps to strengthen their fleets with a view to expanding business scale.

Nippon Suisan also planned a business expansion for the 6th expedition, but as the mother ship *Hashidate Maru* had an inadequate whale catch capacity, the company was keenly aware of the need for a new mother ship that could outperform it. At the time, however, Nippon Suisan was designated as a restricted company, and was unable to take on new shipbuilding above 12,000 tons. The company decided to find a way around this by salvaging and repurchasing the *Tonan Maru III*, which had been requisitioned during the Pacific War then sunk off Truk Island.

In 1950, a proposal for salvaging the *Tonan Maru III* was received from a Hong Kong company. Executive Director Rensaku Onishi, who was managing the whaling division at the time, signed a salvage rights agreement for the sum of \$ 35,000 plus 9 million Japanese yen (a total of 21.6 million yen based on the yen rate at the time). The total cost of salvaging, repairs and associated expenses was 1.1 billion yen. Once permission had been given to salvage the *Tonan Maru III*, the next problem was how to raise the capital needed. Nippon Suisan negotiated with the Japanese government, and won an allocation of 630 million yen of GARIOA (Government Appropriation for

Relief in Occupied Area) over 2 years. In addition, Haruo Nakai, Manager of the Financial Affairs Section at the time, repeatedly negotiated with various banks, and succeeded in obtaining loans mainly from the Reconstruction Finance Bank, the Industrial Bank of Japan, the Nippon Kangyo Bank and other government-related financial institutions.

The work of salvaging and towing *Tonan Maru III* was fraught with risks, which no Japanese insurance company was willing to cover; in the end, insurance was provided by the American company AIU.

After all these complications, the work of salvaging the *Tonan Maru III* could at last commence. To conduct a preliminary survey, the salvage vessel *Kimishima Maru* departed from the Kure Dock of Harima Shipyard carrying 45 persons including the survey team and crew members in April 1950. The survey lasted two weeks or so, and produced the finding that a salvage operation could be achieved within a period of five months' work on site. Nippon Suisan therefore resolved to go ahead with the salvage.

Once the ship had been refloated, it waited for the arrival of the tanker *Gyokuei Maru* which was on its way home from the 5th Antarctic whaling expedition. The *Gyokuei Maru* then towed the ship back to Japan over a distance of 3,700 km. However, major hurdles still lay in wait. At the time, there were no nautical charts for the seas around Truk Island, and the narrow channel through coral reefs presented considerable difficulty for towing. After at last managing to squeeze through, the ships were only 100 km from Japan when they were hit by a storm packing maximum wind speeds of 35 m per second. The *Gyokuei Maru* was exposed to typhoon conditions for two whole days as it towed the *Tonan Maru*, but somehow managed to make it through, and returned safely to port at Wakaura. After that, refurbishment work was undertaken at the Aioi Plant of Harima Shipyard, and in October 1951, the *Tonan Maru III* was relaunched under the new name of "*Tonan Maru*".

The new *Tonan Maru* led the 6th Antarctic whaling expedition in 1951 as the whaling mother ship. For



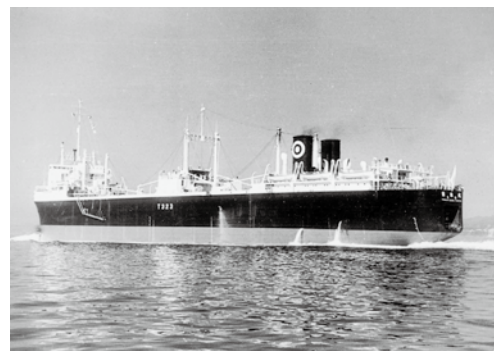
Tonan Maru III after grounding and sinking in the Truk Atoll



The operation to refloat *Tonan Maru III* in the Truk Atoll



Arrival off Aioi, Hyogo Prefecture, in April 1951



Restored to life as *Tonan Maru*, the ship sets off for the 6th Antarctic whaling expedition that October

the company's employees, whose spirits must have been dampened by the painfully slow progression of Nippon Suisan's reconstruction and rehabilitation, the *Tonan Maru* must have been like a beacon of hope.

Enhancement of the Marine Product Sales System

To avoid the ills of a monopoly in the GHQ economic reforms after the end of the war, the number of marine product wholesale companies was not limited, but those answering to certain conditions determined by provincial governors (based on instructions from the Minister of Agriculture and Forestry) had to be registered. This led to a flood of wholesale companies being launched on various markets in 1947. Nippon Suisan, which had lost its entire sales network in Japan owing to its cooperation in the Fishery Control Ordinance, could now sell fish caught in its various operations through wholesale companies all over Japan.

Meanwhile, for a short time after the war, Nippon Suisan had sold fish through its own independent wholesale company in the Tokyo Central Wholesale Market. However, as the business could not be continued with sales of Nippon Suisan's fish catches alone,

Chuo Gyorui Co., Ltd., with which the company had shared close interpersonal relations since before the war, took over the business, including transferring all of its employees. This was the beginning of a cooperative business relationship between the two companies.

In November 1952, the *Zenkoku Nissui Kai* (National Nissui Association) was formed, and a sales network was built around leading consignee agencies all over the country.

Jun-ichi Kishimoto, later to be appointed Executive Director, recalls the situation at the time as follows: "The *Zenkoku Nissui Kai* included many business partners who had been tremendously helpful in our sales of fresh west fish and others since before the war. (part omitted) Our fish catches were sold via the route of fisheries producers—wholesale merchants—middlemen—retailers, and consignment sales were the basic format between fisheries producers and wholesalers. Settlements were based on itemized invoices (showing sales minus the cost of sales) issued by the wholesalers. The system of consignment sales continued for both fresh fish and frozen fish until the system of normal sales was introduced in 1968".

A powerful sales network based around the National Nissui Association was eventually to make a huge contribution to Nippon Suisan's postwar reconstruction.

Section III

Development and Expansion during Japan's Era of Rapid Economic Growth

Chapter 1: Laying the Groundwork for Growth

1950–1955

Part 1 The Korean War and Special Procurements

Falling into recession due to the so-called “Dodge Line” and subsequent “Dodge Recession”, the Japanese economy was saved by the outbreak of the Korean War in June 1950. The Korean War generated economic effects that were favorable to Japan's economy. Demand for special procurements of military supplies by United Nations forces in Korea had ripple effects on Japan, an industrialized nation geographically situated near the Korean Peninsula. And the international repercussions of the special procurements led to expanding exports from Japan.

On the other hand, as tensions rose between the Eastern and Western Blocs with, among other developments, the emergence of the German Democratic Republic (East Germany) and the People's Republic of China in 1949, the United States worked to make peace with Japan with an eye to keeping it as a U.S. ally. However, the Soviet Union was wholly opposed to the U.S.'s intentions, and even members of the Western Bloc—namely Australia, New Zealand, the United Kingdom, the Philippines, and Burma among others—felt that American peace overtures to Japan were overly magnanimous. The U.S. assuaged the concerns of these Western Bloc nations by signing security treaties and defense treaties with them. Then, on September 8, 1951, the U.S. signed a peace treaty with Japan in San Francisco. The Japan–U.S. Security Treaty was concluded in the afternoon of the same

day.

In 1952, following the security treaty's conclusion, ceasefire talks began in Korea. This same year, South Korea issued a declaration concerning maritime sovereignty that established the so-called “Syngman Rhee Line”. The following year, 1953, an armistice agreement was signed on the Korean Peninsula, and with it came the full-scale arrival of the Cold War era in East Asia.

During this time, Japan's industrial production and real GNP (gross national product) surpassed their prewar levels in 1951 as a result of the Korean War's special procurements. The following year, 1952, the Japanese economy began to see signs of a consumption boom. Demand for textile goods grew suddenly, driven by Korean War-caused interruptions of raw material imports and rapid declines in production. At the same time, demand for furniture and fixtures, which had been sluggish, also improved rapidly. The result was a “consumption boom” that reflected high growth in consumer spending. This boom continued into 1953 and became what an economic white paper called an “investment boom”. However, in 1954, the economic cycle once again brought Japan's economy back into recession. In 1952, restoration of the corporate names of former *zaibatsu* was allowed, and as a result, Mitsubishi, Mitsui, Sumitomo, and other companies retook their former names.

Later, in 1955, Japan entered an era of rapid economic growth under what became known as the “1955 System”. This was a political system formed by two main parties: the Liberal Democratic Party, which was born when conservative forces joined together, and the Japan Socialist Party, which stood as a secondary party.

In 1955, the cabinet of Ichiro Hatoyama approved a five-year plan for economic self-support that called for Japan’s economic autonomy and full employment.

Then, in 1957, Nobusuke Kishi’s cabinet announced a new long-term economic plan. This same government also devoted itself to shifting its labor policy to one based on labor-management cooperation while expanding employment and eliminating wage disparities. These policy directions were continued in an “income-doubling plan” put forth by Hayato Ikeda, who had previously supported the Dodge Line policy as Minister of Finance and who became Prime Minister in December of 1960.

Part 2 Establishing Postwar Maritime Order

The Truman Proclamations and Disturbance of Postwar Maritime Order

In September 1945, immediately following the end of World War II, U.S. President Truman made two proclamations (the so-called “Truman Proclamations”) that laid out the United States’ basic policies regarding preservation zones for fishery resources and continental shelves.

The first proclamation states with regard to preservation zones for fishery resources that “the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States, subject to its jurisdiction and control”.

And, the second states with regard to the continental shelf that “the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation [to a depth of 200 m] is reasonable and just”. Factors behind this proclamation were the fact that development of American oil drilling technologies had advanced to a point where drilling beyond three nautical miles (approximately 5.6 km) was possible, and the emerging need to clarify federal and state authority for licensing oil drilling and tax affiliation.

Regarding high-seas fishing off the coasts of the U.S., these proclamations intended to preserve fishery resources by establishing that preservation zones

would be set up by the U.S. in areas where American fishermen had traditionally operated alone, and based on agreements with other countries in areas where both American and foreign fisherman had operated together. It was said that this approach was taken as a precaution against the reemergence of Japan’s prewar practice of actively moving into fishing grounds. In response, Prime Minister Shigeru Yoshida said in a letter to U.S. Secretary of State Dulles in February 1951 that Japan was prepared to enter into fishery agreements with other countries as soon as it regained its sovereignty. The Prime Minister also said that Japan would prohibit operations in new preserved fisheries that are outside marine areas in which Japan operated prior to the war.

The Truman Proclamations served to ignite claims by coastal countries that the marine areas around them were their own territorial waters. From 1946 to 1951, Mexico, Argentina, Panama, and other Latin American countries stretched the meaning of the proclamations to assert their jurisdiction over offshore fisheries as well as substantial expansions of their territorial waters. In August of 1952, the four nations of Chile, Ecuador, Peru, and Costa Rica issued the “Santiago Proclamation”, thereby declaring their complete sovereignty and jurisdiction over waters out to 200 nautical miles from their coasts. The proclamation later became the source of a unified view among Latin American nations that their territorial waters extended out for 200 nautical

miles. It also influenced South Korea's establishment of the "Syngman Rhee Line" in the oceans around Japan.

In this way, nations began claiming territorial waters ranging from three nautical miles to 200 nautical miles and thereby disrupting maritime order.

Meanwhile, as a new body launched in October 1945, the United Nations established the International Law Commission to codify international laws. And one of the tasks the U.N. entrusted to the commission was the codification of a maritime law. From 1951 to 1956, 15 esteemed international legal scholars deliberated maritime law within the commission. These deliberations led to the preparation of a draft Law of the Sea that took into account the conclusions of the International Technical Conference on the Conservation of the Living Resources of the Sea that was held in Rome in 1955. The commission also recommended that national representatives should be invited to an international forum to study the Law of the Sea. Taking this recommendation, the United Nations held an international meeting on the matter in Geneva in February 1958. It should be noted that Japan gained United Nations membership in 1956.

This meeting was the First United Nations Conference on the Law of the Sea (UNCLOS I). It

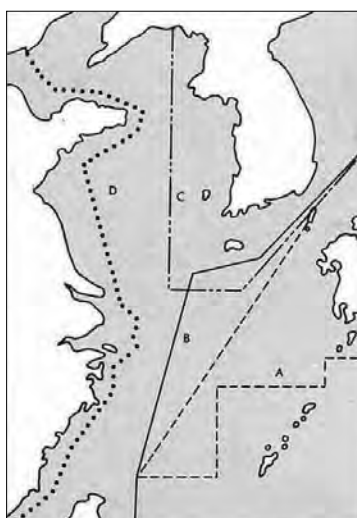
was attended by 86 countries, including Japan. The conference resulted in the adoption of the so-called "four Geneva Conventions on the Law of the Sea": The Convention on the Territorial Sea and Contiguous Zone, the Convention on the High Seas, the Convention on Fishing and Conservation of Living Resources of the High Seas, and the Convention on the Continental Shelf. It deserves mentioning, however, that no agreement was reached on the most basic problem of territorial water size.

Abolishment of the MacArthur Line

Three days before the San Francisco Peace Treaty came into effect on April 28, 1952, the "MacArthur Line", which had been in place since September 1945, was abolished. The purpose of the MacArthur Line was to promote the fishing industry within limited fishing grounds to satisfy postwar Japan's food demand. During the years prior to the line's removal, Japan's fishery production expanded with the building of fishing boats and procurement of fishing equipment. At the same time, restrictions on Japanese fishing and fisheries were gradually relaxed. However, the line seriously constrained the development of Japan's fishing industry, which sought to move onto the high seas and expand. Thus, the MacArthur Line's abolition opened the door to the development of Japanese fishing.

On the other hand, the MacArthur Line's abolition meant that Japan—now a sovereign nation—was entering the difficult era of nation-to-nation fishing negotiations in a post-Truman Proclamation world. Here, Article 9 of the Treaty of San Francisco states the following: "Japan will enter promptly into negotiations with the Allied Powers so desiring for the conclusion of bilateral and multilateral agreements providing for the regulation or limitation of fishing and the conservation and development of fisheries on the high seas". Thus, the Japanese government began entering fishery negotiations immediately following the treaty's coming into force.

Rough map of western fishing ground restrictions



- A----- MacArthur Line (initial permission)
- B———— MacArthur Line (secondary expansion)
- C..... Rhee Line
- D..... Kato Line

Establishment of the “Syngman Rhee Line” and Japan–R.O.K. Negotiations

In October 1951, GHQ mediated an agreement to hold a meeting for restoring diplomatic relations between Japan and South Korea. Among other topics, this meeting would discuss fishery-related issues between the two countries. However, on January 18, 1952, just prior to the meeting, South Korean President Syngman Rhee issued a “proclamation of sovereignty over the seas”. The president declared that South Korea had sovereignty over mineral and fishery resources in a vast sea area around the Korean Peninsula and that it would place these resources under its management. This was three months prior to the MacArthur Line’s abolition.

The Japanese government protested the drawing of this so-called “Syngman Rhee Line” (Rhee Line) on the grounds that it violated the principles of freedom of the seas and of development and protection of marine resources of the high seas. Nonetheless, South Korea began stepping up its seizure of Japanese vessels within the Rhee Line on April 25, 1952. Seoul justified its actions by citing the Truman Proclamations as well as fishery restrictions being enforced by Latin American countries, and later by mentioning the “sea defense zone” (the “Clark Line”) that UN forces had established around the Korean Peninsula in September 1952.

Japan responded by dispatching private self-defense vessels to ensure the safety of its fishing boats near the Rhee Line. Seizures of fishing boats nevertheless continued and Japan was forced to refrain from operating in those waters.

Until the Rhee Line was abolished with the signing of a fisheries pact between Japan and the Park Chung-hee administration in 1965, South Korea seized a total of 328 Japanese vessels and detained 3,929 people. Forty-four Japanese died or were injured as a result of these seizures.

Conclusion of a Japan–China Fishery Agreement

On December 7, 1950, a Japanese fishing boat was fired upon and seized by Chinese vessels in the East China Sea. This was followed by similar acts in the following year and thereafter. These incidents were the result of a December 1950 decision by the Commission of Military Administration for Eastern China’s fisheries management bureau to establish a no-bottom trawl fishery zone along China’s coasts. However, the existence of this demarcation—the so-called “Kato Line”—was not reported to Japan by China.

The frequent seizures were a significant threat to west-water trawling operators. In 1952, they launched a Japan–China fisheries roundtable to discuss the issue. They also requested that the Japanese government and U.S. forces in Japan provide protection, and took repeated steps to demand compensation. However, their efforts failed to produce clear results, as Japan and China had no diplomatic relations at the time and Sino–American relations had worsened.

In 1952, Japan and China signed a trade agreement that provided the foothold needed to resolve the problem. In 1953, Japanese crewmen held by China were returned to Japan, and it became clear that China had held them for reasons that included violation of its territorial waters, obstruction of coastal fishing, and suspicion of spying. In addition, China’s seizures of Japanese fishing boats began falling off about this time, as international tensions showed signs of relaxing against the backdrop of the Korean War armistice and the Geneva Conference.

In October of 1954, Chinese Premier Zhou Enlai informed a visiting Japanese cultural mission that China was prepared to enter into fishery negotiations. This led to the establishment of the Japan–China Fishery Association in November and the beginning of negotiations in 1955. The result was the signing of a non-governmental fishery agreement on April 14. The agreement came into effect on June 13, 1955.

Valid for a period of one year, this agreement was

later extended twice. However, in May of 1958, a Japanese youth pulled down the Chinese flag at a stamp exhibition in Nagasaki. This *Kokki Jiken* (flag incident) as it was known soured Sino–Japanese

relations and led to China’s refusal of Japan’s request to extend the agreement once more. Consequently, Japanese fishing boats continued to voluntarily restrain their operations.

Part 3 Fishery Negotiations and the Resumption of Fishing Operations

1. International Convention for the High Seas Fisheries of the Northern Pacific Ocean, Japan–U.S.S.R. Negotiations on Fishery, and Fishery in the North-Seas

Signing of the International Convention for the High Seas Fisheries of the Northern Pacific Ocean and Resumption of Mother Ship-Type Fishery of Salmon and Trout

Beginning in November 1951, Japan, the United States, and Canada began holding meetings to discuss negotiations for fishery negotiations based on Article 9 of the Treaty of San Francisco. The Japanese side maintained a careful posture throughout the meetings, as it saw their results as a precedent for negotiations with other countries. On the other hand, the American and Canadian sides also asserted their own rights, and as a result the meetings did not proceed smoothly. However, ultimately Japan won permission to operate in western waters by agreeing to voluntarily refrain from salmon and trout fishing east of 175° west longitude. Japan also agreed that if its boats violated this condition, they could be boarded, inspected, or seized. Meanwhile, Japan was allowed to begin mother ship-

type fishery of crab, a practice that it had pursued prior to the war.

After some 50 meetings, a basic convention and annex were drafted and adopted. They were signed by plenipotentiaries of the three countries on May 1952. And on June 12, 1953, the International Convention for the High Seas Fisheries of the Northern Pacific Ocean came into force.

Around this time, the profitability of tuna fishery and Antarctic whaling, which had supported Japan’s fishing industry in the days immediately following World War II, was worsening. Japanese marine products companies thus began seeing the resumption of north-sea fishery as a path to business recovery, and they applied en masse for the fishery permits needed to do so.

In 1952, three companies—Nippon Suisan, Taiyo Gyogyo, and Nichiro Gyogyo—were granted permits to begin north-sea mother-ship salmon and trout



Tenryu Maru on its first postwar north-sea expedition

fishery. Because operations during this year were to be on a trial basis, restrictions were placed on sea areas of operation and operational methods. Among these restrictions, the number of mother ship fleets that could operate was limited to three. Even so, for these three companies seeking business recovery, the reopening of north-sea operations was the messiah they had been hoping for.

Taiyo Gyogyo set sail with a fleet of 38 ships, while Nichiro Gyogyo did so with a fleet of 16. Nippon Suisan dispatched the trawler *Tenryu Maru* as its mother ship, together with 10 catcher boats and two research ships. These three fleets embarked on their first fishing voyages in May of 1952.

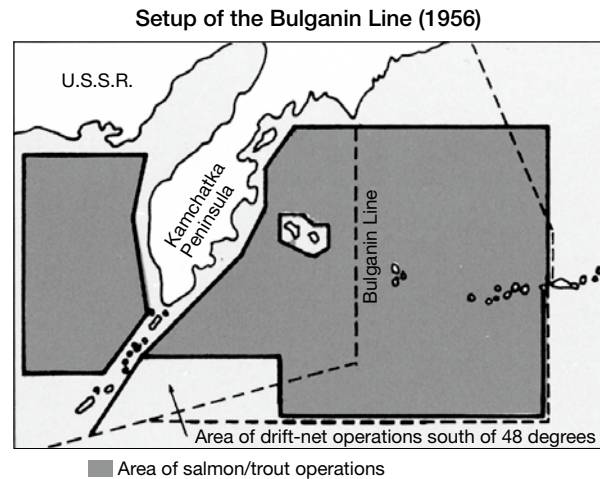
Of the three fleets, the one making the largest catch belonged to Taiyo Gyogyo. It hauled in a total of 1,22 million fish, which was 58% of all three companies' total catch. This number far exceeded Nippon Suisan's catch of approximately 471,000 fish (22%) and Nichiro Gyogyo's catch of roughly 429,000 fish (20%).

The catches were landed and sold as frozen fish, salt-cured fish, and salted salmon roe. Partly because they were the first north-sea salmon and trout products of the postwar era, the catches were traded at high prices in competitive bidding by marine products dealers. As for can products for export, Nippon Suisan and Nichiro Gyogyo each produced just 2,000 boxes (48 half-pound cans to a case), as they judged that such products would not be profitable.

The Japan–U.S.S.R. Convention on High Seas Fisheries in the Northwest Pacific Ocean and Mother Ship-Type Salmon and Trout Fishery

In December of 1955, Agricultural Minister Ichiro Kono announced a concept for systematizing north-sea salmon and trout fleets. The next year, 1956, five fleets were added to make 19 fleets leaving port. And their area of operations expanded greatly in the seas to the east and west of Kamchatka.

The concept sought to increase business efficiency. It established a Nippon Suisan grouping (two Nippon Suisan fleets and one Hokoku Suisan K.K. fleet), a



Taiyo Gyogyo grouping (three Taiyo Gyogyo fleets, one Hakodate Kokai Gyogyo K.K. fleet, and two fleets affiliated with the Hokkaido Fisheries Bureau), a Nichiro Gyogyo grouping (six Nichiro Gyogyo fleets and one fleet affiliated with Taiyo Reito Bosen K.K.), and other fleets (two Kyokuyo Hogeï fleets and one Hoko Suisan fleet).

However, just as preparations were being made for these fleets to begin operations, something happened that shook the entire Japanese fishing industry.

On March 21, 1956, the Soviet government announced its decision to temporarily establish a "salmon and trout fishery regulation zone" on the high seas around the Kuril Islands. Claiming that lower salmon and trout catches were being caused by Japanese overfishing, Moscow established what became called the "Bulganin Line" as a means of preventing such overfishing. It limited catches inside this line to 500,000 centners (approximately 22,700 tons) and placed the Soviet Ministry of Fisheries in charge of supervising the zone. The Japanese government protested this move as a violation of international law, but began fishery negotiations with the U.S.S.R. nonetheless.

On May 9, 1956, Agricultural Minister Kono met with Premier Minister Bulganin. This meeting subsequently led to the May 14 signing of the Japan–U.S.S.R. Convention on High Seas Fisheries in the Northwest Pacific Ocean, which established quotas of 65,000 tons within the Bulganin Line. Moreover,

the two sides decided to establish a Japan–Soviet Fisheries Commission. The commission was charged with holding deliberations on various issues, including correction of annexes attached to regulatory actions and setting of yearly quotas for specific fish types.

Following these developments, the previously rocky Japan–U.S.S.R. negotiations for restoration of diplomatic ties moved forward under Prime Minister Hatoyama and Premier Bulganin and eventually led to the signing of the Japanese-Soviet Joint Declaration on October 19, 1956. The fisheries convention came into effect simultaneously with the Japanese-Soviet Joint Declaration. The result was that Japan's fishing industry was now subject to regulation in the North Pacific Ocean as well.

On May 14, 1956, the delegation that had just concluded the fisheries convention laid out Japan's north-sea fishery policy for fiscal 1956. This policy reduced Japan's fifth fishing expedition down to a total of sixteen fleets: two Nippon Suisan fleets, five Nichiro Gyogyo fleets, two Taiyo Gyogyo fleets, and seven other fleets. These fleets were unable to reach their allotted yearly quota of 65,000 tons of salmon and trout within the regulated zone, as their total catch reached just 47,775 tons.

Japan's mother ship-type salmon and trout fishery became subject to the decisions of the Japan–Soviet Fisheries Commission beginning with the sixth

expedition of 1957. The sixth expedition enjoyed a bountiful catch and all fleets returned to port ahead of schedule. A bumper haul of sockeye salmon made it possible to increase production of canned sockeye salmon, a highly valued export item. As a result, Japan's production of canned salmon and trout in 1957 exceeded 1 million boxes for the first time in the postwar era.

The allotted quota for the seventh expedition of 1958 was 110,000 tons. However, the loss of one fleet to the Sea of Okhotsk, which enjoyed exceptional operating conditions, and poor weather following the fleets' departure led to predictions that some fleets would return with catches that were far short of their allotments. In order to maintain the quota for the following fiscal year, the fleets took various measures to avoid this problem, including tacking shortfalls onto fleets that had good catches. In the end, this allowed them to squeeze by with the claim that they had reached 99% of the quota.

Later, the salmon and trout quota was reduced to 85,000 tons in the third round of Japan–U.S.S.R. fishery negotiations of 1959 and 67,000 tons in the fourth round of 1960. In the fifth round of negotiations in 1961, the quota was further dropped to 65,000 tons and a new no-fishing zone was added in the sea area south of 48° north latitude.

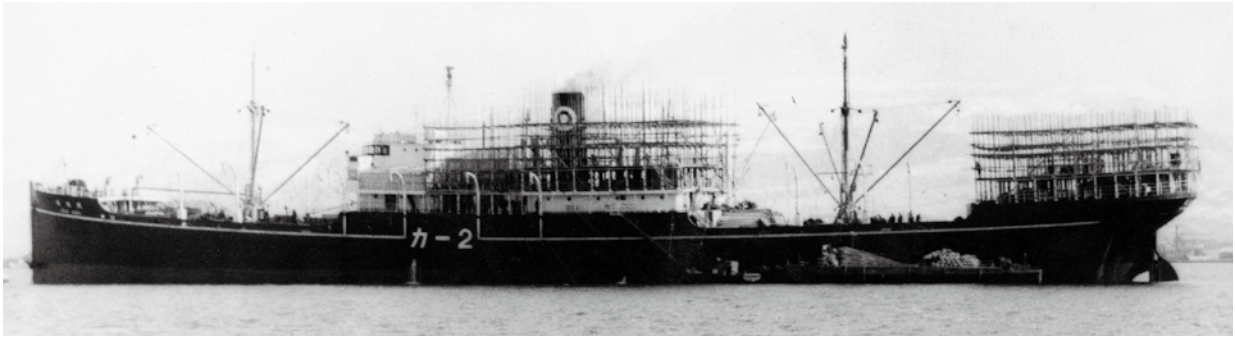
2. Resumption of Mother Ship-Type Crab Fishery

Resumption of Mother Ship-Type Fishery in Bristol Bay

Mother ship-type crab fishery was a practice that Japan started during the Taisho period (1912–1926) but stopped during and after World War II. It ranked alongside salmon and trout fishery as an important north-sea operation for Japan's fishing industry.

As meetings for the International Convention for the High Seas Fisheries of the North Pacific Ocean got underway in November 1951, it became apparent

that mother ship-type crab fishery in the eastern Bering Sea's Bristol Bay would become possible. Crab fishery was expected to deliver high profitability, and thus Nippon Suisan, Taiyo Gyogyo and Nichiro Gyogyo each applied for permits from the Fisheries Agency. However, the king crab fishing grounds in Bristol Bay were small, making operations by three fleets unrealistic from the standpoint of resource preservation. Because of this, the Fisheries Agency proposed establishing a new company or even joint management by the three major companies. However,



Tokei Maru: Sent to Bristol Bay after postwar resumption of mother ship-type crab fishery

the three companies rejected these proposals and insisted on operating independently, citing their own respective advantages in crab fishery. For its part, Nippon Suisan emphasized its strong prewar performance in north-sea crab resource management and technical proficiency.

This squabble sparked a major political issue. The Fisheries Agency sought to resolve the problem by proposing a three-way joint management scheme in which Taiyo Gyogyo would operate the fishing boats, Nippon Suisan would provide the personnel, and Nichiro Gyogyo would take charge of sales. However even this proposal did not go far. Ultimately, in order to make fishing the priority, Nippon Suisan indicated that it would leave the final decision to the others, while Taiyo Gyogyo and Nichiro Gyogyo agreed to three-way joint management. However, there was a growing number of people in the U.S. who misinterpreted this three-way arrangement as actual fishing by three companies and opposed it as such. Consequently, GHQ advised cancelling fishery operations in 1952, thereby ensuring that no operations would take place that year.

The next year, 1953, the Japanese government took steps to avoid repeating the problem of the previous year. From the start, it announced a policy that only one mother ship would be permitted to engage in crab fishery in Bristol Bay, and that the permit would be issued in response to joint applications submitted based on mutual coordination among concerned operators. Given this permit policy, the presidents of Nippon Suisan, Taiyo Gyogyo, and Nichiro Gyogyo held discussions that actualized three-way joint

management. Regarding the problematic issues of capital and sales, the presidents decided to resolve the former by splitting responsibility among the three companies, and the latter by dividing canned king crab products evenly among the three companies, who would affix their own labels to their shares. The permit period was set at three years, from March 28, 1953, to March 27, 1956. The operating area was limited to the Bering Sea located east of 166° west latitude, with the exception of areas within three nautical miles of the coastline. The number of cans that could be produced was limited to 50,000 boxes. Restrictions were also placed on by-catch of salmon, trout, halibut, Pacific herring, and other fish.

On March 30, 1953, six catcher boats set sail from Hakodate for Bristol Bay. They were followed on April 8 by the *Tokei Maru*.

Onboard was Yasuo Haraguchi, a managing director at Nippon Suisan who served as the fleet's leader. After arriving in Bristol Bay, the *Tokei Maru* fleet began operating on April 20. It concluded operations on April 16, having produced its quota. The entire amount of canned king crab was exported to the U.S., which had great demand for the product. The export value totaled 540 million yen. Thus, the catch proved to be a valuable source of foreign currency for Japan at that time.

Subsequently, a second and then a third fleet left port in fiscal 1954 and 1955. Because these fleets were still operating within the permit period, they were managed like the first fleet under the three-way arrangement. The number of cans produced was fixed at 57,000 boxes to avoid provoking the U.S.

Thus, crab fishery in Bristol Bay had proceeded smoothly up to the third expedition and produced excellent results.

Operations under the three-way arrangement continued as is until 1962, when two fleets were formed—one around the *Tokei Maru* (Nippon Suisan and Hokoku Suisan) and one around the *Dainichi Maru* (Taiyo Gyogyo and Nichiro Gyogyo). The following year, 1963, a much larger joint management arrangement involving two fleets and nine companies was formed. The permitted number of produced cans peaked this year at 235,000 boxes.

Mother Ship-Type Crab Fishery in Soviet Waters

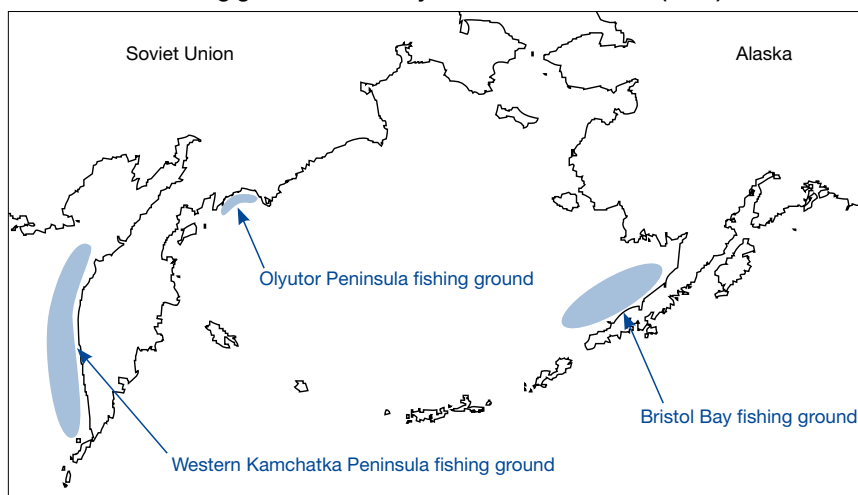
On the other hand, marine products companies maintained a careful stance vis-à-vis operations in Soviet waters. This was partially due to concerns over vessel seizures by the U.S.S.R. However, given progress in north-sea fishery, which had resumed in 1952, and predictions that high-seas operations would be safe based on successful operation of Kyokuyo Hoge's *Fuei Maru* cod fleet in 1954, the government decided to permit mother ship-type crab fishery off the western coast of Kamchatka in 1955. Although this decision led to a flood of permit applications, in the end two fleets were granted permits as joint management partnerships, with one fleet operated by Nichiro Gyogyo and Nippon Suisan and the other operated by Taiyo

Gyogyo and Hokuyo Suisan.

The Nichiro Gyogyo and Nippon Suisan partnership had trouble deciding on a mother ship, as both companies insisted on being the leading fishing entity. Ultimately, mediation by the Fisheries Agency led to the decision that Nippon Suisan would be the leading entity and that its *Yoko Maru* would be the mother ship. Profits would be distributed so that Nippon Suisan and Nichiro Suisan would receive three-fourths and one-fourth, respectively. As for the Taiyo Gyogyo and Hokuyo Suisan partnership, it was decided that the Taiyo's *Hakuyo Maru* would be the mother ship and Hokuyo would be the leading entity. Profits were to be split evenly.

Initially, the Fisheries Agency limited production from mother ship-type crab fishery in Soviet waters to 60,000 boxes of canned king crab per partnership. However, catches were far better than anticipated, prompting the partnerships to ask the Fisheries Agency to raise their quotas by an additional 10,000 boxes. Noting improved Japan–Soviet relations, the agency complied on the conditions that the partnerships conducted their operations over as wide an area as possible and that they understood that the expanded 70,000-box quotas were for the current fishing year only. Then, having achieved their production targets, the *Yoko Maru* returned to port two weeks early in August, followed by the *Hakuyo Maru* returned in September.

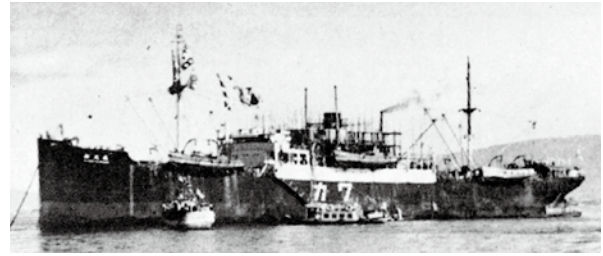
Fishing grounds visited by north-sea crab fleets (1956)





Yoko Maru

In 1956, the Fisheries Agency used the previous year's success as the basis to grant Nippon Suisan, which had few permits for salmon fishery, permission to independently engage in trial operations off of Olyutor Peninsula (eastern Kamchatka). Moreover, it gave the four companies that had operated within partnerships the previous year permission to go it alone. Blessed with bountiful fishing, the four fleets had a combined production of 313,000 boxes that year. With the entire amount going to exports, this business became highly profitable for each company. Nippon Suisan dispatched its *Yoko Maru* fleet to the area west of the Kamchatka Peninsula (western Kamchatka) as well as a fleet centered on the *Shokyu Maru* to the sea off the Olyutor Peninsula for trial operations. However, the *Shokyu Maru* fleet's results were poor, with production reaching just 54,500 boxes of the allotted 70,000. In the end, Nippon Suisan achieved a total production of 147,000 boxes by having



Shokyu Maru

the *Yoko Maru* make up the shortfall. However, it decided not to send the *Shokyu Maru* out in subsequent years.

As for operations in 1957, there were concerns about possible negative impacts from the Japan–U.S.S.R. Fisheries Convention that was concluded in 1956. However, in general, Japan's fishery requests were largely accepted and no restrictions were placed on production. Consequently, the Fisheries Agency allowed four fishing fleets to leave port, the same number as the previous year. In terms of production, each company was initially issued a quota of 70,000 cans; however, these quotas were later raised. Nippon Suisan—which had shown strong performance but whose *Shokyu Maru* fleet out of operation—was allotted a quota of 92,400 boxes. Taiyo Gyogyo, Nichiro Gyogyo, and Hokuyo Suisan were each allotted quotas of 80,000 boxes.

3. Tuna Fishery, West-Water Trawling, and Mother Ship-Type Trawl Fishery

Rapid Expansion of Tuna Fishery

Tuna fishery was one of the forms of fishery that were restricted by the MacArthur Line. It was also a business looked to for early recovery, as it received financing to help it get back on its feet as part of efforts to increase food production by the Japanese government and GHQ. Japan's participation in the tuna business expanded rapidly following the MacArthur Line's second fishery zone expansion in June 1946, and the number of licensed tuna boats exploded from 323 in 1946 to 1,146 by the end of 1948.

On top of active government-led efforts to support

tuna fishery, there were expectations that demand for canned tuna both in Japan and the U.S. (which had been a tuna exporter prior to World War II) would grow. Exports of canned tuna to the US started in 1948, followed by frozen tuna the following year. In addition, GHQ began allowing mother ship-type tuna fishery in May 1950, a development that led to participation by major marine products companies and further escalation of tuna fishery.

The result was a period of dramatic growth in the tuna business. However, this period was abruptly halted in March 1954, when the tuna boat *Fukuryu Maru No. 5* was exposed to radiation produced by an

American hydrogen bomb test on Bikini Atoll of the Marshall Islands. The test exposed all 23 crewmembers of the *Fukuryu Maru No. 5* to radiation and subjected many other fishing boats to radioactive fallout. It also ruined tuna fishing grounds for 425 tuna boats and irradiated and forced the disposal of some 326 tons of tuna catch onboard boats. The resulting damage to tuna's reputation among Japanese consumers led to a precipitous drop in fish prices that even hurt many tuna fishing businesses, distributors, and processors with no connection with the irradiated tuna. Their vast accumulated stocks became ingredients of fish sausage and ham products that major marine products companies were actively promoting.

Strong tuna demand returned once the uproar had settled down, and catches once again grew spectacularly. However, the growth of yields far outpaced growth in demand. This caused major marine products companies to reinforce their freezing facilities and raise their production ratios of frozen tuna in order to avoid oversupply.

Transition of Fishery in West-Water Fishery

For five years following the MacArthur Line's establishment in 1945, west-water trawling in the East China Sea and Yellow Sea rapidly recovered and prospered. A large number of new boats were constructed and yields surpassed prewar levels. Meanwhile, while west-water otter trawling also saw rapid improvements, it did not reach prewar levels. This was because west-water trawling boats were cheaper to construct than trawlers and better adapted to the fishing grounds there.

The massive yields led to smaller resources, particularly of high-quality fish, and by extension lowered productivity. In search of new resources, the government petitioned GHQ to expand the MacArthur Line in 1947 but was refused. A result was illegal fishery that spurred a combined 20% reductions in the number of west-water trawling boats in July and September 1950.

Then, South Korea started seizing Japanese fishing boats around 1947. By the end of 1952, South Korea seized some 130 vessels. Meanwhile, between May 1948 and August 1949, 29 vessels were seized and 2 vessels sunk by Taiwan. And 107 vessels and 1,281 crewmembers were seized by the People's Republic of China between December 1950 and the end of 1952.

The San Francisco Peace Treaty was signed in 1951 and came into force in April 1952, and with it came the MacArthur Line's abolishment. In tandem with this move, however, were China's drawing of the Kato Line in February 1950 and South Korea's establishment of the Rhee Line in January 1952. For Japan, a newly sovereign country on the road to recovery, these lines took a heavy toll on its west-water trawling.

The fishery agreement that Japan and China concluded in 1955 expired in June 1958 when China refused to extend it. Japan subsequently refrained from fishery operations during the next five years, and the Japanese government maintained a stance that consistently paid attention to China's concerns. This included strictly controlling illegal Japanese fishing within the Kato Line. Nonetheless, violations by Japanese operators continued, and incidents of Chinese fishing boats' firing on Japanese vessels did not abate. The day when Japanese vessels could operate safely seemed a long way away.

In the meantime, Japan and South Korea concluded negotiations for the mutual release of detainees in December 1958. However, although 922 Japanese crewmen held in South Korea did indeed return home in the wake of the negotiations, seizures of Japanese boats by South Korea did not slacken and the number of detainees continued to grow.

Construction of west-water trawling boats also continued into the 1950s, with between 50 and 100 vessels being built each year. Looking to achieve larger catches, operators sought to improve their productivity by converting to steel vessels, building larger vessels, and modernizing their equipment. Consequently, yields grew dramatically. Factors behind this were the

MacArthur Line's abolition and establishment of fishery safety with the Japan–China non-governmental fishery agreement. However, while catches of medium-priced fish (such as lizardfish, white croaker, cultassfish, and conger eel) and miscellaneous fishes pureed to make fish paste grew, those of high-priced fish (such as sea bream, tilefish, and yellow sea bream) decreased.

Permission to operate in the South China Sea was granted with the establishment of temporary regulations on trawling in July 1952. Thus, Japanese operators began operating west-water otter trawlers and west-water trawling boats on a trial basis. However, the next year (June 1953), operators were permitted to send fleets to the South China Sea as per the conventional practice by stopping their west-water otter trawling and west-water two boats trawling. In addition, operators' permits for west-water fishery were withdrawn, and they were authorized to operate in the South China Sea only. At the same time, they were permitted to use larger ships for deep-seas fishery. Accordingly, permission to operate in west-water fishing grounds was withdrawn and a trend toward the construction of large fishing boats began. Both Nippon Suisan and Taiyo Gyogyo built large trawlers in the 1,000-ton class. However, voyages to the South China Sea subsequently declined, and operations began shifting to the Bering Sea from 1954.

In this way, the number of west-water otter trawlers operating in west-water fishing grounds began declining around 1953, and the number of west-water trawling boats having superior attributes in terms of efficiency and profitability increased.

Beginning of Mother Ship-Type Trawl Fishery

From around the mid-1950s, marine products companies began to sense that operating in west-waters offered only limited resources and profitability. They thus began north-sea mother ship-type trawl business as a substitute business.



Itsukushima Maru

Nippon Suisan and Taiyo Gyogyo began mother ship-type trawl fishery in the Bering Sea in 1954. Both companies engaged in refrigerated factory ship-based flounder fishery in which a licensed mother ship transferred catches to a refrigerated ship. Both companies produced frozen fish such as yellowfin sole, Alaska plaice founder, and flathead sole and achieved considerable success. Two fleets operated again in 1955; however, the number doubled to four in 1956 and 1957, and the size of operations gradually grew as other companies joined in. In 1958, fishmeal factory ship-based fishery resumed for the first time in 20 years. In line with this development, mother ship-type fishery regulations were revised to bring a shift from conventional catch transshipment permits to mother ship-type trawl fishery permits.

Likewise in 1954, small-scale trawl fishery by independent vessels also began in the Bering Sea region for the purpose of producing frozen flounder and other fish.

Bottom trawl fishery in the Sea of Okhotsk (off the western shore of the Kamchatka Peninsula) also started in 1954. Fourteen vessels left port with the primary purpose of catching cod. However, initial catches were not good, and it was not until 1957 that fishery activities finally got into full swing.

Moreover, Nippon Suisan's trawler *Uji Maru* began trial operations off the Olyutor Peninsula in 1958. Here, the company developed its own fishing ground for crab, halibut, cod, Alaska pollack, and other fish.

Part 4 Development of Nippon Suisan's Marine Products Business

Development of the North-Sea Mother Ship-Type Salmon and Trout Business and Bottom Trawl Business

Having formulated a vision for its mother ship-type salmon and trout business in north-sea fishing grounds through its first expedition in 1952, Nippon Suisan set out to expand the scale of the second expedition by replacing the mother ship with the *Kaiko Maru*. It also expanded the number of participating catcher boats from 12 in the first expedition to 27, including a survey vessel. The result was a record catch value from frozen and salted fish alone of 470 million yen.

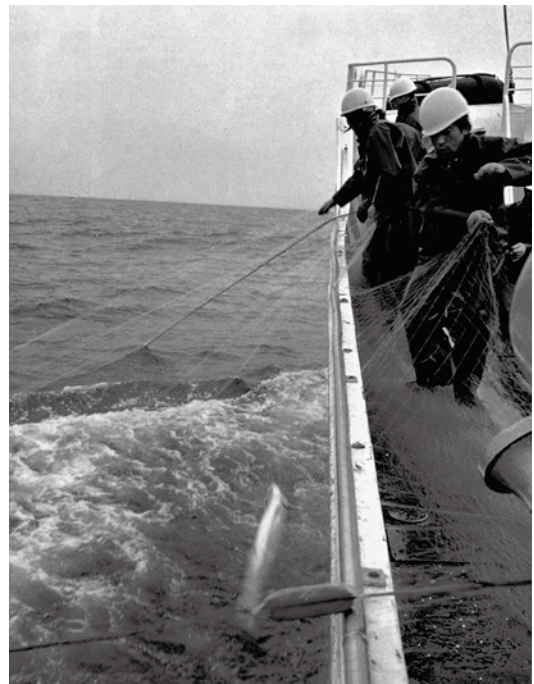
The results of trial operations during these two

expeditions gave Nippon Suisan confidence that it could enjoy stable operation and high profitability in mother ship-type salmon and trout fishery. This confidence set the stage for full-scale operations beginning with the company's third expedition in 1954. The third expedition generated a much higher yield and, when canned products made with salmon and trout from Hokkaido's coastal areas were included, had a total production that was roughly 50% larger than the previous year's. Moreover, both domestic and overseas demand remained robust, generating a supply shortage that kept prices high. As a result, exports were particularly strong and largely surpassed the previous year's level.

Beginning with the fourth expedition, Nippon



Salmon/trout caught by a catcher boat are loaded onto a mother ship.



Hauling work on a catcher boat



Asama Maru



The mother ship *Miyajima Maru*



Kashima Maru

Suisan's affiliate Hokoku Suisan formed a fleet together with Hoko Suisan to participate in salmon and trout fishery. The expedition's catch was bountiful, particularly for trout, and produced a yield that was triple that of the previous year. However, the high yield led to a fall in prices for salted products and other products. Nippon Suisan and the other major marine products companies strove to maintain their profits by adjusting sales while watching market conditions. In canned goods exports, they coordinated their sales methods and prices within the framework of the Japan Salmon and Trout Canned Export Fisheries Cooperative that was formed in August 1955. This and other factors—including the effects of broader import permit applicability in the United Kingdom and growing interest from the United States due to lower production of canned salmon and trout products in Alaska and Canada—let to record production of 12,704 tons, far exceeding the previous year's result.

Thus, Nippon Suisan's north-sea mother ship-type salmon and trout business became an important component of its overall operations in the first half of the 1950s. In 1955, mother ship-type salmon and trout fishery accounted for 22% of production and 19% of total sales in all businesses.

Meanwhile, Nippon Suisan built the trawler *Asama Maru* in May 1954 to begin operating in the Bering Sea. She blazed a path to new fishing grounds by successfully producing 92 tons of frozen fish, two tons of salted cod, and two tons of salted flounder. In September of the same year, Nippon Suisan began flounder operations in the eastern Bering Sea with a fleet centered on the mother ship *Miyajima Maru*, which had previously been engaged in salmon and trout fishery. Although something of a secondary operation behind salmon and trout, this ship joined with the *Einin Maru*—a vessel jointly operated by Hokuyo Suisan and Taiyo Gyogyo that began operations at about the same time—to lift the curtain on later north-sea mother-ship trawl fishery. Leading five trawlers, the *Miyajima Maru* produced a total of 4,500 tons during this expedition.

Nippon Suisan subsequently lifted its mother ship-type trawl business in the eastern Bering Sea to full-scale status by dispatching the *Miyajima Maru* fleet again in 1955 and then two fleets centered on the *Miyajima Maru* and *Kashima Maru* in 1956.

Opening of the Nagasaki Branch and Strengthening of West-Water Trawling Business

Around 1952, the year the MacArthur Line was abolished, Nippon Suisan was gradually approaching the production capacity for west-water trawling business that it possessed prior to World War II.

In November of 1952, Nippon Suisan established a branch in Nagasaki to strengthen its west-water trawling business. It attached west-water trawling boats from the fisheries department of Kawanami Kogyo, a company it purchased in 1951, as well as some of the west-water trawling boats of its Tobata Branch to the new Nagasaki Branch. Otoharu Kajiyama, who had moved Nippon Suisan to Kawanami Kogyo after the war, was named the office's general manager. Kajiyama would later become a vice president of Nippon Suisan.

At the same time, Nippon Suisan enhanced its supporting functions in order to reinforce its framework for west-water trawling business. It purchased the Naminohira yard of Izutsu Shipyard Co., Ltd., and established Nagasaki Shipyard Co., Ltd., to repair its operating vessels. It also set up Fuji Gyokan K.K. as a division to manufacture and supply fish containers.

However, stronger fishery controls enforced by South Korea and China in the 1950s presented a serious problem for Nippon Suisan as it planned to expand its west-water trawling business.

Between 1952, when the Rhee Line was established, and 1959, Nippon Suisan vessels seized by South Korea numbered four trawlers and six bottom trawlers. And although, as a preventative measure, the company ordered its vessels to operate at a distance of at least 60 nautical miles from coastal islands, seizures continued unabated.



The west-water trawling boat *Koyaki Maru* purchased from Kawanami Kogyo

Despite such constraints, Nippon Suisan continued to construct west-water trawling boats. In 1953 it launched the *Tokiwa Maru*, *Onoe Maru*, *Suwa Maru*, *Ise Maru*, *Nishiyama Maru*, and *Tateyama Maru*, all wooden 57-ton west-water trawling boats. And in 1955 it launched the *Shinyo Maru*, *Takuyo Maru*, and *Katori Maru*, each of the 112-ton class.

With the Japan–China fishery agreement of 1955, Nippon Suisan enjoyed some measure of safety in its west-water business. This, combined with improvements in business efficiency, led to stable production and higher sales. The value of production, which stood at 1.5 billion yen in 1953, grew to 2.15 billion yen in 1958, while sales grew from 1.72 billion yen to 1.99 billion yen. However, this rate of growth was small compared to other businesses, and consequently the share of west-water business among all businesses shrank in terms of both production value and sales.

Nippon Suisan owned 23 of the total of 58 trawl fishery boats in Japan at its base for trawling business at Tobata Port. In all, it owned 11,343 tons of shipping and landed catches of 11,330 tons, or more than half of the national catch. However, restrictions on fishing grounds imposed by Japan’s neighbors led to overfishing and resource exhaustion, and ultimately west-water otter trawling business began to fall below west-water trawling business in terms of operational efficiency and profitability. This spurred Nippon Suisan to develop new fishing grounds, build larger trawlers, and move into deep-seas trawling business.



The west-water trawling boat *Unzen Maru No.23*, built in 1952 following the Nagasaki Branch’s founding

Antarctic Whaling from the Sixth Expedition and Later

The sixth Antarctic whaling expedition in 1951 left port with the *Tonan Maru* replacing the *Hashidate Maru* as the mother ship. The fleet was largely expanded from the customary 16 ships to 24 ships, making it the largest operation of the postwar period. The expedition was highly successful, catching 711 BWU (“blue whale unit” conversion) of baleen whales and 362 sperm whales, which are toothed whales. It produced 19,868 tons of whale oil and 9,277 tons of whale meat.

The seventh Antarctic whaling expedition of 1952 was stricken by an unforeseen disaster—the sinking of the refrigerator ship *Settsu Maru* with 3,800 tons of whale meat in its hold in March 1953. Fortunately the entire crew was rescued; however, the loss cast a damper on Antarctic whaling business that, to that point, had been progressing nicely. The accident meant that Nippon Suisan could not supply whale meat to wholesalers and led Rensaku Onishi, the company’s senior managing director, to resign to take responsibility.

While the *Settsu Maru*’s sinking threatened to harm Nippon Suisan’s standing in some industrial circles, the company recovered by taking fast action. In November of 1953, it launched the *Miyajima Maru*, a highly sophisticated refrigerator ship whose capabilities far eclipsed the lost *Settsu Maru*, and assigned her to the eighth Antarctic whaling expedition. The new ship not only served as a refrigerator ship for Antarctic whaling but also as a mother ship for the north-sea

mother-ship salmon and trout fleets and flounder fleet.

During this crisis, Nippon Suisan's fifth president, Kyuhei Suzuki, issued a manifesto stating the following: "It is said that a business is what people make of it. Even it has superior ships and flawless equipment, the business cannot improve efficiency if it does not have the people to operate them. On an individual level, what these people can achieve is limited and infinitesimal. However, they can show unlimited strength if they all band together and manifest oneness" (*Nissui Koho*, volume 4, October 1953). He also sent plaques bearing the phrase "*shinwa kanto*" (friendship and fighting spirit) written in his own hand to all operating ships. "*Shinwa kanto*" subsequently became Nippon Suisan's motto and was displayed in all vessels, factories, and offices.

The eighth Antarctic whaling expedition caught 811 BWU, an achievement that surpassed the sixth's mark. Additionally, its catch of sperm whales reached 322, a number that was roughly on par with the sixth expedition. Thus, Nippon Suisan's Antarctic whaling business had achieved its target production for the first time in the postwar era.

The ninth expedition broke the 1,000 BWU barrier for the first time ever. However, the tenth expedition's catch fell back below this mark the following year.

For the 11th Antarctic whaling expedition (1956 to 1957), Nippon Suisan dispatched two fleets by adding a fleet built around the 11,956-ton mother ship *Matsushima Maru*. The *Matsushima Maru* was originally a tanker constructed under the fifth planned shipbuilding phase of 1949. Although a tanker, she was built with an eye to future conversion into a whaler. The planned shipbuilding program was implemented by the Japanese government in 1947 for the purpose of alleviating vessel and capital shortages among shipping companies. It set shipbuilding tonnages and monetary amounts, and then allocated low-interest loans for shipbuilding capital and hulls to qualified shipowners. For a time after its construction, Nippon Suisan put the *Matsushima Maru* into

service as an oil tanker in the Persian Gulf, a move made out of consideration for wariness of Japan among other whaling nations, such as Norway and the United Kingdom. In the wake of Taiyo Gyogyo's dispatch of two fleets for the ninth Antarctic whaling expedition of 1954, Nippon Suisan modified the *Matsushima Maru* in June 1956 and then attached her to the 11th expedition after putting her through trials in north-sea whaling in July. Now as a company operating two fleets, Nippon Suisan posted excellent results that helped put the disappointing tenth expedition behind it.

Nippon Suisan began augmenting its entire whaling fleet in 1954. Until then, the company's standard whaler was in the range of 400 to 500 tons. Now, one after another, it was building whalers in the 750-ton class. The launch of the *Konan Maru No.10* in 1954 opened the door to a steady procession of new whalers. As a result, the fleet of six whalers that participated in the first Antarctic whaling expedition ballooned four times to 24 by the time of the 13th expedition (1958 to 1959).

As it augmented its fleet, Nippon Suisan's production increased in step. A comparison of the first and 13th Antarctic whaling expeditions shows that the baleen whale catch grew from 392 to 1,622 BWU; the sperm whale catch rose from 4 to 748; whale oil production grew from 3,700 tons to 35,759 tons; whale meat production increased from 10,608 tons to 31,837 tons; and liver oil went from zero to 42 tons. Thus, major increases were achieved in all categories.



Matsushima Maru operating as a whaling mother ship (she was later renamed the *Tonan Maru II*).

Resumption of North-Sea Whaling

In 1952, postwar north-sea whaling started when the Fisheries Agency announced that it would allow one fleet to operate. Whaling would focus on baleen whales and sperm whales around the Aleutian Islands north of 45° north latitude and the Bering Sea. Nippon Suisan joined with Taiyo Gyogyo and Kyokuyo Hogeï to send out a fleet centered on Kyokuyo's *Baikal Maru* as mother ship. Nippon Suisan was originally reluctant to join in north-sea whaling due to falling whale oil prices. However, it decided to go ahead with the three-way arrangement after considering future potential.

The first and second expeditions of 1952 and 1953 produced favorable results. This led Taiyo Gyogyo to

successfully apply to the Fisheries Agency for the addition of its *Kinjo Maru* as a mother ship. Thus, the third expedition of 1954 set sail with two fleets, one centered on Taiyo Gyogyo's *Kinjo Maru* and the other on the *Baikal Maru*.

For the fifth expedition of 1956, Nippon Suisan asked for and received permission to operate the *Matsushima Maru* as the mother ship of a fleet to concentrate on sperm whales. From this time, Nitto Hogeï and Nippon Kinkai Hogeï joined with Nippon Suisan, Taiyo Gyogyo, and Hokuyo Hogeï to form a five-way joint management framework to conduct north-sea whaling. Nippon Suisan and Taiyo Gyogyo provided mother ships on an alternating basis.

Part 5 Full-Scale Shipping Business

Postwar Shipping Business

Promoting the planned shipbuilding program as a means of economic revitalization, the government began efforts to reconstruct the ocean-going ship industry in the fifth planned shipbuilding phase of 1949. Theretofore, the government had established an entirely government-funded public ship corporation to promote demand for ships. With the public ship corporation's involvement, 93 vessels totaling 188,000 tons were constructed under planned shipbuilding phases 1 to 4. The corporation supplied just less than 60% of the required capital. It was disbanded in 1950 when GHQ lifted regulations designed to support the controlled economy.

When the Korean War broke out in June 1950, Japan's just privatized shipping businesses were suddenly faced with a shortage of ships. And although the special procurements and increasing imports and exports were helping revitalize the shipping industry, the profits were being enjoyed by only a very small percentage of shipping businesses.

The Korean War cease-fire talks of July 1951 marked the beginning of the end of the shipping boom. The

Baltic Dry Index (an index of tramp steamer freight charges calculated by the U.K.'s Chamber of Shipping) recorded 203.8 in May 1951, before the end of the Korean War; however, it began to plunge from the spring of 1952 and fell to 79.2 in August 1952. The slump in the shipping industry continued until 1954, when marine transport became rejuvenated with the reemergence of European economies. It steadily improved in subsequent years.

Another boom—the “Suez boom”—occurred in 1956. Following the Egyptian government's nationalization of the Suez Canal in July 1956, Israeli, British, and French forces attacked Egypt. Egypt resisted by sinking ships in the canal to block passage through it. Consequently, all freight that normally would have transited the canal had to make the much longer journey around the Cape of Good Hope. This led to goods stockpiling that in turn generated a shortage of ships. Tanker fees skyrocketed and eventually fees for dry cargo transport did as well. However, the boom subsided when the Suez Canal was reopened, and the shipping industry again fell into a slump as a result.

Nippon Suisan's Entry into the Shipping Business

In 1948, the Shipping Control Administrator, Japan (SCAJAP) issued a directive allowing Japanese tankers to carry Persian Gulf oil for the first time since the end of the war. Nippon Suisan responded by sending the *Hashidate Maru* to the Middle East in August of the same year.

Looking to expand its shipping business, Nippon Suisan applied for the fifth planned shipbuilding phase in 1949. It then employed the program to build the tanker *Matsushima Maru*, which was completed at Hitachi Zosen's Sakurajima shipyard in May 1951. After concluding a contract with the oil company Caltex, Nippon Suisan began operating the *Matsushima Maru* the following June. This marked the first time that Nippon Suisan had operated a full-time tanker in the postwar era.

With the *Matsushima Maru* operating successfully, Nippon Suisan looked to strengthen its shipping business. In 1951, it converted the refrigerator/salted-storage ship *Tadotsu Maru* into a full-time tanker. It also sent the whaling mother ships *Tonan Maru* and *Tonan Maru II*, the tanker *Gyokuei Maru*, and other ships to the Middle East, Indonesia, and the U.S. during non-Antarctic whaling months.

The following year, 1952, Nippon Suisan entered into a two-year chartered ship contract with Caltex for use of the *Matsushima Maru* and *Tadotsu Maru*.

In 1956, Nippon Suisan converted the *Matsushima Maru* into a whaling mother ship. The following year, it renamed her *Tonan Maru II*, and built the tanker *Matsushima Maru II* to replace her in November. It then concluded a three-year chartered ship contract



Hashidate Maru

for use of the *Matsushima Maru II* with the Caltex Group.

Beginning in 1952, the company made effective use of non-tankers in its shipping business. Examples include leasing the mother ship *Tokei Maru*, which had been used in mother ship-type crab fishery, to a shipping line and using the *Yoko Maru* to transport iron ore and cement.

Moreover, after abandoning its effort to develop crab resources off the coast of the Olyutor Peninsula after one expedition, Nippon Suisan leased the *Shokyu Maru*—which it had purchased for the endeavor—to a shipping company during the 1956 offseason and all of 1957. It later sold her at the end of 1957.

Other examples include the company's use of the *Eiko Maru* (built in 1953 as a refrigerated carrier) and *Meiko Maru* (built in 1956) as offshore loading ships. Both ships were used as cool carriers during the offseason.

In fiscal 1954, Nippon Suisan's shipping business accounted for 12% of the company's total sales. It therefore played an important role in Nippon Suisan's rebuilding as a company.

Part 6 Development of the Processed Foods Business

Growth of the Fish Canning Business

Postwar Japan's fish canning business got off to a rocky start. Many onshore canning factories were damaged during the war. There were shortages of canning

products due to bans against fishing activity. And there were shortages of cans due to inadequate supplies of tin. The result was insufficient production capability. Production of canned fisheries products totaled 40,000 cases in 1945, 220,000 cases in 1946, and

120,000 cases in 1947. These figures fell far short of the 8.89 million cases produced before the war in 1937.

Canning of blueback fish, such as sardines, mackerel, and saury, resumed together with fishing activity shortly after the war's end. However, their export was initially prohibited. When export restrictions were lifted in 1947, canning of tuna and bonito as well as of mandarin oranges was promoted as a means of earning foreign currency. Production remained unsteady for a period of time. However, by around 1949 yields returned to their prewar levels and it became easier to procure cans. These developments led to expanding production for export.

Tuna canning for export was particularly robust given growing demand in the United States. In fact, tuna canning was so strong that it was known as the "axis of exports". In terms of both production and export volume, tuna ranked with salmon and trout as a leading canned fishery product.

Overall production of canned products grew steadily. Between 1948 and 1958, production increased by roughly 40 times from 11,885 tons to 449,841 tons. The share for export saw particularly strong growth, as the value of exports surpassed the \$100 million mark in 1956. Export volume also grew from 2,059 tons in 1947 to 190,659 tons in 1958. On the other hand, because canned products tended to be marked for export in order to earn foreign currency, the canned products market in Japan was slow to develop. However, entering the 1950s, the canned goods industry stepped up their efforts to expand domestic demand, and as a result markets for whale meat, fruit, and livestock products grew. By 1957, 60% of all canned goods produced were consumed domestically.

Meanwhile, international regulations on Japanese fishery were becoming stronger with each passing year. Consequently, marine products companies were pressed to diversify their operations in order to maintain profits. One area demanding particular attention was onshore processing.

It should be noted that the Japan Cannery Association,

an organization that inherited the operations of the Dai-Nippon Cannery Federation in 1927, ceased its activities during the war years. However, in 1948 the Cannery and Bottlers Association was formed when the Japan Canning Research Laboratory and Cannery and Bottlers Promotion Organization merged. On May 27, 1952, the association renamed itself, once again taking its original name of Japan Cannery Association.

Expansion of Nippon Suisan's Canning Business

In 1950, Nippon Suisan dissolved its affiliate Yamato Suisan, and took over production of canned whale at its own Odawara cannery. And in 1953, it leased a cannery in Ishinomaki City and began production there. This cannery canned not only whale but also locally caught saury, bonito, and mackerel.

With the resumption of north-sea fishery in 1952, Nippon Suisan restarted its mother ship-based canning of salmon and trout as well as Bristol Bay crab. The north-sea mother ship-type crab fishery was managed jointly through a three-way arrangement comprised of Nippon Suisan, Taiyo Gyogyo, and Nichiro Gyogyo. In 1955, the Japan Crab Canning and Sales Company and Japan Crab Canning and Export Fisheries Cooperative were formed to coordinate sales and exports. However, each of the participating companies utilized their own brands. For Nippon Suisan, this allowed it to retain the *hinomaru* (rising sun) logo it had used since before the war and which later became the foundation of its brand in the food products business. The same year, Nippon Suisan doubled the number of its salmon and trout fleets from seven to 14. However, its efforts to develop overseas markets did not proceed as hoped, and thus it turned its attention to developing the domestic market as a new source of demand.

Also in this same year, Nippon Suisan formed the Nissui Hinomaru Association to popularize and expand sales of canned products bearing the *hinomaru* logo.

Therefore, Nippon Suisan had engaged in sales only to the wholesale shops of three companies in Tokyo (Hokuyo Shokai K.K., Itsumi Sunyo-do Co.,Ltd., and Kokubun Shoten K.K.), one company in Osaka (Nodaki Shoji K.K.), and one company in Nagoya (Yamada Trading Company). However, with the formation of the Nissui Hinomaru Association, Nippon Suisan was expanding its sales routes. Seeking to raise willingness to sell Nippon Suisan products by establishing close relationships with wholesalers, the company built a framework of seven chapters in the Hokkaido, Tohoku, Kanto, Koshin-etsu, Chubu, Kinki, and Seibu regions. Members were secondary wholesalers having links to primary wholesalers. It should be noted that the Nissui Hinomaru Association's range of products handled expanded to reach across the entire spectrum of processed foods, and that it eventually transformed into the Nissui Valued Customers' Association. It was a major contributor to the success of Nippon Suisan's food products business.

Moreover, from 1956, Nippon Suisan stepped up its advertising and public relations activities in order to promote penetration of the *hinomaru* logo among consumers.

At the same time, it also expanded its canning operations. In March 1956 it closed the leased Ishinomaki cannery and opened a more sophisticated facility in Onagawa to replace it. It also acquired a cannery from Asahi Can & Co., Ltd. in Shimizu City and started full-scale canning there in June 1956. At this time, it shut down its Odawara cannery and moved the machinery and equipment there to the new Shimizu cannery. Nippon Suisan now had three canneries—in Hakodate, Shimizu, and Onagawa—that primarily canned whale but also salmon and trout, bonito, tuna, saury, mandarin oranges, and other products. The company's production volume rose steadily in line with its increased capacity, which grew from 200 cases a day in 1949 to 4,000 a day in 1958.



Advertisement for the canned product "Nissui no Kosen Kani" (Nissui's factory ship crab)



The Shimizu Plant

Beginning of Nippon Suisan's Fish Sausage Business

Nippon Suisan's fish sausage business had its true beginnings at the company's Tobata Plant. Product development was led by Isamu Yoshimura (later a senior managing director), who was assigned to the Tobata Plant in January 1946. Yoshimura deemed that the *chikuwa* fish-paste cake that the plant was producing at the time had poor profitability. He also felt that the company needed new products that were capable of meeting future changes in dietary habits. He later recalled, "At the time, we were making *chikuwa*. But this product just wasn't succeeding for the company in terms of cost and other aspects. I thought that because Japan had lost the war, the Japanese diet would inevitably become Americanized. I had this vague idea that we must create a product with an English-sounding

name” (*Nissui Kobo*, volume 150, June 1966).

In 1947, Yoshimura tried manufacturing a sausage that combined white croaker with beef and pork. However, this product suffered from poor shelf life at room temperature. Yoshimura solved this problem by packing the filling into “Ryphan”, a tubular casing with superior moisture-prevention and contraction qualities that was developed by Ryphan Industry Co., Ltd. He then switched the main ingredient from white croaker to tuna. This was because the tuna price was depressed at the time and only about half that of white croaker. With the product now made primarily from tuna, it was marketed as “Tuna sausage”.

Initial efforts to sell tuna sausages did not fare well in either the fish or meat market because they contained both fish meat and livestock meat. To boost sales, Yoshimura worked to promote using straightforward methods, such as holding tastings and other such events. Eventually, the sausages gained popularity when served in school lunches and hospital meals, and by 1951 the company was producing between

20,000 and 30,000 sausages a day. In February 1952, use of preservatives (nitrofurazone) in fish-paste products was approved, which made it possible to store sausages for long periods of time at room temperature. This spurred the company to begin full-scale production and sales of tuna sausages in October of 1952.

Later, beginning in April 1954, Nippon Suisan began producing and marketing “Isana sausage” made with whale meat and pork. That autumn it began developing “pressed ham” made from whale. This product began appearing on shelves in 1955.

With sales growing steadily, the company expanded tuna sausage production by adding its Hokkaido Plant to the Tobata Plant in March 1955. It further built a new tuna sausage facility at its Onagawa Plant in July of the same year, and then expanded this facility in November 1956 and July 1957. The company also built a tuna sausage plant in Tsukishima, Tokyo, in August 1956, and later expanded its production capacity through expansion and improvements in July 1958.

In this way, Nippon Suisan established its



Packing and shipping “Tuna Sausage” (1952)



production system as it simultaneously developed and enhanced its sales organization. Although it started its sales using sales routes for dry products centered on Kyushu, it later came to sell at fish and dry products retailers through licensed consignee located throughout Japan. It also rapidly expanded its sales routes by marketing fish sausages through the Nissui Hinomaru Association established in 1955.

Three other companies also began producing and marketing fish sausages. They were Seinan Kaihatsu Co., Ltd., of Ehime Prefecture, which started full-scale production in 1952; Taiyo Gyogyo, which entered the market around 1953 to 1955; and Nichiro Gyogyo, which entered in 1955. The market began expanding as competition intensified.

Around this time, Nippon Suisan began stepping up its advertising and sales promotion. Discussing the state of the company's sales promotion effort in its product distribution, an anonymous article submitted to the company newsletter *Nissui Koho* (March 1955) said, "Of course, we must not forget that consumers are the public at large. [Given this], would it not be best to engage in advertising that is directly linked to the mass consumer market? [Part omitted] The company should etch the *hinomaru* logo into the minds of consumers". In response, the Sales Department's Processing Division stated the following in the next month's volume: "Advertising must be matched with product sales. If a product is not available in retail shops, it matters little how much advertising money is spent or how consumers are targeted; indeed, the result of advertising under such conditions could even be a loss of consumer confidence. [Part omitted] Only recently have we finally reached full-scale production, and now we are focusing our attention on advertising accordingly. We are steadily expanding our activities based on yearly sales activity. [Part omitted] To repeat, we are prepared to reinforce consumers' recognition of the *hinomaru* logo over the course of the next two or three years". Advertising and sales promotion activities gained momentum the following year (1956), as Nippon Suisan worked to permeate its brand—the

hinomaru logo—by sending out advertising sound trucks, participating in product exhibitions, strengthening the Hinomaru Association, organizing movie tours, setting up billboards, and sponsoring radio broadcasts.

For approximately two years beginning in 1957, Nippon Suisan sponsored a radio program called *Akado Suzunosuke*. A nationwide program broadcast from Radio Tokyo, *Akado Suzunosuke* was a public sensation. It was so popular that it became a televised program of the Tokyo Broadcasting System in its first year. Victor Company of Japan, Limited, and Nippon Columbia Co., Ltd., competed to provide its theme song, and there were even offers to turn it into a motion picture immediately after it began airing.

Nippon Suisan reorganized itself in order to promote advertising that is effective and company-wide. Until then, the company did not have an office charged with supervising advertising activities, as the General Affairs Department was in charge of company P.R. and the Sales Department was in charge of advertising. The reorganization established an Advertising Division within the General Affairs Department in April 1957. This new division was placed in charge of consumer-oriented advertising based on the philosophy that company P.R. and producer advertising are two sides of the same coin.

The company also set up an organization to support sales activity. In September 1957, it established Osaka Nissui Shoji K.K. to expand sales routes in the Osaka area. And the following November, it launched Nissui Service K.K. in Tokyo. Rather than working in sales, Nissui Service's activities centered on delivery to retail shops under the Nissui Hinomaru Association's umbrella in Tokyo and the rest of the Kanto area as well as sales promotion.

Nippon Suisan's sales of fish sausages grew steadily as a result of its efforts to establish production and sales frameworks. Sales of fish sausages (including hams) grew significantly from 467.81 million yen in 1954 to 2.187 billion yen in 1958.

Early Steps into the Frozen Food Products Business by Marine Products Companies

Japan's postwar frozen foods production resumed in 1946 with frozen foods made from fishery and agricultural products at Nippon Suisan's Tobata Seafood Processing Plant (formerly Tobata Reizo) and "Reika", a Popsicle-like product made by Nippon Reizo. Subsequently, production took such forms as frozen vegetables to feed Antarctic whaling crews and frozen foods (edible frog, boiled and shelled shrimp, frozen strawberries, frozen mandarin organs, swordfish steak, tuna steak, and rainbow trout) for export by Nippon Suisan and Nippon Reizo.

Entering the 1950s, repairs to factories damaged during the war were largely complete and various controls were lifted. This led some companies to begin full-scale resumption of their frozen food products businesses. Nippon Reizo was particularly conspicuous in this regard. Nippon Reizo began comprehensive research toward production of food product prototypes in 1950, beginning with trial production of mandarin oranges, frozen strawberries, and other fruit. In 1951 it began producing frozen mandarin oranges at its Yaizu plant; some of these oranges were exported to the United States. Its frozen strawberries were sold as an ingredient for frozen fruit juices at department

stores. Beginning in 1954, it increased its product development to include precooked frozen foods, such as *chawanmushi* egg custard and tempura sets, and expanded sales to all regions. That same year the School Lunch Act was enacted, and Nippon Reizo's fish fillets, croquettes, and fish sticks were used in school lunches. Also around this time, research advances and facilities improvements helped raise quality. Nippon Reizo took advantage to introduce the latest technologies and equipment in order to further enhance the quality of its frozen food products.

Around the mid-1950s, marine products companies were entering the frozen foods category one after another, developing their production and sales systems as they did so. With an eye to selling canned and frozen foods at department stores, Nippon Reizo launched Yukiwa Shokuhin K.K. (currently Ryoshoku Limited) in January 1954. And in May of the same year, it began sales of commercial-use frozen foods for mass meal services, such as those in schools, hospitals, and factories, by established Maruichi Shokuhin, Ltd.

Subsequently marine products companies continued striving to create sales avenues. For example, to promote sales of frozen foods, they purchased large numbers of refrigerated showcases for distribution and leasing to retail shops throughout Japan.

Part 7 Management Status of Nippon Suisan

Reconstruction of the Business Structure

At the end of fiscal 1945, Nippon Suisan's capital structure was 40% owned capital and 60% borrowed capital. This forced the company to rely on loans to cover capital requirements for reconstruction. Nippon Suisan's capital stock was 700 million yen in 1949; however, it increased its stock to 1.4 billion yen in 1953 and then doubled it by another 1.4 billion yen to 2.8 billion yen in 1955. As for dividends, it resumed dividend payments at 12% in 1951 and 15% until the second half of 1957.

From around 1950, Nippon Suisan rebuilt its business structure through active capital investment and corporate acquisitions. Following its acquisition of Kawanami Kogyo fisheries department, which was involved in west-water trawling, it purchased all of the stock of Kyowa Yushi Kogyo in November 1953. It established this new acquisition as its arm for sperm whale oil processing, a business that was seeing year-on-year production increases.

Then, in June 1955, it acquired the stock of Hokoku Suisan when that company doubled its capital. Hokoku Suisan was established in August 1945 and took its

first steps in west-water trawling and mother ship-type tuna fishery the following year. In 1950 it began full-scale mother ship-type tuna fishery. Having acquired Hokoku Suisan, Nippon Suisan expanded Hokoku's business and had it begin north-sea mother ship-type salmon/trout fishery and mother ship-type flounder fishery.

Moreover, it established Fuji Gyocan, as its fish container division in 1952; Hokko Gyogyo K.K. to manage deep-seas and coastal trawl fishery, crab fishery, and squid fishing in August 1954; Nippo Sangyo K.K. as its materials division in October 1955; and

Sanwa Kogyo K.K. as its canning machinery repair arm in December 1956.

It also established Osaka Nissui Shoji in Osaka in September 1957 and Nissui Service in Tokyo in November to promote more efficient sales of processed foods.

Looking to reinforce its capabilities in refrigeration and freezing, Nippon Suisan established Tsurumi Reizo K.K. in February 1951; Hakodate Teion Soko, in April 1953; and Tokyo Teion Reizo K.K. in May 1953. It charged each of these companies with refrigerated warehousing businesses.

Chapter 2: Strong Strides Forward during Japan's Period of Rapid Economic Growth

1955–1964

Part 1 Japan's Period of Rapid Economic Growth and Changing Dietary Habits

For Japan's economy, 1955 proved to be the best year of the postwar era. Exports were booming on the back of strong economies in Europe and the U.S. as well as intensifying international competition. As a result, Japan's trade balance saw significant improvement. Japan had also greatly surpassed its prewar levels in terms of both per-capita real national income and mining and manufacturing production. Moreover, its production capacity was twice what it had been in 1935. Private-sector capital investment was growing, as was consumer spending symbolized by purchases of the "three status symbols" (televisions, refrigerators, and washing machines). The Japanese economy had thus entered the economic boom (called the *Jinmu Keiki*) of the mid-1950s, a period that would last 31 months.

However, the Suez crisis of 1956 put a brake on Japan's economic growth. Excessive capital investment fell as a result of the government's financial belt-tightening. Production and prices nosedived after peaking

in June 1957, as the economy fell into what was called the *Nabezoko Fukyo*, or "bottom-of-the-pot recession". The effects of the recession were relatively minor, however, and in the end Japan's international balance of payments improved thanks to the government's austerity measures.

After the recession bottomed out, Japan once again enjoyed an economic boom (called the *Iwato Keiki*) that would last until December 1961. Active private-sector capital investment was the engine that drove this period of long-term growth. Coming to power in July 1960, the government of Hayato Ikeda put forth an "income-doubling plan" that called for maintaining average economic growth of 7.2% and doubling the real national income over the course of ten years (fiscal 1961 to 1970). This plan generated additional capital investment and led to growth that far exceeded that envisioned by the plan.

From the end of 1962, a new period of economic growth—called the *Olympic Keiki*—began. Here,

Japan's economy became buoyed by expanding public investment for infrastructure as the nation prepared to host the 1964 Tokyo Olympics. This boom lasted until October 1964, when the economy fell into the *Showa 40-nen Fukyo* (1965 recession). Despite the government's introducing a series of monetary easing steps, recovery from this recession was slow. Consequences included a high rate of corporate bankruptcies, stagnating stock prices, and higher consumer prices. The bankruptcies even reached major corporations and highlighted the recession's severity. The government responded by actively implementing measures to increase demand, including the issuance of government construction bonds.

The recession finally bottomed out in October 1965, after which the economy was back on the path to recovery. What followed was a long 57-month-long economic boom called the *Izanagi Keiki*. And in 1968 Japan's GNP surpassed West Germany's to become the world's second largest economy.

Changing Dietary Habits

The period of rapid economic growth brought with it mass production and mass consumption. It was also a time of radical change in the traditional dietary habits and values of the Japanese people.

As the labor population concentrated into urban areas, the "nuclear family" of two generations (parents and their children) living together came into being. And as their economic means grew, people became capable of purchasing their own homes and possessing various appliances and devices that enriched their lives. During the 1950s, the "three status symbols" were black & white televisions, electric washing machines, and electric refrigerators. However, during the long period of rapid economic growth, "three new status symbols"—called the "3 Cs" (color television, cooler [air conditioner], and car [automobile])—emerged.

Small residences characterized by housing blocks and tiny houses were built one after another. And as a result, the place where people eat—in other words,

the place that forms the nucleus of daily living—moved from its traditional setting in the kitchen to a "dining room-and-kitchen" space.

Meanwhile, economic growth made the postwar food shortages a thing of the past, and from around 1955 people enjoyed significant improvements in their diet. The percentage of rice, the main staple in Japan, in people's calorie intake fell. Conversely, that of wheat rose gradually throughout the length of the period of rapid economic growth. At the same time, the percentages of meats, dairy products, and fats and oils also rose. Fish, which was at the center of the Japanese diet since before the war, maintained high percentages in both calorie intake and consumer spending.

Consumers now had a broader range of options when it came to food ingredients. They could easily obtain not only fisheries products but also meat, and they could purchase agricultural products from overseas. Moreover, selection and volume were no longer their only concerns, as they were now also paying attention to freshness, quality, and safety.

Moreover, the main ingredients comprising daily meals were no longer just the "three fresh product" categories of fish, fruits and vegetables, and meat. This was because new processed foods were appearing in the market and gaining more and more consumer attention. In addition to conventional preserved foodstuffs and seasonings (such as instant coffee, instant noodles, and vacuum-packed foods), consumers were now showing fondness for various processed foods that offered new tastes, convenience, and simplicity.

As more ingredients became available, cooking classes and dietary information in magazines and other sources became increasingly detailed. At the same time, new ingredients led to a greater variety of menus. Now, in addition to the traditional menu of rice, miso soup, and several side dishes, Japanese consumers could also choose Western foods and menus featuring bread, dairy products and salads.

Such sophistication in food consumption was underpinned by the development of Japan's food-products industry, expansion of food imports, and

growth of the distribution industry that delivers these products to consumers.

Part 2 Rising International Concern about Fisheries Resources

The Rise of New Fishery Powers

In the 1960s, a succession of former colonies gained their independence. And membership in the United Nations, which stood at 55 countries when the organization was founded in 1947, reached 123 in 1970s.

In 1962, resource claims were established within a U.N. resolution titled “Permanent Sovereignty over Natural Resources”; such claims would later become known as “resource nationalism”. At the same time, the so-called “North-South problem” emerged within the trend toward colonial independence, and developing countries formed a coalition called the “Group of 77” to present a united stance.

Meanwhile, a vast competition to develop technologies was underway, symbolized by U.S.–U.S.S.R. space development. And countries were beginning to develop continental shelf oil fields to meet growing energy demand generated by economic growth.

The world’s fisheries also saw dramatic development. The total world catch, which stood at 27.48 million tons in 1955, ballooned to 34.70 million tons in 1960, 48.58 million tons in 1965, and 63.85 million tons in 1970. The main methods used were net fishery and bottom trawl fishery. In 1962, Peru’s catch reached 7.16 million tons, surpassing Japan’s 6.89 million tons and ranking it number one in the world. In bottom trawl fishery (including trawling), the major players were the Soviet Union, Western and Eastern Europe, and Japan in the North and South Atlantic Oceans, and the Soviet Union and Japan in the North Atlantic Ocean.

This growth in fishery activity led to the expansion of territorial waters and establishment of exclusive fishing zones, particularly among developed fishing nations. In January 1966, New Zealand began enforcing its exclusive fishing zone. In January 1967, Argentina

established that its territorial waters extended 200 nautical miles from its shores, and Mexico declared an exclusive fishing zone of three nautical miles beyond its territorial waters of nine nautical miles. The next month (February), Brazil enacted a new fisheries law with a provision setting 200-nautical-mile territorial waters after three years. And in March, Mauritania declared an exclusive fishing zone around Cape Blanco.

Apart from these developments, the Soviet Union, a nation possessing many fishing waters, began strengthening its regulatory measures on a yearly basis. This trend emerged following establishment of the Japan–Soviet Fisheries Commission, which was based on the Japan–U.S.S.R. Fisheries Convention following the U.S.S.R.’s declaration of the Bulganin Line in 1956. In 1959, it implemented fishery restrictions in the Sea of Okhotsk, and in 1962 it established “Zone B” and reduced yearly quotas. Mother ship fishery was particularly affected by these actions in the beginning.

Then, on May 20, 1964, the United States enacted the so-called “Bartlett Act” (a law prohibiting fishing by persons other than U.S. citizens and residents within the U.S.’ territorial waters or specified sea areas). A characteristic of this law was its setting of penalties for violations.

In Search of a New Maritime Order

The Second United Nations Conference on the Law of the Sea (UNCLOS II), held in 1960, advanced discussions focused on the problems of territorial waters and exclusive fishing zones, which had been left unresolved following the first conference of 1958. Here, the leading proposal, put forth the United States and Canada, advocated that territorial waters should extend out six nautical miles and then exclusive fishing

zones should extend out for another six nautical miles. After being passed unanimously by committee members, the proposal was sent to the General Assembly. However, it was rejected after failing to receive the two-thirds approval required for passage. Nonetheless, the proposal spurred nations to harden their stances concerning resources protection in territorial waters. More and more countries began independently establishing fishing zones and expanding their territorial waters to 12 nautical miles as domestic measures.

Subsequent to UNCLOS II, many countries unilaterally set their territorial waters or fishing zones at 12 nautical miles. Conflicting interests between coastal fishing nations and deep-seas fishing nations sharpened, and discontent began to build in coastal and developing countries. Meanwhile, the number of countries claiming territorial waters/exclusive fishing zones of 12 nautical miles and even territorial waters of 200 nautical miles grew.

In December 1967, Arvid Pardo, ambassador to the U.N. from the tiny Mediterranean country of Malta, made an historic speech at the United Nations. Ambassador Pardo told the U.N. that even deep seabed mineral resources, assets shared by all of mankind, were presently in danger of seabed segmentation. He pointed out the need to establish an international body to begin studying peaceful use of these resources in ways that consider the interests of impoverished countries. Based on the ambassador's proposal, the U.N. General Assembly resolved in 1970 to hold a Third United Nations Conference on the Law of the Sea during 1973.

The U.N. then established the Committee on the Peaceful Uses of the Seabed and the Ocean Floor beyond the Limits of National Jurisdiction (CPUSOF) as a preparatory body for the conference. Once formed, the committee set about preparing a list of problems with the Law of the Sea. Two years in the making, this vast list covered the full range of issues concerning the sea. During the list's preparation, a new concept called the Exclusive Economic Zone, or EEZ, started to gain traction. Located outside of territorial waters, an EEZ

would be a sea area that, in return for allowing free navigation, would give economic sovereignty to the coastal country. Such sovereignty would include the right to explore and develop fishery and mineral resources. Within a short period of time, countries came to see EEZs as extending 200 nautical miles from the coast, and this became the dominant international viewpoint.

In the sense that resources belonging to all mankind would be used equally, Pardo's proposal was strongly rooted in fair-minded globalism. However, discussions within CPUSOF moved in the opposite direction, toward sea segmentation based on 200-nautical-mile EEZs that tacitly recognized 12-nautical-mile territorial waters, and thereby reflected the self-serving resource nationalism of developing countries

Liberalized Importation of Fishery Products

In 1959, the International Monetary Fund's Board of Governors and the General Agreement on Tariffs and Trade (GATT) Conference passed resolutions lifting import restrictions imposed on Japan and other countries. In response, the next year (1960) the Japanese government approved its "Outline of the Trade and Exchange Liberalization Plan" to promote the liberalization of trade. As a result, imports of all fishery product items were liberalized in October 1961, with the exceptions of major coastal fishery products (sardine, horse mackerel, mackerel, Pacific herring, yellowtail, cod, squid, scallop, *nori* seaweed, and *kombu* seaweed), salmon and trout eggs, whale meat, agar-agar, fish oil, fishmeal, pearls, and other such items.

Subsequently, Japan's imports of fishery products grew each year. In 1959, prior to the lifting of import restrictions, imports amounted to approximately \$7.71 million. This figure rose to roughly \$59.40 million in 1963 and to approximately \$191.57 million in 1967. While the share of imports against exports stood at just 3.3% in 1959, it grew to 20.9% in 1963 and 58.7% in 1967, thereby resulting in an import surplus. While liberalization certainly contributed significantly to

the rapid increase in imports, declining domestic production and increasing demand for fisheries products also played a role.

The marine products companies saw liberalized fishery product imports as a threat. However, Japan, which was then enjoying astounding economic growth, was being asked to behave with a more international viewpoint. This included giving consideration to developing countries, for example. On the other hand, accelerated liberalization would be unavoidable in the effort to stabilize consumer prices. Thus, it was apparent that import liberalization would continue whether the marine products companies liked it or not. Consequently, these companies that had previously supported Japan's deep-seas fishery now took advantage of liberalization to promote joint ventures for the purpose of developing and importing fishery resources along foreign coasts. The ventures formed during this time sought to engage in highly efficient operations in excellent fishing grounds near Africa. A little later, joint imports of shrimp began to flourish.

The Status of Japan's Fishing Industry

Japan's total catch continued to show healthy growth.

This growth was largely attributable to high-seas fishery and offshore fishery. At the same time, the share of coastal fishery in the total catch fell rapidly.

Looking at the catch in term of fish type, the relative shares of sardines and Pacific herrings were reduced from the postwar reconstruction period into the period of rapid economic growth, while those of horse mackerel, mackerel, tuna, and cod were raised.

Changes in consumption and dietary habits in the Japanese public during times of economic growth, structural changes in the fishing industry, and, above all, the direction of fisheries negotiations were all felt keenly in the management of major marine products companies. Moreover, a succession of developments that included the drawing of the Bulganin Line, stricter regulation of north-sea fishery by the Japan–Soviet Fisheries Commission, and tougher international regulation of whaling cast a dark shadow on the future of fishery operations. Major marine products companies attempted to fight back by reinforcing their onshore operations. This strategy was referred to as *suisan-kaisha no joriku sakusen* (an amphibious landing by marine products companies).

Part 3 Nippon Suisan's Five-Year Reformation Plan

1. Proposal and Capital Procurement

The establishment of the Bulganin Line in 1956 rocked the fishing industry. This combined with the *Nabezoko Fukyo* recession further reinforced the industry's negative outlook.

Haruo Nakai, a senior managing director at Nippon Suisan, adopted a strategy of reinventing the company by making bold investments during this difficult period. Taking the form of a Five-Year Reformation Plan, the strategy's plan's main thrust was to inject massive investments designed to bring management stability by cultivating the company's fishery, food

processing, and shipping businesses into three main operations. Specifically, it promoted development of new fishing grounds to break through stagnation in north-sea fishery, reinforced the onshore business with focus on construction of new processing plants and seafood processing plants and development of the sales network, and expanded the shipping business. The plan started in 1959 with efforts to reinforce the onshore business. And until 1964, it invested huge amounts of capital into maritime operations amid encouraging signs in the economy and fishery

environment.

Nakai explained the plan to stockholders as follows: “The plan is an attempt to take a new look at Nissui based on a long-term program. It seeks to preserve the company against the current backdrop of rapidly deteriorating performance, and to respond to poor conditions in the fisheries business, which will likely grow even worse in the future. [Part omitted] Last fiscal year, we made various endeavors on both the management and labor sides and asked for patience and effort from our employees. And now, looking over the next two years, we are asking you, our stockholders, to extend to us your patience and understanding as we take extremely proactive measures. Specifically, we will take the initiative in addressing future deteriorations in our fishery operations in both the north and south by cutting production costs (mainly interest, amortization, etc.) through fundamental reformation of the company. And we will seek to achieve autonomous development and overall stability in the company through a rapid shift to full-scale food product manufacturing and processing by keeping capital of up to 1.5 billion yen that would ordinarily leave the company through taxation, dividends, etc., over the next two years” (*Nissui Kobo*, volume 66, June 1959).

This was not the first time that Nippon Suisan dared to take proactive measures during difficult times. When its trawling operations suffered during the early Taisho era (1912–1926), the company responded by building a large number of new trawlers. Moreover, during the Great Depression, it built a comprehensive

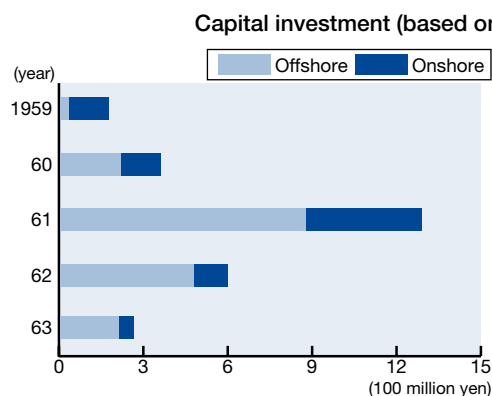
fishing and processing base in Tobata and shifted its operations there. Thus, Nippon Suisan had experience approving and executing large-scale management strategies during times of business stagnation. Prepared to be fired if his efforts failed, Nakai knew that he had no option but to resolutely execute the reformation plan.

Ultimately, the company invested 33.4 billion yen over five years. Wherever possible, it used its own funds to provide the capital, and it employed a variety of means to make this happen. With the understanding of its banks and major stockholders, it cut dividends from 15% to 12% and executed a fractional free issue of 3% for two years beginning with the second-half accounts settlement of 1958. It also executed measures that integrated a portion of its reevaluation reserve into capital, and increased its internal reserves by 1.5 billion yen over the course of two years. Management personnel cut their own executive bonuses by 20% and executive remuneration by 10% while also reducing entertainment expenses. The company further amortized 4.5 million yen in two years.

The company also actively increased its capital. In January 1962 it raised its capital stock to 10 billion yen with a paid-in capital increase of approximately 6.3 billion yen. Because the company posted a real deficit due to the economic recession and its capital investment, it lowered dividends to 10% from the first half of 1962 (with the exception of a 15% payment to commemorate Nippon Suisan’s 50th anniversary in fiscal 1961).



Haruo Nakai when senior managing director



Year	Major investment
1959	Construction of Harumi Seafood Processing Plant
60	Modification of <i>Gyokuei Maru</i> into a meal factory ship, construction of <i>Amagi Maru</i>
61	Construction of <i>Matsushima Maru II</i> ; construction of Hachioji Plant, etc.
62	Construction of <i>Andesu Maru</i>
63	Construction of <i>Kiso Maru</i> and <i>Kurama Maru</i>

2. Execution of the Five-Year Reformation Plan

Start of Efforts to Reinforce Onshore Business

Nippon Suisan set out to invest in and reinforce its onshore business for two years beginning fiscal 1959.

It took this approach for two reasons:

- 1) There was a need to cultivate onshore business as a new main operation given the poor outlook for the fishing business at the time that the plan was formulated. Theretofore, the fishing business had been the company's chief focus; however, tightened fishery regulations in coastal nations cast doubt on the future of this business. The *Nabezoko Fukyo* recession that started in 1957 also had a hand in poor fishery performance.
- 2) Products produced by onshore business were gaining greater importance in line with changing dietary habits and consumption trends.

In the first fiscal year of the Five-Year Reformation Plan, half of the 1.653 billion yen in onshore investment went to construction of the Harumi Plant. Touted as the best multifunction plant in the Orient, the Harumi Plant began frozen processing of fishery products after its completion in May 1960. The next year, a frozen foods plant was added to the premises, allowing the facility to begin full-scale production of frozen foods. It became the Harumi Coldstore in 1966.

In fiscal 1960, the plan's second year, the company reinforced its processed food manufacturing functions, developed its sales organization, and cultivated and strengthened affiliates. At the same time, it developed bases for purchasing, producing, and storing processing ingredients, a strategy outlined by the following statement: "By possessing refrigerated warehouses and processing plants in the fishery production bases of Kyushu, Hokkaido, and Sanriku, let us turn disadvantage into advantage to take Nissui forward by securing processing ingredients through purchases of non-Nissui offshore products in order to cover

lower production by our own fishery operations" (*Nissui Kobo Tokubetsu-go*, May 1959).

In the third year, fiscal 1961, the company invested more than 1.6 billion yen to start construction of the Hachioji Plant. Work was completed in 1962. In 1965, the facility became the Hachioji General Plant.

The company steadily developed its systems with an eye to strengthening its sales of processed foods. It divided the entirety of Japan into seven districts: Hokkaido, Tohoku, Kanto, Chukyo, Keihanshin, Chushikoku, and Kyushu. The existing Osaka and Tobata Branches and Fukuoka resident office as well as sales bases established until 1962 were placed within these districts. Namely, these sales bases where the Sapporo Branch (1961), Sendai Branch (1960), Tokyo Branch (1962), Nagoya Branch (1962), and Hiroshima Office (1961).

At the same time, it expanded Nissui Service, a provider of sales support functions, to all parts of the country. In addition to the Nissui Service K.K. in Tokyo, which had already been in existence since 1957, it established Hiroshima Nissui Service K.K. (1959), Sendai Nissui Service K.K. (1960), Sapporo Nissui Service K.K. (1961), and Nagoya Nissui Service K.K. (1962). It also later established Osaka Nissui Service K.K. (1966).

Nippon Suisan also formed the "Nissui Ham and Sausage Hinomaru Association" to expand its sales networks.

Plants in each region were then linked to these sales networks. In addition to the existing plants in Tobata, Hakodate, Onagawa, Tsukishima, and Shimizu, Nippon Suisan added the Tobata Daini Coldstore in 1959, Harumi Plant and Itami Plant in 1960, and Anjo Plant and Hachioji Plant in 1962 (the Tsukishima Plant was closed in 1960). It also set up the "Hinomaru Packers' Association" to organize plants involved in canning operations.

In the ways described above, the company successfully reinforced its production and sales networks for

processed foods. Between the end of fiscal 1958 (prior to the plan's implementation) and fiscal 1963, sales of processed seafood products (such as fish sausages and hams) grew from a monthly output of 4.74 million to 28.94 million products, and those of canned products were raised from a monthly output of 77,000 boxes to 224,000 boxes.

From 1961, the plan's third year, the company began entering into new fields as it also reinforced its existing processed foods business. That year it began producing mayonnaise and ramen, and in 1962 it started producing cheese. The amount of money it invested into building new plants for these operations reached 4.1 billion yen.

Also, as north-sea fishery expanded, it enhanced its seafood processing plants to freeze and process growing catches as well as refrigerated warehouses to store them.

It added Sapporo Hinomaru Reizo K.K. and the Sapporo Coldstore in 1959; the Harumi Coldstore,

Sendai Hinomaru Reizo K.K., Hachinohe Coldstore, Sendai Coldstore and Nagoya Coldstore in 1960; and the Aomori Coldstore and Fukuoka Coldstore in 1963. The Onagawa Coldstore (1957) and Tobata Daini Coldstore and Kushiro Coldstore (1958) were built prior to the Five-Year Reformation Plan's implementation.

Construction of Two Major Plants

Around this time, the three companies of Nippon Suisan, Taiyo Gyogyo, and Nichiro Gyogyo were developing a joint plan to build a new wharf in the relatively undeveloped Harumi district of Tokyo. However, the Tokyo Metropolitan Government required that they build a 10,000-ton pier as part of the project. Meeting this requirement proved tough for the companies as they struggled under the weight of the *Nabezoko Fukyo* recession, and as a result Taiyo Gyogyo and Nichiro Gyogyo pulled out. However,



Harumi Coldstore (bird's-eye view)



View of a warehouse's interior

for the remaining company, Nippon Suisan, making Harumi a base for operations was an essential component of its effort to successfully promote onshore business and expand maritime operations based on its Five-Year Reformation Plan. It therefore decided to build the pier on its own.

Located on a plot measuring 17,357.15 m², the Harumi Plant was constructed as a three-story reinforced concrete building with a total area of 15,069.9 m². It was equipped with 35 refrigerators that maintained internal temperatures of between -26 and -30°C and had a combined capacity of 12,100 tons. Freezing facilities were comprised of four ammonia direct expansion-type contact freezers, one air-blast freezing room, and two semi-air-blast freezing rooms. They had a single-time freezing capacity of 20 tons. The freezers maintained a freezing temperature of -35°C or lower and had the capability to quickly freeze various product types and shapes. The plant could be operated safely and efficiently with automated and remote control, which included centralized monitoring of temperature management and the operational status of automated equipment among other items. Moreover, the plant possessed a 10,000-ton pier and railroad siding. Known at the time as the premier facility of the Orient, the Harumi Plant was vital as a supply and storage base for the vast consumption area consisting of the Tokyo metropolitan area and Keihin region.

The total construction expenditure of 1.4 billion yen, which included 200 million yen to build the pier, was the largest short-term expense ever before borne by Nippon Suisan. Moreover, the plant was expected to be in the red by about 60 million yen for the first fiscal year after completion even if the plant ran at full capacity, and to face tough business circumstances for the first four years after construction. The company attempted to cover anticipated plant deficits by lowering transport costs, loading and unloading costs, delivery costs, packaging costs, and production costs for products and purchased commodities.

As one Nippon Suisan executive put it, the Harumi

Plant “forms the core of a nationwide refrigerated warehouse network in the seafood products business of Nippon Suisan—now a general foods company—that links production and sales” (Vice President Haruo Nakai in *Nissui Koho*, volume 77, May 1950). Speaking at the completion of the Harumi Plant, Vice President Nakai also said, “It is our mission to use this effective weapon, the likes of which we will never see again, in the highest possible manner to overcome our present difficulties and win the battle for the future”. Indeed, the Harumi Plant was capital investment that symbolized the Five-Year Reformation Plan, a strategy for long-term productivity expansion to ensure Nippon Suisan’s future growth.

In June 1962, two years after the Harumi Plant’s opening, the Hachioji Plant was completed at a cost of 1.643 billion yen. This new facility was built as a replacement plant to eliminate insufficient production capacity at the Tsukishima Plant, which supplied fish sausages and hams to the Tokyo metropolitan region. It also served as a general plant capable of producing the string of new products that were coming out then. With an area of approximately 70,000 m², it was the largest food products plant in the Orient of its day. Equipped with the latest facilities and built with attention to all necessary aspects—including access from its inland location to ports, industrial water, environmental hygiene, plant exhaust, labor, and welfare—it was the ultimate food processing plant of its time.

In terms of production capacity, it had a daily output of 500,000 sausages and hams, 30 tons of mayonnaise, three tons of cheese, and 200,000 servings of ramen.

Construction of the Hachioji Plant represented the final element of onshore investment under the Five-Year Reformation Plan. And with it, Nippon Suisan had seen the completion of its new fishery processing and sales system.

The Hachioji Plant and Harumi Plant complement each other to supply products to the Kanto and Koshin-etsu regions.

Haruo Nakai later recalled, “I was always thinking

about our effort to promote onshore business and expand marine business under the Five-Year Reformation Plan. So I knew that if we built the Hachioji Plant, fish as ingredients and fish for sale in Kanto that was brought in by 10,000-ton refrigerator ships would have to be landed in Tokyo or Yokohama. That is why Nippon Suisan approved the building of the special 10,000-ton pier” (Saburo Koshikawa, *47-nen no Koseki*, 1979).

The Harumi Plant and Hachioji Plant were built not only to simply enhance the company’s production capacity, but also to achieve mutual linkage.

Switch to Investment to Strengthen Maritime Operations

Nippon Suisan’s fishing business, which had been performing well since its postwar resumption, was starting to fall on harder times. Stricter regulations by South Korea and China and worsening profitability in west water business, stronger international controls on north-sea salmon and trout operations and crab operations, and lower allowable catch numbers in Antarctic whaling made it necessary to develop new fishing business.

Given this need, the Five-Year Reformation Plan sought to expand the company’s trawling and shipping businesses.

Nakai explained this strategy as follows: “After considering the development of new fishery operations—such as the conversion in maritime operations, in other words, mother ship-type bottom trawl fishery in north-sea waters, large-scale trawling fishery off of African coasts, the new trend toward supertankers, and other matters—as well as the particulars of associated fishery rights, actions by other companies in the same industry, and forecasts of the future, what we came to was a policy of doing everything in a single stroke before construction costs went up” (*Nissui Kobo Tokubetsu-go*, June 1961).

In part, what rushed the decision to proceed with investment was the “income-doubling plan” announced

by the government of Hayato Ikeda. Nakai predicted that the plan would require the development of infrastructure, and that such development would cause basic prices to rise and invite cost inflation.

In its fishing operation, the company began by employing larger trawlers and switching to deep-sea trawling in the world’s fishing grounds. In 1960, the Japan’s largest stern trawler *Amagi Maru* was completed and then followed by a series of 2,500-ton trawlers. Then, in 1964, even larger trawlers in the 3,500-ton class were brought into service.

Meanwhile, the company took a major step forward in its shipping business. Previously, this business centered on using vessels as tankers, carriers, and cargo ships during the fishing offseason. However, the shipping industry was prone to economic fluctuations, and there were concerns that the business would not rebound from the effects of the continuing *Nabezoko Fukyo* recession. Consequently, the company decided to switch to a business structure that could promise stable shipping profits based on long-term contracts for large tankers. It further decided to cultivate this business into a new main operation to support the company’s management. It built the tanker *Matsushima Maru II* in September 1962, the ore carrier *Andesu Maru* in November 1962, and the tanker *Matsushima Maru III* in April 1964. These vessels operated under long-term contracts extending over ten or more years.

Investment under the Five-Year Reformation Plan for these maritime operations stopped at just 294 million yen in the first fiscal year of 1959. However, with full attention given to this area from the second year, a total of 2.150 billion yen was invested for the development of new fishing grounds in 1960. Subsequently the figures were 8.715 billion yen in the third year, 4.755 billion in the fourth year, and 2.086 billion in the fifth.

From the end of fiscal 1958 until the end of fiscal 1964, Nippon Suisan’s gross tonnage grew greatly, more than doubling from approximately 140,000 gross tons to more than 300,000 tons. This increase came

from the construction of larger vessels. During this period, the company built 12 trawlers, 24 west-water

trawling boats, six refrigerated cargo carriers, one tanker, and one ore carrier.

3. Results of the Plan

Sales by Business Type

As Nippon Suisan greatly raised its production capacity through the Five-Year Reformation Plan, its sales also grew greatly. Sales in fiscal 1958, which was prior to the plan's implementation, stood at 28.9 billion yen. This contrasts with 1963, the final year of the plan, when sales grew by over 80% to reach 53.7 billion yen.

By category, fishery business grew by 1.9 times, from 13.3 billion yen to 25.0 billion yen, while processing grew by 2.7 times, from 5.9 billion yen to 16.3 billion yen.

Growth in Nippon Suisan's food products operations was driven by fish sausages and hams. Operations that could not grow were whale meat/whale oil, salmon/trout, mother ship-type crab operations, and west-water trawling fishery. Whale meat/whale oil operations failed to grow because the company voluntarily restricted the number of whales it caught, a move in step with other whaling nations responding to tougher international whaling regulations. Salmon/trout operations did not grow due to stricter controls on north-sea operations arising from the Japan-U.S.S.R. Negotiations on Fishery. And both mother ship-type crab operations and west-water trawling fishery were strongly affected by various countries' fishery regulations.

The operations holding up the company's fishery category were mother ship-type bottom trawl fishery and trawling. Southern trawling, which the company began in 1959, posted sales of 5.262 billion yen, or 9.5% in terms of percentage of sales by category, in fiscal 1964. This figure propelled it to second place in the fishery category, behind whale meat/whale oil. Sales of northern trawling grew by roughly 7.1 times to 1.581 billion yen, which pushed it up to 2.9% in

terms of percentage of sales by category.

Sales by the shipping business doubled from 1.496 billion yen to 3.0 billion yen. What allowed this stable increase in profits amid uncertainty throughout the entire shipping industry were the new construction of tankers under the Five-Year Reformation Plan and the signing of long-term contracts for them.

Investments and loans to affiliates amounted to 6.041 billion yen. Group members grew during the plan's implementation from 12 companies to 37. Breaking down the 25 newly added companies, three were in fisheries, three were in shipping and container manufacturing, two were in cold storage, six were in processing, 10 were in sales, and one was an overseas company. The plan met its objectives in the areas of reinforcing and expanding the onshore processing category, developing a nationwide refrigeration network, and establishing the sales network. And the plan significantly increased the number of affiliates in refrigeration and processing businesses as well as in sales.

Focusing on Securing Profits

Total investment under the Five-Year Reformation Plan reached 33.4 billion yen. Breaking this figure down, maritime operations accounted for 18 billion yen, onshore operations accounted for 9.4 billion yen, and investment and loans accounted for 6 billion yen.

During this time, the company's long-term debt amounted to 6.3 billion yen and its bonds issued reached 2.2 billion yen; these figures accounted for 25% of the investment amount. In general, the company followed a policy of covering investment with its own capital and borrowed only as required; nonetheless, the company's debt increased steadily. During

this time, the company's interest owed reached 2 billion yen in fiscal 1961 and 3 billion yen in fiscal 1962.

At the same time, the company's capital stock, which stood at 3.5 billion yen in 1957, grew dramatically to 5.768 billion yen in 1959, 6.329 billion yen in 1960, and 10 billion yen in 1962. Dividends paid also grew during this time.

Beginning in 1962, the fourth year of the Five-Year Reformation Plan, the company's focus shifted to securing profit.

The period of rapid economic growth was a time when all companies—not just Nippon Suisan—engaged in capital investment to increase their

production. The result was overproduction. It was also a time when Japan's economy suffered a worsening international balance of payments arising from excessive investment. Financial belt-tightening in September 1961 as well as business-curbing measures (such as “international balance-of-payment improvement measures”) led to lower wholesale prices and fish prices.

Thus, the next management challenge facing the company was how to recover the massive investment it had made under the Five-Year Reformation Plan. On the other hand, it could not be denied that the new business fields into which the company was now venturing as a result of the plan laid the foundation for growth in the coming generation.

Part 4 Tightening Fishery Regulations and Nippon Suisan

The Direction of Fishery Negotiations and North-Sea Fishery

In June 1963, ten years following the International Convention for the High Seas Fisheries of the Northern Pacific came into effect in 1953, it became time to revise the convention. However, negotiations toward this revision had hit a snag. The problem was a clash between the positions of Japan, which wanted to abolish the abstention principle applied to areas east of 175° west longitude, and the United States and Canada, which felt it was better to maintain the principle in order to preserve resources.

Japan proposed a new convention that would abolish the abstention principle, divide catches fairly among the three countries, and implement appropriate resource preservation measures that are scientifically based. On the other hand, the U.S. and Canada demanded that the abstention principle remain in place and operational improvements be made under the current convention. They also sought further tightening of restrictions by emphasizing three items: a new proposal for regulating catch periods, zones, operation methods, etc., to address overfishing of halibut; a proposal that, in effect, would prohibit

salmon fishing west of 175° west longitude, and a new interpretation of the abstention principle. As a result of these opposing viewpoints, no progress was made in dialogue, even at the 1964 Ottawa meeting held the next year.

Initially, Japan's stance was so unbending that it even threatened to withdraw from the negotiations. However, it later relaxed its position and continued talking out of concern for the negative impact such a move would have on its fishery exports and possible retaliatory restrictions on Japanese crab fishery by the U.S. under its “Prohibition of Foreign Fishing Vessels in the Territorial Waters of the United States” law. Nonetheless, the two sides failed to reach a new agreement. Negotiations toward revising the convention were eventually called off, and talks on catches in regularly scheduled committee meetings continued as per the previous practice.

Meanwhile, a new fishing zone was established in the sixth round of Japan–U.S.S.R. Negotiations on Fishery in 1962. The Soviet Union insisted on regulating the area south of 45° north latitude, while Japan pushed for self-imposed regulation in this area. These conflicting stances resulted in the establishment of a “Zone A” in the previous fishery area and a new “Zone

B” in a sea area where Japan would regulate itself. Negotiations established yields of 55,000 tons in Zone A and 60,000 tons in Zone B.

Beginning the following year, Japan–U.S.S.R. fishery negotiations regulated salmon and trout fishery by setting single-year no-fishing areas, shortening catch seasons, and taking other such actions. However, they did not drastically reduce overall yields, and therefore catches remained in the 90,000 to 120,000-ton range until 1971.

Amid stricter international fishery regulations, Japan’s mother ship-type salmon and trout fishery began to decline in the mid-1960s. This decline took forms of smaller fleet numbers and smaller fleet sizes. However, while catch sizes fell accordingly, the percentage of relatively higher priced sockeye salmon caught rose.

The overall salmon and trout catch fell from 54,000 tons in 1960 to 40,000 tons in 1969. Its production value also declined slightly from 20.3 billion yen to 19.8 billion yen. Nonetheless, profits remained comparatively strong due to growing domestic consumption of fishery products and rising sales prices.

Tougher Regulations on Mother Ship-Type Crab Fishery in Soviet Waters

Because the Soviet Union suggested implementing strict regulations on mother ship-type crab fishery in its waters at the second round of the Japan–Soviet Fisheries Commission in 1958, the number of fleets that Japan sent out was set at four. At the same time, fishery of king crab off the western coast of the Kamchatka Peninsula, which previously had been left to self-regulation, was placed under numerical restrictions. This led to a decline in the per-fleet quota of from 88,000 cases (one case = 48 half-pound cans) in 1957 to 70,000 cases in 1959. Consequently, king crab can production from Japan’s mother ship-type crab fishery, including that from Bristol Bay, fell from 400,000 cases in 1957 to 350,000 cases in 1959.

Entering the 1960s, Japan continued to operate

four mother ship fleets. However, its quota fell each year, falling to 224,000 cases in 1968. On the other hand, the number of Soviet fleets grew from six in 1960 to eight in 1968, and its yield increased from 390,000 cases to 432,000 cases. In various ways—including restrictions on fishing season; contraction of operating area; and controls on periods for submerging nets, reciprocal number of casting nets, and meshes—regulations were being strengthened to Japan’s disadvantage.

In 1966, Nippon Suisan’s *Tenryu Maru* engaged in trial operations outside of the king crab fishing grounds near the Kamchatka Peninsula’s western coast. She caught golden king crab and processed it as frozen product. This trial was followed by fleets comprised of a 1,000-ton mother ship and six or seven catcher boats beginning in 1968. However, eventually golden king crab also became subject to a Japan–U.S.S.R. Crab Agreement that dramatically reduced catches.

The Olyutor Peninsula in the western Bering Sea was a main fishing ground for king crab, and until 1959 it was open to operation by one small-scale mother ship fleet only. However, from 1960, a fleet centered on a large-scale mother ship that also used bottom trawl nets, Pacific herring gill nets, and other equipment began catching blue king crab and processing it as frozen product. From 1963, a fleet that had completed king crab fishing near the Kamchatka Peninsula’s western coast began operating in the area around the Olyutor Peninsula and manufacturing canned blue king crab. Because this area was not subject to the Japan–U.S.S.R. Fisheries Convention, production grew steadily. And around 1966–67, catches of snow crab off the Olyutor Peninsula and Navarin Canyon sea area started to show promise, thereby attracting a growing number of single-ship operations. However, catches and production of these items plummeted when they, too, became subject to the Japan–U.S.S.R. Crab Agreement of 1969.

In the area to the east of Sakhalin, operations for snow crab began in 1963, followed by trial operations for king crab and blue king crab in 1965. However,

these catches also decreased sharply as a result of the Japan–U.S.S.R. Crab Agreement.

In the eastern Bering Sea, canning as part of mother ship-type king crab fishery began in 1953. Initially, Japan voluntarily restricted its mother ship operations in order to avoid a conflict American king crab fishing boats. However, both the number of ships and production grew rapidly in the early 1960s, spurred by demand for increased production and entry into the region by Soviet crab factory ships. However, the resulting fierce competition among the king crab fleets of Japan, U.S., and U.S.S.R. brought to the fore fishing ground disputes and overexploitation of resources in the region. In 1966, the U.S. restricted activities by Japanese and Soviet mother ships in the eastern Bering Sea by enacting the Prohibition of Foreign Fishing Vessels in the Territorial Waters of the United States law based on the Bartlett Law. And in 1965, the Japan–U.S. King Crab Agreement came into force, causing catches in the region to plunge thereafter.

A Shift Toward West-Water Trawling

In 1960, a “revision of permits for west-water two boats trawling fishery and trawling” was implemented. Then, in 1963, the Fisheries Agency, taking note of the sluggish performance of fishery in seas near Japan and north-sea waters as well as the advance of foreign trawling, moved to promote the development of deep-seas fishing grounds and use of their resources by accepting applications for new 12 new licensed vessels on the condition that they abandoned west-water fishery.

With this action, west-water otter trawlers—whose numbers had been declining and which suffered from lower catches and productivity since the 1950s—gave up their west-water fishery permits in the 1960s and shifted to deep-seas trawling.

On the other hand, west-water trawling boats continued to be built at a rate of between 70 and 100 a year, continuing a trend from the 1950s. From the mid-1960s, operators were switching to larger vessels

and stern trawlers in order to streamline their operations. The growing size of vessels was further accelerated by increasing numbers of vessels that were operating in summer north-sea fishery as catcher boats affiliated with north-sea mother ship-type bottom trawl fishery. Consequently, many operators took older vessels out of service to supplement tonnages, and thus the number of licensed west-water trawling boats decreased.

Growth of North-Sea Mother Ship-Type Trawl Fishery and Resumption of Fishmeal Factory-Ship Fishery

The Japan–U.S.S.R. Negotiations on Fishery of 1957 led to the steady decline in salmon/trout fishery and crab fishery that had, until then, been the mainstays of Japan’s north-sea fishery. On the other hand, they also brought the catching of groundfish living on or near the ocean’s floor, such as flounder and Alaska pollack, into the spotlight.

In the Bering Sea, bottom trawl fishery from flounder refrigerated factory ships began in 1954. The catch started with flounder but later grew to include halibut, Alaska pollack, sablefish, Pacific Ocean perch, shrimp, and Pacific herring. However, sales of these fish did not take off immediately as they suffered from low market recognition. Consequently, Nippon Suisan and Taiyo Gyogyo both reduced their fleets by one in 1958, leaving two fleets in operation: Nippon Suisan’s *Miyajima Maru* fleet and Taiyo Gyogyo’s *Chiyo Maru* fleet. Nonetheless, as fish types diversified, products also become more varied. To expand public acceptance, Nippon Suisan began making prototypes for dressed and fillet, dressed meat, salt-cured, and frozen products, while Taiyo Gyogyo did the same for dressed and fillet, fishmeal, and fish liver oil products.

It should be mentioned that regulations controlling mother ship-type bottom trawl fishery were revised in 1958 to institutionalize mother-ship dragnet fishery permits. At this time, flounder refrigerated factory ship fishery was moved from its conventional



Hokuyo Suisan's meal mother ship *Hoyo Maru*

classification under the catch transshipment permit system to the mother ship-type bottom trawl fishery permit system.

Around 1958, sablefish, a fish caught around the Aleutian Islands and the Gulf of Alaska, gained popularity among the American public and soon became subject to fishery restrictions. And catches of Pacific Ocean perch, a fish caught since around 1962, hit their peak in 1968 at 150,000 tons; however, subsequent yields fell rapidly. Gradually, the target of catches switched to Alaska pollack.

On the other hand, in 1958, Hokuyo Suisan revived its fishmeal factory-ship fishery to catch groundfish in the Bering Sea, which was known from prewar operations to have plentiful stocks, for the first time in some 20 years.

After five fishmeal fleets were added in 1960, marine products company engaged in mass production in fierce competition with each other. Accordingly, the amount of fishmeal produced skyrocketed from just less than 20,000 tons in 1959 to 58,000 tons in 1962. However, such mass production suppressed prices and caused profitability to fall below the break-even point.

The company most affected by this was Hokuyo Suisan. The fact that its fishmeal fishery was not breaking even put pressure on its profitability and ended up eating away at earnings from its strong western Kamchatka Peninsula crab fishery. At the time of its settlement of accounts at the end of 1962, Itochu Corporation, a Hokuyo Suisan stockholder and its major creditor, demanded that the company be rebuilt



Gyokuei Maru, a tanker that was modified into a meal mother ship

under Nippon Suisan's umbrella. This demand led to its being placed within the Nippon Suisan Group.

By 1963, fishmeal production by Japan—registered vessels had fallen to 25,000 tons. Nonetheless, Nippon Suisan's *Gyokuei Maru* kept her production at the previous year's level, and as a result the company's fishmeal operation enjoyed profitability by benefitting from a price rise when supply fell.

North-sea groundfish fishery that had started in 1954—specifically, fishery by deep-sea trawlers converted to north-sea waters using mother ship-type bottom trawl, longlines, single-ship trawling, and coastal bottom trawl nets in the Sea of Okhotsk, Bering Sea, Gulf of Alaska, and part of the North Pacific Ocean—took off in a very short period of time. In 1960, 12 fleets left port. This number consisted of four fishmeal factory-ship fleets, four refrigerated factory ship fleets, and four longline fleets. The next year, 1961, an unprecedented north-sea fishery boom occurred, as 33 fleets and 380 catcher boats caught 620,000 tons. Nichiro Gyogyo entered operations in 1961, sending its 1,500-ton stern trawler *Akebono Maru No.50* to Bristol Bay. Such excessive activity produced furious competition and lower fish prices. The turbulence of this time was followed by a period of stability when operations were scaled back to 14 fleets and a catch of 410,000 tons in 1964.

Originally, fishmeal was sold by Nosan Corporation, Mitsubishi Corporation, and others. However, as fish prices fell, Nippon Suisan, Taiyo Gyogyo, and Hokuyo Suisan started joint sales of white meal.

The Start of Southern Trawling

From the 1950s, a time of decline in west-water trawling, into the 1960s, southern trawling developed quickly as trawlers operating off the coasts of New Zealand, Africa, North Atlantic Ocean, and other regions grew larger.

Sparkling this development was the discovery of fishing grounds to the west of New Zealand by Taiyo Gyogyo's *Taiyo Maru No.51* in 1959. Seeing great possibilities for these fishing grounds, Taiyo Gyogyo followed up by sending out *Taiyo Maru No.56*, *No.57*, and *No.61*. That same year, Nippon Suisan also sent a trawler to the northwest coast of Australia and, in 1960, to an area off the coast of New Zealand. Nichiro Gyogyo, which initially only participated in northern trawling, sent its *Akebono Maru No.53* to New Zealand fishing grounds and *Akebono Maru No.50* to fishing grounds west of Australia in May 1963.

Development of West African fishing grounds also

gained considerable momentum around this time. With an eye to developing them, Nippon Suisan, Taiyo Gyogyo, and Nanpo Gyogyo Kaihatsu conducted trial operations there. After concluding that they were indeed bountiful, all three companies sent out a succession of trawlers. Nippon Suisan dispatched its trawler *Uji Maru* in July 1959, and in 1960 it began building and operating a series of 2,500-ton trawlers as part of its Five-Year Reformation Plan. Taiyo Gyogyo also built a 1,500-ton stern trawler and sent it to African fishing grounds. And it similarly began building and operating large trawlers in excess of 2,000 tons in 1963. Nichiro Gyogyo began participating in southern trawling in 1962 when it sent out its *Akebono Maru No.50*.

African fishing grounds can be divided into the northwest coast of Africa, the offshore area of southern Africa, and the offshore area of southwestern Africa.

Catch resources in the northwest coast of Africa were mainly cherry bass, sea bream, common pandora,



The trawler *Uji Maru*



Unloading at the port of Piraeus, Greece, a base of operations for the northwest coast fishing ground of Africa



African northwest coast fishing ground

common cuttlefish, and octopus in the northeastern fishing ground, and yellow sea bream and hake in the southern fishing ground. Demand for common cuttlefish and octopus, in particular, was high in Japan, and thus these fishing grounds were an important resource, so much so that “the size of the catch [there] plays a huge role in determining the success of offshore trawling in Africa” (Fumio Imanaga, “*Enyo Tororu Gyogyo no Shinkadai*”, *Suisan Hyoron Bessatsu: Yakushin-suru Enyo Tororu Gyogyo* [“new issues in deep-seas trawl fishery”, fisheries critique supplement: deep-seas trawl fishery in an era of remarkable growth]). However, yields peaked in 1963–64 and steadily declined thereafter. This was due to resource depletion resulting from competition among not only Japanese vessels but also those of companies in the Soviet Union, Spain, Italy, the Netherlands, and other countries. It was also attributable to coastal nations’ setting of exclusive fishing zones. As for the fishing grounds in offshore areas of southern and southwestern Africa, companies set up bases in Cape Town and other locations to target fishing grounds along the Agulhas Bank of the continental shelf near the southern coast of southern Africa and the edge of the continental shelf near the west coasts of southern and southwest Africa. Catches from the southern Africa coastal fishing ground included yellow sea bream, hake, and horse mackerel. The yellow sea bream catch in 1964 reached 20,000 tons, making it the largest catch of any single variety of the Sparidae family ever made overseas. In Japan, catches were used in catering to New Year’s celebrations, weddings, and other festive occasions.

In the beginning, Japanese trawlers caught yellow sea bream along the Agulhas Bank off of Cape Town’s coast, but they later began harvesting hake in 1963 as resources declined. However, Japanese vessels did not make this switch enthusiastically, as hake had low popularity in Japan, European import regulations placed strict limitations on amounts that could be sold there, and competition with European operators was fierce.

Japanese marine products company also began

catching horse mackerel from around 1963. Catches were used to make dried fish products.

Whaling Trends

As the IWC reduced total whaling quotas, Japan shifted the focus of its harvest to sperm whales, which were outside the IWC’s regulations. This shift began with the 18th expedition of 1963. However, a worsening whale oil market caused by overproduction of sperm oil spurred Japan reduce its sperm whale catches between the 21st expedition of 1965 and the 24th expedition in an effort to restore the market.

Around 1964, Antarctic whaling quotas fell below 10,000 BWU to 8,000, and Japanese whaling companies started purchasing the quotas of whaling mother ships of countries that had discontinued whaling. They also promoted whaling from foreign bases by using leases and forming joint enterprises.

From 1963, Nippon Suisan started operating from a base on South Georgia, a territory of the United Kingdom. It had been searching for opportunities to engage in whaling from South Georgia, which was exempt from quotas, as a way of dealing with shrinking quotas. It began negotiating with Salvesen, one of the companies operating on South Georgia, and conducted onsite studies that ultimately led to its signing a contract with Salvesen in June to use that firm’s facilities for a subleasing fee of 50,000 pounds.

Similarly, Taiyo Gyogyo and Kyokuyo Hogeï also concluded contracts to use a base on South Georgia using Kokusai Gyogyo K.K. as their representative. There, they harvested baleen whale prior to leaving



The South Georgia base

for Antarctic whaling.

However, IWC regulations were changed in 1966 so that whales harvested at South Georgia were counted within Antarctic whaling quotas. This led Nippon Suisan to abandon its whaling there. In the end, during the three years that it operated on South Georgia, the company lost about one billion yen.

Advancement of Shipping Business

In 1957, prior to the Five-Year Reformation Plan, Nippon Suisan operated four vessels in its shipping business. These were the dedicated tanker *Matsushima Maru II* and operated three vessels that served as tankers during the fishing offseason; namely, the *Tonan Maru* and *Tonan Maru II*, and *Tadotsu Maru*.

During the plan's implementation, the company used investment allocated to reinforce its shipping business to complete the *Matsushima Maru II* in September 1962 and the ore carrier *Andesu Maru* in November 1962.

At the time of its construction, the *Matsushima Maru II* was Japan's largest tanker. This fact attracted considerable attention given that she was built by a marine products company rather than a shipping company. Built at a price of 2.1 billion yen, she carried petroleum between the Persian Gulf and Japan under a 12-year long-term contract with Tokyo Tanker K.K. The *Andesu Maru* was built for 2.3 billion yen, and plied the oceans between Chile and Peru and Japan under a 15-year contract with Kawasaki Steel Corporation.



The ore carrier *Andesu Maru* (completed in 1962)

In 1964, Nippon Suisan built the *Matsushima Maru III*, which also hauled petroleum between the Persian Gulf and Japan under a long-term contract with Tokyo Tanker. This same year, the shipping industry was beginning to enjoy strong economic times following a successful reorganization. Nippon Suisan's shipping business was also showing stable and strong performance on the back of its long-term contracts.

In 1961, Nippon Suisan launched Nissui Kaiun K.K. to handle the maritime transport of catches and products as well as general shipping business for the Nippon Suisan Group. At the time of its establishment, Nissui Kaiun worked to enhance its cool carrier service by operating three ships: the refrigerated carriers *Eiko Maru* and *Meiko Maru* and the refrigerated carrier *Tsukishima Maru* owned by Nippon Suisan affiliate Tokyo Teion Reizo. The need for its cool carrier service was growing with the expansion of north-sea mother-ship fishery. Thus, beginning in May of this year, Nissui Kaiun also put the new 1,700-ton refrigerated carriers *Nanko Maru*, *Hokko Maru*, *Toko Maru*, and *Seiko Maru* into service as they left the shipyards. And in 1967, it built the *Asakaze Maru* and *Harukaze Maru* to further expand its fleet of ocean-going vessels.

Beginning of Overseas Business

Japan's deep-sea fishery was being increasingly squeezed by a number of international regulations, including the Japan-U.S.S.R. Convention on High Seas Fisheries in the Northwest Pacific Ocean, Japan-U.S. King Crab Agreement, Japan-U.S. Fishery



The fast refrigerated carrier *Asakaze Maru* (completed in 1967)

Agreement, and Japan–U.S.S.R. Crab Agreement. Consequently, marine products company began reconsidering their focus on fishing and examining ways of building onshore business and securing fishery resources through non-fishing means.

The following three factors were behind the emergence of overseas businesses. First, there was growing need to develop and supply new and different fishery resources to meet growing domestic demand for fishery products. Second, imports of main fish types—namely, sea bream, tuna, salmon and trout, shrimp, and crab—had become possible through fishery import liberalization in 1961, and marine products company were using this as an opportunity to promote the development and import of fishery resources along foreign coasts by applying their accumulated fishing technologies and information-gathering capabilities. And third, developing countries in Southeast Asia, Latin America, Africa, and other regions were actively promoting tie-ups with Japanese enterprises in order to develop their coastal fishery resources. Developing countries hoped to absorb the know-how possessed by Japan's marine products company, and Japanese enterprises sought to meet domestic demand by developing the fishery resources of these regions.

In 1951, Taiyo Gyogyo set up a trade department in its Tokyo head office. That same year, it began providing technical guidance on bottom trawl fishery in India, and it began full-scale efforts to enter overseas markets through joint ventures in 1953.

On the other hand, Nippon Suisan started its overseas business in the South China Sea using Hong Kong as a base. A shortage of vessels and capital forced the company to start off in a nearby country. In October 1954, Nippon Suisan entered into a technical tie-up with Hong Kong's Kai Cheung Shipping Company and dispatched two groups of 100-ton bottom trawl

boats. Then, in March 1955, it put forth the boats as contributions in kind to establish the wholly owned affiliate Tung On Fisheries Development Company Limited. This company engaged in bottom trawl fishery and trawling. That same month, Nippon Suisan established Premier Development Company as a joint venture with Taigho Construction Company Limited to conduct bottom trawl fishery.

In 1959, Nippon Suisan purchased a stake in the Argentine company Aurora Astral Sociedad Anonima. This allowed it to begin tuna operations in Argentina, where tuna fishery had been neglected since the end of the Pacific War. At this time, Nippon Suisan entrusted operation of its tuna boats to Hokoku Suisan. When it dispatched the *Eisei Maru*, one of Hokoku's fleet, to Argentina and Uruguay, it found that the tuna fishing grounds there were plentiful. However, unstable tuna migration combined with continuing inflation-fueled instability in Argentina led the company to pull out in 1967.

In June 1960, it began tuna operations in Las Palmas of the Spain-governed Canary Islands. It established a liaison office there in April 1962.

In 1964, Nippon Suisan set up a West Africa Office in Accra, Ghana, and concluded a service agreement with the Ghanaian government. Ghana was actively developing and promoting its fisheries and had built two 1,500-ton trawlers in Japan. Nippon Suisan was charged with operating these vessels. Under the agreement, Nippon Suisan sent 16 top crewmen to the two vessels (one of which was the Ghanaian vessel *Banko*) to provide technical guidance. However, this arrangement was ended in 1973 due to psychological differences between the two sides, political instability in Ghana, a weak economic foundation, and uncertainty in the foreign exchange situation among other causes.

Part 5 The Evolving Processed Food Industry and Nippon Suisan

Changing Dietary Habits and Innovations to Food Distribution

Many processed foods emerged during Japan's period of rapid economic growth, and the convenience of these foods had a major impact on the Japanese public's values vis-à-vis food and culinary styles.

In August of 1958, Nissin Food Products began marketing "Chicken Ramen", the world's first instant ramen noodles product. And in 1960, Morinaga & Co. began selling instant coffee, thereby sparking a major boom when other companies soon followed suit. Indeed, the 1960s were a time when a great variety of processed foods became available and gained rapid acceptance. Among them were so-called "instant foods" that included instant curries and soups; condiments and seasonings such as mayonnaise, salad dressings, and soup stock base; *furikake* seasonings to sprinkle on rice; and snack foods.

Frozen foods represented one form of these processed foods. Previously, frozen foods had primarily been sold for commercial use. However, now they were becoming popular in the home as more households came to possess refrigerators.

The Japanese diet was becoming increasingly diversified, broadening from the traditional Japanese-style (rice-based) menu to also include bread, meats, and other Western foods.

Supermarkets played an important role in this diversification of dietary habits. Bringing in streamlined management methods—such as creation of self service-oriented stores and chain store operation—they revolutionized conventional retail and wholesale-based food distribution by employing mass procurement and mass sales of the rapidly growing range of foods and ingredients made possible by innovations in processing technologies as well as household goods.

It is said that Japan's first supermarket was Kinokuniya, a produce shop catering to foreigners

that was established by Tokuo Masui in Tokyo's Aoyama district in 1953. In 1956, a number of supermarkets opened throughout Japan, including Maruwa Food Center, established by Hideo Yoshida in Kokura on the island of Kyushu, and "housewifely store" Daiei, established by Isao Nakauchi.

In the early 1960s, capital from various sources began flowing into supermarket management, and as a result the number of stores to balloon from 283 in 1957 to 2,682 in 1962. This pace gained even further momentum from the mid-1960s.

The Fish Sausage Business

In the mid-1950s, fish sausage production benefitted from a major innovation that lifted productivity and caused production to skyrocket in the early 1960s.

The original way of making fish sausage involved packing the casing film with filling by hand and then sealing the ends by tying them with cotton string. This method was replaced when a device was developed that could automatically fill and tie off the casing using polyvinylidene chloride film and aluminum wire. The advancement in filling material and automated manufacturing processed raised production efficiency and the quality of the finished product.

Fish sausage production grew strongly by 15% or more year-on-year until 1963. However, that the rate of growth fell that year and then declined year-on-year until 1967. The reason for this decline was the appearance of competing products.

As incomes rose with economic growth, the status of livestock products among the broad range of food options for consumers also rose. Hams and sausages made from beef and pork gained attractiveness among consumers as symbols of Western-style dining. For fish sausages, this meant the arrival of formidable competitors.

At the same time, major marine products companies were reinforcing their production plants as part of

rebounded. This was led by swelling consumption during the *Izanagi Keiki* period of economic expansion and new demand for canned products as a form of processed food that delivers convenience and new tastes. The result was growing production from 726,000 tons in 1965 to 1,028,000 tons in 1970. And as domestic demand gained strength, exports also showed strong and stable performance throughout the 1960s.

Full-Scale Entry into the Frozen Food Products Business

Nippon Suisan actively promoted its frozen food products business as part of its effort to strengthen onshore business under the Five-Year Reformation Plan.

In 1958, Nippon Suisan resumed its frozen food products business by beginning full-scale production of frozen agricultural and fishery products at its Tobata Plant. That same year, it began producing “fish sticks” for commercial use at Tokyo Teion Reizo’s Tsukishima Plant. And in 1959 it began producing “Chawanmushi” egg custard at its affiliate, Hakodate Teion Reizo. “Chawanmushi” was Nippon Suisan’s first precooked frozen food that targeted ordinary households, and it remained an enduring seller until the 1990s.

The brand-new Harumi Plant began manufacturing frozen foods under the Nippon Suisan banner in 1960. Among other products, it produced shrimp sticks, salmon sticks, deep-fried Oriental shrimp, and deep-fried oysters. The following year, 1961, a new frozen foods facility was built at the Harumi Plant. This new factory produced squid sticks, *tatsuta-age* fried whale, deep-fried shrimp, and “*binomaru* balls”. As product development continued, production of new items such as spinach, edamame soybeans, *soramame* broad beans, strawberries preserved in syrup, and other frozen foods began in 1962, followed by curry blocks

for commercial use and cream soup in 1963.

As products became increasingly diversified, Nippon Suisan began dividing its sales activities into those targeting ordinary households and those targeting commercial food preparers (or, in other words, businesses preparing meals for “mass feedings”). Sales activities targeting ordinary households began by first securing sales spaces. Sales personnel worked to foster consumers’ recognition of the Nippon Suisan brand by installing freezer showcases in department stores at company expense. In order to devise products and manufacturing/sales policies that grasp the trends and foci of consumer preferences, the company set up frozen showcases at three stores in the Tokyo metropolitan area (Shinjuku Isetan Department Store, Shibuya Tokyu Department Store, and a department store in the Kawasaki Station building) to conduct test marketing. This approach was later expanded to the Kichijoji Takashimaya and Ikebukuro Seibu Department Stores.

Nippon Suisan also implemented a plan to further expand sales avenues by distributing 2,000 freezer showcases to retail shops in Tokyo and Osaka. However, the company faced a tough battle here, as the showcases’ performance did not meet requirements, product handling at the distribution stage tended to be rough, and raising consumers’ recognition of frozen foods proved more difficult than expected. Consequently, it began looking for sales avenues in the commercial-use food market, with focus on school lunch programs.

The company set out to sell 350,000 meals a month to school lunch programs. Using the sales network of Tamai Shoten Co., Ltd., a wholesaler of commercial-use products, it sold “stick” foods to 800 elementary schools in Tokyo. Its sales of commercial-use frozen foods for mass feedings and the restaurant industry grew in 1963 and 1964 and made up for poor growth in sales to households.

Chapter 3: New Developments in the Fishing Industry

1965–1970

Part 1 Development and Commercialization of Frozen *Surimi*

Onshore Development

From the late 1940s until the mid-1950s, the fish landed in the greatest amounts in Hokkaido was Alaska pollack. At that time, Alaska pollack was useful for its roe; however, its meat tended to spoil easily and did not freeze well, and therefore was not often used. Typically, only a portion of landed meat was used in locally produced fish-paste and fishmeal products.

However, from the mid-1950s, Hokkaido's abundant Alaska pollack resources began attracting considerable attention, which in turn sparked attempts to find ways of utilizing them. Advancement of bottom trawl fishery in Hokkaido increased the Alaska pollack catch by some three to four times. It also led to the landing of the majority of catches at specific fishing ports and lengthening of the fishing season. As a result, it became necessary to process large quantities of fish while taking measures to stabilize fish prices. The Hokkaido Fisheries Experimental Station and Nippon Suisan took advantage of this situation to develop frozen *surimi* (fish paste) made from Alaska pollack.

The central figure in research on frozen *surimi* at the experimental station was Kyosuke Nishiya, who was head of its processing department. One day, Nishiya froze some leftover fish meat paste from an experimental fish-sausage filling machine. When he thawed the paste several days later, he found that its elasticity remained just as it was before freezing. This finding contradicted the conventional wisdom that freezing filling as is would cause it to harden after thawing, and suggested the possibility that *surimi*

could be kept in cold storage.

This discovery gave Nishiya an idea. He conducted an experiment whereby he cut frozen *surimi* for fish sausage into cubes, joined the cubes with fresh fish meat paste, packed them into casing, and then heated them. The consistency of the resulting sausage was uniform, and there was no difference in quality with sausages made with uncooked meat.

Nishiya took the results of his experiment to Nippon Suisan's Hakodate Branch to discuss the possibility of using frozen Alaska pollack *surimi* as an ingredient in fish sausages.

Meanwhile, Nippon Suisan was also exploring possibilities for cold storage of Alaska pollack. At the time, its mother ship-type bottom trawl fishery mainly produced catches of flounder; only a tiny amount of Alaska pollack was caught as bycatch. However, Isamu Yoshimura, general manager of the Hokkaido Branch, had the idea of using Alaska pollack as an ingredient in fish-paste products, for which future shortages were predicted. Yoshimura said, "If it is possible to store Alaska pollack meat without freezing denaturation, [Part omitted] this will allow us to not only effectively utilize vast north-sea resources of Alaska pollack that are currently used only to make fishmeal, but also to streamline our fishmeal business" (*Nissui Kobo*, volume 750, March 1960).

Thus, Nippon Suisan began joint research with the Hokkaido Fisheries Experimental Station in late 1959.

In 1960, the research team invented a *surimi* that suffered no loss of quality even when frozen. This was achieved by cleansing minced Alaska pollack with

pure water and then adding saccharides and polymer phosphate. The water-cleansing process enhanced product strength after heating and texture when eating by improving gel formation. And the addition of saccharides and polymer phosphate worked to prevent freezing denaturation.

Development and Commercialization of Offshore *Surimi*

In 1960, as it pursued joint research with the Hokkaido Fisheries Experimental Station, Nippon Suisan also began research on offshore manufacture of frozen *surimi* aboard the fishmeal mother ship *Gyokuei Maru*. Onboard the *Gyokuei Maru* was Osamu Tanaka, an engineer with the experimental station, who cooperated in the research.

The development of offshore *surimi* processing faced problems that were unlike those of onshore processing. The process of cleansing minced fish with pure water was an essential part of the manufacture of frozen *surimi*; however, obtaining sufficient quantities of pure water onboard ship proved difficult. In addition, it became clear that there was a limit to the degree that freezing denaturation could be prevented when post-spawning Alaska pollack was used. As a result, the quality of frozen Alaska pollack *surimi* produced offshore came nowhere near that produced in onshore plants. Moreover, because Alaska pollack was bycatch that accounted for only a small portion of the fishmeal fleet's catch (including that of the *Gyokuei Maru*), technical research for its use did not go beyond the basic level.



The *surimi* factory ship *Shikishima Maru*

However, Nippon Suisan felt that there would be no future for mother ship-type bottom trawl operations if they could not conduct offshore production of frozen *surimi* efficiently and supply ingredients to the large fish-sausage and fish-paste market.

In 1962, the *Gyokuei Maru* fleet's voyage to the Bering Sea suffered an abnormally poor catch of yellowfin sole that prevented it from producing the 600 to 800 tons per day needed to make fishmeal. Consequently, around the midpoint of the fishing season in late May, the fleet moved to fishing grounds further west based on a report by a survey ship. There, it encountered an abundance of Alaska pollack that exceeded expectations.

From the next year, 1963, the *Gyokuei Maru* fleet switched from yellowfin sole to Alaska pollack. The bountiful resources of Alaska pollack and uncertain future of the fishmeal business reinforced the company's recognition of the importance of offshore *surimi* manufacture. Yoshimura and others suggested that Nippon Suisan should attempt to mass produce frozen Alaska pollack *surimi*, which it decided to do during the 1964 fishing season.

Because it benefitted from the kind of fish freshness that only offshore operations could achieve, the completed trial product attained quality that exceeded that of onshore frozen *surimi*. For Nippon Suisan, which, before the test, had hoped to reach a quality level of around 80% of onshore frozen *surimi*, this result turned out to be a very happy miscalculation.

Nippon Suisan then installed fish meat processing machines and dehydrator on the *Gyokuei Maru*. Thus, now equipped to produce 60 tons a day, the *Gyokuei Maru* set out for the 1965 fishing season. However, while offshore manufacture had produced solid results during the test, the start of actual production soon caused headaches, including an abnormally black color and impurities in the products. Furthermore, the products' elasticity worsened significantly about halfway through the fishing season. In the end, a decision was made to catch flounder for the rest of the season while conducting tests to raise the quality of frozen *surimi*.



Processing Alaska pollack on a mother ship



The *surimi* freezing process



The *surimi* production process

Nonetheless, the test was ultimately successful in resolving all concerns regarding the offshore production of frozen *surimi*. And at about the same time, Taiyo Gyogyo was successfully producing salted *surimi* onboard its factory ships.

Also around this time, the industry was under pressure to quickly begin using *surimi* as a replacement for whale meat in fish sausages. Nippon Suisan responded by beginning full-scale offshore production of *surimi*. To add to the capacity *Gyokuei Maru* gave it, it modified the *Shikishima Maru*, which had been operating as a refrigerated factory ship near the Olyutor Peninsula, by installing a *surimi* plant capable of producing 70 tons a day. She set sail as a *surimi* factory ship in 1967. That year, Nippon Suisan's offshore *surimi* production skyrocketed to 16,810 tons from 1,013 tons 1966.

In 1968, the company further reinforced its facilities. It completed the *Haruna Maru* and *Kongo Maru*, the first 4,000-ton refrigerated *surimi* trawlers fitted with machinery to produce 30 tons of *surimi* per day as well as the latest equipment capable of processing 150 tons of raw fish per day. It also extended the hull of the *Shikishima Maru* by 19 meters and raised the capacity of her *surimi* plant to 90 tons per day. That same year, Nippon Suisan roughly doubled its offshore *surimi* production compared to the previous year to 32,169 tons.

Appearance of the General Factory Ship *Mineshima Maru* and Trawler *Yamato Maru*

In February of 1970, Nippon Suisan put the general factory ship *Mineshima Maru* into operation in north-sea waters with an eye to further strengthening its offshore frozen *surimi* production. The *Mineshima Maru* was originally the *Ominesan Maru*, a tanker owned by Mitsui O. S. K. Lines Ltd. Nippon Suisan purchased and modified her into a general factory ship to replace the *Gyokuei Maru*, which was built before the end of the war in 1944. Interestingly, the *Ominesan Maru* and Nippon Suisan had crossed paths before. In 1965, Nippon Suisan's crab factory ship *Tokei Maru*, which had been serving as a cargo ship during crab fishery's offseason, caught fire for an unknown reason and sank off the west coast of the Philippines. The ship that arrived to rescue the *Tokei Maru*'s crew was none other than the *Ominesan Maru*. Bringing the latest equipment to the manufacturing



The general factory ship *Mineshima Maru*, modified in 1970



The 5,000-ton trawler *Yamato Maru*, built in 1970

process and improving both productivity and product quality, the *Mineshima Maru* outshined all other vessels in the production of frozen *surimi*.

In July of 1970, Nippon Suisan launched the 5,000-ton trawler *Yamato Maru*. It sent this new 5,000-ton trawler to northern trawling, primarily for the reason that it could handle expanding “fishponds” (fish congregations). Because, by nature, Alaska pollack tend

to come to the surface during the nighttime, harvesting them required concentrating work during the daytime when the fish are on the seafloor. While a 4,000-ton trawler could only hold about 80 tons of raw fish, the *Yamato Maru* could hold 250 tons. Moreover, she had stronger winches and components for more effective operation during daylight hours. This equipment allowed her to lift around 100 tons per haul, as compared to the conventional 40 tons. As a result, the *Yamato Maru* had a fishing capacity that was 1.4 times greater than the *Haruna Maru*'s. Moreover, she had enhanced fishing capability, as she was equipped with the most advanced loran course recorder, sonar, net recorder, and fishfinder, all of which raised fishing efficiency. She also had an improved fillet machine having superior operational capabilities compared to conventional machines.

Part 2 The Arrival of a New Generation

Development of New Fishing Grounds Through Trawling

Based on its Five-Year Reformation Plan, Nippon Suisan began developing a succession of new fishing grounds through trawling. And it maintained its fishing operations by continuing this effort into the late 1960s, even after the plan had concluded.

The northwestern coastal region of Africa—an area where Nippon Suisan began operating in 1959—was seeing competition-caused yearly declines in yield that drove the company to begin developing other areas in the vicinity. In 1967, it finally discovered a fishing ground for hake off Africa's southwestern coast. And it later developed a large hake fishing ground off the southern coast of the Republic of South Africa. Nippon Suisan successfully maintained stable catches by effectively utilizing the resources of these multiple fishing grounds.

When it began harvesting hake in 1963, prices for the fish in Japan were low due to its low recognition compared to other whitefish in the Japanese market.

Consequently, catches were sold in Spain, Italy, and other countries where it was more commonly eaten. The *Kirishima Maru*, a trawler that entered service in 1964, was equipped the latest fillet machine and weight sorter. These devices allowed her to raise added value and lower cost by standardizing products and consuming less energy in production.

As it was developing fishing grounds off the northwestern coast of Africa, Nippon Suisan continued trial operations in other parts of the world in the hope of finding new fishing grounds and fishery resources. This effort was based on its view that the good times for trawling in African fishing grounds would one day end.

In 1967, the trawler *Kaimon Maru* conducted surveys and trial operations off the coasts of Florida, New York, and Nova Scotia of North America. Because these activities produced favorable results, Nippon Suisan began full-scale operations to harvest butterfish and spear squid. The next year, 1970, it began conducting year-round operations to increase catches and fish types, harvesting banded reef-cod and deep-sea smelt

during the summer, Pacific herring in September, and spear squid and butterfish in the winter. In the case of spear squid and butterfish, however, adequate surveys to ensure stable harvests could not be conducted, as schools tended to move erratically in response to changes in water temperature. Accordingly, catches ultimately failed to meet expectations.

At the same time, Nippon Suisan began developing fishing grounds around New Zealand from 1966.

The company had already known about favorable fishing grounds for sea bream, horse mackerel, and trevally off the North Island's west coast, which were discovered through trial operations by the trawler *Ikoma Maru* in 1961. However, it decided to temporarily suspend operations there as it put priority on the plentiful northwest African fishing grounds. Then, in 1966, the *Ikoma Maru* discovered a fishing ground for Japanese Spanish mackerel off the coast of Canterbury on the eastern side of the South Island. Nippon Suisan responded by sending the *Amagi Maru* in 1967 to primarily harvest horse mackerel and Japanese Spanish mackerel off the North Island's west coast and offshore of Canterbury on South Island's east coast. However, this operation did not lead to stable sales, partially because its profits were largely affected by market price fluctuations brought by varying catch sizes in waters near Japan.

Construction of Large Trawlers and Vessel Enhancement

Nippon Suisan began bringing in large-scale 2,500-ton stern trawlers in 1960, using investment for offshore operations provided under the Five-Year Reformation Plan. What sparked this development was a visit to Europe by Fumio Imanaga, the first captain of the *Amagi Maru* (and later president), where he saw the degree to which stern trawlers had advanced. Thereafter, the company put 2,500-ton trawlers into service in African fishing grounds one after another. Beginning in 1964, it sought to overcome worsening profitability from stricter fishing regulations by

building large trawlers of 2,500 tons or more that promised even greater productivity. Completed 2,500-ton vessels were the *Teshio Maru*, *Tokachi Maru*, *Zao Maru*, *Shirane Maru*, and *Suzuka Maru*, and completed 3,500-ton vessels were the *Aso Maru*, *Kirishima Maru*, and *Takachiho Maru*.

The growing size of these large trawlers was made possible by the use of stern trawling. Previously, trawlers used side trawling, in which trawls were towed from lines thrown over one of the gunwales. However, this method did not permit the use of larger vessels due to balance restrictions. As a result, the largest vessels were in the 1,000-ton class, which included the *Asama Maru*. The change from side trawling to stern trawling improved stability during operation.

Increasing trawlers' size brought a number of advantages. It gave them greater range, larger catch storage capacity in expanded holds, room for better processing equipment, and improved operability that allowed operation during rough weather. It also provided larger



Amagi Maru, 2,500-ton class (completed in 1960)



Kirishima Maru, 3,500-ton class (completed in 1964)

onboard space for living areas that helped crews withstand long voyages.

Additionally, the use of electronics technology made more efficient fishing possible. A succession of electronic devices were introduced, among them highly precise fishfinders, “net sondes” that allowed crewmen to ascertain conditions within towed trawls, systems for integrated control of trawl casting and hauling from the bridge, and loran and radar to establish ship position. Large stern trawlers that were so equipped could process large catches at even greater distances from port, which made them the mainstay of a new era in fishery.

It should be noted that the Japan Overseas Fishing Association was established on August 1, 1968, to promote Japanese trawlers’ expansion into the world’s fishing grounds.

Efforts to Streamline Whaling

When it became time for 21st expedition of 1966, the international whaling yield had been lowered even further from 4,500 BWU in the previous year to 3,500 BWU. Consequently, settling of per-country quotas did not proceed smoothly, and there even were calls for a return to the Olympic System. Eventually, it was decided that quotas would be set at 1,633 for Japan, 1,067 for the Soviet Union, and 800 for Norway. Beginning this year, Nippon Suisan reduced its fleets to one by eliminating one of the *Tonan Maru* fleets. This left Japan with four fleets.

Against this backdrop, Norway announced in 1968 that it was suspending its whaling operations due to a downturn in the whale oil market. And in Japan, Taiyo Gyogyo operated only one fleet beginning with the 23rd expedition, thereby lowering the total number of Japanese fleets to three.

The quota was again reduced at the time of the 26th expedition in 1970, with Japan’s figure lowered to 1,346 BWU. The Fisheries Agency responded by distributing domestic shares in line with the shrinking quota; however, for the marine products company—which

were already reaching the bounds of profitability—the question of how the year’s quota should be divided up produced an intense tumult. Ultimately, the Fisheries Agency mediated an arrangement whereby 15.92 BWU of Taiyo Gyogyo’s basic quota of 541.92 BWU would be given to Nippon Suisan and Kyokuyo Hogeï. Thus, Taiyo Gyogyo’s share became 526 BWU while those of Nippon Suisan and Kyokuyo Hogeï became 410 BWU.

As for north-sea whaling, members of a three-partnership arrangement—namely, “Nippon Suisan and Nitto Hogeï”, “Taiyo Gyogyo and Nippon Kinkai Hogeï”, and “Kyokuyo Hogeï and Hokuyo Hogeï”—were granted permission to operate one fleet each, with each fleet comprised of no more than seven vessels. This permission was based on consideration of a request by Nippon Suisan, Taiyo Gyogyo, and Kyokuyo Hogeï, who desired to operate independent specialized fleets beginning from the 11th expedition in 1962. The result was the realization of three general fleets capable of harvesting baleen whale and sperm whale. However, when the IWC placed restrictions on sperm whale harvests in 1970, production and sales suffered dramatic declines, as the catch was limited to 10% of what it was in 1968.

Now faced with intensifying whaling harvest restrictions and lower profits, the whaling companies sought to streamline their operations and raise productivity by reorganizing their fleets and improving vessel performance.

Nippon Suisan began its effort here by making the *Tonan Maru II* fleet its only Antarctic whaling fleet from the 21st expedition in 1966. Then, after receiving permission from the IWC to have the *Tonan Maru II* handle both Antarctic and north-sea whaling in 1970, it added north-sea whaling to her duties in 1971 and scrapped the *Nichiei Maru* (formerly the *Nitto Maru*, purchased from Nitto Hogeï and renamed in 1964), which had been used in north-sea whaling until then. Having the same mother ship engage in both northern and southern whaling added momentum to the company’s drive to achieve more efficient whaling

operations.

Meanwhile, Nippon Suisan sought to bring greater efficiency to coastal whaling by closing whaling bases in Senzaki (1965), Kushiro (1968), and Oshima and Tomie (1970), while also using large 750-ton whalers.

Nippon Suisan also strove to improve the productivity of its whaling operations. In order to produce even more high-quality products from a single whale, it set out to improve product yield and promote research on fine-tuned processing methods in all aspects of whaling. In addition, it implemented even stricter measures to raise efficiency and lower cost in fleet operation; tracking, capture, and hauling by whalers; and performance of accompanying refrigerator ships.

For example, in 1970, the company modified the 90-mm whaling guns it had been using to make them 75-mm guns, which helped raise catch efficiency and whale meat yield. In 1971, it refitted the *Tonan Maru*'s main engine to improve her speed, reduce the number of sailing days, and accelerate movement to fishing grounds. And in 1972, it built the 900-ton whalers *Shonan Maru* and *Shonan Maru No.2*, which consumed far less power compared to 750-ton whalers, the mainstays of the whaling fleet.

In addition, it shifted the cooling devices used on refrigerator ships from calcium chloride brine freezers to ammonia direct expansion-type contact freezers, thereby improving performance and quality. As a result of such streamlining efforts, Nippon Suisan's whaling operations recorded a percentage of total sales of 5.7% at the end of fiscal 1971. This and other achievements helped whaling maintain its standing as a main company business.

Crab Fishery in Decline

As the U.S.S.R.'s restrictions against mother ship-type crab fishery in its waters tightened, Nippon Suisan's *Tenryu Maru* and two catcher boats conducted trial operations for golden king crab outside of the king

crab fishing ground in 1966. The next year, 1967, this operation was picked up by a fleet comprised of the mother ship *Asama Maru* and six catcher boats. And from 1968, a fleet consisting of Hokoku Suisan's *Eihei Maru* and nine catcher boats began operating. However, catches suddenly dropped off as golden king crab also became subject to the Japan–U.S.S.R. Crab Agreement in 1966.

Meanwhile, around July of 1966, catches of snow crab off the Olyutor Peninsula and Navarin Canyon sea area started to show promise and attracted a growing number of single-ship operations. However, catches and production of snow crab plummeted when it, too, became subject to the Japan–U.S.S.R. Crab Agreement of 1969.

On February 16, 1968, the Soviet Union issued a decree on the continental shelf (“Decree of the Presidium of the Supreme Soviet on the Continental Shelf”). It stated that the Soviet Union, which was regulating crab as a continental shelf resource, would now handle crab covered in the Japan–U.S.S.R. Fisheries Convention signed in 1956 as a separate matter. Accordingly, crab fishery was separated from the Japan–Soviet Fisheries Commission and placed within discussions toward conclusion of a new agreement by the two nations' agricultural ministers.

When the Japan–U.S.S.R. Crab Agreement was concluded in 1969, the scope of regulated crab types and regions expanded through the execution of regulations based on the agreement. To the previously regulated area off the west coast of the Kamchatka Peninsula were added six new restricted fisheries (golden king crab in the area off the west coast of the Kamchatka Peninsula; snow crab in the western Bering Sea; king crab and blue king crab in the area east of Sakhalin; snow crab in the area east of Sakhalin; horsehair crab in the area around Kamen Opasnosti; and king crab, horsehair crab, and Hanasaki crab near the four southern Kuril Islands).

Previously both Japan and the Soviet Union set regulations. However, under the new agreement, the Soviet Union would first set regulations on Japanese



The mother ship *Keiko Maru*



Hauling in a crab trap



Frozen snow crab from a factory ship

crab fishery and then later notify the Japan of its production plan. Moreover, while the Japan–U.S.S.R. Fisheries Convention dictated that fishery resources harvested on the high seas would be distributed between Japan and the U.S.S.R., the Japan–U.S.S.R. Crab Agreement established that Japan would be using resources under Soviet sovereignty. Furthermore, it established that decisions on crab quotas would no longer be made by the Japan–Soviet Fisheries Commission, but rather through discussions by a newly established

Japan–U.S.S.R. intergovernmental conference on crab fishery.

In 1969, Nippon Suisan was running three crab operations. Specifically, they were king crab fishery by the *Keiko Maru* fleet in Bristol Bay of the eastern Bering Sea and *Yoko Maru* fleet off the western coast of Kamchatka, and golden king crab fishery by the *Eihei Maru*, also off the western coast of Kamchatka. The *Keiko Maru* fleet was subject to regulations of the Japan–U.S. King Crab Agreement, while *Yoko Maru* and *Eihei Maru* fleets were subject to regulations of the Japan–Soviet Crab Agreement.

Japan was given permission to harvest 216,000 boxes of king crab in 1969. However, negotiations at this time prohibited Japan from operating off the coast of the Olyutor Peninsula, an area that Nippon Suisan developed and from which it had enjoyed good catches for many years.

Part 3 Nippon Suisan’s Food Products Business

1. Expanding Existing Processed Foods

The Fish Sausage and Ham Business Amid Intensifying Competition

Faced with shortages of tuna, which had been the main ingredient of fish sausage, Nippon Suisan switched to whale in 1963. Then, when supplies of whale meat declined, it began using frozen Alaska

pollack *surimi*, a product for which full-scale production began in 1967.

At the same time, it worked to develop new fish sausages. And it strove to expand its business by producing fish hams, which continued to have growing demand, and “fish hamburger”. Fish hamburger saw rapid growth, in particular.

For fish sausages, the prices of ingredients were skyrocketing as market growth stagnated and competition intensified. Accordingly, Nippon Suisan made the bold decision to raise the prices of its fish sausages and hams in September 1965. It had not raised these prices in over ten years. However, the entry of new competitors and emergence of mass retailers had created price competition that was based on mass production rather than product quality, and this trend was showing no signs of abating.

Nippon Suisan employed a variety of measures in order to consistently ensure both product quality and profits. Among them were 1) improving productivity by using high-performance manufacturing machinery, 2) conserving power with automatic control systems, 3) streamlining costs by unifying quality control, 4) integrating quality standards for identical products across all branches and plants, 5) controlling costs by integrating designs and product content amount/packaging standards, and 6) improving the capabilities of sales personnel and lowering distribution costs. For example, in 1968, it conducted tests to dramatically improve process automation at its Hachioji General Plant. Here, it installed two lines each capable of producing 65,000 fish sausages a day, thereby allowing it to reduce line personnel by half.

In addition, it strove to unify nationwide sales prices while establishing collaboration among neighboring branches and a head office-led sales structure in order to address the formation of regional distribution networks and national spread of mass retailers.

Because these measures were enacted, Nippon Suisan's fish sausage and ham production remained at roughly the same level from 1961, achieving 34,860 tons and a 20.8% share of all production in 1971.

Stable Sales in the Canning Business

Between 1964 and 1971, Nippon Suisan's canning business saw generally stable growth in terms of both production and sales.

However, while can sales in the domestic market

were comparatively strong, exports suffered from lower prices due to intensifying competition. Although, from around 1966, the amount of canned salmon and trout exported to the United Kingdom stayed roughly unchanged even amid increasing U.S. and Canadian production and exports to the U.K. as well as poor economic conditions in the U.K., the company was forced to lower its product prices. Prices subsequently remained low in part because of Alaskan and Canadian production.

Meanwhile, the amount of canned crab exported saw yearly declines due to growing domestic demand. Moreover, a glut of Alaskan products in the American market, which was a major export destination, caused prices to fall from around 1969.

In October 1969, the U.S. government banned the use of the artificial sweetener cyclamate (sodium cyclamate), citing it as being highly carcinogenic. In response, the Japanese government and Ministry of Health and Welfare issued an order prohibiting use of cyclamate that would take effect after a grace period lasting until September 1970. As a result, sales of products made with the sweetener plummeted.

In addition to the ban on cyclamate, 1969 saw the price of canned crab nosedive. For Nippon Suisan, these developments led to a nearly 20% year-on-year decline in both production and sales. The company countered by conducting special sales and shifting sales destinations for stockpiled products among other measures. Such actions resulted in an early recovery. Although the business lost 90 million yen in fiscal 1970, it returned to post a profit of 210 million yen in 1971.



Fish sausage and ham products of the 1970s

In December 1970, mercury in excess of the U.S.'s permissible amount was detected in canned tuna in the United States. Cans produced in Japan were among the products violating this standard. The discovery led the U.S. Food and Drug Administration (FDA) to prohibit imports of products containing mercury in excess of 0.5 ppm.

Furthermore, beginning in April 1971, the FDA started conducting not only mercury inspections but also strict quality inspections when products were imported into the U.S. As a result, a combined total of 460,000 boxes of cans from Japan failed to pass quality inspection or mercury inspection in fiscal 1971. Of these, 430,000 boxes of canned tuna were shipped back to Japan. Additionally, the so-called "Nixon Shock" of 1971 had a serious impact on exports of canned goods. The cumulative effect of these negative factors caused exports to attain just 95.6% of the previous year's level.

Thus, despite grappling with various problems, Nippon Suisan's canning business in the era of rapid economic growth registered stable sales that were supported by strong demand in the domestic market. Consequently, it joined the frozen food products business—a sector that enjoyed remarkable growth during this time—as one of the core businesses of Nippon Suisan's processed food operations.

A Revolution in Processed Food Sales

Sales of Nippon Suisan's canned goods, fished sausages, and other processed foods were based on a system of authorized dealers. Even during this time of increasingly common mass retailing and great transformation in food distribution, Nippon Suisan continued to place emphasis its use of authorized dealers.

Nippon Suisan was unable to see changes coming to the distribution system. It was aware of the existence of mass retailers when they emerged in the mid-1960s, and it recognized that the roles of wholesalers were changing. However, President Haruo Nakai and other members of management stuck to strengthening the

existing system (by, for example, checking on wholesalers' management conditions and selecting appropriate ones) out of concern for how changing the system might affect authorized dealers. Consequently, they modified only portions of the system.

Nippon Suisan's delay in reinventing its distribution system led to its late response to distribution's regionalization. Consequently, intense competition flared up among wholesalers that had been segregated by region under the conventional system. This led to frequent bankruptcies among secondary wholesalers, which significantly lowered distribution. This was handled by supplying products from major primary wholesalers; however, it was unavoidable that the problem would have an effect.

The company finally got on track toward reinventing its distribution structure in 1971. Recognizing that conventional region-specific sales measures were limited in how they could respond to the growing size of mass retailers and spread of nationwide chains, it set out to standardize sales throughout the country. Theretofore, plants were placed under management of branches; however, the company decided to place all plants under the jurisdiction of company head office and separated sales from production.

It also implemented fine-tuned distribution measures. In the Tokyo district, for example, it set up a system of "helpers" who visited retailers to improve exchanges of product information. It also enclosed "Nissui coupons" redeemable for prizes in packages of fish sausages, fish hams, and *chikuwa* to boost retailers' desire to stock these products.

Nippon Suisan also took various measures aimed at cultivating secondary wholesalers that excel at small-lot sales. Among them, it sent out more vehicles to make routine visits to wholesalers, and increased the frequency of visits by Nissui Service employees and sales personnel from the traditional once monthly to twice monthly.

At the same time, it worked to maintain its official price system and took measures to avoid price competition in shops so as to unify its prices.

Expansion of Frozen Foods for Household Use

From the mid-1960s, the “main product” crown in marine products companies’ processed food businesses was moving from fish sausages to frozen foods.

What contributed significantly to the growth of frozen foods for household use was the rapidly increasing number of mass retailers. For mass retailers, who were continually opening new stores, frozen foods became one of their most eye-catching sales sections and were thus a key attraction to customers. The formation of frozen foods sections combined with the increasing popularity of household refrigerators and freezers expanded demand for convenient frozen foods.

Efforts by individual companies and industrial groups paid off, as the value of frozen food production grew rapidly from a value of 234 million yen in 1958 to 3.845 billion yen in 1965. The number of precooked frozen foods and dishes—including deep-fried foods, tempura, hamburger steak, and *shumai* and *gyoza* dumplings—entering the market grew at an astounding rate.

It was proposed that a refrigerated temperature zone in the storage and distribution processes—called a “cold chain” (low-temperature distribution system)—should be established to support the diffusion of frozen foods for household use. A cold chain is a concept whereby perishable foods are distributed at a controlled temperature from the production stage through to consumption. Although the term “cold chain” does not necessarily refer to frozen foods alone, its use promoted higher interest in and recognition of frozen foods.

The Japan Frozen Food Association was established in January 1969. It was comprised of 20 members, including 12 food manufacturers and seven electrical machinery manufacturers.

Although the association’s activities covered an extensive range, its quality control arm promoted thoroughgoing attention to quality control at the manufacturing and distribution stages. In June 1971, it laid out “voluntary standards for frozen food handling”

that require foods to be kept at a temperature of -18° or lower in line with international standards. The purpose was to ensure thorough temperature control at all distribution stages, including manufacture, storage, transport, distribution, and sales.

Like its competitors, Nippon Suisan’s frozen food products business had struggled to succeed in the household foods sector until around 1965. This had led it to concentrate on frozen foods for commercial use, such those used in school meals. However, everything changed in 1967, when demand for frozen foods for household use took off, particularly in the Kansai market. What sparked this new demand was the sudden popularity of a bale-shaped potato croquette called “Chibikko Korokke”.

Chibikko Korokke was jointly developed by Nada Kobe Seikyo (Nada Kobe Consumer Cooperatives’ Union) and Nakamura Hirokazu Shoten K.K. of the Kansai region. Unlike the standard oval croquettes, it suggested a more refined quality that generated growing sales, most notably in Kansai. As a cooperative, Nada Kobe Seikyo sought to handle foods made with as few preservatives as possible, and frozen foods fit perfectly with this aim. And for frozen foods for household use, which at the time did not have established sales channels, the emergence of the cooperative’s sales channels and floor space proved highly significant.

At the same time, Daiei, a company that was opening new stores in Kansai and other regions, began actively installing large showcases in its stores to expand its handling of frozen foods.

Propelled by this increase in stores handling frozen foods for household use in Kansai, Nippon Suisan expanded its sales of these projects. Over the course of three years, sales of Nippon Suisan’s frozen foods grew by nearly four times, from 2.8 billion yen in 1968 to 10.4 billion yen in 1971. What drove this growth were frozen products for household use. This is demonstrated by the fact that the ratio of household-use to commercial-use frozen foods in sales went from 22:78 in 1968 to a more balanced 41:59 in 1970.

Among the products that supported Nippon Suisan's frozen foods business were "Kani Kurimi Korokke" (creamed crab croquettes) and "Kani Shumai" (crab *shumai* dumplings), which entered stores in 1969. These products were representative of Nippon Suisan as a company primarily oriented toward fisheries products. At the time, many companies were entering the frozen foods industry; however, most of their precooked foods were made with livestock or agricultural products. In contrast, Nippon Suisan was characteristic in that it sold fisheries products. And it thus strove to differentiate itself from competitors by securing abundant fisheries resources.

Start of *Chikuwa* Production and National Sales

In 1968, Nippon Suisan began national sales of *yaki-chikuwa* (grilled chikuwa fish-paste cake). This product, which could be eaten raw, was made possible by the development of full-scale offshore *surimi* in the mid-1960s.

Around this time, the quality of *chikuwa* products was rising throughout the industry, and *chikuwa* production was growing in all parts of the country. Reasons for this were improvements in Alaska pollack *surimi*, which is the main ingredient of *chikuwa*, and uniformity and stability of quality brought about by the automation of *chikuwa* plants.

However, Nippon Suisan's relationship with fish-paste product manufacturers proved to be an obstacle to its effort to produce and market *chikuwa*. As it used its *surimi* to make its own fish sausages and hams, Nippon Suisan also supplied it as a basic ingredient to fish-paste product manufacturers. Nippon Suisan's entry into the "Yaki-Chikuwa" market could put it in competition with these business partners and possibly endanger their relationship. Nonetheless, Nippon Suisan felt it could utilize its offshore frozen *surimi* to create a completely new type of "Yaki-Chikuwa", and had high expectations that this product could generate new business. It ultimately determined that it would be possible to separate its own product from

existing products and therefore avoid competition.

It began producing "Yaki-Chikuwa" at the Hachioji Plant in October 1967. Made using technologies passed down from the prewar Tobata Plant, the product was well received by consumers and enjoyed strong sales within the Tokyo Branch's service area. The company took this success to successively expand production to other plants. It began production at the Anjo Plant in November 1967 and the Itami Plant in August 1968. By October 1972, its production system covered all parts of the country, with the Hachioji, Hakodate, Onagawa, Shimizu, Himeji, and Tobata Plants all making "Yaki-Chikuwa". The 13 lines of these six plants achieved daily production of 810,000 units.

Nippon Suisan's "Yaki-Chikuwa" was made from factory ship-made *surimi* as well as lizardfish, white croaker, and conger eel and given a unique seasoning. Conventional *chikuwa* suffered from poor shelf life and was usually eaten after boiling or heating. However, Nippon Suisan's *chikuwa* had high freshness because it was made in a short period of time with fresh ingredients, and had a "deliciously uncooked flavor" that could be enjoyed as is. What made this possible were efforts by manufacturers of seafood processing machinery that allowed both mass production and energy-savings, and linkage between production and sales. In the Anjo Plant's case, production was based on a principle of immediate production/next-day sales, and the supply area was limited to that which could be covered by distribution vehicles within one hour's driving from the plant. These efforts bore fruit and sales grew strongly. By 1971, it was selling as many as 200,000 cases a month (one case contained 25 packages).

The *chikuwa* business benefitted from Nippon Suisan's ability to create its own "value" by catching and processing fishery products. It had successfully industrialized *chikuwa*—a product that was traditionally produced in a cottage industry-like fashion—by changing it into something made with frozen *surimi* in an industrial process. However, its success here also put it into competition with major marine products company.

2. The Ups and Downs of New Businesses

The Mayonnaise Business

In March 1961, Nippon Suisan began marketing “Nissui Delux Mayonnaise” as part of a strategy to reinforce its processing operations under the Five-Year Reformation Plan. All major marine products companies were expanding their participation in processed foods at this time, and Nippon Suisan was no exception.

A motivation behind Nippon Suisan’s decision to enter the mayonnaise market was a relationship it formed with Nosan Corporation, which was a meal buyer. At the time Nosan was collecting shipments of eggs, and the two companies decided that they could form a “give-and-take” partnership if Nippon Suisan purchased the eggs to make mayonnaise. Production was handed by Nippon Chomi Shokuhin Corporation, a Nippon Suisan affiliate. Although, early on, there were instances of mayonnaise being returned due to inconsistent quality, this problem was resolved around 1963 and sales began to see steady growth.

As Japan’s mayonnaise industry adapted to the westernization of eating habits, production grew from 15,574 tons in 1960 to 48,976 tons in 1965. In fiscal 1966, the mayonnaise market’s value surpassed 20 billion yen. The market share of the top manufacturer, Kewpie Corporation, grew from 70% in 1962 to 85%. Kewpie’s strength came from its high product quality, price competitiveness, and marketing prowess. Many latecomers struggled to compete with Kewpie and

eventually pulled out of the market or switched to the mayonnaise-for-commercial-use market in order to avoid competing with Kewpie.

Nippon Suisan took variety of measures to compete, including developing an almost completely airtight container and sales of mayonnaise made without additives. And in 1970 it reentered the market with “Fleuret”, which was sold in an “upside-down” container with a large squeeze spout. However, profits worsened and production was stopped in December 1971.

The Cheese Business

Cheese production and consumption grew in Japan from the mid-1950s. As dairy companies set up production systems, national consumption grew from 2,570 tons in 1956 to 13,239 tons in 1964.

Nippon Suisan launched its cheese business in 1961. After hearing about a patented cheese manufacturing method from Koichi Nakanishi, a professor at Tohoku University, the company became determined to enter the cheese business as a general food products company given future demand for animal protein and cheese business potential. It won the rights to Nakanishi’s method after bidding against Taiyo Gyogyo, and began production at Nippon Rakuno Shokuhin K.K., a member of the Nippon Suisan Group. Sales began in July 1962. Nippon Suisan’s cheese was unique in that was manufactured in only two to three weeks rather than the usual six months.

Japan’s cheese industry continued to expand from



Mayonnaise



Cheese

the mid-1960s. National consumption grew by 2.6 times over the course of five years, from 15,500 tons in 1965 to 40,313 tons in 1970. The growing cheese market led existing cheese manufacturers to step up their capital investment and new companies to enter the industry. The result was intensifying competition. In 1968, in particular, a succession of meat businesses began entering the market. This caused considerable instability, as now more than 20 companies were making cheese, and generated fierce price competition.

Nippon Suisan's cheese business got off to a rocky start, as it had difficulty balancing quality and cost. The company nonetheless worked to distinguish itself from other companies by selling pencil-shaped "baby cheese", which was smaller than available "mini cheeses". This baby cheese was well received among consumers; in fact, sales were so strong that production could not keep up with demand, even when the Hachioji Plant was at full operation.

However, Nippon Suisan's performance stalled out amid cutthroat competition that was generated when meat manufacturers and overseas firms partnering with Japanese manufacturers entered the market. It subsequently moved to actively develop original products that take advantage of its position as a marine products company. It attempted to link the cheese business with other businesses by, for example, developing *kamaboko* with cheese and *chikuwa* with cheese as products for commercial use and fried cheese rings as frozen food. However, these efforts did not capture the anticipated market share and failed to eliminate business losses. Consequently, the company ended production in 1971 and withdrew from the cheese industry.



Ramen

The Instant Noodles Business

Production and sales of instant noodles developed by Momofuku Ando began at Sanjee Shokusan (a company operated by Ando himself; it became Nissin Food Products in December 1958) in August of 1958. By 1959, sales of instant noodles were growing strongly as a result of advertisement and sales by department stores and word of mouth.

The instant noodles market expanded rapidly as demand skyrocketed and more companies joined in. Over the course of a first "golden period" (1959 to 1961) and then a second golden period (1963 to 1964), production ballooned from 110.7 million servings in 1959 to 2.3 billion servings in 1966.

However, after years of rapid growth, the instant noodles industry became disrupted by ruthless sales practices as competition intensified. Competition became particularly fierce in late 1964, spurred by overcrowding by over 300 manufacturers coupled with moves to augment facilities and expand production by major manufacturers.

In 1965, Nippon Suisan became the first marine products company to enter the rapidly growing instant noodles industry. Initially it engaged in purchase-based sales only; however, by the following year, 1966, it had begun production at the Onagawa Plant.

Seeing instant noodles as a promising business, the company began production at locations throughout Japan. Production bases included not only the Onagawa, Hachioji, and Tobata Plants but also Nippo Shokuhin Corporation in Kumamoto, Hachinohe Teion Reizo K.K. in Aomori, and Mogami kanzume K.K. in Yamagata. It also sold distinctive products in particular sales regions, such as stick ramen in Sapporo, flavored ramen in Sendai, and ramen with attached soup packets in Tokyo.

However, specialty noodle manufacturers had a powerful grip on the instant noodle market, and Nippon Suisan's standing in the market gradually weakened. Amid tough competition, its efforts to improve the quality of its regionalized products did

not go well outside of Tohoku and Kyushu. Faced with an increasingly difficult fight, the company began reducing the number of factory lines. At the beginning of fiscal 1970, it was operating just two lines at its own

Onagawa Plant and one line each at its affiliates, Mogami kanzume, Hachinohe Teion Reizo, and Nippo Shokuhin. It completely shut down production by around 1973.

Part 4 Nippon Suisan's Overseas Business

1. Overseas Business in the 1960

A New Era of Joint Ventures

From the mid-1960s, Japanese interests were accelerating their movements overseas. However, of fish sales, ship chartering, services, and joint ventures, their primary focus was on conducting business by establishing joint ventures with local companies.

Of these joint ventures, many involved arrangements whereby the Japanese side would provide necessary capital to local companies and, in essence, sponsor the facilities and vessels they needed for operation, and the local companies would manage and operate the facilities and vessels. In return, the local companies would give all rights to catches to the Japanese side. In many cases, the Japanese side was comprised of a marine products company and a trading company. The marine products company was responsible for fishing operations, while the trading company was in charge of negotiations with the local government as well as importing/exporting after the joint venture was established. Produced goods were distributed between the marine products company and trading company in accordance with their investment ratios.

The number of overseas joint ventures entered into by Japanese fishery and trading companies grew steadily from the mid-1960s. However, of all companies, the one that was actively developing local ventures from the earliest stage was Taiyo Gyogyo. Its efforts go back to 1951, prior to the San Francisco Peace Treaty's coming into effect. At that time, it responded to a request for assistance from the Indian business

conglomerate Tata Group by dispatching technical advisors on bottom trawl fishery methods and providing guidance to Indian fishermen. It began full-scale overseas business in 1953 by setting up a joint venture in Burma, and by the end of 1970 it had established 22 joint ventures in 16 regions. These were overwhelming numbers compared to Nippon Suisan's seven ventures in five regions and Nichiro Gyogyo's four ventures in four regions.

Formation of Overseas Business

From the mid-1960s, Nippon Suisan departed from its previously cautious posture to begin actively promoting overseas business. This was because, amid not only stricter bilateral fishery regulations and growing momentum in efforts to regulate use of the high seas, there was growing consensus within Nippon Suisan that the company must enter into tie-ups with coastal nations (for example, through development imports or technical collaboration) as a step toward the future, even if such tie-ups were disadvantageous in some respects, in order to continue gaining access to fishery resources.

Nippon Suisan established a Remote Operations Department in its head office in 1966. The company already had a Trade Department (established in 1960) and overseas operations division in the Tobata Branch (established in 1961). However, the Trade Department was mainly responsible for import and export administration, such as gathering information from trading companies and selling products purchased by other

departments within the company. Its activities were not centered on overseas business. Given the need to expand overseas business in response to the changing environment surrounding fishing operations, the company abolished the Tobata Branch's remote operations division and set up a new Remote Operations Department in the head office to have full-time jurisdiction of overseas business. Subsequently, the Trade Department took charge of import/export administration

and the Remote Operations Department had responsibility for administration of overseas business.

As for remote bases, the company elevated the status of its Las Palmas Office, whose primary responsibility had been procuring tuna, from liaison office to full-scale office in 1967, and established a Cape Town Office in the Republic of South Africa the same year. These new offices were in addition to the West Africa Office that it had set up in 1964.

2. Development of Shrimp Fishery

Start of Joint Ventures in Australia and Indonesia

Between the end of the war and 1960, Japan was a shrimp exporter. In fact, in 1960, 98% of shrimp consumed in Japan was domestically produced. Moreover, Japan's shrimp exports reached some 3,000 tons. However, the liberalization of imports of shrimp along with tuna, salmon, and trout in October 1961 began a period of 10 years when frozen shrimp coming into Japan grew by more than 10 times, from 4,000 tons in 1961 to 57,000 tons in 1970.

Rising dietary standards during the era of rapid economic growth increased shrimp consumption. Ultimately, Japan's coastal shrimp fishery could not keep up with domestic demand, and this opened the door to imports from many overseas regions, including Southeast Asia, the Middle East, China, and Latin America.

The actors that were actively promoting shrimp imports during the 1960s were trading companies and marine products company. Because shrimp importing was a high price/high profit business with standardized products, companies could enter without possessing strong expertise in the field. Consequently, trading companies actively promoted shrimp importing following liberalization of fishery imports in 1961.

Nippon Suisan began a region-wide onsite shrimp fishery survey in New Guinea and Australia in the autumn of 1966. One result was the verification of

plentiful shrimp fishing grounds off of the northern coast of Australia by the 1,000-ton trawler *Asama Maru*. This led Nippon Suisan to ask the Australian government for permission to begin operating and begin selecting partners with which to form a joint venture.

After receiving unofficial approval from the Australian government in June 1968, Nippon Suisan formed the Northern Research Pty., Ltd. as a joint venture with its affiliate Nanpo Gyogyo Kaihatsu, Itochu Corporation, and Hickman as the venture's Australian partner. It was agreed that the company would establish its base of operations in Darwin, that Northern Research would build 20 shrimp trawlers within six years, and that Nippon Suisan would provide eight or nine trawlers to Nanpo Gyogyo Kaihatsu until the fifth year. It was further decided that the chartered ship fees would be paid by exchanging harvested fish products at the F.O.B. price in Darwin.

Northern Research began operating in October 1968, harvesting banana prawn, tiger prawn, and other shrimp. Shrimp that passed screening for export was sent to Japan and the rest was supplied to cities in southern Australia. It should be noted that Northern Research suffered enormous damage from a cyclone in 1974.

Following this business in Australia, Nippon Suisan began a survey and trial operations in the sea area of West Irian, Indonesia, with an eye to shrimp fishery development. Following a one-year survey, Nippon

Suisan set up two joint ventures in quick succession in 1970.

In May 1970, Nippon Suisan established P.T. West Irian Fishing Industries (W.I.F.) in partnership with Nanpo Gyogyo Kaihatsu, Mitsubishi Corporation, and a local company. W.I.F. operated three 300-ton shrimp trawlers, including Nippon Suisan's *Kashii Maru*, and eight 100-ton shrimp trawlers, including the *Fukuma Maru*. Its base of operations was located in Ambon. The company showed strong performance for the most part, with catches growing 640 tons in

fiscal 1970 to 1,318 tons in fiscal 1973. During this same period, the per-vessel catch grew from 58 tons to 88 tons.

Then in July of the same year, Nippon Suisan launched P.T. Irian Marine Product Development (I.M.P.) with Hokoku Suisan, Nissho Iwai Corporation, and a local company. This joint venture placed three 300-ton shrimp trawlers, including Nippon Suisan's *Yamashiro Maru*, and six 100-ton shrimp trawlers, including the *Iki Maru*, into operation.

Part 5 Development of Nippon Suisan's Shipping Business

The Shipping Business during the Era of Rapid Economic Growth

The era of rapid economic growth was a time of unprecedented expansion for the shipping industry, this despite ups and downs that included the Suez crisis shipping boom and subsequent poor economic times on the boom's downside.

In December 1962, the Ministry of Transport revised its "Guideline on Measures for the Shipping Industry" and drafted the guideline's governing laws (namely, the "Act on Special Measures concerning Shipping Industry Reconstruction" and the "Act on the Partial Revision of the Act for the Subsidization of Interest Payments on Loans for Construction of Oceangoing Vessels"). These laws passed both chambers of the 43rd Diet and were promulgated and executed on July 1, 1963.

As a result, approximately 90% of Japan's ocean-going shipping tonnage (including that of affiliates) was integrated by, among other actions, condensing the core of the shipping industry from 12 companies to six. After this success and then the resumption of dividends by Nippon Yusen K.K. in the September period of 1965, the remaining five shipping companies also resumed dividend payments by the September period of 1967. The resulting industrial structure laid the groundwork for a period of growth and prosperity

known as the "10 golden years", which lasted from 1964 until the oil crisis of 1973. During these 10 years, the gross merchant ship tonnage owned by Japan grew by 4.1 times. With the exception of a unique period immediately following the end of World War II, this rate of growth was unprecedented in the modern history of Japanese shipping. Moreover, Japan's shipping industry posted extraordinary figures in terms of net profit and special depreciation reserves during this time.

Construction of the *Nippon Maru*

Against this backdrop of unprecedented growth in Japan's shipping industry, Nippon Suisan's shipping operations also experienced tremendous development. "Seeing Japan's growing trade as a golden opportunity, Nippon Suisan further expanded its shipping operations by expanding its tonnage. The company's thinking here is revealed by the following statement by President Haruo Nakai.

"Every country in the world worries about unusual economic stagnation. That's why they all must implement economic promotion measures to raise their citizens' standard of living. This requires them to make their industries prosperous, which leads to growing amounts of goods distributed worldwide. In actual fact, last year Japan alone imported between 500 and



The ore/oil combination carrier *Nippon Maru* (completed in 1967)

600 billion tons of raw materials. We are building large ships with this kind of long-term vision in mind” (minutes of a Central Producers Conference in fiscal 1971).

“In the future, food will move internationally. Japan, in particular, must import its food from countries around the world. And this is where medium-sized refrigerated carriers and meal/oil combination carriers will come into play. [Part omitted] In the shipping industry, large ships will respond to growing distribution needs. Moreover, as Nippon Suisan’s fishing operations expand globally, medium-sized refrigerated carriers will serve to import Japan’s food—beginning with these fishing cargoes—and thereby ensure their importance to our business” (*ibid*).

In September 1967, Nippon Suisan built the *Nippon Maru* (deadweight tonnage of 88,550 tons, gross tonnage of 53,751 tons) at a cost of 2.8 billion yen. The most important characteristic of the *Nippon Maru* was that she was the only ore/oil combination carrier in Japan. Core companies that had been affected by the government’s shipping industry integration policy became eligible for treasury funds and other subsidy measures. This put companies extraneous to the policy, such as Nippon Suisan, at considerable financial disadvantage. To address this, Nippon Suisan endeavored to distinguish itself from the integrated companies by building a combination carrier that they did not have. After receiving a positive response from Ishikawajima-Harima Heavy Industries Co., Ltd., (currently IHI Corporation) about the building of such a vessel, Nippon Suisan made the decision to go forward with the project and began looking for shipping customers.

Initially, Nippon Suisan entered into negotiations with Mobil of the United States. However, at the time, the U.S. government was pursuing development of subsea oil fields off the coasts of Alaska and California. Consequently, while Nippon Suisan desired a long-term contract for services between the Persian Gulf and U.S., Mobil sought a short-term contract of around five years. The negotiations became snagged and ultimately broke off.

Next, Nippon Suisan approached Kawasaki Steel Corporation (currently JFE Steel Corporation), a company with which it signed a long-term contract for the *Andesu Maru* in 1962, about the possibility of an ore shipping contract. Kawasaki Steel agreed to Nippon Suisan’s proposal and the two companies signed a 15-year contract for regular charter service. The ship’s specifications were then studied with this contract in mind, and the decision was made at the basic design stage to give her a gross tonnage of 53,751 tons, which would allow passage through the Suez Canal and entry into the Port of Chiba. Although the two sides had difficulty seeing eye to eye in negotiations on carriage charges, ultimately it was decided that the charge rate would be adjusted every five years. During the course of the negotiation, it was decided to make the ship’s deadweight tonnage 88,550 tons, which was 4,000 tons more than originally planned.

The result was a *Nippon Maru* equipped with the very latest equipment. To reduce the labor burden on crewmembers, a broad array of remote-control systems were employed to open and close cargo pipe vales, measure tank ullage and draft, and operate main and auxiliary machinery. The ship was also designed to conserve power with automatic battery chargers made with transistorized voltage fluctuation-detecting circuits, and she employed emergency warning equipment to improve safety. Additionally, air conditioners were installed in all living quarters to improve crew welfare and raise operational efficiency.

The completed *Nippon Maru* made her maiden voyage in October 1967. After one year and three months at sea, she safely returned to port in Japan in

January 1969.

Construction of *Nippon Maru III*

Having been engaged in negotiations with Kawasaki Steel concerning the affixation of a back letter since August 1968, Nippon Suisan reserved a shipbuilding berth at Ishikawajima-Harima Heavy Industries the next year, 1969.

What led Nippon Suisan to build a new ship was an accident involving the ore-bulk cargo combination carrier *Bolivar Maru*. In January 1969, the *Bolivar Maru* sank due to hull fatigue southeast of Nojima-zaki point. Because she had been built by Ishikawajima-Harima Heavy Industries, the shipbuilder sought to restore its honor by offering to build a new ship within the ongoing Nippon Suisan-Kawasaki Steel negotiations.

The result was the keel laying for what would be Japan's largest combination carrier, with even higher economic performance than the *Nippon Maru*, at Ishikawajima-Harima Heavy Industry's Kure Shipyard in August 1970. The new ship was completed in May 1971. She was given the name *Nippon Maru III*, which was selected from proposals submitted by company employees. It should be noted that she was named "III" rather than "II" was because it was decided that "Nippon Maru II" did not have a pleasant ring to it.

The *Nippon Maru III* had a length of 305 m, beam of 43.3 m, a depth of 24.7 m, gross tonnage of 89,500 tons, and deadweight tonnage 157,260 tons. She could cruise at 15.5 knots when fully loaded. Moreover, she was even more automated than the *Nippon Maru*. She had a control room even in the engine room and was certified as "M-Zero" (capable of operating with an unmanned engine room during nighttime). She also gained attention as the first Nippon Suisan vessel to employ two female crewmembers (mess workers).



The meal/oil combination carrier *Suzukaze Maru* (completed in 1970)

The *Nippon Maru III* set sail from Japan on May 20 under a 15-year chartered ship contract with Kawasaki Steel. First, she was loaded with crude oil at Ras Tannurah in the Persian Gulf, which she carried to Northern Europe. Next she was loaded with coal at Hampton Roads on the North American Atlantic coast and then iron ore at Tubarão, Brazil. She then carried this consolidated cargo back to Japan. The entire voyage took four months to complete and involved four continuous legs.

In addition to the *Nippon Maru III*, Nippon Suisan built the 3,000-ton fast refrigerator carrier *Asakaze Maru*, which was capable of cruising at 17 knots, in 1967, followed by her sister *Harukaze Maru* in 1968. Both ships were equipped with the latest equipment and integrated control systems to save energy and manpower. Both were leased to Nissui Kaiun. In their first voyages in 1968, they carried frozen pork from Shanghai to Europe on their outward legs, and were loaded with catches from southern trawlers at Las Palmas, Cape Town, and other ports for the return journey to Japan.

And in 1969, Nippon Suisan built the *Sachikaze Maru*, a meal/oil combination carrier designed to refuel northern meal and *surimi* fleets and ship meal. The next year, 1970, the company built her sister ship, the *Suzukaze Maru*.

Part 6 Successes in the Last Half of the Era of Rapid Economic Growth

Continuing Growth

In April 1966, Nippon Suisan moved its head office to the Nippon Building in Tokyo's Otemachi district. The move was symbolic of a company that was finally emerging from reconstruction under its Five-Year Reformation Plan and positioning itself for a period of strong growth. This was a time when the Japanese economy had come out of the *Showa 40-nen Fukyo* recession and was now entering the last half of the era of rapid growth.

It was also a time when Japan's fishing industry was seeing growing production, particularly in deep-seas and coastal fishery. And although Nippon Suisan was suffering from stagnating sales in some of its processing categories, it was enjoying steady growth in terms of both ordinary and net income.

In the wake of the Five-Year Reformation Plan's completion, Nippon Suisan's gross sales reached 95.6 billion yen in fiscal 1970, an increase of more than 70% compared to fiscal 1964's mark of 55.2 billion yen. Thus, sales momentum that had been generated during the plan's implementation had largely been maintained.

Looking at sales by category, fishing accounted for 56.8 billion yen in fiscal 1970, or 59% of the total. This was followed by processing at 29.7 billion yen (31%) and shipping and refrigerated storage at 4.2 billion yen (4%). Compared to fiscal 1964, fishing had grown by 2.3 times while processing had grown by more than 60%.

In particular, since 1969, when priority investment in offshore operations and efforts to maintain and improve the company's financial composition began to bear fruit, ordinary income rose dramatically from its usual place around the 3-billion-yen level to over six billion yen. Meanwhile, net profit rose also skyrocketed from the 1-billion-yen level to around 3 billion yen.

In the last half of fiscal 1969, Nippon Suisan

announced it was increasing dividends payments by raising its dividend rate from the traditional 10% to 12%. Then, in the last half of fiscal 1970 and first half of fiscal 1971, it again increased dividend payments by 3% to commemorate the company's 60th anniversary, and it retained this rate of 15% into the last half of fiscal 1971. However, even with the increased dividends paid from 1969 to 1971, the company still maintained consistently excellent earnings as its dividend payout ratio remained under 40%.

Although the company was faced difficulties during this period—specifically in the forms of tightening overseas fishing regulations and stagnating sales in some onshore sectors—its fishery business was growing thanks to progress in its offshore frozen *surimi* operations and joint ventures. Moreover, its shipping business was also growing with the construction of new large combination carriers. However, in food processing, sales of fish sausages and hams that were previously mainstays were flattening out. And new businesses such as mayonnaise, cheese, and instant ramen were facing tough competition.

During this time, the company reduced the number of ships in its possession from 130 to 115. As its whaling operations shrank, it cut the number of its mother ships from three to one and of its whalers from 23 to 13. And it greatly decreased its fleet of west-water trawling boats from 61 to 46.

Offshore frozen *surimi* operations, which were increasingly becoming the core of Nippon Suisan's fishing activity, saw an increase in the number of ships, as the number of *surimi* trawlers expanded from one to three.

However, as the number of vessels declined, gross tonnage increased from 291,569 tons to 459,359 tons. In its effort to reinforce its shipping business, Nippon Suisan added the fast refrigerator carriers *Asakaze Maru* in 1967 and *Harukaze Maru* in 1968 as well as the meal/oil combination carriers *Sachikaze Maru* in 1969 and *Suzukaze Maru* in 1970. Also added were

the ore/oil combination carrier *Nippon Maru* in 1967 and iron ore/oil combination carrier *Nippon Maru III* in 1971; the sheer sizes of these ships drove up the company's owned shipping tonnage during this period.

Also during this time, Nippon Suisan added two frozen food processing plants (Anjo and Hachinohe) and two cold stores (Sapporo and Hachinohe) to its onshore production bases.

At the end of fiscal 1971, Nippon Suisan had the capacity to produce 1.86 million fish sausages and hams, 810,000 *chikuwa* and *kamaboko* units, 7,200 cans, 840,000 servings of frozen food, and 250,000 servings of ramen each day.

As a result of its adding refrigerated warehouses and expanding plant capabilities, the company's refrigeration capacity grew from 50,000 tons at the end of fiscal 1964 to 70,586 tons by the end of fiscal 1971. This was to cope with its growing catch production, which went from 6.35 million tons to 9.91 million tons, as well as imports, which went from 230,000 tons to 398,000 tons. Hand-in-hand with such expansion, production capacity at its seafood processing plants also grew from 276 tons to 393.6 tons per

day.

Newly added affiliates included one marine products company (Nanpo Gyogyo Kaihatsu), one transport and container-manufacturing company (Marushin Sharyo Seibi), refrigeration and processing company (Mogami Kanzume), three were sales companies (Nagoya Nissui Service, Osaka Nissui Service, and Yamatsu Suisan), and three were overseas companies (Northern Research [N.R.P.], W.I.F., and I.M.P.). The number of affiliates decreased from 41 in 1964 to 36 in 1971. Meanwhile, affiliate-oriented investments to promote overseas business began becoming increasingly conspicuous.

Nippon Suisan's strong performance throughout the 1960s was the product of advance investment under the Five-Year Reformation Plan from 1959 to 1964, and then expanded business made possible by enhanced production functions and mass production/mass sales.

Furthermore, even after the plan's completion, Nippon Suisan did not scale back its effort to raise productivity by building larger ships with an eye to expanding its fishing and shipping businesses. This allowed it to maintain its positive momentum here.

Chapter 4: End of the Era of Rapid Economic Growth

1971–1977

Part 1 Rapidly Changing Economic and Industrial Environments

1. Japan's Economy of the 1970s

The "Nixon Shock" and Yen Appreciation

One event Japan hosted during the 1970s was the Japan World Exposition, Osaka, 1970. Held in the Senri Hills of Suita City, Osaka Prefecture, it was the first international exposition ever held in Japan. It

attracted 64.22 million people (a new World Expo record) during its 183 days. Although the economy was still showing improvement following the *Showa 40-nen Fukyo* recession's bottoming out in October 1965, this improvement peaked during the World Expo's run in July 1970. Lasting 57 months, the

expansion was the longest of the postwar era and became known as the *Izanagi Keiki*.

In August of 1971, the following year, U.S. President Richard Nixon announced an emergency economic policy. The main points of this policy were that it terminated convertibility of the U.S. dollar to gold, froze prices and wages for 90 days to curb inflation, and levied a uniform 10% import surcharge to correct the trade balance. In other words, it demanded that countries running trade surpluses with the United States, such as West Germany and Japan, allow their currencies to appreciate. It therefore signified the collapse of the Bretton Woods system that had continued since the war and the end of the fixed exchange rate system. Because maintaining an exchange rate of 360 yen to one U.S. dollar was thought to be essential to protecting Japan's economy, the impact on Japan was tremendous. This impact became known as the "Nixon Shock" ("Dollar Shock").

Subsequent attempts were made to maintain the fixed exchange rate system through multilateral coordination. In December 1971, a meeting of finance ministers from ten countries approved the Smithsonian Agreement, which put into place provisional measures to revalue the yen at 308 to the dollar. However, Japan's trade surplus continued to expand even after the agreement, leading to greater pressure to raise the yen's value. A rekindled dollar crisis made it apparent that fixed exchange rates could no longer be maintained, and ultimately Japan joined other developed countries in moving to a floating exchange rate system in February 1973.

The First Oil Crisis

The year of the Nixon Shock, 1971, was a time of economic downturn following the *Izanagi Keiki* recovery. Fearing the effects that a stronger yen would have on the economy, the Japanese government and Bank of Japan implemented a broad range of fiscal and monetary policies. One result was the beginning of efforts to expand Japan's money supply.

In July 1972, Kakuei Tanaka was elected president of the Liberal Democratic Party and became Japan's prime minister. Looking to realize his pet theory of *Retto Kaizo* (remodeling the Japanese archipelago), Prime Minister Tanaka set into motion proactive fiscal and monetary policies that reached beyond the levels of 1971 and the first half of 1972 and expanded investment for large-scale public works projects. The money supply was rapidly expanded to support these policies, and prices began to rise as a result. At the same time, land was bought up throughout the country in anticipation of future development, which caused land prices to skyrocket.

It was then that the first oil crisis hit. In October 1973, the Fourth Arab-Israeli War erupted. Initiating an oil strategy designed to help it win the war, the Organization of the Petroleum Exporting Countries (OPEC), a body comprised of oil-producing Arab states, decided to cut crude oil production, place an embargo on developed countries favoring Israel and raise the price of crude oil to as high as four times its pre-conflict value.

For Japanese industries, which had developed thanks to the availability of cheap oil, soaring oil prices delivered a tremendous blow. This blow was even felt in daily life, as a variety of actions were taken to conserve oil. Businesses voluntarily shut off their neon signs and broadcasters ceased making late-night broadcasts, while gas stations closed for business on weekends and public holidays. Moreover, consumer panic caused by uncertainty swept through the nation, resulting in the hoarding of toilet paper, detergent, and other daily items. The oil crisis also caused commodity prices to climb pronouncedly, generating what was called *kyoran bukka* (a wild price spiral). At their peak in February 1974, wholesale prices had risen by 37% and consumer prices by 26.3% compared to the same month of the previous year. This same year of 1974, the government implemented a policy to restrict overall demand that led to Japan's first year of negative growth since the end of World War II.

End of Rapid Economic Growth and Shift to Growth Industries

These two overseas crises—the Nixon Shock and oil crisis—stalled Japan’s rapid economic growth and brought the nation into an era of low economic growth. For Japan and the rest of the world’s countries, stagflation marked by economic doldrums and inflation became a universal problem. The rapidly changing economic environment significantly eroded companies’ willingness to make capital investments. To put themselves on better footing, companies engaged in streamlined management aimed at lowering energy consumption, reducing debt, and achieving cost reductions through energy savings. Materials industries and

other industries that were huge oil consumers frantically developed energy-saving technologies, and as a result, energy efficiency for manufacturing industries as a whole improved by almost 20% by the time of the second oil crisis in 1979.

Japan’s industrial structure began undergoing a powerful shift toward more energy-conscious industries in the wake of the oil crises. “Heavy industries” such as steel, shipbuilding, and petrochemicals that had led Japan’s postwar economy went into decline. And in their place arose new “processing and assembly” industries—such as an automobile industry excelling at fuel-efficient cars and electrical machinery industry that made full use of Japan’s microelectronics technologies—to take the lead in the 1980s.

2. Diversification of the Food Industry

With the end of rapid economic growth, the industrial structure saw stagnation in manufacturing and other secondary industries and the rise of service industries (tertiary industries). Leading this rise was the food-service industry. The *gyudon* (beef bowl) chain Yoshinoya had already opened its first store in Tokyo’s Shimbashi district by 1968, and Genroku Sushi set up a store at the Japan World Exposition, Osaka, 1970. This same year, family restaurant chains also began full-scale operation, with Skylark and Royal Host opened their first restaurants in 1970, followed by Denny’s in 1974.

Meanwhile, overseas fast-food restaurants began appearing one after another. In 1971, McDonald’s opened its first store in the Mitsukoshi Department Store in Tokyo’s Ginza district and was followed by a string of new businesses selling fried chicken, doughnuts, ice cream, pizza, and other fast foods.

In all cases, the stores of these food-service businesses employed uniform designs and kitchen equipment. They also prepared manuals detailing cooking

times and customer service that allowed even employees without food-service experience to do their jobs effectively. The emergence of new shop management methods that were based on such manuals attracted a considerable amount of public attention.

Likewise, processed foods were becoming increasingly developed and easier to use. Cup Noodles, which appeared on the market in 1971, could be eaten anywhere and anytime so long as hot water was available. Such convenience made it the leading product among instant noodles. The appearance of foods in retort pouches also sparked a revolution in processed foods. Soon a series of products were hitting store shelves, including curry sauces, meat spaghetti sauces, cream stew, *zenzai* (red bean soup) and base for *mabo-dofu* (Szechuan-style bean curd).

Frozen foods, too, saw expanding consumption from the end of the 1960s until the early 1970s. In 1970, yearly per-person consumption of frozen foods stood at 1.43 kg; by 1975, it had grown to 3.4 kg.

Part 2 International Fishery amid Tightening Regulations

1. UNCLOS III and Fishery Resources

Application of the Evensen Proposal Concerning 200-Nautical-Mile EEZs

In 1974, discussions by an informal group gathered by Jens Evensen, a Norwegian minister in charge of matters concerning the Law of the Sea, led to the tying up of the 200-nautical-mile exclusive economic zone issue as text within the Law of the Sea.

Evensen had pointed out that resolving this issue would not be easy, stating, “It will be extremely difficult to reach a compromise within the official setting that is UNCLOS”. Regarding common ground, he concluded that, “Judging from the discussions that have taken place thus far, I believe that the only way forward is compromise that recognizes freedom of navigation in passages used in international navigation, rather than recognizing 200-nautical-mile EEZs”. From this analysis, Evensen notified participating countries that he was “prepared to host informal discussions to prepare a draft compromise”.

This proposal was welcomed by the United States, which, at least officially, had been opposed to 200-nautical-mile EEZs. Consequently, the “Evensen meeting” was held just prior to the second session (Caracas, Venezuela) of the Third United Nations Conference on the Law of the Sea (UNCLOS III) in 1974. Participants were primarily countries promoting 200-nautical-mile EEZs, and included Latin American countries promoting 200-nautical-mile territorial waters as well as developed countries (Japan, United States, Soviet Union, etc.). Indeed, the meeting was a virtual “mini United Nations”.

Discussions of this issue continued until the conference’s third session (Geneva, Switzerland) in 1975. The Evensen proposal to “establish EEZs of 200 nautical miles” was adopted in a draft prepared by the second committee. It was eventually incorporated

almost without modification when the Convention on the Law of the Sea was enacted in 1982.

During the second session, the majority of countries were in favor of 12-nautical-mile territorial waters. Japan, which had continually supported three-nautical-mile territorial waters at UNCLOS I and II, also expressed its support for the 12-nautical-mile designation at this session.

UNCLOS III and Major Fishery Consensus

Looking to establish comprehensive international order on the seas, UNCLOS III, which had first met in December 1973, concluded in 1982 with enactment of the “United Nations Convention on the Law of the Sea”. Major items in the convention pertaining to fishery were the establishment of 200-nautical-mile EEZs, principle of surplus distribution to promote optimum use within EEZs, the state of origin principle for anadromous species, and optimum use of highly migratory species.

The following is a summary of important items for which consensus was achieved in fishery stipulations.

Exclusive economic zones

In their EEZs extending out 200 nautical miles from their coasts, coastal states have 1) sovereign rights for the purpose of exploring, exploiting, conserving, and managing the natural resources, whether living and non-living, of the seabed and waters superjacent to the seabed; 2) exclusive jurisdiction over other activities and scientific services for the economic exploration and exploitation of sea areas; and 3) jurisdiction over matters concerning preservation of the marine environment, including control of pollution.

Utilization and distribution of fishery resources

Where a coastal state does not have the capacity to harvest its entire allowable catch, it shall, through agreements or other arrangements, give other states access to the surplus of allowable catch. In giving access to other states, it shall take into special account provisions concerning land-locked states and geographically disadvantaged states and, particularly, to provisions concerning developing countries.

Highly migratory species (tuna, etc.)

Coastal states shall cooperate directly or indirectly through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilization of highly migratory species both within and beyond the exclusive zone. In regions for which no appropriate international organization exists, coastal states and fishing states shall cooperate to establish such an organization and participate in its work.

Marine mammals (dolphins, fur seals, whales, etc.)

The convention does not limit the right of coastal states or international organizations to prohibit, limit, or regulate the exploitation of marine mammals more strictly than provided for in the convention where appropriate. States shall cooperate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management, and study.

Anadromous stocks (salmon, trout, etc.)

1) A state in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks. 2) A state of origin of anadromous stocks shall ensure their conservation by the establishment of appropriate regulatory measures for fishing in all waters landward of the outer limits of its exclusive economic zones. A state of origin may, after consultations with the other states fishing these stocks, establish total allowable catches for stocks originating in its rivers. 3) With respect to fishing of anadromous stocks beyond the outer limits of an exclusive economic zone, states concerned shall maintain consultations with a view to achieving agreement on terms and conditions of such fishing, giving due regard to the conservation requirements and the needs of the relevant state of origin in respect of these stocks. The relevant state of origin shall cooperate in minimizing economic dislocation in such other states fishing these stocks. States participating by agreement with a state of origin in measures to renew anadromous stocks, particularly by expenditures for that purpose, shall be given special consideration by the state of origin in the harvesting of stocks originating in its rivers. Enforcement of regulations regarding anadromous stocks beyond an exclusive economic zone shall be by agreement between the relevant state of origin and the other states concerned.

For Japan's fishing industry, which was centered on fishing operations on the open sea, including EEZs, the above consensus ensured that the day was coming when it would have to make major concessions.

2. Trends in North-Sea Fishery

Regulations on Alaska Pollack

Nippon Suisan began full-scale offshore production of Alaska pollack *surimi* in 1967. However, not long after, Alaska pollack also became subject to fishery regulation. During Japan–U.S. fishery negotiations in 1972, the United States complained about Japan's large

harvests of Alaska pollack. The next year, 1973, Japan was again confronted with a similar complaint during Japan–U.S.S.R. fishery negotiations. Japan responded in the form of self-imposed restraint in its harvests. Nonetheless, restrictions were tightened to 1.3 million tons in 1974 and further to 1.1 million tons in 1975. Moreover, new no-fishing zones were established,

closed fishing seasons were extended, and Japanese fishing boats were boarded by American observers.

Furthermore, Japan–U.S. fishery negotiations in 1974 resulted in the establishment of no-fishing zones not only in the Bering Sea but also the Gulf of Alaska. They also placed restrictions on total harvest and on harvests of various species. Japan was instructed to keep its harvest of Alaska pollack in the eastern Bering Sea at the fiscal 1975 level of 1.5 million tons, and to cut its number of operating catcher boats and fishing season length by approximately 10% of their actual fiscal 1976 figures. In 1977, Nippon Suisan implemented voluntarily restrictions that kept its catch quota at 569,200 tons.

Regulations on Salmon and Trout

Of all forms of deep-seas fishery that postwar Japan had pursued, north-sea salmon and trout had, since 1952, been the one most expected to deliver reliable and stable revenue.

However, the United States, Canada, and Soviet Union were strengthening their interpretations of “state of origin” (specifically, that a “state in whose rivers anadromous stocks originate shall have the primary interest in and responsibility for such stocks”) vis-à-vis salmon and trout, which are anadromous species, and began enforcing stricture fishery regulations as a result.

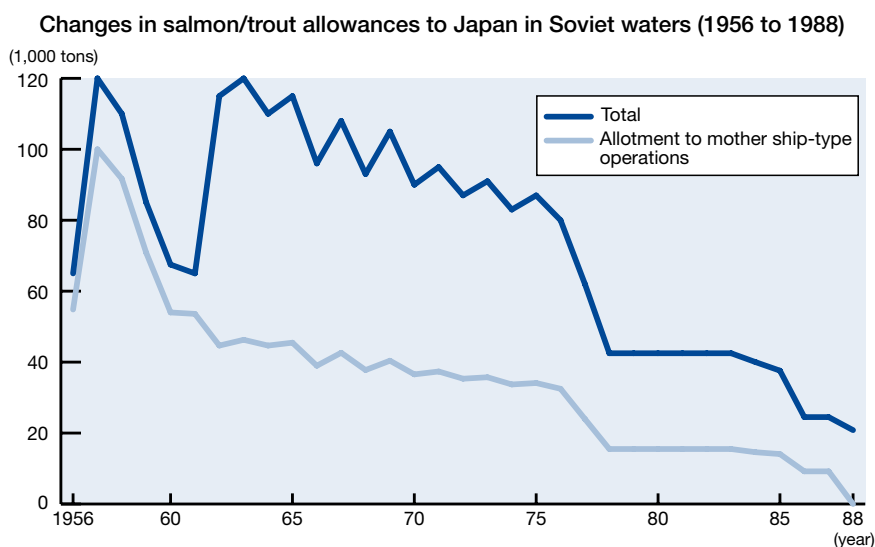
In 1972, as preparations toward holding UNCLOS III were underway, the United States and Soviet Union each presented proposals concerning the state of origin principle. Both proposed that, under the principle, a coastal nation could claim rights to relevant species stocks even if they were outside its 200-nautical-mile EEZ. Subsequently armed with the established 200-nautical-mile EEZs and the state of origin principle, the U.S. and U.S.S.R. separately entered into new fishery negotiations with Japan.

In the previously mentioned consensus, it was determine that “a state of origin must consult with other states habitually fishing anadromous stocks [in its EEZ] when establishing total allowable catches for said stocks, and must cooperate to minimize economic dislocation in states whose nationals have habitually fished [in its EEZ]”. Thus, the state of origin principle had a major impact on north-sea salmon and trout fishery.

Entering the 1970s, trout harvests grew in place of sockeye salmon catches.

In 1971, the Soviet Union decided within Japan–U.S.S.R. fishery negotiations to set a 10,000-ton quota for its salmon and trout harvest in international waters. Traditionally lacking experience in coastal salmon and trout fishery, the Soviet Union appeared to have established this quota with an eye to lowering Japan’s quota in international waters.

The next year, 1972, Japan–U.S.S.R. fishery



negotiations resulted in an 8,000-ton reduction in the total quota to 87,000 tons. Moreover, Japan was asked to reduce the number of its operating ships by 10%, to which it complied by implementing voluntary curbs.

That year, Nippon Suisan dispatched its *Nojima Maru* fleet with 32 vessels. This number was achieved by reducing the number of the fleet's catcher boats (from 33 to 30) and then adding two catcher boats affiliated with Hokoku Suisan.

Regulations on Crab Fishery

Of the many international regulations applied to fishery, the strictest and most quickly implemented were American and Soviet restrictions on north-sea crab fishery.

In 1971, Soviet regulations forced a two-thirds cut in Japan's king crab quota compared to the previous year. They also dropped the number of king crab fleets from four to two. As companies dealt with this sudden halving of fleets, confusion and pessimism permeated through the industry. On top of this, during the 1973 negotiations, the Soviet side declared its intention to completely close king crab fishery in the near future. Consequently Japan approached the 1974 negotiations with considerable trepidation. Although complete closure was avoided through painstaking preliminary talks that began in January 1974, the negotiations ended with even stricter regulations' being slapped on king crab fishery. The king crab harvest was halved from 60,000 cases of king crab cans to 38,000 cases (1.224 million crabs). Moreover, the remaining two mother-ship fleets were no longer permitted to operate, as the line was drawn at nine single ships. These developments led Nippon Suisan to bring its king crab factory-ship, which had a 60-year history reaching back to the Taisho era, to an end.

However, in 1975, a total ban on king crab fishery was indeed put into effect off of the Kamchatka Peninsula's west coast. Japan grudgingly accepted the closure through a compromise by which it demanded

larger crab quotas in other areas. The result was a shift from king crab fishery off of Kamchatka's west coast to golden king crab fishery as well as snow crab fishery near the Olyutor Peninsula. Specifics of this unusual quota increase were as follows. The limit on golden king crab caught by mother ship operations would remain at 500,000 crabs (of which, Nippon Suisan's share was 333,000 crabs), which was the same level as the previous year. In addition, four single catcher boats would be allowed as converted king crab vessels, with each vessel permitted to catch 10,000 crabs for a total of 40,000 crabs. The fishing grounds for these vessels were also expanded. Likewise, the quota for snow crab fishery off of the Olyutor Peninsula was increased by 32,000 crabs from its previous level to 97,000 crabs, also with expanded fishing grounds. Against this backdrop, Nippon Suisan, which had pursued king crab fishery in this area until 1968, returned for the first time in seven years to engage in snow crab fishery.

Meanwhile, harvests under the Japan-U.S. King Crab Agreement (which was revised every two years) were on a precipitously downward trend. Harvests that had been reduced down to 163,000 cases in fiscal 1966 and 1967 were further reduced to 85,000 cases in 1968. The 1970 Japan-U.S. King Crab Agreement then brought an even further decline down to 37,500 cases for the two years of 1971 and 1972.

The mainstream practice in Japan's crab fishery at the time was to can king crab and produce snow crab as frozen food. Since the Japan-U.S. King crab agreement of 1965, Japan's fishing industry had felt that the trend toward lower king crab quotas would not be stopped. King crab fishery used tangle nets that caught crabs by entangling their legs in the mesh. However, tangle nets were not suitable for snow crabs, which have long legs, two more legs than king crabs, and a fragile shell. Consequently, round cages were used. Because winches on *kawasaki* crab boats that cast and hauled in lines in conventional crab fleets could not handle the heavy cages, it was decided to use 100-ton catcher boats.

The United States began setting quotas and

regulations for round-cage crab fishery in 1969. In 1969, the quota was set at 16 million crabs; in 1971, it had fallen to 14.6 million crabs.

Under the 1972 Japan–U.S. King Crab Agreement, 1973 and 1974 king crab quotas were lowered from 1 million crabs to 700,000. Quotas for snow crab were also lowered by 600,000 crabs to 14 million. Moreover, Bristol Bay was divided into two zones (north and south), with quotas assigned to each. Of these, the southern zone (Zone B) was an area for bottom trawl fishery that had never been exploited by crab operations. Accordingly, this move generated suspicions that the U.S. was strategically acting to exclude Japanese crab fleets from Bristol Bay. Initially, Japan was required to allow American observers to board one of its two fleets; however, in 1973 this requirement

was changed to two observers on both fleets as American monitoring became stricter.

In 1976, the U.S. established a 200-nautical-mile exclusive fishing zone. Enforcement of this zone began on March 1, 1977. With this move, the Japan–U.S. crab agreement was allowed to expire. Beginning in 1977, crab joined other species subject to regulations under the Japan–U.S. Fishery Agreement that was signed on March 18 of the same year. Thereafter, crabs landed with bottom trawl nets were immediately returned to the ocean as prohibited species.

In 1977, the king crab quota for the eastern Bering Sea fell to zero. Subsequently all Japanese crab fishery in American waters, including the eastern Bering Sea, ended in 1980. That year, the *Keiko Maru* fleet left port for crab fishery in Bristol Bay for the last time.

3. Antarctic Krill and Whaling Operations

Krill Operations

Measuring six inches in length, krill (Antarctic krill) belongs to the order Euphausiacea together with shrimps and crabs. It was known among whalers as food for baleen whales and other animals living in the Antarctic Ocean.

Krill was abruptly thrust into the spotlight around 1973, a time when fishery controls were tightening on north-sea fishery.

Among the reasons for this sudden attention was that its vast stocks would not dry up even if harvested in large amounts. Moreover, it matched well with shrimp and fish in terms of both taste and nutrition, and it presented no danger of contamination. But above all else, what made krill attractive was that it could be harvested unencumbered in international waters and, at least for the immediate future, there were no international regulations in place to control its fishery.

Between 1973 and 1974, the Marine Fisheries Research and Development Center (currently the Fisheries Research Agency) conducted krill fishery

trials. Subsequently, Nippon Suisan became the first private-sector interest to begin krill operations in October 1974, when the trawler *Aso Maru* harvested 1,400 tons off the coast of Enderby Land, Antarctica. This was followed by a 2,500-ton harvest in 1975. In 1976, Nippon Suisan sent two ships, the *Aso Maru* and *Yoshino Maru*, with a view to mass production. The result was a harvest of 6,400 tons. One purpose of this operation was to build up a history of krill fishery in case it became subject to international controls in the future.

In 1977, the company tested a catch method that involved sucking in krill with a pump. It also tried out various methods for processing shelled, minced, and dried products. Thus, the company had growing expectations that krill could translated into a successful business.

The Twilight of Whaling

On June 9, 1972, the United States put before the United Nations Conference on the Human Environment (held in Stockholm) a proposal calling



Aso Maru operating in the Antarctic Ocean



Yoshino Maru, 4,000-ton class (completed in 1973)

for a 10-year moratorium on commercial whaling. The emotionally charged proposal lacked scientific basis and seemed intended to stir up a sense of crisis concerning the global environment and its resources. It was roundly criticized when it came up for debate and was rejected at the International Whaling Convention held on June 30. Nonetheless, international opinion against whaling subsequently began to take shape, led by the U.S.

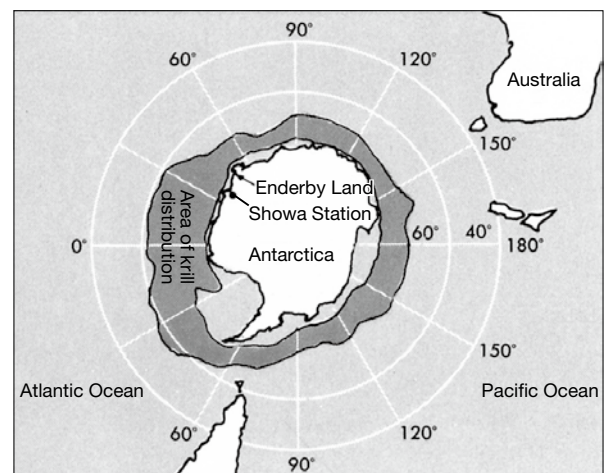
This did not bode well for the future of whaling. However, throughout the 1960s Nippon Suisan had secured revenue from its whaling operations by effectively utilizing harvested whales and improving its whale products in the face of shrinking quotas. It anticipated that the fall in whaling quotas would bottom out, and that then it could achieve sustainable business by improving operational efficiency. In fact, during this time Nippon Suisan invested as much as 3.1 billion yen to overhaul the main machinery on its mother ships and build new whalers.

However, contrary to the company's wishful thinking, cuts to whaling quotas continued unabated. Concern about whaling and strong anti-whaling opinions gained strength from the global environmental movement, whose point of reference differed from the resource-conservation mindset held by countries in the fishing industry.

In addition to the per-country restrictions on the number of whales that could be harvested, which were implemented from the 17th Antarctic whaling expedition of 1962–63, species-specific restrictions began

with the 27th expedition of 1973–74. Until the 26th expedition, if, for example, Nippon Suisan's quota was set at 410 BWU, the company could freely elect to harvest fin whales or sei whales, so long as it stayed within this BWU quota. However, with the 27th expedition, the company was given a species-specific quota—specifically, its catches could not exceed 346 fin whales and 885 sei whales. Once its quota for a certain species had been met, it could no longer catch any more whales of that species, even if it found more. This lowered whaling efficiency and led to higher costs to move and find whales.

Moreover, sea area-specific restrictions were added from the 29th expedition of 1975–76. The coastal sea areas around Antarctica were divided into six zones. Each whaling fleet was assigned a zone, and the number of whales of each species that a fleet could catch in its zone was predetermined. At the time of the 30th



Area of krill distribution in the Antarctic Ocean

expedition, Japan's quota was reduced to slightly more than one-third that of the previous year. Within this, Nippon Suisan's quota was 61 fin whales and 358 sei whales, figures that were less than half of the previous year's quota. On top of this, regulations became even more detailed, as the fin whale quota was limited to just one of the six zones, and harvest of sei whales in certain zones was prohibited.

Regulations went so far as to even cover small minke whales. And before long, minke whales became the only species for which whaling was allowed in the Antarctic Ocean.

In 1975, Nippon Suisan ended its whaling operations in the Antarctic Ocean and north seas when it sent the *Tonan Maru II* on its final company voyages to the north seas in May and then to the Antarctic in October. The company also ceased whaling in waters near Japan in 1976.

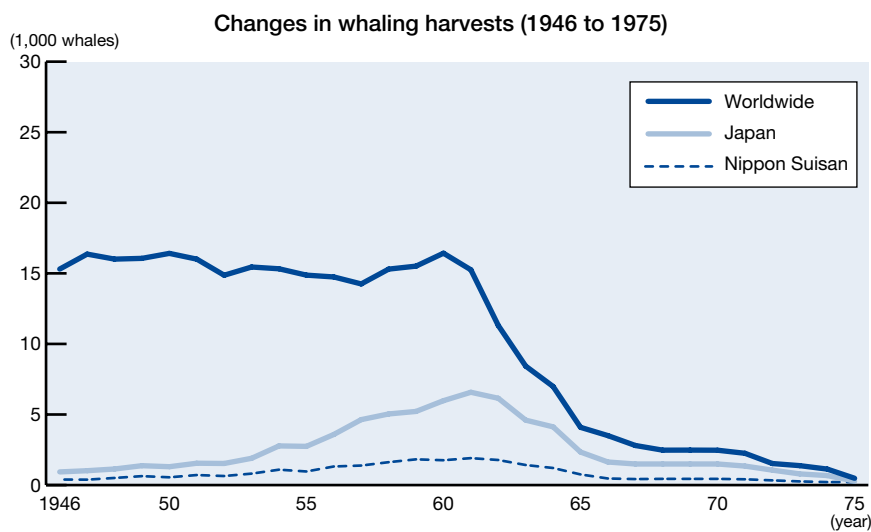
And thus the curtain closed on Nippon Suisan's whaling business, an activity reaching back 86 years to its forebear that started commercial whaling, Nippon Enyo Gyogyo K.K.

In 1974, the Fisheries Agency approached the three Antarctic whaling companies with a plan to continue whaling by combining operations and establishing an integrated company as a countermeasure against stiffening whaling restrictions. In response, the three companies formed a preparatory committee to begin studies toward integration in relevant fields in April

1975. The committee decided to proceed with integration after receiving assurances of legal and financial support from the government and the understanding of labor unions. In February 1976, the new company, Nippon Kyodo Hogeï K.K., was born. It was comprised of six companies: the three original companies—Nippon Suisan, Taiyo Gyogyo, and Kyokuyo Hogeï—plus Nitto Hogeï, Nippon Hogeï, and Hokuyo Hogeï.

Of Nippon Kyodo Hogeï's 3 billion yen in capital, Nippon Suisan contributed 32%. Iwao Fujita, a former chairman of the Japan Fisheries Association, was picked to be the new company's president. Its fleet consisted of three whaling mother ships and 20 catcher boats that were sold to it by whaling companies. It had 100 onshore employees (of whom, 27 came from Nippon Suisan) and some 1,400 seagoing employees (434 from Nippon Suisan). As a rule, Nippon Suisan found employment for those of its employees that were not transferred to the new company by reassigning them to other Nippon Suisan departments or providing job-placement services to help them find work in other companies.

The new company sent out two fleets, one each centered on the *Tonan Maru II* and *Nisshin Maru No.3*, to conduct its first Antarctic whaling in October 1976. The *Tonan Maru II* was joined by eight whalers and one refrigerator ship, while the *Nisshin Maru No.3* was accompanied by 10 whalers and one



refrigerator ship. These operations brought a total catch of 1,237 sei whales, 3,950 minke whales, 234 sperm whales, and 225 Bryde's whales. Their product production reached 40,289 tons, which included 5,819

tons of whale oil, 1,366 tons of sperm oil, 32,763 tons of frozen food, 170 tons of salted food, and 172 tons of collagen peptide and other products.

4. Development of Overseas Business

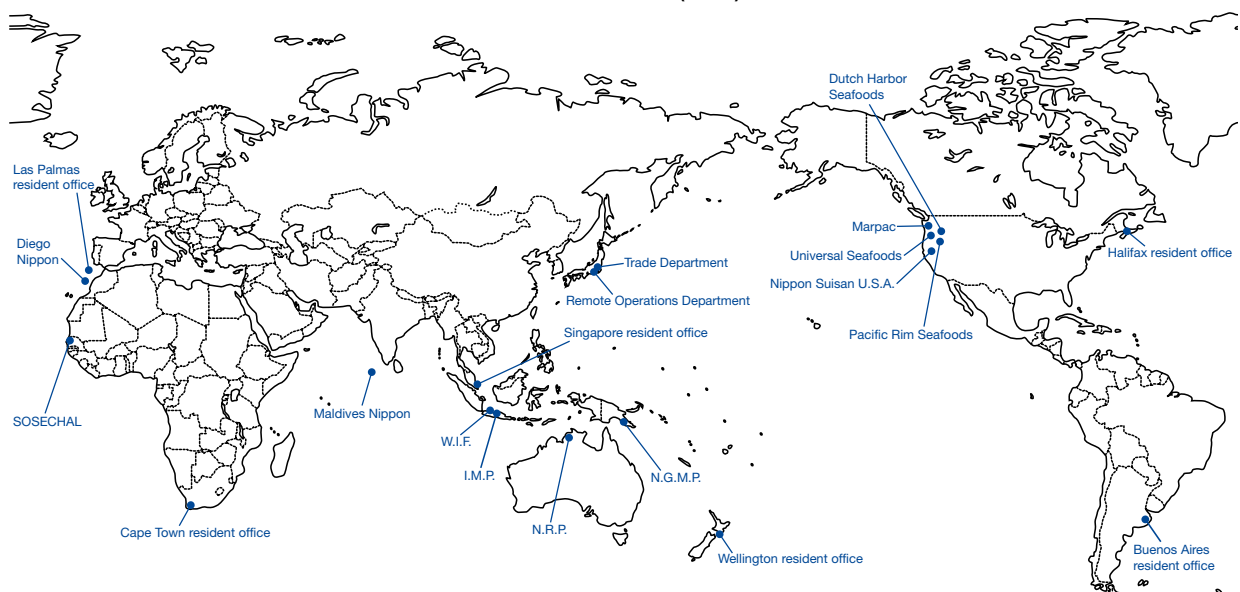
Nippon Suisan's entry into North America started in 1965 when it began purchasing and importing Alaskan salmon roe. This was five years after the 1961 liberalization of fishery product imports into Japan. In 1972, Nippon Suisan opened a liaison office in Seattle to serve as a base for its fisheries business. It subsequently expanded its purchases from salmon roe (for which the market was extremely competitive) to include king crab and snow crab. And in 1973 it began a partnership with Gilman Brothers, which was its export partner for minced Alaska pollack.

Also in 1973, it provided \$602,500 in investments and loans to the Marpac, Inc. of Alaska and acquired 46% of its stock in return. It built a new canning plant there for processing and sales of salmon cans, frozen salmon, salmon roe, and frozen snow crab.

In May 1974, Nippon Suisan launched the Universal Seafoods, Ltd., headquartered outside of Seattle in Redmond, Washington, as a base for processing and

sales of seafood products in North America. In August of the following year (1975), this new company began full-scale operation with frozen processing of king crab and snow crab in a floating factory aboard the *UniSea*, an engine-less cargo ship moored at Dutch Harbor on Alaska's Unalaska Island. In addition to crab, it primarily processed *surimi* from Alaska pollack and other fish as well as fish meal, and later expanded to refrigerated warehousing and the hotel business. Meanwhile, in March 1974, Nippon Suisan expanded its representative office in Seattle and established Nippon Suisan (U.S.A.), Inc. (capital of \$30,000), a wholly owned local affiliate, to oversee its North America operations and locally invested companies and to develop and promote new businesses and markets. The company's head office was set up in Seattle (later moving to Redmond in 1997). Its purpose was to purchase Alaskan *surimi*, salmon, Pacific herring, groundfish, roe, and fishmeal.

Overseas bases (1977)





A shrimp trawler operated by N.R.P.



Alaska fishing base (Dutch Harbor, circa 1977)

Nippon Suisan dispatched the trawler *Kirishima Maru* to conduct trail operations near Chile in 1976, and did the same with the *Kirishima Maru* and *Fuji Maru* in 1977. These operations led to the launch of a joint venture to develop fisheries in Chile (EMDEPES) in 1978. However, after acquiring land to build a plant in Puerto Montt, the new company had to proceed on shaky ground amid signs that the Chilean government would alter its fisheries policy.

In Malaysia, a new company called Sarawak Suisan Sdn, Bhd. was established in Sibul, Sarawak, with 360,000 Malaysia dollars in 1973. Nippon Suisan entered into a technical tie-up with this company and applied its expertise to producing high-quality frozen shrimp.

In Europe, Nippon Suisan established Atlantic Fisheries Development (A.F.D.) in Ireland in 1974. This move was in response to a call by the Irish government, which had set forth a policy to develop fishery resources in the North Atlantic Ocean in preparation for the era of the 200-nautical-mile EEZ, and to attract foreign industrial capital in view of its participation in the European Community. However, Nippon

Suisan pulled out of Ireland in 1978 due to difficulties that EEZ regulations caused to operations in the northwest Atlantic.

In March 1977, prior to the 200-nautical-mile EEZ era, Nippon Suisan's had invested a total of \$3.75 million in paid-in capital into eight overseas companies under the Trade Department, including Diego Nippon (Spain), Sonigui (Guinea), Marpac (Seattle, U.S.A.), and Universal Seafoods (Redmond, U.S.A.). As for its Remote Operations Department, it was involved in six joint ventures that included N.R.P. (Australia), W.I.F. (Indonesia), I.M.P. (Indonesia), and N.G.M.P. (New Guinea), and its operating fleet consisted of one large trawler, 10 small trawlers, and 50 shrimp trawlers. It achieved yields of 3,724 tons of shrimp and 8,795 tons of groundfish, and sales equivalent to 10.1 billion yen.

It was exporting fishery products to Greece, Italy, France, Spain, Portugal, Africa, and other destinations through Nissho Iwai Corporation, Toshoku K.K., Itochu Corporation, Marubeni Corporation, and others. And its local buyers were developing sales avenues.

Part 3 Nippon Suisan during the Era of Slow Growth

A Rapidly Changing Management Environment

For the fishing industry, the 1973 oil crisis sparked difficult economic times accompanied by inflation (stagflation). Among other problems, the industry was now faced with skyrocketing prices for vessel fuel

and materials, rising personnel expenses, stagnating fish prices, and poor sales of fish sausages, canned products, and high-quality frozen fish. Although prices stabilized in 1975 as long-term government measures for curbing overall demand took effect, the slump worsened as companies not only adjusted their

production and inventories to match declining consumption but also curtailed employment.

During the UNCLOS III gathering of 1974, developing countries and others, spurred by “resource nationalism”, put forward demands for the establishment of exclusive economic zones. There were increasingly louder calls for stronger restrictions against north-sea fishery and whaling.

At a board meeting following the general stockholders meeting of late November 1973, Vice President Masatake Suzuki was appointed Nippon Suisan’s new president, and outgoing President Haruo Nakai was named chairman of the board with right of representation. On December 1, immediately after taking his new post, President Suzuki issued an official message to the company. Noting Nippon Suisan’s tough management environment, he urged employees to band together and positively face the future, to improve productivity, and to eliminate waste. Again, in May 1974, he issued a message calling on employees to “innovate everywhere”. Questioning the reasons for year-on-year increases in personnel and material costs of 9 billion yen and 8 billion respectively, he called on employees to eliminate these increases by changing their ways of thinking and improving work methods and mechanisms.

Faced with rapidly changing circumstances, Nippon Suisan hammered out a new management policy for fiscal 1974 and thereafter that emphasized lower fishing costs and a stronger processed foods business in frozen foods and other areas. Although revenue was up that year on the back of 174.5 billion yen in sales, ordinary income amounted to 2.1 billion yen, while net profit stood at 1.5 billion yen, which was far below the previous year’s figure of 4 billion yen. Consequently, the company cut executives’ salaries and made cost reductions in all departments beginning in February 1975. On April 10, 1975, Suzuki issued an official message titled “a request to all onshore and offshore Nippon Suisan employees”. In it, he declared that, amid a worsening business environment, the company was facing its worst crisis since its foundation and

must improve revenue by 5 billion yen. He called on all employees, whether they worked on land or onboard ships, to pull together to overcome the crisis, and he asked for their understanding and cooperation in helping ensure Nippon Suisan’s survival. Five days later, he issued another message announcing the establishment of the First Planning Committee (chaired by Shun-ichi Okuchi).

Reinforcing Processing Operations

At a board meeting following the general stockholders meeting of December 1975, Vice President Juro Osoegawa assumed the company’s presidency.

Over the two years that passed since UNCLOS III opened in December 1973, the concept of “economic zones extending out 200 nautical miles” gained increasing acceptance. That year, the United States’ Senate debated the Magnuson-Stevens Act, which, among other provisions, sought to establish a fishing zone reaching out 200 nautical miles.

One area being considered under this law was the Bering Sea and Aleutian Islands region, a fishing ground that provided half of Nippon Suisan’s fishing business revenue. If its operations were to become restricted there, the company could not expect to increase its catch quantity. Indeed, such restriction would mark the dawn of a new era of declining operations. Consequently, measures to promote intensive use of fishing grounds and create higher added value would be essential to future business management.

When he was still a vice president, President Osoegawa had been in charge of Nippon Suisan’s sales and processing operations for one year. He described his impression of this time as follows.

“The company has large quantities of fish as raw feedstock, but it is not necessarily utilizing these quantities effectively. Why hasn’t this advantage being tied to sales? I think we should review our sales system and consider a business method that interlinks fresh fish and frozen foods” (*Nissui Kobo Tokubetsu-go*, June 1975).

President Osoegawa thus made reinforcing processing operations throughout the entire company the foundation of his management policy.

Osoegawa's management policy was reflected on a report by the First Planning Committee, which began work in April 1975, and led to reorganization and restructuring in 1975.

The settlement of accounts for fiscal 1975 (full year) showed a slight increase in profit, partially due to a rebound in fish prices, with ordinary income reaching 2.8 billion yen and net profit standing at 1.5 billion yen. During the fiscal year, dividends were reduced from 15% to 10% and then again down to 8%; however, the company narrowly avoided having to stop dividend payments.

Report of the First Planning Committee

The Planning Committee's task was to formulate a vision of Nippon Suisan in the 1980s. This vision was to be a source of hope and vitality for regular employees, whose ambitions tend to atrophy.

Regarding the economic environment, the report noted that structural changes in consumption caused by the oil crisis-sparked international economic downturn and slower growth in Japan's economy were affecting Nippon Suisan's business by causing low fish prices and poor performance in frozen food products, and that these conditions were placing downward pressure on profits.

As for deep-seas fishery, it mentioned that the emergence of "resource nationalism" was driving enactment of the new International Law of the Sea, and that this trend was upsetting the foundation of Nippon Suisan's fundamental businesses.

Given these circumstances, the report proposed that Nippon Suisan should move forward by lowering its high dependency on fishing operations and raising the importance of non-fishing operations while simultaneously expanding sales through purchases in Japan and abroad. It recommended making stronger sales capabilities and processing the foundation of these

efforts, and it proposed bringing greater efficiency to fishing in line with allowable limits and promoting development imports in order to ensure stable supply of fishery products.

It laid out the following directions for individual business sectors:

- Fishing: Implement streamlining measures in response to international order of the seas. Strive to maintain sales and pursue profits through intensive use of catches.
- Shipping: Strengthen international competitiveness from a comprehensive viewpoint (including affiliates) to withstand sudden changes in the international environment.
- Processed foods: Take proactive steps toward becoming a general foods company.
- Trading: Expand overseas and domestic purchasing by systematically utilizing the company's technical capabilities.
- New business: Actively develop new businesses in ways that fit with the company's makeup.

According to the committee, what was needed to realize the new suggested policy was reorganization to reinforce the sales system, strengthen purchasing and trading components, and promote development of new products.

Taking these recommendations, the company decided to reinforce its sales system by utilizing a "sales headquarters" framework to preside over sales, processing, development, and the Central Research Laboratory, while at the same time clarifying its system for communicating with branches. Furthermore, to handle more extensive regional distribution, it decided to assign a board member to supervise eastern and western Japan as the general manager of both the Tokyo and Osaka Branches. It also set about establishing a new product development office based on recognition that "the processed food business cannot grow without the development of new products".

In its effort to ensure stable supply of fishery products, it decided to improve the efficiency of vessel operations in accordance with allowable conditions and promote development imports and domestic purchasing. Other measures it addressed included strengthening the makeup of shipping operations and augmenting holds to match shipping strength, reorganizing and reinforcing the processed foods business, bolstering the competitiveness of cold storage business (specifically, equipment automation, labor-saving and expanding warehouse capacity), improving production through close labor-management consultations, and measures to address the aging society phenomenon as a form of personnel administration. Still others included active development of technical guidance, common fishery, and joint ventures as circumstances permit in order to secure fish protein.

Tough Times for the Food Products Business

The processed foods business had been expected to make up for lost revenue in the fishing business. Unfortunately, however, it did not produce profits as easily as was hoped.

Around the mid-1960s, the fish sausage and ham market, which had been growing strongly, began to contract at a rate of about 3% annually. Amid cutthroat competition, the company's efforts to recover lost revenue by raising prices did not go well, necessitating action to adjust and streamline production. On the other hand, its frozen foods business was continuing to show healthy growth, and thus the company was attempting to differentiate itself from the competition by offering fishery products and frozen foods made with fishery products. However, its once promising ramen and mayonnaise businesses made little headway and were being scaled back. Nippon Suisan began adjusting its production systems for these products and taking other actions to reconfigure its production plants, a process that was completed in March 1972. The company looked forward to returning to the black in fiscal 1973.

In March 1972, Nippon Suisan presented a medium-term processed foods plan for the three-year period between 1972 and 1974 to the Central Producers Conference. In effect, this plan was a growth strategy. It put forth a scheme to establish the Nippon Suisan brand by developing differentiated high-quality products using value-added processed foods made with mass-caught species landed by fishing operations. Because production and sales had been separated in 1971 (the year prior to the plan's implementation) and plants were now under the management of the head office, the plan was praised for allowing the sales division to dedicate itself to sales.

However, just three months later, Nippon Suisan's overall business performance worsened due to sudden yield reductions, falling fish prices, and other developments. This combined with rising feedstock and personnel costs in the food products business made it necessary to review the plan. Of particular concern was the need to break the slump in the fish sausage and ham business. And this led to even greater consolidation of production plants.

That year, a public stir was created when suspicions arose that AF2 (acrylic furylfuramide), a preservative used in processed foods, was a potential carcinogen. Predicting that use of AF2 would be banned, Nippon Suisan developed a technology for sterilization with pressurization and heating that can maintain quality without use of AF2. It began marketing fish sausages and fish hams made with this new technology in 1973. However, this incident spurred even further contraction of the fish sausage market.

In October 1973, a new medium-term plan to cover the years 1974 to 1976 was prepared for Nippon Suisan's processed foods category. The plan called for the processed foods business's establishment as an independent organization. It also proposed expanding the product range by breaking away from reliance on fishery products to also include agricultural and livestock products. It included the creation of a processed foods division during the Nippon Suisan's reorganization in December, and aimed to return plant

management to the branches and realize an integrated product-sales framework in each region by placing the new Processed Foods Department in charge of national coordination and integration of all activities between production and sales.

The plan also included utilization of the company's production capabilities by using fishery products as feedstock; efforts to reduce cost by holding down distribution costs, etc.; setting up frozen food sales sections in the Takamatsu Branch as well as the Sendai, Nagoya, and Fukuoka Branches to reinforce the sales system; organization of a wholesalers' association and unification of business negotiations with mass retailers; and starting of new businesses.

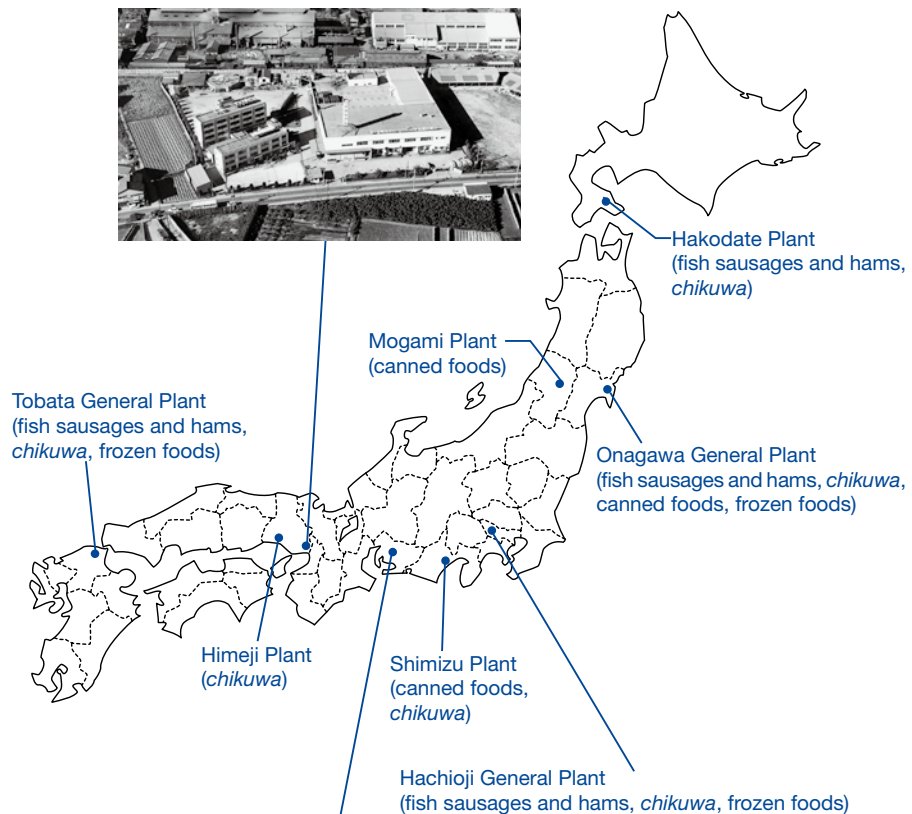
From mid-1974, the previously high rate of growth

in frozen foods slowed as the industry entered a period of stable growth. Companies concentrated on products that they could produce efficiently—such as *shumai* and *gyoza* dumplings, hamburger steaks, and croquettes—and thus set the stage for fierce competition.

In January 1975, Nippon Suisan launched Nittake Shokuhin K.K. to market retort-pouch foods in partnership with Takeda Pharmaceutical Company Limited. Utilizing packaging developed with the technologies of Toyo Seikan, this new venture produced products with high-retort sterilization, a process whereby retort pouches were heated with very hot steam to a temperature of 135°C for a short period of time. This process maintained the texture and taste

Processing plants in 1976

Itami Plant (frozen foods)



Anjo Plant (frozen foods)



of ingredients even better than conventional retort-pouch products. The new company offered a broad range of products that included hamburger steaks, creamed whitefish, yakitori, and grilled eel. However, sales did not meet expectations and as a result Nippon Suisan decided to pull the plug on the venture in March 1977.

Meanwhile, the downsizing of fishing operations was having an effect even on the processed foods business. In 1975, Nippon Suisan sent out its last Antarctic whaling fleet. When it subsequently decided to scale back work at the Onagawa Plant, which had been a whale canning plant, it sparked a labor problem. The strife grew so large that it affected discussions on improving the processed foods business until an agreement was eventually reached in 1979. The reconstruction policy that was formulated during this process became a new medium-term plan for the processed foods business.

Expanded Purchasing

The First Planning Committee noted that previous emphasis on developing marine products had resulted in delays in securing fishery products from trading companies. It also put forth the following recommendations:

- Cover shortages in mother ship-type bottom trawl fishery catches by making domestic purchases in Hokkaido and the Sanriku region.
- Joint ventures by remote operations should introduce fishery as a development system for underdeveloped countries. This can benefit local countries if the



Retort-pouch products

products are sent to local consumption and surpluses are exported.

- In overseas purchasing, regard trading companies as competitors, paying particular attention to shrimp.
- Develop purchasing of frozen tuna.
- Expand investment and operations to the Alaskan producers Universal Seafoods and Marpac, and expand scale by diversifying partner companies.
- Also focus on Atlantic octopus and squid.

Around 1975, one problem concerning the distribution of fishery products was a changing environment surrounding retail stores. Fish retail stores became largely grouped into four classifications (i.e., traditional fresh fish shops, sushi restaurants, catering shops, and fish sections of mass retailers) and store sizes were becoming smaller. Thus, the committee noted that any effort to increase sales volume would require the development of off-market distribution outside of existing routes as well as study of direct sales to food product manufacturers and mass retail stores. It also recommended improving Nippon Suisan's brand power by increasing added value through the development of new applications based on frozen fish processing.

Looking to reinforce its purchasing, Nippon Suisan established special purchasing sections in its Tokyo, Osaka, and Fukuoka Branches in 1976. At this time, it was enjoying strong performance in its fish feed/oil and meal purchasing, which was a new business for the company, as well as fish oil refining at its Onagawa Fish Feed and Oil Plant. As a result of these activities, Nippon Suisan's fresh and frozen fish sales grew by 41% in fiscal 1976, while its purchasing alone improved by 81% and refrigerated warehousing grew by 31%. The company also improved storage functions at catch landing sites. In 1977 it built a new refrigerated warehouse at Hachinohe Teion Reizo and constructed a new Kushiro Plant for Hakodate Teion Reizo.

Company-wide sales in 1977 exceeded budgeted figures in terms of both sales and profit, despite the arrival of 200-nautical-mile EEZs. This was attributed to the company's effort to reverse its ratio of marine

products to purchased and imported products. Thus, Nippon Suisan was achieving the First Planning Committee's recommendation to turn around the ratio of own marine products to other products from 7:3 to 3:7 within three years.

Reinforcing the Cold Storage Business

The First Planning Committee was also the body that advised Nippon Suisan to enhance and reinforce its national network of refrigerated warehouses to improve its ability to sell marine products.

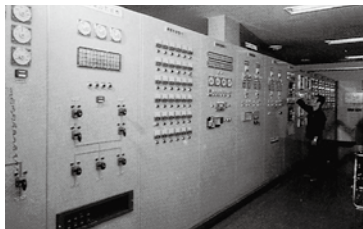
Nippon Suisan therefore began an organizational review and aggregation effort that would allow it to respond to sales needs at the national level, with three temperature zones (frozen, dry, and chilled), and with 365-days-a-year delivery, rather than at the local warehouse level, as was conventional practice.

In refrigerated warehousing, a great deal of time passes before invested capital can be recovered. Consequently, a company must have the financial strength necessary to support it. With the arrival of EEZs, it was inevitable that fishery regulations would

become tighter. Such regulations meant smaller yields for Nippon Suisan and the rest of Japan's fishing industry. Thus, Nippon Suisan's effort to expand its refrigerated warehouse network was not only a proactive countermeasure against regulations but also a strategy to cultivate profit-earning business while it still had the fundamental strength necessary. Moreover, it went beyond intensifying the company's food plants; it was also seen as a means to redistribute personnel from shrinking fishing operations.

Nippon Suisan's refrigerated warehouses took two forms: coastal facilities serving as bases for landing catches from deep-seas trawlers and receiving imports, and refrigerated warehouses at points of consumption that supply large consumer markets. As of 1977, the company had a total of 18 such facilities. The arrival of EEZ regulations was expected to lead to smaller catches. To respond, Nippon Suisan enacted a strategy to develop profit-earning business by permitting general consignors to use warehouses that theretofore had mainly served to store its own fishery products only, allowing handling of not only fishery products but also frozen foods and other items, and upgrading

Coldstores in 1976



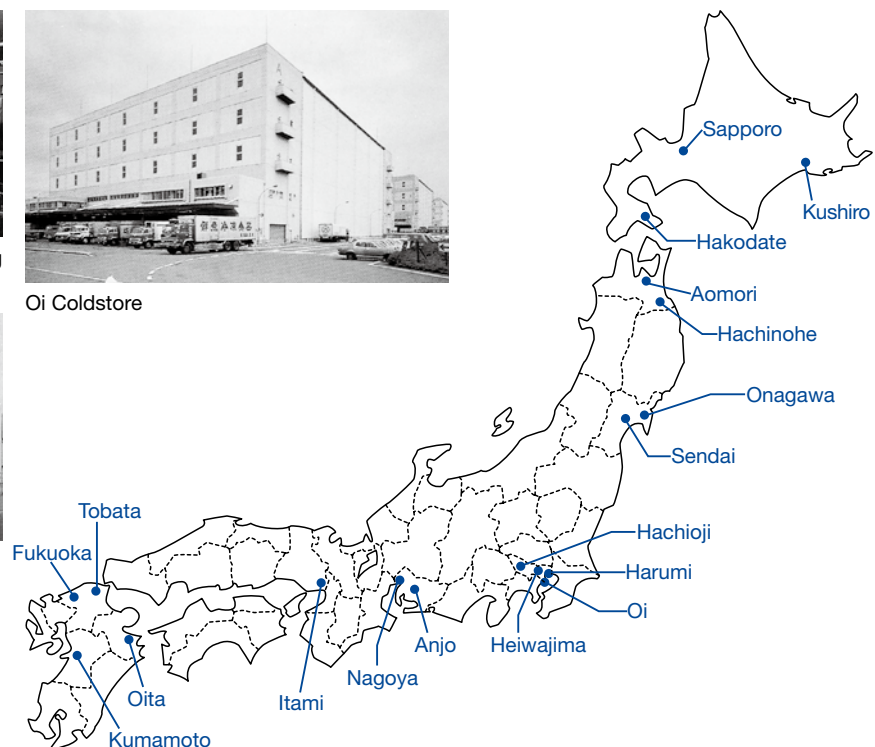
Integrated control room for freezing machines



Oi Coldstore



Warehouse work





1976: Nippon Suisan's Oi Coldstore
Ota City, Tokyo 20,000 tons



1976: Nippon Suisan's Heiwajima Coldstore
Ota City, Tokyo 2,814 tons



1975: Nippon Suisan's Anjo Coldstore
Anjo City, Aichi Prefecture 15,300 tons

warehouses' functions to make them distribution centers that also provide freight transport.

Nippon Suisan implemented the various components of the expansion strategy in rapid succession. In 1975 it completed construction of the Anjo Coldstore (Anjo City, Aichi Prefecture). And in 1976 it began operating the Oi Coldstore (Ota City, Tokyo) and Heiwajima Coldstore (Ota City, Tokyo).

It deserves noting that the Japan Association of Refrigerated Warehouses was formed on October 4, 1973, when functions concerning business-oriented refrigerated warehouses of the Japan Association of Refrigerating Industry (founded in 1948) were spun off into an independent organization. The association's main purpose is to serve the public's interest in the refrigerated warehouse industry.

A Tough Fight in the Shipping Business

Ever since it was planned and implemented in the Five-Year Reformation Plan in 1959, Nippon Suisan's shipping business had been positioned alongside fishing and food processing as one of the company's three main businesses. And, although its sales were small in comparison with fishing, it provided stable profits. However, the Nixon Shock of 1971 caused the fixed exchange rate regime (pegged at 360 yen to one U.S. dollar) that had continued since the end of World War II to collapse and hastened a shift to a floating regime in February 1973. As a result, the yen quickly appreciated to 308 yen to the dollar and then further to 260 yen. The strengthening yen afflicted ocean-going shipping involving tankers, ore carriers, and other vessels by dragging down its international competitiveness

as costs for crews and other items rose. Then came the first oil crisis in October of the same year. Although the crisis temporarily brought the exchange rate back up to around 300 yen to the U.S. dollar, it also caused the amount of trade to plummet, thereby producing a glut of vessels. This environment delivered a major blow to the international shipping industry.

Moreover, Japan's policy vis-à-vis shipping changed following the oil crisis, as it now sought to integrate major shipping companies. While the new integration policy was designed to secure sea lanes, it also meant that shipping companies that were not specifically targeted would lose their subsidies. Accordingly, such companies came under pressure to further reduce costs by various means, including selling their vessels to overseas interests and crewing ships with foreigners.

In March 1976, the ore/oil combination carrier *Amazon Maru* was completed at Ishikawajima-Harima Heavy Industry's Aioi Shipyard at a cost of 8 billion yen. Nippon Suisan took delivery and began operating her in May under a 15-year time-charter agreement with Kawasaki Steel Corporation.

Establishment of Nissui Senpaku

As a response to such circumstances in its shipping business, Nippon Suisan attempted to improve competitiveness and profitability by abolishing its Vessel Operations Department and transferring the department's duties to Group member Nissui Kaiun in July 1976. It then concentrated all aspects of the shipping business, including those pertaining to tankers, in Nissui Kaiun.

Behind this measure were the poor conditions



The ore/oil combination carrier *Amazon Maru* (completed in 1976)

facing shipping in general—namely, weakening competitiveness caused by the fluctuating exchange rate regime and falling freight charges due to plummeting trade volume—combined with a severe business environment for Nippon Suisan that was attributable to greatly lower freight flows from overseas fishery. This environment made it necessary for the company to strengthen its competitiveness and integrate management and operation systems. By separating the shipping business, Nippon Suisan sought to pursue the advantages that come with being a specialized company.

In 1976, Nippon Suisan leased a total of nine vessels on a bareboat basis (i.e., without crews) to Nissui Kaiun. They included the *Matsushima Maru*, *Matsushima Maru II*, *Matsushima Maru III*, *Andesu Maru*, *Nippon Maru*, *Nippon Maru III*, and *Amazon Maru*. At the same time, it renamed Nissui Kaiun as

Nissui Senpaku Co., Ltd. and increased its capital from 50 million yen to 200 million yen (with a further increase to 800 million yen in 1980). Furthermore, it transferred the *Isokaze Maru*, which was the most advanced refrigerated carrier to date, to Nissui Senpaku in October 1976. This move was intended to give Nissui Senpaku depreciable funds and enhance the composition of its finances.

In line with these measures, Nippon Suisan transferred 375 of its large-ship crewmen and 26 of its onshore employees to Nissui Senpaku in January 1977. Simultaneously it leased the newly constructed Nippon Suisan vessels *Asama Maru* and *Ikoma Maru* to Nissui Senpaku on a bareboat basis. From its beginning, Nissui Senpaku had a total staff of 594 offshore employees and 42 onshore employees. It should be noted that Nippon Suisan also transferred 75 of its large-ship crewmen to Nippon Kyodo Hogeï when it was established in 1976.

Thus, Nissui Senpaku was born as a company to take full-time charge of ship administration (tankers, ore carriers, and other vessels), administer cool carrier service to carry Nippon Suisan-affiliated fishery products from fishing grounds, and manage reefers (temperature controlled transport) that carry general ocean-going refrigerated cargo.

Structural Change during the Period of Slow Growth

Chapter 1: Changes in the Economy and Fishery Environment

1977–1985

Part 1 Trade Friction between the U.S. and Japan

U.S.–Japan Trade Friction in the 1980s

In 1979, the Iranian Revolution brought oil production in Iran's neighbors to a halt. The result was a second oil crisis that suddenly drove up previously stable crude oil prices. Like the first oil crisis six years earlier, this environment plunged the world's economy into stagflation. However, Japan, having learned well from the previous crisis, was able to minimize the effect on its own economy by taking an integrated public-private sector approach that included early financial belt-tightening and thorough resource and energy conservation.

Amid continuing stagflation, Ronald Reagan, who had been sworn in as the new U.S. president in January 1981, announced three major policies for a return to a "strong America". These were fiscal austerity measures to curb inflation, major tax breaks to spur corporate investment, and expansion of military spending. However, these policies ultimately led to fiscal deficits and trade deficits that were dubbed the "twin deficits".

The U.S.'s twin deficits continued to grow at an

accelerated pace during the early 1980s. Eventually the target of American anger at this situation became Japan's trade surplus with the U.S. Having quickly shaken off the second oil crisis's effects, the Japanese economy was posting ever larger current account balances since 1981. According to statistics of the U.S. Department of Commerce, around the mid-1980s America's trade deficit with Japan exceeded \$50 billion, which was more than five times what it was in the late 1970s.

U.S.–Japan trade friction that first emerged in the 1970s became increasingly intense entering the 1980s. Specifically, this friction was felt in the automobile sector and in high-tech sectors, such as semiconductors and electronics. In succession, Japan's major export industries in these and other sectors began moving production to the U.S. in a bid to avoid trade friction. However, even with these efforts, the trade balance failed to improve. Eventually the problem sparked calls in the U.S. for Japan to improve its economic structure, which in turn led to the Japan–U.S. Structural Impediments Initiative (SII).

Part 2 Changing Consumption and Distribution of Food Products

Developing Infrastructure for Daily Living

From the end of the era of rapid economic growth, through the second oil shock and the rise and then collapse of the “bubble economy”, to the *Heisei Fukyo* recession, Japan’s economic circumstances evolved at a bewildering pace. Against this backdrop, the national average yearly salary of working-class households more than doubled from 2.834 million yen in 1975 to 6.85 million yen in 1995.

Consumer spending also increased in step, and accordingly durable goods became more prevalent in society. In particular, from the 1970s until the 1990s, there was a conspicuous increase in consumer products that make life easier, among them room air conditioners, microwave ovens, large refrigerators, and video tape recorders (VTRs). Moreover, the 1980s saw the arrival of toilet seats with a warm-water shower feature in ordinary households, marking a major change in living styles. Also appearing were word processors, facsimile machines, and personal computers. The popularity of PCs, in particular, had a profound impact on subsequent lifestyles.

In terms of the structure of consumption, the percentage of money spent on daily essentials (e.g., expenditure for food, furniture and household utensils, clothing, etc.) entered a declining trend, while that for communications and transportation grew strongly. The share of expenditure for services, such as money outlaid for education and amusement, also grew.

Greater Availability of Information on Food and Daily Living

In the 1980s, a series of new cooking magazines started appearing on the market. Theretofore, cooking had generally been featured as a single section in the content of general women’s magazines; however now magazines almost entirely dedicated to cooking were being published.

The magazine that opened the floodgates here was *ESSE* (Fusosha Publishing Inc.), which first appeared in 1981. *ESSE* used multipage layouts to present various recipes with color photographs to highlight their attractiveness, and by doing so it influenced all subsequent cooking magazines. In actuality, *ESSE*’s content featured more than just cooking, as it also ran articles on health, childrearing, and interior decorating, among other topics. These features made it a lifestyle magazine rather than a simple cooking magazine. On the other hand, *Orange Page* (East Japan Railway Company), a magazine that began publication in 1985, first appeared on shelves of the national mass retailing chain Daiei. This origin was reflected in its becoming a true cooking magazine. *Orange Page* also spawned a great number of cookbooks, leading to an increasing number of housewives and single women who used them as guides in the kitchen. Another magazine, *Lettuce Club* (Kadokawa Marketing), appeared in 1987. Because it was initially under the umbrella of the Seiyu supermarket chain, *Lettuce Club* was a lifestyle magazine that often presented new living ideas by exploring supermarket circulars in great detail. In a way, it served as a bridge between the distributor and the homemaker. A major characteristic of *Lettuce Club* was its position as a daily living magazine found on shelves right next to the cash register.

The cooking magazines and books that appeared at this time popularized the joy of eating by highlighting the wide world of cuisine. They featured recipes rich with variety and capable of adding spice to daily living. They presented cooking methods that taught readers how to skillfully utilize ingredients in diverse ways. And they suggested party menus for foods that were easy to prepare but looked gorgeous.

Changes in Dietary Habits and the Food Products Industry

Consumption of rice, the main staple of the Japanese

diet, was in steady decline. In 1980, yearly per capita rice consumption in Japan stood at 45.8 kg; by 1990, this figure fell to 35.3 kg, or by 10 kg in 10 years. However, consumption of bread and noodles did not grow particularly strongly during this time. A look at the compositional makeup of food expenditure shows that, while the shares of purchased rice and perishable foods generally declined, the share of processed foods grew steadily. Moreover, the percentage spent in restaurants and other such establishments grew even more conspicuously than before.

The sudden growth of chain stores that began in the 1970s was fueled by the entry of housewives into the labor force as part-time workers. The more time that housewives spent at their jobs, the less time they spent doing housework, which in turn led to the simplification of meals served at home. At the same time, eating at home became less frequent and eating out at restaurants became more and more routine. Moreover, the enactment of the Equal Employment Opportunity Law (revised) in 1985 further accelerated women's advancement into working society. Amid such circumstances, convenience stores began to stock a broad range of *onigiri* rice balls, *bento* boxed meals, sandwiches, and other items on their shelves from the mid-1980s. Additionally food services centered on take-home precooked dishes in various forms—including catering, home-delivery, and take-out—grew. Indeed, it was boxed meals, prepared dishes, and other forms of precooked food that satisfied the needs of full-time working women.

Food Diversification and Expansion and Development of the Food Products Industry

Changes in the household structure brought about by lower birthrates and emergence of the nuclear family were also becoming apparent. The percentages of households comprised of a single person or married couple without children grew rapidly. Among single-person households, many consisted of an elderly person or unmarried woman. And among households

comprised of a married couple without children, many enjoyed high household incomes because both members worked. There are significant differences between senior citizens and young women in terms of the types and quantities of food they want, and food demand varies depending on income. Consequently, the kinds of food required by society became more and more diversified compared to times when large families ate the same foods together.

At the same time, general supermarkets expanded their sales spaces for perishable foods and other food products, while convenience stores fought back by introducing a broad range of products to address consumer demand for precooked foods. The foods products industry also joined in by developing new menus; for example, *bento* boxed meal chain stores created products specifically targeting young women. The growing range of available menus and rich variety of products brought customers into stores. And as menus became even more varied over the years, the food products industry expanded and evolved to keep pace.

A supporting factor in the diversification of food was the emergence of processed and frozen foods. Various forms of processed and frozen food products appeared on the market, and the range of advanced processed foods broadened to include instant foods, precooked frozen foods, and retort-pouch foods. This was a result of efforts to satisfy demand among working housewives and single people for foods that were both easy to prepare and delicious. Consumption of frozen foods increased dramatically as more products became available, with yearly per capita consumption growing from 3.4 kg in 1975 to 15.24 kg in 1995, an increase of approximately five times in 20 years.

Meanwhile, various problems threatening food safety, such as dioxin and bovine spongiform encephalopathy (BSE) contamination, came to light throughout the world from the early 1990s. As a result, health concerns joined demand for deliciousness and convenience as a factor that accelerated the diversification of food needs.

Part 3 Arrival of the Era of 200-Nautical-Mile Zones

1. The Shift toward 200-Nautical-Mile Zones in Major Developed Countries and Japan

Enactment of the U.S.'s Fishery Conservation and Management Act

The Third United Nations Conference on the Law of the Sea (UNCLOS III) of 1973 lasted nine years between its start and eventual adoption of the U.N. Convention on the Law of the Sea. During this time, the idea that exclusive economic zones for fisheries must be established quickly spread rapidly among developed nations.

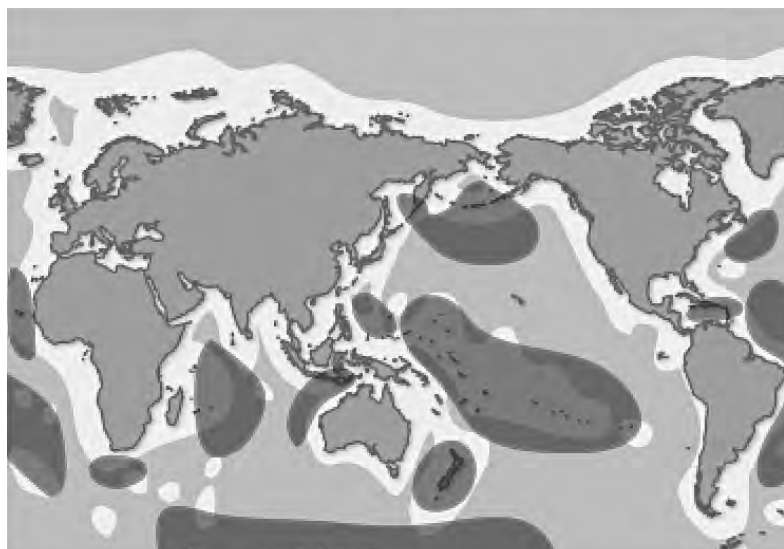
In October 1975, almost two years since UNCLOS III was first convened, Iceland stepped forward to establish a 200-nautical-mile exclusive fishing zone. Ireland's main industry was fishing, as it was surrounded on all sides by excellent fishing grounds. However, this excellence was attracting more and more fishing boats from the United Kingdom, other European nations, and the Soviet Union. Thus, the fact that Iceland took the step of establishing an exclusive fishing zone ahead of the developed nations suggests its sense of crisis here.

Within the United States, as well, public debate was taking shape over expanding the country's exclusive fishing zone to 200 nautical miles as a provisional measure until the Law of the Sea could be executed. This was against a backdrop of growing dissatisfaction among coastal fishery operators about operations by fishing boats from the Soviet Union, Japan, European Economic Community (EEC), and other nations.

Amid such circumstances, Senator Warren G. Magnuson (Democrat from Washington) submitted a bill that would extend the U.S.'s exclusive fishing zone to 200 nautical miles to the Senate when the second session of UNCLOS III began in June 1974. However, the "Magnuson Bill", as it came to be called, became shelved in the Senate and was eventually scrapped.

The following year, 1975, Magnuson again submitted the same bill to the Senate. A similar bill was also submitted to the House of Representatives. The bill passed the House of Representatives in September 1975 and then the Senate in January 1976. It was signed

200-nautical-mile zones and high-seas fishing areas



□ 200-nautical-mile zone ■ High-seas fishing area

Source: Japan Fisheries Association

into law as the Fishery Conservation and Management Act of 1976 (commonly known as the FCMA) by President Gerald Ford in April and took effect on March 1, 1977.

The following is an outline of the FCMA at the time of its enactment.

(1) It establishes a 200-nautical-mile fishery conservation zone measured from the U.S. coast. (2) It declares that the United States will exercise exclusive fishery management rights for the following: all fish species except tuna in the fishery conservation zone, all anadromous species and sedentary species of the continental shelf in other sea areas that originate from the United States, and all continental shelf resources that go beyond 200 nautical miles. (3) It allows foreign fishing only when conducted under a governing international agreement in which the partner government clearly recognizes the United States' right to exercise exclusive fishery management in the zone, and requires partner countries to pay fees to cover a portion of U.S. expenditure for enforcement and research. It also states that foreign fishing shall be practiced in accordance with U.S. laws and controls based on permits issued by the United States. (4) It stipulates that the Total Allowance Level of Foreign Fishing (TALFF) will be calculated by six newly established Regional Fishery Councils by subtracting the catch capacity of U.S. fishing boats from the optimum yield (OY) for each species of each year. And (5) for foreign fishing that had been practiced under existing international agreements, it requires that the relevant agreements be renegotiated to ensure that they match with the content of the FCMA.

Accordingly, the FCMA stipulated that fishing shall take place under the management of a coastal country—specifically, the United States. It thus signaled the end of an era in which fishing could be conducted freely in coastal waters.

Enactment of the Breaux Act

In 1978, a revised FCMA was enacted that, over and

above promoting seafood trade based on quotas, added a system of surcharges to fishing fees in order to cover expenses for natural disaster relief to American fishermen. The next year, 1979, laws (the Packwood-Magnuson Amendment [PM Act] and Perry Amendment) were enacted that halved the quotas of countries that do not observe conservation measures established by international organizations. And in December 1980, the American Fisheries Promotion Act (Breaux Act) was enacted to protect and develop free fishing in the U.S.'s 200-nautical-mile zone.

A factor behind the Breaux Act was dissatisfaction among U.S. fishery interests arising from skyrocketing fuel costs and sluggish growth of the fishing industry. Although all items concerning yields and operational conditions in the American zone were now determined through management plans based on the FCMA, the quota allocated to Japanese fishery for 1977, the first year of a new Japan–U.S. fishery agreement, was 1.14 tons (of which, the quota for Alaska pollack was 836,400 tons). This was an 11% reduction compared to the 1.32-million-ton quota allowed the previous year. This reduction led to fleet reductions of four vessels in trawl fishery and one vessel (suspension of fishing) in north-sea longline/gill net fishery.

Initially the bill included items having extreme importance to Japan, among them the phasing out of foreign fishing over a five-year period. Japan lobbied hard for changes with concerned parties of the U.S. government and Congress. This effort resulted in slight modifications to the phase-out and other items of the bill. The bill's sponsor, Representative John Breaux of Louisiana, was serving as chair of the fisheries and wildlife subcommittee of the House of Representatives' shipping and fisheries committee.

The following is a basic outline of the bill:

- 1) The United States can reduce the 1979 TALFF by 5 to 15% as U.S. yields grow.
- 2) Fishing fees will be set by multiplying the total costs of FCMA and its execution by the proportion of foreign yields against all yields (including the U.S.

yield).

- 3) As a general rule, American observers will board 100% of foreign fishing boats, with the expenses for this boarding collected from the foreign fishing boats.
- 4) When setting fishing quotas, the first consideration will be the amount of cooperation relevant countries give to U.S. seafood exports.

Regarding item 1), in particular, although conditions barring foreign fishing (a so-called “phase out”) were slightly modified after intense lobbying in the U.S. government and members of Congress, the bill was nonetheless signed into law by the president in December 1980 and became known as the Breaux Amendment (I). In addition, item 4) marked a policy shift from emphasis on actual catches to emphasis on cooperation with the United States.

Later, a draft amendment to the FCMA that was proposed by Representative Breaux and enacted in January 1983—which was known as the Breaux Amendment (II) to distinguish it from the earlier amendment—led to a “fish-and-chips” policy that brought countries’ cooperation with U.S. efforts to promote seafood exports to the fore and reinforced the authority of the Regional Fishery Councils (RCs). Specifically, foreign operators would have to operate within fishery quotas set by the Department of State based on fishery management plans and other items prepared by the RCs.

The PM Act and Breaux Act seemed to pit the benefits of Japan’s commercial whaling in the Antarctic against those of Japanese fishery in the American zone.

Enactment of a Canadian Governor General's Order on Fishery Zones

In June 1976, two months after the FCMA was enacted in the United States, the U.S.’s neighbors of Mexico and then Canada proclaimed 200-nautical-mile zones.

Canada already had a fisheries agreement for salmon

and other species with the United States. Consequently, it was clear that U.S.’s establishment of a 200-nautical-mile zone would generate a boundary problem between the two countries in the Atlantic and Pacific Oceans. Canada immediately resolved to not be left behind. In January 1977, two months before the American law came into effect, Canada established a 200-nautical-mile fishing zone under an order by the Canadian governor general (provided as a provisional measure for one year). It should be noted that Mexico set up a 200-nautical-mile exclusive fishing zone in July 1977.

In this way, the neighboring countries of the North American continent mutually agreed to 200-nautical-mile exclusive fishing zones even before consensus on the matter was reached at UNCLOS III. This trend toward establishing such zones in domestic laws ahead of international consensus led to the placement of major fishing grounds of the northern hemisphere under 200-nautical-mile zones within a short period of time.

Establishment of 200-Nautical-Mile Exclusive Fishing Zones by E.C. Countries

The American and Canadian declarations of exclusive fishing zones had an immediate effect on European Community countries. Major fishing grounds for E.C. fishing boats were the Norwegian coast and Atlantic coasts of the U.S. and Canada. Because Norway, the U.S., and Canada had each enacted domestic laws concerning 200-nautical-mile exclusive fishing zones between April 1976 and January 1977, the E.C. countries knew that they would be shut out of these fishing grounds in the future. Moreover, it was clear that Soviet fleets that were denied access to these areas would come rushing into E.C. coastal areas.

Seeking to counteract the three countries’ moves, E.C. members held an informal foreign ministers’ meeting in October 1976. There, they decided to establish a 200-nautical-mile exclusive fishing zone along the coasts of the North Sea and North Atlantic

Ocean beginning in January 1977.

Moreover, the E.C. nations demanded that unified fishery negotiations concerning operations in this zone by third-country fleets, such as those of the Soviet Union, take place premised on the zone's establishment. The Soviet Union initially refused the demand, as it did not recognize the E.C. as a political entity; however, in the end it agreed to enter negotiations.

Establishment of the Soviet Zone

Soviet deep-sea fishery was highly dependent upon American and E.C. waters. In American waters, the U.S.S.R. was in the same position as Japan in that it was subject to constraints under the FCMA. At the same time, however, it was being shut out of the E.C.'s 200-nautical-mile zone. Thus it was also forced to fundamentally rethink its fishery policy.

It began by signing a fisheries agreement with the United States in November 1976 whereby it recognized the U.S.'s right to manage fishery within the 200-nautical-mile zone. Then, almost immediately afterwards, the Presidium of the Supreme Soviet issued an order in December announcing the decision to provisionally establish a 200-nautical-mile exclusive fishing zone until the Convention on the Law of the Sea could be enacted. A Council of Ministers meeting in February 1977 decided to establish this zone on March 1, 1977, the same date as the American zone's establishment.

Enactment of Japan's Territorial Waters Act and Act on Temporary Measures Concerning Fishery Waters

At the second session of UNCLOS III, Japan announced its support for an international agreement setting 12-nautical-mile territorial waters. That was in 1974.

To address the issue of 200-nautical-mile fishery zones, a bill for amending the Territorial Waters Act and a draft of the Act on Temporary Measures Concerning Fishery Waters (the so-called

"200-nautical-mile fishery zone act") were submitted to the 80th National Diet. They were promulgated on May 2, 1977, and put into effect on July 1 of the same year.

Japan adhered to the basic principles of narrow territorial waters and freedom of the high seas, and thus it opposed attempts to expand territorial waters and establish 200-nautical-mile fishery zones. As the majority of opinions at UNCLOS III leaned toward 12-nautical-mile territorial waters and 200-nautical-mile fishing zones, Japan hardened its resolve not to set a 200-nautical-mile zone so long as there was no UNCLOS agreement. However, it eventually shifted its position from generally opposing such zones to recognizing fishery performance within them. The U.S. and U.S.S.R. had both set 200-nautical-mile zones, thereby putting pressure on Japan's north-sea fishery. Moreover, it became apparent that the Soviet Union would draw the line for its zone between Hokkaido and the four disputed Kuril Islands known in Japan as the "Northern Territories". Japan therefore began leaning toward establishing a 200-nautical-mile exclusive fishing zone along Japanese coasts, including the disputed Northern Territories, as a way of resisting the Soviet move.

Consequently, Japan became the 26th country in the world to establish a 200-nautical-mile fishing zone. It subsequently became generally necessary for foreign fishing boats to receive permission from the Ministry of Agriculture, Forestry and Fisheries if they wished to operate in Japan's 200-nautical-mile zone.

Thus, while maintaining its basic policy, Japan had provisionally decided to establish a 200-nautical-mile exclusive fishing zone as a response to fishing and territorial issues.

At the same time, however, Japan recognized that neither China nor South Korea had established a 200-nautical-mile zone. It therefore decided against establishing its own zone near these two countries in the Sea of Japan and East China Sea so as to maintain order in fishery activities.

2. Japan's Fishery Negotiations with Other Nations

Conclusion of a Japan-U.S. Fishery Agreement

The United States' FCMA stipulated that the U.S. could enter into "governing international fishery agreements" only with countries that recognized its exclusive fishery management right. Accordingly, Japanese fishing vessels would be banned from American waters if Japan did not recognize the U.S.'s right and sign an agreement before the FCMA's execution date.

However, at the time, the Japanese government was maintaining its basic stance of not recognizing any 200-nautical-mile zones laws without a UNCLOS consensus. Hence neither the first round of Japan-U.S. fishery negotiations (held in Washington in August 1976) nor the second (in Tokyo in November 1976) went smoothly. Meanwhile, however, more and more countries were setting 200-nautical-mile zones. It was becoming clear that no breakthrough could be achieved if Japan alone stuck to the conventional viewpoint.

At the third round of negotiations held in Washington in December, Japan wholly recognized the FCMA and accepted American right to set quotas, right to collect fishing fees, and jurisdiction. This led to the conclusion of a five-year Japan-U.S. fishery agreement that was in line with the FCMA. The agreement came into effect in November 1977. Thus, for the moment at least, Japan would have continued fishing access to American waters. This agreement expired in 1982 after a period of five years and was replaced by a second Japan-U.S. fishery agreement that came into force in January 1983. The agreement was subsequently renewed every two years.

Even though the first agreement had been based on the FCMA, which the U.S. enacted in April 1976, American fishing did not develop as expected and as a result legal restrictions became increasingly tighter. First, quotas were lowered after they became entangled in the whaling issue under the FCMA amendment of 1978. Then there were the 1980 Breaux Amendment (I), which included provisions for the phasing out of

foreign fishing over a five-year period, and the 1983 Breaux Amendment (II), which brought to the fore a "fish-and-chips" approach demanding cooperation with American fishery aims in exchange for quotas.

Conclusion of a Revised International Convention for the High Seas Fisheries of the Northern Pacific Ocean

For a quarter of a century, the International Convention for the High Seas Fisheries of the Northern Pacific Ocean signed by Japan, the U.S., and Canada had contributed to the development of fishing in the North Pacific Ocean. However, in February 1977, the U.S. declared that the convention was incompatible with the FCMA. It announced that it would scrap the current convention in one year and demanded that revisions be made before this time

Including a round of preliminary negotiations in August of 1977, it took five sessions to complete negotiations for the revised convention.

The negotiations focused on a number of problems, including 1) regions for operation by Japanese salmon and trout fishing boats, 2) control of high-seas areas outside the 200-nautical-mile zones, and 3) bycatches of marine mammals.

For problem 1), the following compromise was reached at the third round of negotiations in February 1978.

In waters where North American and Asian salmon and trout mingle, regulations will become correspondingly stricter in areas where the seasonal migration of North American fish is larger. On the other hand, some operation by Japanese fishing boats will be allowed within the U.S.'s 200-nautical-mile zone, even in areas populated by migrating North American salmon and trout.

The abstention line for salmon and trout will be moved 10 degrees west from the former convention to 175° east longitude. Even in areas west of the

abstention line, operational periods and numbers of operating vessels will be regulated for each sea zone noted in the convention's annex.

For items 2) and 3), agreements were reached at the fourth round of negotiations held in March and April 1978. In accordance with the convention, operation areas and seasons for Japanese mother ship-type salmon and trout fishery would become restricted in fishing grounds for migrating Alaskan salmon and trout of the western Bering Sea.

The work of revising the convention also included discussion of the problem of Dall's porpoise bycatches. The U.S.'s Marine Mammal Protection Act prohibited the unauthorized capture of marine mammals. However, Dall's porpoises live in the North Pacific Ocean in large numbers, and their accidental capture in drift nets for salmon and trout fishery was unavoidable. Here, the U.S. and Japan reached a compromise whereby unauthorized bycatches would be allowed for a period of three years. This compromise was clearly stated in an annex to the convention.

The revised International Convention for the High Seas Fisheries of the Northern Pacific Ocean did not come into effect until February 1979 due to domestic procedural delays in the U.S. and Canada.

Conclusion of a Provisional Japan–U.S.S.R. Fishery Agreement and Provisional U.S.S.R.–Japan Fishery Agreement

The Soviet Union's decision to establish a 200-nautical-mile exclusive fishing zone in February 1977 was keenly felt by Japan's fishery industry. The zone was an area in which Japanese had long engaged in north-sea fishery. Moreover, the date of the zone's establishment—March 1—was soon approaching. The Japanese government hastily approached the U.S.S.R. with a request for negotiations that led to the beginning of talks between Japanese Agricultural Minister Suzuki and Soviet Fisheries Minister Ishkov in Moscow on February 28.

Although the negotiations did not proceed

smoothly due to the two sides' conflicting viewpoints, they did confirm a basic framework that allowed mutual fishing with mutual exercise of 200-nautical-mile zone rights. The two ministers exchanged a letter detailing short-term measures, thus securing Japanese operations within the Soviet 200-nautical-mile zone during March (however, it was decided that Japanese fishing boats would not fish for salmon, trout, or Pacific herring). It was further decided that negotiations would begin on March 15, and that a provisional agreement would be reached on Japanese operating conditions and methods in Soviet waters by April 1.

A major point of contention between the two sides was the Northern Territories dispute. The Soviet Union demanded that Japan recognize a 200-nautical-mile management right that included waters around the Northern Territories; this was a demand that the Soviet side had not made theretofore. Another point was a Soviet request to operate within Japan's 12-nautical-mile territorial waters based on the principle of mutual fishing. Around this time, Soviet operations in waters near Japan were reaching an intolerable level, and protests from coastal fishermen were becoming more and more intense each day.

Because Japan was being forced to choose between the Northern Territories dispute and fishing, the negotiations failed to produce an agreement and were thus discontinued on March 31. Japan thus had no choice but to withdraw all of its fishing boats from the U.S.S.R.'s 200-nautical-mile fishing zone. Entering April, Japan separately sent Special Emissary Sonoda and Agricultural Minister Suzuki to the U.S.S.R. to continue talking; however, these efforts also failed to bring an agreement and negotiations stalled once again.

Negotiations did not restart until after May 2, when Japan's Territorial Waters Act and Act on Temporary Measures Concerning Fishery Waters were enacted. Japan approached the negotiations with the hope of reaching an agreement whereby, in exchange for Japan's recognition that the Northern Territories were part of the Soviet zone, the U.S.S.R. would recognize that

they were also part of Japan's zone. Although the Soviet Union initially opposed this idea, it eventually led to an agreement to proceed by separating the territorial dispute from the fishery issue. The result was the signing of a provisional Japan–U.S.S.R. agreement on May 27. It should be noted, however, that this was a single-year agreement that came into effect on June 10 and expired at the end of the year.

Under the agreement, Japan's total fishing quota within the Soviet 200-nautical-mile zone in 1977 (beginning in June) was 455,000 tons, which marked a steep drop of 36% compared to the actual catch of the same period of the previous year. The agreement did not allow fishing for salmon, trout, and Pacific herring, and it significantly cut quotas for Alaska pollack and flounder. Moreover, a "window frame" method was employed whereby operations were restricted to seven sea areas, with all other areas remaining off-limits. Fishing quotas were subdivided for specific species in each sea area. And the number of permitted vessels was lowered to 6,335, or more than 100 fewer than had operated the previous year, which delivered a serious blow to north-sea fishery. Eying the situation with alarm, the Japanese government hammered out a basic policy to provide relief measures to cover the loss in vessel numbers. The policy was passed by the Cabinet on June 21.

On the other hand, negotiations to determine operations by Soviet fishing boats in Japan's 200-nautical-mile fishing zone—in other words, a provisional U.S.S.R.–Japan fishery agreement—began on June 30, 1977. These talks resulted in a total Soviet quota beginning in July 1977 of 335,000 tons, and set two sea areas where Soviet fishing boats had previous operational experience as fishing areas. They also established regulations on prohibited areas and seasons based on Japanese domestic regulations and self-imposed regulations of the fishery industry. The provisional U.S.S.R.–Japan fishery agreement was signed on August 4.

Japan pursued talks to make both the provisional Japan–Soviet and Soviet–Japan agreements long-term

deals valid for five years or three years. However, the Soviet side did not respond favorably, and thus the agreements were finalized at the single-year level. Accordingly, in their protocols it was agreed that extensions would be single-year extensions of the 1977 agreements.

At Japan–Soviet and Soviet–Japan agreement negotiations held the next year, 1978, the U.S.S.R. strongly insisted on equality of fishing quotas. Thus, when Japan proposed setting the U.S.S.R.'s quota for Japan at 700,000 tons and Japan's quota for the U.S.S.R. at 378,000 tons, the U.S.S.R. countered by demanding that the quota for the U.S.S.R. be raised to 700,000 tons. It moreover took a hard-line stance by saying that if Japan refused to accept this demand, the U.S.S.R. would lower its quota to Japan. Eventually, talks concluded with a quota for Japan of 850,000 tons and a quota for the U.S.S.R. of 650,000 tons. Negotiations were similarly rocky the following year (1979), again due to Soviet demands for equality. However, an agreement was ultimately reached by setting a quota for Japan of 750,000 tons and a quota for the U.S.S.R. of 650,000 tons.

The 1979 quotas for both sides remained unchanged until the 1983 fishing season. However, Soviet fishing was not performing well vis-à-vis its quotas. This led the U.S.S.R. to demand relaxed conditions against Soviet operations in Japanese waters or stronger regulations against Japanese operations in Soviet waters. Eventually, in 1987, a charged quota system was added to the traditional charge-free quota system in Soviet waters.

Conclusion of a Japan–U.S.S.R. Fishery Cooperation Agreement

On April 29, 1977 (the year the Soviet Union decided to establish a 200-nautical-mile fishing zone), the U.S.S.R. notified Japan on April 29 that would scrap the Japan–U.S.S.R. Fisheries Convention that had been in effect until then. On top of the convention's scheduled expiration expire one year later (April 28,

1978), the U.S.S.R. noted the need for a new Japan–U.S.S.R. agreement for salmon and trout fishery in the era of 200-nautical-mile zones.

Japan–U.S.S.R. negotiations that ran from September until April the following year became entangled in discussions surrounding offshore harvests. The Soviet Union strongly asserted that Japan should abstain from offshore harvests of salmon and trout. Japan countered forcefully by arguing that offshore harvests were not prohibited under the integrated draft of the U.N. Convention on the Law of the Sea, and that the actual catches of harvesting countries are in line with respected regulations. The talks faced extremely tough going, as neither side budged from its position. However, a Japanese proposal to cover a portion of the costs for renewed Soviet salmon and trout production proved successful in finally moving the talks toward a signed Japan–U.S.S.R. fishery cooperation agreement.

The Japan–U.S.S.R. fishery cooperation agreement stipulated that both sides would cooperate in conserving and rationally utilizing fishery resources (including anadromous species) in waters outside their 200-nautical-mile zones originating from their northwestern Pacific Ocean coastlines. It further included provisions calling for the yearly preparation of concrete measures to be based on the agreement that would be finalized through the signing of Japan–U.S.S.R. protocols. The agreement was concluded on April 23, 1978. It had a five-year term of validity and included provisions allowing automatic extension.

The two sides also opposed each other in subsequent talks on protocol content, as they approached the table from completely opposite viewpoints. The Soviet Union demanded that Japan accept drastically reduced quotas and expanded no-take zones while also covering a portion of the expense needed to maintain and expand Soviet salmon and trout resources. The restricted fishing zones in particular dealt a serious blow to Japan's salmon and trout fishery. The final proposed agreement set Japan's quota at 42,500 tons, opened up from the Soviet proposal (a triangular

no-take zone surrounded by 44° north latitude, 175° east longitude, and the outer edge of the American and Soviet 200-nautical-mile zones) the area east of 170° east longitude as Japan's fishing area, and established that Japan would provide the equivalent of 1.76 million yen in actual goods to the Soviet side as fishery cooperation expense.

Under such circumstances, Japan was forced to scale back its salmon and trout fishery due to drastically reduced catches, greater restrictions on fishing zones, and the burden of paying fishery cooperation expenses.

Fishery Relations with China

Negotiations toward an intergovernmental fishery agreement with the People's Republic of China began in 1973, the year following restoration of Japan–China diplomatic relations. These talks bore fruit with the signing of a three-year agreement in August 1975.

The era of the 200-nautical-mile exclusive fishing zone arrived during the agreement's term of effect. As the international trend toward partitioning sea areas gained momentum, Japan became wary of how China might react when the agreement expired in December 1978. However, China made no mention of any desire to establish a 200-nautical-mile zone during negotiations for a new agreement. Rather, China's position was that the agreement could be automatically extended if Japan agreed to modify an annex to strengthen regulatory measures. Japan and China subsequently reexamined the measures and agreed to modify the annex. And the agreement was automatically renewed as a result.

Specifically, the reinforced regulatory measures included extended suspended fishing zone periods for motorized bottom trawl fishery, expansion and new establishment of protected zones and stronger restrictions on vessel numbers, and yearly provision of a list of Japanese fishing vessels operating within horsepower-regulation zones and notification of their fishing locations from Japan to China. This Japan–China

fishery agreement remained in effect until a new agreement was signed in 1997.

Fishery Relations with South Korea

Japan's fishery relations with the Republic of Korea had continued smoothly and uneventfully since the Japan–South Korea fishery pact's signing in 1965. However, the arrival of the era of 200-nautical-mile zones brought unexpected trouble.

Many South Korean large trawlers operated on the high seas of the North Pacific Ocean. However, these trawlers were shut out of their fishing grounds when the Soviet Union enforcing its 200-nautical-mile fishing zone. They responded by moving south in great numbers to the seas around Hokkaido, which were prime fishing grounds for Alaska pollack and other species. This development caused not only overfishing but also major safety concerns, as it led to incidents of damaged equipment on Japanese fishing boats and hit-and-run accidents. Japan had excluded South Korean fishing boats from its Act on Temporary Measures Concerning Fishery Waters. Consequently, from the South Korean boats' standpoint, all areas outside of Japan's 12-nautical-mile territorial waters were international waters. Emboldened by this view, South Korean fishing boats pressed on with operations near Hokkaido.

Japan filed a complaint with South Korea that resulted in an October 1978 conference between the

two countries' fisheries agencies. However, South Korea maintained that its boats were acting in accordance with the "principle of freedom of the seas", and thus the conference produced no clear path to resolution. Meanwhile, there were of course increasingly louder calls in Japan for the fishery waters act to be applied to South Korea as well.

A major breakthrough toward resolving the problem came early in early 1980.

The two sides' repeated discussions generated a growing desire to resolve the problem not just in terms of the Hokkaido situation but also in the overall interest of Japan–South Korea fishery relations. Specifically, a "package" was proposed that would combine self-imposed regulations on operations by South Korean fishing boats near Hokkaido with measures to establish suspended fishing zones for Japanese west-water trawling boats near Jeju Island. This proposal was agreed upon by the Japanese and South Korean fisheries commissioners in October 1980. Although the agreement caused some mutual dissatisfaction among Hokkaido fishery workers and west-water trawling workers, it was the only available way forward to break the stalemate.

Subsequently, suspended fishery zones were established for west water trawling boats near Jeju Island, and the number of such boats was reduced by 60. The Japanese government provided operators with subsidies worth approximately 1.7 billion yen to help them cope with these changes.

Chapter 2: Nippon Suisan Phases Out its Fishing Business

1977–1985

Part 1 Shrinking Deep-Sea Fishery by Japan and Nippon Suisan

1. Shifting from Commercial Whaling to Scientific Whaling

In the summer of 1982, the 34th meeting of the International Whaling Commission (IWC) passed a resolution calling for a complete moratorium on commercial whaling after three years. The resolution included the condition that a comprehensive resources evaluation would be conducted by 1990, and that later whaling quotas would be set based on the results. The Food and Agriculture Organization of the United Nations (FAO) criticized the moratorium, saying that it had absolutely no scientific validity. In accordance with rights guaranteed it as a signatory of the International Convention for the Regulation of Whaling, the Japanese government submitted an objection to the moratorium in November of 1982. In it, Japan claimed that the IWC's decision lacked scientific basis and was not in line with the objectives and purpose of the convention.

The United States, feeling intensifying domestic antipathy to whaling, asked Japan to comply with the moratorium, saying that if Japan refused to accept the IWC's decision, Washington would have no choice but to lower its fishing allowances to Japan based on U.S. law. In response, the Japanese government noted during Japan–U.S. whaling discussions that its “objection did not necessarily mean that Japan would continue whaling after three years”. This comment allowed Japan to avoid reductions in its trawling and bottom trawl fishery quotas.

In February 1983, the two countries began Japan–U.S. whaling discussions to address the problem.

During these talks, the U.S. maintained its stance that it would use fishing allowances to slap sanctions against Japanese whaling. After undergoing a period of tough negotiations, the two sides finally reached an accord on November 14, 1984. Details were as follows: 1) During the whaling seasons of 1984 and 1985, Japan would be allowed to match its 1983 catch of 400 sperm whales in waters close to Japan. 2) During the two years of 1986 and 1987, the United States would not lower Japanese fishing allowances in retaliation against Antarctic whaling by Japan. 3) Japan would withdraw its objection to the IWC concerning the shelving of sperm whale quotas by December 31. And 4) Japan would stop sperm whale whaling by 1988.

An American anti-whaling group that consistently supported the moratorium filed suit against the U.S. Secretary of Commerce and Secretary of State, who had jointly led negotiations from the U.S. side, demanding that the new Japan–U.S. Whaling Accord be scrapped. What the group objected to was the two-year delay in the moratorium's implementation from 1985 to 1987. Fearing that this international agreement between the U.S. and Japan would become contested in U.S. courts, the Japan Fisheries Association and Japan Whaling Association took intervening legal action by stating Japan's basic stance vis-à-vis whaling and asserting the moratorium's inconsistency with the International Convention for the Regulation of Whaling. Ultimately, while both the district court

and high court ruled in favor of the case's plaintiffs, the U.S. Supreme Court overturned these rulings to rule in favor of the defendants.

The result of the above-mentioned developments was cessation of Antarctic whaling by Japan in April 1987. The final whaling expedition was conducted by the mother ship *Nisshin Maru No.3* and four whalers. It caught 1,941 minke whales and produced 596 tons of whale oil and 9,949 tons of frozen food products. Moreover, in March of the following year, Japan also terminated large- and small-scale coastal whaling (excluding that for Baird's beaked whales and other small whales).

With the end of commercial whaling, Japan began random sampling surveys based on the International Convention for the Regulation of Whaling. It started by capturing 300 minke whales in a preliminary survey

during the 1987/88 fishing season in order to gather data that commercial whaling could not provide. With the start of scientific whaling, a cetacean research laboratory within the Japan Whaling Association was given independent status with the government's blessing and launched as the Institute of Cetacean Research on October 30, 1987. The body charged with actual capture of whales was Kyodo Senpaku K.K., a company that was established on November 5, 1987. Purposes of the surveys included stock management and gathering of biological data. It should be noted that the IWC adopted a nonbinding resolution demanding that Japan reconsider and stop its scientific whaling program. Nonetheless, Japan commenced full-scale surveys beginning from the program's third year.

2. Withdrawal from Mother Ship-Type Crab Fishery

The provisional Japan–U.S.S.R. fishery agreement that was signed in 1977 greatly restricted operations by Japanese fishing boats in the Soviet Union's 200-nautical-mile zone. The impact on crab fishery was severe, as quotas under the agreement fell steeply to around 60% of actual catches in the year prior to the agreement. At the same time, fishing for blue king crab near eastern Sakhalin, snow crab in the Olyutor Peninsula and Navarin Canyon area, and king crab and horsehair crab in the southern Kuril Islands was now prohibited. This forced a dramatic reduction in the number of crab fishing boats from 124 in the previous year to 78.

With 200-nautical-mile regulations coming into effect in 1977, discussion held based on stipulations of the Japan–U.S.S.R. Crab Fishery Agreement (which began on February 6, 1969) were concluded under the new name "Japan–U.S.S.R. Crab Agreement". The new agreement was valid for one year and would be subject to discussions held in Moscow in each subsequent year. In the seventh Japan–U.S.S.R./U.S.S.R.–Japan crab and whelk talks of 1975, the Soviet Union

announced it would completely close king crab fishery off of Kamchatka's west coast, which was something it had been pushing for two years. Japan agreed to accept this in exchange for larger crab quotas in other sea areas. As a result of this compromise Japan's crab fishery off of western Kamchatka switched from king crab to golden king crab. During this first year of the era of 200-nautical-mile exclusive fishing zones, Japan's operations were not so unlike those in past years. However, the situation would change radically the following year.

Nippon Suisan had been fishing for golden king crab in this area with Hokoku Suisan's mother ship *Eiho Maru*. However, it was forced to shorten its fishing season there amid falling numbers of Japanese fishing boats resulting from the smaller quotas as well as lower efficiency caused in part by frequent Soviet inspection visits.

Given the challenges these circumstances presented, Japan's fishery operators searched for ways to overcome and survive. Here, they began negotiations toward forming partnerships with Soviet fishing interests that

would exist outside the bounds of intergovernmental agreements. Some of these partnerships would include technical cooperation in crab fishery. The Japanese government also stepped in to actively support such initiatives. As a result, between April and July 1979, contracts for seven partnerships were signed by fishing interests in both countries. Among them, those concerned with crab focused on snow crab in the Olyutor Peninsula and Navarin Canyon area as well as horse-hair crab and snow crab off of western Kamchatka. These partnerships continued thereafter; however, they generally operated at a loss due to high contributions paid by the Japan side to the Soviet side and low fish prices among other factors.

It deserves noting that 1995 marked the end of Japan's golden king crab fishery within the Soviet Union's 200-nautical-mile zone. Following the *Eiho Maru*, Nippon Suisan Group-affiliated operations involved the *Hokko Maru No.177* from 1988 to 1993 and the *Shinryu Maru No.8* in 1994. It then closed the curtain on its crab fishery with operations by the *Shinko Maru No.11* in 1995.

Japan's crab fishery faced a similarly tough challenge in American waters. The Japan-U.S. King Crab Agreement expired the same year that the U.S. established its 200-nautical-mile exclusive fishing zone in 1976. The Japan-U.S. Fishery Agreement that came into effect in November 1977 lumped crab in with other species and instituted new regulations necessitating payment of fishing fees by Japanese fishing boats in the American fishing zone and operation within set quotas. It also lowered the king crab allowance for the eastern Bering Sea to zero in 1977.

On the other hand, Japan was the only foreign country permitted to engage in snow crab fishery in the east Bering Sea. Notwithstanding the fact that



Keiko Maru engaged in mother ship-type crab fishery in Bristol Bay, U.S.A., between 1966 and 1980.

Japanese operations were limited to a species that the U.S. did not target and to coastal areas in which American boats did not operate, Japan was able to secure comparatively stable allowances even after 1977. However, excessive investments by U.S. crab operators seeking to expand their yields resulted in overharvesting that caused financial hardship among them. This and other factors led to growing demands for the elimination of foreign snow crab fishery and a proposal to set the TALFF at zero. Japan quickly urged the United States to maintain and preserve snow crab fishery. There were even some within the U.S. who argued that setting the TALFF at zero was illegal given the existence of bountiful snow crab resources that the U.S. could not fully exploit. Nonetheless, an economists' report explaining that a zero TALFF would increase snow crab exports to Japan became the basis upon which Japanese crab fishery in American waters, including the eastern Bering Sea, ended in 1980.

Nippon Suisan had been conducting snow crab fishery in the eastern Bering Sea by sending out a fleet centered on the *Keiko Maru* through a four-company arrangement together with Hokoku Suisan, Kyokuyo, and Hokuyo Suisan. However, this operation came to an end in 1980.

3. Withdrawal from Mother Ship-Type Salmon and Trout Fishery

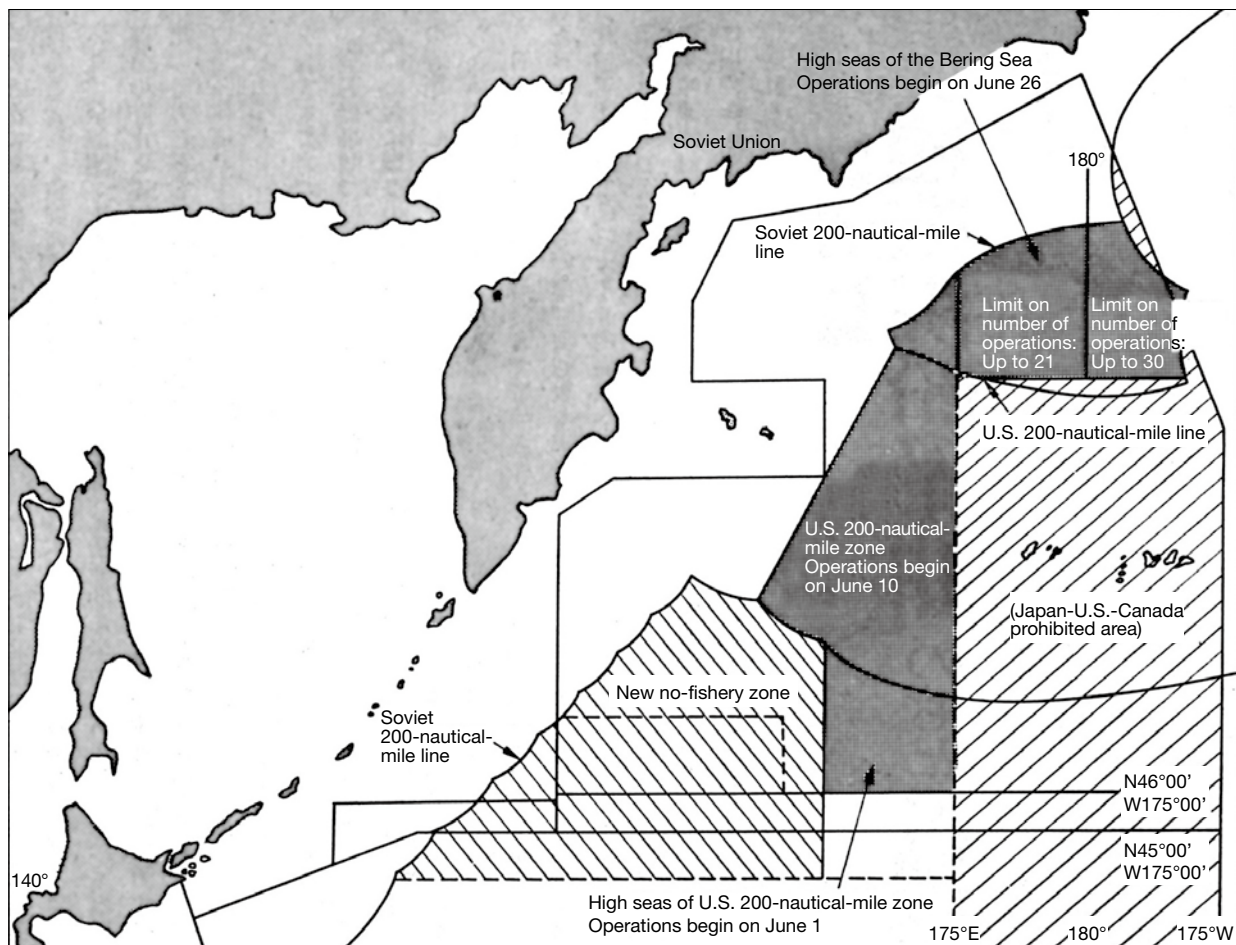
The Bering Sea, Sea of Okhotsk, and other North Pacific fishing grounds had bountiful stocks of salmon and trout, Alaska pollack, and other species. The

majority of these fishing grounds were located within the 200-nautical-mile zones of the U.S. and U.S.S.R. As the world entered the era of the 200-nautical-mile

zone, these two countries wasted no time in expanding the sea areas under their jurisdictions. And this of course necessitated new fishery frameworks between them and Japan, a nation that was highly dependent upon the North Pacific fishing grounds.

In February 1977, the United States issued notice that it was scrapping the International Convention for the High Seas Fisheries of the Northern Pacific Ocean because it conflicted with its FCMA (i.e., its 200-nautical-mile exclusive fishing zone law). The convention thus expired in February 1978. To replace it, a new International Convention for the High Seas Fisheries of the Northern Pacific Ocean was put into effect in February 1979. The U.S.'s original intention was to possess exclusive control over all migratory areas of salmon and trout originating in the U.S. (excluding the territories and fishing zones of other countries) and issue fishing allowances to foreign countries when excess stocks existed. It intended to

do this while simultaneously maintaining the stipulations of the FCMA. In effect, however, what the U.S. meant was that it would not issue any salmon and trout allowances because excess stocks did not actually exist. Japan opposed the U.S.'s claim to exclusive control as the state of origin, citing the UNCLOS consensus that even when exercising primary interest in and responsibility for anadromous species as the state of origin, a state must give consideration to minimize economic dislocation in states whose nationals have habitually fished in the area. Although the U.S. and Japan held diametrically opposite positions, they ultimately agreed that, while the FCMA's regulations would remain in effect, Japan would be allowed to engage in some operations within the U.S.'s 200-nautical-mile zone, even in migratory areas for North American salmon and trout. Even with this concession, however, Japan's mother ship-type salmon and trout fishery in fishing grounds for migratory Alaskan



Mother ship-type salmon/trout fishing zones for fiscal 1978 *Nissui Koho*, October 1978

salmon and trout of the western Bering Sea would be restricted in terms of fishing area and season.

In addition, the Soviet Union similarly used its setting of a 200-nautical-mile fishing zone to place tough restrictions on Japan. It completely banned salmon and trout fishery in its 200-nautical-mile zone and lowered allowances even on the high seas, citing the “state of origin” principle. Furthermore, in 1988 Moscow demanded that Japan end its high-seas salmon and trout fishery by 1992. The U.S.S.R. was joining with the U.S. and Canada in holding firmly to the state of origin principle, and thus 1991 marked the end of Japan’s high-seas salmon and trout fishery.

Tightening restrictions against Japan did not stop there. In the U.S., indigenous Alaskans and environmental protection groups grew louder in their demand that Japan phase out its mother ship-type salmon and trout fishery with each passing year. On March 8, 1986, unofficial talks on salmon and trout between Japan and the U.S. produced an agreement whereby Japan would gradually scale back its mother ship operations in international waters of the Bering Sea west of 180° east longitude, with the goal of terminating such operations in 1988, and stop operations east of 180°

east longitude by 1994. At the same time, however, bycatches of fur seals and dolphins in salmon and trout drift nets had spurred American environmentalists and others to file a lawsuit demanding the suspension of salmon and trout fishery under the Marine Mammal Protection Act. A U.S. court of appeals ruled in favor of the plaintiffs on May 11, 1988, and the U.S. Supreme Court upheld the ruling in June of the same year. Consequently, Japan became unable to continue mother ship-type salmon and trout fishery, regardless of any outcomes of Japan–U.S. fishery talks.

Operational circumstances for Japan’s fishery companies became increasingly severe during this time, as companies became subject to intensifying regulation and were obliged to pay stiff fishery contributions to the Soviet Union. Until 1977, the Nippon Suisan Group engaged in joint operations with Hokoku Suisan using a single fleet centered on the *Nojima Maru*. These operations were expanded to a three-company arrangement by adding Kyokuyo in 1978. However, the Nippon Suisan Group’s operations effectively ended in 1987. Japan’s mother ship-type salmon and trout expeditions drew to a close in 1988.

4. Withdrawal from Mother Ship-Type Trawl Fishery

Beginning of Offshore Purchases from American Vessels

In 1977 (after the FCMA’s enactment), the U.S.’s fishing allowance to Japan stood at 1.191 million tons. This compared to 1.30 million tons in estimated actual harvest the previous year. The allowance remained stable in subsequent years, standing at 1,158 million tons in 1978, 1,160 million tons in 1979, 1,160 million tons in 1980, 1,390 million tons in 1981, and 1,350 million tons in 1982.

Of the 1977 allowance, the quota for Alaska pollack was 836,400 tons, which was broken down to 792,300 tons in the Bering Sea and Aleutian Islands area and 44,100 tons in the Gulf of Alaska. The allowance

remained largely the same in 1978.

With the FCMA’s introduction, crab fishery operators in Seattle borrowed from a fisheries promotion fund to build and operate a large number of fishing boats. However, this led to overfishing that caused crab stocks to dry up, which in turn forced many operators toward bankruptcy. During Japan–U.S. seafood trade meeting in July 1980, the U.S. government proposed a countermeasure that would have American operators harvest underutilized Alaska pollack stocks and then have Japanese processing ships purchase the harvests at sea. Fearing negative effects on its fishing allowances, Japan accepted this proposal. Thus, beginning in 1981, Japan commenced ship-to-ship purchases of 11,400 tons as an import allowance.



Offshore purchasing by a trawler

This was the beginning of so-called “offshore purchasing” (as a joint venture).

At a Japan–U.S. seafood trade meeting in June 1981, the U.S. pressed Japan to expand its offshore purchases of Alaska pollack in 1982 to 200,000 ton or even 400,000 tons. However, when Japan countered that suddenly expanding purchases would generate a variety of problems, the two sides settled on 60,000 tons. In the following year’s talks, they agreed to raise purchases to 120,000 tons between June of that year and May 1983, and then to 200,000 tons over the course of the following one year. That year, the first private-sector meeting on offshore purchases was held between the U.S. and Japan. Until 1986, such Japan–U.S. inter-industry meeting provided a venue for Japanese fishery operators to voice their opinions concerning the setting of offshore purchase amounts and U.S. fishing allowances to Japan.

Tightening Regulations under the “Fish-and-Chips” Policy

The U.S. announced that, beginning in January 1982, it would determine fishing allowances to Japan based on Japan’s cooperation with efforts to promote the American fishery industry—in other words, on Japan’s offshore purchases and American seafood imports. This forced Japan to accept the U.S.’s demand to greatly expand its offshore purchases of Alaska pollack. Behind this policy was a stipulation in the Breaux Act stating that “the degree to which a company obstructs U.S. seafood imports will be an item for consideration when setting country-specific allowances”. Known as



U.S. fishing boat supplying unprocessed fish to a Japanese vessel

the “fish-and-chips” policy, it led to Japan’s making yearly concessions in terms of its offshore purchases of Alaska pollack and other species. At the same time, however, U.S. fishing allowances to Japan were cut down to one-tenth their original size during a 10-year period. Despite originally cooperating with the offshore purchasing scheme in order to receive higher allowances, Japan was in fact seeing smaller allowances due to increasing harvests by American fishing boats combined with stronger processing capabilities in the U.S. Forced to dramatically shorten its operating season in line with its shrinking allowances, Japan brought a *surimi* mother ship into offshore purchasing (which until then had employed *surimi* trawlers) in 1987. What this meant was that work typically handled by mother ship-affiliated independent fishing boats from Japan was now being undertaken by American fishing boats. In the end, this turned out to be the last year in which Japan engaged in mother ship-type trawl fishery.

Then, 1988, Japan’s allowance was finally reduced to zero. Offshore purchasing amounts had also fallen due to growing yields by American fishery operators, and by now Japanese fishery companies had shifted to local product production. The offshore purchase amount for Alaska pollack fell to zero in 1990, followed by that for flounder in 1991. Thus ended the offshore purchasing scheme in the Bering Sea and Gulf of Alaska.

Expansion of Nippon Suisan's Offshore Purchasing and End of its Mother Ship-Type Trawl Fishery

Mother ship-type trawl fishery was one of Nippon Suisan's key businesses. However, when the U.S. lowered its fishing allowances to Japan, the company was forced to adjust the scale of its fishing to match. It therefore focused on securing profit while raising operational efficiency. In 1977, Nippon Suisan's mother ship-type trawl operations in the Bering Sea were allotted a quota of 310,783 tons of unprocessed fish. That year the company operated three fleets centered on the *Mineshima Maru*, *Shikishima Maru*, and *Kashima Maru*. It continued operating these three fleets in later years and successfully posted favorable results even amid declining quotas.

Meanwhile, Nippon Suisan also focused its attention on offshore purchasing, as purchasing helped secure allowances for Japan in the U.S.'s 200-nautical-mile zone and alleviate U.S.–Japan trade friction. In June 1981, Nippon Suisan's trawler *Kongo Maru* began offshore purchasing and processing *surimi* and meal. Again, in 1982, the company purchased 20,000 tons. Understanding the necessity for offshore purchasing for its influence on Japanese fishing allowances, Nippon Suisan continued to expand the size of its purchasing in subsequent years.

Accordingly, Nippon Suisan assigned three trawlers to offshore purchasing in 1982. These trawlers purchased 46,711 tons of Alaska pollack. The company then sequentially raised its purchases by sending out four trawlers to purchase 91,189 tons in 1983, five trawlers to purchase 145,000 tons in 1984, and six trawlers to purchase 167,000 tons in 1985. The next year, 1986, it added the *Miyajima Maru*, *Mineshima Maru*, and *Kashima Maru* to the trawlers and made a combined purchase of 262,000 tons. Thus, at a time when harvests were being squeezed by the setting of 200-nautical-mile fishing zones worldwide, Nippon Suisan's fishing business was being supported by offshore purchases.

However, contrary to Nippon Suisan's original

hope, the U.S.'s fishing allowances to Japan decreased in inverse proportion to expanding offshore purchases. That year, Nippon Suisan's mother ship-type trawl fishery quota in the Bering Sea was 101,255 tons, or roughly half of the previous year's quota. The company responded by scaling down to two fleets, one each centered on the *Mineshima Maru* and *Kashima Maru*. Then, the next year, 1987, its bottom trawl fishery quota fell to zero. Until then, Nippon Suisan had managed to make up for declining quotas with offshore purchases. However, in 1987 its purchases totaled approximately 225,000 tons, which was below the figure from the previous year.

The appearance of 200-nautical-mile fishing zones around the world initially signaled an uncertain future for Nippon Suisan's fishing business. Just then, however, offshore purchasing stepped in to contribute significantly to improved earnings. By focusing simultaneously on offshore purchasing and greater operational efficiency, Nippon Suisan successfully achieved strong performance until the mid-1980s. And it was because of this that the loss of offshore purchasing, combined with coincidentally poor performance in its fishing operations, caused Nippon Suisan's earnings to nosedive.

Shrinking High-Seas Fishery

With its operations being squeezed by overseas 200-nautical-mile zones, Nippon Suisan shifted to midwater trawling for Alaska pollack in international waters of the Bering Sea and drift-netting for neon flying squid in the North Pacific. Although Nippon Suisan's high-seas harvest in 1978 was no more than 400,000 tons, this figure doubled in 1985 and then quadrupled to 1.63 million tons in 1988. In fact, this last figure was equivalent 13% of total production and 73% of Nippon Suisan's deep-sea fishery catch.

Japanese fishing boats were not the only ones working in the Bering Sea, as South Korean, Chinese, Polish, and Soviet fishing boats were also present. These boats were taking in rapidly growing harvests,

particularly of Alaska pollack. Around this time (in January 1988), illegal fishing by Japanese boats was discovered within the U.S. 200-nautical-mile zone, near international waters of the Bering Sea, which added fuel to calls to stop high-seas operations. At the same time, the U.S. and U.S.S.R., seeing the rapid depletion of fish stocks in international waters, became concerned about negative impacts on stocks within their 200-nautical-mile zones. This concern led them to insist on a total fishing ban on Alaska pollack in international waters of the Bering Sea in 1992. Also around this time, a second preparatory meeting for the U.N. Conference on Environment and Development held in March 1991 included discussion on high-seas fishery regulations. Moreover, at a fifth conference of nations concerned with high-seas fishery in the Bering Sea that was held in 1992, participating countries agreed to voluntarily halt fishing on a temporary basis for two years (1993 and 1993), thereby effectively ending high-seas operations. Following this, a study on high-seas fishery in the Bering Sea was conducted through a six-party conference and led to execution of the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CCBSP) in December 1995.

Furthermore, high-seas drift-net fishing for neon flying squid by Japanese boats generated growing international concern for drying up stocks while

also inadvertently catching salmon and trout, marine mammals, and seabirds. Such concern spurred the U.S. Congress to enact the High Seas Driftnet Fisheries Enforcement Act in 1987. Following this, the 46th U.N. General Assembly unanimously adopted a new resolution that included a moratorium on high-seas drift-net fishery at the end of 1992.

Shrinking Fishery in Soviet Waters

In annual talks on fishing quotas that took place following the signing of provisional Japan–U.S.S.R./U.S.S.R.–Japan fishery agreements, the Soviet Union insisted that Japan's quotas should be lowered based on the principle of equality. This position led to a yearly decline in Japan's quota for Alaska pollack. Japan attempted to increase its quota for Alaska pollack in Soviet waters by raising its allowances for Japanese pilchard and mackerel, which were species the Soviet Union most desired, in Japanese waters.

However, while Soviet quotas of Japanese pilchard and mackerel rose, Japan's quota for Alaska pollack failed to recover, falling from 345,000 tons in 1978 to 300,000 tons in 1979, and then further to 290,000 tons in 1980 to 82.

In 1986, 100,000 tons of Japan's 200,000-ton fishing quota were subject to fees. Subsequent yields gradually declined, reaching 100,000 in 1994.

5. Trends in Southern Trawling

Tighter Regulations in U.S. East Coast Fishing Grounds

Prior to the FCMA's enactment, Nippon Suisan had exported spear squid it caught in fishing grounds of the American east coast to Europe as its main direct-sales product.

When the FCMA came into effect in 1977, the U.S.'s allowance to Japan was set at 4,810 tons of Argentine shortfin squid, 16,930 tons of spear squid, 3,300 tons of butterfish, and 7,000 tons of other

species for a total of 32,040 tons. The area in which Japan was permitted to operate was a long strip running north-south along the edge of the continental shelf off the coast of New York. Freedom to operate there was heavily restricted; for example, operating periods were established for each subzone within the area, and prior notification was required whenever vessels moved from one subzone to another. The fishing ground was prone to trouble between U.S. and Japanese operators, as many American operators set up fishing equipment there, and this equipment

frequently became entangled with or damaged by the equipment of Japanese trawlers.

Japanese trawlers often creatively adjusted their travel periods by utilizing this fishing ground together with adjacent grounds off the coast of Canada.

In 1986, Japan was allowed a catch of 850 tons (250 tons of silver hake, 50 tons of red hake, 50 tons of river herring, and 500 tons of other species) before this fishing ground was closed. In preparation for this closure, Nippon Suisan had entered into a joint venture with an American operator to catch spear squid and Argentine shortfin squid; however, it withdrew from this venture in 1987.

Regulations by South Africa and Withdrawal from South African Waters

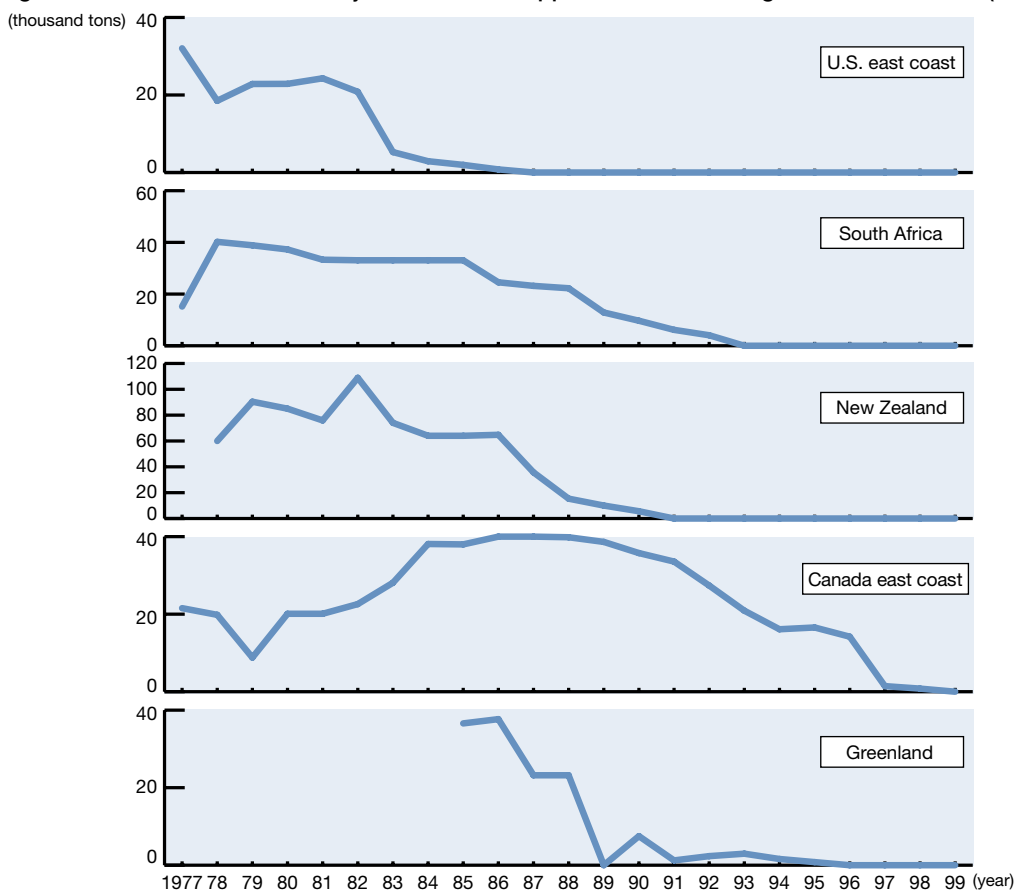
In the 1970s, Japan responded to U.N. resolutions condemning the Republic of South Africa's apartheid policy by stopping all economic assistance to South

Africa and posting only a consul general rather than an ambassador. Japan's Ministry of Foreign Affairs was acting with extreme caution vis-à-vis South Africa, as the signing of intergovernmental agreements with it and dispatches of government delegations to it could anger African nations and spark an international problem.

However, in November 1, 1977, South Africa notified fishing countries that if they did not enter into a fishery agreement with it by November 1, 1977, they would not be able to operate in South Africa's 200-nautical-mile zone. This put Japan in a serious bind, as the area was a highly important fishing ground for it.

The Fisheries Agency was persistent in urging the Ministry of Foreign Affairs to move forward with the negotiations needed for such an agreement. This perseverance paid off when Shun-ichi Okuchi, vice president of Nippon Suisan, was suddenly dispatched to South Africa to begin fishery negotiations in October

Changes in catch allotments from major countries in Nippon Suisan's trawling in southern oceans (1977 to 1999)



1977. At the time, only a few days remained until a decision would be required on whether or not to withdraw Japanese fishing boats that were already operating off the coast of Cape Town. Okuchi entered South Africa and started talks together with the Japanese consul general on October 29, just prior to the deadline's expiration. These talks resulted in a provisional decision to allow fishing operations for two months—November and December 1977—as well as the effective conclusion of a basic fishery agreement. Japan's fishing boats had narrowly escaped being sent home. Then, on December 6, Japan and South Africa signed a full fishing agreement. Japan's fishing allowance that year was set at 15,180 tons. This was followed in 1978 by an allowance of 40,200 tons, which broke down to 27,000 tons of horse mackerel, 5,000 tons of hake, 3,000 tons of spear squid, 1,700 tons of sea bream, and 3,500 tons of other species. These figures were far lower than anyone in Japan imagined.

Subsequently, Japan and South Africa fishery held annual talks to discuss and determine Japan's fishing allowance for the following year. Unfortunately for Japan, these talks consistently ended in lower allowances. Japan was continuing to implement economic sanctions against South Africa for continuing its apartheid policy, and these sanctions were influencing the fishery talks. It became apparent that the end of allowances was approaching.

Relations between the two countries improved in 1991 when South Africa abandoned apartheid and Japan, in turn, announced the end of economic sanctions against it. Japan–South Africa talks in December postponed the end of the allowance for one year. Ultimately, however, Japanese fishing boats left South African waters at the end of 1992.

At the peak of its operations in 1978, Nippon Suisan operated nine vessels in South Africa. This number later fell until the *Niitaka Maru* became the last to operate in 1992.

Regulations by New Zealand and Withdrawal from New Zealand Waters

In September 1977 New Zealand enacted a law establishing its 200-nautical-mile exclusive fishing zone. It then set a transition period from October until March of 1978 during which operation by foreign fishing boats would be allowed, as it also established no-fishing areas in which foreign fishing would be prohibited. Japan asked New Zealand for bilateral talks during the transition period but was unsuccessful due to the effects of an agricultural trade issue. Consequently, Japan was forced to call its trawlers—which were fishing at the time—back to port in March 1978. Later talks did not proceed smoothly, as New Zealand sought to link fishing quotas with its trade complaints against Japan concerning dairy products; however, an agreement was eventually reached and put into immediate effect on September 1. The quotas New Zealand presented at this time were, in all areas, far below previous catches by Japan's squid boats, southern trawlers, and bottom set net long-line boats. Despite extensive negotiations, New Zealand did not allow larger quotas, and thus Japan had no choice but to accept what was presented and scale back its fleet accordingly.

New Zealand's fishery management year started in October and ended in September the following year. In order to accept its fishing quota for a particular management year, a country had to pay the corresponding fishing fees prior to the start of that management year. In addition, fishing grounds were subdivided into eight subzones, with harvestable fish species and amounts predetermined for each.

With the exception of 1982, New Zealand's allowance to Japan declined as New Zealand's own fishery industry grew. Eventually Japan's quota-based fishery ended with horse mackerel fishing by the *Akagi Maru* in 1991.

The basic principles behind New Zealand's fishery policy were protection of its own fishery and promotion of joint ventures. Thus, as it shut out foreign



Kiso Maru

fishing boats on one hand, New Zealand conducted fishing within its own quotas by chartering foreign boats on the other.

Nippon Suisan's operations centered on its leasing the *Kiso Maru* and *Kurama Maru* through Sealord Products Limited (S.P.L.) for use by Hokuyo Suisan (merged with Hokoku Suisan in October 1983; currently Hohsui Corporation) and Sealord Group, Ltd. in June 1979, followed by the *Rokko Maru* from October.

In October 1986, New Zealand implemented its ITQ (individual transfer quotas) system. In addition to offshore purchasing with S.P.L., this system led to operations based on charter contracts between local companies having quotas in New Zealand and Japanese partners.

In 1987, Nippon Suisan began operating the *Yamato Maru* and *Rikuzen Maru*, which had been involved in Alaska pollack *surimi* operations in the North Pacific, during New Zealand's hoki fishing season from July to August. Both ships continued operating there until 1990. The *Rikuzen Maru* was sent again in 1992.

In 1994, Sealord Pacific Limited was established as a member of the Sealord Group, and Nissui New Zealand, Ltd. (hereafter "Nissui NZ") was formed within the Nippon Suisan Group. These two companies then set up a co-operation called Sea-Sui Joint Venture. The *Akagi Maru* (renamed *Pakura*) began operations under this joint venture in February 1994, fishing with quotas leased to it by Sealord. Later, Nissui NZ independently purchased Nippon Suisan's *Ibuki Maru* (renamed *Taharaki*) and began operating her



Kurama Maru

in May 1995. And in November 1997, Nissui NZ chartered the *Pakura* from Sea-Sui and also began operating her on its own. However, quota lease fees were rising year by year and making operations uneconomical, and as a result the *Pakura* and *Taharaki* had to be sold in 2002.

Regulations by Canada and Withdrawal from Canadian Waters

At the end of 1976, following a special meeting of the International Commission for the Northwest Atlantic Fisheries (ICNAF), Japan conducted talks with Canada in the hope of continuing its operations in Canadian waters. Canada agreed to allow Japanese boats to operate and issued fishing quotas on the condition that an intergovernmental agreement would be signed at an early date. Talks between the two sides for a provisional agreement were stopped as a result.

However, for operations in 1978 and thereafter, Canada strongly desired an early agreement, saying that it would not allow fishing to proceed without one, and it put forward its own proposal to Japan in the latter half of 1977. Negotiations to conclude the agreement continued in three sessions over the course of three months beginning in January 1978. They finally bore fruit when a Japan–Canada fishery agreement was signed on April 28, 1978.

In 1977, Canada issued a fishing quota of 21,550 tons to Japan (3,000 tons of Argentine shortfin squid, 14,300 tons of capelin, and 4,250 tons of deep-sea smelt). However, with execution of the Japan–Canada fishery agreement pushed back until April 1978,

Canada decided to allow fishing by foreign boats without an agreement for an interim period during the first year of its new 200-nautical-mile exclusive fishing zone. Canada issued quotas to Japan for a long period of time compared to other countries; however, the quotas finally came to an end in 1998.

It should be noted that Canada implemented various measures for countries that cooperated with its effort to promote Canadian fishery and seafood processing. Among them, it allowed such countries to use a portion of its own domestic catch. However, although catches of Argentine shortfin squid in Canadian waters remained strong until the early 1980s, they later declined significantly.

Nippon Suisan was involved in partnerships for cod, Argentine shortfin squid, capelin, and red rockfish among other species. The last such partnership involved fishing for red rockfish and capelin by the *Takachibo Maru* in 1990.

Regulations by Greenland and Withdrawal Greenlandic Waters

In 1984, two vessels from Japan—Nippon Suisan's *Teshio Maru* and Taiyo Gyogyo's *Banshu Maru No.7*—engaged in red rockfish fishing off the western coast of Greenland. Each of these vessels was operating based on a separate fishing contract between the Greenland Trade Department and its marine products company in Japan.

In May 1985 a first round of fishery negotiations between Japan and Greenland took place based on the results of these operations. This was followed by a second round in July that resulted in the setting of fishery conditions and produced a fishing contract for 1985 and thereafter.

That year, Japan was allowed a total catch of 36,580 tons. This broke down to 13,180 tons off of Greenland's eastern shore (6,180 tons of red rockfish, 1,000 tons of Greenland halibut, and 6,000 tons of other species) and 23,400 tons off of its western shore (5,500 tons of red rockfish, 7,500 tons of Greenland halibut, and

10,400 tons of other species). These figures were the result of hard work put in by the Japan Overseas Fishing Association and private fishery operators. However, by 1995, the allowance had fallen to 800. That year turned out to be the final one of Japanese operations in Greenland, as Japan's allowance was set at zero the following year.

Between 1985 and 1988, Nippon Suisan sent out between one and three vessels each year. It operated two vessels—the *Zao Maru* and *Tokachi Maru*—in 1988, its final year in Greenland.

Launch of NAFO and Japan's Withdrawal

The International Commission for the Northwest Atlantic Fisheries (ICNAF) was launched in 1950 to maintain fishery resources in waters near Canada's east coast, Newfoundland, and the Grand Banks. Japan joined the ICNAF in 1970. However, all members withdrew from the ICNAF when the era of the 200-nautical-mile exclusive fishing zone arrived. This led to the birth of a new organization, the North Atlantic Fisheries Organization (NAFO), in 1979. Nippon Suisan had been fishing for red rockfish and other species in the region since the days of the ICNAF; however, it found that operating large trawlers within the quotas allowed by NAFO was unprofitable, and it ended its operations there with fishing by the *Takachibo Maru* in 1991.

It should be noted that the management of resources in this region is based on decisions made by member countries attending annual NAFO meetings. Accordingly, Japan has continued to secure quotas even since 1992 by operating fishing boats there and maintaining the presence of a government delegation at NAFO meetings. The Japan Overseas Fishing Association continues to send boats there to fish for red rockfish, Greenland halibut, squid, and shrimp.

Argentine Shortfin Squid Fishing Grounds of Argentina

With a continental shelf that extends to the edge of its 200-nautical-mile zone, Argentina was blessed with bountiful fishery resources. Nippon Suisan began developing these resources as a major remote business, and it commenced fishing and processing at PESPASA, which it established in 1981.

Meanwhile, in July and August 1978, the *Zao Maru* confirmed the formation of Argentine shortfin squid fishing grounds outside Argentina's 200-nautical-mile zone. In 1979, the number of Nippon Suisan boats operating there began growing as boats that had been working in South Africa shifted over to Argentina. Interestingly, the squid harvested there were larger in size than those of other regions, and thus market accep-

tance took a certain amount of time.

Trawlers owned by Nippon Suisan operated in Argentina from 1978 until around 1980. Then trawlers and squid boats of other companies began moving in and creating a crowd of various boats during the fishing season. The number of Nippon Suisan's trawlers peaked at ten in 1987 and then entered a decline. Eventually, Nippon Suisan's operations there ended with fishing by the *Niitaka Maru* in 1994.

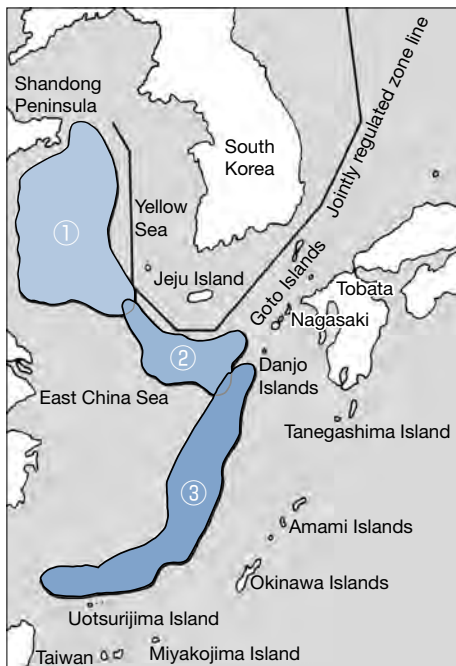
Squid boats began receiving permission to operate within Argentina's 200-nautical-mile zone by paying fishing fees from 1993. This led to a harvest in excess of 100,000 tons in 1999. In the end, however, declining quality in Argentine shortfin squid resources and stricter fishing conditions led to a final operation by five vessels in 2006.

6. Trends in West-Water Trawling

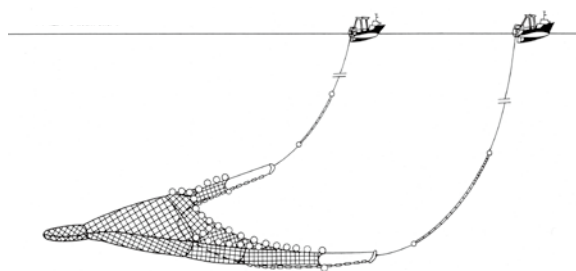
West-water trawling had remained strong during the 1970s, even amid declining resources and tougher regulations by China and South Korea. However, this strength suddenly faltered in the 1980s. A decline in the number of fishing boats that began in the late

1960s became pronounced in the 1970s, and scaled back operations led to significant decreases in the number of operating vessels. In the case of west-water trawlers, in 1967, there were eight vessels based in Shimonoseki (300-ton vessels owned by Taiyo Gyogyo

Rough map of west-water fishing grounds



West-water two boats trawling diagram



West-water trawling was practiced by Japan, China, South Korea, and North Korea in fishing grounds ranging from the Yellow Sea to the East China Sea.

- 1) Prawns, young squid, flounder
- 2) Cutlassfish, conger eel, croaker, butterfish, squid
- 3) Red sea bream, yellow sea bream, tilefish, trevally, black-throat seaperch, red rice prawn, alfonsino

and Nichiro Gyogyo) and six in Tobata (300- and 500-ton vessels owned by Nippon Suisan). These numbers fell to three in Shimonoseki (300- and 400-ton vessels owned by Nichiro Gyogyo) and two in Tobata (500-ton) in the early 1970s. The number of vessels in Shimonoseki plummeted to zero in the latter half of the 1970s. While two vessels remained at Tobata until the 1980s, they were not operating in western fishing grounds. The number of licensed fishing boats fell dramatically from approximately 640 in 1970 to roughly 500 in 1980, and then further to 240 in 1990. Major reasons for these decreases included shrinking resources, tougher international regulations, and competition with foreign ships. Added to these were falling demand for fish-paste products due to the diffusion of Alaska pollack *surimi* and soaring fishery management costs.

Shut out of the U.S.S.R.'s 200-nautical-mile exclusive fishing zone in 1977, South Korean deep-sea fishing trawlers stepped up their activities around Hokkaido. This created various problems that included shrinking stocks and fishery damage. In response, Japan and South Korea commenced talks on problems associated with South Korean fishing boats near Hokkaido in August 1980. Through these talks it was decided that South Korean fishing boats would halve their catch capacity in waters near Hokkaido, and that Japan's west-water trawling boats would be asked to halve their catch capacity in waters near Jeju Island, an area on which these boats were highly dependent. Specifically, a region covering 10 fishing grounds between 125° and 127° east longitude to be jointly regulated by Japan and South Korea would be designated as a "special regulated zone". Fishing there would be prohibited between February 16 and November 15 of each year for a period of three years beginning on November 1, 1980. It was further decided that the total number of vessels permitted to fish during the allowed period would be set at 106, and the maximum number of vessels that could operate simultaneously would be 66. In response to this decision, the Fisheries Agency issued a bulletin dated October 30, 1980,

stating that "operation of west-water trawling in the special regulated zone shall be prohibited during the period of February 16 to November 15 of each year". The Fisheries Agency completed preparing domestic laws toward this end and started the work of reducing vessel numbers.

This was the first period of self-imposed regulation. In all, five such periods were implemented. The second period began in 1983 and lasted for three years. The total number of permitted vessels was lowered to 88, and the maximum number permitted to operate simultaneously was reduced to 54. The third period lasted four years, from 1988 to 1991. During this time, the total number of permitted vessels was set at 44 and the maximum number of simultaneous vessels was 28. The fourth period became a time of tougher controls; however, the fifth period saw further cuts in the total permitted vessels and simultaneously operating vessels down to 35 and 22, respectively. The yield in the joint zone fell below 20,000 tons in 1977, below 10,000 tons in 1981, and below 5,000 tons in 1988.

Nippon Suisan set up its Nagasaki Branch as a base for west-water trawling in 1952 and was using it to vigorously promote its west water trawling business. However, the branch's west-water business began operating in the red in 1975, and its deficits grew larger with each passing year. Consequently, Nippon Suisan suspended operations of west-water trawling boats there in 1980. It reassigned concerned employees to the Tobata Trawling Department, which was its other west-water trawling base, and took various employment measures that included asking workers to accept voluntary retirement. Year-round operation of west-water trawling boats was ended in 1982, and all ships of the Nagasaki Branch and Tobata Trawling Department were assigned to work as catcher boats in north-sea mother ship operations during the summer months. The following year, west-water trawling was scaled back to the prime winter fishing months only. However, when even these moves failed to bring a positive turnaround, Nippon Suisan concentrated the Tobata Trawling Department's west-water business into the

Nagasaki Branch in January 1986, thereby making the branch an arm dedicated to west-water business. When the business environment still showed no improvement even after west-water operations from Tobata ceased, the company sought to find a way to survive by splitting the business into a separate company. Thus, it launched Nikko Suisan K.K., in July 1988. Employees affiliated with the Nagasaki branch had their employment terminated and were then assigned to the new company. At the same time, Nippon Suisan transferred four teams of west-water trawling boats and two carriers to Nikko Suisan. Nikko Suisan then inherited

Nippon Suisan's west-water trawling business when the Nagasaki Branch was closed down at the end of August.

Nikko Suisan strove to improve its operating revenue by building energy-saving vessels with emphasis on labor-savings and preservation of freshness, and by narrowing down shipping destinations to focus on major consumption areas. However, increasing pressure from foreign vessels—most notably from China and South Korea—led to ballooning deficits from 1990. Consequently Nikko Suisan was dissolved in March 1993.

Part 2 Efforts to Create a New “Nippon Suisan”

Record Profits under the “200-Nautical-Mile Zone Shock”

For Japan's fishery industry, 1977 was the year of the “200-nautical-mile zone shock”.

The shock started when the U.S. and U.S.S.R. established 200-nautical-mile exclusive fishing zones on March 1. They were soon followed by many coastal countries. These zones meant that Japan's fishery industry was now under new restrictions concerning crab fishery, salmon and trout fishery, fishing boats for north-sea fishery, and coastal bottom trawl fishery, particularly in areas of the North Pacific Ocean inside the U.S. and Soviet zones. As a result, more than 1,000 fishing boats became targets for vessel reductions.

However, Nippon Suisan's fishing business was not immediately affected. In fiscal 1977, its seafood sales—which included those generated by fishing as well as overseas joint ventures, trade, and domestic purchases—reached 276.3 billion yen. This figure was 1.5 times higher than the previous year's sales of 175.2 billion yen. In terms of volume, harvests increased by just 13%; therefore, the increase was largely attributable to soaring fish prices.

With business going strong, the company's gross sales in 1977 reached 379.5 billion yen, or roughly 1.5 times sales of the previous year. Its net income also

grew by 1.6 times year-on-year to 9.9 billion yen. This figure represented the company's highest profit to date, and is a record that has not been surpassed since. The next fiscal year, 1978, saw a slight decrease in revenue and profit due to the effects of smaller quotas and fewer operating vessels, with sales standing at 374.6 billion yen and net income at 8.1 billion yen.

A proposal to establish a Second Planning Committee was brought up for discussion in April 1979. President Juro Osoegawa weighed in on the matter by issuing a presidential notice on May 18. In it, he noted that the company had successfully maintained its performance as a result of efforts to expand business that were based on studies of countermeasures against 200-nautical-mile zones by the first committee in 1975. However, he reiterated that the company's profitability had not broken its dependency on fishing. With regard to current performance, he further noted that clear qualitative changes were afoot in terms of the company's revenue. Osoegawa therefore announced that, given structural changes taking place since the oil crises, Nippon Suisan would set up a Second Planning Committee to formulate a new vision of the company in the 1980s.

Report of the Second Planning Committee

The Second Planning Committee (chaired by Sei-ichi

Kobayashi) submitted its report in December 1979.

It set a basic philosophy of “contributing to the betterment of people’s lives by stably supplying foods from a global perspective”. It established “securing reasonable profits”, “pursuing rationality”, and “respecting human beings” as its management policies.

It also set forth the following as policy guidelines for major business operations:

- Fishing: Maintain business volume by actively developing partnerships and joint ventures. It will be important to reinforce trading functions and establish conditions for those functions in order to maintain and strengthen the company’s dominance in fish distribution.
- Processed foods: Reduced in-house fishing means lower profits. Thus, food processing must become a stable source of future revenue.
- Shipping: Shipping has a nature unlike other businesses in that it is affected by economic fluctuations for longer periods of time. Thus, it is advisable to separate it from other businesses, and policies toward this end should be fully implemented.

Specifically, it laid out the following measures.

In fishing, the report noted the importance of placing the highest priority on improving the company’s profitability rate while also striving to maintain business volume by remaining number one in the industry. It stated that the company should maintain and cultivate its fishing effort and strength where possible over the short term, but also seek to rationally reorganize and qualitatively strengthen its business given long-term limitations to fishing effort. Moreover, it recommended that the company pursue possibilities for partnerships and joint ventures as its in-house fishing decreases, and move quickly to deal with inevitable surpluses in workforce and hold space.

In particular, the report expressed the view that the company should actively operate its existing fishing operations based on conviction that “the last vessels

operating in all fishing grounds will belong to Nippon Suisan fleets”. In order to reinforce the underpinnings of Nippon Suisan’s fishing business, the report established that the company should invest in streamlining (for example, by building the latest energy-saving fishing boats) as it also enters joint ventures to supplement its in-house fishing and searches for possibilities for partnerships concerning North American Alaska pollack. It further laid out a course for making its west-water business independent in fiscal 1980.

In trading, the report set securing products and reinforcing the company’s distribution dominance as top goals in making Nippon Suisan a “total producer” of fish products together with its fishing category. It established that the company should increase its share by actively expanding its sphere of activities and stabilize the foundation of its profit-making structure during the first half of the 1980s, and then aim to firmly establish this structure in the latter half of the decade. It also urged the company to devote itself to commercial warehousing in its refrigerated warehousing business so as to steadily develop it into a source of stable revenue.

As for food processing, the report stated that first reestablishing the category’s autonomy and then developing it into a stable source of revenue for the medium and long term were priority items. The report also established that the company should seek to become a general foods business in the future as it also fully demonstrates its special characteristics as a fisheries company. It further said the company should build up trust as a brand owner by working to expand its product lineup to meet consumer needs.

And in shipping, the report stated that the autonomy of Nissui Senpaku must be respected to the greatest degree possible. It noted that if it becomes necessary for Nissui Senpaku’s growth to enter joint ventures or tie-ups with other companies, Nippon Suisan should respond flexibly by not insisting on being a 100% shareholder.

In addition, the report pointed out the need to move trading functions of the Remote Business

Department into the Trade Department and to closely link the Trade Department and Fresh and Frozen Products Sales Department. It also recommended incorporating production plants into production management rather than the head office/branch office system.

Striving to be a General Foods Company

Performance in fiscal 1979 showed sales of 407.9 billion yen, which was 109% of the previous fiscal year's figure. However, net income stood at 7.2 billion yen, which was 90% of the previous year's figure.

The next fiscal year, 1980, marked the fourth year since the beginning of the 200-nautical-mile zone era. Nippon Suisan recognized that rapid changes capable of uprooting its key businesses of deep-sea trawling and mother ship-type fishery would not happen in the near future. Consequently, it formulated a schedule for operating all of its existing fishing boats as in the past, and even began building highly advanced trawlers with an investment of 8.5 billion yen.

In fiscal 1979, Nippon Suisan's processed foods business recorded sales surpassing the 100-billion-yen level and earning a profit of 1.1 billion yen. Whether or not the company could maintain these figures into fiscal 1980 became the focus of attention. Success would depend on a medium-term food products plan that reflected the results of labor-management talks originating from the Onagawa Plant.

At a June 1980 board meeting that followed a general shareholders meeting, Vice President Shun-ichi Okuchi was named the company's new president. Then, in July, Okuchi held an investigative meeting that was based on general circumstances of the 14th half-year period. The meeting's purpose was to encourage awareness of how soaring fuel costs and stagnant fish prices were impacting on the company's rapidly worsening business conditions, and to discuss ways of minimizing the decline in revenues that had begun the previous fiscal year.

Although sales reached 408.9 billion yen, which

was on par with the previous year, net income fell to 5.6 billion yen, or 77% of the previous year's level. This profit figure actually exceeded expectations and allowed the company to pay a commemorative 70th anniversary dividend. However, it provided no indication that a better environment was on its way in the coming fiscal 1981.

It should be noted that an Offshore Business Division was launched in June 1980. The division was placed in charge of the Trawling Department, Nagasaki Branch, Northern Seas Department, Vessels Department, Remote Business Department, and International Fishery Measures Office. This move was designed to integrate fishing business-related offices in advance in order to handle reducing in American quotas to Japan.

One goal of the fiscal 1981 plan was to secure sales and revenue exceeding the previous fiscal year's levels. Saying that Nippon Suisan would "seek to become a first-rate general foods company while remaining the top marine products company", President Okuchi hammered out a management policy that encompassed multifaceted perspectives but still preserved the company's fishery core. Particularly with regard to the fishing business, Okuchi's plan demonstrated his strong view that Nippon Suisan's mission was to distance itself from the second-place company, particularly in a harsh environment, and to survive in the world's oceans.

However, when it became clear that realizing the plan would be doubtful at the time of the 14th half-year period, a directive urging certain achievement of a revised profit goal was issued under the name of Vice President Sei-ichi Kobayashi. The purpose was to "spur each office to work even harder toward attaining the new goal". While fish prices had recovered compared to the previous year, prices for *surimi* and meal fell below expectations. Nonetheless, the company succeeded in attaining sales of 429.7 billion yen (or 105% of the previous year's figure) and attained its profit goal of 5.0 billion yen (90% of the previous year).

The goal for fiscal 1982 was to expand profits. By

setting this goal, the company hoped to brake falling profits that had continued for the previous several years. Its focus was on worsening market conditions for *surimi* and meal and handling of west water business based at Nagasaki.

With no hope that it could expand its fishing business, the company sought to maintain volume. Meanwhile, the processed foods business fell under pressure to achieve profits as soon as possible in order to become a category capable of supporting Nippon Suisan's growth. And the seafood purchasing business sought to make forward-looking responses, despite difficulty avoiding exchange rate fluctuations, by increasing domestic and overseas purchases to supplement the fishing business.

That year, Nippon Suisan also set as goals the operation of its own vessels within joint ventures in Argentina and Chile, and the building of a new trawler to follow the two built the previous year. President Okuchi declared that these goals were demonstrations of his determination to prevail during tough times in the fishery industry and of his confidence in the company's success. Another goal was to build the company into a strong general foods company, without remaining satisfied with its status as the top marine products company.

The fiscal 1982 settlement of accounts posted increases in both revenue and profit.

The fishing business succeeded in securing earnings and South American joint ventures were developing nicely. Efforts to streamline west-water business were completed the previous fiscal year. Moreover, the fact that the processed foods business was showing a profit even after subtracting production management, product development, and advertising expenses was also highly significant. Sales increased by 13% year-on-year to 484.4 billion yen, which was Nippon Suisan's highest sales figure ever. And profit rose for the first time in four years, reaching 7.4 billion yen for a year-on-year increase of 48%.

Report of the Third Planning Committee

In fiscal 1983, Nippon Suisan wished to continue its growth from the previous year. Here, it was particularly vital for the fishing business to avoid allowing its production to decline. Additionally, the purchasing business was asked to bring handling fees to near 1%. And the processed foods business was required to make new efforts based on a revolutionary program for the second medium-term plan's first fiscal year.

Nippon Suisan launched its Third Planning Committee in July. The committee's highest priority was the realization of long-term and continuous growth. It was charged with addressing the need to see in-house fishing, offshore purchasing, and onshore processing as a tripartite undertaking, given concerns about the future of North American west coast businesses; examining the ideal form of the seafood purchasing business, which had grown rapidly as a supplement to the fishing business; and, amid signs that the newly profitable processed foods business would suddenly stagnate, establishing a corresponding revenue structure in existing sectors.

Jun-ichi Kishimoto, a senior managing executive officer, was named to be the chairman. The committee was comprised of a main planning committee made up of board members and specialized subcommittees comprised of general managers of the company's departments. It submitted its report the following year, in March 1984.

The report analyzed the strengths and weaknesses of Nippon Suisan's key businesses as follows:

- 1) Fishing: Fishing must consistently remain a core business in such forms as joint ventures and partnerships. The ability to comprehensively manage fishing business is one of Nippon Suisan's strong points. The company's deep-sea bottom trawl fishery business has the greatest strength and highest yields, which allow it to maintain operational levels and enter into joint ventures within countries'

200-nautical-mile zones even amid tight overseas fishery regulations. However, as the company withdraws from other fishery sectors, it is specializing in deep-sea bottom trawl fishery, and its technical capabilities are being limited to this area. Although it has maintained its cost advantage, aging vessels and tightening regulations will make it difficult to maintain this advantage under current conditions. Thus, the company must break away from its conventional thinking and reorganize its businesses accordingly.

2) Seafood purchasing: Only recently have domestic/overseas purchasing and sales begun expanding. One of Nippon Suisan's major strengths is its stable supply of catches and imported commodities from joint ventures. In its imports of overseas products, Nippon Suisan has room for additional procurement efforts in areas that differ from major trading companies. However, a stronger sales framework will be essential. In particular, there is room for additional development of sales routes for commercial products and processed products. The company's earning capacity remains unstable.

3) Food products: The food product business fell into chronic deficits around 1975. Although the company worked to rebuild it by taking decisive streamlining measures in 1979, additional effort will be needed to make it a contributor to overall revenue and expenditure. Efforts to reinforce product development capability, which was a point of focus in labor-management talks, have yet to bear fruit. The business's sales capacity of 130.0 billion yen is quite high and deserves commendation. The biggest problem is

its poor position in the Tokyo metropolitan area, where the nation's population is concentrated. Moreover, the fact that products purchased from partner plants (which make up the majority of all products) do not produce profit is a major problem. Shifting to directly managed or semi-directly managed plants should be studied to secure producers' profits. The company should raise its in-house manufacturing rate, improve productivity, and increase profitability with lower costs by developing products that are suited to Nippon Suisan-managed plants. Problems with the processed food business include quality control capability, product development capability, cost competitiveness, and sales strength. Higher earnings power is an area where improvement is expected.

The report further provided the following overview of the company's circumstances at the time.

Despite the long period of time that has passed since calls to reform the company's fishing-dependent revenue structure were heard, Nippon Suisan has a long way to go before it can supplement fishing with businesses expected to fulfill this role; namely, domestic/overseas purchasing and processed foods businesses. The fishing business is facing rising costs, and although it has been securing earnings by improving productivity, this will be difficult from 1984. The domestic/overseas purchasing business posted profits in fiscal 1981 and 1982; however, it is expected to plunge back into the red in fiscal 1983. This points to its susceptibility to exchange rate fluctuations and weak revenue base. The processed foods business finally turned a real profit in fiscal 1982. This was largely due to EPA (eicosapentaenoic acid), and thus the pace of improvement was slow. The company urgently needs to improve the profitability of its domestic/overseas purchasing and processed foods businesses in order to transform its overall revenue

structure. At the same time, it must orient itself to achieve long-term and sustainable profit growth as it also resolves a surplus workforce problem expected to arise from a shrinking fishery business and more streamlined processed foods business.

The report stated that the company must set a medium-term earnings target of at least 10.0 million yen. It broke this figure down into at least 5.0 billion yen for fishing, 3.0 billion yen for fresh and frozen food products, and 2.0 billion yen for processed foods.

Actual performance for fiscal 1983—the year of the committee's study—saw lower revenue and lower profit due to red ink in the trading sector resulting from falling fish prices during the second half of the year. Sales reached 470.0 billion yen (98% of the figure for the previous year) and net income stood at 4.8% (65%).

In fiscal 1984, Nippon Suisan set about putting itself on a path toward profit growth based on the Third Planning Committee's report. This included structural reform designed to help the company demonstrate its collective strength. The Sales Division was split into the Fresh and Frozen Products Division and Food Products Division. Together with the existing Overseas Business Division and Offshore Operations Division, this produced a total of four divisions. The company then worked to achieve close coordination among all four organizations. In addition, the Overseas Business Division was reorganized by integrating its Remote Business and Foreign Trade Departments.

Seven full years had passed since 200-nautical-mile zones became the rule. Against this backdrop, the Offshore Operations Division set a policy of securing interests in existing fishing grounds, pursuing tie-ups and joint ventures with a close eye to trends in partner countries, promoting operations in international waters, and utilizing the company's technologies and know-how in non-fishing-related fields.

Although the food products business was achieving sales of 140 billion yen, it was continuing to falter in terms of profitability. At the same time, the business

circumstances of overseas joint ventures and Nissui Senpaku had become a management issue.

The business environment during this fiscal year was not entirely bad, as Nippon Suisan posted a 3% gain in revenue to 484.3 billion yen and a 16% rise in profits to 4.8 billion yen.

A Darkening Path to Profit Growth: Toward the Fourth Planning Committee

Fiscal 1985 marked a turning point for Nippon Suisan's offshore business, as it was moving to battle its competitors with quality rather than quantity. It increased investment to establish Great Land Seafoods, Inc. (G.L.S.) as a *surimi* process plant, acquire all of shares of UniSea, construct refrigerated warehouses (including the Tobu Reizo Shokuhin's No.2 Coldstore as well as facilities for Kinki Reizo Shokuhin and Kitakyushu Reizo Shokuhin), and launch Esukei (S.K.) Suisan K.K. as a seafood processing plant. On a completion basis, this investment amounted to 14.7 billion yen. It also moved to cultivate budding new businesses by setting aside a special development fund of 100 million yen. And it sent four trawlers to joint ventures in South America; all of which were put into service. Meanwhile, its offshore purchasing business expanded year by year. Although Nippon Suisan started this business reluctantly so as to acquire government fishing quotas, it had become necessary as a means of raising business profitability.

During the second half, all businesses with the exception of offshore business appeared unlikely to achieve their planned goals. As a result, the company took the unusual step of holding a management committee meeting prior to the mid-term settlement of accounts. The market was depressed due to a strong yen as well as intensifying sales competition as well as excess stocks from an oversupply of seafood products. Meanwhile, even offshore business, which had been the company's only earnings source, began seeing increasingly harsher fluctuations in its environment.

A Fourth Planning Committee was convened in

November. Entering fiscal 1985, Nippon Suisan's path to real profitability darkened. In addition, the company feared that its revenue structure reforms were not keeping pace with the speed at which the business environment was worsening. The biggest problem was the fact that the food products business's 140.0 billion yen in sales were not contributing to the company's revenue and expenditure.

It was decided that Nippon Suisan would implement measures under a fundamental reform plan toward rebuilding the company's revenue base over the course of three years to begin in fiscal 1986.

In January 1986, the Fourth Planning Committee (chaired by Vice President Fumio Imanaga) submitted its interim report at a regularly scheduled board meeting. The following are priority items contained within it. 1) Guide grouping in the north-sea and trawling businesses. 2) Reestablish west-water business. 3) Form a company-wide system in the development of North American business. 4) Expand the refrigerated warehouse business nationwide. 5) Reorganize plants in the food products business. 6) Resolve problems concerning personnel and labor policy and the hiring structure. And 7) consider organizational problems and consolidated management.

Fiscal 1985 was a year of lower earnings but higher profits, as sales reached 473.9 billion yen, a figure equivalent to 98% of the previous year's sales, while net income reached 5.8 billion yen, or 104% of the previous year's figure. There was divergence among the businesses between their plans and actual performance. Nippon Suisan was making no progress toward becoming a general foods company; indeed, its dependency on fishing was becoming even stronger. The Fourth Planning Committee was charged with finding emergency countermeasures against this trend.

It should be noted that, in December 1985, the west-water trawling business of the Trawling Department were merged with the Nagasaki Branch. Additionally, a General Development Office was set up in January 1986. These moves were intended to expand the peripheral sectors of existing businesses in

order to make the company a "first-rate general foods company" and to promote Nippon Suisan's entry into new sectors.

Then, in June 1986, Vice President Fumio Imanaga was named Nippon Suisan's new president.

That year, Nippon Suisan's offshore purchasing, mother ship-type trawl fishery, and trawling in the Bering Sea performed better than expected. Contributing factors include a better-than-expected Alaska pollack harvest and higher *surimi* prices. However, even more important was the fact that the government's quota to Nippon Suisan from among the U.S.'s Alaska pollack fishing allowance remained at 620,000 tons. Nippon Suisan was able to use this quota to secure earnings from catching and processing with its own boats.

In offshore purchasing, which was growing each year, fishing profits were going to the Americans, and thus purchasing was not contributing to earnings. Meanwhile, while the food products business was in a tough fight amid excessive supply, the frozen foods business was competing well and bringing in earnings above the planned target.

Thus, although both earnings and profits were down on a year-on-year basis, the company succeeded in raising earnings according to plan. Nonetheless, it still made no progress in improving its revenue structure.

Of 15.0 billion in investment and loans, offshore-related items, such as the *surimi* mother ship *Miyajima Maru* and one team of west water hand-hauling boats, accounted for 8.0 billion yen.

Fiscal 1986 was also a year when Nippon Suisan began searching for ways to expand its business. In April, it began cultivating black tiger shrimp after establishing Bangkok Shrimp Cultivation Co., Ltd. (B.S.C.) in Bangkok, Thailand. It also began a study toward building food for fish breeding into a business by setting up a feed research team within the General Development Office. It also entered the dining-out industry.

Then, in October, it established a "business field

selection committee” to study new business fields. Vice President Katsusuke Minoda was appointed its chairman. The committee was comprised primarily

of board members as well as a working group made up of section leaders and assistant section leaders from all departments.

Part 3 Nippon Suisan’s Shrinking Fishing and Shipping Businesses

Stability in the Fishing Business until the Mid-1980s

In 1977, the year in which the U.S. and U.S.S.R. began enforcing their 200-nautical-mile exclusive fishing zones, Nippon Suisan’s fishing business consisted of mother ship-type salmon and trout fishery, mother ship-type crab fishery, mother ship-type trawl fishery under the Northern Seas Department; northern trawling and southern trawling under the Trawling Department; and west-water trawling under the Nagasaki Branch. Nippon Suisan had already withdrawn from whaling in 1976 and was concentrating its resources in joint whaling by Japan.

In fiscal 1977, Nippon Suisan suspended operation of the *Miyajima Maru* in salmon and trout fishery, terminated *surimi* operations by the trawler *Kongo Maru*, and suspended snow crab and Pacific herring fishing in the Bering Sea as well as flounder fishing by the *Nojima Maru* off the west coast of Kamchatka. However, the loss of these operations was covered by increased production from mother ship-type trawl fishery and South America-based trawling.

Operations in fiscal 1977 produced the following results. In trawling, four trawlers operated in North Pacific and North American east coast fishing grounds with a quota of approximately 70,000 tons, while seven trawlers operated in African fishing grounds with a quota of 43,000 tons. Three trawlers operated in the northwestern Atlantic Ocean while eight trawlers operated off of New Zealand’s coasts and other areas with a planned quota of approximately 44,000 tons. Moreover, two large trawlers engaged in trial operations off the coast of Chile in South America, where they produced 11,000 tons of hake and fish meal. Remote businesses produced and imported 12,000

tons. Two trawlers worked in Antarctic krill fishing grounds. In west-water trawling, two trawlers and 42 west-water trawling boats operated and harvested approximately 7,600 tons. In north-sea operations, a smaller number of mother ships were employed in mother ship-type salmon and trout fishery. Nippon Suisan co-operated the *Nojima Maru* fleet with Hokoku Suisan in the Aleutian Islands and Bering Sea with a quota of 4,000 tons. In mother ship-type crab fishery, the *Keiko Maru* fleet was jointly operated by Nippon Suisan and three other companies in the Bering Sea under a snow crab quota to Japan of just under 5,000 tons. And in the Sea of Okhotsk, the *Eiho Maru* fleet operated with a golden king crab quota of approximately 600 tons. In mother ship-type trawl fishery, the fleets of the *Mineshima Maru*, *Shikishima Maru*, and *Kashima Maru* each operated in the Bering Sea with quotas of approximately 302,000 tons.

Compared to the previous year, trawling in fiscal 1978 had an increase of three operating vessels with a higher quota of approximately 10,000 tons in North Pacific and northwestern Atlantic fishing grounds, but a decrease of one vessel and approximately 5,000-ton quota reduction in Africa. For New Zealand fishing grounds, the plan was reduced by 24,000 tons and the number of operating vessels was halved to four. This same fiscal year, Nippon Suisan began operating near Argentina’s Patagonia region. There, large trawlers produced 7,400 tons of hake, Argentine shortfin squid, etc. Mother ship-type crab fishery saw a 1,000-ton increase in the snow crab quota of the *Keiko Maru* fleet (joint operation by four companies) but a halving of the *Eiho Maru* fleet’s golden king crab quota to approximately 300 tons. Mother ship-type trawl fishery had an approximately 12,000-ton quota reduction.

Other operations saw little change compared to the previous year.

Compared to fiscal 1978, North Pacific and north-western Atlantic trawling had a 3,000-ton quota reduction but a two-vessel increase in operating vessels in fiscal 1979. African trawling had a quota reduction of slightly less than 10,000 tons, while New Zealand trawling lost one trawler but had a roughly 10,000-ton quota increase. In west-water business, the quota increased by 1,600 tons. Mother ship-type crab fishery had no year-on-year change. In mother ship-type trawl fishery, the quota was reduced by 9,000 tons. Performance in other operations was much the same as it was the previous year.

In this way, in the three years following the birth of the 200-nautical-mile system, Nippon Suisan's fishing business remained comparatively stable.

Even 1980, four years after the system came to be, Nippon Suisan did not believe that coastal nation's fishing regulations on foreign boats would continue indefinitely.

Nippon Suisan's balance of payments in fishing business was gradually declining after peaking in fiscal 1977. However, taking the view that U.S.'s fishery allowance to Japan would not change beyond some minor adjustments, Nippon Suisan felt that its profits would rise at a constant rate as soon as the problem of surplus vessels was resolved. It believed there was a limit to the degree to which coastal nations could raise their catch capacity so long as resources remained stable; thus, it was anticipating that regulatory conditions would stabilize at some point. Nippon Suisan's plan here was to survive until that day arrived, and to persist with its long-established technical capabilities and high morals even as other companies dropped out.

As for north-sea mother ship-type fishery of fiscal 1980, the snow crab quota of the *Keiko Maru* fleet, which was being operated jointly by four companies, was dropped to 2,800 tons in mother ship-type crab fishery, while the quota for mother ship-type trawl fishery was reduced to 266,000 tons. However,

trawling remained at the previous year's level. However, the balance of payments worsened by 10% due to rising costs.

West-water business was suffering from poor performance that began in the mid-1960s. Despite bountiful harvests of fleshy prawn in the 1970s, the business lacked competitiveness and fell into the red from 1975. The business structure required reinforcement.

West water business was scaled back in fiscal 1981. Year-round operations were suspended, and a system was employed whereby nine teams of the Nagasaki Branch and six teams of the Trawling Department accompanied north-sea mother-ship operations during the summer and engaged in west-water operations during the winter. Five teams of dedicated-use boats were taken out of service, and employment measures were taken for more than 100 crewmen. As a result, business returned to the black the following fiscal year.

In fiscal 1981, the *Keiko Maru* fleet's snow crab quota in the Bristol Bay was cut to zero, meaning the fleet could not operate there.

Regarding the use of resources within the U.S.'s 200-nautical-mile zone, the Breaux Amendment (I) of December 1981 led to the setting of optimum production amounts for American fishery operators and denied the allocation of surplus resources to other countries. One result was the beginning of offshore purchasing of Alaska pollack and other species in June 1981. The amount purchased grew larger with each passing year; it was slightly more than 10,000 tons in fiscal 1981 and climbed to 66,000 tons in fiscal 1982. Of these amounts, Nippon Suisan purchased 6,100 tons in fiscal 1981 and 21,000 tons next year.

Nippon Suisan's total volume of offshore purchases grew to 46,000 tons in fiscal 1982, 91,000 tons in fiscal 1983, 145,000 tons in fiscal 1984, and 167,000 tons in fiscal 1985. On the other hand, government-set fishing quotas for these same years were 294,000 tons, 252,000 tons, 254,000 tons, and 206,000 tons.

In fiscal 1984, golden king crab fishery off of western Kamchatka as part of mother ship-type



The *surimi* factory ship *Miyajima Maru*, completed in 1986

crab fishery was placed outside of intergovernmental discussions. This was due to a decision by the Japan-U.S.S.R. Fisheries Commission that crustaceans were continental shelf resources that should be entirely under the possessing country's management. It was expected that subsequent private-sector negotiations would lead to operations in accordance with regulations based on Soviet law; however, such negotiations did not take place and consequently fishery activities remained in limbo. The next fiscal year, 1985, fishing was suspended when negotiations broke down. Other companies later continued fishing of some several hundred tons through a joint-management approach; however, these companies pulled out in 1995.

Change began to appear in previously stable northern operations in fiscal 1986. Offshore purchasing was growing significantly, reaching 262,000 tons. However quotas had plunged to 101,000 tons. Thus offshore purchasing and fishing had reversed position. The new ship *Miyajima Maru*, *Mineshima Maru*, and *Kashima Maru* were added to *surimi* trawlers engaged in offshore purchasing. Traditionally, the fishery allowance to Japan had given to the *Mineshima Maru*, *Shikishima Maru*, and *Kashima Maru*; however, now it was given to two fleets—those of the *Mineshima Maru* and *Kashima Maru*. The *Miyajima Maru* was built to substitute for the *Shikishima Maru* as a highly advanced labor- and energy-saving *surimi* mother ship.

Also in fiscal 1986, the west-water business of Tobata's Trawling Department was integrated into the Nagasaki Branch.

Scaling Back and then Ending of the Fishing Business

From 1977, the first year of the 200-nautical-mile zone system, until fiscal 1986, Nippon Suisan's fishing business had proceeded smoothly, centered on Alaska pollack and *surimi*. This was despite the decline of its mother ship-type crab fishing and scaling back of its west-water business. However, this changed completely in fiscal 1987.

In fiscal 1987, the U.S.'s fishing allowance to Japan in its waters was slashed to 110,000 tons. As a result, Nippon Suisan chose not to operate. The allowance to Japan was further cut to zero in January 1988.

This left offshore purchasing as Nippon Suisan's only north-sea operation. Offshore purchasing reached 225,000 tons in fiscal 1987 and 180,000 tons in fiscal 1988. However, the falling fishing allowance to Japan—which had been above 200,000 tons several years prior and was even above 100,000 tons in fiscal 1986—dealt a serious blow to Nippon Suisan's management.

Other fishing operations in fiscal 1987 recorded 78,000 tons of bottom fish and other fish within the 200-nautical-mile zones of Canada, South Africa, New Zealand, and Greenland; approximately 101,000 tons of bottom fish, squid, and krill in high-seas fishing grounds of the Bering Sea, Antarctic Ocean, and Atlantic Ocean; 6,000 tons in western fishing grounds; 3,000 tons in mother ship-type salmon and trout fishery; and 500 tons in jointly managed golden king crab fishery.

As a result of reduced fishery quotas, mother ship-type salmon and trout fishery was made a joint undertaking managed by all companies in fiscal 1988. This effectively ended Nippon Suisan's north-sea operations.

That fiscal year, as west-water trawling business continued to suffer worsening profits, Nikko Suisan was established in July and received the Nagasaki Branch's operations. Then, in September, Nissui Marine Service K.K. was launched to effectively utilize

Nippon Suisan's fishing technologies.

The next year, fiscal 1989, Nippon Suisan's offshore purchasing plunged to 88,000 tons. This marked the last year that it purchased Alaska pollack. In fiscal 1990 just yellowfin sole and some other species remained.

Fishing operations in fiscal 1989 brought in approximately 130,000 tons of bottom fish, squid, krill, and other species from the 200-nautical-mile zones of Canada, New Zealand, and others as well as high-seas fishing grounds of the Bering Sea and South America. They also recorded 55,000 tons from partnerships in New Zealand. Snow crab, golden king crab, and west-water trawling were practiced through joint operations; however, their intake plummeted. Fishing had become a money-losing business.

As it scaled back its fishing business, Nippon Suisan also made employment adjustments concerning 380 employees affiliated with the Northern Seas Department by March 1989. Even so, it was pressed to make further moves to achieve the optimum workforce size.

Fiscal 1990 was a year of vast and unprecedented deficits in Nippon Suisan's fishing business that arose from poor catches in international waters of the Bering Sea. As a result, the company was unable to pay dividends that year. Fiscal 1990 became the last year for Nippon Suisan's operations in these waters.

The Maritime Operations Division, which oversaw the fishing business, was incorporated into the Fisheries Division in January 1990. The Fisheries Division's red ink had come from fishing operations of the Tobata Branch. Business losses were attributable to poor fishing in international waters of the Bering Sea as well as poor performance from southern fishing grounds. In June, Nippon Suisan decided to end its mother ship-type trawl fishery permit expire.

In November, Nippon Suisan presented a plan to downsize its fishing business to the All Japan Seamen's Union. The plan called for a reduction in the number of Nippon Suisan's own fishing boats from 14 to eight, raising the number of joint-venture boats from seven

to eight, and maintaining the number of outsourced business boats at four. It would further implement employment measures for all 300 offshore employees who were expected to be affected by the fleet reduction. Specifically, these measures included transfers and dispatches; education, training, and acquisition of qualifications at vocational skills development centers; work in offshore-related positions; reassignment to onshore occupations; and assignment to duties in a mutual assistance association (later named "Nissui Tech") that was formed based on the concept of mutual assistance during an age of "joint fishing". Nippon Suisan also utilized a voluntary retirement system for people who desired to leave the company.

In February 1991, an occupational development project team was formed to explore and develop offshore-related duties and peripheral duties in order to operate Nissui Tech and better utilize the company's human resources.

In 1992, it looked unlikely that fishing operations would be unable to continue. Given this, Nippon Suisan reduced its Tobata fleet by eight trawlers. With fishing near South Africa also coming to an end, this left krill fishery in the Antarctic Ocean and the partnership with S.P.L. in New Zealand as Nippon Suisan's only fishing operations. Nippon Suisan was making a bid to keep its west water business alive by splitting it into a separate company, Nikko Suisan; however, this company was ultimately dissolved in March 1993.

Moreover, in 1995, Nippon Suisan scrapped trawlers or sold them to overseas joint ventures as part of a reworking of its trawling business structure. It reduced its own trawling fleet of six trawlers to just two: the *Koyo Maru No.8* and *Niitaka Maru*. Fundamental employment measures needed for this reorganization of trawling operations were discussed and determined by company management and labor. All 716 crewmen and administrators affiliated with the Tobata Branch received lump-sum retirement payments. The company then rehired those employees who desired reemployment under set conditions. A total of 270

employees were rehired in the fishery technologies field. It also rehired others who wished to accept dispatch assignments related to offshore engineering or coastal service.

Nissui Marine Industries Co., Ltd. was established in 1996. The new company's purpose was to develop occupations outside of Nippon Suisan, and to do so in a manner integrated with Nissui Tech's administration, which theretofore was the responsibility of the Trawling Department's labor section. Nissui Marine Industries' activities covered a broad range that included offshore engineering, coastal shipping, and the machine industry. It expanded its business by absorbing similar businesses within the Nippon Suisan Group. In 1998 it took over Wakamatsu Zosen K.K., a builder of small fishing boats. It merged with Nissui Ship Management K.K., in 2003, and took on the offshore functions of Nissui Engineering Co., Ltd., in 2005. And it merged with Nichinan Sekiyu K.K. in 2007.

A Smaller Shipping Business

In November 1979, an informal decision was reached whereby Nippon Suisan would be commissioned with the operation, management, and administration of a submersibles support vessel for the Japan Marine Science and Technology Center (currently the Japan Agency for Marine-Earth Science and Technology; JAMSTEC), an organization under the Science and Technology Agency. After assigning its Vessels Department as the contact point for this operation, Nippon Suisan launched Nippon Marine Enterprises, Ltd., on January 31, 1980. (The new company became a wholly owned subsidiary of Nippon Suisan in 1984.)

Nippon Suisan's whaling business had already been lost, and its north-sea mother ship fishery was being scaled back. Thus, Nippon Marine Enterprises presented a perfect job opportunity for large vessel seamen. Operating a marine research vessel requires the ability to safely and precisely lower heavy objects

into the ocean and then bring them back up again while at sea. It also necessitates a flexible work structure that meets existing conditions. Nippon Suisan knew that its seamen's skills and resources that had been honed through mother ship operations would prove useful here, and that it is why it responded to the center's call for a support vessel operator.

Of the 80 vessels that Nippon Suisan owned in 1980, those under the direct management of its Vessels Department—which was in charge of building, modifying, and maintaining vessels as well as their communications and operational aspects—totaled six: five mother ships and the *Miyajima Maru*. A total of eleven vessels—two oil combination carriers, two meal combination carriers, and seven refrigerated carriers—were chartered on a bareboat basis to Nissui Senpaku, which was established in 1976. In 1979, the company took the tanker *Matsushima Maru II* out of service and transferred control of the *Nippon Maru III* to Nissui Senpaku to bolster that company's financial strength.

Around this time, the shipping business was stagnating due to chronic oversupply of hold space. Although Nissui Senpaku was doing well based on its long-term charter contracts for specialized vessels, it built the modern tanker *Nachi Maru* in 1980 in a bid to reinforce its standing. It made the decision to scrap the ore/oil carrier *Nippon Maru*, as the ship's charter contract with Kawasaki Steel was due to end in October 1982. And it drew up plans to build a refrigerated carrier to replace the aging *Asakaze Maru*.

In fiscal 1983, Nissui Senpaku's specialized ship category—its main revenue earner—suffered from deteriorating international competitiveness due to the strong yen, and as a result it could not conclude any contracts with shippers. At the same time, its reefer category began suffering from a worldwide economic slowdown and falling freight charges attributable to an oversupply of hold space. These factors plus abnormal climatic conditions plunged Nissui Senpaku into the red.

In October 1984, Nissui Senpaku established

Shinwa Reefer K.K. Designed to be a streamlining measure for the future, this move separated the reefer category that was based on time charters and illuminated problems with the existing business. The volume of international trade of frozen and refrigerated cargo was growing at an annual rate of 4%, and therefore it was thought that the amount of such freight handled by Japan would also increase. It was felt that the future of the reefer business would be bright.

Then it established N.S. Marine K.K. in December 1985 in order to secure employment for employees in the shipping business and operate low-cost vessels.

As measures to bring its deficits under control, Nissui Senpaku scrapped the *Asakaze Maru* and *Harukaze Maru* in November 1984, returned the *Suzukaze Maru* and *Matsukaze Maru* to Nippon Suisan, and built the cool carrier *Sagami Maru*. It also built the *Mazeran Maru* to replace the *Nippon Maru III*, and received the *Asama Maru*, *Ikoma Maru*, and *Amazon Maru* from Nippon Suisan. At the same time, the company put forth a draft for a medium-term plan. The *Mazeran Maru* was completed in 1986.

On September 25, 1987, Nissui Shipping Corporation was launched to inherit the business of Nissui Senpaku.

Although Nissui Senpaku had suffered from rapidly deteriorating performance because of a slump in its refrigerator ship business in 1983, its five-year medium-term plan was steadily putting it back on the path to recovery. However, its balance of payments deteriorated once again when the yen rose against the dollar from the end 1986 and contracts for the *Amazon Maru*

and *Nachi Maru* were canceled in the spring of 1987. The company was also burdened by an excessive number of seamen on its payroll. Thus the decision was made to switch over to the new company as a means of breaking out of these circumstances.

It was judged that creating a separate company was the best way to streamline the onshore and offshore workforce, settle past debts, and execute operations without being restricted by the subsidization of interest payments on loans for construction of oceangoing vessels system.

At the time of its establishment, the new company had the ore combination carrier *Mazeran Maru*, four refrigerated carriers, 22 refrigerated carriers that were time chartered to other companies, 37 onshore employees, and 145 offshore employees. It also transferred the *Isokaze Maru* to N.S. Marine. N.S. Marine crewed the *Isokaze Maru* together with the *Soyokaze Maru*, which it received from Nippon Suisan.

Immediately following its launch, Nissui Shipping was able to secure earnings from lower costs by bringing down personnel expenses and charter fees and



The ore/coal combination carrier *Mazeran Maru*



Asama Maru (left) and *Ikoma Maru*, which transported fruit based on a time charter agreement with United Brands of the United States

benefitting from a stable freight charge market. These earnings allowed it to pay dividends. However, an international shipbuilding boom around 1990 brought an excess of available hold space in refrigerated carriers. Although fruit transport entailed the basic risk of demurrage resulting from crop-caused cargo instability, there was demand for new high-speed ships amid increasingly intense competition, and thus Nissui Shipping chartered many such ships to secure shippers.

The shipowners demanded that the charters be guaranteed for a minimum of five years and have fixed fee rates; however, Nissui Shipping's fruit transport contracts were valid for only a year at most. Within a slumping freight charge market, Nissui Shipping's fees for long-term chartering of 10 or more vessels fell completely out of step with its freight charge revenue. This led to a deteriorating balance of payments in the company.

Part 4 Sluggish Growth in the Food Products Business

1. An Effort to Rebuild the Food Products Industry

Evolving Retail and Growth in Frozen Foods

From the 1970s until the 1980s, Japan's population became more concentrated in urban areas and the trend toward the nuclear family gained momentum. At the same time, women came to take a more prominent position in society, and lifestyles and consumer habits among the Japanese changed greatly.

The main players in retailing had already become supermarkets. And from supermarkets came general merchandising stores (GMS) of even larger size. GMS made it possible for consumers to buy all of their daily necessities at one store, as they sold not only food but also daily goods, clothing, and electronic products. Moreover, as motorization progressed, mega GMS appeared in the suburbs, and with them came a new buying pattern whereby families travelled by car to GMS on weekends to buy everything they need at once. However, this trend conversely led to the decline of ordinary small- and medium-size retail shops that formed neighborhood shopping streets.

Meanwhile, convenience stores began appearing in the 1970s and spread primarily in urban areas. Convenience stores allowed consumers to buy what they needed at any time from the early morning until late evening—and sometimes even 24 hours a day. This attracted customers who were unlike those of

mass retailers; specifically, they were visited by a growing number of young and unmarried customers that even included men. Over the course of 10 years, the number of convenience stores grew from 6,000 to close to 30,000 at the end of the 1980s. The fact that convenience stores began stocking *bento* boxed meals, sandwiches, and rice balls whose sales depend on their freshness was indicative of their function as “refrigerators away from home”.

As these new forms of retail outlet developed, they gained strength and became increasingly widespread. And as they did so, the food products industry changed with them.

In that it changed consumer habits and made life more enriched and convenient, the diversification of retail sales had commonality with processed foods. And other item to have this same commonality was frozen foods.

Frozen foods had continued to grow ever since first appearing on the market. Production, which had stood at 140,000 tons in 1970, reached 560,000 tons in 1980 and then 780,000 tons in 1985. This represented an increase of 1.4 times in five years. Similarly, domestic per capita consumption, which was 1.4 kg in 1970, grew strongly to 6.0 kg in 1980 and then 7.9 kg in 1985.

During the process of this growth, the range of

products grew from frozen seafood products and frozen agricultural products to frozen precooked products, and targeted consumers expanded from commercial customers to include ordinary households. Particularly in the case of frozen food products for households, the establishment of the cold chain together with the technical development and diffusion of cooking equipment (e.g., household refrigerator/freezers, toaster ovens, and microwave ovens) were important contributing factors.

The value of a superior preservation technology—namely, freezing that retains the food’s original flavor—became linked with consumers’ demand for products they could buy and keep until a time when they wanted food they could prepare easily and eat quickly. And this point allowed frozen foods for household use to become a favorite among consumers.

Growth of Nippon Suisan’s Frozen Foods Business

From the mid-1970s, Nippon Suisan’s food products business experienced a changing of the guard in its primary products. There were signs that fish sausages/hams and canned goods were in decline, while frozen foods were showing strong growth.

In its frozen foods business, Nippon Suisan had taken a product policy that was founded on seafood.

Coming on the market in 1973, “Nissui Pack” was a frozen seafood product made of shrimp, squid, and other seafood that was sold in small packs. In 1977, Nippon Suisan began selling the “The Fish” series of precooked dishes that made eating fish easy. Products of the series included “Florida Portion” battered whitefish, Chinese-style “Cooking Fry” made with *surimi*, and “Creamy Croquettes” made with milk. Not long after, one of Nippon Suisan’s long-running sellers “Squid Tempura” was also added.

The “L Pack” series that appeared in stores in 1979 was a lineup of high-quality frozen precooked products. It included “shrimp spring rolls” and “squid fritters” made primarily with seafood. The “L” stood for

“luxury”. These products were sold through routes targeting both household and commercial customers. Among the products sold at this time, many including “Squid Tempura” and “Squid Snack Fritters” remained on the market for many years after undergoing modifications to their tastes and methods of preparation.

In 1983, Nippon Suisan began marketing a product series called “Seafood NOW Nissui”, which was linked to a “Seafood NOW” corporate advertising campaign that had taken the country by storm during the 1980s. Theretofore, most frozen food products were for deep frying. However, this series offered food items that came in pouches for heating in boiling water, thus saving the user the inconvenience of deep frying. A variety of real, high-quality seafood items was sold, including “shrimp cooked in chili sauce”, “whitefish *umami* stew”, and “salmon cheese sauce stew”. These products were also sold for commercial use, particularly as products for restaurants, and their success here spurred Nippon Suisan to expand its business to areas outside of school meals and industrial catering, where it had already proven its strength.

In November 1983, Nippon Suisan established Chilly Co., Ltd. to produce and market chilled food products as a step into the frozen and chilled foods business.

Then, in 1984, it began marketing a “Hitokuchi” (bite size) series that focused on prepared dishes for *bento* boxed meals. Here, Nippon Suisan was making a point of advertising frozen foods as dishes for use in boxed meals, something that had only been implied before. Product design was clearly oriented for such use and contributed to the products’ becoming a hit. Other companies began making similar moves around the same time, leading to the arrival of “boxed meals” as a new category in the household frozen foods market.

Rebuilding the Food Products Business

Nippon Suisan’s processed foods business had been tasked with providing steady earnings as a mainstay business—together with fishing and shipping—since

the Five-Year Reformation Plan of the early 1960s. However, it became unable to meet expectations in the 1970s. Although sales had grown as the business was expanded, it became a losing undertaking when advertising expenses were taken into account.

During late 1970s, it was clear that the fish sausage/ham and canned goods businesses had matured and that frozen foods was growing. Nonetheless, even during this time, the frozen foods business failed to turn a profit.

Meanwhile, Nippon Suisan's effort to convert production plants and consolidate product types was unable to keep pace with this changing of the guard among products, and thus improving this situation became an urgent task. On the other hand, the company had to rearrange production equipment and personnel in line with its withdrawal from new businesses that it had pursued with an eye to future processed foods expansion.

In December 1978, a production conference on improving the processed foods business was formed. Here, Vice President Shun-ichi Okuchi noted, "The balance of payments in the processed foods business has been chronically bad in recent years. However, we cannot remain dependent upon the offshore businesses for profits. We must streamline processed foods."

Jun-ichi Kishimoto, a managing director, summarized problems with the processed foods business as follows: 1) Poor sales profits due to problems with selling power; 2) a labor-intensive structure that is inconsistent with the growth-period principle of securing sales with small numbers of exceptionally talented workers; 3) insufficient concentration on creating and cultivating products in the past; and 4) inadequate scientific management that ascertains markets and consumer needs.

Improvement measures that were mentioned included: 1) Achieving unity of purpose in sales and enhancing use of wholesalers and the field system; 2) improving producer focus and reinforcing product power that targets consumer tastes; 3) adjusting the

product-specific team system; and 4) managing sales efficiency numerically.

Identified problems concerning processing plants included the following: 1) Capital investment in the processed foods business stopped at partial energy-savings investment, investment for product turnover, and pollution-related investment; there was no investment for converting production systems at Nippon Suisan's plants; 2) plant layouts and operational modes have not been readjusted to meet sales trends; 3) although investment has been made for plant mechanization, technologies for completing products are inadequate; and 4) productivity at Nippon Suisan's plants is poor, while costs are high.

Furthermore, Kishimoto noted the company's business philosophy. He said, "Nippon Suisan has grown based on a management principle of 'catching great amounts of fish and delivering it to the dining table in a manner akin to the way tap water flows into the kitchen.' During Japan's post-war reconstruction, we primarily strove to fulfill our social mission of supplying fish-meat sausages to even the most remote agricultural villages to provide them with seafood protein. While we later made priority investments in deep-sea fishery in international waters, our basic mission as a food products company has not changed. It is my earnest desire to see us develop as a company that, in addition to acting in accordance with its guiding principles thus far, also contributes to the joy of good health. It is here that we should find the focus of the processed foods business."

The production conference on improving the processed foods business continued meeting until September 1979.

In April 1979, an agreement was reached on a basic policy for management of the processed foods business. The basic outline of which was as follows: 1) The processed foods business should be reestablished and developed as one of Nippon Suisan's mainstay businesses; 2) the business must contribute to better eating habits among the Japanese people; 3) Nippon Suisan will seek to become a general foods company

with the special dimension of also being a fisheries company; and 4) the company shall devote itself to being a “brand owner” that directly addresses consumer needs.

In June, a “long-term processed foods business plan and near-term measures” was proposed. In production, it included a recommendation to rearrange and consolidate production plants. For the Onagawa Plant, it suggested closing the frozen foods, canned goods, and ham sausage plants, leaving only the *chikuwa* plant and fish feed and oil plant. It also recommended concentrating frozen food operations in the Hachioji, Itami, and Anjo Plants; canned goods in the Shimizu Plant; and fish feed and sausages, hams, and hamburgers in the Hachioji, Hakodate, and Tobata Plants.

For sales, it recommended reinforcing the head office’s sales guidance system by rearranging its marketing functions, changing over from a mindset fixated with sales performance to market objectives management, eliminating overlapping by seeking to make maximum use of wholesalers and clarifying collaboration between Nippon Suisan and service companies, and strengthening functions for introducing and cultivating new products. As near-term measures, it suggested paying full attention to behavior management of personnel in charge of sales; working to accumulate basic sales data that support strategy development; conducting regular roller surveys, spot observations, and trade area analyses; and setting Tokyo, Nagoya, and Fukuoka as priority regions, with particular emphasis on the Tokyo metropolitan area as a top priority zone.

Additionally, regarding development, the basic policy recommended making a full-scale effort toward reinforcing the development system as a pillar of the processed foods business’s rejuvenation.

In July, discussion focused on the Onagawa Plant problem. In the end, it was decided to continue the *chikuwa* plant, build a new processing plant having cold-storage functions, ask for voluntary retirements by offering a better retirement package, and shift some personnel to sales through rehiring or other means.

The basic policy for the processed foods business that was hammered out through this process became the framework for the First Medium-Term Plan for the Processed Foods Business, which was effective from 1980 to 1982. The medium-term plan produced streamlining effects during this period that in turn brought higher earnings. In fact, during the plan’s final year, fiscal 1982, the business returned to the lack even with advertising and development expenses considered. However, some issues remained unresolved, including a reexamination of business by Nissui Service, study of plant layouts, consolidation and management of partner plants, and consolidation of product types.

The Second Medium-Term Plan for the Processed Foods Business came into effect from fiscal 1983 to 1985. The new plan sought to lift sales from 134.5 billion yen to 200.0 billion yen. Taking the successes and remaining problems of the first plan, the second plan strove to expand the entire processed foods business with new businesses and product development. It placed particular emphasis on frozen foods, an area expected to see growth.

Meanwhile, a separate medium-term plan for the frozen food products business was also being drafted.

In 1982, the frozen food market was expected to be worth 450.0 billion yen, with 327.0 billion yen coming from precooked foods. Nippon Suisan’s total sales were expected to be 70.9 billion yen, which would rank it number one in the sector, while its sales of precooked foods were forecasted to reach 32.0 billion yen, which would make it number three. By channel, Nippon Suisan was expected to rank fourth in products for household use, second in products for commercial use, and second in prepared dishes for mass retailers; however, it was expected to rank no higher than fourth in the dining-out segment. By product, Nippon Suisan was expected to rank first in deep-fried seafood (including squid tempura) and *chawanmushi* egg custard, but second or third in deep-fried shrimp, croquettes, *shumai*, *gyoza*, and spring rolls. The

question was: To what extent could the company offer top products? In products for household use, it was decided to put forth an image of Nippon Suisan as a “seafood manufacturer” and to center efforts on a product range that utilized ingredients in which the company had an advantage. And on the commercial side, it was decided to augment the product lineup and focus particularly on products oriented toward restaurants in order to respond to the various needs of a broad range of business categories.

The strategy for fiscal 1983 emphasized communication-oriented approaches, with focus on how to motivate consumers rather than simply selling individual products. It presented measures capable of injecting products into eating habits by, for example, utilizing advertising media, presenting ideas to consumers in stores, and suggesting menus.

The sales environment of fiscal 1983 was characterized by a scramble for market share among competing companies. Consequently, although the first year of the medium-term plan had been positioned as a year for preparation only, poor progress this year led to a decision to reexamine the second medium-term plan.

The strategy for fiscal 1984 was as follows: 1) For each product group, place emphasis on commercial use in frozen foods; in particular, develop “Gourmail” products. 2) In products for household use, focus on *bento* boxed meals, prepared dishes, seafood ingredients, and frozen vegetables; also make new moves into the chilled products field. 3) For canned goods, expand seafood canning, particularly of tuna, bonito, and mutton yakiniku for the “Sea Gourmet” line. 4) For processed products, work to raise recognition of existing fish sausage and ham products, and lift sales with improved products; also, developed products for chilled distribution. 5) For fish-based products, expand a product lineup centered on *chikuwa*; also, develop a forward-looking production system by building new partner plants. 6) Focus on reinforced management of special sale costs and sales-promotion costs as well as analysis and reduction of storage fees, freight

charges, and distribution expenses as priority issues. 7) Although efforts have been made to expand standard products in the Tokyo metropolitan area, where reinforcement is underway, by cultivating partner wholesalers and strengthening contact points with mass retailers, the results have been poor. Measures were taken in terms of personnel, organization, and funding.

At the same time, product development was positioned as a strategic business category. Here, the decision was made to expand business by deepening collaboration with sales offices and specifically pursue diversification. The policy called for developing large-scale products by reinforcing the product-development capabilities of the Central Research Laboratory and acquiring know-how on product development and manufacturing through tie-ups with other companies, and, in new fields (such as fine chemicals), firmly establishing business by actively entering domestic markets. In the fine chemicals field, the policy called for the manufacture of EPA (eicosapentaenoic acid) as a pharmaceutical together with business expansion within the food products market and marketing of taurine.

Fiscal 1984 saw higher production revenue due to cheaper prices for Alaska pollack *surimi* and lower production plant costs. Even so, sales had to struggle to achieve its goals, as it was forced to expand special sale expenditures amid cut-throat competition.

In fiscal 1985, maintaining the size of the fish sausages and hams business as a major contributor to earnings became a priority issue. At the same time, the canned goods business was called upon to expand its size and improve its profitability, while the fish-paste products business was asked to grow in size while maintaining profitability. In product development of canned goods, the company sought to step up its activities by introducing high vacuum cans and aluminum containers and also enter the retort pouch business.

In the frozen foods business, the company’s strategy was to pursue product development by integrating

development functions and clarifying responsibility for market introduction, and to promote arrangement of existing products and market establishment. In products for household use, priority was placed on developing menus for specific categories, branding seafood products, and strengthening agricultural product lineups and procurement capabilities. In sales activity, the company strove to reduce special sale expenditures, advance sales-promotion strategies and advertising, and arrange and integrate package designs. It also integrated purchasing and sales of frozen vegetables into the Agricultural Products Division No.3 and changed the orientation of persons in charge of commercial sales in each branch from being product-

focused to client-focused. In production, it sought to improve the facilities and supply capabilities of partner plants.

With the market environment reported to be saturated and demand for food products stagnating, sales declined by 2% year-on-year (to 136.0 billion yen) and the business's balance of payments failed to reach the budgeted level. Overlapping negative conditions were in play here; poor exports placed pressure on domestic demand, the strong yen led to an increase in cheap livestock products, and lower production of Alaska pollack *surimi* brought higher raw material costs.

Chapter 3: Nippon Suisan Struggles to Change its Business Structure

1985–1995

Part 1 A Frustrated Expansion Strategy and Sluggish Business

1. Rise and Collapse of the “Bubble Economy”

The Plaza Accord and the “Heisei Boom”

In the wake of the Plaza Accord of September 1985, the yen's strength against the dollar quickly intensified. As a result, the yen strengthened from 240 yen to the dollar to 150 yen to the dollar in the autumn of 1986. This rapid rise had a direct impact on Japan's export industries and brought on a “high-yen recession”. The Japanese government responded by implementing an emergency economic policy to stimulate domestic demand. At the same time, the Bank of Japan lowered its official discount rate on five separate occasions, finally arriving at a post-war low of 2.5% from February 1987. As a result of these measures, the economy began improving from 1987, and Japan entered its second-longest period of economic expansion, which contin-

ued until April 1991.

Among the driving forces behind the expansion were active capital investment by corporations and expanding personal consumption. Another characteristic of this period were diversified financing that resulted from financial deregulation in the early 1980s. In particular, convertible bonds and warrant bonds (bonds with stock acquisition right) came into widespread use in procuring capital investment. Companies actively made procurements in overseas markets on the back of expanding foreign-exchange gains that were made possible by the strong yen.

However, the continuing monetary easing policy and large-scale fiscal action brought an overheating economy and rapid increase in the money supply. Because corporations could procure funds easily, they

invested large amounts into stocks, real estate, and even golf club memberships and artworks in order to utilize their surplus funds. On the other hand, because major corporations were depending less on banks for their financing, banks shifted their lending targets to small- and medium-sized enterprises. In particular, they expanded financing to construction, real estate, and non-banking enterprises. Such massive funds also flowed into all kinds of real estate investment.

Under such conditions, a “bubble economy” emerged. The Nikkei stock average rose above the 20,000-yen mark for the first time in January 1987 and reached 38,915 yen—the highest value ever recorded—at the end of 1989. Meanwhile, land values in Japan’s six major metropolitan areas more than tripled their 1985 level. Soaring asset prices, particularly of real estate, produced a cycle whereby corporations gained higher collateral strength, which in turn made it even easier for them to procure financing. One result was that corporations competed with each other to expand overseas.

Collapse of the Bubble

The three years between 1989 and 1991 were a time of great change in the world. The Tiananmen Square uprising occurred in June 1989, the Berlin Wall fell and Eastern Europe began democratizing in November, East and West Germany reunited in October 1990, the Cold War ended with the Malta Summit in December, and the Soviet Union collapsed in December 1991, bringing an end to the Cold War structure. In Japan, the death of Emperor Showa in January 1989 brought a new era called Heisei, and then the “bubble economy” collapsed in 1991.

The Nikkei stock average began falling in January 1990. What spurred this decline was a shift toward belt-tightening by the Bank of Japan. As a result of five reductions of the official discount rate from May 1989 until August of the following year, expectations for stock investments rapidly deteriorated and the Nikkei stock average fell below 15,000 yen in August

1982. The Tokyo Stock Exchange’s aggregate market value, which had peaked at 611 trillion yen, fell to 305 trillion yen by the end of May 1992, representing a loss of more than 300 trillion yen. Meanwhile, land values also began falling in 1991. This was sparked by tough total volume control against financing for real estate financial institutions that were implemented by the Ministry of Finance in April 1990. The result was a capital loss of approximately 110 trillion yen in 1991. Urban areas—and particularly Tokyo—experienced particularly severe plummeting of land values.

In the 1990s, the biggest problems for the Japanese economy were bad debts and financial crisis. In the summer of 1991, a series of misdeeds involving financing and securities, including compensation for losses and fictitious deposits, were uncovered, thereby negatively affecting confidence in financial institutions. Moreover, in 1991, the number of corporate bankruptcies that were direct results of the bubble economy’s collapse exceeded 10,000 cases and recorded total liabilities of 8.1487 trillion yen, which was the highest such figure ever posted. Of all businesses, those in real estate and construction were the hardest hit by the economy’s collapse. And consequently the financial institutions that had financed them were saddled with an enormous number of bad loans.

The Japanese government and Bank of Japan relaxed their tight-financing policy beginning in July 1991, and hammered out large-scale comprehensive economic measures in August 1982. Nonetheless, an economic environment characterized by a persisting sense of stagnation that would later be known as “the lost decade” was set to begin.

During this time, Japan’s deep-sea fishery was facing rapidly declining fishing allowances from the United States. This decline gained even more momentum in 1984 and thereafter. For Nippon Suisan, which had viewed fishing as one of its mainstay industries, the impact was severe. Despite managing to achieve good results until fiscal 1986, profits took a nosedive in fiscal 1987 and turned into a loss in fiscal 1990. The

fall had occurred much faster than anyone in management had predicted, and made cultivating a second

and then a third stable profit-making business to replace fishing an urgent task.

2. Business Field Reports and the Near-Term Vision

Formulating New Business Fields to Replace Fishing

The budget for fiscal 1987 showed year-on-year declines in both earnings and profit. The income and expenditure budget for offshore business amounted to just one-third that of the previous year.

The strategy for formulating the budget was as follows: 1) In offshore business, secure earnings by responding to all circumstantial changes, while avoiding overconfidence in own strengths in traditional business alone. 2) While noting that overseas business is growing, remember that North America is a particularly important base for fishing business. Improve earnings by reinforcing the management of each joint venture. 3) The fresh and frozen fish business has been a fish purchasing business since its foundation; develop the scale of sales and earning power. Desired results were obtained last year despite low fish prices; such results should be enhanced. 4) In the food products business, strive to reinforce new product development and selling power, and strengthen competitiveness by streamlining and improving efficiency.

At the time that plans in all business categories were compiled, the sales budget had fallen below the previous fiscal year's level. Indeed, the entire group was facing difficult circumstances. It was therefore necessary for board members to lead the way in establishing a revenue-earning structure, reinforcing selling power, and controlling costs. This led to the decision that all senior board members would take pay cuts beginning in April.

The "business field selection committee" presented a basic strategy in May. The strategy included the following analyses and points concerning business conditions.

a) Changes in the fishing business environment and

response: The fact that fishing has continued its predominance even after absorbing the effects of two oil crises demonstrates the appropriateness of previous strategy. While maintaining fishing's status as the company's "money tree", it will be important to rebuild the strategy within a rapidly changing environment. It is anticipated that fishing sales, which amounted to 73.1 billion yen in fiscal 1986, will reach to just 60% of this figure in fiscal 1991.

b) Strategy maintainability: In general, profits that are gained from a business's "money tree" are invested into growth fields and leading products. However, in Nippon Suisan's case, they have been reinvested into maintaining fishing business. The company has traditionally employed a strategy whereby declines in fishing business are covered by purchasing operations. However, this is a continuation of the "fishing as No.1" principle that began in past times of food shortages. Consequently, market development and R&D investment have had secondary importance.

c) Future topics: Reflecting on the above, the company must boldly venture into future growth businesses while preserving its "money tree". It will need to shift from a "production first" view to emphasis on sales and markets. And it must also move from being a harvest- and trading-oriented food products company to one based on development.

The basic strategy then presented the following three points regarding the desired path forward.

a) Engage in business that contributes to people's health through production, trade, and multilateral production of chiefly primary products.

b) Shift from being a conventional harvest- and trading-oriented company to development-based company in the broader sense in order to create new businesses based on the company's functions as a

manufacturer and technologies produced by R&D.

- c) As a business vision for the company's 80th anniversary, set a goal of 53.0 billion yen for new businesses.

Examples of candidates for new business include the following: in fishery: seeds/seedlings and aquaculture; in livestock: animal husbandry; in agriculture: seeds/seedlings and agricultural processing; in fine chemicals: natural seasonings, health foods, and pharmaceuticals; and in services: dining-out business, health and marine leisure, financing, and Harumi development projects. At the time, the company had already commenced activity in aquaculture, fresh fish sales, fine chemicals, natural seasonings, restaurants, and financing.

The strategy also presented specific measures for existing businesses.

- Offshore business: It will be necessary to downscale and reorganize *surimi* operations and take measures to handle surplus employees. Further, study additives and develop processing equipment to improve the added value of products. Develop product forms for yellowfin sole operations. Expansion of salmon/trout and crab fishery should not be expected. In southern trawling, it will be necessary to reorganize operations and reinforce earning power, respond to scaled-down fleets and aging vessels, and deal with surplus employees. Krill operations are stable for the moment, but reuse development remains an issue to be resolved.
- Overseas business: Improve earnings of joint ventures and stabilize their management foundation. For the UniSea Group, strengthen production facilities, develop supply bases for imported goods, and seek to become a general seafood business for fishing, processing, and sales. Get G.L.S. on track by securing stable raw materials.

For PESPASA, improve the earnings power of onshore plants, and cultivate mainline goods, such as hake fillet and Argentine shortfin squid. For EMDEPES, stabilize earnings by improving the added value of krill, hoki, and southern blue whiting. Work to stabilize the earnings of I.M.P. and W.I.F. In addition, build a sales network in the U.S., expand countries and species for purchasing, develop fishing grounds, and accumulate know-how in shrimp operations and their commercialization.

- Fresh and frozen fish: Develop general supplier functions. Establish directly-managed plants that function as manufacturers (including product development) and systematize processors. For commercial activities, engage in thoroughgoing individual management and improve earnings by employing suppliers that are closer to product origins, diversifying sales channels, and strengthening specified agents. Also, expand handled products, such as fresh fish, processed products, and seafood items other than fish.
- Food products: Improve earnings by reorganizing production plants, consolidating product types, creating a more flexible production framework that can immediately respond to sales conditions, and streamlining sales distribution. Expand the range of business and reinforce product development by diversifying feedstock from agricultural and livestock products and entering/expanding chilled food-related businesses. Develop and import products from overseas and exploit overseas markets.

Capital investment for fiscal 1987 was large at 15.3 billion yen, which was a figure on par with the

previous year's. This included construction of the *Chikuzen Maru* and expansion of refrigerated warehouse facilities in Seibu Reizo Shokuhin Co., Ltd. Additionally there was investment for streamlining, beginning with the dissolution of Nissui Senpaku. Nippon Suisan simultaneously made investments toward its own survival and for restructuring.

At the same time, Nippon Suisan obtained external financing of 13.4 billion yen by, among other activities, issuing Swiss franc-based straight corporate bonds equivalent in value to 7.6 billion yen in order to procure financing of 18.3 billion yen.

On June 13, the *Haruna Maru* caught fire and became a total loss. Then, on November 28, South African Airways Flight 295 crashed. Perishing in the accident were 38 Nippon Suisan employees who were due to replace the crew of a trawler operating off of the Cape Town coast.

On June 29, the company employed a “three division” structure—comprised of the Maritime Operations Division, Sales Division, and Food Products Division—in order to accelerate reform of its business structure. Deep-sea fishery, an undertaking in which Nippon Suisan had been a continuous participant since before World War II, was by definition a global business. In this connection, Vice President Minoda said, “Deep-sea fishery must not be thought of in terms of work methods or organization in a overseas or domestic territory—in other words, based on geographical criteria—but rather in terms of whether how work can be performed functionally and even efficiently. The success of Nippon Suisan's work depends on how it can secure products while maintaining cooperative relationships with other countries”.

The Maritime Operations Division was comprised of the fishing component of overseas business, with focus on offshore business, together with the North America Department, which was in charge of North America and expected to gain increasing importance as a strategic category for the future, and the International Department, which had responsibility

for other overseas business. The Fresh and Frozen Products Division became the Sales Division, and purchasing and sales functions that were traditionally overseas business were transferred there. This was done to create a structure in which purchasing and sales were linked on both the domestic and international levels. And food product-related duties of the Overseas Business Division were transferred into the Food Products Division.

Performance in fiscal 1987 showed that sales increased to 481.1 billion yen, or 103% of the previous year's figure, while net income fell conspicuously to 3.2 billion yen, or just 68% that of the previous year. Reasons for this included greatly lowered fishing allowances within the U.S.'s 200-nautical-mile zone, stagnating fish prices arising from a rapid rise in seafood imports due to the strong yen, a collapse in squid prices resulting from an internationally strong harvest, and falling *surimi* prices attributable to a growing percentage of poor-quality products in offshore purchasing. Although the food products business had improved earnings, the worsening balance of payments in the fishing business could not be checked. The company covered its dearth of ordinary income, which was the worst since the oil crisis, with gains on insurance claims and asset sales.

As the company was about to enter the new fiscal year at the end of fiscal 1987, Vice President Minoda said, “The truth is that, thus far, we have managed to make it through this admittedly difficult year, and circumstances remain such that we can continue to overcome them with effort”. He also declared that “reducing the Nippon Suisan's dependence on fishing earnings is imperative”. Here, he spoke of the need to raise productivity through enhancement and reinforcement by bringing greater efficiency and rationality to existing businesses, and the need to expand the company's range of business fields by proactively entering new businesses.

The company's basic strategy for achieving this included 1) firming up the earnings base by reinforcing business and sales capabilities and engaging in

commercial activity, 2) bolstering competitiveness by diffusing cost awareness throughout the company and comprehensively lowering costs, and 3) stimulating workplaces and raising employees' desire to succeed.

The following describes the strategy for each business.

- Maritime Operations Division: Rebuild the revenue system to correspond with extreme changes in the fishing environment in ways that include developing overseas businesses and review of the management system.
- Sales Division: Given the need to stably secure high-quality products and an ever-changing distribution environment, firm up the revenue base by reinforcing the sales structure. This should be centered on overseas and domestic bases and involve more than simply compensating for reductions in in-house catches and product biases.
- Food Products Division: Amid an intensifying environment generated by increasing imports of all food products on the back of the strong yen, firm up the revenue base by responding to internationalization and further reinforcing competitiveness in ways that integrate product development, production, and sales.

Among new businesses, production and sales of feed for fish farming produced consistent results. In the dining-out business, Nippon Suisan diversified by opening a seafood restaurant in Tokyo's Aoyama district called "dede" and operating seafood restaurants in partnership with department stores, shops specializing in seafood-on-rice bowls, and fast-food restaurants offering yakiniku menus. It also responded to growing consumption of fresh fish by setting up a "live fish team" envisioned as a business that vertically integrates everything from eggs and fry to feed, culture, transport, processing, and sales.

Worsening Business Performance as a Near-Term Vision is Prepared

In September of 1988, a "Near-Term Vision" was put forward by a "Near-Term Vision Committee" chaired by Vice President Minoda. The committee was formed in December 1987. Its membership was comprised of senior board members and included working groups formed around general managers of the company's departments.

The committee's objectives were to formulate a Near-Term Vision of the company and present a "new Nippon Suisan" by taking into account Japan's economy and the management environment. Its conclusions were to be premised on improvement and growth of existing businesses during the 1986-1988 reformation period that was set in the Fourth Planning Committee's plan of January 1986, and on the establishment of multilateral business fields for structural reform by the business field selection committee of May 1987. Its task was to prepare an "ideal form" and "desired form" of the company with a target year of 1995, which stood at the midpoint before the arrival of the 21st century.

"Top priority on the customer", "a solid technical foundation", and "behavior-focused performance" were established as new management guidelines. Moreover, "a global initiative to the sea and eating" was designated as a business field. The idea behind this designation was to see the sea not simply in terms of fish but as the mother of boundless possibilities.

Five main areas of business were established. Namely, they were the fishery business, which encompassed sales, fishing, marine development, aquaculture, and purchasing of frozen fish, fresh fish, *surimi*, and other forms of processed and terminal processed products, shellfish and seaweed, and other fishery products; the processed foods business, which involved sales, production, purchasing, and raw materials procurement concerning frozen foods, canned products, fishery paste products, chilled foods, retort pouch foods, dried foods, meat products, seasonings, and

beverages; the general distribution business, which covered cold storage and distribution; the services business, which was in charge of dining-out business, mail order sales, fish retail sales, direct sales, real estate, and marine leisure engineering; and the fine chemicals and pharmaceuticals business. Nippon Suisan sought to develop all of these businesses on a global scale.

As for its business objectives, Nippon Suisan sought to become a one-trillion-yen company by the early the 21st century, and to achieve sales of 750.0 billion and ordinary income of 15.0 billion yen by fiscal 1992.

Looking at main activities, in the fishery business, the vision sought to make Nippon Suisan a “leading seafood player” by forming a global production and procurement network and expanding sales routes in the world’s major markets. It saw the company’s fishing business as a tool for achieving this, and set about upgrading and applying long-cultivated systems and personnel in this area. It also sought to expand or newly establish overseas joint ventures, placing priority on South America but also beginning ventures with the Soviet Union. And it advocated promoting domestic and overseas aquaculture and expanding overseas purchasing as well as purchasing bases.

In the processed foods business, it called for Nippon Suisan to reform its production system by establishing key domestic production plants in Hachioji and the Kansai region. It also sought the development of operations in South Korea and Southeast Asia. In terms of its product groups, it called for expansion of chilled and retort pouch products and entry into the processed livestock products, seasonings (including sauces), dried foods, and beverages categories. It looked to expand the company’s processed agricultural products business and enter the seeds, aquaculture, and fresh products businesses. Additionally, it sought to diversify the company’s raw materials business by adding such items as flour, meat, and rice to *surimi* and other fish meat products. And it focused on bolstering selling power in terms of both quality and quantity from the standpoint that reorganizing branch offices and expanding sales locations will make the

company more customer-oriented.

In the general distribution business, the vision sought to expand and diversify Nippon Suisan’s refrigerated warehouse business and increase its warehouse and hold capacity by a yearly average of around 20,000 tons to secure 400,000 tons in the Group. It also sought to diversify the storage business by accumulating know-how on the handling of special-purpose items. It further advocated study toward entry into the refrigerated warehouse business overseas. It additionally looked to begin a frozen and chilled distribution business in the Kanto and Kansai areas with an eye to future nationwide expansion.

In the fine chemicals business, it sought to promote fine chemicals founded on biologically active agents that come from fishery products. It further aimed to enter the pharmaceuticals business through bulk manufacture of curative drugs that utilize these agents. And it looked to move forward with these activities based on collaboration with Nissui Pharmaceutical Co., Ltd.

And in the services business, the vision aimed to make this business an effective means of ascertaining market needs and obtaining long-term earnings. It looked to move forward by utilizing the company’s long-cultivated management resources as well as partnerships and joint ventures with other companies. It aspired to make the dining-out business the core of Nippon Suisan’s services business by developing seafood restaurant and fast-food formats and taking a multi-store approach. It further advocated research into new forms of fresh fish retailing, close study of the results, and utilization of these results to enter such retailing. It also looked to redevelop Nippon Suisan’s existing real estate business, and to expand its engineering business by developing and accumulating required human resources for offshore and onshore business. It also advocated taking on challenges in all other feasible fields.

Other items included in the vision included expanding the R&D system and clarifying its objectives to underpin the company’s position as a manufacturer

and raise efficiency, and studying relocation of Central Research Laboratory or establishment of a maritime laboratory. It also mentioned promoting use of information systems, rebuilding the organizational structure, and reforming the personnel system.

The Near-Term Vision was approved as the new medium-term plan by the board of directors in October 1988.

However, by this time, the U.S.'s fishing allowance for Alaska pollack to Japan—which had been one of the few remaining pillars of Nippon Suisan's fishery business—had already been reduced to zero, leaving only offshore purchasing. The announcement of this reduction was delivered to Japan from the U.S. in January, and it delivered a stinging blow to Nippon Suisan's business management.

The Nagasaki Branch, which had been engaged in west-water business, was closed on August 31, 1988. The Trawling Department and Northern Seas Department were eliminated when the Maritime Operations Division was reorganized, and administration of scaled back fishing business was inherited by the Operations Department and Tobata Branch.

As Nippon Suisan put the Near-Term Vision into effect, it also felt growing pressure on its business performance. In August, the company's mid-term dividend payment policy came under reconsideration. Although some wanted to see payments decreased, a decision on the matter was put off due to the availability of earnings carried forward and internal reserves. In September, a special production conference was held to receive an explanation of first-half performance and the Near-Term Vision. Addressing this performance, President Fumio Imanaga said, "In the face of a strong yen, increasing amounts of imported seafood, and liberalization of agricultural and livestock products, we must recognize that management predicated on rising fish prices will no longer succeed". Here, Imanaga noted that declining earnings in fishing business were due to delays in structural change—i.e., downscaling of Nippon Suisan's business—arising from an increasingly difficult business environment.

Imanaga also spoke of the fresh and frozen fish business, which theretofore had maintained superiority in the domestic market, by pointing out the need to rebuild the sales network, the function of which was eroding due to decreasing availability of attractive product catches.

In order to rectify its slow response to these environmental changes, the company became determined to spare no effort in reinforcing and thoroughly streamlining its business and sales capabilities, strengthening its competitiveness by reducing cost, and stimulating its workplaces. It further set about forcefully promoting improvements in the balance of payments of existing businesses, thereby restoring balance between sales and expenditure.

Nippon Suisan's investments and loans in fiscal 1988 reached 17.0 billion yen. In the Maritime Operations Division, 5.5 billion yen went to financing for operations bases (such as UniSea in North America and PESANTAR, EMDEPES, and S.A. in South America) and Nikko Suisan and 1.0 billion yen went toward converting the *Miyajima Maru* into a trawler. In the Food Products Division, 3.1 billion yen went to frozen noodles and cooked rice businesses and the development of new products, 2.5 billion yen went to refrigerated warehouse-related items, and 4.2 billion yen went to other items. These figures were appropriated by borrowing.

Worsening performance in the second half of fiscal 1988 forced Nippon Suisan to revise its targets downward. While year-long performance showed that sales had reached 464.0 billion yen, or 96% of the previous year's figure, net income had plunged to 1.6 billion, or just 51% compared to the previous year. The company continued to pay dividends by selling assets.

At the end of the fiscal year in March, Nippon Suisan designated the coming fiscal year 1989 as the "first year of the near-term future" and revamped its corporate philosophy, company creed, management policy, code of conduct, and corporate slogan.

- Corporate philosophy: To seek to become an internationally established general marine

and food corporation, and to contribute to better health and living among the public.

- Company creed: Creation and challenge
- Management policy: “Top priority on the customer”, “a solid technical foundation”, and “behavior-focused performance”
- Code of conduct: 1) Stimulate the workplace through ceaseless self-reform; 2) Seek to improve performance with a constant eye to profits; 3) Strive to become a company that is depended upon and trusted by society.
- Corporate slogan: Confronting marine and food issues from a global perspective.

The budget plan for fiscal 1989—the “first year of the near-term future”—was formulated under circumstances in which almost no increase in profit could be anticipated and continued payment of dividends was doubtful due to a business climate that offered no hint of a positive turn. Thus, the highest priority goals for the fiscal year were to secure earnings and build an earnings-producing system.

Beginning in fiscal 1987, Nippon Suisan’s operating income plunged as sales fell. The worsening operating income suggested not only deteriorating earnings from fishing but also weakening vitality within the entire company. The fresh and frozen fish and food products businesses that were expected to supplement fishing were stagnating, unable to maintain past performance. Moreover, the company’s management culture was not being reformed and little headway was being made in changing employees’ attitudes.

Fiscal 1989 similarly saw lower earnings and profits, as Nippon Suisan reported just 1.1 billion yen in profits from 437.7 billion yen in sales.

Already by December, a study toward revising the Near-Term Vision had begun. The vision was failing even in just its first fiscal year.

It should be noted that Nippon Suisan newly established a “Sumiri Operations Department”, “Logistics Department”, and “Service Operations Department”

on April 1. This move coincided with its effort to rebuild its businesses and actively move into new fields based on the Near-Term Vision. In the Maritime Operations Division, the “Operations Department” was abolished and the duties of its labor section were transferred to the Labor Department No. 1, and mother ship-type crab fishery was transferred to the Soviet Union and Europe Section. A new “Aquaculture Team” was also established.

Moreover, “AAA-21” (read “triple A twenty-one”) was commenced as a “movement to activate people and organizations” from the autumn. This was a three-year activity that sought to identify individual issues in specific business categories and then make reforms to address them. It was also designed to change the company’s organizational climate through voluntary activities.

Then, in January 1990, the Maritime Operations Division and Sales Division were merged to form the Fisheries Division. This was a step toward building an integrated production-sales system and tying it to the business structure. The result was a two division system comprised of the new Fisheries Division and the Food Products Division.

Nonpayment of Dividends in Fiscal 1990

Nippon Suisan’s fiscal 1990 strategy placed priority on 1) reinforcing corporate competitiveness and 2) strengthening the company’s business and sales capabilities.

The company established a “Business Administration Division” to promote management reform and a “Marketing Division” to strengthen the company’s selling power. President Imanaga was placed in charge of the former, while Vice President Minoda took charge of the latter. The Business Administration Division’s Corporate Strategic Planning Office, Finance & Accounting Department, and Systems Department studied business management systems, business operations systems, and awareness-raising targeting section heads. And the Marketing Division

was charged with clarifying sales strategy and implementing cross-cutting policies concerning customers, products, and services that reached beyond the jurisdictions of individual divisions. It was also given the responsibility of integrating the advertising aspects of sales policies, advertising activities, and each division in line with the corporate philosophy. These steps were designed to reinforce the selling power of the Fisheries Division and Food Products Division.

With an eye to realizing the Near-Term Vision, the Nippon Suisan launched a special committee in September to establish a foundation for preparing, implementing, and managing the progress of fiscal year budgets based on a medium-term three-year plan for the fiscal years 1991 to 1993.

In November, the committee began an examination of current mindsets, problem areas, and plan orientation in preparation for a medium-term management plan. It studied a new medium-term plan by using the three-year period between fiscal 1991 and 1993 as a time to establish a system for stably securing earnings and laying the groundwork for the next leap forward.

A new pay and personnel system was introduced in December 1990. Founded on the basic concepts of “merit-based pay”, “human resources development”, and “response to diversified values and motivations”, the new system changed organizational names from “department” and “section” to “group” and “team”, brought a shift from the board members-led system to one led by organizational leaders, reorganized employee classifications for onshore workers, and introduced course-specific personnel management and ability-based grade systems as well as performance-based pay.

In February 1991, the company decided to introduce a new budget preparation system into sales of the Fisheries Division and Food Products Division. The new system was first brought into a portion of business operations prior to full-scale implementation

the following fiscal year. The basic thinking here was to get all employees involved from budget preparation to progress management, engage in achievable profit planning that integrates all company strategies and the goals of each organizational level, and strive for autonomous category-based operations as a target management system that establishes organizational teams as the smallest profit management unit. The system also set priority management items at each organizational level and promoted organizational activities based on an administrative cycle designed to ensure budget attainment. The criterion for ascertaining the profit of each team was set as “contribution profit”; in other words, profit remaining after the team’s fixed expenses were accounted for. And the criterion for determining product profit was made “marginal profit”; in other words, profit remaining after variable expenses were deducted from gross profit.

Settlement of accounts in fiscal 1990 ended up in the red. Although sales reached 460.0 billion yen, net income recorded a deficit of 1.1 billion yen. The biggest blow to the company’s hopes for profitability was a slump in fishing that exceeded expectations. Here, poor performance in high-seas fishing grounds of the Bering Sea was particularly costly. Meanwhile, the food products business’s effort to break away from red ink became bogged down. However, in the fine chemicals business, Nippon Suisan received approval to market EPA as a pharmaceutical. This led to operations at the new Tsukuba Plant that produced better-than-expected results.

The cost of rebuilding the fishing business combined with 22.0 billion yen in investments and loans—which included increased financial charges in line with expanded borrowing and 10.0 billion yen in investment for a *surimi* plant in UniSea—meant that Nippon Suisan could not pay dividends in fiscal 1990 even if it sold off some of its assets.

3. Action Plan 93 and the Emergency Rebuilding Plan

A Tough Fight for Recovery

Of course the most urgent issues for fiscal 1991 were restoring the company's positive performance and building a framework that would allow resumption of dividend payments. Amid great changes in the business and social environments, it was thought necessary to reexamine whether or not structural reform and mindset-changing had actually taken place within Nippon Suisan's organization and climate and to morph them into a corporate constitution that can adapt to such changes.

At a March 1990 board meeting on formulation of the fiscal 1991 revenue and expenditure plan and cash plan, President Imanaga issued a directive ordering the preparation of a new medium-term three-year plan and calling on employees to attain its goals for fiscal 1991—the new plan's first year—with a responsibility and tenacity. The directive was made with full awareness that a company must continually increase its profits if it is to survive, and that Nippon Suisan's survival would be in doubt if it continued to operate under its present profit structure.

At a board meeting held following a shareholders meeting in June, Katsusuke Minoda was named Nippon Suisan's new president.

That same month, deliberations were held on a medium-term plan called "Action Plan 93" that targeted the three-year period between fiscal years 1991 and 1993. This plan was approved by a board meeting in July.

Action Plan 93 was oriented towards Nippon Suisan's rebuilding as a company. Its purpose was to build a solid corporate foundation by bearing in mind the difficulty Nippon Suisan was having in realizing its Near-Term Vision. Part of it was devoted to summarizing areas in which the Near-Term Vision was failing to become firmly established as an effective management plan. For its first fiscal year, Action Plan 93's most urgent task was to help the company break

away from its present doldrums and pave the way to positive performance over the coming three years. To make this possible, it was essential that it promote corporate restructuring that covered both physical and human aspects.

Action Plan 93's first priority was to reform and develop Nippon Suisan's business foundation while seeking to achieve the Near-Term Vision's goals. It sought to reinforce the company's revenue-earning foundation during its first fiscal year, reinforce this foundation during the second year, and complete structural reform in the third year. Benefits to be gained as the plan moved toward attaining these goals included better management quality, stronger competitiveness, and enhanced added value.

It deserves noting that the board of directors also held a one-year "board members' workshop" on management strategy in order to comprehensively promote operational and organizational reform.

Business operations for the first fiscal year included rebuilding the fishing business, streamlining the company as a whole while rebuilding systems, constricting borrowing that had grown to 120.0 billion yen while holding down costs, and strengthening business capabilities.

Sales in fiscal 1991 amounted to 444.2 billion yen, a figure representing lower earnings, as it was equivalent to 96% of the previous year's level. However, net income posted a positive figure of 600 million yen. Both ordinary income and operating income showed improvement, and thus some within the company felt that the company had finally stopped the bleeding.

One reason for this turnaround was completed adjustments to facilities and personnel in the fishing business. A total of 404 employees decided to retire early by taking advantage of the company's elective retirement scheme. The turnaround was also supported by strength in the *surimi* business and healthy sales of Epadel (a product made with EPA marketed by the fine chemical business) by Mochida

Pharmaceutical Co., Ltd. Moreover, the frozen food products business continued to show strong performance, and the canning business turned a profit by completely clearing out its stock.

However, the reason the bleeding was stopped was not because a mechanism for producing earnings had been completed. That year—the middle year of Action Plan 93—President Minoda moved to further clarify the plan's targets and strategy. Saying “We must not simply look at these figures and let the success they suggest go to our heads”, he wanted to “develop and reinforce Nippon Suisan's revenue-earning foundation” even more.

This was also the year when work efficiency activities began. These activities sought to analyze the work of individual employees in the fishery, food products, distribution, and head office management categories and then urge them execute their duties more efficiently.

Budgeted sales for the next fiscal year (1992) were unchanged for from fiscal 1991. Given forecasts that the market environment would make increasing sales difficult, the budget focused on cost reduction and improved financial strength. It also did not include the practice of patching together profitability by easily selling off assets, which was a method that had been used continuously in recent years.

However, at the end of the first half, circumstances suddenly changed compared to the previous fiscal year, and it was predicted that business performance would worsen. One reason was a reaction against *surimi* prices that had skyrocketed compared to the previous year. In addition, the company was forced to sell off assets when Nissui Finance disposed of large investment losses. Sales were down at 412.7 billion yen, or 93% of the previous year's level. And net income fell to the negative side by 300 billion yen. As a result, the company did not pay dividends for the third consecutive term.

Emergency Rebuilding Plan

At budgetary discussions for fiscal 1993, it was apparent that Nippon Suisan would not be resuming dividends soon—this despite the year's being the final one of Action Plan 93. Setting a proposed revision on top of the original plan as a minimum line, the board of directors prepared a working budget that was premised on improved after-tax performance and a review of expenses by each department.

In the fisheries business, the company sought to achieve movement toward secure profits and high added-value products, and set a 0.5% increase in fish prices as a target. In west water business, it closed Nikko Suisan. On the other hand, the food product business turned around and performed strongly with support from profits in the fine chemicals businesses and great strides in the frozen food products business; however, such performance did not make up for losses in other businesses.

Moreover, the dissolution of Nissui Finance in March 1994 added 9.2 billion yen in borrowings to special losses. The result was a total mid-term burden of 15.1 billion yen.

Fiscal 1993 sales fell below the 400 billion mark to 383.3 billion yen. Net income also reported a loss of 6.1 billion yen. Of this, 16.4 billion yen in special losses were covered through the disposal of marketable securities. Once again, Nippon Suisan did not pay dividends.

It should be noted that the Central Research Laboratory's Oita Marine Biological Technology Center was completed in Tsurumimachi, Minami-Amabe-gun, Oita Prefecture (Currently Saeki City) in December 1993. The center was situated on the waterfront as an R&D base in the aquaculture field. Its purpose was to serve as a foundation for Nippon Suisan's efforts to fortify its feed, eggs and fry, and fresh and live fish distribution businesses.

In November 1993, Nippon Suisan hammered out an Emergency Rebuilding Plan for the coming fiscal 1994. Given expectations that Action Plan 93 would

conclude before achieving its goals, the company extended the plan one year and added bold emergency measures added to it.

In the fiscal 1994 management policy (which included this emergency plan), President Minoda spoke of the company's determination to succeed, saying "Although Nippon Suisan stopped paying dividends in fiscal 1990, in truth the point at which we started sliding toward deficits was in fiscal 1987, when our main business—fishing—failed to turn a profit. That was the year when we started selling off assets. Over the course of the next six years that ended in fiscal 1992, our assets sales reached a staggering 63.0 billion yen, from which we had a capital gain of 41.6 billion yen. While our overall net income during this time totaled 4.6 billion yen, we were actually running a loss of 37.0 billion yen when this capital gain was subtracted". He added, "Over the past two decades or so, we have ventured down a dark road from our glorious past to our gloomy present. If we stay on this road, we face the distinct possibility of going bankrupt. Right now, we are faced with the most basic challenge of revitalizing our company. We cannot allow ourselves to sink to the ocean floor with everything we have. We must work to rebuild Nippon Suisan with bold emergency measures". The objectives here were to stop the company's flow of red ink as soon as possible and make it possible to resume dividend payments.

To achieve these objectives, the plan would seek to prevent assets outflow and achieve diminishing equilibrium. Measures toward these ends would include reduction and reassignment of the company's overall workforce, organizational integration and realignment, reexamination of business, contraction of fixed expenses, review of deficit businesses and preparation of improvement scenarios, lowering of distribution costs, execution of financial improvement measures, development and rebuilding of affiliates, and expansion of investment return.

In the Fisheries Division, the plan would bring the workforce down to the minimum level necessary by integrating the Offshore Operations Group and



Oita Marine Biological Technology Center

Tobata Branch. In the fishing business, it would seek to improve international competitiveness by continuing the company's presence in other countries while achieving lower costs. It would also strive to raise sales and productivity and enhance earning power by establishing a Surimi Operations Department. And in the fresh fish business, it would switch to fresh fish sales based on *ikejime* (killing fish immediately prior to cooking) and processed products while also conducting a fundamental reassessment of all stages between production and sales.

Moreover, in the food products business, the plan would endeavor to raise the productivity of processed foods sales and bring greater efficiency to fish sausage/ham and canning businesses.

During the process of settling on the fiscal 1994 plan, it was confirmed that the plan would lay the managerial groundwork for raising profits sustainably, rather than delivering stronger performance instantaneously, and that it would be a top-down plan. It was also decided that progress management would be conducted once every two months.

However, the company could not expect to achieve the Emergency Rebuilding Plan's intended results in fiscal 1994. Although it was moving forward with internal reform of its own accord, its effort was not bearing fruit in its relationships with customers and the market. Consequently, Nippon Suisan decided to begin a follow-up medium-term management plan that would present new trends in fiscal 1996. It also decided to implement an Emergency Rebuilding Plan for an additional year. This was a single-year plan for

fiscal 1995.

In August 1994 an explanation of the single-year plan for fiscal 1995 was presented to a special board meeting called to discuss important business. Under the plan, fiscal 1995 would be positioned as a “period to prepare Nippon Suisan for alignment with new growth trends as a manufacturer with special advantages in fishery”. The plan’s concept was centered on three “*shinkas*” (homophonous words meaning, respectively, deepening, evolution, and growth) and positioned under the banner “the year of *shinka*: realizing new aspiration and action”. Under the first *shinka* (deepening), Nippon Suisan would fully execute voluntary reforms to break away from deficit operation and promote efficient management, and deepen its efforts to tackle problems that were not addressed in fiscal 1994. Under the second *shinka* (evolution), the company would study changes in the marketplace and among customers, and use what it learns to accelerate bold measures to ascertain problems and transform its functions. And under the third *shinka* (growth), it would enhance recognition of Nippon Suisan’s true worth by growing and expanding its business activities in order to continuously provide value to the marketplace and consumers.

The board held discussions on what represented Nippon Suisan’s main business, and on whether the company was “selecting” and “concentrating” on business in the true senses of the words. The board concluded that “main business” is business that is important for the company’s growth, and business that has high productivity and competitiveness. It felt that “selection” should take into account level of leadership in the marketplace, earning power, clear competitive advantage, application of company strengths, and other factors based on evaluation of current conditions and relative positioning. And it saw “concentration” as the pulling together of management resources—in other words, human resources, capital, and technologies—into selected businesses, and the sharing of common functions and support functions.

It was further concluded that, for Nippon Suisan,

the yardstick for measuring selection and concentration was success as a “food products manufacturer with special advantages in fishery”. For Nippon Suisan, being a “manufacturer” meant generating earnings by supplying value (represented by cost performance and attractiveness) to targeted customers through products developed around technology.

At the November 1994 board meeting at which the fiscal 1995 plan was approved, President Minoda made the following statement: “In fiscal 1991, we did not pay dividends. We formulated Action Plan 93 to make reforms toward resolving this situation, but unfortunately the plan failed to reach all of its aims. That is why we have formulated an Emergency Rebuilding Plan and are making a company-wide effort to implement it. Although we successfully achieved most of our first-half goals in the previous mid-term settlement, we have not carried this success through the entire year. [Part omitted] The Emergency Rebuilding Plan seeks to reduce stocks, borrowings, and personnel by downsizing management resources. However, simply downsizing will cause the company to atrophy. That is why I want to prepare a growth-oriented plan for next fiscal year. It is extremely regrettable that achievement of the Emergency Rebuilding Plan’s goals is in doubt. I am concerned that Nippon Suisan will be unable to attain any of its objectives if it cannot implement carefully formulated, fully understood, and fully prepared plans. This is why I am asking all board members to clarify into concrete form those areas under their responsibility where goals have not been reached”.

The fiscal 1995 budget under the plan was not the kind of partial optimization-based bottom-up budget that had been used in the past. Instead, it was formulated in a top-down manner from a total optimization-based standpoint. It set borrowing at 100 billion yen or less and did not include any new large-scale capital investment. It prepared a 2.0-billion-yen strategic special reserve for operational considerations with a ceiling of 3.0 billion yen.

Focus points in actualizing the management plan

were 1) accurate and speedy progress management and performance evaluation, 2) thoroughgoing accomplishment based on quick execution of decisions, and 3) bold selection and concentration of management resources.

On the business category level, the plan called for the setting of individual stock standards and efforts to promote stock reductions. And on the company level, it noted the need to promote “total cost innovation”. To accomplish this, it called for the redefinition and clarification of items and setting of goals by seeing management mechanisms, operational mechanisms, and organizational and personnel aspects as forms of cost. In addition, it called for the introduction of a new system and maximization of user benefits based on newly established system guidelines. It also called for the standardization and full use of information. Cross-cutting company-wide products were implemented to make maximum use of this new system.

At 5:46 A.M. on January 17, 1995, the Great Hanshin-Awaji Earthquake struck with a magnitude of 7.5. The disaster took the lives of some 6,500 people. Although all of Nippon Suisan’s employees were safe, approximately 200 of them suffered damage to their houses or other property. The disaster caused the Osaka Branch’s online system to shut down and damaged the production line at the Itami Plant, causing it to be inoperable for several days. The Osaka Branch continued operating with employees who were capable of commuting to the office. Nippon Suisan provided canned goods and fish sausages to the afflicted Hanshin region as relief supplies.

In January 1995, discussions between Nippon Suisan and the All Japan Seamen’s Union resulted in an agreement to rebuild trawling operations. The agreement reduced Nippon Suisan’s trawler fleet of six vessels to two through sales to overseas joint ventures or scrapping. It also led to the dismissal of all 716 crewmen and office workers affiliated with the Tobata Branch. Of these employees, 401 were rehired and 125 were transferred to other companies, etc. Nippon Suisan covered the approximately 14.0 billion

yen in special losses it incurred this fiscal year, which included losses associated with the agreement, by selling off marketable securities and other assets.

Fiscal 1994 sales stood at 400.9 billion yen, or 105% of the previous fiscal year’s sales. Net income was in the black by 400 million yen.

For its fiscal 1995 business plan, the company decided to conduct business with focus on the break-even point and based on the single-year plan. The plan emphasized the following points:

- 1) Aim for a three-pronged revolution comprised of seeing invisible costs, reducing distribution costs by 30% while reducing cost price (including overseas transfer) by 50%, and doubling productivity.
- 2) Bring in fishery business producers’ profits. Eliminate mismatches between policy and execution by providing the equipment needed to be a manufacturer.
- 3) Make every effort to promote awareness of return for investment.

To satisfy these points, Nippon Suisan determined to divide its work management into four classifications: manufacturing, partnerships, trade, and hedging. It also saw division of commodities as an essential element of a new business system.

Particularly in food products, the division of Nippon Suisan-made products and purchased products was an important issue. Urgent tasks included bringing commercial and product distribution in line with price on the sales side, and integrating production bases (and particularly establishing overseas production bases) on the production side. Moreover, the company recognized that if unit prices were to be lowered, then expanding sales and engaging in mass selling were essential. It also noted the necessity of completely controlling distribution costs with integrated distribution.

Board of directors’ strategic study meetings that were attended by all board members commenced in May 1995. The meetings analyzed stagnating performance from all angles and included repeated and thorough discussions to illuminate causes and find

solutions. General managers also participated in the meetings to promote study from a company-wide standpoint. The meetings resulted in a shared awareness of problems facing Nippon Suisan that reached from the president down to board members and general managers.

Yasuo Kunii was named Nippon Suisan's new president at the annual meeting of shareholders held in June.

Sales in fiscal 1995 fell to 383.4 billion, or 96% of the previous fiscal year's figure. Net income fell back into the red by 3.5 billion yen.

Part 2 Diversification in the Fisheries Business

1. Shifting from Remote Business and Foreign Trade to Overseas Business

Overseas Joint Ventures that Started as "Remote Businesses"

Nippon Suisan's overseas joint ventures began with "remote businesses" immediately after World War II. From then until the early 1970s, Nippon Suisan engaged in fishery resources development that was based on trawling primarily in developing countries. However, with the emergence of "resource nationalism", operational risks were generated from increasing economic demands and basic contract cancellations. Nippon Suisan responded by shifting its operations to developed and semi-developed nations. Developed nations represented lower risk, as they had stable political environments and utilized contracts between private enterprises and individuals that helped ensure that contracts were honored. Around the mid-1970s, Nippon Suisan studied Brazil, Argentina, Chile, the United States, Canada, and other nations as possible partner countries. These studies led to the opening of trial operations by the *Kirishima Maru* off the coast of Chile. Nippon Suisan also gained a foothold in herring roe and frozen fish imports on the Canadian west and east coasts.

In 1976, Nippon Suisan opened liaison offices in New Zealand and Argentina to begin gathering information on trends in partner countries. In some cases, developing countries and semi-developed countries wanted not only to establish their fishing industries but also comprehensive development that included

construction of refrigerated warehouses, canneries, and shipbuilding facilities as well as operational infrastructure. Resolving these issues in political terms took time.

Nippon Suisan sought to secure fisheries resources in its remote businesses through a variety of avenues. As its existing fishing areas shrank, it needed to find ways to expand to alternative fishing grounds. Accordingly, it endeavored to develop products by, for example, exploiting species that it had not hitherto utilized. This was in addition to its conventional practice of purchasing products while providing production guidance through partnerships with fishery businesses in partner countries. It also developed fishing grounds in international waters that were outside countries' 200-nautical-mile zones. And naturally it did not neglect to also strengthen its existing joint ventures.

As of the end of fiscal 1977, Nippon Suisan's major overseas joint ventures were as follows:

- Australia: Northern Research (N.R.P.); shrimp trawling
- Indonesia: W.I.F. and I.M.P.; shrimp trawling
- Papua New Guinea: New Guinea Marine Products Pty., Ltd. (N.G.M.P.); shrimp trawling
- Malaysia: Sarawak Suisan Sdn, Bhd; shrimp purchasing
- Spain: Diego Nippon S.A. (DIPPON); octopus and squid operations
- Ireland: Atlantic Fisheries Development Co., Ltd.

(A.F.D.); trawling

- Maldives: Maldives Nippon Corporation., Ltd.; tuna and bonito canning and processing

Continuing to face shrinking existing fishing grounds as it entered the 1980s, Nippon Suisan's remote businesses sought to expand business using trawling that the company had cultivated through joint ventures and partnerships with resource countries and, by doing so, secure products and work areas and effectively sell the products of operating vessels. This effort took a variety of forms, including developing the management of existing joint ventures, studying and commercializing new development projects, promoting direct sales of products produced by Nippon Suisan vessels, and bringing in products from joint ventures into Japan and exporting them to third countries. It also included product purchasing, technical guidance, and sales of Nippon Suisan products.

Sales that had stood at 13.7 billion yen in fiscal 1977 grew to 21.0 billion yen in fiscal 1981.

Nippon Suisan was particularly focused on developing independent businesses in South America.

Japan's fishery companies were directing their attention to undeveloped fishery resources of Chile and Argentina. In Nippon Suisan, the Remote Business Department took charge of these areas by setting up local corporations to engage in fishing and processing. In 1976 it began trial trawling in fishing grounds off the coast of Chile that led to the establishment of EMDEPES in 1978. Nippon Suisan dispatched the trawler *Kirishima Maru* to EMDEPES in 1978 (followed by the *Fuji Maru* the next year) to begin hake fishery. Because these grounds also had plentiful horse mackerel stocks, it also began developing horse mackerel *surimi* there as it simultaneously wound down production of north-sea *surimi*.

In Argentina, Nippon Suisan prevailed in international bidding for the right to develop resources in Patagonia in 1978. It began trial operations there that same year. In 1981 it set up PESPASA, to which it dispatched the *Rokko Maru* and *Kasuga Maru* to fish for hake, hoki, and Patagonian toothfish and develop

fishing grounds for whiskered velvet shrimp and Argentine shortfin squid. In addition to trawling, PESPASA constructed processing plants and refrigerated warehouses in Puerto Deseado in 1982.

In 1988, Nippon Suisan concluded an agreement with Mejino Company to set up a joint venture for *surimi* production. The same year, it established PESANTAR to conduct trawling and dispatched the *Kongo Maru* and *Rikuzen Maru*. These new companies pioneered Argentine *surimi* operations.

Nippon Suisan provided technical assistance in fishery in response to requests from developing countries. It also worked to stably secure catches through trawling for shrimp and other fish. However, changes in social circumstances produced cases in which Nippon Suisan was forced to transfer its assets to local interests. The company responded by redirecting its investments to other countries and regions.

In 1972, Nippon Suisan set up Diego Nippon on the Spanish territory of Las Palmas. Diego Nippon engaged in octopus and squid fishery off the coast of northwest Africa and sold catches to Spain and Japan. From 1977 it possessed 18 trawlers.

As shrimp consumption expanded during the era of rapid economic growth, Nippon Suisan developed its business with focus on shrimp in Asia and Oceania. This focus continued into the 1970s.

In Indonesia, W.I.F. and I.M.P. were established in 1970 with joint investment by Nippon Suisan and several other companies. These companies engaged in shrimp trawling in the sea area near West Irian with trawlers that were previously assigned to west-water



The *Kirishima* after being transferred to EMDEPES



I.M.P.'s trawler *Aman No.2*



Unloading of a shrimp trawler

business.

Sarawak Suisan was established in Malaysia as a joint venture in 1974. Its business involved cargo booking and processing of shrimp. It should be noted that Toei Reefer Line Ltd., a company that entered into a tuna transport partnership with Sarawak Suisan in 1980, took on shrimp transport.

In 1983, Bangladesh's I.F.L. began shrimp trawling. Nippon Suisan helped it proceed smoothly by loaning three trawlers. However, Nippon Suisan was forced to pull out in 1985 when Bangladesh instituted new laws requiring that ships' registries be shifted to Bangladesh.

Nippon Suisan also made numerous advances to develop non-shrimp resources in Oceania.

In New Zealand, S.P.L. was established in 1961, followed by Sealord Development (S.D.L.) in 1971. Hokuyo Suisan invested in both. S.P.L. engaged in trawling while S.D.L. conducted stationary net fishery.

In 1993, Nissui NZ was launched in New Zealand. Here, Nippon Suisan operated in a partnership with S.P.L. by sending its trawler *Akagi Maru*, which was renamed the *Pakura*. In May 1995, Nissui NZ purchased Nippon Suisan's *Ibuki Maru* and operated it under a new name, the *Tabaraki*.

In the Maldives, Nippon Suisan established Maldives Nippon in 1977. The new company began producing canned bonito and tuna products using local resources in 1978. Products were exported to Europe and the United States. However, Nippon Suisan withdrew from this business in 1982 due to

poor profitability expectations.

In Papua New Guinea, Nippon Suisan set up New Guinea Marine Products Pty., Ltd. in 1971 to trawl in the Gulf of Papua. It also built a refrigerated warehouse there in 1975.

Nippon Suisan's trawling business developed new fishery resources in Europe as well.

In 1974, Nippon Suisan established Atlantic Fisheries Development in Ireland and commenced to exploit undeveloped fishery resources of the north-eastern and northwestern Atlantic Ocean near Ireland. In 1977 it began operating in waters near Europe, as it could no longer work in the northwestern Atlantic due to the setting of American and Canadian 200-nautical-mile regulations zones.

Development of Foreign Trade

Similarly, purchasing of seafood through trading became an important means of securing fishery resources for remote businesses that were expanding trawling overseas.

The Trade Department's activities, which began in North America, came to form the core of Nippon Suisan's trading business.

In 1972, Nippon Suisan established a Seattle liaison office under the Trade Department for the purpose of purchasing Alaskan seafood products. This office was reorganized and formed into Nippon Suisan (U.S.A.) in 1974.

Meanwhile, it established the Universal Seafoods, Ltd. in Seattle in 1974. This enterprise processed and

packed king crab and snow crab on a Liberty factory ship moored in Dutch Harbor. In 1977 it built a base for procuring and processing Alaskan crab and other seafood by building a refrigerated warehouse and acquiring Vita Food Company's Dutch Harbor plant. However, falling crab stocks in the late 1970s negatively affected profitability.

At the same time, Nippon Suisan established the Aberdeen Trading Co., Ltd., in Hong Kong in 1975 to serve as a China-Southeast Asia base for seafood imports. And in 1981, the Singapore liaison office was expanded and reorganized to form Nippon Suisan (Singapore) Pte, Ltd.

In 1980, the Trade Department, which had posted a deficit the previous year, moved to realize appropriate product supply in collaboration with specific product teams of the Fresh and Frozen Products Sales Department.

Establishment of the Overseas Business Division

The Remote Business Department and Trade Department were merged in 1984 to form the Overseas Business Division. Supervision of the shrimp purchasing business was moved to the Fresh and Frozen Products Division. Around this time, Nippon Suisan began expanding its view to include aquaculture and it took steps to enter the large shrimp culture market. A Shrimp Aquaculture Team was set up within the Remote Business Department No. 3 in September

1985.

It began a joint venture for shrimp culture in the suburbs of Bangkok, Thailand, in 1985. The following year it set up Bangkok Shrimp Cultivation Co., Ltd. (B.S.C.). For several years thereafter B.S.C.'s production went according to plan. However, later contamination of culture ponds and other problems led to continuing sub-par performance that resulted in Nippon Suisan's withdrawal.

Nippon Suisan was also involved in aquaculture as well as fishery in Chile. An international fishery cooperative began a project to stock rivers with chum salmon in 1969.

Beginning in 1982, Salmenes Antártica (S.A.) promoted the salmon culture industry under the Chilean nonprofit corporation Fundación Chile. When S.A. completed its work, the right to continue this work was put to international bidding in 1988. Nippon Suisan acquired this right the following year and began culture of salmon and trout in Chile. It later constructed processing plants and refrigerated warehouses and established an integrated system for salmon culture that included fertilization and feed.

Although Nippon Suisan had a previous friendship and cooperation agreement with China's largest fishing company, China Federated Fishery Company, it agreed to engage in new fishery cooperation with China in 1985. It dispatched captains to China's first deep-sea fishing fleet, provided guidance in fishing, and began purchasing catches. And in 1986 it set up



A dry pellet plant operated by Salmenes Antártica that was completed in August 1989



A fish preserve operated by Salmenes Antártica



G.L.S.

a Beijing liaison office to serve as a portal for business with China.

At about this time, Nippon Suisan also began processing Alaska pollack roe by outsourcing operations to Yantai Trading and Refrigeration Company. It exported products to Japan.

In 1987 it began purchasing cultured shrimp after investing in a shrimp aquaculture company in Zhuanghe, Dalian. That same year, it began exporting meal for use as eel feed to Fisheries Development Company in Xiamen. And the following year, 1988, it established Xiamen Ryuwa as a joint venture with this company. The venture processed broiled eel for export to Japan.

In the Soviet Union, Nippon Suisan helped establish Okhotsk Fishery Co., Ltd., as a joint Japan–Soviet venture in January 1989. Nippon Suisan leased out the *Nojima Maru* to land and process Pacific herring, and *shishamo* smelt.

In Northern Europe, Nippon Suisan set up a Copenhagen liaison office in 1985 to purchase frozen seafood. The office was later moved to Amsterdam in 1989 and incorporated into Nippon Suisan (Europe), B.V.

In North America, Nippon Suisan's business expansion accelerated from the latter half of the 1980s.

In 1984, Nippon Suisan entered into a partnership with Fishking to manufacture crab-flavored *kamaboko*. Seeing this as a first step toward developing its business in North America, Nippon Suisan exported crab-flavored *kamaboko* that it produced at its Hachioji General Plant to Fishking, which in turn sold the product in the United States.

In 1986, Nippon Suisan took on increased capital of Ocean Products, Inc., a salmon farming company in Maine, and sent employees to it to study farming technology.

Universal Seafoods, which was Nippon Suisan's primary base for business in North America, became a 100% Nippon Suisan Group company in 1986. At this time, the company's name was changed to UniSea. Nippon Suisan acquired its processing ship *Ommisea*, built new facilities for producing processed seafood at its Redmond plant, and used it as a conduit to begin production of crab-flavored *kamaboko*.

Meanwhile, Nippon Suisan established G.L.S. in 1985 to begin onshore production of *surimi* at Dutch Harbor. At Japan–U.S. private-sector fishery talks held in 1984, the two sides agreed that, in exchange for receiving U.S. fishing allowances, the Japanese side would purchase Alaska-produced Alaska pollack products that were in addition to its offshore purchases of Alaska pollack. At that time, American companies lacked production capability and had to develop their functions on their own.

Through these two companies, Nippon Suisan came to possess general business functions that covered fishing, purchasing, processing, and sales on the North American west coast.

However, UniSea's processed seafoods arm was suffering from a weak sales section, deteriorating production line operation caused by mismatches between produced products and market needs, and stagnating refrigerated warehouse section. These circumstances led Nippon Suisan to overhaul the processed seafoods business in January 1988. Redmond's refrigerated warehouse section, crab sticks section, and sales section were spun off to create Unisea Foods, Inc. and become a production base for Nippon Suisan's Food Products Division. Around this time, Nippon Suisan also expanded the number of independent crab catcher boats amid signs that crab stocks were rebounding.

In 1988 Nippon Suisan decided to integrate management by making the president of Nippon Suisan (U.S.A.) a board member in order to unify the

activities of North American group companies under the Head Office's strategy. Moreover, in addition to taking on integrated management duties, Nippon Suisan (U.S.A.) was made the contact point for the Sales Division and Food Products Division. It was also given responsibility for purchasing of North American products, sales of *surimi* produced by G.L.S. and other products within the United States, promoting joint ventures, and gathering information on U.S. domestic fishery.

Furthermore, UniSea absorbed G.L.S. in 1989 to unify Alaskan operations. And, as a countermeasure against the U.S.'s setting of quotas for domestic interests (DAP), UniSea also built a second plant and made securing Alaskan whitefish resources and production of *surimi* at Dutch Harbor its main businesses.

Overseas Business in the Food Products Sector

Nippon Suisan in overseas products procurement in not only fishery but also the food products field.

In Taiwan, Nippon Suisan began importing frozen edamame from Tai Mei Food Industrial Corp. in Kaohsiung in 1973. It also expanded this business by moving into China in the mid-1990s. In 1993 it began

producing salted edamame that were developed by Nippon Suisan and gradually expanded operations. It also began cultivating and exporting black tiger shrimp in 1984; however, over-cultivation exhausted cultivation ponds and forced Nippon Suisan to end this activity after five years.

In South Korea, Nippon Suisan received a request for food products-related technical guidance from Dongwon Industries Co, Ltd., a major fishery company, in 1987. This led to the launching of Dongil Frozen Foods Co., Ltd., as a joint venture. The new company produced *gyoza* and other products that it sold in South Korea through Dongwon Industry's sales network as well as exported to Japan. Dongil Frozen Foods was merged into Dongwon F&B Co., Ltd., in December 2002.

And in Thailand, Nippon Suisan established A&N Foods as a joint venture with Apitoon, a seafood processing company. There it built a plant for producing crab-flavored *kamaboko*. Nippon Suisan's plan was to export crab-flavored *kamaboko* to Europe, where sales of the product were growing, in line with the appreciating yen. However, ultimately Nippon Suisan withdrew from the company after transferring its share to Apitoon in November 1991.

2. Moving from Fresh and Frozen Fish Sales to the Marine Products Business

Expanding Seafood Purchasing

Until the mid-1980s, the business of procuring and selling fresh and frozen fish was called "fresh and frozen fish sales". The focus of procurement was varied and included seafood by Nippon Suisan's fishing and remote business arms, imported products by the trade arm, and seafood bought independently in Japan and overseas as part of fresh and frozen fish sales.

From the mid-1970s, Nippon Suisan stepped up its fresh and frozen fish sales activity in anticipation of shrinking fishing business.

In fiscal 1977, Nippon Suisan domestic sales of fresh and frozen products broke down as follows: 33.2%

from fishing by Nippon Suisan or affiliates, 54.9% from domestic purchasing, and 11.9% from overseas trade. Just a few years before, catches by Nippon Suisan accounted for 70% of all sales. Thus, the fiscal 1977 figures reflected Nippon Suisan attempt to reverse the share of purchased/traded products so as to control the effects of new 200-nautical-mile zones. While fishing accounted for a high percentage of earnings, it was declining in terms of quantity, and thus the increase in domestic purchasing and foreign trade business served to compensate. However, thereafter the domestic purchasing and trade businesses faced difficulty securing gross profits on sales while buffeted by changing fish prices.

Nippon Suisan reorganized its *surimi* sales in fiscal 1980. It expanded its staff of *surimi* sales engineers to help it ascertain consumer needs and reflect these needs on production and sales. It also changed its branch-based sales management system to a block-specific sales system in order to rearrange increasingly complicated *surimi* sales routes and achieve more efficient sales. In its effort to improve sales routes, Nippon Suisan developed and strengthened wholesale dealers existing between producing and consuming districts.

In January 1981, it implemented a restructuring of its Sales Division that abolished the Cold Storage Sections of the Tokyo, Nagoya, and Fukuoka Branches. It also placed cold stores that had operated under these sections within an independent framework.

In April 1982, Nippon Suisan set up a two-department system made up of the Fresh and Frozen Products Sales Department and Processed Foods Department to engage in more fine-tuned management with an eye to expanded business. The Fresh and Frozen Product Sales Department No.1 took charge of sales of all products, while Department No. 2 was given responsibility for sales and distribution of oils and meal. At the same time, cold stores were separated from the branches and placed under the control of the Distribution Section of the Sales Division.

The next year, fiscal 1983, the Fresh and Frozen Product Sales Department No.1 underwent even further compartmentalization. Section 1 was placed in charge of shrimp; Section 2: *surimi*; Section 3: tuna; Section 4: overseas frozen fish, krill, and whale; Section 5: squid and northern frozen fish; and Section 6: salmon, trout, eggs, and crab. Fishing, imports, and domestic purchasing were placed under integrated product-specific leadership to achieve specialization. The priority issues for 1983 were strengthening collaboration with the Offshore and Overseas Business Divisions and reinforcing product team activities, including those in the Head Office, branches, and Offshore and Overseas Business Divisions. Handled volume that year reached 553,000 tons and had a

monetary value of 290.0 billion yen.

In fiscal 1984, the Sales Division was split into the Fresh and Frozen Products Division and the Food Products Division. As a result, “fresh and frozen fish sales” came to be seen as a full-scale “business”. The purpose of the split was to allow Nippon Suisan to buy and sell fresh and frozen fish as a general supplier while maintaining sales as a foundation. The aim of this restructuring was right on the mark, as positive results appeared from that very fiscal year. Shrimp, salmon, and crab, which are particularly susceptible to market movements, were placed under the Fresh and Frozen Product Sales Department No.1. Although Nippon Suisan had integrated overseas purchasing for shrimp, it was efforts to reinforce team activities (including those of branch offices) that allowed it to make swift reactions to market trends. Additionally, the strong market allowed achievement of desired goals.

Fiscal 1985 saw total sales of fresh and frozen products reach 569,000 tons with a monetary value of 301.8 billion yen. It was around this time that the supply of seafood products underwent a major shift. In addition to slackening supply due to international regulations, growing supplies of cultivated shrimp from Southeast Asia and farmed salmon from Northern Europe brought changes to the market that led to competition among fish species as well as between cultured and natural products. Moreover, seafood supplies were becoming abundant and the appreciating yen was attracting more seafood imports. Meanwhile, ample financing and falling interest rates led to a structure whereby companies possessed and turned over large inventories. With inventories remaining large, spot purchases by buyers became the primary practice. Thus, primary buyers took on higher risks in that they had to retain running inventories.

Three primary challenges faced Nippon Suisan’s fresh and frozen business: securing commodities, streamlining distribution, and actively developing the cold storage business.

To streamline distribution, Nippon Suisan worked

to shrink inventories and set about raising its inventory turnover rate. In January 1986, it tackled the distribution issue by separating its Refrigerated Distribution Department.

As for its cold storage business, Tobu Reizo Shokuhin's 10,000-ton Coldstore No.2 began operating in August 1985, followed by Kinki Reizo Shokuhin's 10,000-ton cold store and Kitakyushu Reizo Shokuhin's 12,000-ton cold store in March 1986. At the same time, a 10,000-ton cold store was under construction at Hakodate Teion Reizo, as was a 9,000-ton cold store at Sendai Hinomaru Reizo. The Fourth Planning Committee decided to reinforce the company's revenue base by independently reestablishing the cold storage arm as a sales and cold storage business, securing stable earnings, and promoting expanded cold store capacity at every opportunity.

In fiscal 1986, the environment surrounding the fresh and frozen business changed greatly. The cause was a change in fish distribution. For example, small-lot purchasing, spot purchasing, and imports were becoming increasingly common. In the case of shrimp, the quantity of cultured shrimp and black tiger brought into Japan soared. This quantity remained high despite a surplus and led to plummeting prices. At the same time, salmon and tuna prices stagnated. Performance remained flat as sales of offshore *surimi* lagged due to high prices and prices of fish feed and oil products fell.

In February 1987, the General Development Office's Feed Research Team began experiments toward establishing cultured fish feed manufacture and sales as a business. This field had been identified as a promising direction in which Nippon Suisan should proceed in the future. The goals here were to achieve comprehensive use of coastal mass-catch fish species (such as sardines and mackerel) and vertical integration of cultured fish.

Expanding Domestic and Overseas Purchasing

In July 1987, the Fresh and Frozen Products Division

was re-launched as the Sales Division. This move marked a shift toward a unified sales and purchasing system that incorporated overseas purchasing.

In fiscal 1987 sales reached 620,000 tons valued at 307.2 billion yen. While these figures surpassed those of the previous year, Nippon Suisan's balance of payments fell steeply into the negative side. Among the causes were falling *surimi* prices caused by over-production and plummeting squid prices arising from a bountiful international harvest.

During this time, Nippon Suisan sought to expand its seafood processing bases in production areas. It began establishing bases prepared to handle chilled fish distribution by, for example, building a processing plant in Seibu Reizo Shokuhin and subcontract plants even in Tokyo.

In the cold storage business, as well, Nippon Suisan expanded the capacity of Seibu Reizo Shokuhin and Tobu Reizo Shokuhin by 12,000 tons and 24,000 tons, respectively.

In November 1988 Nippon Suisan began a live fish business by establishing the Harumi Live Fish Center. This was an important step toward building a major integrated business for the future to be linked to existing businesses, such as aquaculture, sales of fishery feeds and fry, live-fish transport, and meal.

Nippon Suisan also began seafood processing at an overseas location. This involved Alaska pollack roe processing at Yantai Trading and Refrigeration Company in China.

The challenge for fiscal 1989 was to establish the company's earnings structure by improving the earnings rate, raising sales efficiency, differentiating products and services, and arranging and expanding business fields.

According to the Near-Term Vision, fields to be developed in the future were meal, shrimp, salmon, tuna, fishery feed, fresh fish, and live fish. These fields were expected to have high market appeal and produce strong market-wide growth rates, although all except meal required strengthening. Areas in which Nippon Suisan had an advantage but needed to secure earnings

by quantitatively expanding its presence in terms of market appeal were crab, squid, Alaska pollack roe, and *surimi*. Areas in which it had no advantage and little market appeal were octopus, Pacific herring, herring roe, and salmon roe. Nippon Suisan's steps forward were planned based on this analysis.

Nippon Suisan also continued to develop processing bases for domestic fresh and frozen fish and set up specialized supervision of these bases.

In April 1989, activities associated with *surimi* were separated from the Sales Division and formed into the Surimi Operations Department. The general distribution business was also separated from the Sales Division when a new Logistics Department was formed. Inheriting the activities of the Refrigerated Distribution Department, the new department was created to keep tabs on distribution of imported and domestically purchased products and integrate distribution activities associated with processed foods. Meanwhile, Nippon Suisan sought to achieve the 400,000 tons in warehouse capacity that the Near-Term Vision called for and successfully secured 290,000 tons.

In January 1990, the Sales Division became the Fisheries Division together with the Maritime Operations Division and Surimi Operations Department. With this move, Nippon Suisan had

placed the production and sales of fishery products within an integrated system. Here, Nippon Suisan was seeking to create an organization that merged production, purchasing and sales; executed its duties based on shared awareness and information; and was linked to customers.

In fiscal 1990, purchased items—which Nippon Suisan had long been expanding to cover falling catches—accounted for as much of 80% of Nippon Suisan's fishery product sales. The biggest challenge facing the company at this time was how to improve earnings from these items. Nippon Suisan thus established the following strategy points: 1) better precision of supply and demand forecasts and risk hedging, 2) inventory management, 3) shift to purchasing branch offices, 4) improved added value from processing, and 5) better inspection accuracy. It further set 1) standardization of work and 2) building of individualized profitability management systems and distribution systems as goals in anticipation that systems supported by sales activity would bolster competitiveness.

In the first fiscal year of the Fisheries Division's new system, fishing-related operations posted a loss of 4.0 billion yen. Although sales-related operations were in the black by 1.6 billion yen, the Fisheries Division recorded a total deficit of 5.2 billion yen.

3. Birth of the Logistics Department

Expansion of the refrigerated warehouse network, which was an item put forth by the First Planning Committee in 1975, was persistently promoted by Nippon Suisan through the expansion of affiliate companies. Nippon Suisan's refrigerated warehouses took two forms: coastal facilities serving as bases for landing catches from deep-sea trawlers and receiving imports, and refrigerated warehouses at points of consumption that supply large consumer markets. As of 1977, the company had a total of 18 such facilities. The arrival of 200-nautical-mile regulations was expected to lead to smaller catches. Thus, Nippon

Suisan enacted a strategy to develop profit-earning business by permitting general consignors to use warehouses that theretofore had mainly served to store its own fishery products only, allowing handling of not only fishery products but also frozen foods and other items, and upgrading warehouses' functions to make them distribution centers that also provide freight transport. This strategy was called the "national distribution point network concept". Under it, Nippon Suisan newly built or expanded facilities in 14 locations by 1988. Some of these refrigerated warehouse companies took names that did not suggest an

association with Nippon Suisan in order to attract many local customers.

Marushin Unyu K.K. (Ota City, Tokyo) began a cold storage business in 1984. Kinki Reizo Shokuhin K.K. (Itami City, Hyogo Prefecture) completed and began operating a cold store in 1986, as did Kitakyushu Reizo Shokuhin K.K. (Kitakyushu City, Fukuoka Prefecture). The next year, 1987, Tobu Reizo Shokuhin's Funabashi office (Funabashi City, Chiba Prefecture) was completed. This was followed by a port plant belonging to Sendai Hinomaru Reizo K.K. (Sendai City, Miyagi Prefecture) in 1990. Nippon Suisan's main organization also got into the act by completing its Kawasaki Coldstore (Kawasaki City, Kanagawa Prefecture) in 1990 and Rokko Island Logistics Center (Kobe City, Hyogo Prefecture) in 1995.

Goals of the "Near-Term Vision" of September 1988 included making distribution one of five key revenue-earning businesses, and, after establishing a Logistics Department in 1989, achieving 400,000 tons in warehouse capacity by 1995 in order to reinforce the overall strength of the Nippon Suisan Group. Nippon Suisan sought to get closer to points of consumption by building inland refrigerated warehouses that were in addition to its conventional refrigerated

warehouses concentrated in coastal areas. At this stage the Nippon Suisan Group had an overall capacity of 280,000 tons.

In January 1990, Nippon Suisan integrated and consolidated distribution work by conducting a reorganization that involved moving the Distribution Management Section, which was under the Food Products Operations Department, to the Logistics Department and installing Distribution Teams in branch offices that did not have distribution sections. The responsibilities of these teams would include food products. That year, Nippon Suisan's cold stores reached a capacity of 320,000 tons.

This time was characterized by an industry-wide rush of new cold store construction. It was also a time when even further effort was needed to secure cargos amid declining inventories caused by rising interest rates.

The number of cold stores was growing throughout the industry. Although this expanding warehouse capacity needed to be addressed with caution, the necessity for inland cold stores that also functioned as distribution centers was growing.

Nichirei Corporation and other companies were also making the switch to distribution, and with its



1979: Sapporo Hihomaru Reizo Coldstore
Nishi Ward, Sapporo City 12,790 tons



1986: Kitakyushu Reizo Shokuhin Coldstore
Kokurakita Ward, Kitakyushu City, Fukuoka Prefecture 12,116 tons



1987: Tobu Reizo Shokuhin's Funabashi Coldstore
Funabashi City, Chiba Prefecture 12,430 tons



1980: Tobu Reizo Shokuhin's Hachioji Coldstore
Hachioji City, Tokyo 10,064 tons



1986: Hakodate Teion Reizo's Hakodate Coldstore
Hakodate City, Hokkaido 11,491 tons



1989: Nippo Shokuhin Kogyo's Jonan Coldstore
Jonan Town, Shimomashiki-gun, Kumamoto Prefecture 8,362 tons



1990: Nippon Suisan's Kawasaki Coldstore
Kawasaki Ward, Kawasaki City, Kanagawa Prefecture 31,200 tons



1990: Sendai Hinomaru Reizo's Minato Coldstore
Miyagino Ward, Sendai City, Miyagi Prefecture 10,895 tons



1991: Kinki Reizo Shokuhin's Otsu Logistics Center
Otsu City, Shiga Prefecture 9,625 tons



1995: Nippon Suisan's Rokko Island Logistics Center
Higashinada Ward, Kobe City, Hyogo Prefecture 10,768 tons

strength in coastal warehouses, Nippon Suisan also needed to quickly increase its inland cold stores and switch to a distribution center-type business. Specifically, the company was entering an era that demanded inter-industry consolidation of bases (e.g., for seafood, frozen foods, etc.), accompanying online functions, and setting of standard services. Its sales that year reached 11.43 billion yen and delivered a net

profit of 552 million yen.

In April 1991 imports of beef and oranges were liberalized. Imports of food products were growing steadily, and oversupplies of all foods, including seafood, were continuing.

In fiscal 1991, approximately 70% of logistics sales came from general consignors. This meant that the sales ratio had been turned around over the course of 10 years. That same year, Nippon Suisan came into possession of its own trucks and began operating them for transport and delivery. Nippon Suisan recognized that it had to offer regular delivery services that could transport cargos to customers at any time, and therefore it continued research to gain know-how for setting fee systems and routes and raising loading efficiency.

Part 3 Advancement of the Food Products Business

1. An Energized Frozen Food Products Business

Household Frozen Foods Expand across more Categories

Production of frozen foods slowed somewhat in the mid-1970s after posting continuous growth of around 30% in the early 1970s. It then grew at an annual rate of 6% over the next 20 years until the mid-1990s.

The household frozen foods market of the early 1980s was comprised of precooked dishes consisting of prepared dishes (including those for *bento* boxed meals) and snack foods, which were the market's

mainstream, together with frozen vegetables and a small number of frozen seafood products.

Although the main snack foods of the mid-1980s were pizzas and gratins, frozen rice-based products soon appeared and were followed by frozen noodle products. Both of these product lines rapidly gained momentum in the market. These items came to be classified as “main course” snack foods as opposed to confectionaries and other “between-meals” snack foods. The range of products available at supermarket frozen food sections—which theretofore had

principally featured prepared dishes—grew. And as a result frozen foods quickly gained consumer appeal.

Specifically, “frozen rice-based products” included pilafs, fried rice, and roasted rice balls. These were products that could be prepared not in a frying pan or toaster oven, which were the primary cooking forms of the 1980s, but also in microwave ovens, which were becoming increasingly common in households. “Frozen noodles” were made by quickly freezing boiled noodles. Because this method maintained noodles in their boiled state through freezing, it gave them a texture that was far superior to chilled noodles or shelf-stable instant noodles. Appearing alongside noodles-only products were products sold in sets with toppings and soup that provided value only frozen foods could deliver.

These frozen noodles and rice menus could be enjoyed by all members of a household. Because they could be prepared quickly using simple cooking methods, they were often prepared by the people who would actually eat them. Accordingly, although “purchasing” customers were often housewives, “actually consuming” customers existed throughout the entire household. Meanwhile, the products were eaten at all times of the day, including breakfast, lunch, dinner, and between meals. Consequently frozen foods gained a stronger presence as familiar processed foods.

By the early 1990s, microwave ovens—which were now found in almost all households—became essential as appliances for cooking frozen foods. Indeed, almost all prepared dishes for *bento* boxed meals were prepared in microwave ovens. From the mid-1980s, croquettes, deep-fried shrimp, and other products that previously required frying in oil could be prepared in toaster ovens due to advancements in processing technologies. The popularization of microwave ovens allowed even further shortening of preparation times. Frozen foods thus met the needs of mothers who wished to save time and trouble preparing their children’s lunches during busy morning hours. And as a result precooked foods for microwave ovens took over supermarket frozen food shelves.

In this way, frozen foods for household use enjoyed a growing customer base due to growing product categories and technical advancements, and they came to be commonplace in the public’s daily diet. And the more that frozen foods gained customer value, the more they also gained value for mass retailers as tools for attracting customers through special sales.

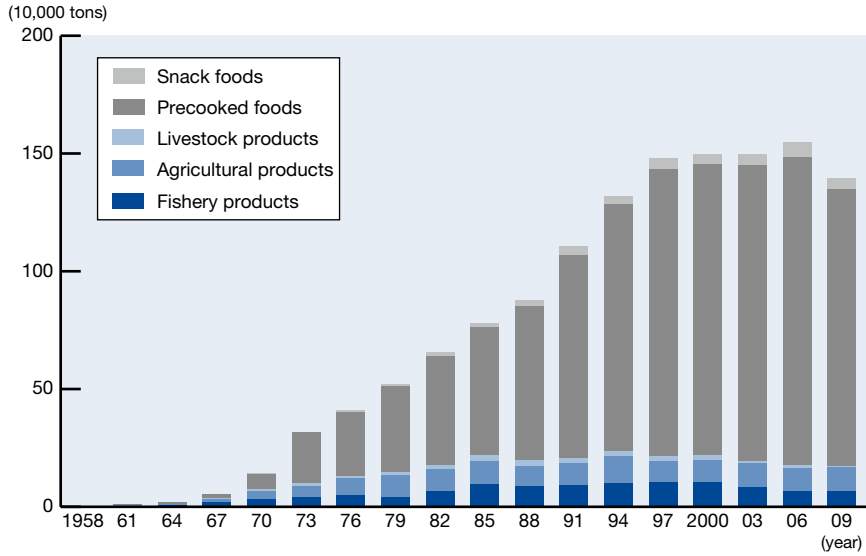
Around this time, the managers of the frozen foods departments of three companies—Nippon Suisan, Ajinomoto, and Nichirei—promoted the establishment of a VAN company as a response to increased use of IT in other companies. The basic thinking here was “to compete in the market fairly, and to share infrastructure”. This company, which was established as Finet, Inc., on April 1, 1986, served as a platform for information exchange between manufacturers of not only frozen foods but also processed foods and wholesale companies. It added an alcoholic beverages VAN in 2002 and became the industry’s de facto standard, a position that it retains today.

A Turning Point in Nippon Suisan’s Household Frozen Foods Business

For Nippon Suisan’s frozen food products business, its decision to enter the frozen rice and noodles market at the end of the 1980s represented a significant turning point.

In 1987 it began selling “COOK FORME Daigaku Imo” (fried and candied potatoes) with an eye to entering the snack foods segment. The product became a hit among consumers. Although the potatoes were precooked foods made for heating in microwave ovens, they gained popularity for being delicious even when eaten cold after natural defrosting. Six months later, Nippon Suisan led other companies in marketing “Chanpon”, a product containing frozen noodles with toppings. It gradually expanded distribution of Chanpon and captured consumer loyalty along the way. Nippon Suisan added production lines for frozen noodles and frozen rice dishes to its Hachioji General Plant, and in 1988 it began marketing “Umi no Pilaf”

Changes in domestic production of frozen foods (1958 to 2009)



Source: Japan Frozen Food Association

Main products of the 1980s





“COOK FOR ME Chanpon” in the new “frozen noodles with toppings” category
Sales began in 1987.



“COOK FOR ME Yaki-onigiri” as an established grilled rice-ball product on frozen food shelves
Sales began in 1989.



“Ebi no Tsutsumi-age”, winner of a gold medal at the 1994 Salon International de l'Alimentation (SIAL)



The “Obento ni Benri” series as part of Nippon Suisan's move into naturally defrosting frozen foods
Sales began in 1986.
The series became an enduring seller after being redesigned in 1999.

(pilaf of the sea) as a full participant in the frozen rice dish market.

Moreover, Nippon Suisan led the competition in marketing “COOK FOR ME Yaki-onigiri” (roasted rice balls). These savory rice balls that could be eaten after simple heating in a microwave oven gained widespread market approval. Both Chanpon and Yaki-onigiri overcame competition from subsequently arriving companies and became enduring bestsellers that were representative of Nippon Suisan's household frozen foods. As for snack products, Nippon Suisan began marketing “COOK FOR ME Atsu-Atsu! Takoyaki” (baked octopus balls) for preparation in microwave ovens in 1991. Their large chunks of octopus and delicious batter made them a hit.

Meanwhile, Nippon Suisan also continued to market new products in the prepared dishes segment.

In prepared dishes for *bento* boxed meals, Nippon Suisan began marketing “Curry & Hamburg Fry” (deep-fried hamburger with curry) as part of its “Hitokuchi” (bite-size) series in 1984. With characteristics that included having the perfect size for lunch boxes and deliciousness even when eaten cold, the

product enjoyed strong sales due to a design that specifically targeted boxed meals. In 1986 Nippon Suisan began selling “Obento ni Benri Green Pack” (convenient green packs for boxed meals) as side dishes that could be defrosted naturally. These products came in three assortments that included burdock roots sauté and stewed *hijiki* seaweed. And in 1989 it began sales of the “Oven Toaster de OK!” series of foods designed for preparation in a toaster oven. The series was later renamed “Obento ni Benri” (convenient for boxed meals) and then revamped to include products for preparation in microwave ovens in 1994. The bestsellers crab cream croquettes and deep-fried whitefish were incorporated into the series.

In Chinese-style prepared dishes, Nippon Suisan had a hit with “LITTLE CHINA Ebi no Tsutsumi-age” (battered and fried shrimp) as a new item in its regular lineup of *shumai* dumplings and spring rolls. This product won the gold medal in the frozen foods category of the 1994 Salon International de l'Alimentation (SIAL), a contest of international hit products.

Amid revolutionary changes in food preparation, Nippon Suisan was quick to take on the challenge of



Introduction of the “Green Giant” brand in the frozen agricultural foods category *Nissui Koho*, March 1979

marketing products for use in microwave ovens. It started by marketing first three microwave oven-oriented products, one of which was “Range Mate Benizake” (sockeye salmon), which hit shelves in 1987. Range Mate Benizake was a grilled fish product consisting of a cut of fish wrapped in a sheet that was heated in a microwave oven. This design saved consumers the trouble of washing dirty grills after cooking. However, it suffered from premature marketing, as microwave ovens had not yet achieved high prevalence in society.

Among the precooked product for microwave ovens that followed “Yaki-onigiri” was “Hakodate Range Croquette Gyuniku” (beef croquettes), which came on the market in 1994. Nippon Suisan’s decision to sell this product was spurred by the sudden popularity of microwaveable deep-fried products, something that was sparked by Nichirei’s sales of microwaveable potato croquettes six months prior. Nippon Suisan offered a range of main products, including “Ebi Fry” (deep-fried shrimp) and “Shiromizakana Fry” (deep-fried whitefish), which hit store shelves in the spring of 1995, and “Harumaki” (spring rolls) and “Kani Creamy Croquette” (crab cream croquettes), which appeared in the autumn. These products offered more than just convenience of preparation; they were also made with specially developed in-house technologies that prevented foods from hardening even when heated in a microwave oven. Thereafter, microwave ovens became the primary means of preparing frozen foods.

Although these products were produced at plants in Japan, there were some moves underway to promote partnerships with overseas interests as well as overseas production.

Overseas procurement and production became particularly conspicuous in frozen vegetables. Nippon Suisan’s began importing and selling frozen vegetables under the “Green Giant” brand through a tie-up with the Pillsbury Company of the United States in 1982. It deepened this relationship in 1992 by establishing Green Giant Frozen Foods K.K. Utilizing bases in Tokyo and Osaka, the new company sought to firmly establish the Green Giant brand by distributing products nationwide and offering an expanded product lineup.

In 1990, Nippon Suisan established “ConAgra Nissui Inc.” through joint investment with ConAgra Foods, Inc. This new venture sold microwaveable ZIP hamburgers.

Among Nippon Suisan’s independently developed products was Taiwan-produced edamame, which it had been promoting since 1973. In 1993, it began selling “Shioaji Edamame” (salted edamame), a product that sparked a growing market as other companies joined the competition. Nippon Suisan also began expanding sales of frozen vegetables from China by entering into an importation contract with Anhui Province following economic liberalization in the 1980s.

The imported frozen vegetables market grew from the mid-1980s, with potatoes from the U.S. and edamame from Taiwan and China showing particularly strong growth. Entering the 1990s, production of prepared foods in China, Thailand, and other countries picked up steam, particularly for products involving many labor-intensive work processes. Nippon Suisan joined this trend by becoming involved at numerous production bases in China, an agricultural producer that could easily supply the labor needed for processing.



“Soft Karei Fry” (flatfish fry) for household use (left) and commercial use (right)

“Sasagata Shiromizakana Fry”

Development of Frozen Food Products for Commercial Use

The counterpart to frozen food products for household use was frozen food products for commercial use. This business expanded around school lunch programs in the 1970s. The main products sold in this category were deep-fried products, croquettes, and fried meat, as deep-frying made it possible to prepare very large amounts of food at once. Here, Nippon Suisan sought to separate itself from the competition by producing products made with seafood, an area in which it held an advantage. Its products included deep-fried whitefish and shrimp, as well as tempura and “Squid Snack Fritters”, which it began selling in 1976. In 1979 it started marketing “Soft Karei Fry” (deep-fried soft flounder) by packaging processed yellowfin sole caught in the Bering Sea in retort pouches. This product gained particular popularity in school lunches, as everything including the bones could be eaten.

During the 1980s, growth in frozen foods for commercial use was supported by the diversification of businesses that use frozen foods. Among settings that now used these foods were industrial food services, dining-out industries, and prepared-dish counters at mass retailers. Each of these businesses had its own requirements for frozen foods, and manufacturers responded by expanding their product lineups and implementing strategies targeting specific business segments. Because many of Nippon Suisan’s products were for deep-frying, it focused on prepared dishes sold by mass retailers and industrial food services. However, it also devoted energy to developing

products for dining-out businesses that are sensitive to new culinary trends. On the sales side, as well, Nippon Suisan established a Special Sales Section in 1979 to develop sales to dining-out businesses.

In 1983, Nippon Suisan began selling “Sake Paupiette” (salmon paupiette) and “Shiromizakana Paupiette” (whitefish paupiette) made of *surimi* prepared to have a mousse-like consistency, and “Mousse Base” as part of a “Yofu Gourmail” series targeting dining-out businesses. This was an attempt to propose new fish menus that differed from deep-fried foods. And in 1984, it began marketing authentic Chinese menus under a “Gourmail Chuka” series. Included was “Ebi Chili Sauce-ni” (shrimp stewed in chili sauce) sold in “boil-in-pouch” packaging. It also sold “Ika Dango Kanoko-age” (squid dumplings deep-fried *kanoko-age* style) and “Ika Dango Mochigome-mushi” (steamed squid dumplings with sticky rice) in a Chinese dumpling series intended to provide an alternative to *shumai* and *gyoza*.

At the end of the 1980s, Nippon Suisan kept entered the frozen noodles and frozen rice dish markets, keeping pace with its moves on the household products side. These products offered short preparation time and “just boiled” texture that could not be matched by chilled products, which made them perfectly suited for commercial food services.

Nippon Suisan sold frozen udon and soba as well as toppings (such as *kakiage* mixed tempura and other forms of tempura) and noodle sauce to go with them. These products later led to the development of *kakiage* that could be defrosted naturally as well as sauces and seasonings. Although the mainstream in the frozen rice dish market was pilafs and fried rice, Nippon

Suisan began trial sales of roasted rice balls for sales near convenience store cash registers. These rice balls soon became a hit in the household products segment.

At the same time, Nippon Suisan also returned to seafood—an area where it could demonstrate its traditional strengths—to sell fried squid products at mass retailers’ prepared dish counters. However, the volume of squid Nippon Suisan handled was decreasing amid changes in squid fishing grounds. On the other hand, something new was occurring in deep-fried whitefish, Nippon Suisan’s other product of expertise, as a result of overseas production. Specifically, “Sasagata

Shiromizakana Fry”, a deep-fried whitefish product made with “once-frozen” technology, had appeared. This new product was produced by Sealord of New Zealand. Product design involved processing and then freezing fish once shortly after harvest in order to preserve the fish’s deliciousness. With this product, Nippon Suisan recognized that product differentiation and characterization could be achieved by producing at the site of origin. And this spurred it to begin producing “once-frozen” deep-fried shrimp in Indonesia and “once-frozen” fried chicken in Beijing, China.

2. The Fish Sausage/Ham and Fish-Paste Product Businesses

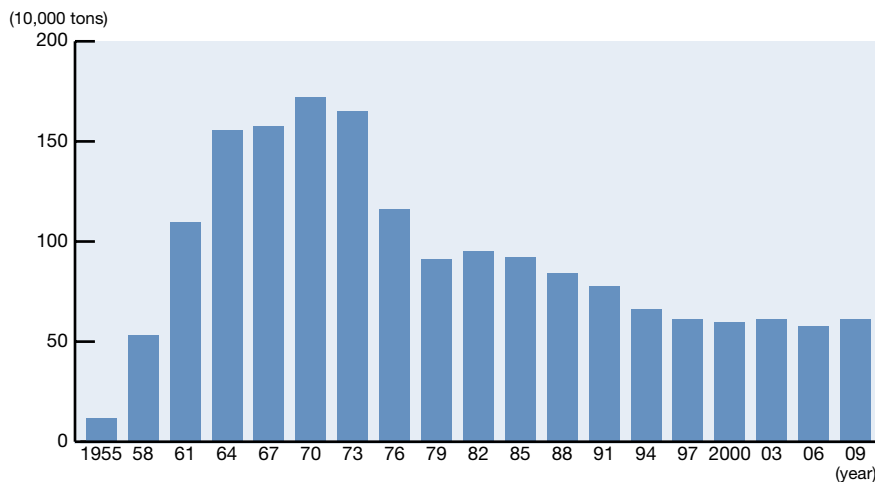
Fish sausages and hams were seeing a long downward trend, with sales held down by processed meat products amid growing meat imports and increasing sophistication of tastes. The market’s scale had been in a continuous 30-year contraction after production peaked at 180,000 tons in 1972. Major influences behind this trend were changing consumer trends and preferences as well as production of Alaska pollack *surimi* (the main ingredient of fish sausages and hams) and market circumstances.

To reverse this trend, Nippon Suisan stepped up its marketing in ways that included introducing sausages featuring numerous cartoon characters that were popular among children. It also began selling a new

fish ham series called “NOW” in 1983. A product in this series called “NOW Hamburger” became a long-running best-seller. Nonetheless, Nippon Suisan could not stop the business’s downward slide, as it was unable to find effective means for restoring performance during the 1980s. Consequently, it was forced to consolidate its fish sausage and ham plants into two plants—Hachioji and Tobata—in 1988.

Nippon Suisan attempted to break out of the slump by seizing on a health boom in the market. It developed “additive-free” sausages that contained no chemical seasonings or preservatives in 1991. It also sold “Seafood Sausages” in a white bag marked with the catchphrase “natural ingredients”. However, while

Changes in fish sausage/ham production (1955 to 2009)



Sources: Ministry of Agriculture, Forestry and Fisheries; Japan Fish Sausage Association; Japan Cannery Association



“Doraemon Sausage”
Sales began in 1978.

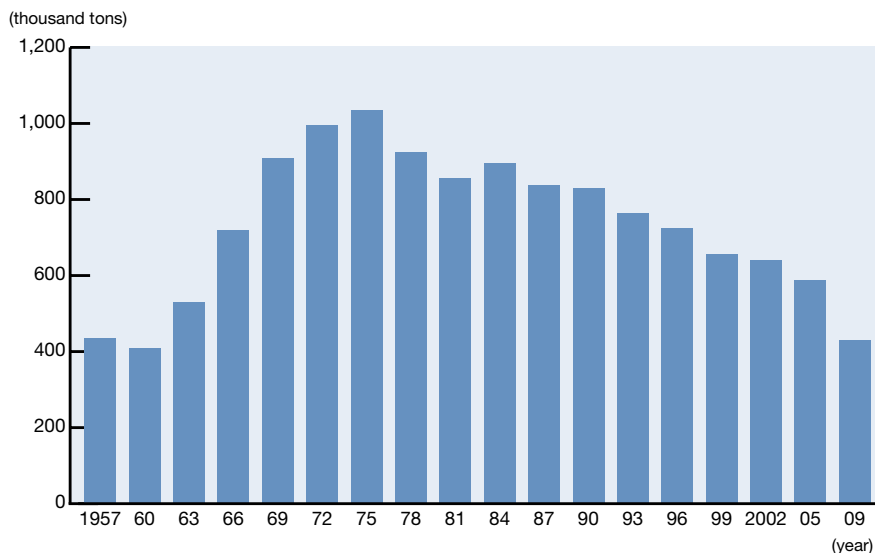


Main fish sausage and ham products
of the 1980s



“NOW Burger”
Sales began in 1983.

Changes in fish-paste product production (1957 to 2009)



Source: Ministry of Agriculture, Forestry and Fisheries, “Annual Statistics on Marketing of Fishery Products”



Sales of oden in retort pouches that can be served
after heating only began in 1987.



“Seafood Sausage” marketed with emphasis
on natural ingredients
Sales began in 1988.



Sales of heat-resistant “Sea Grace”
began in 1990.

consumers in the Tokyo metropolitan area and other urban areas reacted well to the new “healthy” side of Nippon Suisan’s products, sales in more rural areas remained poor. Nevertheless, the company’s attempts here laid the foundation for later reform of Nippon Suisan’s fish sausage business.

As for *chikuwa*, the market was in a continuous decline after peaking in the mid-1970s. Sales were highly susceptible to changes in the *surimi* market, and price competitions were common. Thus Nippon Suisan continued to do all it could to differentiate itself. This included further expanding its product lineup.

In 1987 Nippon Suisan suggested salads as a new use for *chikuwa* by marketing “Salad Chikuwa”, a product made to taste good in salads.

Moreover, in 1993, Nippon Suisan began selling “Umi no Genki DHA-iri Chikuwa” (*chikuwa* made with healthful DHA from the sea), which contained the same amount of DHA (docosahexaenoic acid) obtainable from a single serving of northern bluefin tuna sashimi. Here, Nippon Suisan was adding DHA produced by its fine chemicals business to appeal to the public’s interest in healthy lifestyles. And in 1995

it successfully differentiated itself from the competition by selling “Chikuwa” made with southern blue whiting caught in its Argentina operations.

In its crab-flavored *kamaboko* business, Nippon Suisan focused on exports. Introduced in 1973, crab-flavored *kamaboko* grew into a major hit in 1983 because it met consumer needs. But with the domestic market subsequently becoming saturated, Nippon Suisan looked to find avenues for export. However, exports plunged when the yen rapidly appreciated in 1986 and overseas production grew.

In 1990, Nippon Suisan began selling “Sea Grace” made with a Nippon Suisan-developed manufacturing technology called “extrusion cooking”. The product became a consumer favorite for being useable in various forms of cooking, as it was highly resistant to heat and did not become mushy. It also had a firm texture attributable to a delicately fibrous quality and an authentic flavor coming from crab and scallop extract. Nippon Suisan took broad-ranging steps to reinforce manufacturing facilities at the Hachioji General Plant and other plants in preparation for nationwide delivery in 1992.

3. The Canning Business

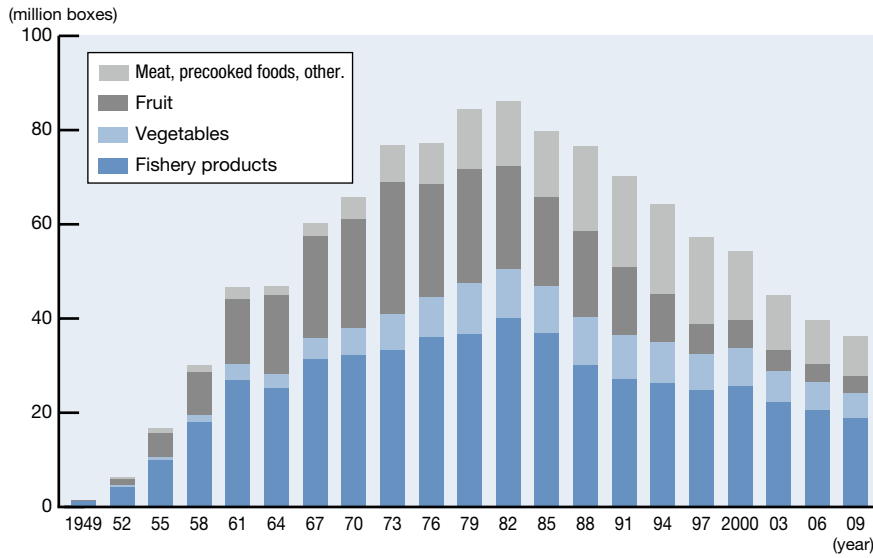
Canned goods were also products suffering from decline and stagnation. Because the canned goods industry began emphasizing domestic demand following the “dollar shock” of 1971, exports had been falling since peaking in 1976. Although Nippon Suisan had lagged behind others in entering the canned tuna segment, which was the leading field of the canned goods market, it eventually entered the growing oil-packed canned tuna and bonito market by selling “Tuna White” in 1975, followed by “Sea Gourmet” in 1977.

It also took on the gift market by utilizing the “Nippon Suisan” brand, an established name in factory-ship crab and salmon canning since before World War II.

The 1980s were marked by a flood of new products. For the canning industry, companies urgently needed to keep their traditional customers and acquire new customers at a time when many shelf-stable processed foods were designed to be fashionable as well as convenient.

A wide variety of products were developed to generate new customers and new usages. With attention to the growing convenience store market, companies offered product lineups that included canned snacks and prepared foods made from seafood and meat, canned fruit for deserts, and prepared curries and soups designed to compete against retort pouch products. Companies also developed “series” products offering a variety of items under a single name with

Changes in domestic production of canned products (1949 to 2009)



Sources: Japan Canners Association, "The Canners Journal"; "Nihon Kanzumeshi" (history of canning in Japan)
 **"Other" includes juices from 1952 to 1958.



Canned products of the 1980s



Sales of okayu (rice gruel) in retort pouches also began in 1988.



Nippon Suisan developed gift-oriented products mainly consisting of high-quality canned crab and scallops.



The "Yaki" series, 1985



The "Meat Company" series sold amid diversifying product lineups, 1985

an eye to capturing specific areas of store shelves. However, this flood of new products also brought the problem of increasing items and excessive inventories.

Companies also took measures to bring greater convenience to consumers. In 1983, easy-opening cans entered the market, followed by lightweight aluminum cans. However, these methods faced significant limitations due to the high cost of their packaging materials.

In canned seafood ingredients, sales were successfully expanded through sales-promotion campaigns that suggested new recipes to consumers. In a tie-up with Kewpie Corporation, Nippon Suisan suggested cross-matching canned scallops with other products under the theme "daikon radish salad". This approach was later expanded to attention-grabbing menus for salads, pastas, and other dishes. Meanwhile, Nippon Suisan promoted in-store sales using lifestyle-related events, and supported the in-store marketing activities

of sales personnel through "four-season sales promotions". Because canned goods were shelf-stable products, Nippon Suisan promoted their sales by placing them in mass displays in traditional store settings. It strove to promote sales that matched the times by adding specific sales themes to displays. This approach was not limited to just canned goods, as it was also extended to all household-related businesses, including fish-paste products, fish sausages and hams, and frozen foods.

Scientific in-store marketing gained attention as use of the POS system became more widespread during the 1980s. Nippon Suisan participated in an experimental study on in-store merchandizing and in-store promotion through a project with the Distribution Economics Institute of Japan and major mass retailers. It then reflected the results on its own sales promotion activities.

In March 1988, the effects of the whaling ban brought a stop to manufacturing and sales of canned



“Seadish” packed in a light-weight aluminum can, 1985



“Yakiniku Mutton”, 1988



“Gyu Yakiniku”, 1990

whale meat. As a result, canned whale production that had peaked at one million cases—and even reached 200,000 cases the previous year—now stood at zero. Nippon Suisan’s black-labeled canned whale was undoubtedly representative of its canned whale business, and it was a vital component of the company’s

effort to remain on retail store shelves. Nippon Suisan looked to replace this product by selling canned New Zealand mutton for yakiniku. And it began stressing canned meat by adding beef products to its lineup in 1991.

Part 4 Formation and Growth of New Business Fields

1. The Fine Chemicals Business

Beginning of EPA Research

The origin of Nippon Suisan’s fine chemicals business can be traced back to the company’s foundation. The need to conduct research on oils was understood from the earliest days. In 1920, the Hayatomo Fishery Research Group was organized and began studying seafood refrigeration methods. Some time later a chemistry department was added to begin research on oils.

Research on EPA (eicosapentaenoic acid) began in 1978. That year, Dr. John Robert Vane of the United Kingdom released a study on the effectiveness of EPA on arterial sclerosis. Employees of Nippon Suisan who read the study believed that EPA offered promise for the future and commenced pertinent research.

EPA is a type of unsaturated fatty acid. It is a classic example of an aquatic oil, as it is found in fish and plankton but not in land-based animals and plants. Examples of effects that have been identified thus far include lowering neutral fat in the blood, lowering the level of total blood cholesterol, increasing HDL

cholesterol, lowering platelet aggregation, and increasing erythrocyte deformability.

Research initially started as a joint undertaking by Nippon Suisan with Nissui Pharmaceutical and Kyowa Yushi Kogyo K.K. Nippon Suisan took charge of advanced extraction using rectification, and Kyowa Yushi was responsible for research on supply of raw oil.

In 1980—the target year for successful extraction of high-purity EPA—Nippon Suisan entered into a partnership with Chiba University’s School of Medicine to conduct on-the-spot verifications of EPA efficacy measurements. These verifications were aimed at practical use of EPA for medical purposes. In 1981, Nippon Suisan entered into a research and commercialization contract with Mochida Pharmaceutical Co., Ltd., which would serve as Nippon Suisan’s partner in translating research into actual pharmaceutical products. Chiba University’s School of Medicine determined that Mochida Pharmaceutical had superior technologies in fields necessary for converting natural products into pharmaceuticals and was the



The “Umi no Genki” series sold as products for general consumers



Supply of basic components for pharmaceuticals: Mochida Pharmaceutical’s “Epadel”



A new Tsukuba Plant was built in 1990 to expand the fine chemicals business

company most qualified to use EPA. Nippon Suisan and Mochida Pharmaceutical engaged in joint research on pharmaceuticals to treat chronic arterial obstructions that eventually led to the completion of clinical tests and an application to manufacture EPA as a pharmaceutical in 1986.

Establishing EPA as a Business

Nippon Suisan began full-scale sales of EPA in 1984 with exports to Shaklee Corporation of the United States. Shaklee is a direct marketer of dietary supplements that operates a subsidiary in Japan. Nippon Suisan also sold EPA to Warner-Lambert.

Other byproducts that are extracted during EPA production include DHA (docosahexaenoic acid) and taurine. DHA is an important constituent fatty acid of the cell membranes of the brain, nervous system, and retina. It is known to be effective in lowering the amount of fat in the blood and as a treatment

for Alzheimer’s dementia and depression. Taurine is a type of sulfur amino acid. Although produced in very small amounts by the body, it is thought that taurine must also be directly ingested from plants. It functions include lowering blood pressure, producing anti-arrhythmic effect, lowering blood glucose, lowering cholesterol, and producing anti-atherogenic action. Among other effective fatty acids that are extracted when producing EPA is arachidonic acid, which has a significant effect on infants’ body growth. Nippon Suisan looked at translating these byproducts into products as well.

Nippon Suisan began sales of taurine in 1985. Taurine was purchased by dairy product manufacturers who added it to infant formula as an essential acid for infant growth.

Because the fine chemicals field had thus developed into a stable business for Nippon Suisan, the company spun it off from its parent organization, the Product Development Department, to form the Fine Chemicals

Department in 1987. It simultaneously added a biochemistry research arm to the Central Research Laboratory to handle fine chemicals and biotechnology.

Beginning the next year, 1988, Nippon Suisan began full-scale sales of the dietary supplements “Umi no Genki EPA” and “DD Oil DHA” as Nippon Suisan products.

In 1990, Nippon Suisan received approval to market “EPA-E Nissui”. Mochida Pharmaceutical then started marketing “Epadel” as a drug for chronic arterial obstruction made with EPA-E Nissui. Epadel soon started showing indications of strong sales. The resulting stable supply of EPA-E Nissui to Mochida Pharmaceutical firmly established EPA as a Nippon Suisan business.

Given these positive indications, Nippon Suisan built a new plant at Tsukuba in April 1994. The plant was established for the simultaneous purposes of production and research toward productivity improvement, and in 1992 it developed a new manufacturing method that could extract EPA with extremely high efficiency. This new method represented a technology that was unique to Nippon Suisan. That same year, Nippon Suisan completed construction of a second wing of the Tsukuba plant and began full-scale production using the new method.

Research and Development in the Seasonings Business

Meanwhile, Nippon Suisan was also developing seasonings.

At the time, the public wanted more than chemical seasonings; it also wanted flavors and richness that

approached authentic seasonings. Stronger health-consciousness was also producing greater demand for natural seasonings. These factors spurred the industry to take a new look at extract-based seasonings made with natural extracts. With this in mind, Nippon Suisan established Kyowa Protein K.K. as a wholly owned affiliate in April 1985. This new company was charged with manufacturing and marketing seasonings made based on extracts produced from seafood, meat, vegetables, and other products.

With the subsequent Near-Term Vision of 1988 listing seasonings as a candidate for new business exploration, Nippon Suisan’s Product Development Department began importing bonito extract from Thailand and marketing it for commercial use in 1989.

In 1991 Kyowa Yushi Kogyo and Kyowa Protein were merged to form Kyowa Technos Co., Ltd. This move added extract-based seasonings and food additives to the traditional product line of oils and fats and chemical products.

Nippon Suisan began using the seafood extracts extracted and concentrated by Kyowa Technos to manufacture extract-based seasonings, bouillon, soups, and other products. It then marketed these products for commercial use and even exported them. Because Nippon Suisan had an advantage over other companies in that it could stably acquire seafood extracts, it attempted to find ways to utilize this advantage by expanding these products into a strong business. However, their high costs compared to chemical seasonings subsequently led the company to decide to concentrate on sales for commercial use.

2. The Chilled Products Business

Products in the chilled temperature range make sections selling daily foods and prepared dishes in growing mass retail stores more attractive, and thus the market for chilled products was expected to grow. Such expectations led Nippon Suisan to establish Chilly Co.,

Ltd. as an experimental business in Hachioji, Tokyo, in November 1983.

Chilly initially made and sold frozen/chilled products, such as deep-fried seafood as well as salted and dried products. It later began supplying vegetable



Chilly products at the time of the company's establishment
salads, sets of ingredients for *nabe* one-pot dishes, and other chilled products for sales in convenience stores. These products were placed under a new manufacturing arm in 1985 as business stabilized, and Chillydy became established as a vendor specializing in conve-

nience store products.

As the business of supplying to convenience stores matured, Nippon Suisan kept pace by establishing affiliates similar to Chillydy throughout Japan. In 1988 it established Kansai Cookery K.K. in the Kinki region, followed by Hello Delica K.K. in the Kanto region in 1989; Sante Foods K.K. in 1990; Cherry Fresh Foods Ltd. and Eniwa Fresh Foods Co., Ltd. in 1992; Hokuriku Fresh Foods Co., Ltd. and Himeji Fresh Foods Co., Ltd. in 1993; and Gunma Fresh Foods Co., Ltd. in 1995. These companies supplied salads, noodles, prepared dishes, rice-based menus, *bento* boxed meals, and sandwiches among other products.

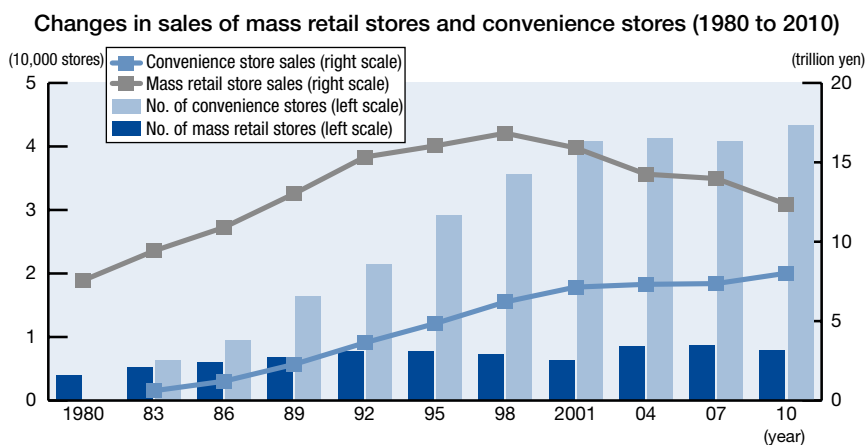
3. The Service Business

In April of 1989, Nippon Suisan established a Service Operations Department in accordance with its “Near-Term Vision”. The new department’s main duties concerned food services and real estate services.

By then, Nippon Suisan’s seafood restaurant “dede” was already open in Tokyo’s Minami-Aoyama district. Dede was an “antenna shop”—in other words, an establishment used to test sales of new products—used to nimbly ascertain diversifying culinary habits. This was a time when many food and beverage companies were opening antenna shops one after another. The

idea for dede came from an in-house open recruitment of business concepts that could be started with 100 million yen or less in capital.

The Service Operations Department launched a number of shops to follow dede beginning in 1989. However, restaurant management did not fit well with Nippon Suisan’s corporate culture. Many of its shops were closed or had their rights transferred to business partners until only “Nanatei” in Kayabacho remained. Nanatei’s management was handled by Nissui Food System Co., Ltd., a company that was established in



Sources: Prepared based on Ministry of Economy, Trade and Industry, “Current Survey of Commerce”, and Japan Statistical Association, “Historical Statistics of Japan, New Edition”. Convenience store performance is from Japan Franchise Association, “JFA Franchise Chain Statistics”. Mass retail store performance is from Japan Chain Stores Association, “Sales Statistics”.

1994.

The other main duty of the Service Operations Department was real estate. Among other activities, it made arrangements for real estate required by Nippon Suisan's departments and offices and redeveloped Nippon Suisan-owned real estate.

In 1991 it joined with Duskin Co., Ltd. to establish Don Co., Ltd. as a chain of restaurants serving rice-bowl dishes made primarily with seafood. With an eye to nationwide expansion, Don opened its first store under the name "The Don" in December of the same year. By December 2001, the company had opened 100 stores.

Also in 1991, a retail fish shop management project was added to the Service Operations Department. The first shop was opened in Kawaguchi City and a second was set up in Tama; however, the Tama shop was not situated in an ideal location and was soon moved to the Daiei Building in Shin-Urayasu. Establishing a network for sales of fresh and live fish was one theme of the Near-Term Vision, and thus the shops were set up with the brand and know-how of Nakajima Suisan and served as final outlets for live fish sales. Keiko Suisan K.K., an affiliate of Nippon Suisan, was charged with their day-to-day management.

Realizing Nippon Suisan's Founding Philosophies

Chapter 1: Management Reforms Based on Selection & Concentration

1996–2000

Part 1 Business Environment during the Second Half of the 20th Century

1. Japan's Prolonged Economic Slump and Reforms of Industrial Structures

Accelerated Globalization through Deregulation

Japan's economy started to again turn lower from the second half of 1997. The burdens placed on Japanese households increased during that fiscal year due to a hike in the consumption tax and an increase in the portion of healthcare expense shouldered by recipients. Concerns about the future were heightened by a string of financial institution failures from the autumn of that year. Stock markets declined and Japan's real growth rate, according to statistics compiled by the Ministry of Internal Affairs and Communications, declined 0.1% in 1997 and 1.3% in 1998, falling for two straight years. The unemployment rate reached a high level as corporations started cutting jobs, which increased anxiety about employment conditions. In February of 1999, the Bank of Japan introduced its "zero interest rate policy" as an economic stimulus measure, but this did not dispel financial and employment concerns. As a result, private sector equipment investment and personal consumption fell. At the same time concerns started to emerge about depressed social and economic activity due to the Japan's declining birthrate and rapidly growing elderly population.

From fiscal 1998 the government began introducing bold deregulation measures, including financial sector liberalization, in order to support healthy economic growth and bolster Japan's international competitiveness. Around this time large Western corporations started entering Japanese markets through partnerships and the establishment of joint ventures with Japanese companies. These developments accelerated globalization in various fields. For example, in the automobile industry France's Renault S.A. entered into a capital alliance with Nissan Motor Co., Ltd. in 1996. Likewise, America's Costco Wholesale Corporation entered Japan's retail market in 1999 followed by France's Carrefour SA in 2000. With foreign companies entering the Japanese market one after another, domestic industrial structures started to adapt to this wave of globalization. As the yen strengthened, large volumes of cheap goods produced in countries with low production costs such as China and the NIEs (newly Industrializing economies; in Asia this refers to South Korea, Taiwan, Hong Kong, Singapore and others) began pouring into Japan. International price competition became fierce, spurring on deflationary trends.

Continued Western Economic Growth

During this period the advancing IT (information technology) revolution helped the U.S. economy recover. The IT revolution introduced information services, equipment and technologies to a wide range of industries. IT-related industries enjoyed rapid growth with this prosperity continuing to around 1999 and 2000. The Asian currency crisis that erupted from Thailand in the summer of 1997 roiled the foreign exchange markets of not only Asian countries, but those in Russia and Latin America and placed more downward pressure on Japan's struggling economy. However, Western economies managed to brush aside the Asian currency crisis and maintain good growth. Then eleven E.U. members in January 1999 adopted the euro as their single, shared currency. This

new "eurozone" had a population of about 300 million people and a GDP (gross domestic product) of \$ 6.5 trillion (as of 1999), creating an economic powerhouse on par with the United States.

The influence of the America's IT revolution started to emerge in Japan in the late 1990's. Japan's economy continued to struggle, but the sudden development of the Internet and related technologies changed society and individual lifestyles. New industries and business styles started to emerge in line with these new lifestyles.

Environmental problems such as global warming and dioxin contamination became more serious on a global scale. There were growing concerns that pronounced climate changes such as heat waves and flooding could negatively impact ecosystems and human society.

2. Marine Products and Food Industry Trends

Marine Products Industry—Growing Global Demand for Main Products

Japan's domestic output of marine products (total for edible and inedible marine products) has been in a clear downward trend in recent years due to declining marine resources and tougher international restrictions on fishing. This output declined to 6,384,000 tons in 2000, approximately 86% of the level in 1996 (7,417,000 tons). Domestic consumption is roughly twice as large as domestic output, so imports are needed to cover this shortfall. The volume of marine product imports grew sharply with Japan lowering import duties by roughly 33% over five years starting from fiscal 1995 in accordance with agreements made at the 1994 Uruguay Round of GATT (General Agreement on Tariffs and Trade) negotiations. The Japanese marine products industry was confronted with the difficult conditions of weaker consumption and lower prices for imported fish due to the strong yen.

Global output of marine products (including fish

farming) has increased steadily each year, growing from 128,560,000 tons in 1996 to 141,800,000 tons in 2000, an increase of 10.3%. This increase has come mainly from fish farming. As such, the percentage of fish farming to overall output has increased from 26.4% in 1996 to 32.2% in 2000. Meanwhile, the output of natural marine products has been flat or has declined slightly. Interest in healthier foods has grown, particularly in the U.S. and Europe. Meanwhile, populations are increasing in developing countries and their eating habits are changing along with their emerging economic growth. These trends have driven growth in global demand for marine products, and this demand is being supported by the fish farming industry.

Protections of natural marine resources, including restrictions on their usage, have become stronger globally. The main trend among most countries had been to use Olympic method fishing (harvesting through free competition) management under the Total Allowable Catch (TAC) system that sets specific limits for each fishing site and species. With Olympic

method management, fishing companies freely competed against each other until their overall hauls reached the TAC, at which time fishing in that area was suspended. However, the United States enacted the American Fisheries Act (AFA) in 1998 and introduced the Individual Transferable Quota (ITQ) system the following year. Under this system, catching and processing quotas were assigned to fishing companies and processors based on their past results. Furthermore, fishing vessels were obligated to join fishing federations (co-ops) at each processing plant and supply 90% of their quota to that plant. The ITQ system unified fishing, processing and marketing, while helping to optimize resource management and maximize resource value.

Meanwhile, the Japanese government in July of 1996 ratified the United Nations Convention on the Law of the Sea. In accordance with this ratification, the government then enacted the Act on the Preservation and Control of Living Marine Resources and in January of the following year introduced resource controls based on the TAC system whereby annual catch limits were set for each species based on past fishing capacity and fishing effort.

Food Industry—Food Safety, Reliability, Convenience and Low Price Trends

Japan's sluggish personal consumption impacted spending on food with steady on-year declines of between 1% and 2% each year following the peak in 1992. The trend towards cheaper prices strengthened in the food industry, evidenced by the emergence of 100 yen sushi in 1999 and 65 yen hamburgers in 2000. Amid deflationary trends for consumer goods in general, consumers supported this trend for lower food prices.

A series of events rocked confidence in food reliability. Specifically, there were cases of food contamination with E. coli O157 in 1996, as well as a food poisoning scandal in involving a major dairy company in 2000. These events heightened interest in food

safety and reliability. The food industry took a big hit with declining sales for food overall, particularly fresh foods. Until that time, food safety and reliability were not big concerns, but suddenly they became important issues that corporations would need to spend a lot of money to address. The introduction of food management standards such as the ISO 9000 series and HACCP (Hazard Analysis and Critical Control Point) encouraged food producers to correct their approaches and review their operations.

The government also began preparing new laws in response to the public demands for greater food safety and reliability. A revised JAS Law was enacted in April 2000 and standards for displaying quality information on all food items were adopted. From July of that year, marine products that were “frozen” or came from “fish farms” had to be labeled as such, in addition to the conventional “fish name” and “place of origin” labeling. From April of 2001 processed foods were required to indicate their “raw materials”, “expiration dates” and “use-by dates”, while the “place of origin” also had to be displayed for imported processed foods.

The food industry was called upon to improve quality and make more precise quality guarantees at a time when raw materials costs were surging and product prices were declining. These points, along with tougher regulations and environmental considerations, produced very difficult management conditions for the industry.

Consumer demands of food products became more sophisticated as people wanted products that were flavorful, healthy, convenient and fresh. In the mid-1990's the category of Home Meal Replacement (HMR) attracted considerable attention in the U.S., but the Japanese market was already offering take-home prepared foods and *bento* boxed meals. However, from the early 2000's the new concept of “ready-made” meals emerged, providing a breakthrough for the saturated food-related business and allowing for some market growth. Consumers were eating out less in order to save money, but “ready-made” meals provided additional options for consumers looking for greater

convenience. This trend was driven in part by a collapse of the conventional eating pattern involving three meals a day enjoyed by the entire family unit, as more women joined the workforce, the number of single-person households (young and old people) increased and 24-hour/day lifestyles became more common.

In order to respond to these calls for food that is convenient, delicious and enjoyable, retailers began diversifying their sales spaces by introducing in-store bakeries, open kitchens, food courts and salad bars. Easing of the Large-scale Retail Store Law allowed

large retailers to extend their operating hours. Competition with convenience stores intensified as these retailers bolstered their lineups of prepared foods, *bento* boxed meals and easy-to-prepare processed foods, while extending operating hours until late at night. With 24-hour lifestyles becoming more common, purchasing trends among male customers started to change. This overturned the conventional wisdom that large retailers should target primarily housewives.

Part 2 Conversion to a Profitable Company Structure — NCR Management

1. Avoiding a Business Slump

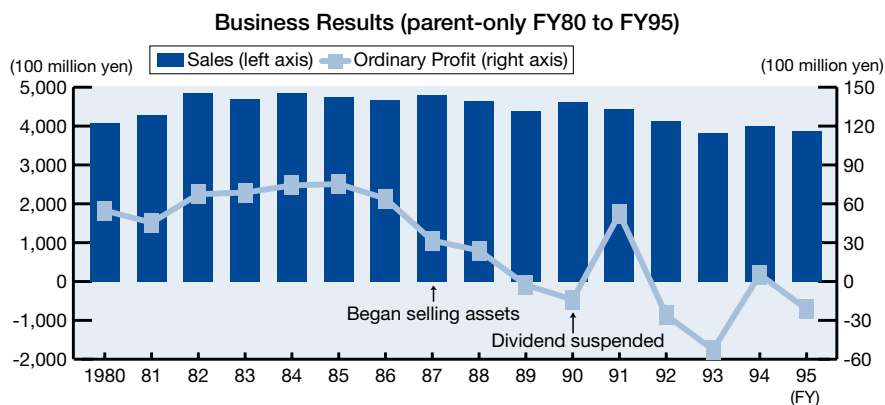
Poor Results even after Switch to Expansion Strategy

Nippon Suisan’s profitability began to worsen from the middle of the 1980’s. In response, the sales of some company assets began with the settlement of accounts for fiscal 1986. In November 1988, the company unveiled its “the Near-Term Vision” that attempted to map out a future for the company through an expanded business range. However, this did not improve profitability for existing businesses and dividend payouts were cancelled for fiscal 1990. The “Action Plan 93” was launched in 1991 and improvements in profitability were seen during the following

fiscal year. However, these improvements could not be maintained. Emergency restructuring plans that even involved adjustments to the employment of fishermen were adopted in fiscal 1994 and fiscal 1995, but solid improvements were not seen and the foregoing of dividend payouts continued.

Conditions for Nippon Suisan were at that time described by then president Yasuo Kunii in the following manner:

“This chronic illness of poor business conditions characterized by repeated downward revisions of our earnings has failed to make a turn for the better. It would probably be accurate to say that this illness has actually gotten worse. Our hands will remain tied as



long as operating profit is not being generated. Marine Products and Foods, our two greatest management resources, are like two poor performing ‘prodigal sons’ that have led a once prosperous house (Nippon Suisan) to the edge of ruin. Something must be done to break this pattern”.

Switch to a Profit-Oriented Management System

In fiscal years 1991 and 1992, executive officers used management study meetings to uncover the reasons why past management plans did not function as intended and to study new strategies for corporate reconstruction.

Improved results from 1991 for individual departments such as Marine Products, Food Products, Distribution and Management helped to bolster company structures and develop revitalization activities even at the work site level. Even though these activities were not directly tied to improving immediate results, they supported a gradual change in awareness within the company. In fiscal 1993, study meetings at the section head level were established to create a shared awareness within the company.

These activities helped to uncover management problems and countermeasures, which led to the creation of management reform concepts and methods.

The business process was a main factor behind the poor results. The groping about for new businesses by each division resulted in the dispersion of management assets in all areas (business, goods, operations), the disappearance of core businesses and the continuation of high-cost business structures. Various divisions such as Marine Products, Food Products, Production, Sales and Distribution were developing

expansion policies without working together. This “partial optimization” business management resulted in business redundancies and increased waste. As sales increased, more management assets had to be deployed, which resulted in a vicious cycle where the costs required for business operations and management continued increasing while earnings deteriorated.

In order to create a profit-generating management system, eliminate accumulated losses and resume dividend payments, a switch from this high-cost structure to a profitable structure became essential.

This switch would involve eliminating waste and concentrating management resources into those core businesses that generate the most profit. The fiscal 1995 executive strategic study meeting thoroughly examined the prevailing conditions and decided to adopt management reforms based on a “selection & concentration” method.

President Kunii decided that between fiscal 1996 and 2000 the company would fight with its back to the wall by implementing “NCR Management”. A decision was also made to adopt a top-down approach instead of the conventional bottom-up approach in order to accelerate realization of these reforms. The implementation of NCR Management was viewed as a commitment to the “aspirations and promise” of all employees and Nippon Suisan. In other words, numerical targets that had to be reached and the responsibilities in achieving these targets were clarified. NCR Management was steadily realized through the achievement of targets. For one month from March 1996, President Kunii held discussions at company HQ and each branch so that all employees could appreciate the very difficult conditions and understand plans to reform the management methods that had been used by Nippon Suisan for so many years.

2. Reconstruction Scenario — NCR Management

Drastic Review of Business Mechanisms

The “NCR” of “NCR Management” was created by

combining the “N” from “Nippon Suisan” with the “C” and “R” from “Category Management” and “Relationship Marketing”, the two key ideas for

implementing this plan. First, ABC analysis was used to sort and select products and businesses with high profitability for the purpose of concentrating management resources in those areas. Efforts were also made to optimize earnings for those categories seen as Nippon Suisan strengths. Furthermore, “relationship marketing” was adopted as a mechanism that does not view relationships with customers as simple transactions, but strives to realize win-win relationships based on trust.

The three key issues for realizing NCR Management were “selection & concentration”, “business standardization” and “information-based management”.

Specifically, “selection & concentration” referred to reviewing businesses, products and operations from the perspectives of efficiency and profitability, concentrating on the better fields that bring out the strengths of Nippon Suisan and then focusing management resources into those fields. At the same time, business operations that improve approaches to dealing with customers were also promoted.

“Business standardization” was adopted to promote standardization suitable for the entire company so that individual business divisions would not conduct business with their own unique methods, but could adopt more general-purpose business processes. The Sales Department also took steps to simplify trade conditions.

Aware of the emerging IT revolution at that time, “Information-based management” was used to promote the gradual provision of information terminals to each employee, with an inclination more toward mobile information terminals for the Sales Department. The introductions of ordering by EOS (Electronic Ordering System), the digitalization of business documents such as order forms and bills, and EDI (Electronic Data Interchange) for transactions with other firms, were all accelerated. At the same time orders were integrated and construction of a system supporting this integration began.

Among these three key issues, “selection & concentration” was the core strategy for NCR Management.

This issue was the key to rebuilding core businesses and switching to a profit-generating business structure.

Every business department conducted ABC analysis for each of their projects, products and operations. This analysis showed that A Products, which account for the top 70% of sales, generate profits, while products that accounted for the bottom 10% of sales did not generate profit. It was then determined that products in the top 70% in terms of customers support plus those in the following 20% (total of 90%) would be recognized as AB products, for which management resources would be concentrated. Those products in the bottom 10% were classified as CZ products, for which reductions were made. “Selection & concentration” based on the results of this ABC analysis was used to eliminate waste and cut costs for all business processes including production, sales and distribution.

Sales departments (including branch offices) serve as points of contact with customers, the source of earnings, and so were recognized as “profit centers”, or in other words, profit-generating departments. These departments were given the rights to make independent decisions regarding prices and other conditions. The aim was to concentrate on the profit core strategies and achieve goals while allowing the sales departments to grasp market and sales trends and quickly respond to the needs of consumers and markets.

In order to ensure the steady implementation of NCR Management, an “NCR Promotion Council” and “NCR scores” were introduced as mechanisms for the managing progress. The NCR Promotion Council was a monthly management conference that allowed the company president, officials and section heads to check the progress of “selection & concentration” efforts based on the NCR scores. Whenever progress was delayed, the cause of the delay would be uncovered and corrective steps would be taken to bring about a course correction. Implementation was then reflected in activities for the following month. NCR scores were management indices for production, sales and inventories, as well as numerical indicators for

those in charge of sales. These scores included such factors as planned activities, business discussions and sales results.

“Business standardization” helped to simplify business processes that had become complicated and distinct to each section, while bringing about a switch to operations based on unified rules. The key component for “information-based management” was the introduction of new information systems.

In April 1996, the food production plant management system MAPS was launched and in October of that year the NCR system was put into place. Furthermore, in addition to information terminals for each employee, groupware was introduced and efforts were made to share more information via e-mails and electronic message boards. Then in 1999

an electronic registry system and a new personnel system were started up.

In addition, the “Brand Management Project” was launched in fiscal 1996 to further enhance the Nippon Suisan brand. During the following fiscal year the logo for the company name and the Nippon Suisan brand marking placed on products were unified into a single corporate brand marking. At the same time, different Nippon Suisan brand marks used for different products and businesses were also integrated into the single corporate brand marking. Furthermore, four individual brands were established for frozen foods and marine products in order to clarify brand missions. Efforts were also made to raise the brand value through strict application of the brand and by linking the brand to quality assurance.

3. Marine Products Business Reforms

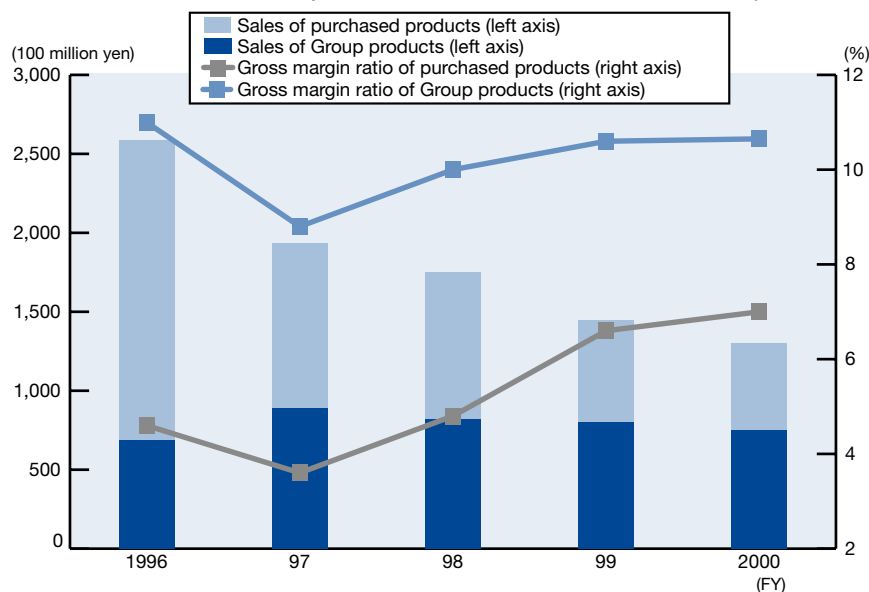
Product Concentration and Improved Management Efficiency

Building a profit-oriented management structure able to withstand changes in marine resource prices became a pressing issue for the Marine Products Business.

All products were arranged into four classifications. Those products generated from assets held by Nippon

Suisan and group companies, as well as those fields that harnessed Nippon Suisan capacities as a manufacturer (such as overseas joint ventures developed through Nippon Suisan technologies and investment) were recognized as core businesses and received particular attention. ABC analysis was also applied to the production sites and purchasing (stocking) conditions for all products. Efforts were then made to reduce

Marine Products Business Group Product and Purchased Product Trends (FY96 to FY00)



less profitable products and scale back inventories.

Organizational reviews were also made from the perspective of business and product “selection & concentration”. Conventionally, sections in charge of marine product management were established at branch offices across the country to handle procurement and sales. However, in August 1996 all procurement and sales functions except for those handled by the Sapporo, Osaka and Fukuoka branches were concentrated in the Fisheries Business Department 1 and Department 2 established at the head office. The former was placed in charge of frozen fish purchasing and sales, while the latter was put in charge of *surimi* purchases and sales. In March of 1997, a Food Materials Management Section was established in the Regional Headquarters in order to improve sales of marine products (including food materials) and to prepare a subscription sales system in which sales plans were shared with customers.

The construction of a global supply chain was promoted so that the range of activities would not be limited to just Japan, but could spread out across the world. In particular, roughly 60% of purchases were made overseas, while sales were still primarily concentrated in the Japanese market. So an effort was made to move toward selling more in foreign markets. The Global Marketing Officer and Global Logistics Center were established to support these global business activities.

“X Business” for the Marine Products Business

Until that time the Marine Products Business relied heavily on bulk frozen fish (low-order processing frozen fish) easily influenced by changes in marine resource prices. As such, earnings growth remained limited. So the “X Business” was established separate from the bulk frozen fish operations as a new business for improving earnings.

First, the Chilled Foods Division was started with the aim of converting marine products into food materials. A clear line was drawn between the conversion



Minh Hai Nissui Girimex Co. (NIGICO)



of marine products into food materials and the bulk frozen fish business. As such, Nippon Suisan could utilize its functions as a manufacturer to process foods for kitchen tables with increased added value. For example, fish were cut into slices for sashimi, cut fish was flavored and processed as pickled fish, and marine food materials were sold to the fish and prepared foods sections of large retailers. In August of 1996, Tokyo Nissui Foods Co., Ltd. (TNF) and Fukuoka Nissui Foods Co., Ltd. (FNF) were established to serve as processing centers.

Nippon Suisan also launched a marine products distribution business to support sales. Specifically, proposals were given to the fish markets of large retailers regarding the arrangement of products to better consider customer needs. These efforts even included the establishment of sales sites. Stores were opened on a trial basis in November 1995 and then in March of the following year a Marine Products Distribution Department was established to launch this business in earnest. The introduction of category management within the Marine Products Distribution Business contributed to better profits for sales sites.

Steps were also taken to bolster shrimp procurement and processing functions in Southeast Asia. In December 1995, Minh Hai NIGICO was established as a joint venture with a government-owned enterprise in Vietnam and the production of processed, one-time frozen “NIGICO Mukiebi” was started using shrimp raised by a “natural catch” method that employs the ebb and flow of tides in the Mekong Delta.

In August 1996, an agreement was reached with Indonesia’s Jayanthi Group to jointly operate a shrimp cultivation business and comprehensive processing

business on the Indonesian island of Seram. These businesses have been wholly owned by Nippon Suisan

since October 2004.

4. Foods Products Business Reforms

Concentration on “Power Items”

The Food Products Business was reconfigured to create a more profit-oriented business structure. Specifically, the “selection & concentration” process was applied to the product line.

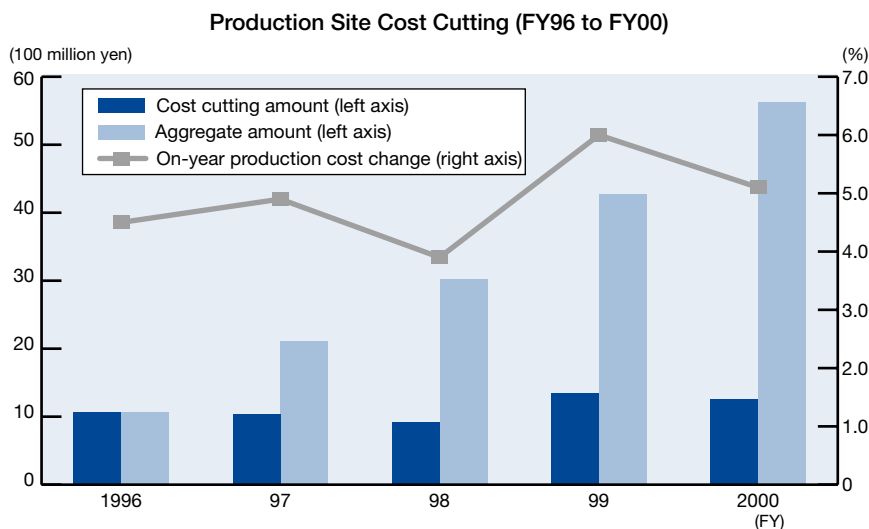
As the Sales Division strived to meet the needs of individual customers, the trend that developed was to handle a wide variety of products in small lots. However, this approach lowered the operating efficiency of production lines, increased costs and pressured earnings. The remedy was to have the Sales Division conduct thorough item control of small-lot products and focus on those that have the highest demand. In conjunction with these steps, separate production line management for each product was introduced at directly managed plants and losses were reduced. By increasing production efficiency and altering procurement methods so that raw materials could be obtained at lower prices, annual cost reduction of around one billion yen were achieved during the NCR Management Period.

As part of the product strategy, products expected to harness the strengths of Nippon Suisan as a

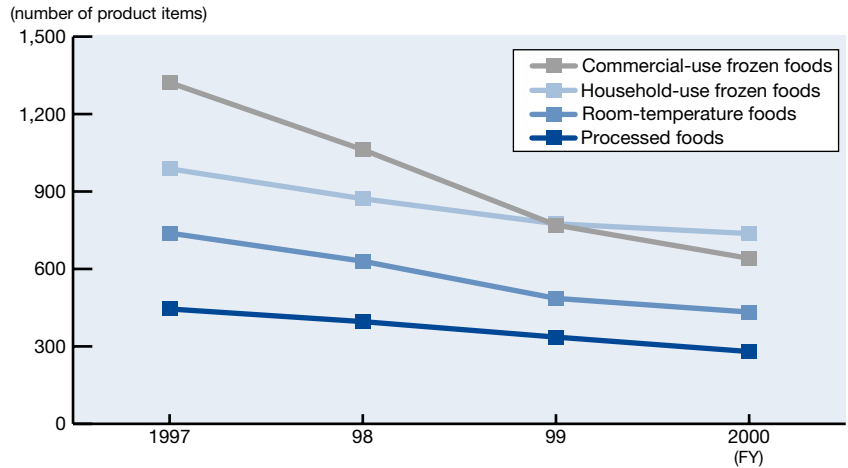
manufacturer and those with good market support were selected as “Power Items”. Efforts were made to achieve market predominance by concentrating management resources into these products and conducting frequent renewals in order to improve product competitiveness. As power items were products produced at directly managed plants, the enhancement of these products helped to secure earnings for the overall business, including production and sales. This policy helped to greatly improve earnings for the Food Products Business. This was especially true for the Frozen Prepared Foods segment, which tended to see increases in the number of offered products. Here, concentrating on Nippon Suisan core products such as “Yaki-Onigiri” (roasted rice balls) and “Kani Kurimi Korokke” (crab cream croquettes) proved successful.

The number of products handled by the Food Products Business was reduced to just over 2,300 by the final year of the NCR Management Period (fiscal year ending March 2000). This was roughly 60% of the some 3,700 items offered as of the end of March 1997.

Operating efficiency at directly managed plants increased and efforts were made to combine operations



Product Number Trends (FY97 to FY00)



Summer 2000 edition of the in-house magazine “Challenge”



Beijing Jiayi Food Joint Factory

with partner plants. Reforms of management activities were carried out and new “approaches” were developed for core businesses with large-lot/important customers with the aim of realizing increased profits for both parties.

Furthermore, importance was placed on category management and customer research in order to bolster sales capabilities and marketing functions.

Category management was positioned as the core of marketing strategy within NCR Management. Products of the relevant sales sites were arranged into product categories based on customer consumption trends. Then using analyses and evaluations based on sales/market data, proposals were made for the optimal sales site plans from the perspectives of consumer

appeal and maximizing sales site efficiency. The aim was to build win-win relationships with the sales sites. The required tools and expertise were accumulated with horizontal development as a practical method for sales.

Consumer research was used to grasp changes in customer consumption trends and to study changes in the underlining senses of value. Understanding these changes allowed for much more accurate product proposals and new product development.

X Business within the Food Products Business

Poultry was developed as a new segment within the Food Products Business.

In May 1998, Nippon Suisan started operations at the Beijing Jiayi Food Joint Factory in China through cooperation with Pengda Co., Ltd. and launched production of the one-time frozen “Tori Kara-age” (fried chicken) frozen food product. This provided Nippon Suisan with the opportunity to break into this main segment of the household-use frozen foods market. This product used the New Zealand one-time frozen white fish filets that were launched in 1995 as a commercial-use frozen food product. This product was frozen only once to fully realize the freshness and good taste of the materials used. The superior taste of the cooked items was a key point for product differentiation. Chicken meat from partner company Beijing

Huadu Broiler Co. was used and products were produced based on unique Nippon Suisan technologies at a frozen food production site directly connected to the chicken processing plants. This allowed for the realization of lines integrating every step from the introduction of raw materials to completion of the final products.

Efforts were made within the Frozen Foods Business to establish production sites mainly in China. In 2000, production sites jointly operated with Beijing Jiayi Food Joint Factory were set up in Anhui and Zhejiang provinces. These farm produce frozen food plants helped to bulk up the Nippon Suisan product line with such products as frozen fried foods, vegetables and pre-cooked meals.

5. Distribution Business Reforms

From fiscal 1996 Nippon Suisan began separating sales and logistics. Distribution operations for individual businesses were all transferred and concentrated at the Central Distribution Business Section. Furthermore, product supply/demand was adjusted based on the sales plan and a shipping and production plan system to be reflected in the factory production plans was started. This helped to greatly reduce inventories, lower storage and other distribution costs, and improve efficiency.

Distribution operations for marine products were then concentrated at the Global Logistics Center established in 1997.

Functions for frozen storage sites and other

distribution points across the country were enhanced by establishing new facilities and refurbishing obsolete facilities. Along with the creation of distribution functions as infrastructure within the company, efforts were also made to begin handling consigned freight from other companies.

In 1996, automated storage was completed at the Sendai Hinomaru Reizo’s Minato Coldstore in Miyagi Prefecture. Then in October 1997, construction was completed for the Seibu Reizo Shokuhin’s Amagi Logistics Center in Fukuoka Prefecture, which replaced the Fukuoka Coldstore as a key shipping base for the Kyushu area. With the introduction of automated storage and sorting equipment, Nippon Suisan realized integrated control of freight within the extremely low temperature to room temperature range, allowing for a multi-functional distribution center with a system for processing, storing and shipping products 24 hours a day. The Fukuoka Coldstore was closed in December 1997. In January of 1998, automated storage was also introduced at the Kinki Reizo Shokuhin Co., Ltd. Itami Center in Hyogo Prefecture, creating a distribution center with distribution processing functions.

In September 1999, the Tokyo General Logistics



Tokyo General Logistics Center

Center (TSC) was completed in Ota City Tokyo. This multi-functional distribution base for the Kanto Area became the biggest such facility within the Nippon Suisan Group with storage capacity of 35,500 tons. This center was equipped with automated storage and storage facilities covering four temperature zones from room temperature to extreme cold. The center was also equipped with distribution processing functions and was even able to handle some distribution center operations on behalf of large retailers. Along with starting TSC operations, the Harumi Coldstore was shut down in January of 2000, bringing

to a close its history of roughly 40 years.

Along with this consolidation and maintenance of distribution centers, efforts were also made to integrate food product ordering centers. In 2000, all orders for eastern and western Japan were consolidated into two locations; Hachioji and Himeji.

Along with this maintenance and consolidation of the distribution business and order centers, distribution efficiency was further improved through direct shipping from the production site, product lot integration and even operating joint shipment of frozen food products with competing companies.

6. Transition to Group Management

Transition to Group Management

Nippon Suisan took steps to reform the management of overseas group companies during the NCR Management Period.

In 1999, the general manager of North America, who also served as president of Nippon Suisan (U.S.A.) Inc., and the general manager of South America, who also served as president of N.A.L. (Nippon Suisan America Latina S.A.), became the executive director of North American operations and executive director of South American operations, respectively. This helped to bring together the operations of individual companies within the group with production functions in North and South America for better execution of business operations in these two regions.

UniSea, Inc. in North America is a good example of these reform efforts. This company encountered management difficulties between 1996 and 1998 as the depletion of snow crab resources resulted in smaller hauls and shorter operating periods.

In 1998, the U.S. government enacted the American Fisheries Act (AFA). This act reduced the number of large, foreign-owned fishing vessels and factory ships, while assigning individual fishing quotas to local fishery cooperatives. Furthermore, processing quotas allowing for the monopolistic purchase of a certain

amount of fishing hauls were also introduced. This resulted in a mechanism under which hauls within the assigned fishing quotas could basically only be sold to a business possessing the requisite processing quotas. Introduction of the Individual Transferable Quota (ITQ) system for Alaska pollack in 1999 allowed marine products companies in the U.S. to realize more planned production.

From around 1999 attention was focused on America/Bering Sea resources with supplies declining as Alaska pollack hauls started to shrink under Russia's Total Allowable Catch (TAC) system. The end use for Alaska pollack caught in the Bering Sea was shifting from the conventional *surimi* for the Japanese market to filets for the growing European and North American markets.

Based on these changing market conditions, UniSea had to make a drastic review of operations and began implementing reforms based on business "selection & concentration". UniSea had focused on only making *surimi* from Alaska pollack, but from 1998 it started to earnestly produce fillets as well. The Saint Paul plant was closed in June of 2000 due to the decline in Alaska pollack resources and pollack operations were scaled back. As a result, the company was able to post a profit for fiscal 1999 after recording losses since fiscal 1996.

In South America, Chilean group company EMDEPES also encountered difficult management conditions as a new fishing law enacted in 1992 tightened restrictions on fishing hauls. So EMDEPES adopted a new business by making a switched from blue hake (*Melanotaenia splendida australis*) to hoki and southern blue whiting in its fishing activities. Hoki is a white fish in the same family as blue hake so could be supplied as a material for white fish filets, but until then southern blue whiting was not commonly used in products. Several trials revealed that southern blue whiting could be used as *surimi* and in October 1994 the Chilean government granted permission to conduct fishing operations within an area of 200 nautical miles for *surimi* operations using southern blue whiting. The same year Nippon Suisan provided EMDEPES with the trawler *Tsuda Maru* (name changed to *Unionsur* after the transfer) and the *surimi* business was able to begin in earnest. These efforts helped EMDEPES to turn around its earnings.

The fishing law enacted by the Chilean government in 1985 obligated companies to invest the same amount in land operations as for their open sea (fishing vessel) operations. So to comply with this law, salmon/trout aquaculture operations were started. Until that time the marine product exports from Chile were

dominated by fish meal in terms of both amount and value. However, 1998 marked the turning point from which high value-added salmon and trout from fish farms became the leading marine product export with the value of these exports suddenly surging.

Salmones Antártica (S.A.) was one of the leading Chilean firms involved in the farming of salmon.

Since becoming a Nippon Suisan Group company in 1998, S.A. has farmed and processed coho salmon and has produced seedlings and feed for Nippon Suisan at bases in Dalcahue in the Chiloé district, Los Lagos Region, and Chacabuco in the Aisén Region. The 1990s marked the dawning of the Chilean salmon industry. Initially exports were mostly coho salmon and trout bound for Japan, but the increase in global demand for salmon provided S.A. with good results and allowed for an expansion of business operations.

In order to help Argentina's PESPASA bolster its fishing operations, Nippon Suisan provided the former trawler *Echizen Maru* in 1994 and the ship *Azuchi Maru* in 1995. However, business results remained sluggish due to the unstable conditions of the Argentine economy. Even though debt/equity swaps were conducted in 1993 and again in 1999, the company was unable to avoid posting huge losses in fiscal 1999 and 2000. With enactment of the Federal Fishery Law



Echizen Maru (Completed 1984)



FishKing Processor, LLC



Nippon Cookery's Atsugi Plant

(Law No. 24922) it was assumed that ITQ systems would be introduced under TAC systems for each type of fish, but some time was required to establish the ITQ system for hoki and southern blue whiting. Thus it took some time before an improvement in management conditions could be seen.

Meanwhile, the Nippon Suisan Group added companies with new functions previously not seen among overseas affiliates. Through Nissui U.S.A., which had integrated all North American operations, Nippon Suisan in August 1996 purchased roughly 90% of the outstanding shares in major U.S. commercial frozen seafood producer Fishking Processor, LLC for about 3.1 billion yen. Fishking was a Japanese maker of frozen seafood products founded in 1955 by Masashi Kawaguchi. The company expanded its business range and grew into a prominent west coast food producer in the field of high quality commercial-use frozen foods. FishKing had three plants in Los Angeles and one in Alabama and owned the famous “Mrs. Friday’s” brand. FishKing was a very significant acquisition, providing Nippon Suisan with its first frozen food production sites and sales divisions in the U.S.

Consolidation and Reorganization of Domestic Group Companies

Reforming the management of domestic group companies was indispensable for establishing sound earnings for Nippon Suisan. Chilled foods and distribution-related companies were consolidated to enhance business operations, while marine products-related companies were mainly reorganized with the aim of streamlining management.

The Chilled Foods Business produced *bento* boxed meals for convenience stores. However, convenience stores were streamlining operations in order to survive, and the Chilled Foods Business accordingly had to reorganize in order to bolster operations and improve efficiency. Nippon Cookery Co., Ltd. was then established in January 1998. Then in March of that year, Eniwa Fresh Foods, Sante Foods, Himeji Fresh Foods, Kansai

Cookery, Hello Delica and Chilly Narashino Plant were all integrated into this new company.

The Marine Products Business dissolved Nikko-Fisheries in fiscal 1997, Hokko Gyogyo and Marusui Co., Ltd. in fiscal 1999, followed by Tosco Corporation, Esukei Suisan, Nippon Suisan (Halifax), Ltd., Saeki K.K. (Chiba) and others in fiscal 2000. The Marine Products Business liquidated a total of 17 companies by fiscal 2000. Likewise, between fiscal 1999 and 2000 the Chilled Marine Products Business liquidated Tokyo Nissui Foods Co., Ltd., Kansai Nissui Foods Co., Ltd. and Fukuoka Nissui Foods Co., Ltd. These steps were taken because the desired number of customers in the chilled foods delivery area could not be secured and the resulting disparity with the production capacity could not be filled. Then in 2000, Saeki Co., Ltd. was established as a directly managed plant with plans to newly develop pickled fish as a core product.

Furthermore, between fiscal 1996 and 2000 a total of 39 companies including Wakamatsu Zosen K.K., NNS, Sendai Ham K.K. and Nippo Sangyo were consolidated/reorganized.

Dissolution of Nissui Shipping

Nissui Shipping, a component of Nippon Suisan’s Marine Transport Division, operated many time charters belonging to ship owners outside of the company, mainly for shipping fruits. The ship owners wanted fixed charter fees and guarantees that their ships would be used for a minimum of five years. However, shipping contracts tended to be for only one year at the longest. As such, earnings soured when conditions for the freight shipping market turned sluggish in the 1990’s. For the more than ten long-term charters (mainly new boat charter contracts), the gap between charter fees and earnings from freight shipping widened, resulting in big losses.

To address this problem, a project team was formed in 2000 to consider the future of Nissui Shipping. This team compiled the following proposals:

- 1) For long-term charters with average remaining contract period of three years, guarantee the contract period and maintain customer service. At the same time, establish two joint-management companies, one for fruits and one for marine products, in order to maintain employment for workers. Transfer operations to these companies.
- 2) After three years (March 2005) when most of the long-term charter contracts have expired, transfer management rights to these two companies and the completely withdrawal Nippon Suisan from the marine transport business.
- 3) Hold negotiations with ship owners regarding lower charter fees as a condition for guaranteeing use of their charters.

These policies were approved at the March 2001 Board of Directors meeting and Nippon Suisan finally could abandon the marine transport business.

In 2001, Nissui Shipping renegotiated charter fees with boat owners, which resulted in a decline of about 14% for these rates. At the same time, capital was also reduced. The joint venture Fresh Carriers Co., Ltd. was established with a foreign corporation engaged mainly in the import and sales of bananas from the Philippines and Nissui Shipping's fruit-related operations were transferred to this new company. Similarly, the joint venture Tokyo Reefer Chartering K.K. was established with Seatrade Group N.V. of the Netherlands. Frozen freight operations, including intermediary operations, were then transferred to this new company. These measures were significant in that they allowed for utilization of expertise held by Nissui Shipping workers.

These steps all went according to plan. Management rights were entrusted to the new companies in 2005, there were no employment or other problems, and

Nippon Suisan was able to make a complete break from the marine transport business.

Looking back at this period, incorporating the marine transport business into the Nippon Suisan business was one consideration. Even after the founding of Nissui Senpaku in 1976, most sea freight was handled through bare boating vessels belonging to Nippon Suisan. This was a business structure without clear management responsibility as overall results (earnings/expenditures) were a combination of Nippon Suisan's charter results and Nissui Senpaku's results from running shipping routes. The Special Vessel Section handling tankers, ore-carrying vessels and other special ships for Nippon Suisan's marine transport business basically entered into long-term contracts with major freight owners. However, these contracts could not be concluded due to changes in the economic environment and tough international competition made a withdrawal from this business inevitable. On the other hand, Nissui Kaiun K.K.'s refrigerated and frozen shipping business mainly picked up on the ocean fish caught using its own fishing operations, including mother ship-type fishery and trawling. The company advanced into the Reefer Department in place of the Special Vessel Section. However, costs were high due to the strong yen and survival was not possible in the existing domestic/foreign specialized industries that were deftly adapting to changes through mergers & acquisitions and the trading of ships. Nippon Senpaku's objective was to maintain this business scale and secure employment for ship workers, however mother ship-type fishery started to contract due to the changing fishing environment. This is believed to be one reason why adaptation to the market changes was not achieved.

7. Overview of NCR Management

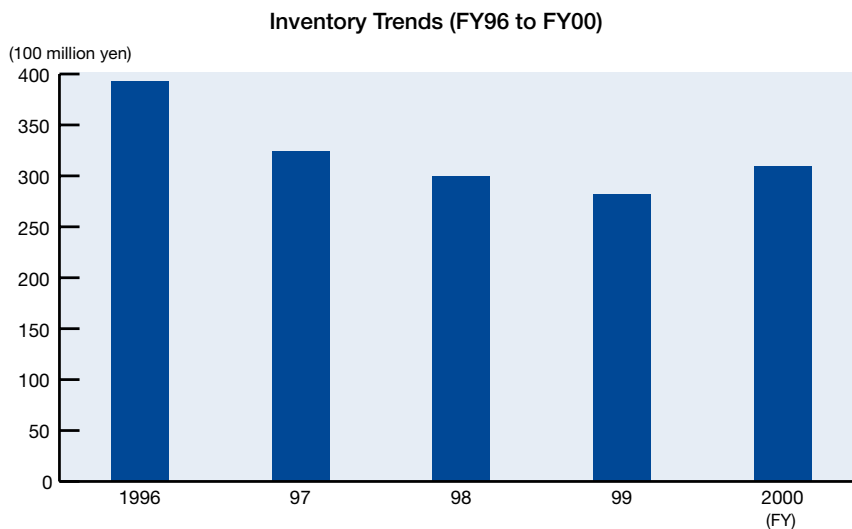
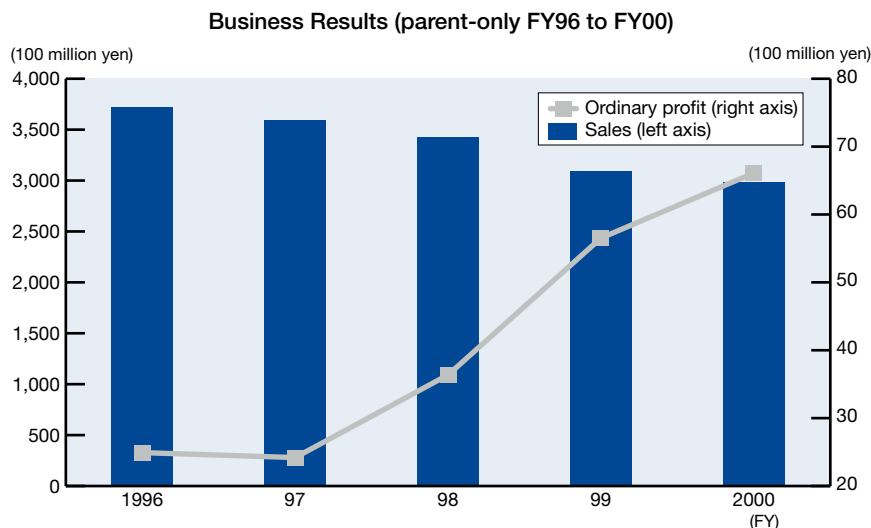
Switch to Profit-Oriented System

Nippon Suisan's management and business practices were drastically reviewed during the five-year period for implementing NCR Management between fiscal 1996 and 2000. Constructing a completely new framework focused on establishing a profit-oriented system was revolutionary. These were five very difficult years for both management and employees. Reducing the number of products also caused inconvenience for customers and gaining their understanding was not always an easy task.

However, the results of these efforts quickly materialized. For fiscal 1996 net sales came to 371.9 billion

yen, ordinary income was roughly 2.5 billion yen after a loss of 2.1 billion yen during the previous year, and net income was 3.036 billion yen. Accumulated losses were removed in fiscal 1997, just the second year of the implementation period, bringing to an end the worsening trend for business results. In fiscal 1998, Nippon Suisan was able to pay an annual dividend of 3 yen/share, the first such payout in nine fiscal periods. This dividend was raised by 1 yen in fiscal 1999 and again in fiscal 2000 as earnings continued to improve.

In June of 1996 Yasuo Kunii was appointed Chairman of the Board and Naoya Kakizoe took the position of company president.



The adoption of NCR Management also contributed to lower inventory levels.

Results, Key Factors and Remaining Issues

The following results from NCR Management were clearly evident in all business divisions:

- It realized focus on strategic products and increased sales of products produced at directly managed plants,
- Cut costs for the Production Division,
- Reduced inventories for the Marine Products and Food Products divisions,
- Reduced distribution expense, and
- Streamlined personnel.

The following were recognized as factors behind the success of NCR Management:

- It launched efforts to learn about and understand “strategy”.
- Top management made decisions with unflinching resolve.
- It created frameworks/mechanisms for execution and made honest efforts towards implementation.
- Aspects that were “difficult” or “troublesome” were adopted into the policy and given structure. At the same time progress was thoroughly monitored using “NCR scores”.

By adopting NCR Management, Nippon Suisan was able to establish a profit base by applying “selection & concentration” to business, products and operations. However, sales continued to decline and growth was not realized. The specific remaining issues were:

- It succeeded in reducing the number of product items, but this concentration did not extend to areas, categories and core businesses.
- Delays existed in standardizing the Marine Products Business.
- It did not succeed in sharing/increasing speed of information within the group.

Improvements to address these points will be incorporated into the next business plan.

There are issues that still need to be addressed. However, NCR Management, which was adopted with the awareness that the company’s resolve would be unflinching, succeeded in realizing the primary goal of constructing a profit-oriented structure. Specifically, accumulated losses were cleared from the books and dividend payments were resumed. As such, this was the first business plan to really function as hoped since the introduction of the 200 nautical mile territorial water system was put in place.

Chapter 2: Aiming for True Globalization TGL Plan and New TGL Plan

2001–2010

Part 1 Environment Surrounding Nippon Suisan

1. Chaotic International Situation

A Domestic Economy in Decline

The start of the 21st Century was soon followed by the September 11, 2001 terrorist attacks on the United

States. These attacks shocked the entire world, rocked global political and social conditions and led to wars in Afghanistan and Iraq.

The result was that Japan’s economy, which was

gradually recovering from a prolonged slump, once again turned lower. Japanese corporate earnings worsened and employment contracted. The decline in the consumer price index spurred on asset deflation in the form of falling prices for land and equities. In 2002, the government hammered out a comprehensive anti-deflation package focusing on disposing of bad debts and reviving industry. The economy gradually recovered from the start of that year, but the recovery was mainly supported by expanded corporate investment in new equipment. Administrative reforms also began in earnest in 2001 with the reorganization of central government agencies. The four main public highway corporations were privatized in 2005 and the postal system was privatized the following year. The merger of municipalities, sometimes referred to as the “great Heisei mergers”, progressed from 1999 to 2011. During this time the number of municipalities decreased to about 47% compared to 1999.

Revisions to the Worker Dispatching Act in 2004 lifted the ban on the use of temporary workers by manufacturers, completely changing Japan’s employment structure. There was an increase in the number of temporary workers and other non-regular employees, but the unemployment rate still rose to over 5%. From the second half of 2004 to the first half of 2005, global demand for IT-related goods softened, export growth slowed and the economy temporarily paused.

Between 2005 and 2006, private consumption grew at a relatively strong pace and stock prices turned up. In March of 2006 the Bank of Japan ended its quantitative easing policy and in July concluded its zero interest rate policy.

From around 2007, international prices for crude oil, grains and other raw materials surged, spurring on cost inflation. Corporate earnings improved and the Japanese economy finally began to break from its slump. However, the severe aftershocks from the September 2008 collapse of Lehman Brothers caused a sudden drop in share prices in Japan and around the world, as well as a rapid appreciation of the yen. This

marked the start of profound changes for social and industrial structures. The trend among manufacturers to shift production overseas accelerated. 2007 also marked the start of Japan’s declining population phase. This produced apprehension about declining demand for food products, decelerated economic growth and other losses of national vitality.

In 2010, the Japanese economy began to see some improvements in exports and production, but the global economy continued to struggle. There were no real improvements for the Japanese economy as sluggish corporate earnings resulted in worsening employment conditions and reduced personal incomes. Personal consumption remained weak due to uncertainties about the future.

Western Financial Crisis and Prosperity of Emerging Nations

The U.S. economy started to slow with the bursting of the IT bubble in the second half of 2000. Then the global economy turned lower following the September 11, 2001, terrorist attacks in the U.S. However, sizable tax cuts and extensive financial easing policies helped to stimulate domestic demand and the U.S. economy recovered relatively quickly. The European economy also started to recover gradually from around 2003. Even the Asian economy, which was a bit of a laggard, started to grow again, led by China.

In 2001 China was granted membership to the World Trade Organization (WTO). Chinese tariffs on agriculture and other products were lowered and the opening of the Chinese markets for goods and services accelerated. In 2004 the E.U. enlarged to 25 members following the accession of ten Eastern European countries. The new entity became the world’s largest economic bloc with a population of roughly 455 million people and a GDP of around 9.7 trillion euros. At the same time, economic activity was being stimulated by various free trade agreements. Such multifaceted integration made particular progress in South America and East Asia.

Asset prices started to collapse in July of 2008 as the U.S. subprime loan (home loan) problem caused a bursting of the housing bubble. Then in September of that year the U.S. brokerage firm Lehman Brothers failed and the impact rattled global financial markets. The impact on the real economy was so great that it came to be called the “Lehman Shock”. Markets were again rattled in November of the following year when the Dubai government announced its flagship holding company was seeking a reprieve on debt repayments. This “Dubai shock” resulted in a sharp drop in global stock prices and ushered in the emergence of the Greek debt crisis from the end of that year into 2010, a crisis that resulted in the steep depreciation of the euro and increased uneasiness about the European economy.

While Western economies were tossed about by these various economic crises, Asian economies were quick to return to recovery paths, mainly due to China and India where solid domestic demand fueled economic expansion. Fallout from the Lehman Shock was relatively light for countries that were enjoying remarkable economic growth such as the BRICs (Brazil, Russia, India and China). Brazil in particular was enjoying an economic recovery led by the automobile industry. By the first half of 2009, economic activity in this country had returned to pre-Lehman levels.

The Lehman Shock ushered in a global shift in the balance of economic power. Economic growth for advanced nations such as the U.S., Japan and E.U. countries declined in 2009 in the wake of the collapse of Lehman Brothers, but firm growth for the newly emerging nations was unchanged for the most part. Similar firm growth could be seen in ASEAN, Middle Eastern and African countries.

Environmental problems have become increasingly severe in emerging and African nations with further progress in modernization and industrialization. Global efforts to protect the environment gained momentum and increased demands were placed on corporations to address the damage that economic activities can inflict on the environment. In 2005 the Kyoto Protocols went into effect, establishing greenhouse gas reduction targets for participating countries. Japan enacted various laws to better protect the environment. In 2003 the “Revised Act on Promotion of Global Warming Countermeasures” was enacted and in 2006 the “Energy Conservation Law” was adopted. Also in 2006, the “amended Containers and Packaging Recycling Law” was established, effectively promoting the reduction, reuse and recycling of product containers by consumers and various organizations, including corporations.

2. Marine Products Business — Food Industry Trends

Marine Products industry—Expanding Global Demand and Heightened Efforts to Preserve Resources

Cases of Bovine Spongiform Encephalopathy (BSE), first identified in Britain in 1986, had spread globally by 1996. This strongly increased awareness and interest in food safety and reliability. In 2001 Japan confirmed cases in Chiba Prefecture and Hokkaido, followed by confirmed cases in Kanagawa and Kumamoto prefectures in 2004.

Demand for marine products was pushed up by this heightened consumer awareness of food safety,

combined with increased health consciousness. Demand for marine products was also pushed up by the rising living standards in regions enjoying remarkable economic growth, such as the newly emerging countries, Russia and former Soviet Union countries that make up the Commonwealth of Independent States (CIS). However, the amount of marine resources caught naturally remained flat, so reliance on aquaculture increased each year. In 2008, the global output of marine resources hit a record high of 158,83 million tons, 42.8% of which came from aquaculture. Production through aquaculture has increased each year with a growth rate of 38.6% between 2000 and

2005 and a growth rate of 8.0% between 2005 and 2008.

Fishing hauls were impacted by tougher international restrictions and resource management by individual countries. Many countries started adopting ITQ systems. Total allowable tuna catch quotas became smaller each year. Restrictions on deep-sea trawling were also toughened. In December 2006, the United Nations General Assembly adopted a resolution to regulate deep-sea trawling in international waters. Then in September 2008 the Food and Agriculture Organization of the U.N. (FAO) adopted guidelines for restricting deep-sea trawling in international waters.

There have been increased global demands on the fishing industry for greater resource sustainability and production traceability. The presence of activities promoting these changes has also increased.

Turning to consumer trends, there has been increased global consumer interest in not only food safety/reliability, but also in foods that are produced in harmony with the natural environment. Consumers came to value products with the Marine Stewardship Council (MSC) mark, which indicates compliance with sustainable fishing practices and traceability. From 2007 Japan took a more active stance in protecting resources and ecosystems by adopting the “Marine Eco-Label” verification system for its fishing industry. Even for aquaculture, greater importance was placed on protecting and harmonizing with the environment.

Japanese eating trends have been moving away from fish. The annual amount of seafood purchased per household declined from 43.6 kg in 2000 to only 35.9 kg in 2009. However, demand for easy-to-eat processed seafood has remained deep rooted.

Sluggish sales of marine products and declining fish prices have forced many marine product companies to reform their operations. In 2003, Nippon Meat Packers, Inc. took a stake in troubled seafood trader Hoko Fishing Co., Ltd. which it later re-launched as Hoko Co., Ltd. In 2005, Nichirei spun off various divisions such as Processed Foods, Marine Products and Logistics.

Food Products Industry—Tougher Regulations for Food Safety and Reliability

Japan’s first confirmed case of BSE in 2001 dealt a serious blow to the food products industry. BSE was spreading globally and countries were banning certain beef imports and taking other measures. Then in 2002 a pesticide residue for which production and usage had been banned internationally was detected in spinach imported into Japan from China. This incident threw into question the safety of Chinese food products. This was followed by a string of other food safety related incidents. These cases involved falsification of product origin, expiration dates, production locations and other information. The government began enacting legal measures to ensure food safety and reliability. In July 2003, the Food Safety Basic Act was enacted. Then in 2006 the Revised Food Sanitation Act was adopted and the Food Safety Commission was established. Unlike in the past, these legal measures were being created more from the viewpoint of protecting the consumer. In May 2006 a “positive list” system was introduced for pesticide residue and other threats. This system prohibited the distribution of foods for which prohibited agricultural chemical residue was detected. The food industry was called upon to provide stricter quality control through management functions such as quality assurance and crisis management.

There was a particularly large impact from the damage to consumer trust caused by the 2008 incident in which agricultural chemicals were discovered in frozen foods imported from China. In addition to enhancing their compliance and risk management systems, various food producers introduced “food defense” measures to guard against the factitious introduction of foreign substances for every stage from materials procurement to sales.

Consumer behavior turned more defensive due to the economic downturn and more people starting cooking at home instead of eating out. There was a clear shift toward the “home-cooked meals” and

“ready-made meals” segments. There was also further diversification of the food service industry to respond to an increase in the number of working women and a decrease in the standard family structure consisting of two parents and two children.

There was greater interest in foods with health functions amid indications that health trends were taking root and with increased consumer awareness about obesity and the need for healthier lifestyles. One such example was the interest shown in EPA (eicosapentaenoic acid) and DHA (docosahexenoic acid) contained in fish oil. Many food makers quickly created businesses in the fine chemicals field in order to use fish oil and other health items as raw materials for functional health foods and supplements.

In Japan accelerated industry realignment through mergers and acquisitions, in order to increase

international competitiveness, was not limited to food makers, but extended to distributors and others as well. Foreign-affiliated distribution companies were making an active push into Japan up until around 2000, but some of those companies started to pull back after failing to break down Japan’s entrenched business culture. Some mass merchandisers and convenience stores confronted excessive competition due to their aggressive expansion strategies and began pursuing originality in order to survive this competition.

In recent years poor weather, major earthquakes and other natural disasters have altered crop harvests and international prices for crude oil, corn, wheat and other commodities have soared. Problems surrounding food such as increasing populations, particularly in the emerging countries, have become more serious.

Part 2 Creating “Global Links” —The “TGL Plan” for Fiscal 2001 to 2005

1. Nippon Suisan Starting Point — “Founding Philosophies”

“Founding Philosophies” as the Key to Victory

The year 2001 was not only the opening page of the 21st century, but also marked Nippon Suisan’s 90th year in business. This year also marked the start of a new medium-term management plan setting a new Nippon Suisan Group vision for the 21st century.

Many serious global problems awaited the 21st century including population growth, energy, food supply and the global environment. However, at the same time tremendous progress was expected for technological revolutions, particularly in the fields of information communications and biotechnology. Furthermore, economic and industrial globalization rapidly progressed in many fields and corporate reorganization accelerated. Large multinational corporations became larger through mergers and acquisitions and their conquest of world markets was spurred on

by absorbing those companies that failed to keep pace with this globalization.

The NCR Management adopted between 1996 and 2000 helped Nippon Suisan establish a profit-oriented structure, but this did not translate into further growth. So the aim of the next medium-term management plan was to create a new business model for the 21st century that would allow the Nippon Suisan Group to survive global competition and achieve continued growth. Two years (fiscal 1999 and fiscal 2000) were spent developing this plan and involved an analysis of current conditions and very precise studies from various perspectives.

At this time the “founding philosophies” that had been maintained since the establishment of Nippon Suisan were reexamined. These philosophies are as follows:

“A tap water supply system is exactly what marine

products should be like in their production and distribution. We seek marine resources from everywhere in the world, ensure that products are always as fresh as possible, set up their worldwide marketing network, just like the tap water pipeline, and distribute them, adjusting their marketing prices in response to demand... Excess costs related to the distribution of marine products also need to be eliminated to realize the distribution costs lowest possible. Earnings through speculation should not be sought in the course of this supply” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

In developing this plan, the actual conditions for global marine products and the food industry were carefully examined. Nippon Suisan’s competition was no longer just domestic rivals in the same industry, but global food-related corporations.

The “founding philosophies” provided some hints for how to best confront the major global revolution that was unfolding. The aim was to create a new business model that remained true to the “founding philosophies”, particularly in regards to the shift in focus from “catching fish” to “creating value from marine resources”.

Dramatically Changing Seafood Market

In establishing this medium-term management plan, Nippon Suisan carefully analyzed profitability for a global corporation in the seafood and food products industry, as well as the environment surrounding the seafood industry including the domestic and overseas markets and consumer trends.

The markets for the main seafood products such as salmon, shrimp and white fish were much bigger in North America and Europe than in Japan. For example, specific market scales in 1998 were 2,750,000 tons for Europe, 1,630,000 tons for North America, 840,000 tons for Japan, and 620,000 tons for Asia excluding Japan. Demand for seafood products was also growing suddenly in the newly emerging countries.

At the same time the amount of fish caught naturally had peaked and the increase in demand was being met by aquaculture. Fish farming production accelerated from 1992. In 1998 this production increased 9% on-year to 39,430,000 tons, accounting for 31% of global seafood output. Many companies started using repeated M&A to compete on the global stage. For example, Dutch animal feed company Nutreco Holding N.V. added a fish feed business and even entered the fish farming field (this business was later sold off). The new trends in the global seafood industry were the promotion of aquaculture and participation by companies from other industries.

Furthermore, many countries rich in sea resources began introducing the ITQ system. Under the former “Olympic method” the large vessels required in order to win the competition consumed lots of fuel, and fishing activities became a war of attrition that disregarded cost performance. As such, marine product companies were unable to turn a profit and maintaining sea resources became problematic. Under the ITQ system, catch quotas were assigned to each company, so they could then catch fish at their own optimum pace. This system was expected to allow for the sustainable, economical and profitable utilization of sea resources, while streamlining investment.

Meanwhile, the global retail industry and food makers were pursuing expanded scale through realignment. In 1999, the world’s largest retailer Wal-Mart Stores, Inc. purchased England’s biggest retailer Asda Stores Ltd. In 2000, Holland’s top retailer Royal Ahold N.V. purchased the American food wholesaling giant U.S. Foodservice Inc., Unilever N.V. acquired Best Foods Inc. and PepsiCo, Inc. acquired Quaker Oats Company. Such purchases spread as big companies sought to occupy global markets and enhance supply chains. This trend even extended to pharmaceutical companies. For example, in 2000 drug giant Pfizer Inc. took over Warner-Lambert Co.

Furthermore, the IT revolution started to dramatically change how business was conducted in the global marine products and food industries. Electronic

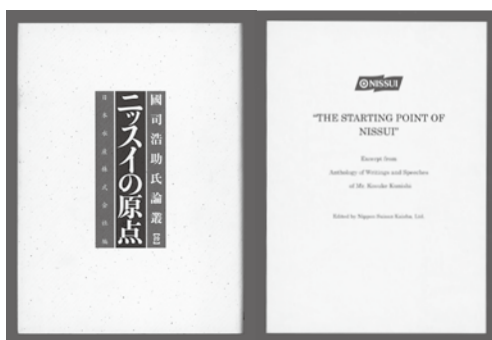
trading between companies over the Internet became more common, particularly in North America and Europe, with the introduction of the producer union site “Seafood Alliance”, the world’s largest retailer joint procurement site “World Wide Retail Exchange” and other platforms. An environment, including logistic systems, was in place allowing major global companies to quickly procure products and materials and conduct other business 24 hours a day. Business had reached an age where time and location no longer mattered.

Consumer lifestyles and eating habits were also changing. In most advanced nations, including Japan, more women were joining the workforce and societal structures were changing due to declining birthrates and larger elderly populations. As a result, lifestyles and values changed, such as greater importance being placed on convenience. Food needs also changed.

On reflection, Nippon Suisan’s global position was small, with its share of the global frozen foods market coming to less than 0.5%. Nippon Suisan held the top shares in Japan for salmon, crab and *surimi*, but held only a very small percentage of the global markets for these items. This was the same for shrimp and white fish. Under these conditions it was very difficult for Nippon Suisan to compete with the top global corporations so an expansion policy became essential.

Aiming to Become a Global Player

Looking at the business environment at the start of the 21st century, many countries were adopting tougher regulations to protect their marine resources,



The Starting Point of Nissui — Excerpts from Anthology of Writings and Speeches of Mr. Kosuke Kunishi (March 2003)

new major customers were emerging for the food industry due to realignment of the retail industry, and food makers were expected to adapt to these changes. Business was becoming borderless due to advances in information technologies, biotechnology and other fields, while at the same time consumer lifestyles and demands for food continued to evolve.

This environment required a global leader who could bring together the marine resources and markets of the world. Such a leader needed to be a global player who could conquer world markets and stand toe-to-toe with global retail, restaurant and food production giants. On this point, Nippon Suisan had the potential to be a global player who could take on this role of global leader. This is because Nippon Suisan was constructing a framework for global access to marine resources, and had established the technologies and organizations needed for converting these resources into products valued by consumers.

In order to compete against global players that have gone beyond business categories, industries and borders, 21st century growth companies need to establish business models that cannot be easily copied by rivals, and must compete through those sectors where most management resources have been accumulated, as well as sectors that will be challenging for rivals. In the case of Nippon Suisan, this referred to the ability to access marine resources and convert these resources into products valued by consumers. The advantage held by Nippon Suisan was its ability to, based on these strengths, form a supply chain between marine resources and delivery (sales) to consumers, and construct unique business models that could meet the demands of the times.

The goal of the medium-term management plan from 2001 was to become a global leader by enhancing these strengths. The following two points were set for this policy.

- Possess the ability to convert (manufacture) marine products into goods valued by consumers and provide these goods globally.
- Provide global leadership for the seafood industry

that puts Nippon Suisan on par with global food companies.

True globalization refers to creating value that will win the support of people in Japan and around the world. The Nippon Suisan Group viewed globalization as a means for uncovering opportunities for growth and returns (profits). In order to win the support of global customers, Nippon Suisan aimed to 1) hold specific shares of global markets, 2) hold brands that will be popular in global markets, and 3) be able to make use of the influence of global quality standards.

The message contained in the “founding philosophies” suggested that reworking the marine products supply chain used since the founding of the company to better suit the 21st century should be a goal in the immediate medium-term management plan. In March

2000, excerpts from the posthumous writings of Kosuke Kunishi, a key person in the founding of Nippon Suisan, were published as *The Starting Point of Nissui—Excerpts from Anthology of Writings and Speeches of Mr. Kosuke Kunishi*. Copies were presented to each employee to foster a shared understanding of the company’s origin.

Then in 2001 Japan enacted the Fisheries Basic Act. In order to switch away from the conventional policies that focused mainly on coastal fishing, this Act incorporated overall development and comprehensive promotion of fishing regions, including the stable supply of quality marine products, management of marine resources/promotion of aquaculture, protecting and improving living environments, processing, distribution and importing.

2. “Global Links” for Entering the Global Marine Products Market

The “TGL Plan” as a Strategy for the 21st Century

The idea of “converting marine resources into products valued by consumers” was positioned in the medium-term management plan (2001 to 2005) as the source of strength that would make the Nippon Suisan Group victorious in the 21st century. As such, the main goals were to become a link between marine resources and global markets, and to build a global supply chain of marine products to serve as this link. This plan was named the “TGL Plan” to represent the two goals of “To be a Global Leader” and “Toward Global Links”.

“Converting marine resources into products valued by consumers” specifically refers to maximizing the value of marine resources, creating a diverse lineup of products including seafood materials (frozen and other processed foods and fine chemicals), while clarifying potential customer and market needs. This is the exact area where Nippon Suisan has been building up strengths since its founding, or more specifically, the high demands of a manufacturer based on skills obtained through the production of goods.

The term “global supply chain” refers to integrated management reaching across borders for each step from accessing marine resources to processing and sales. A good model can be found during the global depression of 1929. At that time Kosuke Kunishi concentrated all business operations at Tobata in Kita-Kyushu, creating a supply chain for fishing (access to marine resources), ice making, refrigeration, freezing, processing, distribution and sales. This model of linking business operations supported growth of Nippon Suisan before World War II. However, as the scale of business grew during post-war reconstruction and Japan’s period of high economic growth, each business eventually reverted to partial optimization and the idea of a global supply chain was lost. Establishment of the TGL Plan helped to bring this idea back to life.

Global Links are essential for constructing a global supply chain. Here “Global Links” refers to the network of Nippon Suisan Group companies (domestic and overseas group companies and equity-method affiliates) and partner companies responsible for each

function in the supply chain, as well as the business growth realized through cooperation among these companies.

As the market economy grew on a global scale, building supply chains with the optimal positioning of various business functions in terms of global perspectives became an important strategy for survival in the 21st century, not only for the marine products and food industries, but for all corporations.

A Manufacturer Converting Resources into Products Valued by Consumers

With the launch of the TGL Plan, Nippon Suisan reconfirmed its commitment to being a “manufacturer converting marine resources into products valued by consumers”. The essence of a manufacturer is to concentrate the strengths of each division into the product. Nippon Suisan’s desire is to put this into practice for the benefit of the customer. The TGL Plan aimed to further enhance functions as a manufacturer in the area of “converting marine resources into products valued by consumers” where Nippon Suisan strengths had been accumulated and realize growth along with customers and partners by creating value for global customers. To this end, the following policies were enacted:

- 1) Insist on being a manufacturer based on skills obtained through the production of things.
- 2) Develop brands that will be supported by people in Japan and around the world.
- 3) Bolster R&D and quality assurance, while making efforts to remain in harmony with nature.
- 4) Integrate Marine Products Business and Food Products Business, promote globalization of production and sales.
- 5) Enhance business systems for creating value along with customers.

The first step was to deepen linkage with overseas group companies within the fishing field in terms of access to global resources and sales networks. Nippon Suisan had been utilizing fishing, aquaculture,

processing, sales and other individual functions (domestic and overseas) within activities targeting the Japanese market. However, this was completely different from the globalization approach taken by the TGL Plan. A global supply chain was built for the optimal linkage of global group companies and partner companies, including those in Japan responsible for each of the supply chain functions, and products with high added value meeting the needs of the Japanese and global markets were sold. This was Nippon Suisan’s new and original business model. The aims were to maximize profits and optimize each business by implementing marketing mix and product mix.

Linkage to corporations sympathetic to the TGL idea were promoted in order to cover gaps where Nippon Suisan did not have corporations responsible for supply chain functions in domestic and overseas regions.

Management Supporting the TGL Plan

In order to realize a corporation that can continue succeeding on the global market, it was essential for each employee to independently participate in the TGL Plan. Therefore, the “My Plan” system was introduced for all Nippon Suisan employees from fiscal 2002. This mechanism for bolstering “initiative & competition” was based on the theories of Stanford University professor and Gorton’s outside board member John Roberts. This is a form of organization management in which individual employees and teams are allowed to maintain their own independence and creativity in addressing management issues with their results linked to overall company management.

In fiscal 2002, “My Plan” seminar working groups that put into practice and gave form to the TGL Plan across divisions were launched so that employees could have a concrete understanding of the significance of “My Plan” within the TGL Plan. These seminars were used to consider the issues that needed to be addressed and the scenarios for realizing TGL. In order to apply the “My Plan” seminar activities to actual business,

project teams known as Linkage Management Teams (LMT) were also formed with the aim of creating new projects across divisions.

At the end of fiscal 2002, the first Nissui Linkage Convention (NLC) was held. The aim of this management conference attended by all employees (approximately 1,200 people) was to obtain understanding of the relationship between “My Plan” and the Nippon Suisan Group, and then participate in the TGL Plan.

Through “My Plan” and the “My Plan” seminars, individual employees were able to consider results and progress for not only their own departments, but for the overall Global Links, and then work to address problems and bring about improvements. The “My Plan” seminars brought about reviews of various projects from the perspective of Global Links. These efforts helped to set the orientation for current business projects such as a vertically integrated business structure for white fish operations, bolstering the bottled salmon flakes segment (a major room-

temperature food product) and the newly developed rice and poultry businesses.

Furthermore, Global Links require the optimization of each supply chain, real-time sharing of information between bases both inside and outside of Japan, and dramatically improved business activities and productivity. Along with introducing information systems for meeting these requirements, the Business Process Re-Engineering (BPR) Project was launched from November 2003. This project was an evolution of the “BPR 2001 Project” started in 1999 when drafting the TGL Plan was just underway. The BPR 2001 Project aimed to reform business systems across various Nippon Suisan fields such as procurement, production, distribution, operations and management. The new BPR Project was formed to reexamine the “business” field. Contribution statements were provided daily with the aim of streamlining in-house transactions, cutting business costs and improving supply chain management.

3. Becoming a Global Leader through a Business Model Unique to Nissui

Vertically Integrated Business Structures — Indicative of TGL

In fiscal 2002, Nippon Suisan began promoting the idea of “vertically integrated business structures”, which is very indicative of business concepts derived from Global Links. Vertically integrated business structure means that for Nippon Suisan, its group companies and partner companies, every operation from accessing marine resources through fishing and aquaculture to the manufacturing and marketing of finished products will be contained with the concept of Global Links.

The white fish business and salmon aquaculture business were cited as examples of vertically integrated business structures. White fish and salmon are categories that have helped to form markets mainly in the U.S. and Europe as opposed to Japan. These businesses allow Nippon Suisan to harness its strengths and are

important from the perspective of bolstering manufacturing functions within the Marine Products Business.

For the white fish business the aims were to enhance access to resources, effectively utilize these resources and maximize the added value by making white *surimi* and filets. For the salmon aquaculture business the aim was to pursue high quality under the “FIVE STAR” brand with traceability available for everything from eggs to processing, even including feed. Vertically integrated business structures were applied to both the white fish business and the salmon aquaculture business, with sales reaching global markets.

Sealord Tie-Up Highlights White Fish Vertically Integrated Business Structures

The first step taken to enhance vertically integrated business structures for the white fish business under



The Sealord Trawler *Rehua*

the TGL Plan was the January 2001 purchase of a 50% stake in New Zealand's Sealord Group Ltd. (hereafter "Sealord"). Sealord is New Zealand's largest fishing company and holds one-fourth of all fishing rights granted by the New Zealand government. Sealord has also obtained fishing rights from various countries in the southern hemisphere. Sealord's main areas of business are trawling, processing and aquaculture with sales activities all around the world. When the shares were purchased, Sealord had bases in 20 countries around the world, owned 25 fishing vessels and had processing plants in seven countries. The company already had deep ties with Nippon Suisan. In 1973, Nippon Suisan took a stake in Sealord Products (which would later become Sealord) through Hokuyo Suisan Co., Ltd. In the early days of New Zealand's fishing industry, Nippon Suisan participated in the development of the country's marine resources. Afterwards, Nippon Suisan provided and operated up to seven fishing vessels. From 1999 joint deep-sea trawling for sea perch was conducted in Chile along with EMDEPES and Pesquera Friosur.

Nippon Suisan Group's access to white fish resources was greatly improved by the addition of Sealord. At that point Nippon Suisan had access to Alaskan pollock resources through Sealord, Nippon Suisan Group companies in South America, UniSea and partner companies in North America, along with access to white fish resources through the Nippon Suisan Group. As a result, Nippon Suisan's name recognition on the global market was elevated.

In addition to fishing, Sealord also processes fresh fish, cultivates white fish and produces processed



J.P. Klausen & Co. A/S
Svenborg, Denmark

products such as green mussel. Furthermore, Sealord provided white fish to Gorton's, a North American producer of household frozen foods, and developed a sales network through the European companies J.P. Klausen & Co. and Nordic Seafood. The previously weak Nippon Suisan Group's sales functions in Europe were suddenly enhanced through this linkage and a new foothold for expanding sales routes was established.

Four international companies, including Nippon Suisan, placed bids to acquire a 50% stake in the Sealord. One reason cited for the selection of Nippon Suisan was because the company "had built deep ties with our country in many areas". For example, Nippon Suisan purchased meat from New Zealand's Anzco Foods Ltd., supported the All Blacks rugby team as an official sponsor since 1993 and procured New Zealand brand frozen vegetables, white sauces and other products. Nippon Suisan built relationships based on trust by contributing to both New Zealand business and culture.

In approving this deal, the New Zealand government said it expected development of the nation's marine resources would be advanced, the added value of marine resources belonging to the Maori people would be raised, national industry would be promoted and jobs would be created. These positive results would come from the transfer of Nippon Suisan Group aquaculture technologies to New Zealand and the introduction of Nippon Suisan fishing and marine resource-related technologies to the Sealord.



Gorton's HQ in Gloucester, Massachusetts



Gorton's Products

Reorganization for Vertically Integrated North American White Fish Operations

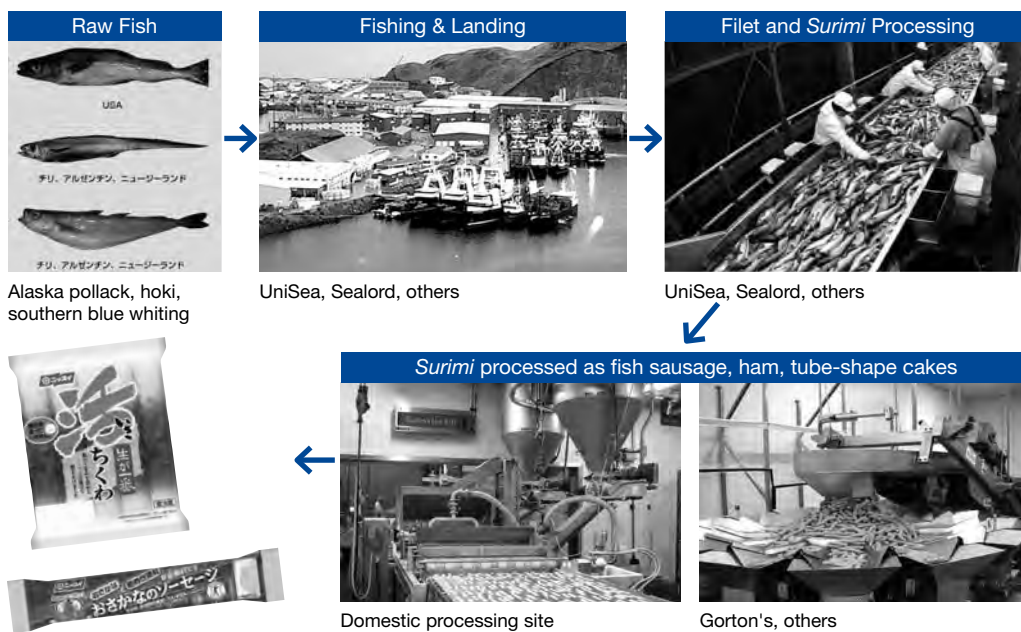
In October 2001, global consumer products giant Unilever sold its North American seafood business to Nippon Suisan (U.S.A.). This acquisition included Gorton's (U.S.), a North American maker of frozen seafood, and BlueWater Seafoods (Canada), both of which became consolidated units of Nippon Suisan. Gorton's was a long-established brand with a history dating back to 1849 and held the top share of the American market, while BlueWater was the No. 2 seafood company in Canada. In 1962, Gorton's became an important partner of the McDonald's Group when the two jointly developed and commercialized the Filet-O-Fish sandwich.

Nippon Suisan thus attracted the attention of the global fishing industry through the acquisition of the

Gorton's and Sealord brands. As a result, more companies wanted to work with the Nippon Suisan Group, which promoted the further expansion of Global Links.

Access to North American marine resources was further bolstered in 2002 through the purchase of a 25% stake in Alaska Ocean Seafood, L.P. (AOS) through Nissui U.S.A. AOS owned the trawler *Alaska Oceans* and produced Alaska pollack paste, *sukeko* (Alaska pollack eggs) and meal in Alaska. *Sukeko*, a refined product from the Alaskan waters, has been a top brand. This acquisition was in response to a share transfer request from Hoko Fishing, which held a capital stake in AOS.

AOS owned catching quotas for Bering Sea Alaska pollack and Pacific whiting along America's west coast. The catch quota for the *Alaska Oceans* trawler increased



from 1999 in accordance with the introduction of the ITQ system following enactment of the new U.S. Fishing Law in 1998.

So at this stage, North American operations consisted of the following five companies: (1) Nippon Suisan (U.S.A.) in charge of imports and exports, (2) UniSea handling Alaska pollack and crab processing businesses, (3) Fishking, a commercial-use frozen food maker, (4) Gorton's, a household frozen foods maker using Alaska pollack, hoki and shrimp, and (5) AOS. Through these five companies, Nippon Suisan was able to create a supply chain and enhance integrated white fish operations covering all aspects from access to marine resources to production, processing and marketing for both commercial and household customers.

Reorganization of North American Crab Business

In 2005, the U.S. enacted a law promoting the management of crab resources including the introduction of an ITQ system for crab fishing in the Bering Sea and Aleutian Islands. Under this law boats were assigned catching quotas and processors were given processing quotas based on their hauls and processing results from 1995 to 2000. Under this law fishing vessels were required to sell 90% of the fish caught within their quota to a processor that had been given a processing quota. Fishing vessels were prohibited from providing fish to processors who did not have such quotas. Furthermore, these processing quotas were transferable and producers could subcontract product operations between themselves depending on the processing

facilities and location of the issued quotas.

UniSea received processing quotas based on past production results, which meant that this processing company could secure a stable supply of fish. This system allowed for production that aimed to maximize resource value, starting with controlling the freshness of materials. In July 2005, UniSea established Bering Sea Partners and purchased Royal Aleutian Seafoods (RAS), which operated a crabbing business in Dutch Harbor, Alaska. UniSea was able to expand its crab business by acquiring RAS's Brown King Crab fishing and processing quotas.

Enhancing European Sales Functions

With the addition of Sealord to the Nippon Suisan Group, the functions of Sealord's sales agents in Europe were combined and reorganized with those of Nippon Suisan (Europe), B.V., greatly enhancing marketing functions in Europe. As a result, Nippon Suisan's sales in Europe surged 30% in 2001 from the previous year, and the sales amount in Europe for the first time ever surpassed the amount purchased for the Japanese market.

Then in 2003, Nippon Suisan made an equity investment in J.P. Klausen & Co. (Svenborg, Denmark), Sealord's sales company in Europe. The white fish sales functions of Nippon Suisan (Europe), which was targeting the Northern European market, were integrated with those of J.P. Klausen & Co. Through J.P. Klausen & Co., sales functions for Alaska pollack filets from UniSea in North America, as well as Merluccius hubbsi and hoki filets from PESPASA and PESANTAR



Europacifico Alimentos Del Mar S.L.
Bilbao, Spain



Nissui (Thailand) Co., Ltd.
Hat Yai, Songkhla Province, Thailand



P.T. Nippon Suisan Indonesia
Jakarta, Indonesia



S.A.'s "FIVE STAR" Brand



Completion of feed plant in Los Ángeles, Chile's No. 8 state, renovated with an integrated production system



Processing Plant at Nissui (Thailand)



S.A.'s sea surface aquaculture

in South America were dramatically improved. Channels for directly selling white fish products to major marine products processors in France, Spain, Germany, Holland, Lithuania, Estonia and other European countries were opened.

Then in 2004, Nippon Suisan, along with Sealord and Friosur (belongs to group partner DERIS) established Europacífico in Spain and sales functions for Spain, Portugal and other Southern European countries were integrated. Along with J.P. Klausen & Co. (covering Northern Europe), this company served as another Nippon Suisan sales base for the European marine products market.

Vertical Integration for Salmon Operations

In recent years the consumption of salmon has grown along with that of white fish, particularly in Western and BRIC countries. For the past ten years the amount of salmon caught naturally has remained roughly flat, while the amount produced through fish farming has grown sharply. In 1992, fish farming accounted for 40% of global salmon production, but this percentage reached about 70% in 2002. During the TGL Plan period, vertical integration was expanded, particularly for the Chilean aquaculture group company S.A. This vertical integration was applied to all stages from



King & Prince Seafood Corp.
Brunswick, Georgia, U.S.A.



Shandong Sanfod Nissui, Ltd.
Qingdao, China

selecting parent fish and hatching to raising fish to adulthood, landing, processing and sales (coho salmon, trout, Atlantic salmon).

Along with bolstering the production systems of S.A., a core salmon farming company in the Nippon Suisan Group, efforts were made to expand these sales beyond Japan to the entire world. By fiscal 2001 shipments of Atlantic salmon to the North American market had already started. Sales were launched through cooperation with North American Nippon Suisan Group companies, and in 2002 a new formula feed factory was built, production of the pellet-type feed expansion started, the quality of farmed salmon was raised and traceability became more complete. As a result, fiscal 2002 production was 2.5 times the level in 1998 and S.A. became the No.8 fish producing company in Chile. Furthermore, smoked salmon production was also started in fiscal 2004.

Nissui (Thailand) Co., Ltd. (NTC), a salmon-dedicated processing site, was established in February 2005 in order to further expand sales routes into global markets. NTC fulfilled its roles of complimenting S.A.'s processing, while creating new types of products. This allowed Nippon Suisan to prepare a foundation for vertical integration of salmon operations.

4. Strengthening and Reorganizing the Domestic Foods, Fine Chemicals and Distribution Businesses

Processed Foods Business Reforms through Vertical Integration of White Fish Operations

Conventionally Nippon Suisan entrusted the production and processing of *surimi* to group and partner companies mainly in North and South America and then the headquarters' Marine Products Business Division sold the paste to domestic producers of foods using *surimi*. The TGL Plan achieved vertical integration for white fish operations from resource access to marine products, processing and finished products. This helped to realize new business strategies harnessing the strengths of Nippon Suisan by combining this *surimi* supply chain with the Food Products Division's

Global Links for Shrimp Farming and Processing

Bolstering shrimp operations was another key policy in the TGL Plan. Natural shrimp catching had been the main trend in Asia, but shrimp farming operations started in earnest with the establishment of P.T. Nippon Suisan Indonesia in 2004, which included construction of a system for all stages from hatching to product processing. Furthermore, in 2001 the Cirebon plant of P.T. AGS was completed in Indonesia allowing for the provision of one-time frozen deep-fried shrimp, an item with good product differentiation.

Then in July 2005, Nippon Suisan acquired America's King & Prince Seafood (K&P), a major frozen foods producer with a focus on shrimp processing (based in Brunswick Georgia). This acquisition further enhanced vertical integration of procurement, production and processing between group companies in North American (UniSea, Fishking and Gorton's).

In order to bolster the production of marine products and frozen foods in China, the joint venture Shandong Sanfod Nissui, Ltd. was set up with Shandong Sanfod in Qingdao city, Shandong, China in June 2004.

fish sausage/ham and other products using *surimi*. Specifically, unique technologies were developed to maintain *surimi* product quality without the use of egg whites and in 2002 the use of egg whites was eliminated for every step from *surimi* processing to the domestic production of fish sausages and *chikuwa* (tube-shaped *surimi* cakes), allowing for the production of *surimi* products that could be enjoyed by those with egg allergies. This is just one example of value generated from vertical integration.

Then in 2003, the Food Products Division established a production line for flake-type flavored *kamaboko* (boiled *surimi*) at the Himeji General Plant. This division was then able to produce and market



Iki-Chikuwa (tubes made from *surimi* without egg whites)



Osakana no Sausage (sausage made from *surimi* without egg whites)



“Obento ni Benri” series at the time of 1999 launch

“Umi kara Sarada Fureku” (salad flakes from the ocean) *kamaboko* using egg-free, high-quality flavored *surimi* produced by group companies. At this time the consumption of flake-type products in the domestic crab flavored *kamaboko* market was growing sharply. Nippon Suisan was a bit late, but finally broke into this field. In addition to great taste, this product used natural coloring and no eggs or preservatives. Sales grew due to the product originality and high quality that satisfied consumer demands for greater food safety and reliability.

Frozen Foods Business within TGL Plan

During the NCR Management period the household frozen foods business continued to concentrate on “Power Items” and product appeal was maintained through frequently renewing products. At the same time new categories were being tested with the aim of spurring on further business growth.

The thaw-at-room-temperature “Obento ni Benri” series of *bento* boxed lunch side dishes introduced in 1999 were very easy to use as these items could be placed into box lunches while still frozen. This product became more popular in 2005 with its evolution into various menu combinations and grew into a major category at frozen foods sales sites with other companies even deciding to participate. This line was reformed as the “Shizen Kaito de Oishii!” (meal naturally defrosted and delicious!) series in 2007, with the “thaw-at-room-temperature” concept providing a new opening to target consumers who did not want to

spend too much time and energy on cooking.

Then in 2005, a series of deep-fried foods with reduced fat was introduced as more health-conscious side dishes. Using a special cloth to limit the absorption of frying oil, the amount of fat for all products in this line was reduced by between 30% and 40%.

Enhancing Nature of Sales for Food Business Division

As a key issue in the TGL Plan for the Food Business Division, the Regional Sales HQ was in March 2001 broken into three divisions: Regional Sales HQ, Consumer Products Department for Tokyo Metropolitan Area, and Food Service Products Department for Tokyo Metropolitan Area. Staffing levels were increased and capacities for negotiating and make proposals were enhanced.

A greater focus was also placed on area marketing and in 2001 Nissui Area Marketing Management (NAMM) was introduced for the core categories in the Consumer Products Section such as household frozen foods, paste products and fish sausage and ham. Television advertising targeting individual regions was also introduced at this time. In 2002, Food Service Products User Marketing Management (GUMM) was introduced in the Food Service Products Section. Instead of focusing ideas on products, sales were developed more from the perspective of functions to meet the demands of customers and markets.



Yaki Sake Arahogushi



IMARK

Restoration of the Shelf-stable Foods Business

Earnings improved temporarily for the shelf-stable foods business (canned goods, retort pouches, etc.) due to a reduction in the number of products during the NCR Management period. However, the decline in sales due to a shrinking market could not be halted and there were even rumors the business would be abolished at the end of 2002. Those in charge wanted to restore the shelf-stable foods business and directly appealed for the opportunity to newly establish a Shelf-stable Foods Business Division in which they could manage all production, procurement and sales supply chains. In March 2003, they were granted permission to continue working to restore this business over a three-year period.

This re-launch came at a time when future prospects were cloudy with the market size shrinking each year, materials costs rising and sales prices declining. The product mix was reviewed with a focus on those products that could harness the strengths of Nippon Suisan. This resulted in a better mix of profit generating products, diversification of bottled products, retorts and gift products, appropriate product management for the bottled goods segment, the promotion of direct shipping utilizing wholesalers and better inventory control. Based on these approaches, the bottled product “Yaki Sake Arahogushi” (grilled salmon flakes) was developed into a core product and success was achieved in cultivating new categories such as the “Nabe Soup” retort pouches. Income and profits continued to increase from 2003 when the balance (income and expenditures) for this business took a turn for the better.

Chilled Foods Business Expansion and Concentration

There was a turnaround for the Chilled Foods Business, which was scaled back during the NCR Management period, and plants were newly established in regions throughout Japan. This turnaround was due to improved approaches for dealing with the chains receiving these products.

Nippon Cookery increased its scale by taking over from various vendors the Aichi Prefecture Komaki Plant in July 2003, as well as the Osaka Hirakata Plant and the Okinawa Plant in October of that year. In January 2005, the Shimada Plant was built to serve as a base for all of Shizuoka Prefecture and the Mikawa region of Aichi Prefecture. Then the Kanazawa Plant was acquired in June of that year, the Yachiyo Plant was built in July and the transfer of business from the Chilly Narashino Plant was completed, creating a system for enhancing business in the Kanto region. This resulted in nine production sites, when including the already existing Atsugi, Oita and Itami plants, which together covered the key Kanto, Tohoku, Hokuriku, Kinki, Kyushu and Okinawa regions.

Meanwhile, Chilly merged with Kanto Fresh Foods Co., Ltd. in July 2008 and its business was passed on as the Chilly Narashino Plant.

Reforms of the Fine Chemicals Business

Expansion of functional lipids (oils and fats) and creation of new values for marine resources were key growth strategies for the Fine Chemicals Business.

EPA, DHA and other functional lipids based on

fish oils were at the core of the Fine Chemicals Business. EPA and DHA used as pharmaceutical materials and as functional lipids for foods had been produced in cooperation with group company Kyowa Technos. Results for the pharmaceuticals materials segment grew steadily from 1990, but regular drug price cuts were implemented from 1992. As such, significant growth in earnings and profit was thrown into doubt after peaking in 1996.

Under the TGL Plan the aim was to replace this pharmaceutical materials segment by expanding functional lipids as the core to growth for the fine chemicals segment. Efforts focused on producing EPA and DHA to be sold domestically and internationally as materials for dietary supplements, nutritional pills and food additives. Sales for the functional lipids business grew steadily along with the domestic and international growth in health food and industrial-use customers. However, production was strained due to obsolete production equipment at Kyowa Technos, environmental problems, insufficient capacity at the Tsukuba Plant, dispersion of base production sites and other problems.

To address these problems, a functional lipids production site was established at the Tsukuba Plant in February 2004, production capacity was increased, and functions for future production, quality and technical development were put in place. In April of that year, “IMARK”, a specified health food based on EPA for those concerned about triglyceride, was launched as a mail-order business. The product name “IMARK” comes from the Inuit word for water. This name was chosen out of the desire to share with many people EPA, a key to the health of the Inuit people who eat plenty of fish.

Integrating and Reorganizing the General Distribution Business

Rationalizing distribution is an important cost management issue for any company. From the late 1990s there was an increase in 3rd Party Logistics (3PL) and

outsourcing services handling all of a company’s logistics functions. There were also many cases of companies reaching beyond the walls of competition to team up with other companies for shared inventory management and transport.

In 2002, Japan had roughly 1,800 managed refrigerated storage facilities with capacity of about 11 million tons, but these levels were than expected to decline. Earnings for refrigerated storage continued to decline after peaking in 1992 and there has been on-going reorganization and weeding out of weaker facilities.

Progress was made in further integrating distribution bases for Nippon Suisan’s General Distribution during the TGL Plan period. In October 2002, Tobu Reizo Shokuhin Co., Ltd. absorbed Sendai Hinomaru Reizo and Marushin Unyu Co., Ltd. Functions and competitiveness were enhanced so this company could serve as a key base in Eastern Japan for the Nippon Suisan Group’s distribution operations. Operations were concentrated at Seibu Reizo Shokuhin (in charge of western Japan) and Tobu Reizo Shokuhin (in charge of eastern Japan). This allowed the group to provide prompt and balanced distribution services covering a wide area.

Issues with Intellectual Property Rights

In recent years Nippon Suisan has appealed for greater respect of intellectual property rights in the food industry.

Nippon Suisan’s “Shioaji Edamame”, a salt-flavored frozen green soybean product that can be thawed naturally at room temperature, has been a popular product since its introduction in December 1993. A unique feature of this product is that the salt flavor is absorbed right into the beans. On May 20, 1993, Nippon Suisan applied for a patent covering this invented product and its special packaging and on September 25, 1998 this patent was registered. During this time the strong sales of the “Shioaji Edamame” contributed to the overall growth of the frozen soybean market.

However, eight objections to this patent were submitted to the Patent Office by June 1999. The Patent Office's Appeal Board made a comprehensive review and concluded on June 30, 2001 that the patents were to be upheld. Based on this confirmation of the validity of the patent rights, Nippon Suisan in October 2001 began holding negotiations with other firms regarding their usage of this patent.

Then on February 13, 2002, a few corporations opposed to these negotiations requested that the Patent Office decision be overturned. In response, Nippon Suisan on March 13, 2002 filed a patent infringement lawsuit with the Tokyo District Court.

On February 18, 2003 the Patent Office decided

to void the patent and on February 26 the Tokyo District Court dismissed the case filed by Nippon Suisan. Not wanting to intentionally cause any further distress for the industry, Nippon Suisan decided not to appeal this decision.

Nippon Suisan is competing with other companies through the development of unique technologies and believes that an environment in which there is mutual respect for intellectual property rights is essential for gaining consumer confidence. In this era of competition among similar products, Nippon Suisan has stressed the importance of respecting intellectual property rights. At the same time, functions within the company regarding patent information were bolstered.

5. Quality Assurance and Environmental Preservation

Quality Assurance

For any producer of foods, a quality assurance system is the foundation for gaining consumer trust and confidence. Quality assurance is a very important issue as it entails implications that could determine the life or death of a corporation.

In 1964, Nippon Suisan established a Food Products Technology Department in charge of technical support for the production of processed foods and a Quality Control Section was established within this department. Since then this Quality Control Section was positioned within the Food Products Business until 1990. Then in April 1991, this section was split into the Marine Products Quality Control Section and the Food Products Quality Control Section to create an independent quality control group directly overseen by the company president. In 1995 an Overseas Quality Assurance Section was established along with new quality assurance sections for the Fukuoka, Osaka and Sendai regions in Japan.

Quality control operations expanded during this time along with the globalization of production and procurement, expanding business fields and a growing

number of offered products. Improving the quality assurance system became imperative for Nippon Suisan as quality control was becoming much more important for business in regards to raising customer satisfaction.

In 1998, Nippon Suisan established a Quality Assurance and Environment Preservation Office. In addition to enhancing the shift in focus from quality control to quality assurance, activities were also expanded to include measures for protecting the environment. The issues addressed were increased and efforts were made to obtain ISO 9000 series quality control management system certification, comprehensive sanitation management and production process approval from the Minister of Health, Labour and Welfare and approval for exporting marine products to the U.S. Through these activities Nippon Suisan created and implemented its own sanitation control standards in accordance with the approaches of HACCP. Inspections and improvement activities were also regularly conducted to maintain the level of quality control and production sites.

However, the event that led to a fundamental review of the quality assurance system was a product recall

in the summer of 2000 after a small fly was discovered in Nippon Suisan's frozen "Chanpon" (noodles with toppings dish). On July 8 of that year, a customer contacted the Customer Service Center to complain that an insect, likely a small fly, was found in the purchased "Chanpon". However, an insufficient response from the company invited customer distrust and unfavorable media coverage. Nippon Suisan eventually recalled the relevant product lot. At that time there was heightened interest in food safety following a food poisoning case at a leading dairy products maker.

Nippon Suisan recognized this as a very serious management crisis that required a company-wide response. An emergency meeting of department heads was called, quality assurance was recognized as the most urgent management issue requiring direct participation from top management and decisions were made regarding three items. Specifically, decisions were made to realize HACCP or equivalent management for the production of all Nippon Suisan products. A decision was also made that the closest sales representative should visit customers making serious complaints to apologize for any inconvenience and verify details of the complaint. Furthermore, steps were taken to operate customer service centers on weekends and establish emergency response rules for the entire company.

In October 2002, the quality assurance system was reformed and a Quality Assurance Charter was established. All employees were requested to take this charter to heart. The main approaches are as follows.

- 1) Safety and reliability are the ties between producer and consumer. The assurance of safety and reliability are what make our brand.
- 2) Quality assurance is a reflection of the quality of management.
- 3) Quality assurance costs shall be compatible with business results.
- 4) All executive and employees from the president down shall be responsible for quality assurance.

In August 2003, a Quality Assurance Management

Meeting made up of representatives from all domestic production sites, including affiliated production sites, was convened so that the above points could be shared with all relevant parties.

Furthermore, in addition to keeping quality assurance functions under the direct control of the president as before, a Quality Assurance Committee chaired by the president and an Executive Council were newly established. These gatherings were convened about three times a month in order to establish various policies for the effective functioning of the Quality Assurance Charter, to quickly respond to customer comments about quality and quality assurance problems arising inside and outside the company, and to establish philosophies for the company.

Furthermore, in October 2002 the Food Safety Research Center was established, enhancing functions for scientifically verifying food safety. This center conducts chemical and microbiological inspections for agricultural chemicals, antibodies and others, mainly for imported products. This center also conducts independent inspections of imported products.

For Nippon Suisan, a company promoting global activities, quality assurance is an issue to be taken up by each company within the Global Links. In 2003, Nippon Suisan initially started thorough implementation of a quality control system in Asia where there is a concentration of group production sites engaged in high order processing. In addition to quality control organizations established at each production site, the Quality Control Center China (later became the Qingdao Nissui Food Research and Development Co., Ltd.) was established in Qingdao, China. In 2004, a quality control center was also established in Bangkok, Thailand. Systems were put in place for managing the quality of raw materials, semi-processed goods and finished goods in each country and for providing instruction and guidance at local production sites.

Environment

The Earth Summit held in Rio de Janeiro, Brazil, in 1992 adopted two important conventions: the Climate Change Convention and the Convention on Biodiversity. Then in 1997 the Kyoto Protocols were adopted at the third Conferences of the Parties (COP3). In 2000, the Japanese government enacted the Basic Act for Establishing a Sound Material-Cycle Society, established the “3 R’s Philosophy” (reduce, reuse, recycle), ratified the 2002 Kyoto Protocols and decided to take steps to reduce greenhouse gases by 6% from 1990 levels.

In 1998, Nippon Suisan established its Quality Assurance and Environment Preservation Office, placed parties in charge of company environment policy and started taking measure to preserve the environment. Around this time Nippon Suisan also started taking steps to receive certification under the ISO14000 series of environmental management system international standards. The Shimizu Plant was the first to be awarded with this certification, which was followed by certification for other production and distribution sites.

In 2001, Environment Relations Officers were established, marking the start of company-wide approaches for preserving the environment.

In June 2003, the Environment Committee was

created and the Environment Code was established. This code, along with the Quality Assurance Code and Code of Ethics expressed Nippon Suisan’s corporate stance and declared that corporate activities would be promoted based on these philosophies.

The Environment Code expresses the company’s philosophy on the environment as: “Since we gain benefits from nature in our business activities, we make it the basic principle of our Philosophy & Ethics to deal with the earth and the sea with gratitude. We will continue to work toward harmony and coexistence with the global environment in our global business, and help create a sustainable society”.

Of all the major foods in the world, only marine products rely on nature for more than half of its supply and the impacts that global environmental changes have on ocean resources are progressing at an accelerated pace. In light of these conditions, the entire group has been making efforts to reduce burdens placed on the environment.

Nippon Suisan’s environmental preservation activities include reducing waste and recycling at production and distribution sites, reducing CO₂ emissions as a global warming prevention measure and preserving water resources.

An in-house Environment Report was issued in fiscal 2004 and a general Environment Report was issued in 2005.

6. Reforms of Management Support Divisions in the TGL Plan

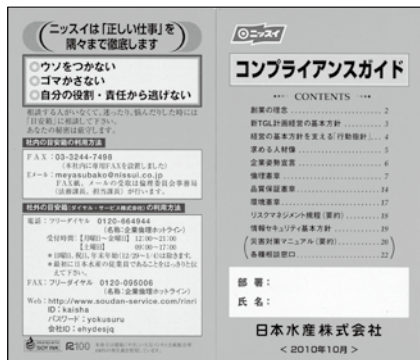
Introduction of New Personnel System

In October 2001, a new personnel system using a job-based grade system was introduced. This was the first drastic reform in 11 years, since the introduction of a course-specific personnel system in December 1990.

In fiscal 1999 the “New Personnel System Project” was launched, discussions between labor and management were held and a new system was considered. The aims of the new system were to adapt to the changing environment confronting corporations (sudden

economic changes, deregulation, global competition, declining birthrate and growing elderly population), establish job standards, handle employees in a fair and easy-to-understand manner, motivate employees and secure competent workers.

There was a complete change from the previous “ability-based grade system” in which employee compensation was based on ability and years of service, to a “job-based grade system” in which salaries differ based on the scale and difficulty of work entrusted to each employee. The new system was applied to all



Compliance Guide containing the Quality Assurance Charter, Code of Ethics, and Environmental Code (October 2010 edition)

Nippon Suisan employees including management. Based on this approach, the company-owned housing system was abolished and the previous welfare system was completely reviewed. The basic philosophies of the new employment system were as follows:

- 1) Employee compensation and evaluation will be based on “duties”, “results” and “ability”.
- 2) Support will be given to raise the specialized abilities of each employee and to develop professionals.
- 3) Support will be provided so employees continue to work under healthy, safe and secure conditions.
- 4) Work options will be expanded.
- 5) Promote the development of executives from the perspective of group management.

Furthermore, the employee assessment system used achievement score assessments of the degree to which results were achieved and measurements of the degree to which skills were used in performing duties. The former is reflected in bonuses and the latter in wage revisions.

This evaluation system was reviewed in fiscal 2010. Greater importance was placed on assessments of results and actions in order to assess those who act in accordance with the image of the desired employee and to promote personnel development. It was also determined that these assessments would be reflected in bonuses.

Corporate Governance

Japanese accounting standards were drastically changed by the sweeping reforms in 2000 that came to be known as the “Big Bang” accounting reforms. These

reforms included the introduction of consolidating accounting, cash flow statements, current value accounting, retirement benefits accounting and income tax accounting. These reforms were intended to meet financial market needs and bring Japanese accounting practices more in line with international standards. These changes also applied pressure on corporate management to carry out reforms. There were greater calls for corporate disclosure including these points from the fiscal year ended March 2000.

Nippon Suisan began making preparations to fully disclose management/financial information and explain group activities. IR activities were also started along with launching the TGL plan in 2001. In June 2001 the president held a briefing to explain the fiscal 2000 results and the TGL plan to institutional investors and brokerage analysts.

In September 2002, Nippon Suisan formed a “Compliance Preparation Committee” to study the company’s approach to compliance. Then in March 2003 the company’s Code of Ethics was established. This code was created to clearly express the value that Nippon Suisan places on corporate ethics, clarify the mental attitude employees should take in their actions and ensure that these ideas are shared by all employees. At the same time an Ethics Committee was launched and compliance activities were put in place with the aim of elevating the level of ethical behavior, including that of group companies. This Ethics Committee built the group’s compliance system, enhanced educational activities, thoroughly managed information and promoted fair trade.

An Information Security Section was created in

order to establish and enforce regulations for handling personal information and for managing confidential business information. Furthermore, the Basic Policy for Information Security was set in February 2005.

Risk management was also started with the launching of a Risk Management Committee in 2005. Issues were resolved by uncovering and assessing business risks, and then prioritizing the development of countermeasures. These efforts led to the establishment of risk management regulations in February 2006.

Accounting and Finance Streamlining

In April 2003, Nissui G Net Co., Ltd. (hereafter referred to as “G Net”) was established to take over duties from the Business Affairs Center. The “G” of G Net refers to Global, Group and General. The purpose for setting up this new company was to support financing-related operations for the Nippon Suisan Groups and concentrate service operations in order to clarify costs, standardize operations and realize efficient fund procurement within the group. G Net was also responsible for requesting payment for products sold by Nippon Suisan and for handling

payments received.

In November of the previous year, a Cash Management System (CMS) was introduced as a fund management mechanism for the overall group and to promote efficient fund raising within the group. CSM was incorporated into the Nippon Suisan’s Finance Section and systems were put in place for stable, low-interest fund procurement and receipt/disbursement operations. The individual external fund procurement operations used by each group company up until then were all brought together. This promoted operational efficiency, creditworthiness of the Nippon Suisan Group, realization of low-interest fund procurement by harnessing the merits of Nippon Suisan’s scale, and reductions in interest costs for the overall group and fund flows outside the group. The introduction of CMS resulted in a reduction in group interest bearing debt of more than 10 billion yen and a reduction in financing charges of more than 100 million yen.

In order to increase the number of shareholders and create greater share liquidity, the minimum trading lot for Nippon Suisan shares was lowered from 1,000 to 100 shares in September 2005.

Part 3 “New TGL Plan” as Management Strategy for Nippon Suisan’s Next 100 Years for Fiscal 2006 to 2010

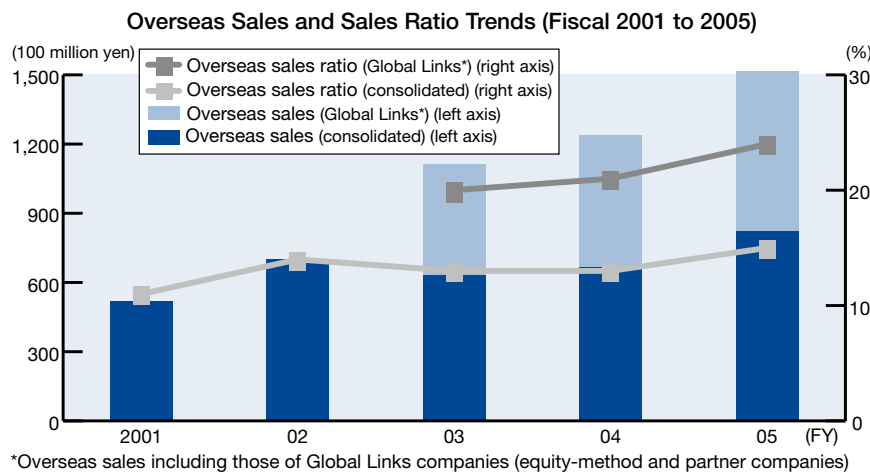
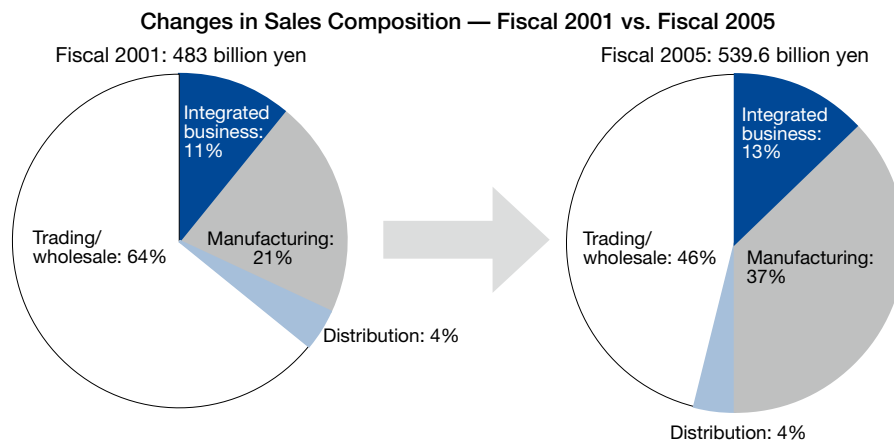
1. New TGL Plan as Foundation for Next 100 Years

Suddenly Changing Business Environment

From around 2005 various problems involving global population growth, food/natural resources and the destruction of the environment on a global scale came more into focus. Attention turned to the BRICs (Brazil, Russia, India and China) countries which account for close to 40% of the world’s population, but higher resource prices due to the economic activities of these countries became unavoidable. Meanwhile, Japan’s economy entered a declining phase from 2005.

As such, it became increasingly important for Japanese firms to not rely solely on the domestic market, but to also develop overseas markets, particularly in the newly emerging countries.

As global demand for marine products increased, Japan’s position in the global trade of marine products began declining. The global trade of marine products has been increasing each year and record high levels were hit in 2007 in terms of both import amounts and value. Japan had been the world’s largest importer of marine products, but this amount has been



decreasing after peaking in 2002 and China took over the spot of top importer in 2005. There has also been in upward trend for marine product imports to the U.S. and Europe due to greater health awareness and unease about meat and poultry safety following cases of BSE and bird flu. Demand for marine products has increased in China along with that country's economic growth. In these regions there has been increased interest in marine products, particularly salmon, which has sent prices sharply higher. Japan's imports have decreased and there has been the so-called "*kaimake*" phenomenon (loss of purchases to others).

Japan is a country that relies on imports for roughly half of its marine product consumption. Efforts were needed to reform marine products policy in accordance with a new marine products master plan for securing a stable supply of marine resource. These efforts included the recovery and maintenance of marine resources and the development and protection of fishery management bodies with international

competitiveness.

In 2002, the Basic Plan for Fishery was enacted in accordance with the Fisheries Basic Act and various policies were put forth to secure a stable supply of marine resources and for the healthy development of Japan's fishing industry. However, good results were not obtained and the Basic Plan for Fishery was reworked in 2007 in order to change marine product policy.

Reorganization of Japan's marine products and food industries were promoted amid a string of global mergers and acquisitions involving huge corporations. In October 2007, Maruha Group Inc. (capital: approx. 29 billion yen) merged with Nichiro Corporation (capital: approx. 12.2 billion yen) via a share swap. The new entity, Maruha Nichiro Holdings, Inc. had capital of 31 billion yen and annual consolidated sales of 850 billion yen. This merger came when the Maruha Group was approaching its 127th year in business and Nichiro was getting ready to celebrate its 100th

anniversary. The following year Japan Tobacco Inc. (JT) acquired Katokichi Co., Ltd. (current TableMark Co., Ltd.) and made it a group company.

Aiming to become a “True Global Leader”

The following are the results of the “TGL Plan” adopted by Nippon Suisan between 2001 and 2005.

- Improved access to global marine resources
- Increased influence over global markets and customers
- Established footholds in the fishing and aquaculture industries within Japan’s EEZ (exclusive economic zone)
- Further expanded global networks
- Continued bolstering of financial strengths
- Created group appeal as a company that acquires and develops global talent

However, a major problem is that returns on such investments take time and the investment cannot always be sufficiently recovered.

The “New TGL Plan” medium-term business plan started from fiscal 2006, gave careful consideration to the suddenly changing business environment, while pursuing returns on investments in the previous TGL Plan and taking steps to enhance functions complementing Global Links. The New TGL Plan was intended to make the Nippon Suisan Group’s business more cutting edge and sophisticated. The period for this new plan was seen as a time for Nippon Suisan to achieve its centennial goals and build a solid foundation for the company’s next 100 years.

Nippon Suisan greeted its centennial anniversary of foundation in fiscal 2011 with the aim of being “a company which boasts unsurpassed strength and customer support in the field of creating value for customers from marine resources” and a “global leader in creating value for customers from marine resources”. In terms of group management strategy, Nippon Suisan decided to create value under this shared vision and work to strengthen the Global Links. “Global Links” refers to a network of companies which share

the Nippon Suisan Group vision and work together to create value through win-win relationships that do not necessarily involve capital support.

The basic management policy for the New TGL Plan was defined as: We help people around the world achieve a rich, healthy lifestyles by creating a diverse set of values from marine resources and delivering them to customers.

The image of the business structure was described as realizing a unique business model that links the power of nature and the power of science to lifestyle values in order to create the most trusted network in the global marine products industry.

The following are specific images of business structures for the Nippon Suisan Group.

- 1) Improve the profitability of core businesses (improve business structure through measures to acquire resources)
 - Improve profitability through cost reductions in core businesses.
 - Secure profit by developing and selling highly functional products.
 - Change the sales style to link with “pull marketing” through advertising.
 - Further enhance vertically integrated business structures and maximize profits through marine product and marketing mixes.
- 2) Expand profits through more sophisticated business (reform business structure through methods for acquiring resources)
 - Secure safety, reliability and traceability through vertical integration, by achieving advances for the aquaculture business and by developing a cutting-edge aquaculture (fish farming) model.
 - Team up with outside research organizations to develop and commercialize various sophisticated functional materials based on natural materials.
- 3) Acquire new technologies such as bio-production technologies (structural reforms based on a third resource acquisition method that does not rely on the harvesting of natural resources)

- Begin researching and commercializing the bio-production of EPA, DHA and other functional materials.
- 4) Reorganize group companies and focus management resources on manufacturing functions. Cooperate with partner companies to create structures for highly efficient management of trading and wholesaling. Switch from the consolidated method to the equity method to achieve scale realizing better functions and services.
 - 5) For all businesses make a deeper push into the domestic markets, create global markets and customers, and bolster systems for maximizing the value for marine resources.
 - 6) As a leader in the marine industry, show stakeholders a commitment to plans and become a more trustworthy corporation.

The following are the key strategies for achieving this goal.

- (1) R&D Strategy: Refine techniques so as to avoid any waste of the limited marine resources. Establish aquaculture and bio-based technologies. Establish research facilities for the science of food functions and for bio-production. Also establish a section promoting aquaculture, place this section in charge of the Oita Marine Biological Technology Center and pursue cutting-edge aquaculture operations in terms of both research and business execution.
- (2) Resource Production Strategy: Expand and bolster access to marine resources by enhancing frameworks for accessing fishing and by expanding/deepening aquaculture operations. Acquire bio-production technologies as a new means for obtaining resources. Hold specific shares of the main seafood resources such as white fish, salmon, shrimp and crab. Enhance frameworks for accessing overseas fishing, participate in the domestic fishing industry.
- (3) Processing/Production Strategy: Newly establish, reorganize and concentrate domestic and overseas production sites, including group companies, for the purpose of better global area marketing. Promote the “2 in 5” activities (= double productivity in five years). Bolster the functional materials business as a new value added-type business.
- (4) Quality Assurance Strategy: Adhere to the Quality Assurance Charter and build a quality assurance system for realizing the group’s responsibilities for guaranteeing quality. Establish a system for ensuring consistent quality from the fish farms and produce farms to the processing plants and distribution.
- (5) Marketing Strategy: Conduct marketing strategies suited for the needs of customers in each global region. With Global Links as the core concept, bolster domestic and overseas sales organizations, and establish a network with a strong presence and sense of trust. Build a brand system that combines the Nissui brand with other current brands.
- (6) Logistics Strategy: Integrate logistics functions and promote better supply chain efficiency. Establish a Supply Chain Management Section, integrate control of domestic and overseas logistics for production, inventory and shipping, and improve supply chain efficiency.
- (7) Business Innovation Strategy: Continuously innovate business and enhance executive abilities in order to realize strategies. Establish a “Business Reform Council” with the aim of converting business structures to high-profit models. Work across all sections to resolve problems such as how to best maximize group functions and how to eliminate the “unseen negatives”.
- (8) Group Management Strategy: Conduct group management so as to elevate synergies and leverage. Promote cooperation and use scrap & build for various group functions in order to realize synergies. In addition to the quarterly group management conference, hold Global Links management conferences twice a year.

The approach was to spend the first three years of the plan implementation period (fiscal 2006 to 2008) creating high profit-oriented management and business structures and then spend the second three years (fiscal 2009 to 2011) acquiring results and achieving the two main TGL goals; specifically “True Global Links” and “True Global Leader”. The first three years were for raising competitiveness and converting management and business structures to high profit-oriented models by promoting efficient management of the Global Links built within the TGL Plan.

Furthermore, the New TGL Plan was launched with the indomitable resolve to adhere to the “2008 Rule”, which stated that “businesses and offices that do not have a goal for switching to high profit models by fiscal year 2008 would be abandoned”.

Functions Supporting the New TGL Plan

The new TGL Plan used the following meeting structures to share goals, progress and measures for the new TGL Plan.

As for the meeting structures used by the parent Nippon Suisan, monthly TGL Promotion Meetings (section head level management conferences in accordance with the Board of Directors meetings and management conferences) were continued for making decisions regarding management policy. These meetings were used to make decisions on company-wide policy, conduct monthly follow-ups for each project and share management information. In fiscal 2006, a Management Innovation Meeting under the direct control of the company president was established. Taskforces cutting across all organizations were formed to tackle individual problems in order to maximize group functions, eliminate “unseen negatives” and convert business structures to high profit-oriented models. Some of the main themes addressed were enhancing vertical integration, bolstering manufacturing functions, strengthening group synergies, improving supply chain functions and promoting cost cutting.

Other meetings were also continued. These included the section head management roundtables for managing/sharing sectional My Plans and for improving management by section heads through the exchange of opinions on management. Employee management roundtables for improving My Plans, accelerating results and allowing management and employees to understand their roles within management policies and plans were also continued.

For the overall group, the “Nissui Global Links Conference” launched in 2002 was continued in order to establish implementation plans for strengthening Global Links with overseas group companies. The study of issues for each region became particularly important. Furthermore, group management conferences were held to improve the management of group companies. These included group management meetings for sharing fiscal year policies with major domestic and overseas group companies and quarterly discussions with major domestic and overseas group supply chain-related companies regarding progress and specific measures.

Enhancing Business in Europe

The New TGL Plan determined that the Nippon Suisan business model would need to be reformed along with the paradigm change. Under a new business model that raises the value of goods and things, the focus would be placed on R&D and manufacturing functions that create value, and sales functions would be improved through cooperation with Global Links companies and partner companies.

The addition of Sealord to the Nippon Suisan Group in 2001 provided the opportunity to strengthen Nippon Suisan’s existing sales functions by utilizing the global sales functions of Sealord. The New TGL Plan aimed to move further towards completing a global supply chain by adding improved sales functions to the Global Links for accessing marine resources prepared by the TGL Plan.

The first task was to reinforce the group’s functions



Nordic Seafood A/S Hirtshals, Denmark



Cité Marine S.A.S. Kervignac, France

in Europe.

In May 2006, the Nippon Suisan Group took a stake in Nordic Seafood (Hirtshals, Denmark) through European group company Nissui Europe. The marine products sales functions of Nissui Europe, based on the Sealord sales network, were integrated into those of J.P. Klausen & Co., in which a stake was taken in 2003 for commercial-use white fish sales, as well as those of Europacífico, for which a stake was taken in 2004 for the same functions in Spain and Portugal. The stake in Nordic Seafood enhanced sales functions allowing for coverage of three business segments; specifically the restaurant and retail segments, in addition to the conventional industrial-use segment.

A particular focus was placed on France, Europe's largest market for marine products. In October 2007, shares in Cité Marine (Kervignac), a leading producer/marketer of frozen and chilled foods (mainly seafood) were purchased through Nissui Europe. This move provided the Nippon Suisan Group with its first manufacturer in Europe. Cité Marine possessed unique processing technical skills and product development capabilities, and held a commanding 70% share of the French market. This stake bolstered the supply chain in Europe and put in place functions for changing how customers value Nippon Suisan Group marine resources.

Enhancing Business in North America

In April 2006, Nissui U.S.A. acquired F.W. Bryce, Inc. (Gloucester, Massachusetts), a developer and importer

of marine products. F.W. Bryce develops and imports various marine commodities such as Canadian snow crab, Norway salmon and Alaska pollack developed in China. The company sells industrial-use food materials mainly to major food service companies.

Along with the acquisition of F.W. Bryce, Nippon Suisan merged Fishing with K&P, and transferred the marine commodities sales division of Fishing to F.W. Bryce.

In June 2008, Nippon Suisan acquired shares in AOS through Nissui U.S.A. When this company then merged with the Glacier Fish Company (G.F.C.) (Seattle, Washington) the Nippon Suisan Group was able to take a stake in G.F.C. through a share exchange and additional investment. Through this merger, G.F.C. newly obtained the *Alaska Oceans* vessel, so the size of its fleet came to three trawlers and two long-line fishing boats. This investment improved the company's ability to supply Alaska pollack and other high quality products processed at sea, and allowed for greater synergies with the group's global production and sales networks.



The trawler *Northern Glacier* Glacier Fish Company (G.F.C.) Seattle, Washington, U.S.A.

Enhancing Business in Latin America

Since enactment of the Provisional Fishing Law in 2002, quotas for each type of fish and for each company were set for 10 years in Chile.

In October 2007, the Nippon Suisan Group established the sales and marketing firm DOSA in Santiago, Chile, along with marine products/aquaculture investment firm Dersa to bring together the operations of Nippon Suisan Group firm EMDEPES and Dersa Group company Friosur.

EMDEPES independently operated trawl fishing operations, while the Friosur Group independently operated ice storage boats and on-land processing facilities for those hauls. Dersa took over the sales and management functions of both companies, sold the products from both companies on domestic and overseas markets, and even sold products from Nippon Suisan “Global Links” companies, all with the aim of expanding business in Latin America. By working with Dersa, Nippon Suisan was able to jointly operate fishing quotas, strengthen resource management, jointly operate vessels, and make businesses more profitable through the efficient operation of sales, marketing and management organizations.

This business integration marked an important turning point for Nippon Suisan’s operations in Latin America. This integration reinforced the “Global Links” being promoted by Nippon Suisan and was positioned as one of the “Local Links” connecting Nippon Suisan with regional business partners.

Chile’s S.A. was hurt by the spread of ISA

(infectious salmon anemia) among Atlantic salmon in all regions in 2007 and damage from severe earthquakes. In 2008 it closed one of its two plants and posted huge losses. The company focused on trout salmon, which was much less effected by the ISA outbreak. Conditions improved with good sales of its “Sashimi Trout Trim E” sushi and sashimi fish for the Japanese market sold under its respected “FIVE STAR” brand.

A new fishing law enacted in Argentina in January 1998 introduced a true ITQ system for the next ten years (until 2008) for the main fish targeted by the Nippon Suisan Group such as sea bass, southern blue whiting, hoki, *Merluccius hubbsi*. The fish allotment ratios under the ITQ system were in philosophy effective for 15 years. This allowed for an environment where planned hauls, production and investment were more possible than before. As of 2010, quotas provided to Nippon Suisan Group companies for the above-listed fish came to a total of 47,000 tons.

The Nippon Suisan Group also targeted Brazil, one of the newly emerging economies where consumption of marine products was increasing along with economic growth. In June 2007, Nippon Suisan and Friosur each purchased 40% stakes in Brazilian seafood distributor Nordsee in São Paulo. This company was a Friosur trading partner with good results as a supplier to the commercial-use market. Sales routes in Brazil, a country with a population of 180 million people, were expanded by offering salmon and white fish produced by Nippon Suisan Group companies.



The trawler *Oceandawn* Desarrollo Oceanico S.A. (DOSA) Santiago, Chile



Unionsur 1 (formerly *Koyo Maru No.8*; renamed in 2003) Empresa de Desarrollo Pesquero de Chile S.A. Santiago, Chile

Enhancing Domestic Aquaculture Business

In order to fulfill its role in reviving Japan's fisheries industry, Nippon Suisan helped to bolster access to marine resources within Japan. One example is Nippon Suisan's aquaculture business, which is seen as a promising business as access to natural marine resources becomes more difficult.

In January 2004, Nippon Suisan was asked to take over the operations of the failed Takamaru Co., Ltd., which was involved in yellowtail aquaculture. Nippon Suisan then established Kurose Suisan Co., Ltd. (Kushima City, Miyazaki Prefecture) and entered the yellowtail fish farming business.

During that same year the Imari Fish Feed and Oil Plant was completed, becoming the second domestic production site for aquaculture formula feed after the Onagawa Fish Feed and Oil Plant. Advanced measurement and mixing equipment were installed and a system for instantly understanding the history of the materials used in the feed production was adopted. Feed types best suited for each stage of yellowtail farming at Kurose Suisan, from hatching to adulthood, are mixed and produced based on the results of research conducted at the Oita Marine Biological Technology

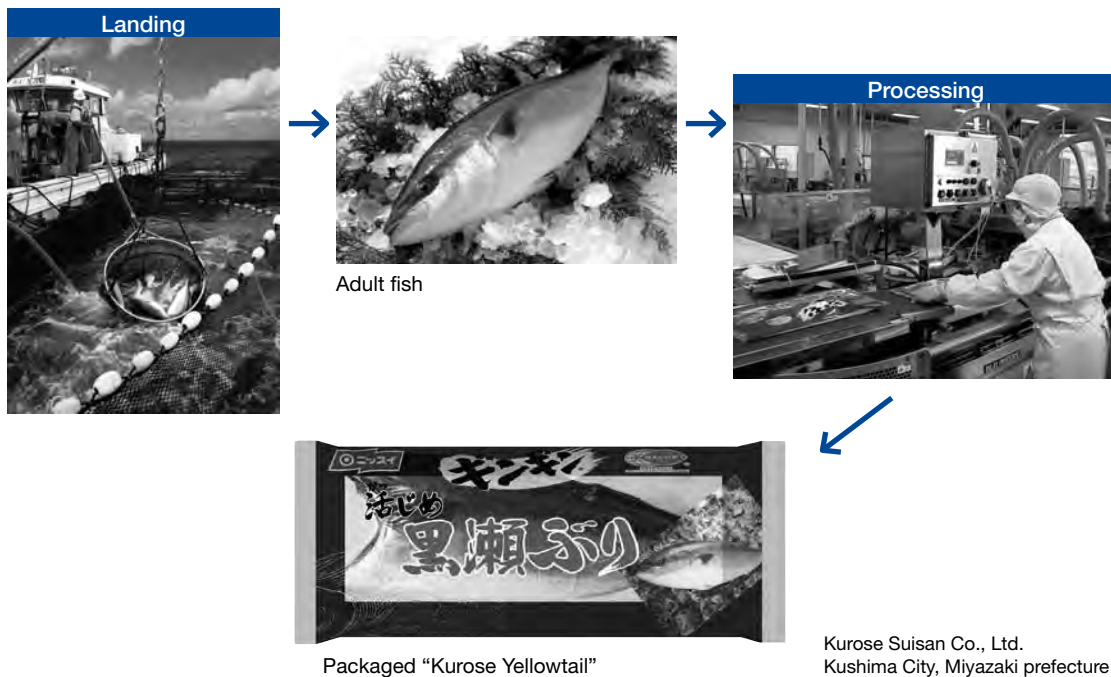


Imari Fish Feed and Oil Plant (Imari City, Saga Prefecture) Center.

In fiscal 2006, an Aquaculture Promotion Section was established and placed in charge of the Oita Marine Biological Technology Center and aquaculture was positioned as a core business for Nippon Suisan.

The Oita Marine Biological Technology Center started research activities from 1994. Along with supporting the development and expansion of Nippon Suisan's aquaculture business, the center also studied measures for fish diseases, developed artificial seedlings, researched breeds, developed land-based aquaculture, feed supply and offshore aquaculture technologies. The center also supported the foundations for the aquaculture business and established technologies for raising the value of the entire aquaculture business.

Kurose Suisan's process of yellowtail culture and processing



Kurose Suisan Co., Ltd.
Kushima City, Miyazaki prefecture

In May 2006, Nippon Suisan took a stake in tuna farming company Nakatani Suisan Co., Ltd. (Setouchi-cho, Oshima-gun, Kagoshima Prefecture) and tuna farming operations were started at Amami Oshima in Kagoshima Prefecture. Synergies were generated between Nippon Suisan’s research of feeds/cultivations and fish farming technologies/expertise accumulated by Nakatani Suisan. At the same time, systems were put in place for delivering to markets a stable supply of cultivated tuna, which are excellent in terms of traceability, safety and reliability. Along with entry into this tuna farming business, Koshikijima in Kagoshima Prefecture was added as a base for tuna cultivation operations.

In 2007, short-term large bluefin tuna farming operations were started in Ine Bay, Kyoto Prefecture. Bluefin tuna weighing around 100 kg caught by Kyowa Suisan Co., Ltd. were cultivated in a fish preserve established by Nakatani Suisan in Ine Bay. From November of that year, the “Ine Maguro (Ine’s tuna)” brand was shipped to upscale sushi bars, Japanese restaurants and inns. Ine Maguro was well received, with flavor said to be comparable to that of high quality tuna caught in the ocean.

Nippon Suisan also conducted fishing operations within Japan’s EEZ as a measure for bolstering access to marine resources in Japan. Japan ranks 60th in the world in terms of national land area, but 6th in terms of EEZ area, which is indicative of a major island nation. However, policies and research for increasing these fish hauls have become issues to address. In order

to drastically revive Japan’s fishing industry, there needs to be thorough resource management based on science, marine products that will appeal to the world will need to be produced and supply chains will need to be built.

Based on these considerations, Nippon Suisan decided to participate in fishing within Japan’s EEZ. This decision was spurred on by a request to provide business and financial support in 2005 to net fishing and offshore trawl fishery firm Kyowa Suisan of Tottori Prefecture and affiliated company Tokai Gyogyo K.K.

In order to stabilize management for Kyowa Suisan and Nakatani Suisan, Nippon Suisan in March 2008 began participating in the management of Kyowa Suisan, making it a Group company, and in May of that year began participating in the management of Nakatani Suisan, also adding it to the Group. Nippon Suisan took these developments as an opportunity to raise the value of marine resources with the aim of drastically reviving Japan’s fisheries industry.

Antarctic Krill Business and Mission

In October 1974, Nippon Suisan began operating the trawler *Aso Maru*, the first private-sector vessel to fish for Antarctic krill. At that time the boiled-food product “Oki-Ebi” was being sold as a shrimp substitute. In 1982, Chile’s EMDEPES began operating the vessel *Fuji*. In 1994 the vessel *Tsuda Maru* was purchased, refitted and introduced as the EMDEPES vessel



Nakatani Suisan Co., Ltd.
Oshima-gun, Kagoshima Prefecture
Fish breeding preserve (Amami Oshima)



Kyowa Suisan Co., Ltd.
Sakaiminato City, Tottori Prefecture

Unionsur. However, in 2004 this ship was returned to Japanese ownership in order to develop a business with stable earnings. Operations were started with this vessel renamed the *Niitaka Maru*.

The total volume of krill resources in Antarctica is believed to be between several hundred to several billion tons. Since 1980 these resources have been managed by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

Krill is mainly used as fishing bait, but other applications include biologically active substances, *gyosho* fish sauce, foods, aquaculture feed, pet foods and meal. In 1998 krill was processed into a powder and used to manufacturer fermented seasonings, a product that was later patented.

Since its founding, Nippon Suisan had conducted both fishing and sales operations. However, in 2001 it established a Krill Operations Department combining these two operations, in order to better respond to market and customer changes. In terms of the handled products, there was a shift from the previous sales of frozen bulk products to a specialization in fishing bait. Raw frozen packaged products and powdered products such as “TSURI-MAO” were developed and marketed. However, earnings declined as the market for fishing bait contracted and bait produced overseas began entering the market. Searching for some way to continue the business became a pressing matter.

From 2002 sales were expanded to target the leisure fishing market as a product strategy measure, while at the same time development of industrial-use pharmaceuticals and chemicals products were promoted. Efforts were also made to reduce costs related to distribution and operation of the *Niitaka Maru*. A “Krill Project” was launched in 2004 to pursue new possibilities for krill. A krill extraction method was established and a patent application was submitted in March 2007. Functionality was researched with a focus on the EPA and DHA contained in krill. Tests suggested that EPA and DHA could deliver certain effects such as improved brain functions and functions

promoting the metabolism of alcohol in the body. Applications as feed for aquaculture were also studied, and krill was used as fish-luring agents and early-stage feed for fish breeding.

In April 2008, group company Esa Ichiban Co., Ltd. was merged with Nippo Shokuhin Kogyo Co., Ltd. in order to expand operations and improve management efficiency. Nippon Suisan’s sales of feed to dealers were transferred to Nippo Shokuhin Kogyo and efforts were made to improve earnings through expanded krill sales and more efficient operations.

Establishment of Food Products Business Production Bases

In order to generate high earnings and increase competitiveness for the Food Products Business, domestic production sites were concentrated to the greatest extent possible and optimal arrangement of sites was promoted with the aim of streamlining production functions and reducing labor for domestic group companies. New investment was also made when necessary.

Shandong Sanfod Nissui, established in China in June 2004, completed construction of its production plant in 2005. This comprehensive plant handling the production of frozen foods and the processing of marine products became a core production site in China for not only the Food Products Business, but for the Marine Products Business as well. New businesses are also being sought through reforms in cooperation with group companies such as F. W. Bryce, Nordic Seafood and Cité Marine.

In November 2004, Hachikan Co., Ltd. was established in Hachinohe City with joint investment from Hachinohe Kanzume Co., Ltd. This new company handled the production of mostly bottled shelf-stable and frozen foods, and was considered a main domestic production site. At the same time, Hachitei Co., Ltd. and the Nippon Suisan Shimizu Plant were merged with their production functions concentrates at Hachikan.



Marusa Sasaya Shoten Co.
Kushiro City, Hokkaido

In September 2008, the group's largest frozen foods production plant was established within Hachikan in order to develop the Food Products Business and realize higher profits, particularly in terms of expanding production for commercial-use frozen foods. The Hachinohe region is a prominent landing site for domestic marine products. Hachikan was positioned as a site for the production and processing of principal marine raw materials with an eye on linking the raw materials procurement capabilities of Hachinohe Kanzume with the Hokkaido marine products procurement capabilities of Marusa Sasaya Shoten Co. Hachikan has functions for primary processing of marine raw materials, as well as various processing functions for precooked seaweed such as fried seafood, gratins and croquette. This modern plant puts safety and reliability first in consideration of food defense.

The plant also considers high productivity, energy conservation and environmental preservation. Before the established of this plant, Hokkaido Teion Shokuhin

K.K. was dissolved in July 2008.

As an initial step for the “2 in 5 Plan” (doubling food plant production in five years), a production line for the core *yaki-onigiri* product was started at the Nippon Suisan Hachioji General Plant.

Furthermore, capital participation was used to make important companies long entrusted with production operations as affiliates for which the equity method would be applied. In October 2007, investments were made in Kaneko Shokuhin Co., Ltd. (Mitoyo City, Kagawa Prefecture) a producer of frozen prepared foods, Kunihiko Inc. (Onomichi City, Hiroshima Prefecture) a producer of processed and frozen foods (mainly oyster), and Marusa Sasaya Shoten (Kushiro City, Hokkaido), a supplier of Hokkaido *surimi*. Then in December of that year, investment was made in Tai Mei Food Industrial Corp. (Kaohsiung City, Taiwan), a Taiwanese firm that grows and processes (freezes) *edamame*. Then in November of the following year, investment was made in Tomiso Co., Ltd. (Nagoya City, Aichi Prefecture), a producer of kneaded marine products. Efforts were made to strengthen partnerships with these companies, share the development, production and sales functions of the Nippon Suisan Group and create value.

Bolstering Fine Chemicals Business Systems

The Kashima Plant in Kamisu City, Ibaraki Prefecture,



The Kashima Plant: The second construction phase was completed in October 2008.

completed in October 2008, has served as a base for developing advanced fish oil manufacturing technologies and new materials for the pharmaceutical, functional lipids and feed fields. All fine chemicals-related production functions within the group were concentrated and integrated at this site, which was considered a core production site for boosting production capacity and technological reforms for the entire Fine Chemicals Business.

Production of this site was divided into two phases. The first phase, completed in April 2007, covered equipment for the production of pharmaceuticals and subsidiary products. The second phase considered the expansion and integration of functions for production equipment used for the group's fine chemicals fields such as functional food products and chemical products. This helped to enhance development for the pharmaceuticals, nutrition and cosmetics fields, including such items as advanced unsaturated fatty acids, chitin/chitosan derivatives, marine wax and cholesterols. Leveraging this plant helped open up new areas in the fine chemicals field and increase awareness of Nippon Suisan as a producer of fine chemicals.

In April of 2008, group company Kyowa Technos Co., Ltd. (Sanbu-gun, Chiba Prefecture), which manufactures pharmaceutical progenitor starting materials, chitin/chitosan and marine waxes to be sold as industrial-use products, was absorbed. Along with optimizing lipids distribution that was dispersed throughout the group, the integration of this company's fine

chemicals material production functions was also intended to improve business growth and earning capacity through business selection & concentration and more advanced development functions.

In June of that year, the Fine Chemicals Department was changed to the Fine Chemicals Business Operations Department and the Tsukuba and Kashima plants were placed under the control of this new department.

Fine Foods Business Approaches

The Fine Foods Business was started in the mid 1990's as a food-related business within the Fine Chemicals Department. Along with Chillydy, this business produced dressings, sauces and other seasonings for convenience stores.

The line of products was expanded in 1994 and *mentaiko* (spicy fish eggs) pasta sauce for convenience stores and white sauces for restaurants became major products.

In March 2002, a separated and independent Fine Foods Business Department was established. Then in March 2009, the Fine Foods Business Department was incorporated into the Food Service Products Department in order to boost synergies with the commercial-use foods business.

Scrap & Build for Domestic Group Companies

In April 2008, the marine products sales section of Nippon Suisan's Marine Products Division—Sapporo



Kurahashi Co., Ltd. Fukuyama City, Hiroshima Prefecture
Fukuyama regional wholesale market (fish market)



Hiroshimasuisan Co., Ltd.
Hiroshima City, Hiroshima Prefecture

Marine Products Section and the food products sales section of the Nippon Suisan Sapporo branch office were separated and absorbed by group company Teion Co., Ltd. with the aims of building a supply chain base in the Hokkaido region and a new foundation for earnings. Teion's headquarters were moved to Sapporo and the company name was changed to Hokkaido Nissui Co., Ltd. In this manner an earnings foundation was established for the sales business in the Hokkaido region through improved business efficiency.

Nippon Suisan decided to reorganize its trading and wholesale operations in order to focus on its manufacturing functions. Under this policy, some consolidated group companies were converted to equity method companies, avenues to open business development were created and a broad contribution to society was made by providing more advanced functions and services.

Nippon Suisan in March 2006 participated in the rehabilitation of Kurahashi Co., Ltd. (Hiroshima Prefecture) and, with joint investment, established a new company. Nippon Suisan took over the management rights of the new company and kept the company name unchanged. This wholesaler of marine products and marketer of frozen and processed foods had built a solid relationship with Nippon Suisan over many years and fulfilled an important role in supplying marine products and other foods to the local region. More effective ties with the Nippon Suisan Group were promoted and the company was rebuilt with a focus on its main operations.



Maruuo Suisan Co., Ltd.
Himeji City, Hyogo Prefecture

In April 2006, the food service and chilled foods business of comprehensive wholesaler Kato Sangyo Co., Ltd. were spun off to form Kato Teion Co., Ltd. (Nishinomiya City, Hyogo Prefecture). Then in October 2008, Kato Teion was merged with Nippon Suisan Group company Kanesho Co., Ltd. (Itami City, Hyogo Prefecture). The aim was to expand business in the food services and chilled foods distribution fields through specialization, enhanced intermediate distribution functions and a higher level of service. Upon the merger, the company name was changed to K-Teion Foods Co., Ltd. and the new entity was made a Nippon Suisan equity method company.

In April 2008, Nippon Suisan and Chuo Gyorui Co., Ltd. merged their group companies Hohsui and Chuo Reito K.K. in order to reorganize the parent companies' marine products distribution functions in order to build a stronger distribution network. Hohsui was the surviving company and became a member of the Chuo Gyorui Group. Nippon Suisan spun off its marine products logistics business to create Suisan Ryutsu Co., Ltd., which became a Hohsui consolidated company.

Nippon Suisan invested in Hiroshimasuisan Co., Ltd. (Hiroshima Prefecture) in September 2008 and Maruuo Suisan Co., Ltd. (Hyogo Prefecture) in March 2010. These two marine products wholesalers were turned into Nippon Suisan equity method companies.

In March 2009, Nippon Suisan increased its stake in Daisui Co., Ltd., a major marine products



Daisui Co., Ltd.
Osaka City, Osaka

wholesaler in the Osaka, Kyoto and Kobe central wholesale markets, making it an equity method company. Daisui had long been an important customer for Nippon Suisan. When Daisui asked for management support, Nippon Suisan agreed to buy new shares through a public offering.

Strategic Reforms of Distribution Functions

Business reforms were also applied to the General Distribution Business, which supports the Marine Products and Food Products business. A new Supply Chain Management (SCM) section was established in 2006, integrated management was applied to domestic and foreign production, inventory and shipping, and joint distribution of chilled/frozen foods with other firms was adopted. Organizations were reconfigured, an International Distribution Section and Distribution Section were established under a Supply Chain Officer, inventory analysts were introduced, the ordering centers for the Hachioji and Himeji Plants were consolidated, integrated management was applied to the supply chain and functions were expanded.

Refrigerated storage operations within the group were consolidated and integrated in order to realize the New TGL Plan strategies of “improve profitability for core businesses” and “create leverage and synergies with group management strategies”. In April 2007 the Nissui Logistics Corporation was launched to consolidate the 26 frozen storage operations across Japan

from Tobu Reizo Shokuhin, Seibu Reizo Shokuhin and those directly operated by Nippon Suisan. The aim was to increase profits by uncovering local customers and capturing customers over a wider areas, as well as improving competitiveness through low cost operations. In order to cope with a decline in incoming shipments of marine products from overseas, Nissui Logistics bolstered 3PL operations in which it takes on comprehensive distribution operations for domestic mass retailers and restaurant industry. There were increases in handled items other than marine products, such as precision equipment and flowers.

The area covered by joint shipping of chilled and frozen foods with competing companies, which started in 1999, was gradually expanded to cover Hokkaido, southern Kyushu, and the Chukyo region (Gifu and Mie Prefecture). This development of joint distribution, which included joint storage, in 2007 expanded from the distribution base in Osaka to all of Shikoku. In 2009 this joint distribution included the Kinki region. Joint distribution was started for northern and central Kyushu in 2008. The background for establishing such joint distribution was the spirit behind the establishment of FINET; specifically “joint infrastructure for fair market competition”.

In June 2009, a joint storage and shipping base was established in Hiroshima for coverage of the Shikoku and western Chugoku regions. This base was authorized as a business promoting the Green Partnership and CO₂ emissions were cut by about 14%.



Nissui Logistics Corporation
Kawasaki Distribution Center

Stronger Quality Assurance

The global inspection system, based mainly on the Food Safety Research Center, was further improved in order to address the “positive list” system introduced in May 2006 to guard against pesticide residue in foods. Standards were set for the use of agricultural chemicals and animal drugs at farms and fish breeding grounds, and a system was put in place to manage the tracing of raw materials for processing and other information.

Between 2006 and 2008 the food industry was impacted by a series of scandals that increased mistrust in food. These included the use of expired raw materials, altering of expiration dates, camouflaged raw materials and malicious food tampering. These incidents prompted reviews of quality control. So in March 2008, Nippon Suisan established a Prevention Management Section within the Quality Assurance Office and prevention management was promoted. This meant that the focus of the established mechanisms was not restoration after a quality control event, but rather preventing the occurrence of such events in the first place.

Also in March of 2008, the Quality Control Center China was reorganized as a company organization with the establishment of the Qingdao Nissui Food Research and Development Co., Ltd. This company not only made verifications so the Nippon Suisan Group could guarantee the safety of its raw materials and products, but also engaged in the development of products produced in China.

This provided Asia with two major quality assurance bases, along with the Quality Control Center Thailand established in January 2004.

Even before the Tokyo regulations of June 2009 regarding the provision of information on where raw materials were produced, Nippon Suisan in November 2008 established a Raw Materials Information Section and began operating a system for managing such information on raw materials origins.

Expanded Environmental Approaches in Business Divisions

In June 2006, an Environment Office was established separate from the Quality Assurance and Environment Preservation Office's Environment Section in order to better promote corporate activities for a "material-cycle society", such as reducing burdens placed on the environment. The level of awareness for the overall group was raised by issuing Environment Reports, confirming progress in reducing environmental burdens by each division and sharing good examples.

At the same time, environmental awareness activities spread to each division.

The Food Products Division became increasingly interested in environmental measures pertaining to packaging materials. In late 2005, trays used for noodles, ingredients and soups were abolished in order to reduce the amount of packaging materials used for the frozen food product "Chanpon Noodles". Changing the form of frozen noodles to support easier preparation also resulted in downsizing for all products.

The fish sausage product "Osakana no Sausage" became recognized as a product with environmentally friendly packaging and a big marketing effect was achieved. The aluminum wire used for many years to close the fish sausage packaging film was abolished thanks to technology that realized a sealing tape made from the same materials as the packaging film. This revamped product, launched in September 2007 as



Chanpon product without tray
Before (left) and after (right) change to tray-less packaging



Eco-Clip Osakana no Sausage
Before (left) and after (right) change to Eco-Clip

“Eco-Clip Osakana no Sausage”, reenergized the stagnant fish sausage market and helped Nippon Suisan retake market share.

The group’s main production sites and distribution businesses adopted individual environmental preservation activities in line with the content of their businesses. The Kashima Plant used byproducts from the production process as fuel for boilers, and implemented other hardware solutions for the effective utilization of marine resources without any waste. For example, the Hachikan frozen foods plant introduced various types of equipment to reduce burdens placed on the environment and became a model plant in terms of energy-saving and environmental preservation measures. All new freezers used natural cooling agents and frying oils were reused to power boilers. A solar power system installed on the roof is expected to generate 40,000 kilowatts of electricity each year and reduce CO₂ emissions by about 22 tons.

Nissui Logistics worked with the Nippon Suisan Supply Chain Management Department to from fiscal 2007 replace the conventional pallets made from wood and resin to pallets made from plastic bag sheets, and to recycle these pallets. Only one sheet pallet can be used for the entire journey to the delivery destination. This reduced loading labor, improved load volume efficiency and reduced the amount of time needed for loading. Natural cooling mediums were adopted for refrigerators when additions were made to the Kawasaki Distribution Center. Refrigeration equipment at distribution centers was gradually replaced with energy-saving models in order to reduce energy consumption.

Improving Internal Controls

Internal controls were improved in order to prepare for the so-called Japanese version of SOX laws.

The Sarbanes-Oxley Act (SOX Act or the U.S.’s “Corporate and Auditing Accountability and Responsibility Act”) enacted in July 2002 drastically reformed corporate internal controls and auditing

systems with the aim of increasing the transparency and accuracy of corporate accounting and financial reporting. The Act also defined the responsibilities and obligations of corporate managers, and set for penalty-based regulations. Improving internal controls became necessary for Japanese corporations as greater globalization of corporate activities led to calls for more management and accounting transparency. In September 2007 the Securities and Exchange Law was revised and became the Financial Law, which included enactment of the so-called Japanese version of the SOX Act (J-SOX), which would be applied to listed firms from the fiscal year ending March 2009.

In order to comply with these legal changes, Nippon Suisan in April 2007 launched the Internal Control Project and in March 2008 built an internal control system for realizing social responsibilities as a listed firm. Standards and procedures were set so that each business division could effectively manage operations and accurately prepare financial statements. Efforts were also made to build an information system for building the related management and supervisory systems. For affiliated companies as well, systems were gradually built to support their internal controls.

Research & Development

An R&D strategy in the New TGL Plan was to establish bio-production aquaculture technologies in order to create new values for marine resources. The Food Functions Research Laboratory (name changed to Human Life Science R&D Center in fiscal 2009) and Bio-production Research Center were established in fiscal 2006.

The Food Functions Research Laboratory established functions linked to the development of new products with the aim of enhancing business for functional materials such as chitin/chitosan. The Bio-production Research Center worked on bio-production technologies as new methods for acquiring resources so that EPA/DHA can be extracted from seaweed and other cultivated organisms instead of relying on natu-

ral fish oils.

Nippon Suisan has even participated in joint government/industry/academia research projects (including national institutions) and, in doing so, has supported the development of Japan's fishing industry from the R&D side. In 2006, Nippon Suisan was selected along with Mitsui Engineering & Shipbuilding Co., Ltd. as partners in the "Innovation Platform for Fisheries and Marine Technology" operated through the Tokyo University of Marine Science and Technology. These partners worked together to create strategic innovations for the marine biology (aquaculture) field. This project was one of the activities put forth by the Ministry of Education, Culture, Sports, Science and Technology to promote advanced, cutting-edge research. Nippon Suisan also participated in Ministry of Agriculture, Forestry and Fisheries research projects and has developed a system for maintaining a high level of freshness by introducing technologies for easing stresses from catching large fish, a feeding system for off-shore aquaculture and technologies for a high degree of freshness and efficient processing needed to make Japanese saury a global product.

The organization of the Central Research Laboratory was changed in 2007. Specifically, a laboratory system was used to progress management and personnel development, and a team system was used to clarify responsibilities. The Aquaculture Basic Research Laboratory, Marine Food Products Research Laboratory and Health Basic Research Laboratory were established to serve as the sections responsible for fulfilling the obligations of "achieve high earnings for aquaculture business", "high-degree application of

marine resources" and "contribute to good health through ocean resources" specified in the New TGL Plan. Furthermore, study sessions bringing together laboratories with different functions to address a shared theme were held to reinforce cross-sectional ties.

In fiscal 2007, the Research Planning Promotion Office was established as a section to compliment and support the effective functioning of research laboratories throughout group companies in order to enhance R&D from a global perspective. During that same year, Nippon Suisan established an overseas satellite laboratory in Holland's "Food Valley", which has attracted various research institutions and prominent global food companies such as Nestlé Ltd. and Masterfoods Ltd. Research activities mainly in the areas of food processing, functional foods, food safety and fermentation (bio-production) were started. Systems were put in place for joint research with external research organizations. Joint research was conducted with industry, government and academia. Research was entrusted to related organizations and partnerships were formed with other companies.

Between fiscal 2007 and 2008 the Bio-production Research Center began research and development of an EPA production method based on *Labyrinthula* (minute alga). Nippon Suisan launched a *Labyrinthula* Study Group and engaged in joint research with industry and academia with a focus on showing that *Labyrinthula* accumulates DHA and other highly unsaturated fatty acids, as well as the utilization of in production.

2. Approaches during Second Half of New TGL Plan Implementation Period

Qualitative Approaches to Individual Reforms

Operating profit could not be obtained as planned during the three-year period between fiscal 2006 and 2008. Operating profit in fiscal 2007 and 2008 fell below the target levels. Targets were missed mainly

because fish prices were impacted by the surge in costs for *surimi* and other raw materials. Group sales, which were 552.8 billion yen in fiscal 2006, declined to 533.9 billion yen in fiscal 2007 and 505.2 billion yen in fiscal 2008 as the status of some group companies was changed to equity method companies.

With the interim rolling of the New TGL Plan, conclusions were reached that the Nippon Suisan business model would need to be changed in order to better match the times and that the New TGL Plan could not be completed successfully without reforms. Specifically, the target of becoming a high earning corporation was not being reached with the prevailing improvements. Decreased income was due to contractions for the purpose of business structure reforms, but the targeted growth drivers did not function as expected and the expectations for earning power reforms were not met.

Very difficult business conditions were expected to persist in fiscal 2009. Against this background, the following two self-reform items were noted as being absolutely essential.

The first was to change from the current approach of “manufacturing linked to resources and dinner tables with integrated business as the core” to the new approach of “manufacturing linked to resources and lifestyles with functions and technologies as the base”. The goals were for the Marine Products Business to consider consumer scenes, for the Food Products Business to focus on creating categories, and for the Fine Chemicals Business to work on raising the quality of lifestyles. The aim was also to increase points of contact with consumer lifestyles by switching from the conventional supply chain approach to a new value chain approach.

The second needed reform was a “quantitative growth approach” to increasing market shares and improving efficiency. Specifically, switch from the current drive for quantitative expansion to cutting edge technology/service levels, differentiation, uniqueness and individuality. Strive for a “qualitative growth approach” that builds organizations with a higher awareness of norms that act based on reason and logic, in other words, reforms that pursue qualitative fulfillment.

To this end, the following three policies were put forward.

1) Do not maintain current businesses that cannot

be reformed. Determine if businesses should be abandoned, transitioned to equity-method companies with final decisions made after a grace period, or aggressively expanded.

- 2) Accelerate reforms in order to create new growth areas. Especially for the fine chemicals business, use marine functional materials to create unsurpassed business structures and expand points of contact with consumer lifestyles. Improve R&D efficiency from the viewpoints of enhancing R&D/manufacturing functions and expanding points of contact with consumer lifestyles.
- 3) Reform management structures with the aims of matching the decision process with practice, maximizing group results and clarify returns on investment. Strive for optimal sales, logistics and inventory management on a global scale.

Preparing Organizational Foundations for Reforming Management

Falling just before the company’s 100th anniversary, fiscal 2009 and 2010 were extremely important periods for connecting the current Nippon Suisan Group with its future.

Anti-takeover measures were introduced in June 2009 to prevent entities from acquiring large amounts of Nippon Suisan shares. Measures were put in place to prevent large share acquisitions that could damage the value of the Nippon Suisan Group and the sharing of profits with shareholders. In order realize this basic policy, improving corporate value and enhancing corporate governance were included in the New TGL Plan (medium-term business plan). As for the latter, an executive officer system was introduced during this period. The Board of Directors’ management decision making functions and business administration/supervision functions were separated from the duties and functions of executive officers. At the same time the number of directors was reduced to no more than ten and two external board members were appointed.

The realization of reforms was a key consideration

in the reorganization of systems in March 2009. The Fisheries and Food Products Business Operation Division was newly established to promote the integration and enhancement of marketing functions and supply chain management functions for the Marine Products Business and Food Products Business. Supervision of the four businesses of Marine Products, Food Products, North America and South America were placed under the chief operating officer and deputy operating officer. Furthermore, the Marketing Planning Office and Supply Chain Management Department were installed as secretariat functions for the chief operating officer and deputy operating officer. The Global Group Management Promotion Council was established to optimize group management for global expansion and the Global Group Strategic Planning Office under the direct supervision of the president was newly established as a full-time secretariat. Within the Support Administration Division, the Food Function Research Center was converted to the Human Life Science R&D Center with the scope of its research expanded from foods to all lifestyle items.

The Marine Products Business was also enhanced by the March 2010 structural revisions. In order to enhance sales capabilities more from the perspective of the customer, sales functions and procurement functions were separated. Sales functions were converted from the conventional system of responsibility assigned by type of fish to a system of responsibility assigned by type of customer. Moreover, a fisheries products sales promotion officer was placed under the direct supervision of the chief operating officer in

order to promote further evolution for cooperation between the Marine Products Business and Food Products Business.

The following four councils were also formed to support management reforms during the second half of the New TGL Plan implementation period.

- Global Management Promotion Council: Provide proactive management for group companies and study priority issues for the group.
- Innovation Promotion Council: Analyze the state of progress for reforms within the group and consider needed measures.
- R&D Promotion Council: Confirm the progress of research, as well as obstacles and other problems. Promote the “visualization” of research and consider paths to commercialization.
- Fine Chemicals Business Promotion Council: Study the overall Fine Chemicals Business across all sections, promote the “visualization” of this business, eliminate overlap and analyze the state of progress for making reforms.

The following two councils were also formed to support the activities of the Fisheries and Food Products Business Operation Division.

- Inventory Investment Council: Support the activities of the Fisheries and Food Products Business Operation Division and consider global production, sales and inventory.
- Marketing Council: Support the activities of the Fisheries and Food Products Business Operation Division and analyze sales trends, the progress of new product development and market/competition conditions for the main marine and food products.

3. Local Links for Independent Competitive Predominance

Enhancing Local Links

From 2007 the Nippon Suisan Group began constructing “Local Links” as mechanisms for the further evolution of Global Links. The goal was for Global Links member companies to cooperate with their

respective local regions, improve management efficiency, while becoming more entrenched in the local regions and developing business opportunities in growth markets. The aim was to use this two-layered structure (Global and Local Links) to realize independent competitive predominance in the respective

local regions, drive further growth and increase earning capacity.

The establishment of DOSA in South America bolstered management and marketing functions and allowed for the construction of a foothold in Brazil, a newly emerging economy. The addition of the G.F.C. to the Nippon Suisan Group drastically improved production, procurement, processing and sales functions in North America. Participation in Cité Marine not only provided Nippon Suisan with its first manufacturing functions in Europe, but combinations with the already bolstered sales functions helped to further strengthen the European supply chain. In Japan, participation in Kyowa Suisan and Nakatani Suisan allowed for the development of a new business through the “Ine Maguro” brand.

Afterwards, further efforts were made to continue strengthening Local Links.

The new Nippon Suisan Group company Netuno Internacional was established in Brazil in May 2010, allowing for participation in tilapia and shrimp farming, as well the sales of processed goods in Brazil. This company was established with joint investment by Chile’s DOSA and Netuno Alimentos S.A., Brazil’s largest aquaculture/marine products processing company. The Nippon Suisan Group was able to realize both penetration into the strategic aquaculture field and development of a new market, while enhancing Local Links in South America and Global Links.

UniSea in North America had succeeded in expanding its crab business in 2005, but still invested in



Hakata Marukita Suisan Co., Ltd.
Fukuoka City, Fukuoka Prefecture

Alaskan Beauty, which held crab fishing quotas, in order to further ensure a stable supply. K&P earnings were hurt by cyclone damage and in 2009 its status changed from a Gorton’s affiliate to a Nissui U.S.A. affiliate and support was provided for rebuilding operations. Nippon Suisan was able to form three business fields in North America: (1) UniSea’s Alaska pollack and crab processing in Alaska, (2) marine products frozen foods business based mainly on white fish from Gorton’s and K&P, and (3) marine commodities business through F.W. Bryce.

In Japan the domestic supply chain for *sukeko* was strengthened by investing in a *sukeko* processing and marketing company. Hakata Marukita Suisan Co., Ltd. was established as a wholly-owned subsidiary in December 2009, and Nippon Suisan began participating in the *sukeko* fields, utilizing the strength of its access to marine resources. The HQ plant, Chikko Plant, land and buildings at the Koga Plant and trademarks for “Hakata Ago-otoshi” and other products



Netuno Internacional S.A.
Recife, Pernambuco, Brazil



Tokyo Kitaichi Co., Ltd.
Yoshikawa City, Saitama Prefecture



Delmar Co., Ltd.
Chiba City, Chiba Prefecture

held by Hakata Marukita, which was undergoing civil rehabilitation, were all transferred to the new company.

Tokyo Kitaichi Co., Ltd., which had been supplying Nippon Suisan with materials for *sukeko* processing, became an equity-method company in February 2010 after a third party share issuance to raise capital. Then in April of that year, additions were made to the Tokyo Kitaichi's Hokkaido Plant in order to boost production, while also expanding sales with a focus on mass merchandisers.

Frozen seafood producer Delmar Co., Ltd. (Chiba City, Chiba Prefecture) was purchased in July 2010 with the aim of expanding the pre-cooked frozen seafood business. The aim was to achieve strong synergies between Delmar's seafood processing technologies and production/sales networks with Nippon Suisan's access to marine resources, production/sales networks and product development capabilities.

Sales Network Expansion

Sales networks in Japan and Europe were bolstered in 2010 in order to further enhance Global Links.

In order to bolster sales networks in Asia, sales of products to the Japanese and South Korean markets by Sealord were handed over to the Nippon Suisan headquarters in July 2010. With the Nippon Suisan Group having made progress globally, this move was in line with the policy for integrating sales functions with the same markets. The aim was to boost sales efficiency by eliminating overlapping functions within the group.

By taking on these sales functions from Sealord, white fish produced in New Zealand were added to the Nippon Suisan white fish operations, which consisted mainly of hoki from South American. This move contributed to the predominant supply system for the East Asian market, starting with Japan and South Korea. In addition to its conventional sales of processing materials, Sealord was now also able to provide high value-added products for sales best suited for each customer due to access to the Nippon Suisan Group's processing and other functions.

Nordic Seafood became a wholly-owned subsidiary in August 2010. This acquisition increased recognition of the Nippon Suisan Group in Europe and further enriched the Global Links.



TN Fine Chemicals Co., Ltd.
Bangkok, Thailand



Hokkaido Fine Chemical Co., Ltd.
Hakodate City, Hokkaido

Opening New Fields with Fine Chemicals Business

Production bases for the Fine Chemicals Business were bolstered. Through joint investment with Thai seafood processing giant Thai Union Group, TN Fine Chemicals Co., Ltd. was established to serve as an Asian production base. The new company started manufacturing fine chemical raw materials using byproducts from seafood processed by the Thai Union Group. TN Fine Chemicals business was supported through ties with Nippon Suisan's Kashima, Tsukuba and Sakaiminato Plants.

Hokkaido Fine Chemical Co., Ltd. (Hakodate City) was established in December 2008 after a transfer of some business operations from Nippon Chemical Feed Co., Ltd. Operations, mainly primary refining of fish oils and the production of functional lipids, were started from April 2009.

ARA (arachidonic acid) is valued around the world as a key nutrient in the infant nutrition field after DHA. In fact, the CODEX Commission (international intergovernmental organization protecting consumer health, ensuring fair trade of food products and setting international food standards) in 2007 recommended ARA along with DHA as an additive for use in powder milk for infants. The market for ARA grew suddenly in Japan with strong interest in its application as a health supplement material. In November 2009, Nippon Suisan took over some technologies and operations from Suntory Wellness Ltd., introduced bio-production technologies and started manufacturing lipids containing ARA. This allowed for the global production and sales of a functional material for the infant nutrition field, similar to DHA and cholesterols. Commercialization of bio-production, seen as a third method for procuring future resources that is not dependent on catching natural resources, was realized in the New TGL Plan implementation period.

Enhancing Quality Assurance

The number of key production sites increased in 2009 with operations set to kick off for Hachikan and with capital participation in other plants. At the same time activities in the quality assurance field were expanded.

New issues were addressed such as constructing a raw materials information management system and building a food defense system to prevent malicious food tampering. Food analysis capabilities at each plant were improved with the aim of having even more accurate inspection systems in place.

Nippon Suisan again took steps in 2010 to strengthen its quality assurance system. The number of customer complaints stabilized after completing the quality assurance system stipulated in the 2002 Quality Assurance Charter, but complaints started to trend upward from 2007, producing a sense of alarm in the company. Approaches were taken to address issues such as eliminating company-centric thinking, preventing the deterioration of standards, thoroughly implementing prevention management and raising customer satisfaction.

Production site prevention management activities were enhanced. Two external members were added to the Quality Assurance Committee so that conditions could be inspected from perspectives outside of the company. Efforts were also made to listen to the opinions of consumers and raise customer satisfaction.

Efforts were made to again establish an integrated quality assurance system covering all aspects of operations from fishing sites, aquaculture, produce farms and poultry farms to production sites and distribution, right up to the dinner table. Specifically the philosophies of the Quality Assurance Charter were clearly indicated, all employees were asked to completely fulfill their responsibilities for ensuring quality and efforts were made to raise customer satisfaction.

Rapidly Progressing R&D

R&D activities play key roles in the three stated elements that make up the business structure image in the New TGL Plan.

Specifically, the Marine Food Products Research Laboratory of the Central Research Laboratory contributes to “improve the profitability of core businesses”, the Health Basic Research Laboratory of the Central Research Laboratory and the Human Life Science R&D Center contributes to “expand profits through more sophisticated business” and the Aquaculture Basic Research Laboratory and the Oita Marine Biological Technology Center contribute to “developing a cutting-edge aquaculture model”. The Bio-production Research Center has also been working toward the goal of “acquire a third resource acquisition method that does not rely on the harvesting of natural resources”.

The basic policies for R&D are as follows:

- 1) Promote research efficiency and commercialization with progress managed by the R&D Promotion Council.

- 2) Create new values based on functions and technologies that link resources to lifestyles. Make the aquaculture business more sophisticated and with higher earnings. Develop functions with high added value for marine resources, as well as advanced utilization methods.
- 3) Continue pursuing innovative technologies. Open new avenues for bio-production technologies.
- 4) Improve ties within the group between each research center and product planning department.

The Human Life Science R&D Center looks for advanced values that can be added to marine resources in order to raise the quality of life. The Bio-production Research Center works to acquire reproducible production methods for EPA and other items.

Furthermore, the Tokyo Innovation Center was established in Minamino, Hachioji City to mark the approaching 100th anniversary of Nippon Suisan in 2011. This new center bolsters R&D, contributes to management and business, and supports communication with customers, local regions and society, while helping to realize Nippon Suisan corporate philosophies.

Part 4 Passing on the Aspirations of our Pioneers

Ichiro Tamura founded the Tamura Steamship Fishery Company in Shimonoseki, Yamaguchi Prefecture in 1911 and started trawling operations with Kosuke Kunishi, marking the foundation of what would become Nippon Suisan. During the founding of Nippon Suisan these pioneers expressed their aspirations for the company in the following manner: “A tap water supply system is exactly what marine products should be like in their production and distribution. We seek marine resources from everywhere in the world, ensure that product are always as fresh as possible, set up their worldwide marketing network, just like the tap water pipeline, and distribute them, adjusting their marketing prices in response to demand... Excess costs related to the distribution of marine products also need to be eliminated to realize

the distribution costs lowest possible. Earnings through speculation should not be sought in the course of this supply” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*).

These founding philosophies for Nippon Suisan continue to be passed down even today.

When we retrace the footsteps of company pioneers over Nippon Suisan’s 100-year history, it is clear that these aspirations have been incorporated into the business models of each era. Even during times of turmoil, Nippon Suisan overcame difficulties and continued growing thanks to the wisdom contained in these aspirations.

Marine resources, the basis for Nippon Suisan’s business, is the only main food staple in the world for which more than half of its supply is dependent on

nature. Marine resources are currently being placed under the independent control of nations with sea coasts, or under multinational joint management. As such, various restrictions are being placed on capturing these resources. Furthermore, the impacts of excessive fishing and climate change on ecosystems have become increasingly serious. There are many uncertainties even for the future of aquaculture as various countries impose restrictions and as environmental groups voice opposition from the viewpoint of burdens placed on the environments.

There is also a mountain of concerns for the overall food industry such as future living environments for the human race, food problems and food safety. Demand for food will grow along with global population growth, but there are limits to how much the supply of food can be increased. The importance of fishing industries that can continuously access natural resources goes without saying. Furthermore, the varied demands for food are expected to become stronger as changes in global food supplies produce a more intense competitive scramble for food resources.

Against this background, Nippon Suisan will continue to evolve so as to stay true to the ideas of our founding pioneers, expressed as “The fisheries of our country [Part omitted] not only to solve the food problem of our country, but also to help absorb the increasing population” (*Anthology of Writings and Speeches of Mr. Kosuke Kunishi*). Nippon Suisan’s management policy for the start of the 21st century is “Continue to innovate our business, create diverse values from a sustainable business, specifically fishery business managing resources and marine resources obtained from aquaculture and bio-production in harmony with the global environment, and deliver these resources in order to contribute to rich and healthy lifestyles for the people of the world”.

Recognizing this as Nippon Suisan’s obligation, the company will maintain the humble position of “a business using resources cultivated in the natural environment”, will work to maximize the benefits of these resources for the people of the world and continue to pass on both the fisheries industry and the aspirations of our founders to the future.

Photographs courtesy of:

Aioi Works, IHI Corporation

Ako Cultural Promotion Foundation

The Elementary School of Katagiri, Yamatokoriyama City, Nara Prefecture

Mochida Pharmaceutical Co., Ltd.

Hiroko Tamura

Postscript

At 2:46 P.M. on Friday, March 11, 2011, an earthquake occurred off the coast of Japan's Sanriku region. The quake registered 7 on the Japanese seismic intensity scale in northern Miyagi Prefecture and 5-upper in Tokyo's 23 wards. It generated an enormous tsunami that struck Pacific coast areas from the Tohoku region down to the Kanto region, and caused massive damage that left 25,000 people dead or missing. It had a magnitude of 9.0, making it the largest earthquake in Japan's recorded history.

In addition to being heavily damaged by the earthquake itself, the Pacific coast region was decimated by a gigantic tsunami exceeding 10 meters in height. Based on analysis of aerial photos taken by the Geospatial Information Authority of Japan, it was estimated that at least 401 square kilometers of land—or roughly 6.4 times the area enclosed by Tokyo's JR Yamanote Line—were inundated. The National Police Agency estimated that 468,000 people had evacuated their homes as of Monday, March 14 (three days after the disaster).

The enormous tsunami also caused a nuclear accident. At Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Plant in Fukushima Prefecture, radiation was released when the plant's reactors shut down and power to equipment for cooling the reactors and fuel rods was cut off. The government responded by ordering residents within a 20-kilometer radius of the plant to evacuate and instructing those within a 30-kilometer radius to remain indoors. The accident also led to radioactive contamination of drinking water, agricultural and livestock products, and fishery products that caused shipments to be stopped and extremely harmful rumors to spread. There are also concerns that long-term power shortages in the Tokyo metropolitan area could occur.

On April 1, the Cabinet named this series of disasters—which includes the earthquake, tsunami, and accident at the Fukushima Daiichi Nuclear Power Plant—the “Great East Japan Earthquake”.

For Nippon Suisan, the disaster greatly damaged business sites along the Tohoku and Kanto coasts. The Onagawa Plant was constructed as a fish sausage production base five years after a whaling office was established there in 1950. This plant, which subsequently functioned as one of Nippon Suisan's food product plants for many years, was completely destroyed by the tsunami. Similarly devastated was the adjacent Onagawa Fish Feed and Oil Plant. All employees of both plants in Onagawa were ordered to evacuate immediately following the earthquake, an act that helped many escape the danger despite being near the coast. Nevertheless, the tsunami still took the precious lives of employees and their loved ones when it grew so large that it even inundated evacuation centers.

The Hachikan Kuji plant was also completely ruined. And Nippon Suisan's Kajima Plant, Tsukuba Plant, and Funabashi Food Processing Center as well as Delmar's Funabashi Plant and Nissui Logistics' Sendai Minato Logistics Center were so damaged that repairs took considerable amounts of time.

Nippon Suisan placed the highest priority on confirming the safety of its employees and their families. Particularly for employees working in Onagawa, Nippon Suisan made every possible effort to ascertain their safety and rescue them. It further engaged in relief activities in Sendai and other areas where electric power, water, and other services remained severed. Moreover, members of the Nippon Suisan Group joined hands to restore manufacturing lines and strengthen production capacity to meet the product demands of consumers and clients. Nippon Suisan also provided fish sausages, canned goods, daily necessities, and other relief supplies to afflicted areas through public organizations.

(Corporate History Office, April 20, 2011)

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Basic Data

Company History at a Glance

“Tamura Steamship Fishery Company”

May 1911

“Tamura Steamship Fishery Company” established.

“Kyodo Gyogyo Kaisha, Ltd.”

September 1919

“Tamura Steamship Fishery Company” reorganized, becomes “Kyodo Gyogyo Kaisha, Ltd.”

“Nippon Suisan Kaisha, Ltd.”

March 1937

“Kyodo Gyogyo”, company name changed to “Nippon Suisan Kaisha, Ltd.”

“Nippon Kaiyo Gyogyo Tosei K.K.”

March 1943

“Nippon Kaiyo Gyogyo Tosei K.K.” established under the Fishery Control Ordinance.

“Nippon Suisan Kaisha, Ltd.”

December 1945

Company name reverts to “Nippon Suisan Kaisha, Ltd.” with the abolition of the Fishery Control Ordinance.

Trends in the Company's Business Performance

Kyodo Gyogyo Kaisha, Ltd.: 1919-1937

(unit: thousand yen)

Period	Net Profit	Equity Capital	Paid-in Capital	Profit Margin
1919. 4/1-'19.12/31	159	5,000	2,000	15.9%
'20. 1/1-'20. 6/30	726	5,000	3,000	48.4%
'20. 7/1-'20.12/31	861	5,000	3,400	50.7%
'21. 1/1-'21. 6/30	912	5,000	3,400	53.6%
'21. 7/1-'21.12/31	982	5,000	3,400	57.8%
'22. 1/1-'22. 6/30	998	5,000	3,400	58.7%
'22. 7/1-'22.12/31	796	5,000	3,400	46.8%
'23. 1/1-'23. 6/30	837	5,000	3,400	49.3%
'23. 7/1-'23.12/31	736	5,000	3,400	43.3%
'24. 1/1-'24. 6/30	662	5,000	3,400	38.9%
'24. 7/1-'24.12/31	625	5,000	3,400	36.8%
'25. 1/1-'25. 6/30	573	5,000	3,400	33.7%
'25. 7/1-'25.12/31	582	5,000	3,400	34.3%
'26. 1/1-'26. 6/30	595	5,000	3,400	35.0%
'26. 7/1-'26.12/31	682	5,740	4,940	27.6%
'27. 1/1-'27. 6/30	902	5,740	5,735	31.4%
'27. 7/1-'27.12/31	1,051	5,740	5,740	36.6%
'28. 1/1-'28. 6/30	1,081	15,000	8,055	26.8%
'28. 7/1-'28.12/31	1,102	15,000	8,055	27.4%
'29. 1/1-'29. 6/30	1,105	15,000	8,055	27.4%
'29. 7/1-'29.12/31	1,115	15,000	10,370	21.5%
'30. 1/1-'30. 6/30	1,038	15,000	10,370	20.0%
'30. 7/1-'30.12/31	824	15,000	10,370	15.9%
'31. 1/1-'31. 6/30	857	15,000	10,370	16.5%
'31. 7/1-'31.12/31	862	15,000	10,370	16.6%
'32. 1/1-'32. 6/30	857	15,000	10,370	16.5%
'32. 7/1-'32.12/31	869	15,000	10,370	16.8%
'33. 1/1-'33. 6/30	949	15,000	12,678	15.0%
'33. 7/1-'33.12/31	1,098	15,000	12,685	17.3%
'33.12/1-'34. 7/31	331	10,000	10,000	6.6%
'34. 8/1-'35. 1/31	1,069	10,000	10,000	21.4%
'35. 2/1-'35. 7/31	1,096	10,000	10,000	21.9%
'35. 8/1-'36. 1/31	1,123	10,000	10,000	22.5%
'36. 2/1-'36. 7/31	1,217	10,000	10,000	24.3%
'36. 8/1-'37. 1/31	9,237	90,000	38,083	48.5%

Notes: "Tamura Steamship Fishery Company" was established on May 31st, 1911.

"Tamura Steamship Fishery Company" was reorganized to become "Kyodo Gyogyo Kaisha, Ltd." on September 27th, 1919.

"Kyodo Gyogyo" was merged into Hoyo Gyogyo, which in turn was renamed "Kyodo Gyogyo" on July 31st, 1934.

Nippon Suisan Kaisha, Ltd.: 1937-1943

(unit: thousand yen)

Period	Net Profit	Equity Capital	Paid-in Capital	Profit Margin
1937. 2/1-'37. 7/31	7,100	91,500	55,500	25.6%
'37. 8/1-'38. 1/31	6,638	91,500	67,487	19.7%
'38. 2/1-'38. 7/31	7,044	91,500	67,500	20.9%
'38. 8/1-'39. 1/31	7,138	93,000	68,250	20.9%
'39. 2/1-'39. 7/31	7,307	93,000	68,250	21.4%
'39. 8/1-'40. 1/31	9,117	93,000	68,250	26.7%
'40. 2/1-'40. 7/31	6,708	93,000	68,250	19.7%
'40. 8/1-'41. 1/31	6,036	93,000	68,250	17.7%
'41. 2/1-'41. 7/31	5,989	93,000	68,250	17.6%
'41. 8/1-'42. 1/31	5,864	93,000	68,250	17.2%
'42. 2/1-'42. 7/31	5,864	93,000	68,250	17.2%
'42. 8/1-'43. 1/31	6,760	93,000	68,250	19.8%

Notes: The company name "Kyodo Gyogyo Kaisha, Ltd." was changed to "Nippon Suisan Kaisha, Ltd." on March 31st, 1937.

Nippon Kaiyo Gyogyo Tosei K.K.: 1943-1945

(unit: thousand yen)

Term	Period	Net Profit	Equity Capital	Paid-in Capital	Profit Margin
1	1943. 3/31-'43. 9/30	9,588	94,262	69,512	27.6%
2	'43.10/ 1-'44. 3/31	9,634	94,262	69,512	27.7%
3	'44. 4/ 1-'44. 9/30	8,808	94,262	69,512	25.3%
4	'44.10/ 1-'45. 3/31	8,973	94,262	69,512	25.8%
5	'45. 4/ 1-'45. 9/30	2,747	94,262	69,512	7.9%

Notes: On March 31st, 1943, "Nippon Kaiyo Gyogyo Tosei K.K." was established, mainly from the maritime division of "Nippon Suisan Kaisha, Ltd."

Nippon Suisan Kaisha, Ltd.: 1945-1946

(unit: thousand yen)

Term	Period	Net Profit	Equity Capital	Paid-in Capital	Profit Margin
6	1945.10/1-'46. 3/31	1,951	94,262	69,512	5.6%
7	'46. 4/1-'46. 8/10	76	94,262	69,512	0.2%

Notes: On December 1st, 1945, the company name reverted from "Nippon Kaiyo Gyogyo Tosei K.K." to "Nippon Suisan Kaisha, Ltd."

Nippon Suisan Kaisha, Ltd.: FY1946-2009

(unit: million yen)

Term	Period	Sales	Ordinary Profit	Net Pre-tax Profit	Profit Margin	Equity Capital	Dividend Rate
8	1946.8/11-'49. 9/30	6,878	–	155	2.3%	350	non-dividend
9	'49.10/ 1-'50. 3/31	1,453	–	43	2.9%	700	non-dividend
10	'50. 4/ 1-'50. 9/30	3,247	–	77	2.4%	700	non-dividend
11	'50.10/1-'51. 3/31	2,471	–	106	4.3%	700	12.0%
12	'51. 4/ 1-'51. 9/30	2,708	–	177	6.6%	700	15.0%
13	'51.10/1-'52. 3/31	2,595	–	188	7.2%	700	15.0%

Term	Period	Sales	Ordinary Profit	Net Pre-tax Profit	Profit Margin	Equity Capital	Dividend Rate
14	'52. 4/ 1-'52. 9/30	2,552	–	138	5.4%	700	15.0%
15	'52.10/1-'53. 3/31	3,561	–	156	4.4%	700	15.0%
16	'53. 4/ 1-'53. 9/30	4,716	–	203	4.3%	1,400	15.0%
17	'53.10/1-'54. 3/31	4,280	–	262	6.1%	1,400	15.0%
18	'54. 4/ 1-'54. 9/30	6,926	–	311	4.5%	1,400	15.0%
19	'54.10/1-'55. 3/31	6,172	–	413	6.7%	2,800	15.0%
20	'55. 4/ 1-'55. 9/30	7,609	–	471	6.2%	2,800	15.0%
21	'55.10/1-'56. 3/31	8,441	–	506	6.0%	2,800	15.0%
22	'56. 4/ 1-'56. 9/30	10,770	–	516	4.8%	2,800	15.0%
23	'56.10/1-'57. 3/31	8,909	–	524	5.9%	3,500	15.0%
24	'57. 4/ 1-'57. 9/30	12,606	–	551	4.4%	3,500	15.0%
25	'57.10/1-'58. 3/31	9,793	–	513	5.2%	3,500	15.0%
26	'58. 4/ 1-'58. 9/30	13,502	–	517	3.8%	5,600	12.0%
27	'58.10/1-'59. 3/31	10,576	–	261	2.5%	5,600	6.0%
28	'59. 4/ 1-'59. 9/30	15,858	–	270	1.7%	5,768	6.0%
29	'59.10/1-'60. 3/31	13,040	–	283	2.2%	5,941	6.0%
30	'60. 4/ 1-'60. 9/30	17,721	–	301	1.7%	6,119	6.0%
31	'60.10/1-'61. 3/31	15,453	–	901	5.8%	6,303	15.0%
32	'61. 4/ 1-'61. 9/30	21,158	–	651	3.1%	6,303	12.0%
33	'61.10/1-'62. 3/31	18,718	–	738	3.9%	10,000	12.0%
34	'62. 4/ 1-'62. 9/30	22,164	–	785	3.5%	10,000	10.0%
35	'62.10/1-'63. 3/31	22,174	–	761	3.4%	10,000	10.0%
36	'63. 4/ 1-'63. 9/30	26,146	–	764	2.9%	10,000	10.0%
37	'63.10/1-'64. 3/31	27,516	–	791	2.9%	10,000	10.0%
38	'64. 4/ 1-'64. 9/30	26,876	–	899	3.3%	10,000	10.0%
39	'64.10/1-'65. 3/31	28,321	959	905	3.2%	10,000	10.0%
40	'65. 4/ 1-'65. 9/30	31,650	2,180	915	2.9%	10,000	10.0%
41	'65.10/1-'66. 3/31	28,034	1,425	917	3.3%	10,000	10.0%
42	'66. 4/ 1-'66. 9/30	31,378	2,088	1,025	3.3%	10,000	10.0%
43	'66.10/1-'67. 3/31	27,489	1,791	1,031	3.7%	10,000	10.0%
44	'67. 4/ 1-'67. 9/30	33,490	1,345	1,047	3.1%	10,000	10.0%
45	'67.10/1-'68. 3/31	30,515	1,416	902	3.0%	10,000	10.0%
46	'68. 4/ 1-'68. 9/30	38,525	1,419	1,237	3.2%	10,000	10.0%
47	'68.10/1-'69. 3/31	31,692	1,684	1,371	4.3%	10,000	10.0%
48	1969. 4/ 1-'69. 9/30	45,562	2,863	2,856	6.3%	10,000	10.0%
49	'69.10/1-'70. 3/31	36,570	3,184	3,005	8.2%	10,000	12.0%
50	'70. 4/ 1-'70. 9/30	50,046	3,393	3,010	6.0%	10,000	12.0%
51	'70.10/1-'71. 3/31	45,592	3,755	3,605	7.9%	10,000	15.0%
52	'71. 4/ 1-'71. 9/30	61,161	4,577	3,456	5.7%	10,000	15.0%
53	'71.10/1-'72. 3/31	48,158	2,854	2,932	6.1%	10,000	15.0%
54	'72. 4/ 1-'72. 9/30	67,445	2,688	2,268	3.4%	10,000	12.0%
55	'72.10/1-'73. 3/31	52,119	3,443	2,978	5.7%	10,000	12.0%

Term	Period	Sales	Ordinary Profit	Net Pre-tax Profit	Profit Margin	Equity Capital	Dividend Rate
56	'73. 4/ 1-'73. 9/30	81,122	7,562	5,517	6.8%	10,000	15.0%
57	'73.10/1-'74. 3/31	75,062	4,410	3,546	4.7%	10,000	15.0%
58	'74. 4/ 1-'74. 9/30	94,321	1,928	1,938	2.1%	10,000	15.0%
59	'74.10/1-'75. 3/31	80,224	165	430	0.5%	10,000	10.0%
60	'75. 4/ 1-'75. 9/30	103,903	1,926	2,195	2.1%	10,000	8.0%
61	'75.10/1-'76. 3/31	95,683	958	1,340	1.4%	10,000	8.0%
62	'76. 4/ 1-'77. 3/31	258,567	7,937	6,048	2.3%	10,000	10.0%
63	'77. 4/ 1-'78. 3/31	379,596	11,680	9,926	2.6%	10,000	10.0%
64	'78. 4/ 1-'79. 3/31	374,588	11,160	8,086	2.2%	10,000	10.0%
65	'79. 4/ 1-'80. 3/31	407,936	9,063	7,219	1.8%	10,000	10.0%
66	'80. 4/ 1-'81. 3/31	408,800	5,478	5,558	1.4%	10,000	12.0%
67	'81. 4/ 1-'82. 3/31	429,671	4,546	5,023	1.2%	10,000	10.0%
68	'82. 4/ 1-'83. 3/31	484,464	6,738	7,431	1.5%	10,000	10.0%
69	'83. 4/ 1-'84. 3/31	470,001	6,867	4,802	1.0%	10,042	10.0%
70	'84. 4/ 1-'85. 3/31	484,351	7,419	5,568	1.1%	12,287	10.0%
71	'85. 4/ 1-'86. 3/31	473,921	7,526	5,780	1.2%	15,921	10.0%
72	'86. 4/ 1-'87. 3/31	466,304	6,397	4,701	1.0%	18,861	10.0%
73	'87. 4/ 1-'88. 3/31	481,136	3,164	3,182	0.7%	20,825	10.0%
74	'88. 4/ 1-'89. 3/31	463,959	2,394	1,616	0.3%	23,431	10.0%
75	'89. 4/ 1-'90. 3/31	437,730	(263)	1,108	0.3%	23,504	10.0%
76	'90. 4/ 1-'91. 3/31	460,703	(1,400)	(1,105)	-0.2%	23,535	non-dividend
77	'91. 4/ 1-'92. 3/31	444,221	5,218	582	0.1%	23,539	non-dividend
78	'92. 4/ 1-'93. 3/31	412,678	(2,594)	(331)	-0.1%	23,539	non-dividend
79	'93. 4/ 1-'94. 3/31	383,308	(5,268)	(6,003)	-1.6%	23,539	non-dividend
80	'94. 4/ 1-'95. 3/31	400,869	539	540	0.1%	23,692	non-dividend
81	'95. 4/ 1-'96. 3/31	388,388	(2,137)	(3,436)	-0.9%	23,729	non-dividend
82	'96. 4/ 1-'97. 3/31	371,889	2,492	3,130	0.8%	23,729	non-dividend
83	'97. 4/ 1-'98. 3/31	359,231	2,419	7,035	2.0%	23,729	non-dividend
84	'98. 4/ 1-'99. 3/31	342,132	3,637	2,681	0.8%	23,729	6.0%
85	'99. 4/ 1-'00. 3/31	309,018	5,653	6,107	2.0%	23,729	8.0%
86	2000. 4/ 1-'01. 3/31	298,190	6,611	1,384	0.5%	23,729	10.0%
87	'01. 4/ 1-'02. 3/31	317,073	3,006	(24,111)	-7.6%	23,729	10.0%
88	2002. 4/ 1-'03. 3/31	315,623	5,019	(2,167)	-0.7%	23,729	10.0%
89	'03. 4/ 1-'04. 3/31	321,915	1,044	3,928	1.2%	23,729	10.0%
90	'04. 4/ 1-'05. 3/31	321,434	5,500	5,495	1.7%	23,729	12.0%
91	'05. 4/ 1-'06. 3/31	331,771	5,720	8,767	2.6%	23,729	14.0%
92	'06. 4/ 1-'07. 3/31	343,666	8,248	8,387	2.4%	23,729	18.0%
93	'07. 4/ 1-'08. 3/31	337,629	4,166	13,973	4.1%	23,729	20.0%
94	'08. 4/ 1-'09. 3/31	324,284	764	(5,756)	-1.8%	23,729	20.0%
95	'09. 4/ 1-'10. 3/31	306,862	2,102	(2,294)	-0.7%	23,729	20.0%

Notes: Final accounts for Term 8 (Aug. 11, 1946 to Sept. 30, 1949) were deferred because the company had become a special accounting company with the enforcement of the Act on Emergency Measures Concerning Companies' Accounting.

Nippon Suisan Kaisha, Ltd. (consolidated: FY1977-FY2009)

(unit: million yen)

Term	Period	Sales	Ordinary Profit	Net Pre-tax Profit	Profit Margin	Shareholder Equity Ratio
63	1977.4/1-'78. 3/31	402,266	18,801	15,439	3.8%	18.2%
64	'78.4/1-'79. 3/31	398,566	14,777	11,942	3.0%	18.6%
65	'79.4/1-'80. 3/31	440,685	13,013	10,729	2.4%	18.1%
66	'80.4/1-'81. 3/31	440,341	7,162	6,776	1.5%	18.3%
67	'81.4/1-'82. 3/31	464,342	5,641	6,123	1.3%	17.7%
68	'82.4/1-'83. 3/31	528,190	9,320	9,449	1.8%	17.4%
69	'83.4/1-'84. 3/31	517,134	8,120	6,355	1.2%	19.3%
70	'84.4/1-'85. 3/31	540,639	8,659	7,233	1.3%	21.3%
71	'85.4/1-'86. 3/31	528,420	10,714	8,807	1.7%	23.2%
72	'86.4/1-'87. 3/31	521,378	6,889	6,159	1.2%	23.5%
73	'87.4/1-'88. 3/31	531,012	4,610	4,348	0.8%	26.2%
74	'88.4/1-'89. 3/31	532,553	4,151	3,290	0.6%	26.9%
75	'89.4/1-'90. 3/31	508,005	(1,144)	1,550	0.3%	26.5%
76	'90.4/1-'91. 3/31	534,307	(3,643)	(7,894)	-1.5%	23.7%
77	'91.4/1-'92. 3/31	519,244	9,314	1,261	0.2%	23.8%
78	'92.4/1-'93. 3/31	488,491	(7,302)	5,897	1.2%	23.0%
79	'93.4/1-'94. 3/31	457,629	(6,528)	(7,358)	-1.6%	25.2%
80	'94.4/1-'95. 3/31	470,369	(204)	(629)	-0.1%	24.6%
81	'95.4/1-'96. 3/31	468,733	(607)	(2,437)	-0.5%	24.0%
82	'96.4/1-'97. 3/31	466,020	1,110	7,411	1.6%	24.4%
83	'97.4/1-'98. 3/31	477,090	153	8,052	1.7%	25.9%
84	'98.4/1-'99. 3/31	442,998	(928)	(596)	-0.1%	25.3%
85	'99.4/1-'00. 3/31	472,297	7,597	10,876	2.3%	27.6%
86	2000.4/1-'01. 3/31	463,747	7,380	3,899	0.8%	26.3%
87	'01.4/1-'02. 3/31	482,953	4,790	(14,094)	-2.9%	20.3%
88	'02.4/1-'03. 3/31	499,810	14,489	4,571	0.9%	22.0%
89	'03.4/1-'04. 3/31	494,644	8,643	8,429	1.7%	25.0%
90	'04.4/1-'05. 3/31	510,889	12,615	11,102	2.2%	26.7%
91	'05.4/1-'06. 3/31	539,653	11,888	13,248	2.5%	27.5%
92	'06.4/1-'07. 3/31	552,871	16,065	16,257	2.9%	27.7%
93	'07.4/1-'08. 3/31	533,970	6,758	19,879	3.7%	27.3%
94	'08.4/1-'09. 3/31	505,250	(1,222)	(16,182)	-3.2%	14.5%
95	'09.4/1-'10. 3/31	481,574	6,174	4,041	0.8%	16.0%

Nippon Suisan Executives' Terms of Office

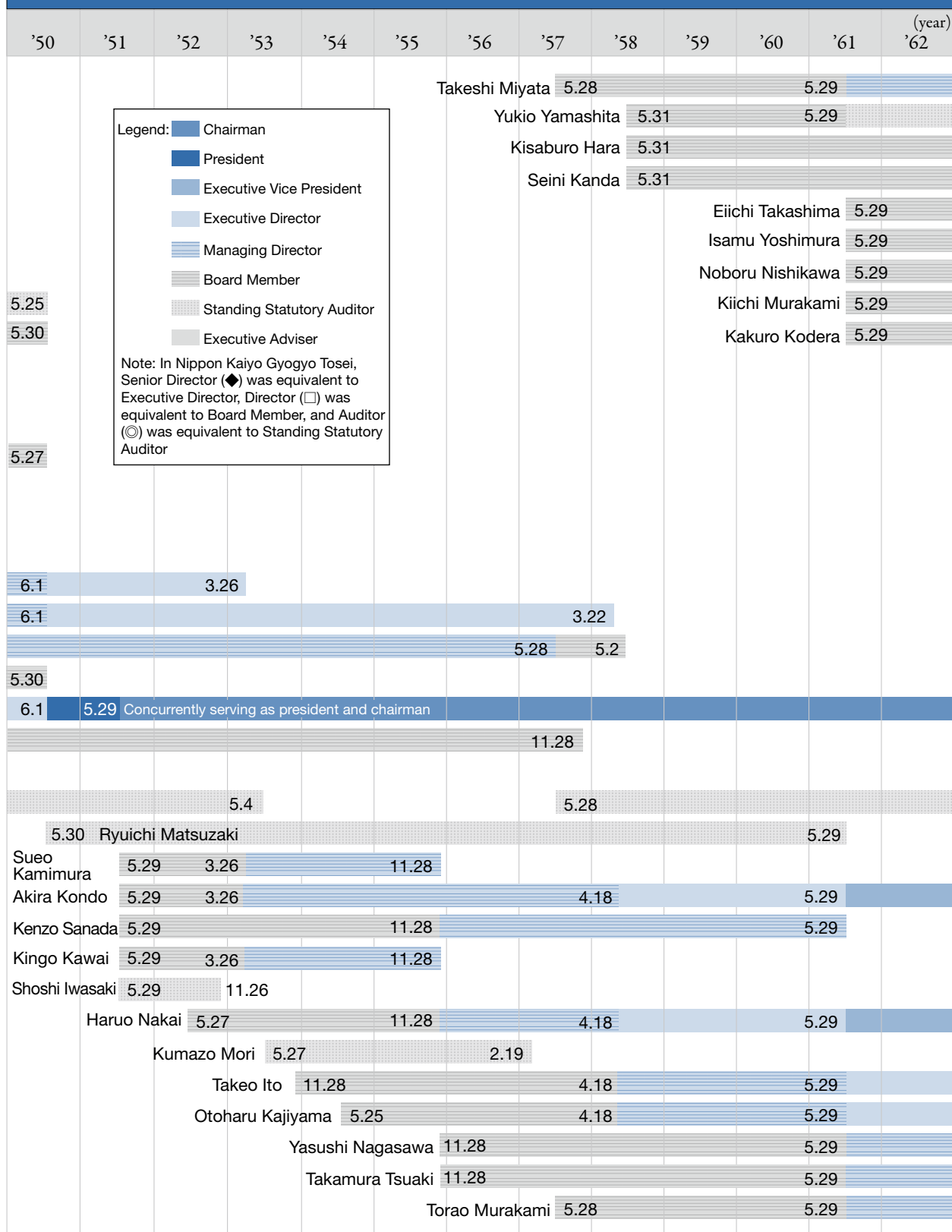
Tamura Steamship Fishery Company									Kyodo Gyogyo Kaisha, Ltd. 9.27			
1911	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	(year) '23
5								9.27	Ichiro Tamura			
									Hisazo Matsuzaki	9.27		
									Kosuke Kunishi	9.27		
									Jinpachi Hayashida	9.27		
									Kenkichi Ueki	9.27		
									Soji Yamawaki	9.27		
									Heikuro Sagiike	9.27		
									Kojiro Shimomura	11.1		
									Setsutarō Nakayama	11.1		
											Keizo Tamura	1.29

Legend:

	Owner
	Chairman
	President
	Executive Vice President
	Executive Director
	Managing Director
	Board Member
	Standing Statutory Auditor
	Executive Adviser

3.31 Nippon Suisan Kaisha, Ltd.						Nippon Kaiyo Gyogyo 3.31 Tosei K.K.			Nippon Suisan Kaisha, Ltd. 12.1				(year)
1937	'38	'39	'40	'41	'42	'43	'44	'45	'46	'47	'48	'49	
	Hiroya Ino	9.27	8.13										
	Ganjiro Haga	9.27				3.31							
	Kosuke Kunishi	4.2	Hisao Tamagawa	9.27	3.6								
			Tadao Katsuragi	3.27	3.31	□		12.1	2.12		7.15		
	Kenkichi Ueki		3.27		3.31			12.1	1.3				
			Tanji Katayama	3.27	3.28								
	Heikuro Sagiike	7.13	Michihiro Baikei	3.27	3.31								
						Goshika Ueki	3.31	□	12.1			8.31	
						Isamu Miyazaki	3.31	□	12.1				
	Keizo Tamura				3.31			12.1	4.30				
						Michitora Baikei	3.31	□	12.1				
	Chiyoma Iwamoto	9.27			3.31								
						Fumio Matsuo	3.31	◎	12.1			8.31	
	Naoshiro Imai				3.31								
	Yoshisuke Aikawa		3.6			Kantaro Miho	3.31	◎	12.1	12.27			
	Shizuo Minoda	9.27			3.31	◆		12.1	1.3				
	Seichu Takezaki	1.31								Rensaku Onishi	2.12		
	Rokuro Masui		9.26							Yuichi Matsuzaki	2.12	8.5	
	Keisuke Yamada		3.6							Yasuo Haraguchi	2.12	8.5	
	Junji Hayashi				3.31					Shigesuke Yokoyama	2.12	8.5	12.24
	Juichi Maene				3.31	□		12.1			Kyuhei Suzuki	8.5	
	Toichi Kuwata	9.27									Suekichi Imamura	8.5	
	Tatusaburo Shibuya		9.27								Ken Sabunji	8.5	7.9
	Yusaku Nishimura	9.27	3.27	3.31							Kenji Ito	8.31	
	5.31 Narimatsu Kimura												
	Shigeo Kuboi				3.31	□		12.1	2.12		7.15		
	Susumu Masui				3.31	□		12.1	1.15	6.2	6.22		
	Gentaro Hayashi		3.6	3.27	3.31					Concurrently serving as president and chairman			
	Kojiro Abe				3.31								
	Shigeji Matsuda				3.31	◎		12.1			7.15		
	3.31 Shigeharu Kato		9.27										
	3.31 Kei Miura		3.27										
	3.31 Masuji Bandai		3.27	3.31									
	3.31 Jiro Shirasu				3.31								
	3.31 Teizo Funazu		11.30										
	3.31 Teruo Muto				3.31								
	6.5 Kenji Kawanabe		3.6										

Nippon Suisan Kaisha, Ltd.



Nippon Suisan Kaisha, Ltd.

	1963	'64	'65	'66	'67	'68	'69	'70	'71	'72	'73	'74	(year) '75
Takeshi Miyata		5.31											
Yukio Yamashita		5.29											
		5.29	Kisaburo Hara	5.30				5.29		3.29			
		5.29	Seini Kanda		5.30			5.29		Ken Otsuru	5.30		
Eiichi Takashima		5.29		6.30						Satoshi Shimoida	5.30		
Isamu Yoshimura		5.29				5.30		4.21		Katsumi Takeda	5.30		
Noboru Nishikawa		5.29					5.29			5.30			
Kiichi Murakami	5.29							5.29		1.28			
Kakuro Kodera	5.29					5.30		5.28		3.30			
Juro Osoegawa	5.29					5.30		5.28		5.30			12.23
Hatsuyu Takeko	5.29					5.30		5.28		5.30			
Hirokichi Takahashi	5.29					5.30				Masaichi Kawasaki	11.29	11.29	
Kijiro Kimura	5.29				5.30					Shigeto Suzuki	5.30		
Jiro Ito	5.29	5.31	5.30							Akira Nishihara	5.30		
Hisashi Fujii	5.29				5.30					Mamoru Someya	5.30		12.23
Nagamitsu Dosho	5.29	5.31								Tomio Tominaga	11.29		
		Masatake Suzuki	5.30				5.29	5.28		5.30	11.29	12.23	
		Hirotake Watanabe	5.30	5.30						Tadao Kawai	11.29		
		Masao Seki	5.30			5.29				5.30			
Concurrently serving as president and chairman		Akio Sakonji	5.30			5.29				5.30		5.30	
11.28	Kyuhei Suzuki												
		Hiroo Sakai	5.30					5.28		11.29			
		Eitaro Atsumi	5.30						5.30			5.30	
		Yoshitake Kuwahara	5.30						5.30			5.30	
Kenji Ito							11.28			Motokazu Shimizu	11.29		
		Shoichi Koganemaru	5.30							5.30			12.23
		Kiyokazu Kobayashi	5.30							5.30			
Akira Kondo	11.28								5.28			Ichiro Ishii	5.30
								Jun-ichi Sakata	5.30		5.30		
								Toyozo Mikumo	11.28		4.12		
								Takashi Tanimura	5.29			5.30	
Haruo Nakai	11.28										11.29		12.23
								Tetsuya Sakakibara	5.29	1.21			
Takeo Ito	5.29						11.28						
Otoharu Ajiyama	5.29				5.30				Takasuke Chiba	5.29		5.30	
Yasushi Nagasawa		5.30		5.30					Shun-ichi Okuchi	11.30	5.30	1.1	
Takamura Tsuaki		5.30					5.29				11.29		
Torao Murakami	5.29								Namiki Hayashi	11.30			12.23

Nippon Suisan Kaisha, Ltd.

	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	(year) '88
6.29 Katsusuke Minoda			6.29				6.29	6.29			6.27		
				6.27				6.29			6.27		
		Kazuya Hara	6.29				6.29	Ken-ichi Kogure	6.28		6.27		
2.29 Kazuo Asano			6.29					6.29		3.30			
			6.29	6.28					Juro Kuboi		6.28		
			6.29		6.28	Yukio Sakamoto		6.29					6.29
6.29 Yoshihiko Taguchi			6.29	6.27						Akio Katakura		6.27	
					Mamoru Asakawa	6.27				6.28		6.27	Hideaki Tokoro
					Akira Miyazaki	6.27			6.28		6.27		
				6.27			6.29				Yoshiomi Hoshino		6.29
6.29					Koichi Gomyo	6.27			6.28				
					Hiroshi Ando	6.27					6.27		
			6.29	6.28			6.27	Kazunori Sakai			6.27		
				6.28		6.29						Takao Fujita	6.29
					Jun-ichi Katayama	6.27		6.29					Toru Fukui
	6.29						Ikuya Ueki	6.29			6.27		
		6.29						Haruo Neo	6.29			6.29	
				6.27				6.29	Toshiro Yamaguchi				
6.29												Yasuo Kunii	6.29
								Kunio Yonezawa	7.5	6.29		6.29	
6.29								Hiroyasu Nonami	6.29				6.29
6.29							6.29						Tomoyoshi Furuya
								Jun Uchida	6.29	6.28			Kunio Kasai
				6.28					6.29	6.28		3.30	
			6.29						Taisuke Moriura	6.29	6.28		
6.29				6.27						6.28			
					6.18								Yasuo Tamura
6.29		6.29							Yashichi Nakazawa	6.29		6.27	
									Ryoichi Nozawa	6.29			
			6.29						Takayoshi Ogawa	6.29			
			6.29								Eikichi Yoshihara	6.28	
Takafumi Toda	6.29			6.27	6.29						Shigeru Fujioka	6.28	
Fumio Imanaga	6.29			6.27				6.29		6.28	6.27		
		Bunshiro Kakimoto	6.29				1.1	6.29					
				6.27							6.27	6.29	
		Kazuyoshi Sasazawa	6.29					6.29		6.28			
					6.27			6.29			6.27		

Nippon Suisan Kaisha, Ltd.

1989	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	2000	(year) '01
Katsusuke Minoda	6.27				6.29	6.27			Ryutaro Sato	6.29		
	Atsushi Yasui	6.27							6.26		6.28	
		Yasuyuki Kuboi	6.26	6.29						Ichiu Mitarai	6.29	
		Koji Adachi	6.26	6.29							Mikio Satake	6.28
Juro Kuboi							6.27					
Yukio Sakamoto	3.30	Noboru Ueda	6.26		6.29							
Akio Katakura	6.27	Koki Hiraoka	6.26				6.27					
Hideaki Tokoro	6.28	Kanji Kato	6.26						6.29			
Akira Miyazaki		12.1			6.29							
Yoshiomi Hoshino			6.29									
Koichi Gomyo	3.30				6.29		6.27					
Hiroshi Ando	3.30	Ken-ichi Suzuki	6.29				6.27		6.29			
6.29	Kazunori Sakai	Hiroaki Kunimasa	6.29				6.26					
Takao Fujita	6.27	Jiro Mizukami	6.29				6.27					
Toru Fukui	6.28		6.29									
6.9	Ikuya Ueki	Hidejiro Koizumi	6.29	6.29								
Haruo Neo		12.1	6.26	Yasuhisa Sato	6.29				6.29			
6.29	Toshiro Yamaguchi			Masahiro Yamada	6.29	6.27						
Yasuo Kunii	6.27		6.29	6.29	6.29				6.29		6.28	
Kunio Yonezawa	6.27			Ken-ichiro Izawa	6.29	6.27						
				Ikuo Matsuoka	6.29				6.29			
Tomoyoshi Furuya			6.29	Keinosuke Kondo	6.29				2.17			
Kunio Kasai		6.26						Norihisa Yamao	6.27		6.29	
6.29	Kazuo Morita		6.29	6.29				2.28				
6.29	Hiroshi Imachi	12.1	6.29					Katsunori Sasao	6.27			
6.29	Seishiro Kataoka							6.26				
Yasuo Tamura	6.27							Masaaki Takahashi	6.27			
Naoya Kakizoe	6.28		6.29	6.29	6.29				6.29			
Ryoichi Nozawa		6.26		6.29				Yoshimoto Ishikawa	6.27			
6.29	Takayoshi Ogawa	12.1	6.29	6.29				Kunihiko Tsuruta	6.26			
6.29	Eikichi Yoshihara							Hiroshi Shibuya	6.26			
Shigeru Fujioka	6.28							Hiroshi Tanaka	6.26			
Fumio Imanaga	6.27		6.29					Kiyohiro Nomura	6.26			
Toru Saigo	6.28				6.29			6.26				
Masahiro Higasa	6.28							6.26				
	Shigehiro Suzuki	6.27			6.29		6.27					
	Yukio Yamamoto	6.27							6.29			

Nippon Suisan Kaisha, Ltd.

	'02	'03	'04	'05	'06	'07	'08	'09	(year) '10
			6.29				Takaaki Wakasugi	6.25	
							Yoshinori Hosoya	6.25	
							6.26 Yuji Kobayashi	6.25 *	
								6.25	
Akira Someya	6.27			6.28				Shinsuke Oki	6.25 *
	3.31								
Norio Hosomi	6.27				6.27			6.25	
		6.29							
Teruaki Kaneko	6.27					6.26			
Kunihiko Koike	6.27							6.25	
Kotaro Yoshikawa		6.29						6.25	
	6.27	Kimizo Shimamura	6.29	3.31					
		Seiji Manabe	6.29					6.25	
		Susumu Kaneda	6.29					6.25 *	
		Kenjiro Fujimoto	6.29					6.25 *	
		Yoshio Osawa	6.29					6.25	
	6.27							6.25	
		Kozo Toyama	6.29					6.25	
		Naoto Ihara	6.28					6.25	
		Akiyo Matono	6.27					6.25 *	
	3.31								
		Yujin Watabe	6.27					6.25	
		Yasumasa Yamasaki	6.27					6.25 *	
	3.31								
		Masahide Koizumi	6.27						
							Koki Sato	6.26	6.25 *
	4.1							6.25	*
							Yoichi Sekiguchi	6.26	6.25 *
	4.1			6.27					
								6.25	
	6.27						Hisami Sakai	6.26	6.25 *
	6.27						6.27 Keishiro Kinoshita	6.25	
	6.27						6.27		
	6.27						6.26		
		6.29					Jun-ichi Nishida	6.25 *	
							Yuichi Makino	6.25 *	
							Eiichiro Yamahashi	6.25 *	
						6.27	Takeshi Wakizaka	6.25 *	
							Seiji Takahashi	6.25 *	

Legend:	Chairman
	President
	Executive Vice President
	Executive Director
	Managing Director
	Board Member
	Standing Statutory Auditor
	Executive Adviser
	* indicates operating officer

List of Group Companies

* Company associated with Juro Oka

** Company associated with Ichiro Tamura

Founding to 1945

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
1	Nippon Enyo Gyogyo K.K.*	—	1904	Renaming	Toyo Gyogyo K.K.	Nagato City, Yamaguchi Prefecture	whaling
2	Toyo Gyogyo K.K.*	—	May 1909	Renaming	Toyo Hogeï K.K.	Shimonoseki City, Yamaguchi Prefecture	whaling
	—	—	May 1909	Merger	(Teikoku Suisan K.K.)	Kobe City, Hyogo Prefecture	whaling
	—	—	May 1909	Merger	(Dai-Nippon Hogeï K.K.)	Tokyo City	whaling
	—	—	May 1909	Merger	(Nagasaki Hogeï Goshi K.K.)	Nagasaki City, Nagasaki Prefecture	whaling
	—	—	May 1916	Merger	(Tokai Gyogyo K.K.)	Tateyama City, Chiba Prefecture	whaling
	—	—	May 1916	Merger	(whaling division of Iwatani Shokai)	Tokyo City	whaling
3	Toyo Hogeï K.K.*	—	1934	Renaming	Nippon Hogeï K.K.	Osaka City, Osaka	whaling
	—	—	1916	Merger	(Nagato Hogeï K.K.)	Nagato City, Yamaguchi Prefecture	whaling
	—	—	1916	Merger	(Dai-Nippon Suisan K.K.)	Tokyo City	whaling
	—	—	1916	Merger	(Naigai Suisan K.K.)	Osaka City, Osaka	whaling
	—	—	1916	Merger	(Kii Suisan K.K.)	Kushimoto-Cho, Wakayama Prefecture	whaling
	—	—	1919	Merger	(Nikkan Hogeï Goshi K.K.)	Tokyo City	whaling
4	Ichi-I Gumi (The Ichi-I Group)**	1907	1911	Reorganization	Ichi-I Gumi	Hakodate City, Hokkaido	fishery (Pacific herring, salmon/trout)
5	Ichi-I Gumi**	1911	March 1914	Reorganization	Nichiro Gyogyo Kaisha, Ltd.	Hakodate City, Hokkaido	fishery (Pacific herring, salmon/trout)
6	Nichiro Gyogyo Kaisha, Ltd.**	March 1914	1916	Transfer	—	Hakodate City, Hokkaido	fishery (salmon/trout)
7	Nippon Kisen K.K.**	December 1915	1921	Dissolution	—	Kobe City, Hyogo Prefecture	shipping
8	Yamagami Gumi K.K.	December 1916	June 1917	Renaming	Nippon Suisan K.K.	Osaka City	marine products/chilled foods wholesale
9	Nippon Suisan K.K.	June 1917	November 1926	Merged	Kyodo Gyogyo Kaisha, Ltd.	Osaka City	marine products sales
10	Nippon Trawl K.K.	May 1919	September 1919	Renaming	Kyodo Gyogyo Kaisha, Ltd.	Shimonoseki City, Yamaguchi Prefecture	fishery (trawling)
11	Takatsu Shokai K.K.	August 1919	June 1920	Renaming	Nippon Gyomo Sengu Kaisha, Ltd.	Shimonoseki City, Yamaguchi Prefecture	manufacture and sales of fishing nets, fishing equipment, and ship fittings
12	Hayatomo Fishery Institute	1920	April 1932	Renaming	Hayatomo Fishery Research Center	Shimonoseki City, Yamaguchi Prefecture	survey, research, and technical development
13	Marushin Unsoten K.K.	March 1920	1933	Transfer	—	Osaka City	transport
14	Nippon Gyomo Sengu Kaisha, Ltd.	June 1920	1946	Transfer	—	Shimonoseki City, Yamaguchi Prefecture	manufacture and sales of fishing nets, fishing equipment, and ship fittings
15	Chuo Suisan Hanbaisho K.K.	August 1920	November 1926	Renaming	Nippon Suisan K.K.	Osaka City	marine products sales
16	Nissen Gumi K.K.	March 1921	November 1933	Merged	Nippon Suisan K.K.	Tokyo City	fishery (purse seine)
17	Kyodo Suisan Hanbaisho K.K.	May 1921	February 1928	Renaming	Kyodo Suisan K.K.	Tokyo City	marine products/chilled foods wholesale
18	Nippon Chikuwa Seizosho K.K.	June 1921	December 1923	Renaming	Nippon Gyoryo K.K.	Shimonoseki City, Yamaguchi Prefecture	food products manufacturing/sales
19	Nippon Trawl K.K.	October 1921	January 1931	Reorganization	Kyodo Gyogyo Kaisha, Ltd.	Kobe City, Hyogo Prefecture	fishery (trawling)
20	Asahi Suisan K.K.	June 1922	June 1929	Renaming	Akebono Gyogyo K.K.	Tokyo City	fishery (fixed net)
21	Nissho Suisan K.K.	November 1922	1927	Merged	Hokuyo Suisan K.K.	Shimonoseki City, Yamaguchi Prefecture	fishery (trawling)
22	Nippon Gyoryo K.K.	December 1923	August 1932	Merged	Godo Suisan Kogyo K.K.	Osaka City	food products manufacturing/sales, feed manufacturing

- The following items are listed in “post-action company name” of the “action” column
- In cases of renaming or reorganization, the name following renaming/reorganization is provided.
- In cases of merger, the name of the merged company is provided in parentheses.
- When a company was merged with another, the surviving company name is provided.
- Cases of transfer and dissolution are marked with a “—.”

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
23	Hoyo Gyogyo K.K.	November 1925	July 1934	Renaming	Kyodo Gyogyo Kaisha, Ltd.	Shimonoseki City, Yamaguchi Prefecture	fishery (Danish seine fishery)
24	Hokuyo Suisan K.K.	January 1926	November 1926	Merged	Kyodo Gyogyo Kaisha, Ltd.	Hakodate City, Hokkaido	fishery (mother ship-type crab fishery)
25	Nippon Suisan K.K.	November 1926	June 1940	Renaming	Yamato Suisan K.K.	Tokyo City	marine products sales/export
26	Chuo Reizo K.K.	June 1927	August 1932	Merged	Godo Suisan Kogyo K.K.	Osaka City	cold storage
27	Horai Suisan K.K.	July 1927	1934	Merged	Kyodo Gyogyo Kaisha, Ltd.	Keelung City, Taiwan	fishery (bottom trawling)
28	Nippon Kosen Gyogyo K.K.	November 1927	April 1932	Merger	Nippon Godo Kosen K.K.	Kobe City, Hyogo Prefecture	fishery (mother ship-type crab fishery)
29	Tobata Reizo K.K.	December 1927	May 1932	Renaming	Godo Suisan Kogyo K.K.	Tobata City, Fukuoka Prefecture	cold storage
30	Fuso Gyogyo K.K.	1928	1933	Merged	Hoyo Gyogyo K.K.	Shimonoseki City, Yamaguchi Prefecture	fishery (Danish seine fishery)
31	Kyodo Suisan K.K.	February 1928	August 1935	Renaming	Nippon Suisan K.K.	Tokyo City	marine products/chilled foods wholesale
32	Kagotori Seikan K.K.	July 1928	December 1931	Renaming	Nippon Gyokan K.K.	Shimonoseki City, Yamaguchi Prefecture	container manufacturing, fresh fish transport, canning
33	Showa Kosen Gyogyo K.K.	November 1928	April 1932	Merger	Nippon Godo Kosen K.K.	Tokyo City	fishery (mother ship-type crab fishery)
34	Akebono Gyogyo K.K.	June 1929	November 1933	Merged	Nippon Suisan K.K.	Tobata City, Fukuoka Prefecture	fishery (fixed net)
35	Tobata Seikan K.K.	November 1929	October 1933	Separation	—	Tobata City, Fukuoka Prefecture	canning
36	Horai Gyogyo K.K.	December 1929	August 1936	Merged	Kyodo Gyogyo Kaisha, Ltd.	Keelung City, Taiwan	fishery (bottom trawling)
37	Higashi Kosen K.K.	1930	April 1932	Merged	Nippon Godo Kosen K.K.	Tokyo City	fishery (mother ship-type crab fishery)
38	Tobata Uoichiba K.K.	February 1930	November 1941	Dissolution	—	Tobata City, Fukuoka Prefecture	marine products wholesale
39	Sankyo Suisan Co., Ltd.	June 1931	February 1935	Merged	Nippon Food Industries K.K.	Tokyo City	marine products export
40	Nippon Gyokan K.K.	December 1931	November 1933	Merged	Nippon Suisan K.K.	Tobata City, Fukuoka Prefecture	container manufacturing
41	Godo Gyogyo K.K.	December 1931	1947	Dissolution	—	Otaru City, Hokkaido	fishery (Pacific herring, salmon/trout)
42	Hayatomo Fishery Institute	April 1932	April 1935	Dissolution	—	Tobata City, Fukuoka Prefecture	survey, research, and technical development
43	Nippon Godo Kosen K.K.	April 1932	September 1936	Merged	Kyodo Gyogyo Kaisha, Ltd.	Tokyo City	fishery (mother ship-type crab fishery)
44	Godo Suisan Kogyo K.K.	May 1932	May 1934	Renaming	Nippon Food Industries K.K.	Osaka City	food products manufacturing/sales, feed manufacturing, cold storage
45	Nanbei Suisan K.K.	July 1932	June 1939	Dissolution	—	Tokyo City	fishery
46	Shinko Suisan K.K.	March 1933	September 1938	Merged	Nippon Suisan Kaisha, Ltd.	Tokyo City	fishery (mother ship-type crab fishery)
47	Borneo Suisan K.K.	December 1933	December 1941	Forfeiture	—	Kojimachi Ward, Tokyo City	bonito/tuna canning
48	Nippon Hoge K.K.	May 1934	September 1936	Merged	Kyodo Gyogyo Kaisha, Ltd.	Tokyo City	whaling
49	Nippon Food Industries K.K.	May 1934	March 1937	Merged	Nippon Suisan Kaisha, Ltd.	Tokyo City	food products manufacturing/sales, feed manufacturing, cold storage
50	Nanyo Suisan K.K.	November 1934	December 1941	Forfeiture	—	Shiba Ward, Tokyo City	food products manufacturing, ice making/cold storage
51	Nissan Fishery Institute Co., Ltd.	April 1935	February 1958	Renaming	Nissan Research Institute Co., Ltd.	Odawara City, Kanagawa Prefecture	pharmaceuticals
52	Nichiman Gyogyo K.K.	October 1935	January 1945	Merged	South Manchuria Kaiyo Gyogyo Tosei K.K.	Dalian, China	fishery, marine products sales

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
53	Hokuyo Hoge K.K.	March 1936	March 1943	Merged	Nippon Kaiyo Gyogyo Tosei K.K.	Kojimachi Ward, Tokyo City	whaling
54	Kyoritsu Suisan Kogyo K.K.	February 1937	February 1938	Transfer	—	Tsurumi Ward, Yokohama City, Kanagawa Prefecture	fish leather
55	Kyodo Gyogyo Kaisha, Ltd. (Kaiun)	December 1937	March 1943	Merged	Nippon Kaiyo Gyogyo Tosei K.K.	Tokyo City	shipping
56	Takuyo Suisan K.K.	June 1939	February 1944	Merged	Minami Nippon Gyogyo Tosei K.K.	Keelung City, Taiwan	fishery (bottom trawling)
57	Tobu Suisan K.K.	October 1939	February 1944	Merged	Minami Nippon Gyogyo Tosei K.K.	Hualien Harbor, Taiwan	fishery (tuna)
58	Yamato Suisan K.K.	June 1940	1950	Dissolution	—	Shiba Ward, Tokyo City	canning
59	Hinode Gyogyo K.K.	March 1943	March 1943	Merged	Nippon Kaiyo Gyogyo Tosei K.K.	Shimonoseki City, Yamaguchi Prefecture	fishery
60	Takasago Gyogyo K.K.	March 1943	March 1943	Merged	Nippon Kaiyo Gyogyo Tosei K.K.	Shimonoseki City, Yamaguchi Prefecture	fishery
61	Donoumi Zosen K.K.	July 1944	September 1964	Renaming	Wakamatsu Zosen K.K.	Wakamatsu City, Fukuoka Prefecture	shipbuilding
62	Kanto Suisan K.K.	—	October 1944	Merged	South Manchuria Kaiyo Gyogyo Tosei K.K.	Port Arthur, China	fishery, marine products sales

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No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
1	Tsurumi Reizo K.K.	February 1951	February 1969	Transfer	—	Yokohama City, Kanagawa Prefecture	cold storage
2	Fuji Gyokan K.K.	July 1952	September 1968	Renaming	Fuji Seikan K.K.	Nagasaki City, Nagasaki Prefecture	container manufacturing
3	Hakodate Teion Soko K.K.	April 1953	February 1958	Renaming	Hakodate Teion Reizo K.K.	Hakodate City, Hokkaido	cold storage
4	Tokyo Teion Reizo K.K.	May 1953	April 2008	Merged	Nissui Logistics Corporation	Chuo City, Tokyo	cold storage, food products manufacturing/sales
5	Kyowa Yushi Kogyo K.K.	November 1953	April 1991	Merger	Kyowa Technos Co., Ltd.	Koto City, Tokyo	lipids manufacturing
6	Hokko Gyogyo K.K.	August 1954	1997	Transfer	—	Otaru City, Hokkaido	fishery
7	Hokoku Suisan K.K.	June 1955	August 1984	Renaming	Hohsui Corporation	Chuo City, Tokyo	fishery
8	Nippo Shokuhin K.K.	October 1955	June 1958	Renaming	Nippo Sangyo K.K.	Hakodate City, Hokkaido	fishing net and ship fittings manufacturing/repair
9	Sanwa Kogyo K.K.	December 1956	July 1962	Transfer	—	Machida City, Tokyo	machinery (canning machinery) manufacturing
10	Oita Chuo Uoichiba K.K.	December 1956	October 1977	Renaming	Oita Chusui Shoji K.K.	Oita City, Oita Prefecture	marine products wholesale
11	Nisshin Sangyo K.K.	April 1957	December 2008	Dissolution	—	Chuo City, Tokyo	non-life insurance agency
12	Osaka Nissui Shoji K.K.	September 1957	December 1990	Dissolution	—	Osaka City, Osaka	food products sales
13	Nissui Service K.K.	November 1957	March 2008	Dissolution	—	Hachioji City, Tokyo	food products sales
14	Nissan Research Institute Co., Ltd.	February 1958	January 1962	Renaming	Nissui Pharmaceutical Co., Ltd.	Bunkyo City, Tokyo	pharmaceuticals
15	Hakodate Teion Reizo K.K.	February 1958	October 1995	Merger	Teion Co., Ltd.	Hakodate City, Hokkaido	cold storage, food products manufacturing/sales
16	Nippo Sangyo K.K.	June 1958	June 2000	Dissolution	—	Hakodate City, Hokkaido	fishing net and ship fittings manufacturing/repair
17	Aurora Austral Sociedad Anomina	1959	September 1967	Transfer	—	Buenos Aires, Argentina	fishery
18	Sapporo Hinomaru Reizo K.K.	March 1959	October 1995	Merged	Teion Co., Ltd.	Sapporo City, Hokkaido	cold storage

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
19	Hiroshima Nissui Service K.K.	April 1959	April 1992	Dissolution	–	Hiroshima City, Hiroshima Prefecture	food products sales
20	Taiheiyō Yougyō K.K.	September 1959	November 1965	Renaming	Kurumaebi Yoshoku K.K.	Futtsu City, Chiba Prefecture	aquaculture
21	Tobata Unyu Seikan K.K.	September 1959	August 2000	Merged	Carry Net Co., Ltd.	Kitakyūshū City, Fukuoka Prefecture	port transport, paper container manufacturing/sales
22	Nishisan Shoji K.K.	March 1960	November 1969	Renaming	Nishisho K.K.	Fukuoka City, Fukuoka Prefecture	marine/food products sales
23	Marushin Unyu Co., Ltd.	May 1960	October 2001	Merged	Tobu Reizo Shokuhin Co., Ltd.	Setagaya City, Tokyo	transport
24	Sendai Hinomaru Reizo K. K.	May 1960	October 2001	Merged	Tobu Reizo Shokuhin Co., Ltd.	Sendai City, Miyagi Prefecture	cold storage
25	Nippon Tanpaku Shiryo K.K.	May 1960	February 1965	Transfer	–	Funabashi City, Chiba Prefecture	feed manufacturing
26	Kaiko Shoji K.K.	June 1960	March 1966	Dissolution	–	Kitakyūshū City, Fukuoka Prefecture	marine products sales
27	Sendai Nissui Service K.K.	July 1960	April 1992	Dissolution	–	Sendai City, Miyagi Prefecture	food products sales
28	Hinomaru Unyu K.K.	September 1960	September 1963	Merged	Sendai Nissui Service K.K.	Shiogama City, Miyagi Prefecture	transport
29	Beppu Marukyo Uoichiba K.K.	October 1960	October 1977	Renaming	Oita Chusui Shoji K.K.	Beppu City, Oita Prefecture	marine products wholesale
30	Tamai Shoten K.K.	November 1960	November 1967	Reorganization	Hinomaru Nissui K.K.	Tokyo	food products sales
31	Nippon Chomi Shokuhin Corporation	January 1961	November 1965	Dissolution	–	Chiyoda City, Tokyo	seasoning manufacturing
32	Nippon Rakuno Shokuhin K.K.	January 1961	September 1964	Dissolution	–	Chiyoda City, Tokyo	food products (cheese) manufacturing
33	Nissui Kaiun K.K.	February 1961	July 1976	Renaming	Nissui Senpaku K.K.	Chuo City, Tokyo	shipping
34	Kushiro Mink K.K.	May 1961	March 1966	Dissolution	–	Kushiro City, Hokkaido	livestock
35	Wakayama Hinomaru Shoji K.K.	May 1961	September 1968	Dissolution	–	Wakayama Prefecture	food products sales
36	Nippo Gyogyo K.K.	June 1961	March 1968	Dissolution	–	Nagasaki City, Nagasaki Prefecture	fishery
37	Sapporo Nissui Service K.K.	July 1961	April 1992	Dissolution	–	Sapporo City, Hokkaido	food products sales
38	Kurumaebi Yoshoku K.K.	August 1962	November 1965	Dissolution	–	–	–
39	Tobata Suisan Kobaikai K.K.	October 1962	September 1986	Renaming	Tosco Corporation	Kitakyūshū City, Fukuoka Prefecture	food products retail sales
40	Nagoya Nissui Service K.K.	October 1962	April 1992	Dissolution	–	Anjo City, Aichi Prefecture	food products sales
41	Hokuyo Suisan K.K.	December 1962	October 1983	Merged	Hokoku Suisan K.K.	Chuo City, Tokyo	fishery
42	Beppu Reizo K.K.	September 1963	November 1970	Transfer	–	Beppu City, Oita Prefecture	cold storage
43	Hachinohe Teion Reizo K.K.	July 1964	June 1986	Renaming	Hachitei Co., Ltd.	Hachinohe City, Aomori Prefecture	food products (frozen foods) manufacturing, cold storage
44	Marushin Sharyo Seibi K.K.	September 1964	March 1973	Transfer	–	Tokyo	vehicle maintenance
45	Wakamatsu Zosen K.K.	September 1964	March 1999	Dissolution	–	Kitakyūshū City, Fukuoka Prefecture	shipbuilding
46	Sendai Hinomaru Shokuhin K.K.	September 1964	February 1970	Transfer	Sendai Shokuhin K.K.	Sendai City, Miyagi Prefecture	food products sales
47	Nanpo Gyogyo Kaihatsu K.K.	September 1965	March 1994	Dissolution	–	Chuo City, Tokyo	fishery
48	Kitakyūshū Kaisanbutsu K.K.	February 1966	November 1969	Merged	Nishisho K.K.	Kitakyūshū City, Fukuoka Prefecture	marine products sales
49	Osaka Nissui Service K.K.	August 1966	April 1992	Dissolution	–	Itami City, Hyogo Prefecture	food products sales
50	Mogami Kanzume K.K.	February 1967	March 1991	Renaming	Mogami Foods Co., Ltd.	Tendo City, Yamagata Prefecture	food products (canned goods) manufacturing
51	Hinomaru Nissui K.K.	November 1967	March 1969	Transfer	–	Tokyo	food products sales

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
52	Fuji Seikan K.K.	September 1968	January 2011	Dissolution	–	Nagasaki City, Nagasaki Prefecture	container manufacturing
53	Northern Research Pty., Ltd. (N.R.P.)	October 1968	February 1985	Dissolution	–	Darwin, Australia	fishery (shrimp), cold storage
54	Nishisho K.K.	November 1969	December 1995	Renaming	Nishisho K.K.	Fukuoka City, Fukuoka Prefecture	marine/food products sales
55	New Guinea Marine Products Pty., Ltd. (N.G.M.P.)	December 1971	1992	Transfer	–	Port Moresby, Papua New Guinea	fishery (shrimp)
56	Société de pêche Nissui-Guinée (SONIGUI)	April 1973	October 1976	Dissolution	–	Guinea	fishery
57	Morpac, Inc.	June 1973	March 1984	Dissolution	–	Seattle, Washington, U.S.A.	food products (canned salmon) and marine products (frozen crab) manufacturing/sales
58	SOSECHAL Société Sénégalais de Chalutage S.A.	September 1973	December 1978	Transfer	–	Ziguinchor, Senegal	marine products (shrimp) purchasing/export
59	Atlantic Fisheries Development Co., Ltd. (A.F.D.)	April 1974	January 1980	Dissolution	–	Cork, Ireland	fishery (bottom trawling)
60	Universal Seafoods., Ltd. (UniSea)	June 1974	January 1986	Renaming	UniSea, Inc.	Redmond, Washington, U.S.A.	marine products processing/sales
61	Sarawak Suisan Sdn. Bhd. (S.R.S.)	June 1974	March 1988	Transfer	–	Sibu, Malaysia	marine products processing/sales
62	Nansui K.K.	November 1974	March 1980	Dissolution	–	Sakaiminato City, Tottori Prefecture	fishery (squid, crab pot)
63	Nittake Shokuhin K.K.	January 1975	March 1977	Dissolution	–	Hachioji City, Tokyo	food products (retort pouch) manufacturing
64	Aberdeen Trading Co., Ltd. (ATRACO)	February 1975	September 1992	Dissolution	–	Hong Kong	marine products export/import
65	Diego Nippon S.A. (DIPPON)	July 1975	March 1988	Dissolution	–	Las Palmas, Spain	fishery (octopus, squid), marine products sales
66	Dutch Harbor Seafoods., Ltd. (D.H.S.)	April 1976	December 2003	Dissolution	–	Redmond, Washington, U.S.A.	fishery (mother ship-type crab fishery), seafood (salmon purchasing) processing
67	Nissui Senpaku K.K.	July 1976	January 1988	Dissolution	–	Chuo City, Tokyo	shipping
68	Maldivé Nippon Co., Ltd.	July 1977	May 1982	Transfer	–	Male, Maldives	food products (canned goods) manufacturing/sales
69	Oita Chusui Shoji K.K.	October 1977	November 1999	Dissolution	–	Oita City, Oita Prefecture	real estate management
70	Seibu Reizo Shokuhin Co., Ltd.	April 1978	April 2007	Merged	Nissui Logistics Corporation	Fukuoka City, Fukuoka Prefecture	cold storage
71	Northern Seafood Inc. (N.S.I)	April 1979	–	Transfer	–	Anchorage, Alaska, U.S.A.	marine products purchasing/processing/sales
72	Tobu Reizo Shokuhin Co., Ltd.	August 1979	April 2007	Renaming	Nissui Logistics Corporation	Hachioji City, Tokyo	cold storage
73	Saeki Co., Ltd.	March 1980	September 1995	Dissolution	–	Chiba City, Chiba Prefecture	marine products manufacturing/sales
74	Nippon Suisan (Canada), Ltd.	March 1981	January 1987	Dissolution	–	Vancouver, Canada	marine products export/import
75	Nissui Engineering Co., Ltd.	December 1981	April 1993	Merged	Nissui Marine Service K.K.	Chiyoda City, Tokyo	construction/design, production technology consulting
76	Tokyo Kaneka Shokuhin K.K.	August 1982	January 2002	Dissolution	–	Hachioji City, Tokyo	food products manufacturing
77	Nichinan Sekiyu K.K.	December 1983	April 2007	Merged	Nissui Marine Industries Co., Ltd.	Shibuya City, Tokyo	petroleum products sales
78	Hokkaido Teion Shokuhin K.K.	June 1984	July 2008	Dissolution	–	Hakodate City, Hokkaido	food products manufacturing
79	Nippon Suisan (Halifax), Ltd.	July 1984	December 2000	Dissolution	–	Halifax Nova Scotia, Canada	marine products export
80	Shinwa Reefer K.K.	October 1984	December 1991	Dissolution	–	Chuo City, Tokyo	shipping
81	Lifemin Co., Ltd.	October 1984	April 2010	Dissolution	–	Taito City, Tokyo	food products mail order
82	Kyowa Protein K.K.	April 1985	April 1991	Merger	Kyowa Technos Co., Ltd.	Hachioji City, Tokyo	seasoning manufacturing
83	Kitakyushu Reizo Shokuhin Co., Ltd.	April 1985	December 1994	Merged	Seibu Reizo Shokuhin Co., Ltd.	Kitakyushu City, Fukuoka Prefecture	cold storage

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
84	Kinki Reizo Shokuhin Co., Ltd.	April 1985	September 2000	Merged	Seibu Reizo Shokuhin Co., Ltd.	Itami City, Hyogo Prefecture	cold storage
85	Tokyo Bulk Carriers K.K.	July 1985	November 1992	Transfer of control	–	Chuo City, Tokyo	vessel leasing
86	Northern Deep Sea Fisheries, Inc. (NORTHSFISH)	July 1985	March 1990	Renaming	Northern Marine Services, Inc.	Seattle, Washington, U.S.A.	coordination of offshore purchasing
87	Esukei (S.K.) Suisan K.K.	August 1985	2001	Dissolution	–	Oshika-gun, Miyagi Prefecture	marine products processing/sales, cold storage
88	Great Land Seafoods, Inc. (G.L.S.)	August 1985	January 1989	Merged	UniSea, Inc.	Redmond, Washington, U.S.A.	marine products processing
89	N.S. Marine K.K.	December 1985	January 1999	Renaming	Nissui Ship Management K.K.	Chuo City, Tokyo	shipping
90	Seafood-Now Inc.	February 1986	June 1992	Dissolution	–	Minato City, Tokyo	restaurant management
91	Bangkok Shrimp Cultivation Co., Ltd. (B.S.C.)	April 1986	February 1991	Transfer	–	Bangkok, Thailand	aquaculture (shrimp)
92	Tosco Corporation	September 1986	September 1995	Dissolution	–	Kitakyushu City, Fukuoka Prefecture	food products retail sales
93	Nissui Finance K.K.	September 1986	March 1994	Dissolution	–	Chiyoda City, Tokyo	financing and securities management
94	Tsukiji Kaneka Kitakyushu K.K.	October 1986	April 1992	Renaming	Kitakyushu Kaneka Shokuhin K.K.	Kitakyushu City, Fukuoka Prefecture	food products manufacturing
95	Nissui Shipping Corporation	September 1987	March 2005	Dissolution	–	Shinagawa City, Tokyo	shipping
96	Himeji Kaneka Shokuhin K.K.	October 1987	January 2002	Dissolution	–	Himeji City, Hyogo Prefecture	food products manufacturing
97	Dongil Frozen Foods Co., Ltd.	November 1987	December 2002	Transfer	–	Changwon City, South Korea	food products (frozen foods) manufacturing and sales
98	Unisea Foods, Inc.	December 1987	February 2000	Merged	Fishing Processor, LLC	Redmond, Washington, U.S.A.	cold storage, food products (crab-flavored fish paste) manufacturing/sales
99	A&N Foods Co., Ltd.	February 1988	1992	Transfer	–	Bangkok, Thailand	marine products processing
100	Nikko-Fisheries Co., Ltd.	July 1988	March 1991	Dissolution	–	Nagasaki City, Nagasaki Prefecture	fishery (west-water trawling)
101	Nissui Marine Service K.K.	September 1988	April 1993	Renaming	Nissui Engineering Co., Ltd.	Chiyoda City, Tokyo	vessel operation/management
102	Sendai Ham K.K.	September 1988	December 1999	Dissolution	–	Sendai City, Miyagi Prefecture	food products manufacturing
103	Kansai Cookery Co., Ltd.	September 1988	March 1998	Dissolution	–	Itami City, Hyogo Prefecture	food products manufacturing
104	Xiamen Longpeng Food Co. Ltd.	November 1988	December 2006	Dissolution	–	Xiamen City, Fujian Province, China	marine products processing/sales
105	Wakasawan Yoshoku K.K.	December 1988	May 1993	Dissolution	–	Mikata-gun, Fukui Prefecture	aquaculture
106	Okhotsk Suisan K.K.	February 1989	1993	Dissolution	–	Khabarovsk, Soviet Union	marine products processing/sales
107	Société Caledonienne des pêches Industrielles S.A. (SOCALPI)	May 1989	October 1991	Dissolution	–	Noumea, New Caledonia	fishery
108	Hello Delica Co., Ltd.	June 1989	March 1998	Dissolution	–	Atsugi City, Kanagawa Prefecture	food products manufacturing
109	Esa Ichiban Co., Ltd.	August 1989	April 2008	Merged	Nippo Shokuhin Kogyo Co., Ltd.	Miyaki-gun, Saga Prefecture	feed manufacturing/sales
110	Inversiones Trans pacífico, S.A.	November 1989	October 1993	Renaming	Nippon Suisan America Latina S.A. (N.A.L.)	Santiago, Chile	marine products purchasing/export and sales
111	Nagasaki Nissui K.K.	December 1989	January 1995	Dissolution	–	Nagasaki City, Nagasaki Prefecture	fishery
112	Conagra Nissui Inc.	January 1990	August 1994	Dissolution	–	Chiyoda City, Tokyo	food products sales
113	Northern Marine Services, Inc.	March 1990	October 1993	Renaming	Pacific Food Systems, Inc. (P.F.S)	Seattle, Washington, U.S.A.	
114	Southern Nissui., Ltd.	April 1990	March 1996	Share exchange	–	Wellington, New Zealand	livestock ranching, meat processing
115	Sun Delica, Ltd.	July 1990	March 1998	Dissolution	–	Kumamoto Prefecture	food products manufacturing

No	Company	Time of group association	Action			Location	Business description
		Date	Date	Description	Post-action company name		
116	Sante Foods Co., Ltd.	November 1990	March 1999	Dissolution	—	Itami City, Hyogo Prefecture	food products manufacturing
117	Kyowa Technos Co., Ltd.	April 1991	April 2008	Merged	Nippon Suisan Kaisha, Ltd.	Sammu-gun, Chiba Prefecture	lipids manufacturing
118	C.R. Corporation K.K.	April 1991	April 2007	Merged	Nissui Food System Co., Ltd.	Chuo City, Tokyo	real estate management
119	Keiko Suisan K.K.	January 1992	March 1996	Transfer of control	—	Chuo City, Tokyo	marine products sales
120	Green Giant Frozen Foods Ltd.	March 1992	February 2000	Transfer	—	Tokyo	food products manufacturing/sales
121	Kitakyushu Kaneka Shokuhin K.K.	April 1992	July 2001	Merged	Kitakyushu Nissui Co., Ltd.	Kitakyushu City, Fukuoka Prefecture	food products manufacturing
122	Cherry Fresh Foods Co., Ltd.	April 1992	2006	Dissolution	—	Sendai City, Miyagi Prefecture	food products manufacturing/sales
123	Eniwa Fresh Foods Co., Ltd.	September 1992	March 1999	Dissolution	—	Eniwa City, Hokkaido	food products manufacturing
124	Saeki Co., Ltd.	March 1993	August 2001	Dissolution	—	Narashino City, Chiba Prefecture	marine products processing/sales
125	Hachinohe Food Chemical Co., Ltd.	April 1993	December 2005	Dissolution	—	Hachinohe City, Aomori Prefecture	seasoning manufacturing
126	Anny K.K.	May 1993	December 2003	Dissolution	—	Hachioji City, Tokyo	food products sales
127	Himeji Fresh Foods Co., Ltd.	September 1993	March 1998	Dissolution	—	Himeji City, Hyogo Prefecture	marine products processing/sales
128	Kansai Nissui Foods Co., Ltd.	October 1993	February 2001	Dissolution	—	Himeji City, Hyogo Prefecture	marine products processing/sales
129	Pacific Food Systems, Inc. (P.F.S)	October 1993	March 1996	Dissolution	—	Seattle, Washington, U.S.A.	sales and service of seafood processing equipment, etc.
130	Carry Aichi K.K.	December 1993	August 2000	Renaming	Carry Net Co., Ltd.	Nagoya City, Aichi Prefecture	transport
131	Nissui New Zealand, Ltd.	December 1993	December 2006	Dissolution	—	Wellington, New Zealand	joint business management of vessels
132	Hokkaido Pesca K.K.	January 1995	February 2009	Transfer of control	—	Sapporo City, Hokkaido	marine products sales
133	Teion Co., Ltd.	October 1995	April 2008	Renaming	Hokkaido Nissui Co., Ltd.	Hakodate City, Hokkaido	cold storage
134	Minh Hai Nissui Girimix Co. (MINH HAI NIGICO)	December 1995	June 2006	Renaming	NIGICO Co., Ltd.	Gia Lai, Bac Lieu Province, Vietnam	processed marine products/frozen food products manufacturing
135	Marusui Co., Ltd.	May 1996	July 1999	Dissolution	—	Okayama Prefecture	marine products sales
136	Tokyo Nissui Foods Co., Ltd.	August 1996	March 2000	Dissolution	—	Hachioji City, Tokyo	marine products processing/sales
137	Fukuoka Nissui Foods Co., Ltd.	August 1996	March 2000	Dissolution	—	Fukuoka City, Fukuoka Prefecture	marine products processing/sales
138	Fishking Processor, LLC	August 1996	June 2006	Merged	King & Prince Seafood Corp.	Los Angeles, California, U.S.A.	food products (frozen foods) manufacturing and sales
139	Kobe Kaisanbutsu K.K.	October 1996	2000	Dissolution	—	Kobe City, Hyogo Prefecture	marine products wholesale
140	Alimentos Chacabuco Ltda.	1997	October 2007	Renaming	Desarrollo Oceanico S.A. (DOSA)	Puerto Chacabuco, Chile	food products (fried white fish) manufacturing and sales
141	Hohsui Food Service Corp.	March 1997	July 2009	Dissolution	—	Hakodate City, Hokkaido	restaurant management
142	Kitakanto Food System K.K.	October 1997	July 2009	Dissolution	—	Mito City, Ibaraki Prefecture	fresh foods processing/sales
143	Nissui Ship Management Co., Ltd.	January 1999	February 2003	Dissolution	—	Shinagawa City, Tokyo	shipping
144	Alaska Ocean Seafood., Ltd. Partnership	2002	May 2008	Merged	Glacier Fish Company, LLC (G.F.C.)	Washington State, U.S.A.	marine products (Alaska pollock) manufacturing/sales
145	Petuna Sealord Pty., Ltd.	March 2004	April 2010	Renaming	Australian Longline Pty., Ltd.	Tasmania, Australia	fishery, marine product processing/sales
146	P.T. Nissui Investment and Management Indonesia	October 2004	2006	Renaming	P.T. Nippon Suisan Indonesia	Jakarta, Indonesia	aquaculture
147	Xiamen Longpeng Nissui Cultivation Co. Ltd.	January 2005	—	—	—	Xiamen City, Fujian Province, China	aquaculture (eel)

Present

No	Company	Time of group association	Founding	Location	Business description
		Date	Date		
1	Nissui Pharmaceutical Co., Ltd.	April 1935	April 1935	Taito City, Tokyo	pharmaceuticals manufacturing/sales
2	Nagasaki Shipyard Co., Ltd.	June 1952	June 1952	Nagasaki City, Nagasaki Prefecture	shipbuilding
3	Hokkaido Nissui Co., Ltd.	April 1953	August 1920	Sapporo City, Hokkaido	cold storage, marine products manufacturing/sales, food products sales
4	Hohsui Corporation	June 1955	August 1945	Chuo City, Tokyo	marine products sales, fresh fish retail
5	Nippo Shokuhin Kogyo Co., Ltd.	September 1961	September 1961	Kumamoto City, Kumamoto Prefecture	food products manufacturing, cold storage, fishing equipment sales, bait manufacturing/sales
6	Yamatsu Suisan Co., Ltd.	November 1966	December 1950	Niigata City, Niigata Prefecture	marine and food products sales, marine products wholesale
7	Mogami Foods Co., Ltd.	February 1967	February 1967	Nishimurayama-gun, Yamagata Prefecture	food products manufacturing/sales
8	P.T. West Irian Fishing Industries (W.I.F.)	May 1970	May 1970	Jakarta, Indonesia	fishery (shrimp trawling)
9	P.T. Irian Marine Product Development (I.M.P.)	July 1970	July 1970	Jakarta, Indonesia	fishery (shrimp trawling)
10	Nippon Suisan (U.S.A.), Inc. (Nissui U.S.A.)	March 1974	March 1974	Redmond, Washington, U.S.A.	marine products purchasing/export and sales
11	UniSea, Inc.	June 1974	May 1974	Redmond, Washington, U.S.A.	marine products purchasing/processing and sales
12	Tokyo Suisan Unyu Corporation	March 1976	March 1976	Ota City, Tokyo	cold store acceptance/delivery agency
13	Oita Chuo Suisan Co., Ltd.	November 1976	November 1976	Oita City, Oita Prefecture	marine products wholesale
14	Oita Gyokan Service K.K.	April 1977	April 1977	Oita City, Oita Prefecture	fish container sales
15	Empresa de Desarrollo Pesquero de Chile S.A. (EMDEPES)	October 1978	October 1978	Santiago, Chile	fishery (trawling)
16	Niigata Shokuhin Service K.K.	July 1979	July 1979	Niigata City, Niigata Prefecture	food processing
17	Nissui Logistics Corporation	August 1979	August 1979	Minato City, Tokyo	cold storage, cargo transport and handling
18	Nippon Marine Enterprises, Ltd.	January 1980	January 1980	Yokosuka City, Kanagawa Prefecture	operation and management of mother ships supporting deep-sea research submersibles and undersea experimental work vessels
19	Nishisho K.K.	February 1980	February 1980	Fukuoka City, Fukuoka Prefecture	freezing and wholesale of dried and salted products, frozen foods, process foods, and fish paste products
20	Nippon Suisan (Singapore) Pte, Ltd.	April 1981	March 1981	Singapore	marine products purchasing/export and sales
21	Explotacion Pesquera de la Patagonia S.A. (PESPASA)	April 1981	April 1981	Buenos Aires, Argentina	fishery (trawling), seafood processing
22	Chilly Co., Ltd.	November 1983	November 1983	Hachioji City, Tokyo	food products manufacturing/sales
23	Yamatsu Frozen Foods Co., Ltd.	October 1984	October 1984	Niigata City, Niigata Prefecture	food processing, cold storage
24	Yamatsu Service, Ltd.	October 1984	October 1984	Niigata City, Niigata Prefecture	market cargo-handling
25	Hachitei Co., Ltd.	June 1986	March 1960	Hachinohe City, Aomori Prefecture	real estate leasing
26	Sankyo Suisan Co., Ltd.	August 1987	July 1947	Shizuoka City, Shizuoka Prefecture	wholesale of processed marine/agricultural, livestock, and fishery products
27	Empresa Pesquera de la Patagonia Y Antartida S.A. (PESANTAR)	November 1988	October 1988	Buenos Aires, Argentina	fishery (trawling)
28	Nippon Suisan (Europe), B.V. (Nissui Europe)	December 1988	December 1988	Amsterdam, Netherlands	European holdings company
29	Salmones Antártica S.A. (S.A.)	December 1988	February 1982	Santiago, Chile	aquaculture
30	Nippon Suisan America Latina S.A. (N.A.L.)	February 1990	February 1990	Santiago, Chile	marine products purchasing/export and sales
31	Don Co., Ltd.	May 1991	May 1991	Suita City, Osaka	restaurant management
32	Kitakyushu Nissui Co., Ltd.	September 1991	September 1991	Kitakyushu City, Fukuoka Prefecture	food products manufacturing/sales
33	Oita Rinkai Kenkyu Co., Ltd.	November 1992	November 1992	Saeki City, Oita Prefecture	research support, seafood aquaculture/sales, etc.
34	Yokohama Trading Corp., Ltd.	December 1992	July 1968	Yokohama City, Kanagawa Prefecture	marine products trading and import/export

No	Company	Time of group association	Founding	Location	Business description
		Date	Date		
35	Nissui Engineering Co., Ltd.	April 1993	April 1993	Chiyoda City, Tokyo	construction design, production technology consulting
36	Carry Net Co., Ltd.	December 1993	November 1971	Nagoya City, Aichi Prefecture	transport
37	Hokuriku Fresh Foods Co., Ltd.	February 1994	December 1993	Toyama City, Toyama Prefecture	food products manufacturing/sales
38	Nissui Food System Co., Ltd.	March 1994	March 1994	Chuo City, Tokyo	restaurant management
39	Pesquera Sur Austral S.A.	August 1994	November 1987	Puerto Chacabuco, Chile	fishery
40	Anzco Foods, Ltd. (ANZCO)	May 1995	September 1984	Wellington, New Zealand	frozen food products manufacturing/sales
41	Gunma Fresh Foods Co., Ltd.	November 1995	November 1995	Isesaki City, Gunma Prefecture	food products manufacturing/sales
42	Pesquera Friosur S.A.	1996	August 1984	Puerto Chacabuco, Chile	fishery
43	Nissui Marine Industries Co., Ltd.	January 1996	January 1996	Kitakyushu City, Fukuoka Prefecture	ocean civil engineering contracting, vessel operation/management
44	Nippon Cookery Co., Ltd.	January 1998	January 1998	Shinagawa City, Tokyo	food products manufacturing/sales
45	Pesquera Mas Afuera S.A.	September 1999	September 1999	Puerto Chacabuco, Chile	fishery
46	Xiamen Longpeng Food Co. Ltd.	2001	2001	Xiamen City, Fujian Province, China	food products manufacturing/sales
47	Sealord Group, Ltd.	January 2001	1973	Nelson, New Zealand	fishery, marine product processing/sales
48	Gorton's, Inc.	September 2001	September 2001	Gloucester, Massachusetts, U.S.A.	frozen food products manufacturing/sales
49	Bluewater Seafoods, Inc.	September 2001	September 2001	Quebec, Canada	frozen food products manufacturing/sales
50	Nissui G Net Co., Ltd.	January 2003	January 2003	Chiyoda City, Tokyo	fund management for Group companies
51	J.P. Klausen & Co. A/S	September 2003	1990	Svendborg, Denmark	marine product purchasing/sales
52	Ryukyu Delica Service K.K.	October 2003	March 1998	Urasoe City, Okinawa Prefecture	manufacturing and sales of boxed meals, rice balls, prepared dishes, noodles, etc.
53	Star Partners, LLC	December 2003	December 2003	U.S.A.	fishery
54	Kurose Suisan Co., Ltd.	January 2004	January 2004	Kushima City, Miyazaki Prefecture	aquaculture
55	Nippon Suisan America Latina Perú, S.A. (NAL PERU)	February 2004	February 2004	Lima, Peru	marine products purchasing/export and sales
56	Australian Longline Pty Ltd.	March 2004	December 1997	Tasmania, Australia	fishery
57	Shandong Sanfod Nissui, Ltd.	June 2004	June 2004	Qingdao City, Shandong Province, China	processed marine and food products manufacturing
58	P.T. Nippon Suisan Indonesia (Nissui Indonesia)	October 2004	October 2004	Jakarta, Indonesia	aquaculture
59	Hachikan Co., Ltd.	November 2004	November 2004	Hachinohe City, Aomori Prefecture	food products manufacturing/sales
60	Nissui (Thailand) Co., Ltd. (Nissui Thailand)	February 2005	February 2005	Hat Yai, Thailand	processed marine products manufacturing
61	Kaiko Senpaku K.K.	March 2005	March 2005	Minato City, Tokyo	vessel operations, maintenance and management, fishery resources research, etc.
62	King & Prince Seafood Corp.	July 2005	1924	Brunswick, Georgia, U.S.A.	frozen food products manufacturing/sales
63	Bering Sea Partners, Inc.	July 2005	July 2005	Redmond, Washington, U.S.A.	seafood processing
64	ATLASOVO	2006	2006	Sakhalin, Russia	marine products purchasing/import and sales
65	Kurahashi Co., Ltd.	March 2006	March 2006	Fukuyama City, Hiroshima Prefecture	marine products/chilled foods wholesale
66	Kyowa Sangyo Co., Ltd.	March 2006	December 1972	Sakaiminato City, Tottori Prefecture	fresh/frozen fish sales
67	Kyowa Suisan Co., Ltd.	March 2006	June 1947	Sakaiminato City, Tottori Prefecture	fishery
68	Tokai Gyogyo K.K.	March 2006	August 1967	Sakaiminato City, Tottori Prefecture	fishery
69	FW. Bryce, Inc.	April 2006	1947	Gloucester, Massachusetts, U.S.A.	marine products purchasing/import and sales

No	Company	Time of group association	Founding	Location	Business description
		Date	Date		
70	Nakatani Suisan Co., Ltd.	May 2006	October 1991	Oshima-gun, Kagoshima Prefecture	aquaculture
71	Nordic Seafood A/S	May 2006	June 1987	Hirtshals, Denmark	marine products purchasing/import and sales
72	NIGICO Co., Ltd.	June 2006	December 1995	Gia Lai City, Bac Lieu Province, Vietnam	processed marine products/frozen food products manufacturing
73	K-Teion Foods Co., Ltd.	October 2006	October 2006	Itami City, Hyogo Prefecture	comprehensive food products wholesale and distribution
74	Nordsee Comercial Importadora Y Exportadora, Ltda.	June 2007	October 1994	São Paulo, Brazil	marine products purchasing/import and sales
75	Fierce Allegiance, LLC	July 2007	April 2003	Washington State, U.S.A.	fishery
76	Europacifico Alimentos Del Mar, S.L.	October 2007	October 2004	Bilbao, Spain	marine products purchasing/import and sales
77	Cité Marine S.A.S.	October 2007	February 1990	Kervignac, France	food products manufacturing/sales
78	Desarrollo Oceanico S.A. (DOSA)	October 2007	October 2007	Santiago, Chile	management of Chilean fishery companies, marine products sales
79	Marusa Sasaya Shoten Co., Ltd.	October 2007	June 1983	Kushiro City, Hokkaido	marine products manufacturing/sales
80	Kunihiro Inc.	October 2007	July 1970	Onomichi City, Hiroshima Prefecture	food products manufacturing/sales
81	Kaneko Shokuhin Co., Ltd.	October 2007	March 1966	Mitoyo City, Kagawa Prefecture	food products manufacturing/sales
82	Tokyo Suisan Terminal, Ltd.	November 2007	September 1972	Ota City, Tokyo	cold storage leasing
83	Tai Mei Food Industrial Corp.	December 2007	1971	Kaohsiung City, Taiwan	food products manufacturing/sales
84	Suisan Ryutsu Co., Ltd.	March 2008	March 2008	Chuo City, Tokyo	seafood retail support
85	Qingdao Nissui Food Research and Development Co., Ltd.	June 2008	June 2008	Qingdao, Shandong Province, China	quality control and development of overseas production bases
86	Glacier Fish Company, LLC (G.F.C.)	June 2008	March 1998	Seattle, Washington, U.S.A.	fishery (trawling), longline fishery, seafood processing
87	Hiroshimasuisan Co., Ltd.	September 2008	April 1984	Hiroshima City, Hiroshima Prefecture	marine products/chilled foods wholesale
88	Nigico Aquaculture Co., Ltd.	October 2008	October 2008	Hoabinh, Bac Lieu Province, Vietnam	shrimp aquaculture
89	Tomiso Co., Ltd.	November 2008	June 1989	Nagoya City, Aichi Prefecture	food products manufacturing/sales
90	Hokkaido Fine Chemical Co., Ltd.	December 2008	December 2008	Hakodate City, Hokkaido	lipids (EPA, DHA, etc.) manufacturing/sales
91	Kiyono Suisan K.K.	February 2009	March 1983	Niigata City, Niigata Prefecture	marine products sales
92	Alaskan Beauty, LLC	February 2009	August 2001	Washington State, U.S.A.	seafood processing
93	Daisui Co., Ltd.	March 2009	April 1939	Fukushima Ward, Osaka City, Osaka	marine products/chilled foods wholesale
94	TN Fine Chemicals Co., Ltd.	March 2009	March 2009	Bangkok, Thailand	functional materials manufacturing/sales
95	Carry System K.K.	September 2009	November 1993	Bando City, Ibaraki Prefecture	transport
96	Nishisho Sangyo K.K.	October 2009	October 2009	Kitakyushu City, Fukuoka Prefecture	wholesale
97	Hakata Marukita Suisan Co., Ltd.	December 2009	December 2009	Fukuoka City, Fukuoka Prefecture	marine products manufacturing/sales
98	Tokyo Kitaichi Co., Ltd.	February 2010	July 1982	Yoshikawa City, Saitama Prefecture	marine products manufacturing/sales
99	Maruuo Suisan Co., Ltd.	March 2010	July 1957	Himeji City, Hyogo Prefecture	marine products/chilled foods wholesale
100	Netuno International S.A.	May 2010	May 2010	Recife, Brazil	aquaculture, marine product processing/sales
101	Delmar Co., Ltd.	July 2010	September 2010	Chiba City, Chiba Prefecture	food products manufacturing/sales
102	Thai Delmar Co., Ltd.	July 2010	November 1989	Samutprakarn, Thailand	food products manufacturing/sales

List of Group Vessels

- 1) (*) in the "Name" column indicates vessels listed more than once due to a change of name, change of use, investment in kind, etc.
- 2) "Operator" indicates the company or individual operating the vessel for a specific purpose.
- 3) * in the "Operator" column indicates a company connected with Juro Oka.
- 4) ** in the "Operator" column indicates a company connected with Ichiro Tamura.
- 5) "Completed" means that construction was complete and the vessel was delivered from the shipyard to the owner.
- 6) "Chartered" means that the vessel was chartered at times when operating without own ships (business format generally used in whaling and mother ship-type crab fisheries in the Meiji, Taisho and early Showa eras).
- 7) "-" indicates data unknown as of Dec. 31, 2010.

Up to 1945

Whalers

Name	Tonnage	Completed/Launched/Bought/Chartered, etc.	Operator	Remarks
Dai-Ichi Choshu Maru	120.02	1899	Completed	Nippon Enyo Gyogyo* Japan's first iron-hulled whaler Dec. 1901 Grounded and sank
Oruga Maru	125.56	1901	Chartered	Nippon Enyo Gyogyo* From Rex Co. (Norway) (launched 1898) Renamed Nissui Maru No.2
Rekkusu Maru	119.67	1902	Chartered	Nippon Enyo Gyogyo* From Rex Co. (Norway) (launched 1902) Renamed Nissui Maru No.1
Regina Maru	112.86	1903	Chartered	Nippon Enyo Gyogyo* From Rex Co. (Norway) (launched 1903) 1905 Grounded and sank
Hogei Maru No.1	103.38	1903	Launched	Nippon Enyo Gyogyo* Norway
Nikorai Maru	132	1905	Leased	Toyo Gyogyo* from the Ministry of Agriculture and Commerce
Togo Maru No.1	112.06	1906	Completed	Nagasaki Hogei Goshi* Built in Norway
Inatsuma Maru	116.04	1906	Completed	Toyo Gyogyo* Arker's Shipyard (Norway) 1933 Shipwrecked
Mein Maru	120	1906	Chartered	Nagasaki Hogei Goshi* From Norway (launched 1906)
Ikazuchi Maru	113.82	1906	Completed	Toyo Gyogyo* Arker's Shipyard (Norway) 1908 Grounded and sank
Jingu Maru	106	1906	Chartered	Toyo Gyogyo* From Rex Co. (Norway) (launched 1906) 1929 Shipwrecked
Airando Maru	105	1907	Bought	Naigai Suisan* From Norway (launched 1903)
Kiworugi Maru	126	1907	Bought	Naigai Suisan* from a Russian whaling company
Sazanami Maru	107	1907	Bought	Kii Suisan* From Norway (launched 1906, formerly Lawless Za)
Hogei Maru No.2	134.03	1907	Completed	Dai-Nippon Hogei* First whaler by Osaka Iron Works
Hogei Maru No.3	109.1	1907	Chartered	Dai-Nippon Hogei* From Norway (launched 1902)
Hogei Maru No.5	103.1	1907	Chartered	Dai-Nippon Hogei* From Norway (launched 1898)
Togo Maru No.2	115.06	1907	Bought	Nagasaki Hogei Goshi* Kneeland Shipyard (Norway, formerly Hamber)
Togo Maru No.3	152.72	1907	Completed	Nagasaki Hogei Goshi* Osaka Harada Iron Works
Avaron Maru	110.74	1907	Bought	Teikoku Suisan* from Arker's Shipyard (Norway) (launched 1904) Dec. 1923 Shipwrecked
Rokko Maru	135.58	1907	Completed	Teikoku Suisan* Osaka Iron Works
Amatomi Maru	123.58	1907	Completed	Tokai Gyogyo* Built in Norway
Akebono Maru	113.82	1907	Bought	Toyo Gyogyo* From Norway (launched 1907, formerly Queen Alexandra)
Suwa Maru	114.95	1907	Launched	Teikoku Suisan* Kneeland Shipyard (Norway)
Asahi Maru	188	1907	Bought	Teikoku Suisan* formerly Asahi Maru (sailing ship) converted to a whaler
Togo Maru No.5	81.4	1908	Bought	Nagasaki Hogei Goshi* From Norway
Taihei Maru No.1	111.94	1908	Bought	The whaling division of Iwatani Shokai* from Taiheiyo Gyogyo (completed 1904)
Taihei Maru No.2	122.61	1908	Bought	The whaling division of Iwatani Shokai* from Taiheiyo Gyogyo (launched 1902, Norway)
Hakuun Maru No.1	107.49	1909	Bought	Dai-Nippon Hogei* From Norway (launched 1906, formerly Fourie)
Hakuun Maru No.2	109	1909	Bought	Dai-Nippon Hogei* From Norway (launched 1906, formerly Worcester)
Jingu Maru No.2	124	1910	Completed	Nagato Hogei* Osaka Iron Works 1929 Grounded and sank
Toyo Maru No.3	205	1924	Launched	Toyo Hogei* Norway 1925 Brought to Shimonoseki 1928 Shipwrecked
Chidori Maru	103	1928	Chartered	Toyo Hogei* From Norway (launched 1903)
Showa Maru	188	1928	Completed	Toyo Hogei* Norway 1944 Sank while requisitioned
Ganjitsu Maru No.1	213	1928	Bought	Toyo Hogei* Osaka Iron Works 1943 Sank while requisitioned
Showa Maru No.2	194.23	1930	Completed	Toyo Hogei* Norway 1945 Sank while requisitioned
Leslie	224	1934	Bought	Nippon Hogei Bought together with the Antarctic Renamed Showa Maru No.3

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Galicia	218	1934	Bought	Nippon Hogeï	Bought together with the Antarctic Renamed Showa Maru No.5
William Wilson	221	1934	Bought	Nippon Hogeï	Bought together with the Antarctic Renamed Showa Maru No.6
Shimura	192	1934	Bought	Nippon Hogeï	Bought together with the Antarctic Renamed Shikotan Maru
Shitoka	192	1934	Bought	Nippon Hogeï	Bought together with the Antarctic Renamed Etorofu Maru
(* Showa Maru No.3	224	1935	Renamed	Nippon Hogeï	formerly Leslie 1944 Sank while requisitioned
(* Showa Maru No.5	218	1935	Renamed	Nippon Hogeï	formerly Galicia 1944 Sank while requisitioned
(* Showa Maru No.6	221	1935	Renamed	Nippon Hogeï	formerly William Wilson 1943 Sank while requisitioned
(* Etorofu Maru	192	1935	Renamed	Nippon Hogeï	formerly Shitoka
(* Shikotan Maru	192	1935	Renamed	Nippon Hogeï	formerly Shimura
Showa Maru No.7	264.3	1936	Launched	Nippon Hogeï	Osaka Iron Works 1945 Sank while requisitioned
Showa Maru No.8	264.3	1936	Launched	Nippon Hogeï	Osaka Iron Works 1944 Sank while requisitioned
Showa Maru No.10	264.3	1936	Launched	Nippon Hogeï	Osaka Iron Works Osaka
Takunan Maru No.1	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Takunan Maru No.2	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works, Osaka 1961 Sold
Takunan Maru No.3	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works, Osaka
Takunan Maru No.5	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works
Takunan Maru No.6	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works, Osaka 1945 Sank while requisitioned
Takunan Maru No.7	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works
Takunan Maru No.8	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works, Innoshima
Takunan Maru No.10	343.46	1937	Launched	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Shonan Maru No.1	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Shonan Maru No.2	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works
Shonan Maru No.3	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Shonan Maru No.5	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Shonan Maru No.6	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Shonan Maru No.7	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Shonan Maru No.8	355.79	1938	Launched	Nippon Suisan	Osaka Iron Works
Shonan Maru No.10	350.5	1938	Launched	Nippon Suisan	Osaka Iron Works 1942 Sank while requisitioned
Shonan Maru No.11	355.79	1938	Launched	Nippon Suisan	Osaka Iron Works
Shonan Maru No.12	355.15	1939	Completed	Nippon Suisan	Osaka Iron Works 1943 Sank while requisitioned
Shonan Maru No.15	355.15	1939	Completed	Nippon Suisan	Osaka Iron Works 1944 Sank while requisitioned
Shonan Maru No.16	355.15	1940	Completed	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Shonan Maru No.17	355.79	1940	Completed	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Konan Maru No.1	455.85	1941	Completed	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned

Trawlers

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Dai-Ichi Maru	199	1908	Completed	Ichiro Tamura/Juro Oka**	Osaka Iron Works (Japan's first steel-hulled trawler)
Minato Maru	188	1911	Completed	Tamura Steamship Fishery Company	Smiths Shipyard (UK) "Tamura Steamship Fishery Company" started operations with this vessel
Toyo Maru No.1	180.3	1911	Bought	Toyo Hogeï*	From UK (launched 1896) March 1928 Grounded and sank
Toyo Maru No.2	193.76	1911	Bought	Toyo Hogeï*	From UK 1913 Shipwrecked and sank
Minato Maru No.2	224.6	1912	Completed	Tamura Steamship Fishery Company	Mitsubishi Goshi Kobe 1944 Hit and sank while operating
Meiji Maru	214.9	1915	Bought	Tamura Steamship Fishery Company	From Mitsubishi Goshi Kobe (launched 1912) 1944 Hit and sank while operating
Chokai Maru	222	1915	Bought	Tamura Steamship Fishery Company	1916 Sold
Kaiyo Maru	225	1915	Bought	Tamura Steamship Fishery Company	From Kawasaki Shipyard (launched 1911) Sold to former Nippon Suisan as a refrigerating transport ship

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
Nishimune Maru No.3	251	1915	Bought	Tamura Steamship Fishery Company Renamed Minato Maru No.3
Daitoku Maru	251	1915	Bought	Tamura Steamship Fishery Company 1916 Sold
(*) Minato Maru No.3	251	1915	Renamed	Tamura Steamship Fishery Company From Nishimune Maru No.3 1916 Sold
Ibuki Maru	225.79	1919	Launched	Kyodo Gyogyo Mitsubishi Zosen Kobe
Rokko Maru	225.79	1919	Completed	Kyodo Gyogyo Mitsubishi Zosen Kobe 1944 Wrecked while requisitioned
Hayama Maru	219.59	1919	Launched	Kyodo Gyogyo Osaka Iron Works Innoshima
Nitaka Maru	221	1919	Launched	Kyodo Gyogyo Osaka Iron Works
Hoei Maru	219.47	1919	Launched	Kyodo Gyogyo Osaka Iron Works 1944 Sank while requisitioned
Benten Maru	221.38	1919	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Mined and sank
Tokiwa Maru	221.82	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Hit and sank
Kasuga Maru	219.46	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Sank while requisitioned
Chihaya Maru	221.97	1920	Launched	Kyodo Gyogyo Osaka Iron Works Innoshima
Nunohiki Maru	219.9	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Confiscated to China
Rikuzen Maru	221.82	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Sank while requisitioned
Rumoi Maru	220.49	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Sank while requisitioned
Otowa Maru	220.49	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Sank while requisitioned
Wakakusa Maru	220.15	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1943 Sank while requisitioned
Yoshino Maru	220.42	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1944 Sank while requisitioned
Takao Maru	220	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1943 Sank while requisitioned
Reisui Maru	219.15	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1944 Sank while requisitioned
Sonobe Maru	220.25	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Sank while requisitioned
Hagoromo Maru	234.02	1920	Launched	Kyodo Gyogyo Ishikawajima Shipyard 1953 Seized by South Korea
Chikushi Maru	220.32	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1943 Sank while requisitioned
Kamo Maru	234.13	1920	Launched	Kyodo Gyogyo Ishikawajima Shipyard 1944 Sank while requisitioned
Ujina Maru	227.02	1920	Launched	Kyodo Gyogyo Uchida Shipyard 1921 Fitted with Japan's first wireless telegraph equipment 1945 Sank while requisitioned
Nemuro Maru	220	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1932 Sank after collision
Musashi Maru	227.02	1920	Launched	Kyodo Gyogyo Uchida Shipyard 1921 Fitted with Japan's first wireless telegraph equipment 1944 Sank while requisitioned
Ranzan Maru	219.11	1920	Launched	Kyodo Gyogyo Osaka Iron Works 1945 Confiscated to China
Kiku Maru	233.62	1920	Launched	Kyodo Gyogyo Ishikawajima Shipyard 1945 Sank while requisitioned
Kaiko Maru	233.62	1921	Launched	Kyodo Gyogyo Ishikawajima Shipyard 1945 Sank while requisitioned
Takasago Maru	275.46	1921	Launched	Nippon Trawl Kobe Steel, Toba 1944 Sank while requisitioned
Ataka Maru	275.46	1921	Launched	Kyodo Gyogyo Kobe Steel, Toba 1944 Sank while requisitioned
Kurama Maru	233.62	1921	Launched	Nippon Trawl Ishikawajima Shipyard 1944 Mined and sank while requisitioned
Yahata Maru	267.14	1922	Bought/ Renamed	Nippon Trawl Kobe Steel, Toba (launched 1922, formerly Meiji Maru No.8)
Tatsuta Maru	267	1922	Bought/ Renamed	Nippon Trawl Kobe Steel, Toba (launched 1922, formerly Meiji Maru No.11)
Keiun Maru	215	1922	Launched	Nissho Suisan Osaka Iron Works 1927 Sank
Horai Maru	234.65	1922	Launched	Nippon Trawl Ishikawajima Shipyard
Naruo Maru	216.24	1922	Launched	Kyodo Gyogyo Osaka Iron Works 1943 Sank while requisitioned
Fuyo Maru	216.23	1922	Launched	Nissho Suisan Osaka Iron Works 1945 Confiscated to China
Kongo Maru	216.22	1922	Launched	Nissho Suisan Osaka Iron Works 1945 Sank while requisitioned
Noshiro Maru	216.55	1923	Launched	Kyodo Gyogyo Osaka Iron Works 1944 Sank while requisitioned
Eifu Maru	216.33	1923	Launched	Nissho Suisan Osaka Iron Works 1944 Sank while requisitioned
Tamura Maru	236.63	1927	Transferred	Kyodo Gyogyo Ishikawajima Shipyard (launched 1920) 1954 Seized by South Korea
Soga Maru	247.47	1927	Transferred	Kyodo Gyogyo Teikoku Kisen, Toba (launched 1920)
Kushiro Maru	311	1927	Completed	Kyodo Gyogyo Mitsubishi Zosen Nagasaki Fitted with Japan's first diesel engine 1933 Hull extended (412 tons) 1937 Sold to CACIP (Argentina)
(*) Karumo Maru	231.64	1927	Converted	Kyodo Gyogyo From a high-speed carrier to a trawler

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Keinan Maru	316.8	1928	Launched	Nippon Trawl	Kobe Steel, Harima 1945 Sank while requisitioned
Gyokuen Maru No.1	313.51	1928	Bought	Kyodo Gyogyo	From Nagasaki Kaiun 1945 Damaged while requisitioned 1952 Renamed Awaji Maru
Gyokuen Maru No.2	316.55	1928	Bought	Kyodo Gyogyo	From Nagasaki Kaiun 1945 Wrecked while requisitioned 1952 Renamed Naruto Maru
Gyokuen Maru No.3	316.55	1928	Bought	Kyodo Gyogyo	From Nagasaki Kaiun (launched 1920) 1944 Sank while requisitioned
Torishima Maru	268.82	1928	Bought	Kyodo Gyogyo	From Nagasaki Kaiun (launched 1922) 1944 Sank while requisitioned
Hakata Maru No.1	272.88	1928	Jointly operated	Kyodo Gyogyo	Vessel belonging to Hakata Trawl (launched 1920)
Hakata Maru No.2	272.92	1928	Jointly operated	Kyodo Gyogyo	Vessel belonging to Hakata Trawl (launched 1920)
Hakata Maru No.3	265.55	1928	Jointly operated	Kyodo Gyogyo	Vessel belonging to Hakata Trawl (launched 1920)
Hakata Maru No.6	262.28	1928	Jointly operated	Kyodo Gyogyo	Vessel belonging to Hakata Trawl (launched 1922)
Hakata Maru No.7	257.48	1928	Jointly operated	Kyodo Gyogyo	Vessel belonging to Hakata Trawl (launched 1923) 1951 Seized by China
Yuki Maru	388.95	1929	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1933 Hull extended (412 tons) 1937 Sank
Myogi Maru	325.84	1929	Completed	Kyodo Gyogyo	1932 Sank in Bohai Sea
Yatsushiro Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima Fitted with on-board rapid freezing equipment 1945 Sank while requisitioned
Kokusai Maru No.100	281.17	1930	Launched	Hinode Gyogyo	
Mamiya Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1944 Hit and sank
Teshio Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Azuchi Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1943 Sank while requisitioned
Kitami Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1942 Sank while requisitioned
Sapporo Maru	397.95	1930	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1944 Sank while requisitioned
Misago Maru No.1	265	1932	Bought	Takasago Gyogyo	Teikoku Kisen, Harima From Karafuto Gyogyo (launched 1920) 1945 Sank while requisitioned
Misago Maru No.8	281	1932	Bought	Takasago Gyogyo	From Karafuto Gyogyo (launched 1922) 1944 Sank while requisitioned
Misago Maru No.11	318	1932	Bought	Takasago Gyogyo	From Karafuto Gyogyo 1943 Sank while requisitioned
Minou Maru	472.77	1933	Completed	Kyodo Gyogyo	Osaka Iron Works 1944 Sank while requisitioned
Shinkyo Maru	472.75	1933	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1937 Sank
Himeji Maru	472.77	1933	Completed	Kyodo Gyogyo	Osaka Iron Works 1936 Sold to Nanbei Suisan
Sendai Maru	472.77	1933	Completed	Kyodo Gyogyo	Osaka Iron Works 1942 Sank while requisitioned
Momoyama Maru	422.53	1933	Completed	Kyodo Gyogyo	Osaka Iron Works 1933 Sank
Hakurei Maru	407.36	1933	Launched	Kyodo Gyogyo	Mitsubishi Zosen Kobe 1945 Sank while requisitioned
Toko Maru	407.34	1933	Launched	Shinko Suisan	Mitsubishi Zosen Kobe 1943 Sank while requisitioned
Hokkai Maru	407.51	1933	Launched	Shinko Suisan	Mitsubishi Zosen Kobe 1944 Sank while requisitioned
(*) Hakata Maru No.1	272.88	1934	Bought	Hoyo Gyogyo	From Hakata Trawl
(*) Hakata Maru No.2	272.92	1934	Bought	Hoyo Gyogyo	From Hakata Trawl
(*) Hakata Maru No.3	265.55	1934	Bought	Hoyo Gyogyo	From Hakata Trawl
(*) Hakata Maru No.6	262.28	1934	Bought	Hoyo Gyogyo	From Hakata Trawl 1944 Sank while requisitioned
(*) Hakata Maru No.7	257.48	1934	Bought	Hoyo Gyogyo	From Hakata Trawl 1944 Sank while requisitioned 1951 Seized by China
Hinode Maru No.11	281.78	1934	Bought	Hinode Gyogyo	From Dai-Ichi Suisan (formerly Dai-Ichi Maru)
Hinode Maru No.12	220.88	1934	Bought	Hinode Gyogyo	From Dai-Ichi Suisan (formerly Chofuku Maru)
Hinode Maru No.15	220.88	1934	Bought	Hinode Gyogyo	From Dai-Ichi Suisan (formerly Daifuku Maru) 1944 Sank while requisitioned
Hinode Maru No.16	234.67	1934	Bought	Hinode Gyogyo	From Dai-Ichi Suisan (formerly Kaifuku Maru) 1952 Renamed Kamo Maru
Minato Maru	664.21	1934	Launched	Kyodo Gyogyo	Osaka Iron Works 1943 Sank while requisitioned
Hinode Maru No.17	235.58	1935	Bought	Hinode Gyogyo	From Hoyo Trawl Goshi (formerly Inaba Maru) 1945 Sank while requisitioned

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
Hinode Maru No.18	235.31	1935 Bought	Hinode Gyogyo	From Hoyo Trawl Goshi (formerly Izumo Maru) 1945 Sank while requisitioned
Himeshima Maru	274.65	1938 Bought	Nippon Suisan	From Kihira Goshi (launched 1927) 1946 Disappeared after leaving Tobata Port
Suruga Maru	991.75	1938 Launched	Nippon Suisan	Mitsubishi Heavy Inds. Hikoshima 1939 Went to Baja California as a refrigerating and freezing ship 1943 Sank while requisitioned
Oi Maru	498.41	1938 Completed	Nippon Suisan	Osaka Iron Works 1942 Sank while requisitioned
Kitakami Maru	498	1938 Completed	Nippon Suisan	Osaka Iron Works Confiscated to UK
Misago Maru No.2	265.86	1940 Bought	Takasago Gyogyo	From Karafuto Gyogyo (launched 1920) 1944 Sank while requisitioned
Misago Maru No.3	267	1940 Bought	Takasago Gyogyo	Teikoku Kisen, Harima From Karafuto Gyogyo (launched 1921) 1945 Sank while requisitioned
Mogami Maru	498.95	1941 Completed	Nippon Suisan	1944 Sank while requisitioned
Tokachi Maru	498.95	1941 Completed	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Hyuga Maru	994.35	1942 Completed	Nippon Suisan	1943 Sank while requisitioned
Chikugo Maru	557.11	1944 Completed	NipponKaiyoGyogyo Tosei	Kanasashi Shipyard 1944 Sank while requisitioned
Yamakuni Maru	557	1944 Completed	NipponKaiyoGyogyo Tosei	Kanasashi Shipyard 1945 Mined and sank
Akashi Maru	344.65	1944 Launched	NipponKaiyoGyogyo Tosei	Hayashikane Heavy Inds. (Shimonoseki) 1956 Seized by South Korea
Tenryu Maru	557.11	1944 Launched	Minami Nippon Gyogyo Tosei	Kanasashi Shipyard 1950 Nansei Suisan 1952 Nanpo Gyogyo Kaihatsu 1975 Sold for scrap
Tatsuta Maru	533.11	1944 Launched	Minami Nippon Gyogyo Tosei	1950 Nansei Suisan 1952 Nanpo Gyogyo Kaihatsu
Nippon Maru No.3	220.13	1945 Bought	Nippon Suisan	From Nippon Gyomo Sengu (Completed 1936)

West-water trawling boats (hand trawling)

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
Kasuga Maru	49.04	1923 Completed	Hoyo Gyogyo	Amano Shipyard 1930 Sold to Nippon Kosen Gyogyo
Taiun Maru	47.58	1925 Bought	Hoyo Gyogyo	From Nissen Gumi (Amano Shipyard, completed 1923)
Reiun Maru	47.58	1925 Bought	Hoyo Gyogyo	From Nissen Gumi (Amano Shipyard, completed 1923)
Ise Maru	48.6	1925 Completed	Hoyo Gyogyo	Amano Shipyard 1930 Sold
Shoshun Maru	48.38	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Yayoi Maru	48.72	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Hoyo Maru	47.66	1925 Completed	Hoyo Gyogyo	Amano Shipyard 1930 Sold to Horai Suisan
Heian Maru	47.66	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Tomino Maru	47.66	1925 Completed	Hoyo Gyogyo	Amano Shipyard 1930 Sank
Choun Maru	47.66	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Ryusho Maru	49.38	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Oikaze Maru	49.38	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Wakamizu Maru	49.38	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Yoshun Maru	49.38	1925 Completed	Hoyo Gyogyo	Amano Shipyard
Sokai Maru	49.94	1927 Completed	Hoyo Gyogyo	Amano Shipyard
Tsukimi Maru	49.95	1927 Completed	Hoyo Gyogyo	Amano Shipyard
Naniwa Maru	49	1927 Completed	Hoyo Gyogyo	Amano Shipyard 1929 Grounded, hull abandoned
Rakuei Maru	49.28	1927 Completed	Hoyo Gyogyo	Amano Shipyard 1930 Sank
Murasame Maru	49.74	1927 Completed	Hoyo Gyogyo	Amano Shipyard
Urakaze Maru	49.74	1927 Completed	Hoyo Gyogyo	Amano Shipyard
Takasago Maru	88.79	1927 Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Confiscated to China
Horai Maru	88.7	1927 Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Koshun Maru	88.7	1927 Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Wrecked and sank while requisitioned
Aishima Maru	50.63	1928 Tie-up	Fuso Gyogyo	1933 Merged with Kyodo Gyogyo
Ukujima Maru	49.88	1928 Tie-up	Fuso Gyogyo	1933 Merged with Kyodo Gyogyo

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Ejima Maru	49.88	1928	Tie-up	Fuso Gyogyo	1933 Merged with Kyodo Gyogyo
Genkai Maru	51.17	1928	Tie-up	Fuso Gyogyo	1933 Merged with Kyodo Gyogyo
Ejima Maru	49.88	1928	Tie-up	Fuso Gyogyo	1933 Merged with Kyodo Gyogyo
Hakusa Maru	89.15	1928	Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1960 Sold
Fuki Maru	91.29	1928	Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1960 Sold
Taian Maru	86.93	1928	Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Kumi Maru	80.44	1929	Launched	Horai Suisan	Mitsubishi Zosen Hikoshima 1948 Seized by South Korea
Nohi Maru	80.44	1929	Launched	Horai Suisan	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Manju Maru	80.44	1929	Launched	Horai Suisan	Mitsubishi Zosen Hikoshima 1949 Scrapped
Keisho Maru	80.44	1929	Launched	Horai Suisan	Mitsubishi Zosen Hikoshima
Koki Maru	73.87	1929	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Fuji Maru	73.87	1929	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Sank while requisitioned
Tenshin Maru	79.74	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1952 Sold
Kiyo Maru	80.37	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1949 Scrapped
Yuko Maru	73.87	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1947 Sank
Mizuho Maru	80.13	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1948 Seized by South Korea
Shosei Maru	72.5	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1940 Sank
Hinode Maru	72.5	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1941 When requisitioned, "Ni-Go Hinode Maru" 1945 Bombed and sank
Meiji Maru	72.5	1930	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima
Kusayama Maru	88.7	1932	Launched	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1945 Confiscated to China
Seiten Maru	72.5	1932	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1952 Sold
Moshun Maru	72.5	1932	Launched	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima
Isshin Maru	88.29	1932	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1951 Seized by China
Zuiko Maru	88.29	1932	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1958 Shipwrecked and sank in fishing grounds
Hakubi Maru	88.29	1932	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1944 Sank while requisitioned
Royo Maru	88.29	1932	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1944 Sank while requisitioned
Hokoku Maru	88.28	1933	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1954 Sank in a typhoon
Nippon Maru	88.28	1933	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1954 Sank in a typhoon
Toyo Maru	88.28	1933	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima
Heiwa Maru	88.28	1933	Completed	Hoyo Gyogyo	Mitsubishi Zosen Hikoshima 1958 Sold
Toshikuni Maru	88.56	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1948 Seized by South Korea 1958 Sold to Kyoei Suisan
Chikyu Maru	88.63	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1958 Sold to Kyoei Suisan
Wafu Maru	88.56	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1945 Sank while requisitioned
Oyo Maru	88.63	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1945 Sank while requisitioned
Yoko Maru	88.56	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1945 Sank while requisitioned
Kashin Maru	88.63	1934	Launched	Hoyo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1944 Wrecked and sank while requisitioned
Sankyo Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works 1945 Sank while requisitioned
Ukuru Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works 1944 Sank while requisitioned
Takeo Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works 1945 Bombed and wrecked
Kinsui Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works 1945 Bombed and grounded and while requisitioned
Toseki Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works 1944 Sank while requisitioned
Kenkai Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works
Tatsukiri Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works
Nagusa Maru	89.43	1934	Launched	Horai Gyogyo	Osaka Iron Works
Daishin Maru	89.58	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1944 Sank while requisitioned
Reiko Maru	88.54	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1955 Seized by South Korea
Ranyo Maru	89.58	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1944 Grounded and abandoned while requisitioned

Name	Tonnage	Completed/Launched/Bought/Chartered, etc.	Operator	Remarks	
Kanan Maru	88.54	1935	Launched	Kyodo Gyogyo	Osaka Iron Works
Daiton Maru	88.54	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1950 To Nansei Suisan 1952 To Nanpo Gyogyo Kaihatsu
Nisui Maru	89.58	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1945 Sank while requisitioned
Hokuto Maru	89.58	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1950 To Nansei Suisan 1952 Renamed Toko Maru
Mazu Maru	89.58	1935	Launched	Kyodo Gyogyo	Osaka Iron Works 1945 Sank while requisitioned
Iran Maru	79.17	1936	Launched	Kyodo Gyogyo	Ichikawa Shipyard
Bansan Maru	79.17	1936	Launched	Kyodo Gyogyo	Ichikawa Shipyard
Shin-Minato Maru	88.54	1936	Launched	Kyodo Gyogyo	Osaka Iron Works 1950 To Nansei Suisan 1952 Renamed Eiko Maru
Tonan Maru	79.17	1936	Launched	Kyodo Gyogyo	Ichikawa Shipyard
Bosen Maru	79.17	1936	Launched	Kyodo Gyogyo	Ichikawa Shipyard
Samizu Maru	88.62	1937	Launched	Nippon Suisan	Osaka Iron Works 1948, 1955 Seized by South Korea
Tsukai Maru	88.38	1937	Launched	Nippon Suisan	Osaka Iron Works 1945 Sank while requisitioned
Chojo Maru	80	1937	Launched	Nichiman Gyogyo	Ue'eda Shipyard (Yasugi, Shimane)
Ryuko Maru	80	1937	Launched	Nichiman Gyogyo	Ue'eda Shipyard (Yasugi, Shimane)
Hinode Maru No.6	70.52	1937	Launched	Hinode Gyogyo	1944 Shipwrecked and sank due to wartime disaster
Hinode Maru No.7	67	1937	Launched	Hinode Gyogyo	1944 Shipwrecked and sank due to wartime disaster
Kaiyo Maru	—	1938	Launched	Nichiman Gyogyo	Shikoku Senkyo
Kaijo Maru	—	1938	Launched	Nichiman Gyogyo	Shikoku Senkyo
Hinode Maru No.8	70	1938	Launched	Hinode Gyogyo	
Hinode Maru No.10	70	1938	Launched	Hinode Gyogyo	
Inzan Maru	99.96	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship
Sagisu Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1942 Mined and sank while requisitioned
Hassen Maru	99.97	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1945 Confiscated to the USSR
Byoritsu Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1945 Confiscated to the USSR
Tatsui Maru	99.96	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1944 Sank while requisitioned
Susan Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Mishima Maru
Ruson Maru	99.96	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Himeshima Maru
Ota Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Tamashima Maru
Wabi Maru	99.96	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 Transferred to Nansei Suisan 1952 Renamed Washima Maru
Yobai Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1945 Sank in foreign waters (unconformed)
Ryosui Maru	99.96	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1944 Sank while requisitioned
Sobun Maru	99.51	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1945 Shipwrecked and sank while requisitioned
Tsuran Maru	99.05	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Otowa Maru
Musha Maru	99.05	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Kureha Maru
Kyuryu Maru	97.89	1938	Completed	Nippon Suisan	Osaka Iron Works 1950 To Nansei Suisan 1952 Renamed Oyo Maru
Yaryu Maru	97.89	1938	Completed	Nippon Suisan	Osaka Iron Works 1950 To Nansei Suisan 1952 Renamed Wafu Maru
Asashio Maru	97.89	1938	Launched	Nippon Suisan	Osaka Iron Works
Bunzan Maru	97.89	1938	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Asashio Maru
Ensui Maru	97.89	1938	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Tenzan Maru	97.89	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Meiyō Maru
Akizu Maru	99.05	1938	Launched	Nippon Suisan	Osaka Iron Works Taiwan base ship 1944 Sank while requisitioned
Yurin Maru	97.89	1939	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship 1943 Sank while requisitioned
Suijō Maru	97.89	1939	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Wakashio Maru
Hinan Maru	97.89	1939	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship 1943 Grounded and sank while requisitioned
Metō Maru	97.89	1939	Completed	Nippon Suisan	Osaka Iron Works Taiwan base ship 1950 To Nansei Suisan 1952 Renamed Rōyō Maru
Hinode Maru No.3	76.14	1940	Launched	Hinode Gyogyō	Ishihara Shipyard (Shimonoseki)
Hinode Maru No.5	74.45	1940	Launched	Hinode Gyogyō	Ishihara Shipyard (Shimonoseki) 1952 Sold
Kokai Maru	73.46	1940	Launched	Nippon Suisan	Shikoku Senkyō 1944 Sank
Hakuyo Maru	58.86	1941	Launched	Nippon Suisan	1948 Missing
Manzan Maru	93	1942	Launched	Nippon Suisan	Osaka Iron Works Confiscated to China
Nan-o Maru	93	1942	Launched	Nippon Suisan	Osaka Iron Works
Takuyo Maru No.1	117.09	1942	Launched	Nippon Suisan	
Takuyo Maru No.2	117.09	1942	Launched	Nippon Suisan	
Koei Maru No.12	77.61	1942	Launched	Nippon Suisan	
Tenyū Maru	53.11	1943	Bought	Nippon Kaiyō Gyogyō Tōsei	
Hoyū Maru	75.91	1943	Launched	Nippon Kaiyō Gyogyō Tōsei	Kyōdō Shipyard (Wakamatsu) 1949 Sold
Kochi Maru	94.1	1944	Launched	Nippon Kaiyō Gyogyō Tōsei	
Ogon Maru	94.1	1944	Launched	Nippon Kaiyō Gyogyō Tōsei	
Sado Maru	91.76	1944	Launched	Nippon Kaiyō Gyogyō Tōsei	Kiyo Zosen (Tokuyama) 1949 Scrapped

Whaling mother ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Mihairū Maru	3,643	1905	Leased	Toyo Gyogyō*	From the Ministry of Agriculture and Commerce (wale flensing ship) 1913 Sold (to Ishikari Sekitan)
Beltana	11,220	1930	Bought	Toyo Hogeī*	UK steamship bought for refurbishment Sold in 1933 before refurbishment
Antakuchiku Maru	9,593	1934	Bought	Nippon Hogeī	From Norway (formerly Antarctic) Bought with 5 whalers
(*) Tonan Maru	9,593	1935	Renamed	Nippon Hogeī	Renamed just before entering Osaka Port en route to the Antarctic as Antakuchiku Maru 1943 Mined and sank
Tonan Maru II	19,262.53	1937	Completed	Nippon Suisan	Osaka Iron Works 1944 Bombed and sank while requisitioned
Tonan Maru III	19,209.71	1938	Completed	Nippon Suisan	Osaka Iron Works 1944 Sank near Truk Island while requisitioned 1951 Floated and major conversion Renamed Tonan Maru

Factory ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Kamimori Maru	4,758	1933	Bought	Nippon Godō Kosen	Uraga Senkyō (launched 1917) 1945 Sank while requisitioned
(*) Kasado Maru	6,020.02	1934	Bought	Shinko Suisan	(formerly used for emigration to Hawaii and Brazil) 1932 Changed to a meal ship 1945 Sank while requisitioned
Ryokai Maru	4,682	1934	Bought	Nippon Godō Kosen	(launched 1911, UK) 1943 Sank
(*) Taihoku Maru	8,252.64	1935	Change of use	Nippon Suisan	Changed from crab factory ship to fishmeal factory ship
Kosei Maru	8,266.37	1939	Bought/ Renamed	Nippon Suisan	(launched 1920, formerly Narenta) 1943 Sank while requisitioned

Crab factory ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Jingu Maru	2,741.65	1926	Bought	Kyodo Gyogyo	From Mr Kotaro Suda (launched 1890, UK)
Itsukushima Maru	3,875.31	1926	Chartered	Kyodo Gyogyo	From Nissho Suisan (launched 1887, UK) Bought 1927
Moji Maru	1,998.39	1926	Bought	Kyodo Gyogyo	From Mr Naoji Nomura (launched 1877, UK)
Toyokuni Maru	2,344.62	1927	Chartered	Kyodo Gyogyo	From Mr Naoji Nomura 1927 Charter cancelled
Wakanoura Maru	2,401.29	1927	Bought	Kyodo Gyogyo	(launched 1885, UK) 1943 Mined and sank
Karafuto Maru	2,818	1928	Chartered	Showa Kosen Gyogyo	(built 1884, Italy)
Tatsuhiko Maru	2,178	1928	Chartered	Showa Kosen Gyogyo	
Higo Maru	1,287	1928	Chartered	Showa Kosen Gyogyo	(launched 1884, UK)
Hakuai Maru	2,614.03	1928	Chartered	Showa Kosen Gyogyo	1926 Bought by Hayashikane Shoten 1945 Mined and sank while requisitioned
Bifuku Maru	2,559	1928	Chartered	Showa Kosen Gyogyo	(launched 1898, UK) (sister ship of Hakuai Maru) 1942 Mined and sank
Shunkai Maru	1,579	1928	Chartered	Showa Kosen Gyogyo	(launched 1919)
Fukuichi Maru	1,999.84	1928	Chartered	Nippon Kosen Gyogyo	(launched 1882)
Ryoto Maru	2,374.01	1928	Chartered	Nippon Kosen Gyogyo	(launched 1882)
Pusan Maru	2,412.45	1928	Chartered	Nippon Kosen Gyogyo	(launched 1883, Germany)
Kanton Maru	2,566.37	1928	Chartered	Nippon Kosen Gyogyo	(launched 1883, UK)
Eitoku Maru	2,951.18	1928	Chartered	Nippon Kosen Gyogyo	(launched 1888, UK)
Kureha Maru	175.9	1929	Bought	Nippon Kosen Gyogyo	From Toyama Prefecture Fisheries Training Institute
Sanuki Maru	5,861.56	1930	Chartered	Nippon Godo Kosen	
Shohei Maru	3,771.4	1933	Chartered	Nippon Godo Kosen	
Toten Maru	3,823.22	1934	Chartered	Nippon Godo Kosen	1944 Bombed and sank
Hokushin Maru	5,819	1934	Bought/ Renamed	Nippon Godo Kosen	formerly Honoruru Maru (Osaka Shosen) 1945 Shipwrecked and sank while requisitioned

Tankers and ore transporters

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Itsukushima Maru	10,007	1937	Completed	Nippon Suisan	Kawasaki Zosen, Kobe 1944 Bombed and sank while requisitioned
Matsushima Maru	10,100	1944	Launched	Nippon Kaiyo Gyogyo Tosei	Mitsubishi Heavy Inds. Nagasaki 2TL-type wartime standard ship 1945 Sank while requisitioned
Hashidate Maru	10,798	1944	Completed	Nippon Kaiyo Gyogyo Tosei	Kawasaki Zosen, Kobe 2TL-type wartime standard ship 1946 Converted to whaling mother ship

Transporters (refrigerating & freezing, etc.)

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Taisho Maru No.1	605	1917	Launched	Toyo Hogeï*	Okajima Jiei Shipyard (wooden whalemeat transporter)
Taisho Maru No.2	614	1917	Launched	Toyo Hogeï*	Okajima Jiei Shipyard (wooden whalemeat transporter)
Karumo Maru	197.36	1923	Launched	Nissen Gumi	Osaka Iron Works Operated as a high-speed transporter
(*) Kaiyo Maru	225.16	1924	Converted	Kyodo Gyogyo	Converted trawler
Awaji Maru	129.83	1926	Chartered	Asahi Suisan	(launched 1917)
Taihakusan Maru	466	1928	Bought	Toyo Hogeï*	Refrigerating steamship
Kosoku Maru No.1	88.11	1931	Completed	Kyodo Gyogyo	
Kosoku Maru No.3	175.66	1932	Completed	Kyodo Gyogyo	Mitsubishi Zosen Hikoshima 1944 Sank while requisitioned
Shinyo Maru	4,658	1933	Bought	Nippon Godo Kosen	Uraga Senkyo (launched 1918) 1944 Sank while requisitioned
Sumiyoshi Maru	113.89	1934	Launched	Kyodo Gyogyo	Mitsubishi Heavy Inds. Hikoshima 1945 Sank while requisitioned
Zuisho Maru	245	1939	Completed	Nippon Suisan	Ichikawa Shipyard (Ominato)
Zuiun Maru	250	1939	Completed	Nippon Suisan	Ichikawa Shipyard (Ominato)

Longline vessels, round haul net vessels, purse seine vessels, dockside transporters, small tankers, etc.

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Suzu Maru	40.12	1927	Launched	Kyodo Gyogyo	Crab catcher
Kazu Maru	38.42	1930	Launched	Kyodo Gyogyo	Crab catcher
Tsuru Maru	40.23	1930	Launched	Kyodo Gyogyo	Crab catcher
Kokai Maru No.3	47.52	1937	Bought	Nippon Suisan	Bought from Chosen Yushi (built 1934)
Kokai Maru No.6	47.52	1937	Bought	Nippon Suisan	Bought from Chosen Yushi (built 1934)
Kokai Maru No.11	39.36	1937	Bought	Nippon Suisan	Bought from Chosen Yushi (built 1937)
Kokai Maru No.12	39.13	1937	Bought	Nippon Suisan	Bought from Chosen Yushi (built 1937)
Genkai Maru	69.44	1944	Bought	Nippon Kaiyo Gyogyo Tosei	From Nippon Gyomo Sengu (launched 1924, tanker)
Ikuchiyo Maru	68.98	1945	Bought	Nippon Kaiyo Gyogyo Tosei	From Nippon Gyomo Sengu (launched 1919, tanker)

Postwar Whalers

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
(*) Nissui Maru No.1	119.67	1946	Renamed	Nippon Suisan	(formerly Rekkusu Maru)
(*) Nissui Maru No.2	125.56	1946	Renamed	Nippon Suisan	(formerly Oruga Maru)
Koyo Maru	366.92	1946	Completed	Nippon Suisan	Hakodate Dock (launched 1944) 1966 Sold for refurbishment
Koyo Maru No.2	367.88	1947	Completed	Nippon Suisan	Hitachi Zosen 1964 Sold
Koyo Maru No.3	367	1947	Completed	Nippon Suisan	Hitachi Zosen 1967 Sold for scrap
Koyo Maru No.5	367.88	1947	Completed	Nippon Suisan	Hitachi Zosen 1950 Sank in a typhoon
Konan Maru	397.61	1948	Completed	Nippon Suisan	Mitsubishi Heavy Inds. Yokohama
Konan Maru No.2	398	1949	Completed	Nippon Suisan	Hitachi Zosen 1967 Sold
Konan Maru No.3	417.43	1950	Completed	Nippon Suisan	Hitachi Zosen 1967 Sold
Konan Maru No.5	434.29	1951	Completed	Nippon Suisan	Hitachi Zosen 1967 Sold
Konan Maru No.6	433.83	1951	Completed	Nippon Suisan	Hitachi Zosen 1967 Sold
Shin-ei Maru No.6	29.98	1951	Completed	Nippon Suisan	From Kawanami Kogyo
Konan Maru No.7	471.16	1952	Bought	Nippon Suisan	Hitachi Zosen 1970 Sold
Konan Maru No.8	471.34	1952	Completed	Nippon Suisan	Hitachi Zosen 1965 Grounded, hull abandoned
Konan Maru No.10	741.76	1954	Completed	Nippon Suisan	Hitachi Zosen 1972 Sold
Konan Maru No.11	741.76	1954	Completed	Nippon Suisan	Hitachi Zosen 1970 Sold
Konan Maru No.12	746.11	1955	Completed	Nippon Suisan	Hitachi Zosen 1972 Sold
Konan Maru No.15	746.11	1955	Completed	Nippon Suisan	Hitachi Zosen 1973 Sold
Konan Maru No.16	743.44	1956	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold for scrap
Konan Maru No.17	743.28	1956	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold for scrap
Konan Maru No.18	742.61	1956	Completed	Nippon Suisan	Hitachi Zosen 1972 Sold
Konan Maru No.20	741.86	1956	Completed	Nippon Suisan	Hitachi Zosen 1977 Sold for scrap
Konan Maru No.21	753.72	1957	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Konan Maru No.22	753.85	1957	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Konan Maru No.23	753.40	1957	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Konan Maru No.25	753.49	1957	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Konan Maru No.26	752.78	1957	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold for scrap
Konan Maru No.27	737.75	1958	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Shonan Maru	916.96	1972	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï
Shonan Maru No.2	916.44	1972	Completed	Nippon Suisan	Hitachi Zosen 1976 Sold to Kyodo Hogeï

Trawlers

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Tone Maru	533	1946	Completed	Nippon Suisan	Mitsubishi Heavy Inds. Hikoshima (launched 1945) 1972 Sold
Saga Maru	349.47	1946	Completed	Nippon Suisan	Saga Shipyard (Toyama, Takaoka) 1965 Sold
Shinano Maru	538.59	1948	Completed	Nippon Suisan	Mitsubishi Heavy Inds. Hikoshima (launched 1945) 1970 Sold
Fushimi Maru	273.3	1949	Completed	Nippon Suisan	Mitsubishi Heavy Inds. Nagasaki 1963 Sold for scrap
Yamato Maru	291.42	1950	Completed	Nippon Suisan	Nishi Nippon Juko, Shimonoseki 1964 Sold for scrap
Omi Maru	291	1950	Completed	Nippon Suisan	Nishi Nippon Juko, Shimonoseki 1967 Sold
Nichibei Maru No.1	362.16	1951	Bought	Nippon Suisan	From Nichibei Suisan 1952 Renamed Kashii Maru
Nichibei Maru No.2	362.16	1951	Bought	Nippon Suisan	From Nichibei Suisan Ishikawajima Heavy Inds. 1952 Renamed Hakozaki Maru
Nichibei Maru No.3	362.16	1951	Bought	Nippon Suisan	From Nichibei Suisan 1952 Renamed Miyaji Maru
Koyaki Maru No.1	273.68	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1952 Renamed Koyaki Maru
Koyaki Maru No.2	277.08	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1952 Renamed Ariake Maru
Koyaki Maru No.3	277	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946)
Koyaki Maru No.6	277.08	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1952 Renamed Kirishima Maru
Koyaki Maru No.7	272	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1952 Renamed Amakusa Maru
Koyaki Maru No.8	273.13	1951	Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1952 Renamed Yatsushiro Maru
(* Kashii Maru	362.16	1952	Renamed	Nippon Suisan	(formerly Nichibei Maru No.1) 1968 Investment in kind to N.R.P. 1970 Renamed UDANG NO.1
(* Hakozaki Maru	362.16	1952	Renamed	Nippon Suisan	(formerly Nichibei Maru No.2)
(* Miyaji Maru	357.05	1952	Renamed	Nippon Suisan	(formerly Nichibei Maru No.3) 1965 Sank after collision in Malacca Strait
(* Koyaki Maru	273.68	1952	Renamed	Nippon Suisan	(formerly Koyaki Maru No.1)
(* Ariake Maru	277.08	1952	Renamed	Nippon Suisan	(formerly Koyaki Maru No.2)
(* Kirishima Maru	277.08	1952	Renamed	Nippon Suisan	(formerly Koyaki Maru No.6) 1963 Sold for scrap
(* Amakusa Maru	272	1952	Renamed	Nippon Suisan	(formerly Koyaki Maru No.7)
(* Yatsushiro Maru	273.13	1952	Renamed	Nippon Suisan	(formerly Koyaki Maru No.8)
(* Awaji Maru	313.51	1952	Renamed	Nippon Suisan	(formerly Gyokuen Maru No.1) 1961 Sold
(* Naruto Maru	316.55	1952	Renamed	Nippon Suisan	(formerly Gyokuen Maru No.2) 1955 Sold
(* Kamo Maru	234.67	1952	Renamed	Nippon Suisan	(formerly Hinode Maru No.16) 1956 Seized by South Korea
Asama Maru	1,070	1954	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1971 Sold
Ikoma Maru	993.20	1954	Completed	Nippon Suisan	Mitsui Zosen, Tamano
Yamashiro Maru	349.21	1955	Completed	Nippon Suisan	Kure Shipyard 1970 Investment in kind to I.M.P. Renamed RUMBATI NO.1
Uji Maru	535.06	1957	Completed	Nippon Suisan	Enzan Senkyo 1964 Sank off Angola
Kawachi Maru	300.21	1957	Completed	Nippon Suisan	Donoumi Zosen 1970 Investment in kind to W.I.F. Renamed UDANG NO.3
Hyuga Maru	300.22	1958	Completed	Nippon Suisan	Donoumi Zosen 1970 Investment in kind to I.M.P. Renamed RUMBATI NO.2
Izumo Maru	301.01	1960	Completed	Nippon Suisan	Donoumi Zosen 1970 Investment in kind to W.I.F. Renamed UDANG NO.2
Amagi Maru	2,249.21	1960	Completed	Nippon Suisan	Kure Shipyard 1st Type 25 stern vessel 1972 Grounded in Solomon Sea, hull abandoned
Ibuki Maru	2,502.70	1961	Completed	Nippon Suisan	Kure Shipyard
Unzen Maru	2,524.68	1962	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1982 Sold for scrap
Ehiko Maru	2,524.85	1962	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1983 Sold to Nippon Kyodo Hoge
Oe Maru	2,524.77	1962	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1982 Sold
Kaimon Maru	2,518.13	1962	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1984 Sold for scrap
Nichinan Maru	2,518.37	1962	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1983 Sold for scrap
Hokko Maru No.30	299	1962	Launched	Hokko Gyogyo	
Kiso Maru	2,522.43	1963	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1988 Sold

Name	Tonnage	Completed/Launched/Bought/Chartered, etc.	Operator	Remarks	
Kurama Maru	2,522.43	1963	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1987 Sold
Hokko Maru No.50	192	1963	Launched	Hokko Gyogyo	
Aso Maru	3,608.29	1964	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1992 Sold for scrap
Kirishima Maru	3,470	1964	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1978 Investment in kind in EMDEPES Renamed KIRISHIMA
Koyo Maru	2,521.23	1964	Completed	Hokuyo Suisan	Mitsui Zosen, Tamano
Takachiho Maru	3,494.99	1965	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1971 Sold to Hokoku Suisan
Teshio Maru	2,500.94	1965	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1974 Investment in kind to A.F.D. Renamed ERIN FISHER
Tokachi Maru	2,501.31	1965	Completed	Nippon Suisan	Mitsui Zosen, Tamano 1989 Sold
Mogami Maru	549.52	1966	Completed	Nippon Suisan	Niigata Tekko, Niigata 1967 Collided with Taiyo Maru No.82 in Southern Alaska fishing grounds and sank
Kitagami Maru	549.86	1966	Completed	Nippon Suisan	Niigata Tekko, Niigata 1984 Sold for refurbishment
Zao Maru	2,530.74	1966	Completed	Nippon Suisan	Mitsui Zosen, Tamano
Hokko Maru No.31	314	1966	Launched	Hokko Gyogyo	
Shirane Maru	2,528.80	1967	Completed	Nippon Suisan	Shikoku Dock (launched 1966)
Okuni Maru	1,496	1967	Launched	San-in Enyo Gyogyo	
Suzuka Maru	2,529	1967	Completed	Nippon Suisan	Shikoku Dock 1991 Sold
Ishikari Maru	549.2	1967	Completed	Nippon Suisan	Wakamatsu Zosen
Koyo Maru No.2	3,456	1967	Completed	Hokuyo Suisan	Mitsui Zosen, Fujinagata 1989 Sold to Nippon Suisan 1995 Sold
Koyo Maru No.21	549	1967	Completed	Hokuyo Suisan	
Niitaka Maru	3,910.2	1968	Completed	Nippon Suisan	Hitachi Zosen, Mukojima 2003 Scrapped
Fuji Maru	3,914.46	1968	Completed	Nippon Suisan	Mitsui Zosen, Fujinagata 1978 Investment in kind in EMDEPES Renamed FUJI
Haruna Maru	4,049	1968	Completed	Nippon Suisan	Hitachi Zosen 1987 Damaged by fire (Tobata Port), sold for scrap
Kongo Maru	3,249.32	1968	Completed	Nippon Suisan	Hitachi Zosen 1989 Investment in kind to PESANTAR Renamed KONGO
Hokko Maru No.12	124	1968	Completed	Hokko Gyogyo	
Yamato Maru	3,990.67	1970	Completed	Nippon Suisan	Hitachi Zosen 1991 Investment in kind to PESANTAR Renamed YAMATO
Rikuzen Maru	3,989.36	1971	Completed	Hokoku Suisan	Hitachi Zosen 1992 Sold to Nippon Suisan Investment in kind to PESANTAR Renamed RIKUZEN
Kasuga Maru	3,279.81	1971	Completed	Nippon Suisan	Hitachi Zosen 1982 Investment in kind to PESPASA Renamed KASUGA MARU
Koyo Maru No.3	3,431.63	1972	Launched	Hokuyo Suisan	
Rokko Maru	3,268.87	1972	Completed	Nippon Suisan	Hitachi Zosen 1982 Investment in kind to PESPASA Renamed ROKKO MARU
Yoshino Maru	3,264.71	1973	Completed	Nippon Suisan	Naikai Zosen 1989 Sank after collision off Argentina
Hokko Maru No.57	348.77	1973	Launched	Hokko Gyogyo	
Hokko Maru No.17	124	1974	Launched	Hokko Gyogyo	
(*) ERIN FISHER	2,500.94	1974	Bought	A.F.D.	From Nippon Suisan (formerly Teshio Maru) 1979 Sold to Nippon Suisan
Hokko Maru No.77	349.62	1976	Completed	Hokko Gyogyo	Narazaki Zosen 1987 Investment in kind to PESPASA Renamed HOTAKA MARU
(*) KIRISHIMA	3,612	1978	Transferred	EMDEPES	From Nippon Suisan (formerly Kirishima Maru) 1994 Sold for scrap
(*) FUJI	3,914	1978	Transferred	EMDEPES	From Nippon Suisan (formerly Fuji Maru) 1989 Sold for scrap
(*) Teshio Maru	2,500.94	1979	Bought	Nippon Suisan	From A.F.D. (formerly ERIN FISHER) 1989 Sold
Akagi Maru	2,576.86	1980	Completed	Nippon Suisan	Naikai Zosen 1993 Sold to SEA SUI JOINT VENTURE
Ibuki Maru	2,577.08	1981	Completed	Nippon Suisan	Naikai Zosen 1995 Sold to NISSUINZ
(*) KASUGA MARU	3,279.81	1982	Transferred	PESPASA	From Nippon Suisan (formerly Kasuga Maru) 1999 Damaged by fire in Argentine fishing grounds, sank
(*) ROKKO MARU	3,268.87	1982	Transferred	PESPASA	From Nippon Suisan (formerly Rokko Maru) 2000 Sold for scrap
Azuchi Maru	2,802	1983	Completed	Hokoku Suisan	Naikai Zosen 1992 Sold to Nippon Suisan 1994 Investment in kind to PESPASA Renamed AZUCHI MARU

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Echizen Maru	2,802	1984	Completed	Nippon Suisan	Naikai Zosen 1995 Investment in kind to PESPASA Renamed ECHIZEN MARU
Unzen Maru	2,591.31	1986	Completed	Nippon Suisan	Naikai Zosen 1989 Investment in kind in EMDEPES Renamed UNZEN
Chikuzen Maru	7,060	1987	Completed	Nippon Suisan	Hitachi Zosen 1991 Sold to Kyodo Senpaku
(*) HOTAKA MARU	550	1987	Transferred	PESPASA	From Hokko Gyogyo (formerly Hokko Maru No.77) 1992 Sold
Koyo Maru No.8	4,991	1988	Completed	Hohsui	Naikai Zosen 1992 Sold to Nippon Suisan
(*) Miyajima Maru	6,370	1988	Converted	Nippon Suisan	Surimi factory ship converted to trawler 1990 Sold to Russia
(*) Koyo Maru No.2	3,456.27	1989	Bought	Nippon Suisan	From Hohsui 1995 Sold
(*) KONGO	3,278	1989	Bought	PESANTAR	From Nippon Suisan (formerly Kongo Maru) 1995 Sold
ALYESKA	198	1989	Bought	DUTCH HARBOR SEAFOODS	1991 Sold
(*) YAMATO	3,989.36	1991	Bought	PESANTAR	From Nippon Suisan (formerly Yamato Maru) 2010 Sold
(*) RIKUZEN	3,990.67	1992	Bought	PESANTAR	From Nippon Suisan (formerly Rikuzen Maru) 2002 Sold
(*) Koyo Maru No.8	4,991	1992	Bought	Nippon Suisan	2003 Investment in kind in EMDEPES Renamed UNIONSURI
Tsuda Maru	5,200	1993	Bought	Nippon Suisan	From Hoko Suisan 1994 Investment in kind in EMDEPES Renamed UNIONSUR
(*) PAKURA	3,067	1993	Bought	SEA SUI J/V	From Nippon Suisan (formerly Akagi Maru) 2002 Sold
(*) AZUCHI MARU	2,802	1994	Bought	PESPASA	From Nippon Suisan (formerly Azuchi Maru) 2001 Sank after collision in Argentine fishing grounds
(*) UNIONSUR	5,200	1994	Renamed	EMDEPES	Formerly Tsuda Maru, 2003 renamed Niitaka Maru 2006 Sold for refurbishment
(*) TAHARAKI	2,577	1995	Bought	NISSUI NZ	From Nippon Suisan (formerly Ibuki Maru) 2002 Sold
Shinkai Maru	2,802	2000	Bought	Nippon Suisan	From Shinkai Gyojo Kaihatsu 2000 Investment in kind to PESPASA Renamed VIENTO DEL SUR
(*) UNIONSUR 1	4,991	2003	Bought	EMDEPES	From Nippon Suisan (formerly Koyo Maru No.8) 2003 Renamed UNIONSUR
(*) UNIONSUR	4,991	2003	Renamed	EMDEPES	Formerly UNIONSUR 1

West-water trawling boats (hand trawling)

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Oshima Maru	75.17	1946	Launched	Nippon Suisan	
Takashima Maru	75.17	1946	Launched	Nippon Suisan	
Yashima Maru	99.5	1946	Completed	Nippon Suisan	Shikoku Senkyo (Takamatsu) 1951 Sank
Toyoshima Maru	99.5	1946	Completed	Nippon Suisan	Shikoku Senkyo (Takamatsu) 1963 Sold
Iki Maru	75	1946	Completed	Nippon Suisan	
Tsushima Maru	75.17	1946	Completed	Nippon Suisan	
Kiku Maru	81.81	1946	Launched	Nippon Suisan	1953 Sank
Choei Maru	81.81	1946	Launched	Nippon Suisan	1953 Sank
Daikoku Maru No.11	135	1946	Launched	Hokoku Suisan	Uruga Dock
Hokoku Maru No.11	99	1946	Launched	Hokoku Suisan	Nagoya Zosen
Hokoku Maru No.13	99	1946	Launched	Hokoku Suisan	Nagoya Zosen
Hokoku Maru No.51	97.78	1946	Launched	Hokoku Suisan	Hitachi Zosen 1951 Sold to Nippon Suisan Renamed Shunyo Maru
Hokoku Maru No.52	97.78	1946	Launched	Hokoku Suisan	Hitachi Zosen 1951 Sold to Nippon Suisan Renamed Rakuyo Maru
Hokoku Maru No.53	97.78	1947	Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.55	97.78	1947	Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.56	97.77	1947	Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.57	97.78	1947	Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.58	98.29	1947	Launched	Hokoku Suisan	Hitachi Zosen 1949 Seized by China / Taiwan
Hokoku Maru No.60	97	1947	Launched	Hokoku Suisan	Hitachi Zosen 1949 Seized by China / Taiwan
Hokoku Maru No.61	98	1947	Launched	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.62	97	1947	Launched	Hokoku Suisan	Hitachi Zosen

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
Hokoku Maru No.63	98.29	1947 Launched	Hokoku Suisan	Hitachi Zosen 1951 Sold to Nippon Suisan, renamed Nikko Maru
Hokoku Maru No.65	97.78	1947 Launched	Hokoku Suisan	1951 Sold to Nippon Suisan Renamed Yoko Maru
Hokoku Maru No.67	97.78	1947 Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.70	98.38	1947 Completed	Hokoku Suisan	Hitachi Zosen
Hokoku Maru No.72	98.9	1947 Completed	Hokoku Suisan	Hitachi Zosen 1951 Sold to Nippon Suisan, renamed Anyo Maru
Hokoku Maru No.75	98.38	1947 Completed	Hokoku Suisan	Hitachi Zosen
Daikoku Maru No.12	136	1947 Launched	Hokoku Suisan	Uraga Dock
Matsu Maru	98.47	1947 Completed	Nippon Suisan	Donoumi Zosen 1965 Sold
Suzu Maru	98.47	1947 Completed	Nippon Suisan	Donoumi Zosen 1965 Sold
Gekko Maru	98.29	1947 Launched	Nippon Suisan	Hitachi Zosen 1963 Sold for refurbishment
Tokai Maru	99.26	1947 Completed	Nippon Suisan	Tokai Zosen (Shimizu) 1949 Seized by China/Taiwan
Miho Maru	99.26	1947 Completed	Nippon Suisan	Tokai Zosen (Shimizu) 1963 Sold
Koyo Maru	98	1948 Completed	Nippon Suisan	Donoumi Zosen 1967 Sold
Fukuyo Maru	98	1948 Completed	Nippon Suisan	Donoumi Zosen 1967 Sold
Wayo Maru	99.4	1948 Completed	Nippon Suisan	Mitsubishi Heavy Inds. Hikoshima 1967 Sold
Junyo Maru	99.4	1948 Completed	Nippon Suisan	Mitsubishi Heavy Inds. Hikoshima 1967 Sold
Taiho Maru No.1	81.81	1949 Bought	Nippon Suisan	From Shima Suisan 1952 Renamed Kiku Maru
Taiho Maru No.2	81.81	1949 Bought	Nippon Suisan	From Shima Suisan 1952 Renamed Choei Maru
Hizen Maru No.1	54.97	1949 Bought	Nippon Suisan	From Hizen Gyogyo Kumiiai
Hizen Maru No.2	54.97	1949 Bought	Nippon Suisan	From Shima Suisan
(*) Shunyo Maru	97.78	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.51)
(*) Rakuyo Maru	97.78	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.52)
(*) Nikko Maru	98.29	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.63)
(*) Yoko Maru	88.56	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.65)
(*) Heiyo Maru	98.9	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.71)
(*) Anyo Maru	98	1951 Renamed	Nippon Suisan	(formerly Hokoku Maru No.72)
Unzen Maru No.1	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Unzen Maru
Unzen Maru No.3	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Katsuyama Maru
Unzen Maru No.5	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Shiroyama Maru
Unzen Maru No.6	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Minoshima Maru
Unzen Maru No.7	99.11	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1953 Seized by China
Unzen Maru No.9	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Tomie Maru
Unzen Maru No.11	99.38	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Tara Maru
Unzen Maru No.12	99.14	1951 Bought	Nippon Suisan	1953 Seized by China
Unzen Maru No.13	99	1951 Bought	Nippon Suisan	1953 Seized by China
Unzen Maru No.15	97.87	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Hinoshima Maru
Unzen Maru No.16	97.87	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched July 1946) 1956 Renamed Kamishima Maru
Unzen Maru No.17	97.87	1951 Bought	Nippon Suisan	1953 Seized by China
Unzen Maru No.18	97.87	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Fukue Maru
Unzen Maru No.19	97.87	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Himi Maru 1953 Seized by China
Unzen Maru No.20	97.87	1951 Bought	Nippon Suisan	From Kawanami Kogyo (launched 1946) 1956 Renamed Shikimi Maru 1953 Seized by China
Nanyo Maru No.5	99.67	1951 Bought	Nippon Suisan	From Kawanami Kogyo 1956 Renamed Tagami Maru
(*) Washima Maru	99.96	1952 Renamed	Nippon Suisan	(launched 1938, formerly Wabi Maru) 1967 Sold
(*) Otaba Maru	99.05	1952 Renamed	Nippon Suisan	(launched 1938, formerly Tsuran Maru) 1967 Sold

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
(*) Kureha Maru	99.05	1952	Renamed	Nippon Suisan	(launched 1938, formerly Musha Maru) 1967 Sold
(*) Meiyo Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1938, formerly Tenzan Maru) 1953 Seized by China
(*) Royo Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1939, formerly Meto Maru) 1953 Seized by China
(*) Toko Maru	89.58	1952	Renamed	Nippon Suisan	(1935 launched , formerly Hokuto Maru) 1964 Sold
(*) Eiko Maru	88.54	1952	Renamed	Nippon Suisan	(1936 launched , formerly Shin-Minato Maru) 1952 Seized by China
(*) Oyo Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1938, formerly Kyuryu Maru) 1967 Sold
(*) Wafu Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1938, formerly Yaryu Maru) 1967 Sold
(*) Fuji Maru	99.96	1952	Renamed	Nippon Suisan	(launched 1938, formerly Inzan Maru) 1967 Sold
(*) Asashio Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1938, formerly Bunzan Maru) 1953 Seized by China
(*) Wakashio Maru	97.89	1952	Renamed	Nippon Suisan	(launched 1939, formerly Suijo Maru) 1953 Seized by China
(*) Mishima Maru	99.51	1952	Renamed	Nippon Suisan	(launched 1938, formerly Susan Maru) 1952, 1958 Seized by China
(*) Himeshima Maru	99.96	1952	Renamed	Nippon Suisan	(launched 1938, formerly Ruson Maru) 1958 Seized by China
(*) Tamashima Maru	99.51	1952	Renamed	Nippon Suisan	(launched 1938, formerly Ota Maru) 1964 Sold
(*) Kiku Maru	81.81	1952	Renamed	Nippon Suisan	(launched 1938, formerly Taiho Maru No.1) 1953 Sank
(*) Choei Maru	81.81	1952	Renamed	Nippon Suisan	(launched 1938, formerly Taiho Maru No.2) 1953 Sank
Unzen Maru No.23	98.56	1952	Completed	Nippon Suisan	
Kashima Maru	98.74	1953	Completed	Nippon Suisan	
Kasuga Maru	98.74	1953	Launched	Nippon Suisan	1958 Sold to Hokoku Suisan
Tokiwa Maru	98	1953	Completed	Nippon Suisan	1971 Sank
Onoe Maru	79.72	1953	Completed	Nippon Suisan	1971 Sold
Suwa Maru	79.56	1953	Completed	Nippon Suisan	Koyo Zosen (Fukuoka) 1961 Sold
Isse Maru	79.57	1953	Completed	Nippon Suisan	Koyo Zosen (Fukuoka) 1961 Sold
Nishiyama Maru	79.85	1953	Completed	Nippon Suisan	1954 Seized by China Repatriated 1962 Sold
Tateyama Maru	79.85	1953	Completed	Nippon Suisan	
Matsuyama Maru	79	1954	Completed	Nippon Suisan	Koyo Zosen (Fukuoka)
Hashima Maru	79.39	1954	Completed	Nippon Suisan	Koyo Zosen (Fukuoka) 1962 Sold
Takashima Maru	79.16	1954	Completed	Nippon Suisan	Koyo Zosen (Fukuoka) 1962 Sold
Shinyo Maru	106.75	1955	Completed	Nippon Suisan	Kure Shipyard 1971 Investment in kind to W.I.F. Renamed UDANG NO.15
Takuyo Maru	106.75	1955	Completed	Nippon Suisan	Kure Shipyard 1971 Investment in kind to W.I.F. Renamed UDANG NO.16
Katori Maru	106.75	1955	Completed	Nippon Suisan	Kure Shipyard
Kaiyo Maru	136.4	1955	Launched	Nippon Suisan	Hayashikane Shipyard 1971 Sold
Genyo Maru	136.29	1955	Launched	Nippon Suisan	Hayashikane Shipyard 1971 Sold
Hokoku Maru No.3	91.59	1955	Completed	Hokoku Suisan	
Hokoku Maru No.5	91.83	1955	Completed	Hokoku Suisan	
Kazuki Maru	107	1956	Completed	Nippon Suisan	Donoumi Zosen
Iki Maru	108.29	1956	Completed	Nippon Suisan	1970 Investment in kind to I.M.P. Renamed AMAN NO.1
Tsushima Maru	108.29	1956	Completed	Nippon Suisan	1970 Investment in kind to I.M.P. Renamed AMAN NO.2 1994 Scrapped
Hokoku Maru No.35	84.45	1956	Completed	Hokoku Suisan	
Hokoku Maru No.36	84.38	1956	Completed	Hokoku Suisan	
(*) Unzen Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.1)
(*) Katsuyama Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.3) 1965 Sold
(*) Shiroyama Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.5) 1965 Sold
(*) Minoshima Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.6)
(*) Tomie Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.9) 1958 Seized by China
(*) Hinoshima Maru	97.87	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.15) 1966 Sold for scrap
(*) Kamishima Maru	97.87	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.16) 1966 Sold for scrap
(*) Fukue Maru	97.87	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.18) 1958 Seized by China
(*) Tara Maru	99.38	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.11)
(*) Shikimi Maru	97.87	1956	Renamed	Nippon Suisan	(formerly Unzen Maru No.20) 1966 Sold for scrap
Aoba Maru	108.07	1956	Completed	Nippon Suisan	Donoumi Zosen

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Wakaba Maru	108.07	1956	Completed	Nippon Suisan	Donoumi Zosen
Shinryo Maru No.1	77.34	1957	Bought	Nippon Suisan	Launched 1954
Shinryo Maru No.2	78.07	1957	Bought	Nippon Suisan	Launched 1954
Akama Maru	106.45	1958	Completed	Nippon Suisan	Donoumi Zosen 1970 Investment in kind to W.I.F. Renamed UDANG NO.6
Fukuma Maru	106.47	1958	Completed	Nippon Suisan	Donoumi Zosen 1970 Investment in kind to W.I.F. Renamed UDANG NO.5
Kaiyo Maru No.31	136.40	1958	Bought	Nippon Suisan	From Kyoei Suisan (launched 1955)
Kaiyo Maru No.32	136.29	1958	Bought	Nippon Suisan	From Kyoei Suisan (launched 1955)
Dejima Maru	94.80	1959	Completed	Nippon Suisan	1st ship built by Nagasaki Shipyard 1970 Investment in kind to W.I.F. Renamed UDANG NO.7
Hirado Maru	94.71	1959	Completed	Nippon Suisan	Nagasaki Shipyard 1970 Investment in kind to W.I.F. Renamed UDANG NO.8
Seto Maru	99.07	1959	Completed	Nippon Suisan	Nagasaki Shipyard 1970 Investment in kind to W.I.F. Renamed UDANG NO.11
Mie Maru	99.01	1959	Completed	Nippon Suisan	Nagasaki Shipyard 1970 Investment in kind to W.I.F. Renamed UDANG NO.12
Oshima Maru	95	1960	Completed	Nippon Suisan	Nagasaki Shipyard 1971 Sold
Aishima Maru	95	1960	Completed	Nippon Suisan	Nagasaki Shipyard 1971 Sold
Tenzan Maru	98.12	1960	Completed	Nippon Suisan	Nagasaki Shipyard 1970 To Nanpo Gyogyo Kaihatsu
Manzan Maru	98.21	1960	Completed	Nippon Suisan	Nagasaki Shipyard 1970 To Nanpo Gyogyo Kaihatsu
Atago Maru	94	1961	Launched	Nippon Suisan	Nagasaki Shipyard 1972 Sold
Yasaka Maru	94	1961	Launched	Nippon Suisan	Nagasaki Shipyard 1972 Sold
Hokoku Maru No.1	98.30	1961	Completed	Hokoku Suisan	Donoumi Zosen 1968 Investment in kind to N.R.P.
Hokoku Maru No.2	98.35	1961	Completed	Hokoku Suisan	Donoumi Zosen 1968 Investment in kind to N.R.P.
Kunimi Maru	94	1961	Launched	Nippon Suisan	Nagasaki Shipyard 1969 Investment in kind to N.R.P.
Takami Maru	94	1961	Launched	Nippon Suisan	Nagasaki Shipyard 1969 Investment in kind to N.R.P.
Tamae Maru	94	1962	Completed	Nippon Suisan	Nagasaki Shipyard
Irie Maru	94	1962	Completed	Nippon Suisan	Nagasaki Shipyard
Hokoku Maru No.6	109.54	1962	Launched	Hokoku Suisan	Donoumi Zosen 1968 Investment in kind to N.R.P.
Hokoku Maru No.7	109.69	1962	Launched	Hokoku Suisan	Donoumi Zosen 1968 Investment in kind to N.R.P.
Suwa Maru	119.88	1963	Bought	Nippon Suisan	From Hokuyo Suisan (formerly Koshin Maru No.1) 1971 Sold
Ise Maru	119.78	1963	Bought	Nippon Suisan	From Hokuyo Suisan (formerly Koshin Maru No.2) 1971 Sold
Tokiwa Maru	94	1963	Completed	Nippon Suisan	Nagasaki Shipyard
Onoe Maru	94	1963	Completed	Nippon Suisan	Nagasaki Shipyard
Nikko Maru	115.83	1963	Completed	Nippon Suisan	Donoumi Zosen 1969 Investment in kind to N.R.P.
Gekko Maru	115.77	1963	Completed	Nippon Suisan	Donoumi Zosen 1969 Investment in kind to N.R.P.
Ose Maru	114	1964	Completed	Nippon Suisan	Nagasaki Shipyard
Shirase Maru	114	1964	Completed	Nippon Suisan	Nagasaki Shipyard
Hashima Maru	114	1964	Completed	Nippon Suisan	Nagasaki Shipyard
Takashima Maru	114	1964	Completed	Nippon Suisan	Nagasaki Shipyard
Koshin Maru No.8	110	1964	Completed	Hokuyo Suisan	Nagasaki Shipyard
Hizen Maru	115	1965	Completed	Nippon Suisan	Nagasaki Shipyard
Higo Maru	115	1965	Completed	Nippon Suisan	Nagasaki Shipyard
Heiyo Maru	114.82	1965	Completed	Nippon Suisan	Wakamatsu Zosen
Anyo Maru	114.62	1965	Completed	Nippon Suisan	Wakamatsu Zosen
Hoyo Maru	168	1966	Completed	Nippon Suisan	Wakamatsu Zosen
Fuyo Maru	168	1966	Completed	Nippon Suisan	Wakamatsu Zosen
Yuyo Maru	168	1966	Completed	Nippon Suisan	Nagasaki Shipyard
Hiyo Maru	168	1966	Completed	Nippon Suisan	Nagasaki Shipyard
Meiyo Maru	184.79	1967	Completed	Nippon Suisan	Wakamatsu Zosen Investment in kind to W.I.F. Renamed UDANG NO.17
Royo Maru	184.61	1967	Completed	Nippon Suisan	Wakamatsu Zosen 1971 Sank in E.China Sea
Koyo Maru	185.35	1967	Completed	Nippon Suisan	Nagasaki Shipyard
Ryuyo Maru	185	1967	Completed	Nippon Suisan	Nagasaki Shipyard 1980 Sank in Bering Sea

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Oyo Maru	194.65	1967	Completed	Nippon Suisan	Nagasaki Shipyard
Eiyo Maru	194.88	1967	Completed	Nippon Suisan	Nagasaki Shipyard
Shoyo Maru	184.48	1967	Completed	Nippon Suisan	Wakamatsu Zosen
Kiyo Maru	184.68	1967	Completed	Nippon Suisan	Wakamatsu Zosen
Wayo Maru	194.91	1969	Completed	Nippon Suisan	Wakamatsu Zosen 1986 Sold for scrap
Junyo Maru	194.55	1969	Completed	Nippon Suisan	Wakamatsu Zosen 1986 Sold for scrap
Yashima Maru	194.46	1969	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Transferred to Nikko Fisheries
Tsushima Maru	197.25	1969	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Transferred to Nikko Fisheries
Shunyo Maru	194.73	1969	Completed	Nippon Suisan	Wakamatsu Zosen
Rakuyo Maru	194.42	1969	Completed	Nippon Suisan	Wakamatsu Zosen
Kakuyo Maru No.1	194	1969	Launched	Hokuyo Suisan	Nagasaki Shipyard
Kakuyo Maru No.2	194	1969	Launched	Hokuyo Suisan	Nagasaki Shipyard
Kakuyo Maru No.3	194	1969	Launched	Hokuyo Suisan	Nagasaki Shipyard
Kakuyo Maru No.5	194	1969	Launched	Hokuyo Suisan	Nagasaki Shipyard
Katori Maru	194.69	1970	Completed	Nippon Suisan	Nagasaki Shipyard 1989 Sold
Kazuki Maru	194.66	1970	Completed	Nippon Suisan	Nagasaki Shipyard 1989 Sold
Kakuyo Maru	194.21	1970	Completed	Nippon Suisan	Wakamatsu Zosen 1986 Sold for scrap
Fukuyo Maru	193.25	1970	Completed	Nippon Suisan	Wakamatsu Zosen 1986 Sold for scrap
Aoba Maru	194.76	1970	Completed	Nippon Suisan	Nagasaki Shipyard
Wakaba Maru	194.97	1970	Completed	Nippon Suisan	Nagasaki Shipyard
Shuyo Maru	193.97	1970	Completed	Nippon Suisan	Wakamatsu Zosen
Eiyo Maru	193.10	1970	Completed	Nippon Suisan	Wakamatsu Zosen
Mizuho Maru	194.27	1970	Completed	Nippon Suisan	Nagasaki Shipyard
Akiho Maru	194.23	1970	Completed	Nippon Suisan	Nagasaki Shipyard
Hokkai Maru	214.77	1971	Completed	Nippon Suisan	Nagasaki Shipyard 1990 Sold
Hakurei Maru	214.77	1971	Completed	Nippon Suisan	Nagasaki Shipyard 1990 Sold
Otowa Maru	214.65	1971	Completed	Nippon Suisan	Wakamatsu Zosen 1988 Sold
Kureha Maru	214.67	1971	Completed	Nippon Suisan	Wakamatsu Zosen 1988 Sold
Hokushin Maru	214.70	1971	Completed	Nippon Suisan	Nagasaki Shipyard
Hokuto Maru	214.37	1971	Completed	Nippon Suisan	Nagasaki Shipyard
Kakuyo Maru No.7	199.00	1971	Launched	Hokuyo Suisan	Nagasaki Shipyard
Kakuyo Maru No.8	199.00	1971	Launched	Hokuyo Suisan	Nagasaki Shipyard
Washima Maru	204.86	1972	Completed	Nippon Suisan	Wakamatsu Zosen
Toyoshima Maru	204.53	1972	Completed	Nippon Suisan	Wakamatsu Zosen
Suwa Maru	134.91	1973	Completed	Nippon Suisan	Nagasaki Shipyard
Ise Maru	134.33	1973	Completed	Nippon Suisan	Nagasaki Shipyard
Atago Maru	134.84	1974	Completed	Nippon Suisan	Nagasaki Shipyard
Yasaka Maru	134.32	1974	Completed	Nippon Suisan	Nagasaki Shipyard
Seto Maru	134.74	1974	Completed	Nippon Suisan	Nagasaki Shipyard
Mie Maru	134.11	1974	Completed	Nippon Suisan	Nagasaki Shipyard
Ose Maru	135.07	1976	Completed	Nippon Suisan	Wakamatsu Zosen
Shirase Maru	135.10	1976	Completed	Nippon Suisan	Wakamatsu Zosen
Dejima Maru	134.72	1976	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Hirado Maru	134.58	1976	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Katsuyama Maru	139.74	1977	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Shiroyama Maru	139	1977	Completed	Nippon Suisan	Nagasaki Shipyard Sank while operating in west-water fishing grounds
Tateyama Maru	149.43	1977	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Nishiyama Maru	149.39	1977	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Kakuyo Maru No.11	149	1978	Launched	Hokuyo Suisan	Nagasaki Shipyard
Kakuyo Maru No.12	149	1978	Launched	Hokuyo Suisan	Nagasaki Shipyard
Matsuyama Maru	139.59	1978	Completed	Nippon Suisan	Nagasaki Shipyard Consort ship of Katsuyama Maru 1988 Sold to Nikko Fisheries 1993 Bought by Nippon Suisan 1998 Sold to W.I.F. Renamed UDANG NO.53

Name	Tonnage	Completed/Launched/Bought/Chartered, etc.	Operator	Remarks	
Nikko Maru	155	1986	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Yoko Maru	155	1986	Completed	Nippon Suisan	Nagasaki Shipyard 1988 Sold to Nikko Fisheries
Kakuyo Maru No.17	165	1986	Completed	Hohsui	Nagasaki Shipyard 1989 Sold to Nikko Fisheries Renamed Eko Maru
Kakuyo Maru No.18	165	1986	Completed	Hohsui	Nagasaki Shipyard 1989 Sold to Nikko Fisheries Renamed Meiko Maru
Wako Maru	164	1989	Completed	Nikko Fisheries	Nagasaki Shipyard
Eiko Maru	164	1989	Completed	Nikko Fisheries	Nagasaki Shipyard

Shrimp trawlers

Name	Tonnage	Completed/Launched/Bought/Chartered, etc.	Operator	Remarks	
Kachidoki Maru No.1	98	1968	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.2	98	1968	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.3	98	1968	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.5	98	1968	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.6	98	1968	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
(* Kashii Maru	362.16	1968	Bought	N.R.P.	From Nippon Suisan 1970 Transferred to W.I.F.
(* Hokoku Maru No.1	98.3	1968	Bought	N.R.P.	From Nippon Suisan 1974 Sold
(* Hokoku Maru No.2	98.35	1968	Bought	N.R.P.	From Nippon Suisan 1974 Sold
(* Hokoku Maru No.6	109.54	1968	Bought	N.R.P.	From Nippon Suisan 1974 Sold
(* Hokoku Maru No.7	109.69	1968	Bought	N.R.P.	From Nippon Suisan 1974 Sold
(* Kunimi Maru	94	1968	Bought	N.R.P.	From Nippon Suisan 1972 Sold
(* Takami Maru	94	1968	Bought	N.R.P.	From Nippon Suisan 1972 Sold
(* Nikko Maru	115.83	1969	Bought	N.R.P.	From Nippon Suisan
(* Gekko Maru	115.77	1969	Bought	N.R.P.	From Nippon Suisan
(* AMAN NO.1	109.37	1970	Transferred	I.M.P.	(formerly Iki Maru)
(* AMAN NO.2	109.37	1970	Transferred	I.M.P.	(formerly Tsushima Maru)
N.R.ANSON	124.2	1970	Completed	N.R.P.	ASI (Western Australia)
N.R.BUCKINGHAM	124.2	1970	Completed	N.R.P.	ASI
N.R.CASTLEREAGH	124.2	1970	Completed	N.R.P.	ASI
N.R.DIEMEN	124.2	1970	Completed	N.R.P.	ASI 1974 Sank in a cyclone
(* UDANG NO.1	396.51	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Kashii Maru)
(* UDANG NO.2	301.01	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Izumo Maru)
(* UDANG NO.3	300.21	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Kawachi Maru)
(* UDANG NO.5	106.47	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Fukuma Maru)
(* UDANG NO.6	106.45	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Akama Maru)
(* UDANG NO.7	94.8	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Dejima Maru)
(* UDANG NO.8	94.71	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Hirado Maru)
(* UDANG NO.11	99.07	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Seto Maru)
(* UDANG NO.12	99.01	1970	Transferred	W.I.F.	From Nippon Suisan (formerly Mie Maru)
(* UDANG NO.15	106.75	1971	Transferred	W.I.F.	From Nippon Suisan (formerly Shinyo Maru)
(* UDANG NO.16	106.75	1971	Transferred	W.I.F.	From Nippon Suisan (formerly Takuyo Maru)
(* UDANG NO.17	184.79	1971	Transferred	W.I.F.	From Nippon Suisan (formerly Meiyo Maru)
AMAN NO.3	97	1971	Bought	I.M.P.	Built by Yokohama Yacht in 1971
AMAN NO.5	99.44	1971	Completed	I.M.P.	Wakamatsu Zosen
N.R.ESSINGTON	184.94	1971	Completed	N.R.P.	ASI
UDANG NO.21	133.13	1972	Completed	W.I.F.	Wakamatsu Zosen 2006 Sold for scrap
UDANG NO.22	133.13	1972	Completed	W.I.F.	Wakamatsu Zosen 2006 Sank (damaged by fire)
Kachidoki Maru No.7	98	1972	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.8	98	1972	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
Kachidoki Maru No.10	98	1972	Launched	Hokoku Suisan	South America north coast shrimp trawl fisheries
N.R.FRANCIS	184.94	1972	Completed	N.R.P.	ASI
N.R.GLYDE	184.94	1972	Completed	N.R.P.	ASI

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
N.R.HARRIS	184.94	1972	Completed	N.R.P. ASI
N.R.JUNCTION	202.3	1972	Completed	N.R.P. ASI
N.R.KENDALL	202.3	1973	Completed	N.R.P. ASI 1974 Sank in a cyclone
N.R.LIVERPOOL	202.3	1973	Completed	N.R.P. ASI
N.R.MITCHELL	202.3	1973	Completed	N.R.P. ASI
UDANG NO.23	157.53	1973	Completed	W.I.F. Wakamatsu Zosen 2006 Sold for scrap
UDANG NO.25	157.49	1973	Completed	W.I.F. Wakamatsu Zosen 2006 Sold for scrap
UDANG NO.26	157.55	1973	Completed	W.I.F. Wakamatsu Zosen 2006 Sold for scrap
N.R.NASSAU	219.88	1974	Completed	N.R.P. ASI Sold to W.I.F.
N.R.ORD	219.88	1974	Completed	N.R.P. ASI Sold to W.I.F.
N.R.PALMER	219.88	1974	Completed	N.R.P. ASI
N.R.ROBINSON	219.88	1974	Completed	N.R.P. ASI Sold to W.I.F.
N.R.SHOAL	143.42	1974	Completed	N.R.P. ASI
N.R.TASMAN	143.42	1974	Completed	N.R.P. ASI
UDANG NO.27	169.56	1974	Completed	W.I.F. Wakamatsu Zosen 2007 Sold for scrap
UDANG NO.28	169.56	1974	Completed	W.I.F. Wakamatsu Zosen
AMAN NO.8	157	1974	Completed	I.M.P. Nagasaki Shipyard
AMAN NO.10	157	1974	Completed	I.M.P. Nagasaki Shipyard
(* UDANG NO.35	147.79	—	Transferred	W.I.F. From N.R.P. (formerly N.R.ORD)
(* UDANG NO.36	147.79	—	Transferred	W.I.F. From N.R.P. (formerly N.R.NASSAU)
(* UDANG NO.37	147.79	—	Transferred	W.I.F. From N.R.P. (formerly N.R.ROBINSON)
AMAN NO.11	150	1981	Completed	I.M.P. Nagasaki Shipyard
AMAN NO.12	150	1981	Completed	I.M.P. Nagasaki Shipyard
AMAN NO.16	105	1993	Bought	I.M.P. From P.T.TOFICO 1970 Built by Yokohama Yacht (formerly TOYO 7)
AMAN NO.18	124.69	1993	Bought	I.M.P. From P.T.TOFICO 1970 Built by Usuki Zosen (formerly TOYO 20)
(* RUMBATI NO.1	340.99	1970	Bought	I.M.P. From Nippon Suisan (formerly Yamashiro Maru)
(* RUMBATI NO.2	298.73	1970	Bought	I.M.P. From Nippon Suisan (formerly Hyuga Maru)
RUMBATI NO.3	194.2	—	—	I.M.P. formerly Kinya Maru
(* UDANG NO.53	154.09	1998	Bought	W.I.F. From Nippon Suisan (formerly Matsuyama Maru) 2006 Sold for scrap
TOYO 5	105.13	1993	Bought	I.M.P. From P.T.TOFICO
TOYO 8	104.25	1993	Bought	I.M.P. From P.T.TOFICO
TOYO 18	124.69	1993	Bought	I.M.P. From P.T.TOFICO

Whaling mother ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks
(* Hashidate Maru	10,798	1946	Converted	Nippon Suisan Former tanker 1951 Sold to Iino Kaiun
Kaiko Maru	2,940.67	1948	Completed	Nippon Suisan Operated by Ogasawara Hogeï (launched 1946)
(* Tonan Maru	19,308.15	1951	Converted	Nippon Suisan Former Tonan Maru III floated in March, towed and converted (Harima Zosen, Aioi) 1971 Sold for scrap
(* Matsushima Maru	13,792.83	1956	Converted	Nippon Suisan Tanker converted to whaling mother ship 1957 Renamed Tonan Maru II
(* Tonan Maru II	13,815.83	1957	Renamed	Nippon Suisan (formerly Matsushima Maru) 1971 Main engine replaced 1976 Transferred to Nihon Kyodo Hogeï
Nichiei Maru	12,918	1964	Bought	Nippon Suisan (formerly Nitto Maru) (Nitto Hogeï purchased Blommendahl) 1966 Sold for scrap

Crab factory ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Токеи Мару	5,385.66	1955	Bought	Nippon Suisan	(launched 1919) 1965 Sank off Manila
Shokyu Maru	5,988.55	1956	Bought/ converted	Nippon Suisan	From Matsuoka Kisen (built 1919)
Yoko Maru	5,763.62	1956	Bought	Nippon Suisan	From Nippon Kisen (launched 1928) 1964 Sold for scrap
Keiko Maru	7,516.88	1966	Bought	Nippon Suisan	Cargo ship Kyowa Maru (completed 1950) converted to factory ship
(* Eihei Maru	1,428	1968	Change of use	Hokoku Suisan	From a longline vessel
(* Eiho Maru	1,281	1969	Bought	Hokoku Suisan	From a transporter
(* Eitan Maru	498	1972	Change of use	Hokoku Suisan	From a longline vessel
GALAXY	1,326	1976	Bought	DUTCH HARBOR SEAFOODS	1997 Sold
VICEROY	1,300	1977	Bought	DUTCH HARBOR SEAFOODS	1987 Sold
OMNISEA	4,948	1985	Bought	DUTCH HARBOR SEAFOODS	Factory ships 2002 Sold

Freezer factory ships, factory ships

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Tadotsu Maru	9,877.14	1946	Bought/ converted	Nippon Suisan	Kawasaki Heavy Inds. Tanker converted to salting carrier
Settsu Maru	9,329.06	1947	Bought	Nippon Suisan	Hitachi Zosen 1947 Converted to salting carrier 1948 Converted to freezer ship
Hoyo Maru	14,111	1951	Launched	Hokuyo Suisan	
Miyajima Maru	9,598.76	1953	Completed	Nippon Suisan	Hitachi Zosen 1968 Converted (8,285.82 tons) 1984 Sold for scrap
Itsukushima Maru	5,889.18	1955	Completed	Hokoku Suisan	Hitachi Zosen 1966 Sold to Nippon Suisan 1977 Sold
Kashima Maru	7,163.2	1956	Completed	Nippon Suisan	Hitachi Zosen 1970 Hull extended by 12m 1988 Sold for scrap
Nojima Maru	8,815.02	1958	Completed	Nippon Suisan	Hitachi Zosen 1993 Sold for scrap
(* Gyokuei Maru	10,181.01	1960	Converted	Nippon Suisan	To a meal factory ship Contributed to development of surimi production at sea 1975 Sold for scrap
Shikishima Maru	9,176.09	1961	Completed	Nippon Suisan	Hitachi Zosen 1967 Surumi equipment added 1988 Sold for scrap
Takashima Maru	9,856.56	1962	Completed	Hokoku Suisan	Substitute for Kashima Maru 1965 Sold to Nichiro Gyogyo
(* Kazushima Maru	3,757	1967	Bought/built	Nippon Suisan	Converted to two-tier deck 1979 Sold
Mineshima Maru	21,050.99	1969	Bought/ converted	Nippon Suisan	Tanker Omimesan Maru (launched 1958) converted to surimi factory ship 1989 Sold for scrap
Miyajima Maru	6,370	1986	Completed	Nippon Suisan	Hitachi Zosen Surimi factory ship 1988 Converted to trawler

Tankers, ore transporters

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Gyokuei Maru	10,181.01	1948	Bought/ converted	Nippon Suisan	Mitsubishi Heavy Inds. Yokohama Tanker converted to Antarctic whaling tanker
Matsushima Maru	13,792.83	1951	Completed	Nippon Suisan	Hitachi Zosen 1956 Converted to whaling mother ship
(* Tadotsu Maru	9,877.14	1951	Converted	Nippon Suisan	Salting carrier converted to tanker 1956 Main engine converted to diesel 1962 Sold
Matsushima Maru (II)	13,103.36	1957	Completed	Nippon Suisan	Hitachi Zosen 1977 Sold for scrap
Matsushima Maru II	29,049.14	1962	Completed	Nippon Suisan	Kure Shipyard 1979 Sold for scrap
Andesu Maru	32,068.08	1962	Completed	Nippon Suisan	Ishikawajima Harima, Aioi 1967 Deck crane added 1979 Sold for scrap
Matsushima Maru III	46,226.53	1964	Completed	Nippon Suisan	Ishikawajima Harima, Aioi 1967 Converted 1977 Damaged by fire off Muroto, irrecoverable
Nippon Maru	53,751.59	1967	Completed	Nippon Suisan	Ishikawajima Harima, Aioi 1982 Sold for scrap
Sachikaze Maru	2,907.42	1969	Completed	Nippon Suisan	Setoda Zosen Meal and oil transporter 1985 Sold for scrap

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Suzukaze Maru	2,930.6	1970	Completed	Nippon Suisan	Naikai Zosen, Taguma Meal and oil transporter 1985 Sold for scrap
Nippon Maru III	89,498.11	1971	Completed	Nippon Suisan	Ishikawajima Harima, Kure Ore/oil combination carrier 1986 Sold for refurbishment
Amazon Maru	85,690.3	1976	Completed	Nippon Suisan	Ishikawajima Harima, Aioi Ore/oil combination carrier 1987 Sold to Israel
Nachi Maru	49,974.05	1980	Completed	Nissui Shipping	1987 Sold for refurbishment
Mazeran Maru	88,286	1986	Completed	Nissui Shipping	Ishikawajima Harima, Kure Ore/coal combination carrier 2000 Sold to Greece for refurbishment

Refrigerating & freezing transporters

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Nichibei Maru No.2	357.05	1946	Completed	Nippon Suisan	1952 Renamed Miyaji Maru
Hokoku Maru No.66	98.29	1947	Completed	Hokoku Suisan	Hitachi Zosen Fish catch transporter
Hokoku Maru No.71	98.9	1947	Launched	Hokoku Suisan	Hitachi Zosen Fish catch transporter 1951 Sold to Nippon Suisan Renamed Heiyo Maru
Hokoku Maru No.73	98	1947	Launched	Hokoku Suisan	Hitachi Zosen Fish catch transporter
Hokoku Maru No.68	98.9	1948	Completed	Hokoku Suisan	Hitachi Zosen Fish catch transporter
Kuroshio Maru No.1	180	1949	Bought	Nippon Suisan	From Terukuni Kaiun 1956 Sold
Kuroshio Maru No.2	180	1949	Bought	Nippon Suisan	From Terukuni Kaiun 1956 Sold
Sagami Maru	5,589	1951	Completed	Nippon Suisan	
Eiko Maru	1,140.43	1953	Launched	Nippon Suisan	Harima Zosen, Aioi Refrigerator ship 1965 Sold for refurbishment
Tsukishima Maru	1,170.19	1956	Completed	Tokyo Teion	Enzan Senkyo
Meiko Maru	1,177.42	1956	Completed	Nippon Suisan	1966 Sold
Kasagi Maru	1,502	1957	Completed	Nippon Suisan	1966 Sold
(*) Yoshino Maru	695	1961	Converted	Nippon Suisan	Converted from a longline vessel 1968 Sold
Nanko Maru	1,696.57	1961	Completed	Nippon Suisan	Hitachi Zosen 1979 Sold for scrap
Hokko Maru	1,697.12	1961	Completed	Nippon Suisan	Hitachi Zosen 1977 Sold for refurbishment
Toko Maru	1,695.56	1961	Completed	Nippon Suisan	Ishikawajima Harima, Aioi 1977 Sold for refurbishment
Seiko Maru	1,692.88	1961	Completed	Nippon Suisan	Ishikawajima Harima, Aioi 1977 Sold for refurbishment
Asakaze Maru	2,816.05	1967	Bought	Nippon Suisan	Miho Shipyard 1984 Sold for scrap
Kazushima Maru	3,757.1	1967	Completed	Hokoku Suisan	NKK, Shimizu From Hohsui 1979 Sold
Harukaze Maru	2,815.91	1968	Completed	Nippon Suisan	Miho Shipyard 1984 Sold for scrap
Matsukaze Maru	2,899.92	1971	Completed	Nippon Suisan	Naikai Zosen 1986 Sold for refurbishment
Soyokaze Maru	2,907.71	1972	Completed	Nippon Suisan	Naikai Zosen 1989 Sold
Isokaze Maru	3,730.58	1973	Completed	Nippon Suisan	Naikai Zosen 1993 Sold for refurbishment
Asama Maru	8,371.89	1978	Completed	Nippon Suisan	1986 Sold for refurbishment
Ikoma Maru	8,369	1979	Completed	Nippon Suisan	1986 Sold for refurbishment
Suruga Maru	4,846	1979	Completed	Nippon Suisan	2004 Sold for refurbishment
Sagami Maru	5,589	1986	Completed	Nissui Senpaku	1989 Sold for refurbishment
SANTIAGO I	7,534	1993	Completed	Nissui Shipping	2004 Sold
White Castle	6,557	2003	Bought	Fresh Carriers	From Tokyo Reefer Chartering

Offshore trawlers, longline vessels, squid angling vessels, bonito fishing boats, round haul net vessels, purse seine vessels, dockside transporters

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Hokoku Maru No.16	98.00	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.17	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.18	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.20	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.21	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.22	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Hokoku Maru No.23	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Hokoku Maru No.25	99.80	1947	Completed	Hokoku Suisan	Bonito and tuna fishing boat
Keiura Maru	204.43	1951	Bought	Nippon Suisan	From Kawanami Kogyo
Eisei Maru	308.03	1953	Completed	Hokoku Suisan	
Eitai Maru	457	1954	Completed	Hokoku Suisan	Longline vessel
Hokko Maru No.5	70.97	1954	Completed	Hokko Gyogyo	Danish seine fishing boat Investment in kind to Aurora Austr (Argentina)
Eisho Maru	1,049.61	1956	Completed	Hokoku Suisan	Longline vessel 1968 Sold
Shirashima Maru	31.64	1957	Launched	Nippon Suisan	Donoumi Zosen Tugboat (Tobata) 1974 Sold
Hokko Maru No.18	74	1957	Launched	Hokko Gyogyo	Offshore trawler
Yoshino Maru	695	1958	Bought	Nippon Suisan	Kanasashi Shipyard 1959 To Argentine tuna business 1961 Converted to transporter
Eiryu Maru	1,283.93	1959	Completed	Hokoku Suisan	Longline vessel
Eikyu Maru	679.95	1959	Completed	Hokoku Suisan	Longline vessel
Eio Maru	1,282.9	1960	Completed	Hokoku Suisan	NKKShimizu Longline vessel 1969 Converted to transporter
Eiho Maru	1,281.78	1960	Completed	Hokoku Suisan	NKKShimizu Longline vessel 1969 Converted to transporter
Eiko Maru	309.77	1961	Launched	Hokoku Suisan	Longline vessel 1975 Sold to Modena (Indonesia)
Eishin Maru	1,494.78	1961	Completed	Hokoku Suisan	Longline vessel
Eitan Maru	498	1961	Launched	Hokoku Suisan	Longline vessel
Eimei Maru	544	1962	Launched	Hokoku Suisan	Kanasashi Shipyard Longline vessel 1969 Converted to transporter
Eikei Maru	1,498	1962	Launched	Hokoku Suisan	Longline vessel
Eihei Maru	1,428	1962	Launched	Hokoku Suisan	Longline vessel
Hokko Maru No.5	70	1963	Completed	Hokko Gyogyo	Offshore trawler
Hatsutori Maru	192.36	1967	Launched	Hokoku Suisan	Bonito ship
Hokko Maru No.3	96	1967	Launched	Hokko Gyogyo	Offshore trawler
Tsukuba Maru	344.78	1968	Launched	Hokoku Suisan	Gill net, longline
Hatsutori Maru No.5	254	1970	Launched	Hokoku Suisan	Bonito ship
Hatsutori Maru No.6	59	1971	Launched	Hokoku Suisan	Bonito ship
Hatsutori Maru No.7	69	1973	Launched	Hokoku Suisan	Bonito ship
Hokko Maru No.7	98	1973	Launched	Hokko Gyogyo	Offshore trawler
Hatsutori Maru No.2	79	1974	Launched	Hokoku Suisan	Nagasaki Shipyard Bonito ship
Hatsushima Maru No.3	79	1974	Launched	Hokoku Suisan	Nagasaki Shipyard Bonito ship
Hokko Gyogyo No.27	96	1978	Launched	Hokko Gyogyo	Offshore trawler
Hokko Gyogyo No.107	99	1979	Launched	Hokko Gyogyo	Offshore trawler
Hokko Gyogyo No.37	96	1981	Launched	Hokko Gyogyo	Offshore trawler
Hatsutori Maru No.8	99.36	1981	Launched	Hokoku Suisan	Bonito ship
Hokko Maru No.177	349	1988	Launched	Hokko Gyogyo	Squid angling, golden king crab single-vessel operation 1995 Sold
HUMBOLDT	224.71	1989	Transferred	SOCALPI	Longline vessel (formerly Fukuju Maru No.28) Tuna ship

Today (as of December 2010)

Trawlers

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
COALSA SEGUNDO	1,929	2001	Grouping	SEALORD	SEALOAD SOUTH AMERICA (Argentina)
BEAGLE I	898	2001	Grouping	SEALORD	SEALOAD SOUTH AMERICA (Argentina)
AORAKI	2,926	2001	Grouping	SEALORD	
OTAKOU	799	2001	Grouping	SEALORD	
TAIMANIA	799	2001	Grouping	SEALORD	
THOMAS HARRISON	1,048	2001	Grouping	SEALORD	
REHUA	2,483	2001	Grouping	SEALORD	
FRIOSUR X	903	1996	Grouping	PESQUERA FRIOSUR	WET FISH TRAWLER
FRIOSUR IX	930	1996	Grouping	PESQUERA FRIOSUR	WET FISH TRAWLER
FRIOSUR VIII	930	1996	Grouping	PESQUERA FRIOSUR	WET FISH TRAWLER
DON ENRIQUE	930	1996	Grouping	PESQUERA FRIOSUR	WET FISH TRAWLER
OCEAN DAWN	1,900	2003	Grouping	PESQUERA FRIOSUR	FACTORY TRAWLER
(*) UNZEN	2,985.48	1989	Bought	EMDEPES	From Nippon Suisan (formerly Unzen Maru)
(*) UNIONSUR	4,991	2003	Renamed	EMDEPES	From Nippon Suisan (formerly Koyo Maru No.8, previously UNIONSUR1)
(*) ECHIZEN MARU	2,802	1995	Bought	PESANTAR	From Nippon Suisan (formerly Echizen Maru)
ESPERANZA DEL SUR	3,694	2010	Bought	PESANTAR	
(*) VIENTO DEL SUR	3,110	2000	Renamed	PESPASA	(formerly Shinkai Maru)
STARLITE	192	2004	Bought	STAR PARTNERS	From ALEUTIAN SPRAY FISHERIES
STARWARD	197	2004	Bought	STAR PARTNERS	From ALEUTIAN SPRAY FISHERIES
ALASKA OCEAN	7,419	2002	Grouping	ALASKA OCEAN SEAFOOD	ALASKA OCEAN SEAFOOD joins Group
PACIFIC GLACIER	3,124	2008	Grouping	From GLACIERFISH	GLACIER FISH
NORTHERN GLACIER	1,866	2008	Grouping	From GLACIERFISH	GLACIER FISH

Shrimp trawlers

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
UDANG NO.30	169.69	1974	Completed	W.I.F.	Wakamatsu Zosen
UDANG NO.31	169.69	1974	Completed	W.I.F.	Wakamatsu Zosen
UDANG NO.32	193.36	1977	Completed	W.I.F.	Wakamatsu Zosen
UDANG NO.33	180.52	1980	Completed	W.I.F.	Wakamatsu Zosen
UDANG NO.20	190.17	1989	Bought	W.I.F.	From Fujishin (Shizuoka) (formerly Fukuei Maru No.18)
UDANG NO.38	178	1992	Completed	W.I.F.	Built by Kodja Bahari (Indonesia)
UDANG NO.1	129	2007	Bought	W.I.F.	From DEEP SEA FISHING (Australia) (formerly INSPIRATON)
UDANG NO.2	131	2007	Bought	W.I.F.	From DEEP SEA FISHING (Australia) (formerly SUREFIRE)
AMAN NO.6	155	1973	Completed	I.M.P.	Nagasaki Shipyard
AMAN NO.7	155	1973	Completed	I.M.P.	Nagasaki Shipyard
AMAN NO.11	150	1981	Completed	I.M.P.	Nagasaki Shipyard
AMAN NO.12	150	1981	Completed	I.M.P.	Nagasaki Shipyard

Purse seine vessels

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.	Operator	Remarks	
Koyo Maru No.8	135	2008	Grouping	Kyowa Suisan	Purse seine vessel
Koyo Maru No.18	135	2008	Grouping	Kyowa Suisan	Purse seine vessel
Koyo Maru No.28	135	2008	Grouping	Kyowa Suisan	Purse seine vessel
Koyo Maru No.78	349	2008	Grouping	Kyowa Suisan	Purse seine vessel
Koyo Maru No.88	349	2008	Grouping	Kyowa Suisan	Purse seine vessel
Kaiko Maru No.1	62	2008	Grouping	Kyowa Suisan	Exploration vessel

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
Kaiko Maru No.2	85	2008	Grouping	Kyowa Suisan	Exploration vessel
Kaiko Maru No.6	85	2008	Grouping	Kyowa Suisan	Exploration vessel
Kaiko Maru No.7	85	2008	Grouping	Kyowa Suisan	Exploration vessel
Kaiko Maru No.16	85	2008	Grouping	Kyowa Suisan	Exploration vessel
Kaiko Maru No.17	62	2008	Grouping	Kyowa Suisan	Exploration vessel
Kaiko Maru No.23	234	2008	Grouping	Kyowa Suisan	Transporter
Kaiko Maru No.33	316	2008	Grouping	Kyowa Suisan	Transporter
Kaiko Maru No.35	228	2008	Grouping	Kyowa Suisan	Transporter
Kaiko Maru No.36	311	2008	Grouping	Kyowa Suisan	Transporter
Kaiko Maru No.37	230	2008	Grouping	Kyowa Suisan	Transporter
Kaiko Maru No.38	311	2008	Grouping	Kyowa Suisan	Transporter

Longline vessels

Name	Tonnage	Completed/Launched/ Bought/Chartered, etc.		Operator	Remarks
JANAS	1,079	2004	Grouping	PETUNASEALORD	Australian waters
AVRO CHIEFTAIN	1,425	2005	Grouping	PETUNASEALORD	Australian waters
ANTARCTICCHIEFTAIN	1,136	2009	Grouping	PETUNASEALORD	Australian waters
GLACIER BAY	982	2008	Grouping	GLACIER FISH	US Pacific waters
NORTON SOUND	594	2008	Grouping	GLACIER FISH	US Pacific waters

W.I.F.: P.T. West Irian Fishing Industries

N.R.P.: Northern Research Pty., Ltd.

I.M.P.: P.T. Irian Marine Product Development

A.F.D.: Atlantic Fisheries Development Co., Ltd.

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50-Year History of the Harima Shipyard

108-Year History of Ishikawajima Heavy Industries Co., Ltd.

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75-Year History of Hitachi Zosen K.K.

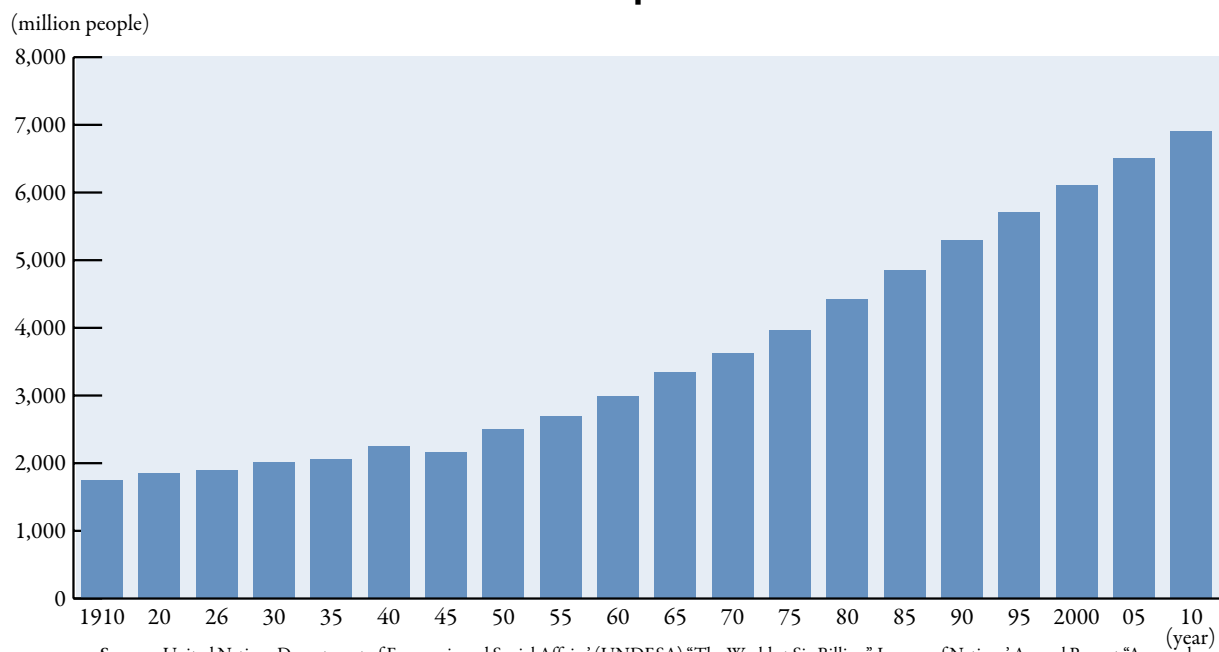
50-Year History of Wakamatsu Zosen

Data Tracing the Navigation of Vessels Lost by Nippon Suisan Companies in the Pacific War, H. Igarashi

In Memory of the Fallen Seamen of Nippon Suisan, T. Koga

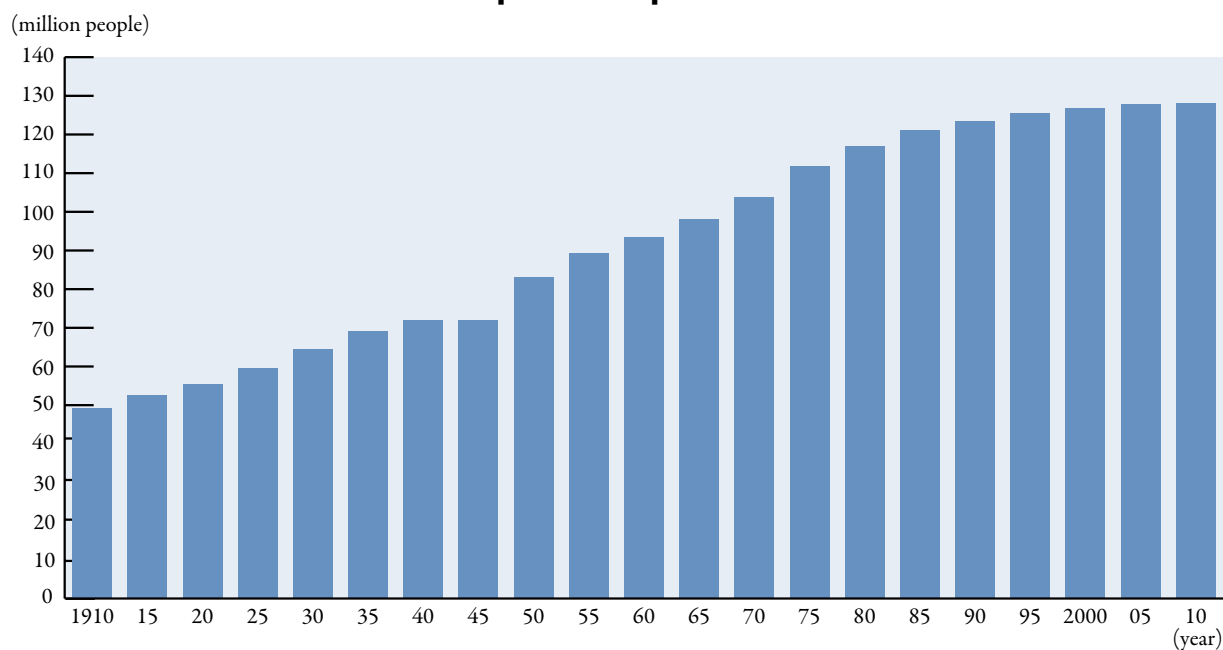
Japan and the World

Global Population



Source: United Nations Department of Economic and Social Affairs' (UNDESA) "The World at Six Billion", League of Nations' Annual Report "Area and Population by Sex for All of the Countries of the World", League of Nations' Annual Report "Statistics Mondiales", League of Nations' "World Population Prospects"

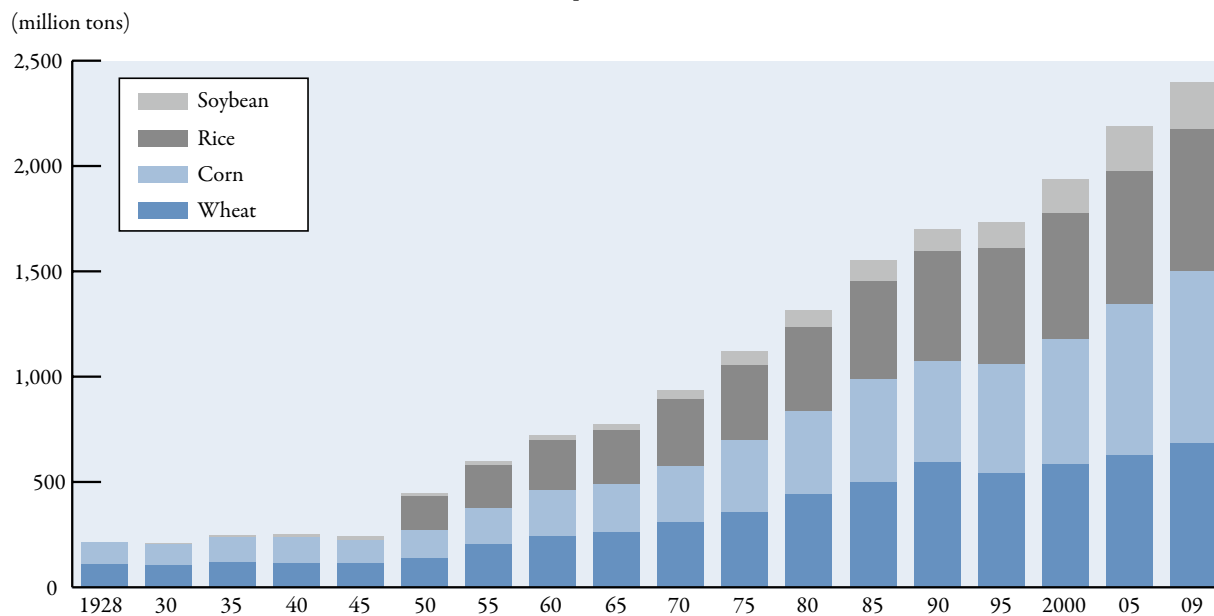
Japanese Population



Source: Ministry of Public Management, Home Affairs, Post and Telecommunications, Statistics Bureau's "Population Census" and "Population Estimates"

*Okinawa not included for period from 1945 to 1970.

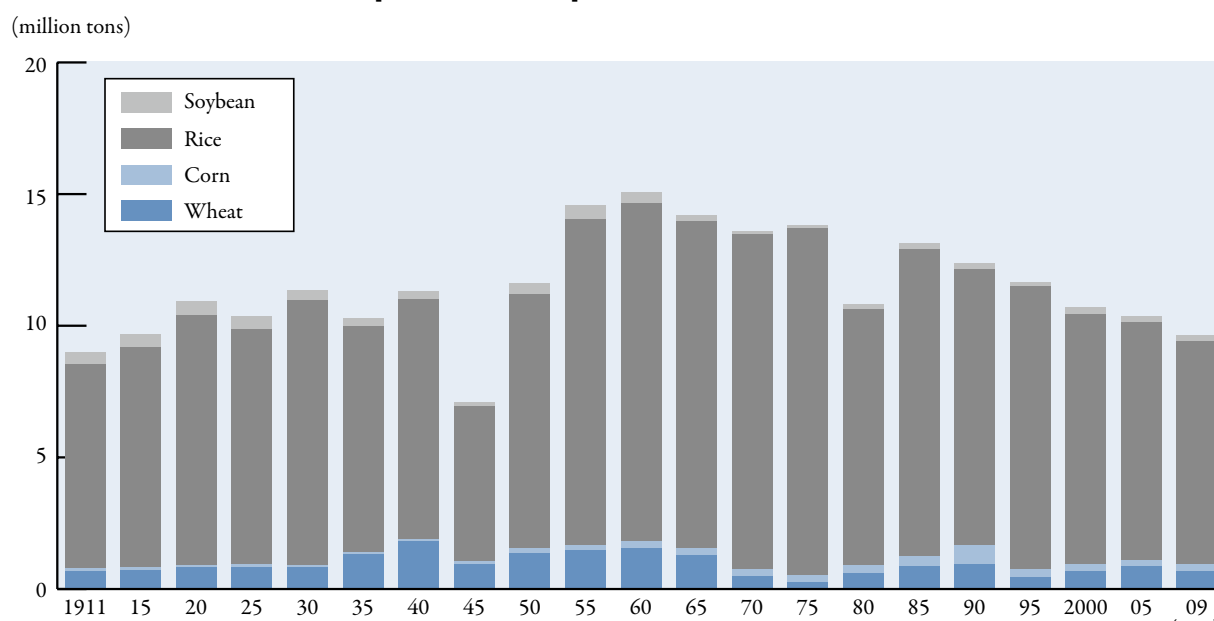
Global Food Staple Production Trends



Source: League of Nations' Annual Report "Agriculture", United Nations' Annual Report "Agriculture" and United Nations' FAOSTAT "Crops Production" (year)

*Soviet Union not included for the years 1935, 1940 and 1945.

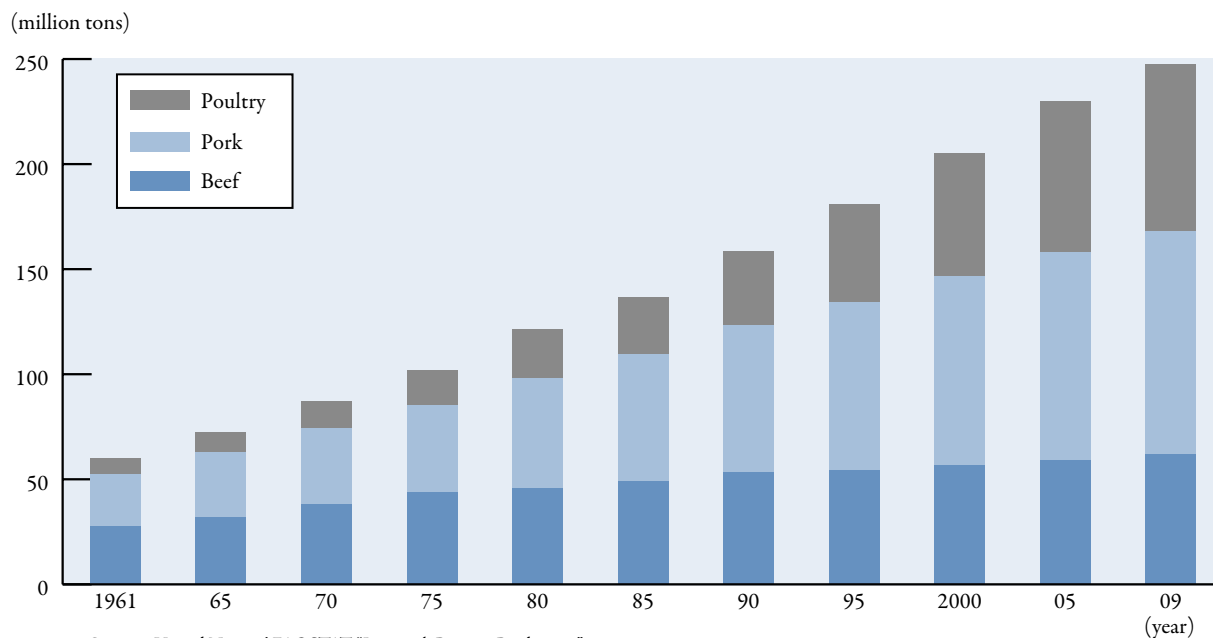
Japan Food Staple Production Trends



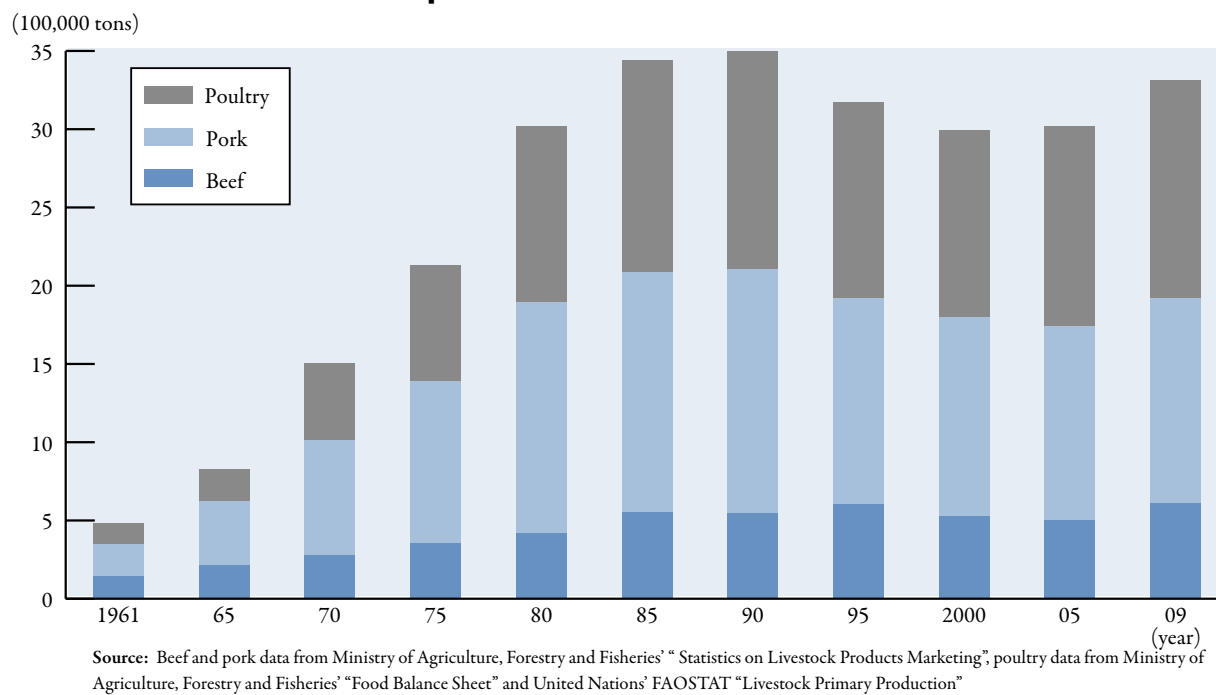
Source: Ministry of Public Management, Home Affairs, Post and Telecommunications, Statistics Bureau's "Historical Statistics of Japan" (Planted Area and Agricultural Production), Ministry of Agriculture, Forestry and Fisheries' "Crop Statistics" and "Vegetable Shipment Statistics", United Nations' FAOSTAT "Crop Production" (year)

*Okinawa not included for period from 1945 to 1970.

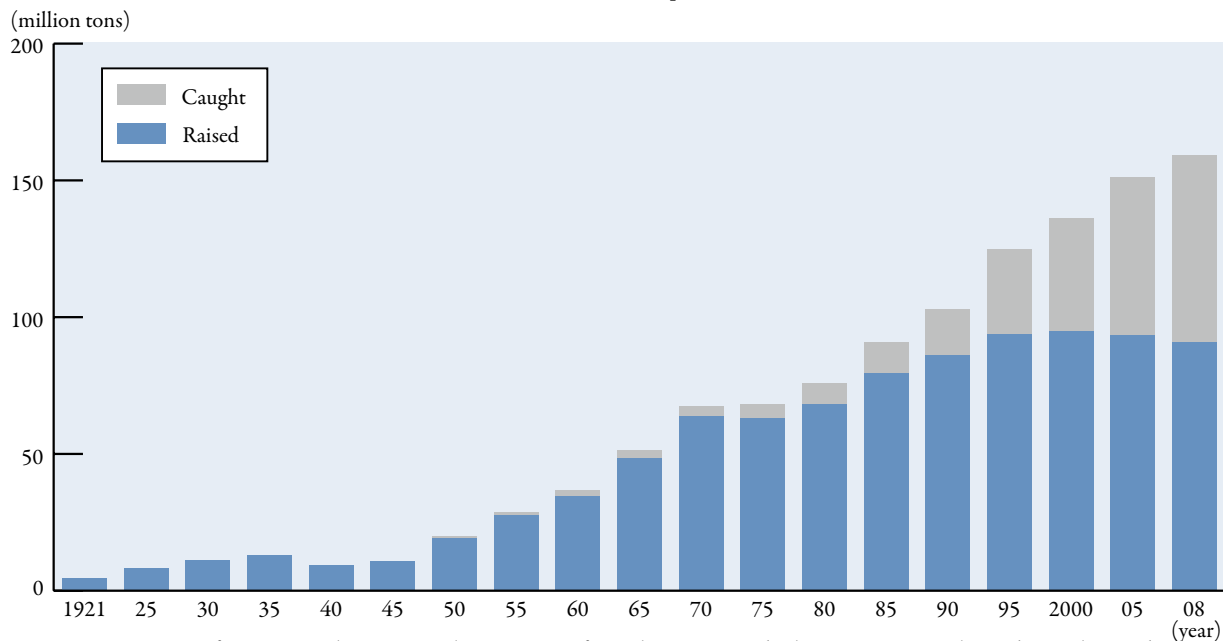
Global Meat Production Trends



Japan Meat Production Trends

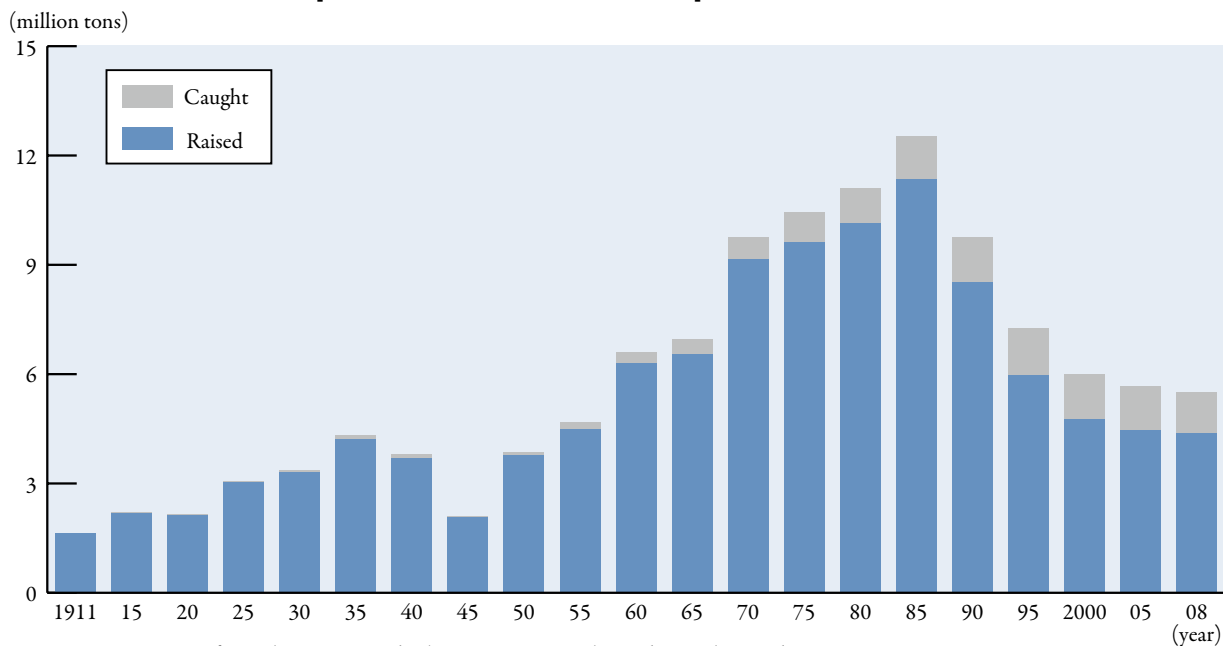


Global Fish Hauls and Aquaculture Trends



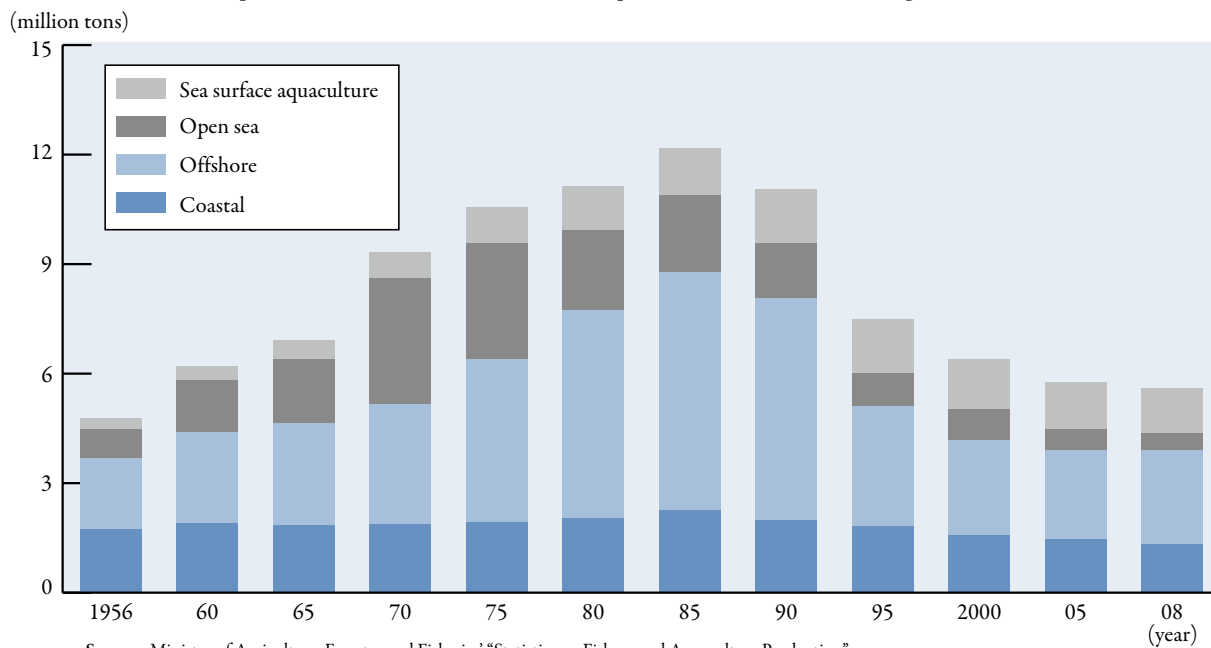
Source: League of Nations' Annual Report "Sea Fisheries", Ministry of Agriculture, Forestry and Fisheries' "Statistics on Fishery and Aquaculture Production", United Nations' annual reports "Fish Landings", "Capture Production", and "Aquaculture Production".
*Captured amounts for 1940 and 1945 do not include the Soviet Union.

Japanese Fish Hauls and Aquaculture Trends

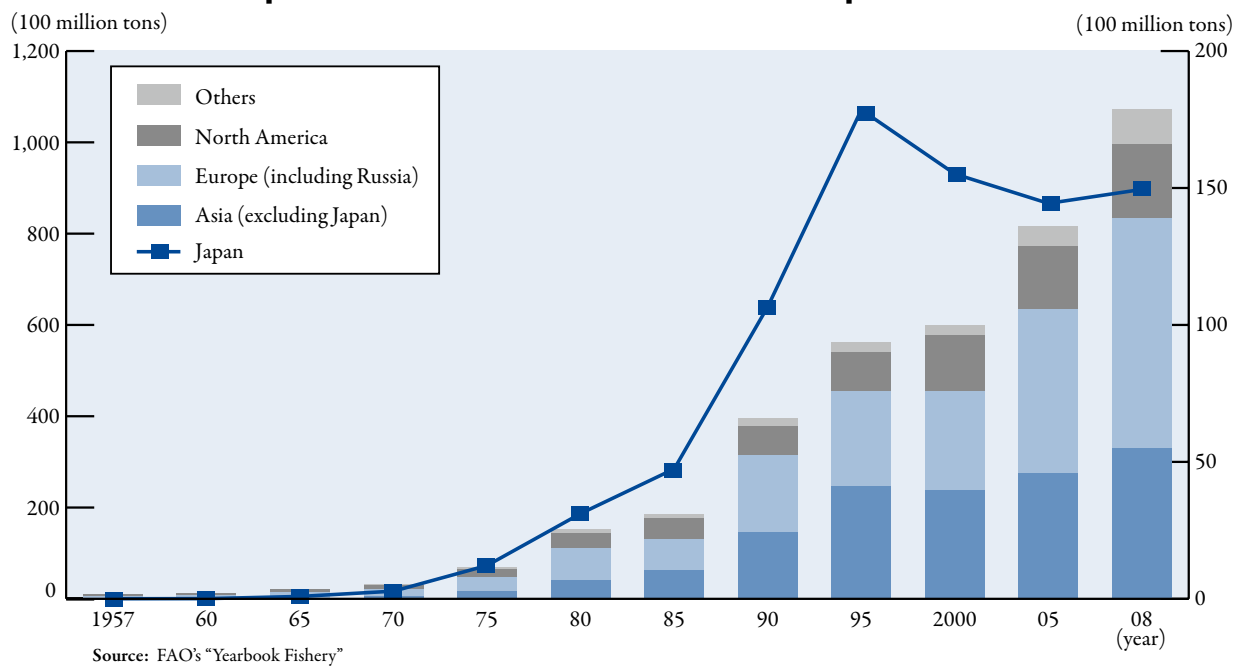


Source: Ministry of Agriculture, Forestry and Fisheries' "Statistics on Fishery and Aquaculture Production"

Japanese Fish Hauls and Aquaculture Trends by Sector



Japanese and Global Marine Products Import Trends



Chronology

Items in this Chronology that appear in bold print pertain directly to Nippon Suisan.

DATE	EVENT
1863 May 12	Kaoru Inoue travels to Europe together with Hirobumi Ito, Masaru Inoue, Yozo Yamao and Kinsuke Endo.
1866 January 27	Ichiro Tamura (birth name Ichiro Kuhara) is born in Hagi, Choshu.
1868 September 8	The era name changes to “Meiji”.
1870 June 29	Juro Oka (birth name Juro Nishimura) is born in Nagoura, Abu County, Choshu.
1871 July 14	Feudal domains are abolished and prefectures created.
1875 May 7	The Sakhalin-Kuril Exchange Treaty is signed.
December 19	The Grand Council of State proclaims state ownership of seas and a system of sea area lease rights.
1877 February 15	The Satsuma Rebellion.
1879 October 29	Edison invents the electric light bulb.
1880 November 6	Yoshisuke Aikawa is born in Ouchi, Yamaguchi Prefecture. ·Hayashikane Shoten is founded.
1881 April 11	A Fisheries Section is created in the Agricultural Affairs Bureau of the Ministry of Agriculture and Commerce.
1882 February 12	The Japan Fisheries Association is founded.
1884 September 18	Fujita Gumi purchases the Kosaka Mine from the government.
1887 February 10	Kosuke Kunishi (birth name Kosuke Nomi) is born in Kobe, Hyogo Prefecture.
1889 January 20	The Fisheries Institute is established.
1890 July 1	Inaugural election to the House of Representatives.
1894 August 1	Declaration of war against China (start of the 1st Sino–Japanese War).
1897 March 31	Promulgation of the Distant Water Fisheries Promotion Act (effective from April 1898).
1899 July 20	Juro Oka and others establish Nippon Enyo Gyogyo K.K. (start of steamship whaling).
1904 February 10	Declaration of war against Russia (start of the Russo–Japanese War).
1906 June 1	Sakhalin becomes Japanese territory south of 50° N latitude.
1907 October –	Thomas Albert Glover establishes Kisen Gyogyo K.K. ·Ichiro Tamura moves into north-sea fishery. ·Ichi-I Gumi is established.
1908 April – November –	Kosuke Kunishi goes to study in Britain and Germany. Ichiro Tamura builds the trawler <i>Dai-Ichi Maru</i> at Osaka Iron Works (first iron-hulled trawler built in Japan).
1909 April 6	Regulations for the Control of Steam Trawler Fisheries are promulgated.
1910 April 21	The Fisheries Law is promulgated.
April –	Takatsu Shoten Fisheries Department is founded (Shimonoseki).
May 20	Tobata Foundry Co. is established.
July –	Kosuke Kunishi goes to Britain to oversee construction of the steam trawler <i>Minato Maru</i> and bring it back to Japan.
November 29	Nobu Shirase and others set out on an expedition to Antarctica.

DATE	EVENT
1911	January 27 Regulations for the Control of Steam Trawler Fisheries are amended; vessels of 180 tons or more are limited to the area west of 130° E longitude.
	January – Umetaro Suzuki creates oryzanin (Vitamin B ₁).
	March – <i>Minato Maru</i> is completed at the Smiths Dock shipyard.
	May – Tamura Steamship Fishery Company is founded (Shimonoseki, Yamaguchi Prefecture).
1912	July 30 Emperor Meiji dies, era name changes to “Taisho”. ·Fishery companies set up canneries in Kamchatka.
1914	March 12 Ichi-I Gumi is reorganized and renamed Nichiro Gyogyo Kaisha, Ltd.; Ichiro Tamura is appointed President.
	July 28 World War I begins.
	November 14 Trawl operators amalgamate to form Kyodo Gyogyo Kaisha, Ltd. in Tokyo. ·The Fisheries Training Institute vessel <i>Unyo Maru</i> starts trials for on-board crab cannery.
1915	December 15 Ichiro Tamura and Fusanosuke Kuhara establish Nippon Kisen K.K.
1916	·Ichiro Tamura transfers all Nichiro Gyogyo shares to Tokuzo Shima.
1917	June 3 Ichiro Tamura underwrites a capital increase by Yamagami Gumi K.K. and changes the company name to Nippon Suisan K.K. (This company differs from the Nippon Suisan Kaisha, Ltd., that was founded on March 31, 1937.)
	July 10 The company emblem of Nippon Suisan (formerly Yamagami Gumi) is registered as a trademark.
	September 12 Exports of gold are prohibited (Japan leaves the gold standard).
	October 8 Mitsubishi Zosen K.K. is established.
	November 7 The “October Revolution” in Russia. ·Ichiro Tamura acquires a majority share in Kyodo Gyogyo.
1918	November 11 Germany and the Allies sign the armistice to end World War I.
1919	September 27 Tamura Steamship Fishery Company is reorganized to become “Kyodo Gyogyo”; Hisazo Matsuzaki is appointed President.
	November 25 A series of new ship launches is begun, starting with the trawler <i>Rokko Maru</i> .
1920	January 10 The League of Nations comes into being.
	February – Hayatomo Fishery Research Institute is established.
	June 15 Takatsu Shokai K.K. changes its trading name to Nippon Gyomo Sengu Kaisha Ltd.
	July 12 The Panama Canal is opened.
	August 23 Chuo Suisan Hanbaisho K.K. is established. · <i>Kureba Maru</i> , a vessel belonging to Toyama Prefecture Fisheries Training Institute, succeeds in producing canned crab at sea.
1921	March 13 Yushutsu Shokuhin, Kamchatka Gyogyo and the former Nichiro Gyogyo merge to establish Nichiro Gyogyo.
	March – Nissen Gumi K.K. is established.
	March – The trawlers <i>Ujina Maru</i> and <i>Musashi Maru</i> are fitted with wireless telegraph equipment.
	May – Kyodo Suisan Hanbaisho K.K. is established (the sales division of Yamagami Gumi is made independent).
	June 2 Nippon Chikuwa Seizosho K.K. is established (jointly capitalized by Kyodo Gyogyo and

DATE		EVENT
		Yamagami Gumi). ·Teiji Wajima starts operating with two crab factory ships.
1922		·1st Thanksgiving for living creatures in the sea.
1923	March 30	The Central Wholesale Market Law is promulgated.
	September 1	The Great Kanto Earthquake.
	September 7	The Emergency Edict on Implementation of a Payment Moratorium is promulgated.
	December 5	Nippon Chikuwa Seizosho changes name to Nippon Gyogyo K.K. ·Official limit of 70 trawling vessels is reached.
1924	July 1	The metric system is adopted.
1925	November 1	Hoyo Gyogyo K.K. is established (anonymous association Shichida Gyogyo-bu is established on April 1, 1925 and converted to a public limited company; name changed to Hoyo Gyogyo). ·The V-D method is introduced from Britain.
1926	January – November 12 December 25	Hokuyo Suisan K.K. is established (President: Kenkichi Ueki). Kyodo Gyogyo absorbs Nippon Suisan and Hokuyo Suisan. Emperor Taisho dies, era name changes to “Showa”.
1927	March 15 April 22 April – May 20 June 1 July – November 15 November 17 November 19 December 6 December 11 December 30	Showa Depression starts, spreads nationwide. The Emergency Moratorium Edict is promulgated. Shimonoseki Fisheries Employee Training Center is established. Kyodo Gyogyo mutual aid system is established. Chuo Reizo K.K. is established. Horai Suisan K.K. is established. Showa Kosen Gyogyo K.K. is established. Nippon Kosen Gyogyo K.K. is established. The diesel-powered trawler <i>Kushiro Maru</i> is completed. Tobata Reizo K.K. is established. Kyoto Central Wholesale Market opens. Tokyo subway opens between Ueno and Asakusa (first subway in Japan). ·First exports of frozen tuna to the United States.
1928	February 20 March 31 July – September 27 November – December 29	16th General Election (first election based on universal suffrage). Fusanosuke Kuhara retires as President of Kuhara Mining Company and is succeeded by Yoshisuke Aikawa. Kagotori Seikan K.K. is established. Nitto Seihyo K.K. changes name to Dai-Nippon Seihyo K.K. The trawler <i>Karumo Maru</i> fishes in the Gulf of Tonkin for the first time. Kuhara Mining is reorganized into a public limited company; name changes to Nippon Sangyo Co., Ltd.
1929	January 22 June 28 October 24 December 15	Completion of the Tobata Refrigeration Plant. <i>Kushiro Maru</i> fishes in the Bering Sea. Start of the worldwide Great Depression. Kyodo Gyogyo begins moving to Tobata Fishing Port.
1930	January 11	Ban on gold exports is lifted.

DATE	EVENT
April 27	The <i>Taiboku Maru</i> fishmeal fleet departs from Hakodate with Japan's first fishmeal producing equipment.
May 1	Toyo Hogeï K.K. purchases the British steamship <i>Beltana</i> for conversion to a whaling factory ship.
May –	Kyodo Gyogyo completes its relocation to Tobata.
May~October	Hayatomo Fishery Research Institute invents an onboard rapid freezing device, which is installed in the diesel trawler <i>Yatsushiro Maru</i> and 5 other vessels. ·Patent obtained for a “strawberry freezing method” developed by Shunro Kato at Tobata Reizo.
1931	June – Sankyo Suisan K.K. is established. September 18 The Mukden Incident. November 11 Osaka Central Wholesale Market opens. December 13 Gold exports are prohibited again. ·Kyodo Gyogyo devises operations using the “single quarter rope”; commercialized in 1934 and used in all ships from around 1939.
1932	April 15 Nippon Kosen Gyogyo integrates Showa Kosen Gyogyo, Higashi Kosen K.K. and mother ship-type fisheries of Hayashikane Shoten; changes company name to Nippon Godo Kosen K.K. April – Hayatomo Fishery Research Institute is renamed “Hayatomo Fishery Research Center”. May 16 Tobata Reizo changes name to Godo Suisan Kogyo K.K. August – Godo Suisan Kogyo absorbs Chuo Reizo and Nippon Gyoryo (Head Office relocated to Osaka).
1933	March 3 Major earthquake and tsunami in Sanriku, Tohoku (the Sanriku Earthquake). March 27 Japan leaves the League of Nations. May – Motosaku Fujinaga starts aquaculture research on kuruma prawn at Senzokujima Laboratory. July 29 Keizo Tamura becomes 2nd President of Kyodo Gyogyo; Yoshisuke Aikawa is appointed Chairman.
1934	May 7 Nippon Hogeï K.K. is established. May 31 Godo Suisan Kogyo changes name to Nippon Food Industries K.K. June – Kyodo Gyogyo transfers its trawl division to Hoyo Gyogyo. July 31 Kyodo Gyogyo, Toyo Hogeï and Dai-Nippon Seihyo merge into Nippon Sangyo. July 31 Hoyo Gyogyo changes name to “Kyodo Gyogyo”; Head Office relocated to Tokyo. December 24 Nippon Hogeï purchases the Norwegian whaling mother ship <i>Antarctic</i> (renamed <i>Tonan Maru</i> on March 12, 1935) and five auxiliary whalers and begins first whaling operation in the Antarctic on the way home. ·Kyodo Gyogyo absorbs Horai Suisan.
1935	February 11 Tokyo Central Wholesale Market opens. April 6 Nissan Fishery Institute Co., Ltd. is established to replace Hayatomo Fishery Research Center (Odawara). May 11 The trawler <i>Shinkyō Maru</i> fishes off northwest coast of Australia. October 30 The trawler <i>Minato Maru</i> fishes for shrimp in Baja California, Mexico.
1936	February 26 The February 26 Incident (attempted coup d'état).

DATE	EVENT
May 21	The trawler <i>Himeji Maru</i> fishes off Argentina.
June 9	Completion of the Tobata Office's new building.
June 9	Hayashikane Shoten establishes Taiyo Hogeï K.K.
June 15	Compañía Argentina Commercial e Industrial de Pescheria (CACIP) is established with joint capital from Nanbei Suisan K.K. and Argentina.
September 16	Kyodo Gyogyo absorbs Nippon Hogeï and Nippon Godo Kosen and increases capital to 42 million yen.
September 28	Taiyo Hogeï completes the whaling mother ship <i>Nisshin Maru</i> .
November –	The trawler <i>Shinkyô Maru</i> fishes in the Bay of Bengal.
1937	January – Kyodo Gyogyo takes over all business of the former Chuo Suisan Hanbaisho.
March 31	Kyodo Gyogyo absorbs Nippon Food Industries.
March 31	Kyodo Gyogyo changes name to "Nippon Suisan kaisha, Ltd."
June 8	The International Whaling Agreement is signed.
August 17	Nippon Suisan moves its Head Office from the Maru Building in Marunouchi, Kojimachi City, to the Nissan Building in Tamura-cho, Shiba City.
September 3	Kyokuyo Hogeï K.K. is established.
September 26	The <i>Tonan Maru II</i> fleet conducts first Antarctic whaling.
November 6	Japan, Germany and Italy form the Anti-Comintern Pact.
November 20	Imperial General Headquarters is established.
December 17	Nippon Sangyo is reorganized as the Manchurian Industrial Development Company.
1938	April 1 The National Mobilization Law is promulgated.
April 2	Kosuke Kunishi dies.
June –	Japan sends its first official delegation to the International Whaling Conference.
October 5	The whaling mother ship <i>Tonan Maru III</i> fleet conducts first Antarctic whaling.
October 5	Kyokuyo Hogeï completes the whaling mother ship <i>Kyokuyo Maru</i> .
October 27	The National Federation of Fisheries Cooperative Associations is established.
1939	September 3 Britain and France declare war on Germany (start of World War II).
October 30	Tobu Suisan K.K. is established in Taiwan and starts mother ship-type tuna fisheries. ·Motosaku Fujinaga succeeds in complete aquaculture of kuruma prawn.
1940	September 16 Fresh Fish and Shellfish Shipment Control Facility Grant Regulations are promulgated.
September 21	The government sets market prices for edible fresh fish and shellfish (1st official price standard).
September 27	Japan, Germany and Italy sign the Tripartite Pact in Berlin.
1941	January 1 The company motto "Serving the Nation with Food" is established.
January –	Nissan Fishery Institute starts drug manufacturing.
March 17	The Ship Protection Act is promulgated (including defense of shipping by the Navy).
April 1	Fresh Fish and Shellfish Distribution Control Regulations are promulgated.
December 8	Japan declares war on the United States and Britain (start of the Pacific War).
December 16	The Commodity Control Ordinance is promulgated.
1942	September 8 Order for Nippon Kaiyo Gyogyo Tosei K.K. and Teikoku Suisan Tosei K.K. to be established under the Fishery Control Ordinance.
December 24	Teikoku Suisan Tosei (mainly the refrigeration and sales divisions of Nippon Suisan) is established; business starts April 1st, 1943.

DATE	EVENT
1943	March 11 The Fisheries Organization Act is promulgated; fishery cooperatives and associations are reorganized and integrated.
	March 31 Nippon Kaiyo Gyogyo Tosei is established; Keizo Tamura is appointed President.
	March 31 Nishi Taiyo Gyogyo Tosei K.K. is established as an amalgamation of the Hayashikane Shoten Fisheries Division, Taiyo Hogeï and Enyo Hogeï K.K.
	September 2 Nippon Suisan's contract to transfer ice-making, refrigeration and freezing equipment to Teikoku Suisan Tosei comes into effect.
1944	February – <i>Tonan Maru III</i> is bombed and sunk near Truk Island.
	May 27 Nippon Kaiyo Gyogyo Tosei moves its Head Office to Maki-cho, Kyobashi City, Tokyo.
	August – <i>Tonan Maru II</i> is bombed and sunk in the South China Sea.
1945	May 7 Germany surrenders unconditionally to the Allies.
	August 15 Emperor Hirohito announces Japan's surrender (end of the Pacific War).
	September 27 1st concession against the MacArthur Line.
	November 20 Control on distribution of fresh food is abolished.
	November 24 Teikoku Suisan Tosei is relaunched as Nippon Reizo Co., Ltd.
	December 1 Company name reverts from Nippon Kaiyo Gyogyo Tosei to Nippon Suisan following abolition of the Fishery Control Ordinance.
	December 8 Nippon Suisan is designated as a restricted company.
1946	January 1 The Tobata Coldstore is returned from Nippon Reizo.
	March 16 The Marine Products Control Order is promulgated and implemented.
	August 11 Nippon Suisan is designated as a special accounting company under the Act on Emergency Measures Concerning Companies' Accounting.
	October 15 The tanker <i>Hasbidate Maru</i> is refurbished as a whaling mother ship.
	November 3 The Constitution of Japan is promulgated.
1947	May 3 The Constitution of Japan comes into effect.
1948	February 22 The <i>Kaiko Maru</i> fleet takes part in Ogasawara whaling.
	July 1 The Fisheries Agency is inaugurated.
	August 5 <i>Hasbidate Maru</i> is put into service as the first postwar tanker carrying heavy oil from the Persian Gulf.
1949	October 1 Founding of the People's Republic of China.
1950	April 1 The Marine Products Control Order is completely abolished.
	May 16 Decisive action to curtail business (including workforce reduction).
	June 5 Construction of the Onagawa whaling base.
	June 25 The Korean War breaks out.
	October 12 Nippon Suisan's limited company designation is removed.
1951	March 3 <i>Tonan Maru III</i> is successfully refloated.
	September 8 The San Francisco Peace Treaty and Japan–U.S. Security Treaty are signed.
	November 5 Japan, the United States, and Canada engage in fishery talks (on regulation of fisheries in the eastern Pacific Ocean following reconciliation).
	November 9 Kawanami Kogyo's fishery division is acquired along with 25 vessels (including trawlers).
1952	April 25 The MacArthur Line is abolished.
	April 28 GHQ is abolished.

DATE	EVENT
May 1	The <i>Tenryu Maru</i> fleet leaves from Hakodate to begin first mother ship-type salmon/trout fishery in the postwar era.
October 1	The Tobata Plant begins full-scale production of fish sausage.
November 10	The Nagasaki Branch is established and becomes a base for west-water trawling.
1953	March 13 The refrigerator ship <i>Settsu Maru</i> sinks in the Antarctic fishing ground.
	April 8 The <i>Tokei Maru</i> fleet leaves to engage in mother ship-type crab fishery in Bristol Bay, Alaska.
	April 10 Hakodate Teion Soko K.K. is established.
	May 14 Tokyo Teion Reizo K.K. is established.
	November 16 Kyowa Yushi Kogyo K.K. becomes an affiliate.
1954	March 14 <i>Fukuryu Maru No. 5</i> returns to port after being exposed to a hydrogen bomb test on Bikini Atoll; tuna prices later plummet for an extended period.
	September 6 The <i>Miyajima Maru</i> fleet begins mother ship-type flounder operations and north-sea mother ship-type trawl fishery in the eastern Bering Sea.
1955	April 3 The Head Office moves to the Tokyo Building in Marunouchi, Chiyoda City, Tokyo.
	April 20 The Tobata Seamen's Training Center resumes activities.
	April – King crab harvests begin off the west coast of western Kamchatka (total allowance of 147,000 tons).
	June 27 Hokoku Suisan K.K. becomes an affiliate.
	July – A new fish sausage plant is opened in Onagawa.
1956	March 2 The Soviet government announces a salmon and trout fishery regulation zone and establishes the "Bulganin Line".
	March 29 A new cannery is built in Onagawa.
	June 5 The Odawara cannery is closed and a new cannery is opened in Shimizu.
	June 27 The tanker <i>Matsushima Maru</i> is converted into a whaling mother ship.
1957	January 29 An Antarctic observation team successfully sets up the Showa Station.
	April – The Nissui-sponsored radio program <i>Akado Suzunosuke</i> begins and becomes a popular sensation.
	August 27 The nuclear reactor JRR-1 in Tokai Village, Ibaraki Prefecture, reaches the critical point for the first time in Japan.
	October 4 The Soviet Union successfully launches the artificial satellite Sputnik.
	November 1 Nissui Service K.K. is established.
1958	February 24 UNCLOS I is held in Geneva.
	February 27 Nissan Fishery Institute changes its name to Nissan Research Institute Co., Ltd.
	April 16 Teletypes are introduced into the Head Office as well as Osaka and Tobata Branches.
	May 17 The <i>Uji Maru</i> fleet leaves for the Olyutor Peninsula fishing ground.
1959	January 1 The EEC (European Economic Community) is launched.
	April 1 The Five-Year Reformation Plan starts.
	July 10 The trawler <i>Uji Maru</i> leaves for Africa (beginning of southern trawling). <ul style="list-style-type: none"> ·A means for preventing occurrence of struvite in crab canning is successfully developed, and a patent application is filed. ·The "Hinomaru Packers' Association" is formed.

DATE	EVENT
1960	March 1 The Trade Department is established in the Head Office.
	April 24 The meal factory ship <i>Gyokuei Maru</i> begins research on offshore <i>surimi</i> production.
	April – <i>Ikoma Maru</i> embarks on the first expedition to waters off the coast of New Zealand.
	May 17 The Harumi Coldstore is completed.
	September 17 The trawler <i>Amagi Maru</i> is completed.
	October 15 A ceremony celebrating introduction of an IBM computer is held, and a punch card system is started.
1961	February 1 Nissui Kaiun K.K. is established.
1962	January 1 Nissan Research Institute is renamed Nissui Pharmaceutical Co., Ltd.
	January 31 Paid-in capital reaches 10 billion yen.
	April 1 The Las Palmas resident office is established in Spain's Canary Islands.
	June 7 The Hachioji Plant is completed.
	August 12 Ken-ichi Horie crosses the Pacific Ocean in a small yacht.
1963	November 28 Haruo Nakai is named president.
1964	May 6 The United States passes a law prohibiting fishing by non-U.S. vessels within the United States' territorial waters or continental shelf (the Bartlett Act).
	June 26 The IWC sets an Antarctic Ocean yield of 8,000 BWU and prohibits hunting of blue whales in the Antarctic Ocean.
1965	·Sales of the frozen products "Kani Kurimi Korokke" and "Kani Shumai" begin.
1966	April 1 The Overseas Operations Department is established in the Head Office.
	April 2 The Head Office is moved to the Nippon Building in Otemachi, Chiyoda City.
	May 16 The Cultural Revolution begins in China.
1967	February 18 <i>Surimi</i> equipment is installed on the refrigerated factory ship <i>Shikishima Maru</i> , which then leaves for mother ship-type trawl fishery in the Bering Sea.
	July 1 The EC (European Community) is launched.
	August 5 ASEAN (Association of Southeast Asian Nations) is formed.
	August 20 The Japan Chain Stores Association is launched.
	December – Japan's GNP (gross national product) ranks third among capitalist nations, behind the United States and West Germany.
1968	March – <i>Shikishima Maru</i> is modified into a <i>surimi</i> factory ship.
	June 26 The Ogasawara Islands are returned to Japan and placed under the Tokyo Metropolitan Government.
	November – Sales of "Yaki-Chikuwa" (baked tube-shaped fish cake) begin.
1969	March 8 The tanker <i>Ominesan Maru</i> is acquired, converted into a general factory ship, and renamed <i>Mineshima Maru</i> .
	July 1 The Japan Frozen Food Association is established.
	September – <i>Nitaka Maru</i> engages in the first Japanese armorhead operations near Midway.
	October 29 The Ministry of Health and Welfare bans use of the artificial sweetener cyclamate and orders a recall of products made with it.
	December – Japan's GDP ranks second among capitalist countries, behind the United States.
1970	February 11 Japan's first domestically manufactured satellite <i>Osumi</i> is successfully launched.

DATE	EVENT
March 15	Japan World Exposition 1970 opens in Osaka (77 nations participate).
March 31	Yahata Iron & Steel and Fuji Iron & Steel merge to form Nippon Steel Corporation.
May 29	P.T. West Irian Fishing Industries (W.I.F) is established (Jakarta, Indonesia).
July 30	P.T. Irian Marine Product Development (I.M.P.) is established (Jakarta, Indonesia).
October 14	<i>Yamato Maru</i> (a 5,000-ton stern trawler, the world's largest) is completed.
1971	June 17 The United States and Japan sign an agreement to return Okinawa to Japan.
	July 20 McDonald's Company (Japan), Ltd. opens its first store in the Ginza Mitsukoshi Department Store.
1972	June 5 The UN Conference on the Human Environment meets in Stockholm, Sweden (112 nations participate).
	September 29 Prime Minister Kakuei Tanaka visits China; Japan and China agree to normalize diplomatic ties.
1973	October 1 The Large-scale Retail Store Act is promulgated.
	October 17 OAPEC (Organization of Arab Petroleum Exporting Countries) initiates a petroleum strategy that causes the first oil crisis.
1974	March 26 Nippon Suisan (U.S.A.), Inc. is established (Redmond, Washington).
	May 3 Universal Seafoods., Ltd. (UniSea) is established (Redmond, Washington).
	October 28 <i>Aso Maru</i> leaves to fish for krill in the Antarctic Ocean (the first private-sector krill operation). <ul style="list-style-type: none"> ·<i>Keiko Maru</i> leaves for the final mother ship-type king crab expedition in Bristol Bay. ·<i>Kitakami Maru</i> leaves for the final single-ship king crab expedition off the west coast of Kamchatka.
1975	January 17 Nittake Shokuhin K.K. is established as a fifty-fifty joint venture with Takeda Pharmaceutical Co., Ltd. and enters the retort-pouch foods business.
	April 30 The Vietnam War ends.
	October 31 The <i>Tonan Maru II</i> fleet makes its last Antarctic whaling expedition.
1976	February 16 Nippon Kyodo Hogei K.K. is established.
	December – The trawler <i>Kirishima Maru</i> begins operating off the coast of Chile.
1977	March 1 The United States executes its Fishery Conservation and Management Act.
	March 1 The Soviet Union establishes a 200-nautical-mile fishing zone.
	July 21 The Singapore liaison office is established (Singapore). <ul style="list-style-type: none"> ·Fish prices skyrocket due to catch instability arising from the trend toward establishment of 200-nautical-mile zones.
1978	May 13 The trawler <i>Rokko Maru</i> begins trial operations off the coast of Argentina.
	May 20 Narita Airport (New Tokyo International Airport) opens.
	August 20 The Daiei, Inc. begins selling Japan's first off-brand ("no brand"; NB) products.
	October 11 Empresa de Desarrollo Pesquero de Chile S.A. (EMDEPES) is established (Santiago, Chile).
1979	February 6 The second oil crisis occurs. <ul style="list-style-type: none"> ·Sales of "Soft Karei Fry" begin.
1980	January 31 Nippon Marine Enterprises, Ltd. is established.
	February 15 <i>Keiko Maru</i> leaves for the final mother ship-type snow crab expedition in Bristol Bay.
	December 22 The United States enacts a fisheries promotion act (Breux Amendment [I]).

DATE	EVENT
December –	Sales of “Mujirushi Ryohin (MUJI)” products at Seiyu Stores, Seibu Department Stores, and Family Mart stores begin.
1981 February –	Technology for condensing EPA (eicosapentaenoic acid) is developed.
March 17	Nippon Suisan (Singapore) Pte, Ltd. is established (Singapore).
April 21	Explotación Pesquera de la Patagonia S.A. (PESPASA) is established (Buenos Aires, Argentina).
June 1	The trawler <i>Kongo Maru</i> conducts the first Japan-US offshore purchasing.
1982 April 2	The Falklands War breaks out.
November 21	The awards ceremony for the first “Umi to Sakana” independent research and artwork contest is held.
December 10	UNCLOS III signs a final protocol and the UN Convention on the Law of the Sea.
1983 November 1	Chilly Co., Ltd. is established.
1984	<i>Eibo Maru</i> leaves for the final golden king crab expedition off the west coast of Kamchatka.
1985 August 12	Great Land Seafoods, Inc. (G.L.S.) is established (Redmond, Washington).
1986 April 1	Finet, Inc. is established as a VAN operating company for the food products industry.
April 1	The Equal Employment Opportunity Act is executed.
June 14	<i>Mineshima Maru</i> leaves for the final expedition under the US’s Pacific Ocean allowance.
October 1	New Zealand implements its ITQ (individual transfer quotas) system.
1987 April 16	Japan’s per capita GNP ranks the highest in the world.
June 1	<i>Nojima Maru</i> leaves for the final mother ship-type salmon/trout expedition.
September 25	Nissui Shipping Corporation is established.
September –	Sales of the household frozen food product “COOK FOR ME Chanpon” begin.
December 10	Unisea Foods, Inc. is established (Redmond, Washington).
1988 July 26	Nikko-Fisheries Co., Ltd. is established.
October 27	Empresa Pesquera de la Patagonia Y Antartida S.A. (PESANTAR) is established (Buenos Aires, Argentina).
December –	The Chilean salmon culture company Salmones Antártica S.A. (S.A.) becomes an affiliate (Santiago, Chile).
December 20	Nippon Suisan (Europe) B.V. is established (Amsterdam, Netherlands).
1989 January 7	Emperor Showa dies.
January 8	The era name changes to “Heisei”.
April 1	The Consumption Tax Act is executed (tax rate of 3%).
June 8	<i>Mineshima Maru</i> is sold.
September –	Sales of “COOK FOR ME Yaki-onigiri” begin.
November 9	The Berlin Wall comes down.
December 29	The Tokyo Stock Exchange stock price average reaches 38,915 yen, the highest figure ever recorded.
1990 February 1	Nippon Suisan the United States Latina S.A. (N.A.L.) is established (Santiago, Chile).
March 30	Nippon Suisan receives approval for its EPA drug medicine and to manufacture pharmaceuticals at the Tsukuba Plant.

DATE	EVENT
September 10	UniSea's G.L.S. Plant No. 2 (<i>surimi</i> plant) is completed and begins production.
October 3	East and West Germany are reunified to form the Federal Republic of Germany. ·Sales of "Sea Grace" made with an extrusion cooking process begin.
1991	January 17 The trawler <i>Miyajima Maru</i> is sold to Russia and renamed <i>Victoria</i> .
	January 17 The Gulf War breaks out.
	March 31 Hohsui Co., Ltd. withdraws from trawling.
	September 26 Kitakyushu Nissui Co., Ltd. is established.
1992	January 22 Keiko Suisan K.K. is established through a joint investment arrangement with Hohsui.
	June 3 The Earth Summit is held in Rio de Janeiro, Brazil.
1993	December 31 The Oita Marine Biological Technology Center is completed.
	December – Sales of the household frozen food product "Shioaji Edamame" begin.
1994	October 23 The frozen food product "Ebi no Tsutsumi-age" wins a gold medal at the 1994 Salon International de l'Alimentation (SIAL) (frozen foods category), a contest of international hit products.
	November 16 The UN Convention on the Law of the Sea comes into force. ·Final fishing operations within Argentina's 200-nautical-mile zone take place.
1995	January 1 The WTO (World Trade Organization) is launched to replace GATT.
	December 29 Minh Hai Nissui Girmix Co. (MINH HAI NIGICO) is established in Vietnam as a joint venture to process shrimp. ·Sales of "Sasagata Shiromizanaka Fry", a household frozen food made with "one-time frozen" technology, begin.
1996	April 1 Implementation of NCR Management begins.
	July 20 The Japanese government ratifies the UN Convention on the Law of the Sea and executes relevant domestic laws.
	September 1 Sales of "Iki-Chikuwa (tube-shaped fresh fish cake)" using southern Blue Whiting <i>surimi</i> begin.
1997	April 1 Japan's consumption tax is raised to 5%.
	December 1 The Global Climate Summit opens in Kyoto, Japan (the Kyoto Protocol is adopted on Dec. 11).
1998	January 12 Nippon Cookery Co., Ltd. is founded.
	October 21 The United States enacts the the United Statesn Fisheries Act.
1999	January 1 Eleven members of the European Union adopt the euro as their single currency.
	March 3 The Bank of Japan expands liquidity in the short-term money market by the largest amount for the year and introduces a zero interest rate policy.
	April 22 US retail giant Costco enters the Japanese market.
	October 18 Nissan Motor Co., Ltd. announces its "Nissan Revival Plan".
2000	February 1 Fishking Processor, LLC. merges with Unisea Foods, Inc.
	October 2 Joint distribution of frozen foods in southern Kyushu with Ajinomoto Frozen Foods Co., Inc. and Nichirei Foods Inc is started.
2001	January 17 Nippon Suisan acquires a stake in Sealord Group, Ltd. (Nelson, New Zealand).
	April 1 Implementation of the TGL Plan is started.
	June 8 The first briefing on corporate earnings is held.

DATE	EVENT
June 22	The Fisheries Basic Act is enacted.
September 11	Terrorists attack multiple sites in the United States.
October 1	Nissui U.S.A. acquires Gorton's, Inc. (Massachusetts, U.S.A.) and BlueWater Seafoods, Inc. (Quebec, Canada).
2002	July 5 Kinki University's Fisheries Laboratory becomes the first in the world to succeed in producing completely farm-raised bluefin tuna.
	July 20 The use of egg whites in fish sausages / hams and other kneaded products is stopped.
	October 1 The Food Safety Research Center is established.
	October 1 The Quality Assurance Charter is drafted.
2003	March 1 The Shelf-Stable Food Business Department is established.
	June 26 The Environment Code is drafted.
	July 10 The Fisheries Research Agency becomes the first in the world to artificially produce elver (glass eel).
	September 5 Nissui Europe acquires a stake in J.P. Klausen & Co.A.S. (Svenborg, Denmark).
2004	January 8 Kurose Suisan Co., Ltd. is founded.
	January 26 The Imari Fish Feed and Oil Plant is completed.
	February 2 Nippon Suisan America Latina Peru, S.A. (NAL PERU) is founded (Lima, Peru).
	February 9 A function oil and fats production site at the Fine Chemicals Business Operations Department's Tsukuba plant is completed.
	April 5 Mail order sales of the specified health food "IMARK" are launched.
	June 16 Shandong Sanfod Nissui Co., Ltd. is founded (Qingdao, China).
	October 1 Europacífico Alimentos Del Mar S.L. is founded (Bilbao, Spain).
	October 13 P.T. Nissui Investment and Management Indonesia (Jakarta) is established by Nissui S'pore.
	November 1 Hachikan Co., Ltd. is founded.
2005	February 3 Nissui (Thailand) Co., Ltd. is established (Hat Yai, Thailand).
	March 2 The United States enacts a law promoting management of crab resources.
	July – Nippon Suisan acquires the United States's King & Prince Seafood Corp. (K&P) (Brunswick, Georgia).
	July 13 UniSea is establishes Bering Sea Partners, Inc. (B.S.P.) (Redmond, Washington).
	July 15 B.S.P. acquires Royal Aleutian Seafoods, Inc. (Redmond, Washington).
2006	March 14 Nippon Suisan invests in Kyowa Suisan Co., Ltd.
	March 15 The Chiloé Office of Salmones Antártica S.A. is completed at the Chonchi processing site.
	April 1 Implementation of the New TGL Plan is started.
	April 1 Nissui U.S.A. acquires F.W. Bryce, Inc. (Gloucester, Massachusetts).
	May 1 Nissui Europe invests in Nordic Seafood A.S. (Hirtshals, Denmark).
	May 29 A positive list system for pesticide residue is enacted in accordance with the Food Sanitation Act.
	May 31 Nippon Suisan invests in Nakatani Suisan Co., Ltd.
	December 29 King & Prince Seafood Corp. acquires Fishking Processor, LLC.
2007	April 1 Nissui Logistics Corporation is established.
	June 22 Nippon Suisan invests in Nordsee Comercial Importadora Y Exportadora, Ltda. (São Paulo, Brazil).
	October 1 Sales and management functions of EMDEPES and the Pesquera Friosur S.A. Group are

DATE	EVENT
	transferred and consolidated in a newly established company Desarrollo Oceanico S.A. (DOSA) (Santiago, Chile).
October 1	Nissui Europe invests in Cité Marine S.A.S. (Kervignac, France).
October 1	Maruha Group merges with Nichiro Corporation to create Maruha Nichiro Holdings, Inc.
October 10	Nippon Suisan invests in Kaneko Shokuhin Co., Ltd. and Kunihiro Inc.
October 25	Nippon Suisan invests in Marusa Sasaya Shoten K.K.
December 1	Nippon Suisan invests in Tai Mei Food Industrial Corp. (Koohsiung, Taiwan).
2008	April 1 Hohsui and Chuo Reito.K.K. merge and become a unit of Chuo Gyorui Co., Ltd.
	June 1 Qingdao Nissui Food Research and Development Co., Ltd. is established (Shandong, China).
	June 2 Nissui U.S.A. invests in Glacier Fish Company, LLC (G.F.C.) (Seattle, Washington).
	September 11 Nippon Suisan invests in Hiroshimasuisan Co., Ltd.
	December 25 Hokkaido Fine Chemical Co., Ltd. is established.
2009	February 10 UniSea acquires Alaskan Beauty, LLC (South Kirkland, U.S.A.).
	March 26 TN Fine Chemicals Co., Ltd. (TNFC) is established (Bangkok, Thailand).
	March 27 Nippon Suisan invests in Daisui Co., Ltd.
	April 1 Meiji Seika Kaisha, Ltd. and Meiji Dairies Corporation establish the joint holding company Meiji Holdings Co., Ltd. and integrate their management.
	June 25 An executive officer system and anti-takeover measures are introduced.
	November 1 Nippon Suisan acquires technologies for cultivating <i>arachidonic acid</i> -producing fungus from Suntory Wellness Ltd.
	December 7 Hakata Marukita Suisan Co., Ltd. is established.
2010	February 28 Tokyo Kitaichi Co., Ltd. is converted to an equity-method company.
	April 20 Major oil spill occurs in the US Gulf of Mexico.
	May 25 Netuno Internacional S.A. is established (Recife, Brazil).
	May 31 Nippon Suisan is awarded the “Kurumin Mark” in recognition of its contributions to help raise the next generation.
	July 29 Nippon Suisan acquires shares in Delmar Co., Ltd.
	December 15 The <i>kunimasu</i> , a fish unique to Japan and believed to have been extinct, is discovered in Lake Saiko, Yamanashi Prefecture.

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