

ATONG TAÑON, ATONG AMPINGAN

*Fisheries challenges in the
Tañon Strait Protected Seascape*



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FOREWORD



Tañon Strait is a unique natural heritage dividing the islands of Negros and Cebu. It is an important migration corridor for fourteen species of whales and dolphins in the country, with around 28,144 artisanal fishers directly dependent on its marine resources as a source of food and livelihood. It was declared a marine protected area in 1998, but like many paper parks all over the country, Tañon Strait suffered from the lack of sustained management efforts and coordination among various stakeholders. Poverty incidence in 2012 was at an average of 29.2 percent.

The turning point for Tañon Strait happened in February, 2015. The Department of Environment and Natural Resources and partners from the Bureau of Fisheries and Aquatic Resources, Oceana, Rare and the Philippine Earth Justice Center, made possible for the first time in 17 years, the convening of the Protected Area Management Board which approved the management plan for the Tañon Strait Protected Seascape. The board held its second general assembly in March 2016, and the implementation of the enforcement plan has been approved.

Last year, the Protected Area Office was inaugurated in Badian in Cebu, on a scenic rocky outcrop surrounded by mangrove forests facing Tañon Strait. Law enforcers from various government agencies have started patrolling the strait, posting modest gains in arresting illegal fishers. In Cebu, support for the protection of Tañon Strait has garnered more adherents through the Coastal Law Enforcement Alliance for Region 7. On the Negros side, there are plans to replicate these efforts in the newly organized Region 18. This year, the site management units have expressed support for the installation of vessel monitoring devices in fishing vessels operating in Tañon Strait, in line with the amended Fisheries Code.

As an advocacy organization that promotes science-based policy reforms, Oceana has been busy conducting research to bolster our campaign to protect Tañon Strait. Early last year, we conducted a

media and audience survey to find out the concerns of stakeholders, and how we can craft relevant information materials for them. For one month, in May, we conducted a study of fishing communities to examine the status of their marine resources and its impact on their livelihood. In the same month, we joined other concerned environmentalists in Cebu to dive in the murky waters off Toledo City, in an abbreviated attempt to document the potential impact of a proposed reclamation project. And last September, we embarked on a weeklong expedition that validated our fears regarding the presence of commercial vessels actively fishing inside the strait despite its protected status.

This publication is a concise presentation of the findings from these various studies. One of the common threads, we soon discovered, was the prevailing sentiment among coastal dwellers that large-scale and illegal fishing practices were destroying what was left of Tañon Strait's marine resources. Measuring only 27 kilometers at its widest, Tañon Strait consists entirely of municipal waters that are and should be off-limits to commercial fishers, in addition to its status as a marine protected area.

Oceana's expedition provided clear basis for the perceptions that had been shared by municipal fishers, and strikes at the heart of our campaign: to end commercial fishing inside the protected area and restore the bounty of Tañon Strait's marine life.

It is our hope that this publication shall provide our policy makers with a stronger impetus to pursue decisive and consistent actions in eliminating the threats to the country's biggest marine protected area, in collaboration with civil society and peoples' organizations.

Tañon Strait is part of our national and global heritage, and we all have a shared duty to protect its resources for the benefit of the present and future generations.

ATTY. GLORIA ESTENZO RAMOS
Vice President, Oceana Philippines



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CHAPTER 1

UNSAY ATO?

Village life in Tañon Strait

What's up? In many Cebuano-speaking villages in the central Philippines, "Unsay ato?" is a common conversation opener when a visitor arrives. It's a way to gently ease into what's new, or how recent events have affected people's lives.

In January 2015, Oceana conducted a media and audience rapid appraisal to find out the information needs and preferences of coastal residents. Four months later, in May, a fish catch monitoring survey was done to assess the socioeconomic status of fishing communities and the resources found in their localities. Narratives and findings from these two research activities are detailed here.

On a cool sunny morning in January, two women chat animatedly as they walk home from the reef flats in Moalboal, on the western coast of Cebu, their pails laden with the bounty of the sea. Near the rocky shore, fishermen in an outrigger banca are hauling in their catch for the day. Most of the shells and small fish are destined for their dining tables, the rest sold by vendors to eager buyers up and down the coast.

Moalboal is one of the 42 cities and municipalities lining the coast of Tañon Strait, a narrow body of water between the islands of Negros and Cebu in the Visayas region. The strait is the biggest marine protected area in the Philippines, and is home to many fishers' groups that are doing their share in taking care of the sea's bounty.

One of these is SAFA, or the Saavedra Fishing Association. Established in 1986, the group is actively protecting an eight-hectare marine sanctuary established

under the Central Visayas Regional Project. When they're not fishing, the 40 members raise cows and goats in small land holdings. Some of the men act as guides for foreign tourists, while others drive tricycles. Some of the Saavedra women work in beach resorts, or sell handmade products to visitors in Moalboal.

All the members of SAFA are aware of the laws that protect the sea. They cite the Fisheries Code of the Philippines – calling the law 'itpaybpipti' in reference to the number of Republic Act 8550 – with a twinge of familiarity. The local Department of Agriculture technicians, and NGOs like RARE and Tambuyog, have painstakingly explained the law to them through seminars and group meetings. However, they are not aware about the amendments passed last year, and they lament that there are few information materials that could help explain the law to them using terms that are easy to understand. Most of them, after all, have barely finished elementary education; it took them several

minutes to write their names in attendance sheets required during a community meeting.

Most of their information comes from what is known in Cebuano-speaking provinces as *'radyo baktas'* or interpersonal communication, usually from neighbors who constantly travel to urban centers. Another key source would be the ambulant vendors (*libud*) who pass on news from other villages.

In a neighboring barangay, the members of the Basdiot Fisherfolk Association also keep other jobs to augment their daily income. They serve tourists in resorts or engage in other businesses like selling rice. The women have started to weave bags from recycled materials.

With the tourism boom, the Basdiot fishers say the demand for their fish catch has increased. However, the prices are now out of reach for the locals, and they are blaming the resorts that are usually foreign-owned and are cornering the market. Most of the fish vendors have to travel to nearby municipalities in Cebu, such as Ginatilan and Alegria, to buy fish.

Like their neighbors in Saavedra, the fishers of Basdiot get information about their fishing grounds from seminars conducted by government fisheries technicians on a monthly basis. However, their knowledge is based on what they can recall, as there is almost no available reference about policies on fishing or about Tañon Strait. Thus, there is little awareness about the laws that govern the basin. Based on daily observation, they are aware that Tañon Strait is home to dolphins and whale sharks; some fishers even tell stories about a dolphin saving a fisherman during a storm. However, they are not aware of the amendments to RA 8550, or that the entire Tañon Strait is a marine protected area.

At the time of the Oceana media and audience survey in January 2015, there was a noticeable lack of information, reference materials, or educational programs about Tañon Strait in the two fishing villages.

Beach tourism

Moalboal sits on the western coastline of the island of Cebu, and is known worldwide for its dive sites and dramatic rocky seascape. Its main tourist area is Panagsama Beach, where Evelyn Abenido-Maligon owns one of the oldest resorts called Eve's Kiosk Dive Resort.

Eve waxes romantic when asked about Panagsama and Moalboal. She recalls her childhood at Panagsama, with its endless supply of assorted fish and long pristine coastline.

"I come from a family of fishers (*mananagat*). We lived off what we got from the sea. Then we noticed that more visitors and divers were coming, so we put up a small hut that offered temporary shelter, drinking and bathing water to beachgoers. That's why it was called a kiosk," she says in Cebuano.

After 40 years, the flimsy kiosk has become a winding complex of guest rooms and function areas. The coffee shop that welcomes guests has also become a favorite hangout of foreigners, who stay for months at the place. Most of them had been patrons of the original makeshift hut.

But Eve is not at all jubilant about the current state of Panagsama beach. Fish catch has decreased and the price has become exorbitant. She attributes this trend to the increasing demand and the proliferation of foreign-owned resorts that buy overpriced fish so often that it has become the norm. Unlike supermarkets, there is no "suggested retail price" for fish here, with vendors making up all manner of excuses for their arbitrary pricing. Eve's Cebuano humor comes to play when she says: "*Ang amoang mga isda, sosyal na pud kay naa na sila'y apelyido. Sama sa 'ang lapu-lapu mahal kay semana santa; ang bucao-buciao mahal kay kusog balud ...'*" (Our fish have become posh because they now have last names. Sellers would say groupers are expensive BECAUSE it's Holy Week, or the price of bucao-buciao [bigeye] is high BECAUSE of huge waves ...)

She also cites the harm on fish habitats and corals caused by inexperienced divers. And worse, even



Sunset at Hale Manna in Moalboal © OCEANA/Oggie Ramos

as her fragile huts made of *amakan* (hand-woven bamboo slats) have been replaced by a sturdy concrete structure, Eve has also lost the freedom to walk along Panagsama's wide shores.

Her older sister, Helen Abenido-Laurente, says the destruction of Panagsama beach, where dive shops and restaurants are built right on the water's edge, goes beyond losing the view of the once majestic shoreline. At the societal level, she laments the growing popularity of marriages between foreigners and local women. Many young girls "no longer dream of obtaining a college diploma but instead aim to meet foreigners who will marry them and bring them out of poverty," she observes.

Another resort owner, Becky Pestaño-Smith, had similar sentiments when she opened Hale Manna at Barangay Saavedra in February 2011. Her employees are also

environmental advocates who are "alarmed by the possible damage to their hometown since all of them are from Moalboal." Becky stressed, "We don't want another Mactan island," referring to the popular tourist destination near Cebu City where the coastline is dotted with permanent structures that do not comply with the easement rules under the Water Code. She believes that ecotourism has made more people aware of environmental protection.

The resort is "more for the local market," Becky says. Her work experience with the environment projects ECOFISH and Coastal Resource Management Program is evident in the décor and also helped sculpt what is now a 2.8- hectare beachfront property. Hale Manna is carpeted by local grass that her staff propagated then transplanted around the expansive grounds. There are no cemented pathways. She says 'nature does not travel in a straight line' and so the crooked paths are



With a population of 866 people, the island community of Olympia earns its keep by selling fish, sea shells, and seaweed.

© OCEANA/Candeze Mongaya

made of lime, sand, soil, and the native grass that frame the spectacular view of the beach facing Tañon Strait.

Olympia, island of fishers

Previously known as Diutay, the island of Olympia is a barangay of Bais City that is accessible only by sea. With a population of 866 people, this fishing community earns its keep by selling fish, sea shells, and seaweed. A few fishermen who own pump boats also work as tourist guides, especially around the sandbar and during the dolphin and whale watching season. Their wives used to have a group called 'Women's Boneless Association' that sold dried danggit, but the business fizzled out after 11 years.

Olympia has one school for its elementary and high school students. Most of the island elders barely finished elementary education. The younger ones who finish high school seek jobs in Bais or other cities. Only one girl from Olympia

has a college diploma, and she recently got married to a foreigner.

During a lively discussion one afternoon, some of the fishers were perplexed by the amount of attention given to dolphins and whale sharks. One resident said: *"Ngano dili man namo patyon ang lomod? Ga kumpetensya man ni sa amo sa isda. Daghan kaayo ilang ginakaon. Wala na para sa amoa!"* (Why shouldn't we kill the dolphins? They eat plenty of fish and there's nothing left for us!)

In its May 2014 Regional Agricultural Situation Report, the Fishery Office of Bais City reports that it "created a Barangay Fishery and Aquatic Resources Management Council in Barangays Olympia, Biñohon and Canlargo to strengthen the local fisherfolk's association." No one in Olympia seemed to be aware of the fishers' council, but they did boast of membership in a new "indigenous peoples' organization" as shown in an attendance sheet that they signed as members. The letterhead gives the name of the group as "Pundok sa Hiniusang Magbabaul sa Habagatan, Inc." or 'Group of Collective Farmers from the South, Inc.' They plan to register the association, having been made to believe by self-styled community organizers who visited the village that since they have "been residents of Olympia island since birth," they can be classified as indigenous peoples.

Guihulngan City

The oldest and biggest fisherfolk association in Guihulngan City is aptly called the "Malusay Fish-Loving People Association 2," named after the barangay where it located. Of its 60 members, 48 are active and 23 also belong to the local Bantay Dagat (coast watch). They guard the Malusay fish sanctuary and participate in coastal clean-ups, mangrove planting, seaweed maintenance, and school tours.

Its president, Alfredo Cotchoco, is assisted by his family in dispensing his duties. His wife is the secretary while one of his daughters is the association's bookkeeper, and also a member of the Bantay Dagat.

Guihulngan Fishery Officer Francisco Rizon says the city has 1,823 registered fishers from 10 coastal barangays. His office has six fisheries technicians who conduct monthly meetings, or *pulong-pulong*, to discuss updates and new ventures. In one of these meetings, they decided to go into livelihood projects like hog raising and tilapia culture, which the mayor supported through loans for animal feeds.

Cotchoco said these meetings serve as their most influential source of information regarding fishery issues. However, some details are easy to forget as their office does not have the necessary reference materials on file. They are aware that Tañon Strait is a protected seascape, but do not really know what it means. Cotchoco asserts that they need capability building training, additional equipment for the Bantay Dagat program, and most importantly, the deputation of fish wardens.

San Carlos: City of alternative energy

San Carlos City is one of the three thickly populated cities in Negros island that benefit from Tañon Strait. Vast sugarcane plantations and prawn ponds line the highway that separates the city from the border municipality of Vallehermoso, the northernmost point of Negros Oriental. The local government is a member of NNARMAC (Northern Negros Aquatic Resources Management Council).

According to senior staff from the Environment and Management Office, the city has its own sea patrol called Task Force Lawod (wave) and livelihood projects to augment the income of fishers. However, they are not fully aware about the status of Tañon Strait. Environment officer Loreto Sanchez says, "*Kabalo nga naay protected area pero wala kami kabalo hantud asa.*" (We know there's a protected area, but we don't know its coverage.)

His colleague Mayette Lomocso suggests that information campaigns are needed to make the people understand the law. She says their office disseminates information through meetings and seminars. They also make use of the *trompo*, or any vehicle fitted with a loudspeaker that goes around town broadcasting key messages, to inform residents in rural areas about news bulletins. Some messages are recorded while some are announced live by the staff operating it.

The Bantay Dagat of San Carlos City is based in the port that faces Sipaway Island. Also known as Refugio Island, Sipaway boasts of white sand beaches and a marine protected area with colorful coral reefs and sea creatures.

With commercial fishing vessels encroaching in San Carlos City's waters and harvesting young fish, the sea patrols have to watch over some fishers who use fine-meshed nets. To keep outsiders in check, resident fishers are required to secure permits and licenses at the city hall, a process that some fisherfolk find tedious and unaffordable, especially for those who can barely read and write.

Dominant media

The 2008 FLEMMS (Functional Literacy, Education and Mass Media Survey) released in 2010 shows that in Region VI (Western Visayas) and Region VII (Central Visayas), which have communities along Tañon Strait, only one in three people have reached or graduated from high school. Thus, it is not surprising to note that most coastal villagers prefer broadcast media instead of print as a source of information.

With electricity readily available, television is the most popular mass media, especially for women who are left at home while the men are out at sea. The most popular channel is ABS-CBN, which has a stronger signal in Cebu and Negros islands compared to other television stations, and their prime time drama series are among the most watched in coastal villages. As a result, most of the endorsers that they patronize are ABS-CBN talents.

Karen Dinsay, who heads the Provincial Information Office in Bacolod City, says ABS-CBN dominates the audience share in the provinces of Negros Occidental and Negros Oriental. She says that during large festivals where ABS-CBN and its main rival GMA both organize shows for the public, the ABS-CBN program often has a bigger audience.

In Bacolod City, the most popular radio station is Bombo Radyo, owned by the People's Broadcasting Service, Inc. It provides news, public service, drama, and music for a large audience in the Central Visayas Region.

San Carlos City runs a program on local cable television entitled "Dateline City Hall," where they discuss agricultural and fishery issues, among other topics. However, the most popular radio station in the city is Brigada News, an FM station. ABS-CBN is the most popular television station, with residents heavily patronizing its news programs and entertainment shows.

In the island of Olympia, fishers and their families are avid viewers of ABS-CBN shows and could endlessly discuss its teleseryes, the Philippines' version of the telenovela. They also listen to radio drama broadcast by DYWC, which is also owned by DYHP. These channels, and the stories that the boatmen bring to the island, are their sources of information.

Among coastal villages in Moalboal, the most popular radio station is DYHP, which is owned and operated by Radio Mindanao Network. The main format of the station is drama, public service and news. They also listen to DYSS or Super Radyo Cebu, the AM station of GMA Network, Inc. Also called Super Balita, the main format of the station is music, news, public service and drama.

In barangay Saavedra, the members of SAFA shared that there is a morning radio show for fishers called 'Bantay Radyo.' The station, DYDD (1260 kHz), is owned by Davao-based Southern Broadcasting Network. However, not everyone listens to the radio program since its broadcast

time still finds the fishers at sea.

In barangay Basdiot, fishers are not fond of watching television because they spend much time at sea. When they get home, their children and wives decide on which shows to watch. All of them agree that ABS-CBN is the better station for both news and entertainment, although some also watch TV5. They cited DYHP and Bantay Radyo as the radio stations that are popular in the village.

In the village of Tuble, barangay captain Roger Ibuogan organizes monthly meetings to update the community about local activities. For national events, Ibuogan says most people watch ABS-CBN news programs and listen to DYHP for radio reports.

While television is mainly for entertainment, residents in Negros and Cebu found themselves glued to the TV screen for information and updates when Visayas was hit by several disasters, especially the earthquake in Guihulngan and powerful typhoons. According to a fisher from Saavedra, they got messages from town mates that were confusing, so they resorted to television and radio. As each disaster passed, however, it was their informal network of fisherfolk who filled in the details about how the sea has changed, how fish catch has decreased, knowing that their lives will not be the same again.

The age of "Fishbook"

Even with social media dominating the scene in many parts of the world, the coastal communities in Tañon Strait remain traditional in their communication processes. Talk of Facebook and someone jokes about 'fishbook' or 'pisbuk.' Say Twitter and the replies are blank stares. But for the young who are in school, social media is the platform for entertainment and socialization. On a weekend afternoon in Moalboal, an internet café was full of young people who were playing games or chatting online, while the elder members in the community were at sea or doing housework.



Drying fish in Bantayan island © Tonee Despejo

In barangay Saavedra, communication generally remains interpersonal – the fishers still value the opinion of leaders and change agents. They hold in high regard the information they get from people that they trust.

May 2015 socioeconomic survey

For almost a month, Oceana staff and researchers combed several coastal communities in four localities along Tañon Strait – Calatrava in Negros Occidental, Guihulngan City in Negros Oriental, Samboan and Moalboal in Cebu – partly to find out their social and economic status.

The survey sampled a total of 96 respondents. The average number of years that a respondent has lived in the barangay is 33, which indicates that most fishers tend to stay in their hometowns and do not migrate to other areas.

EDUCATION. High school is the highest level attained by majority of the respondents, comprising 53% of the total. This was followed by 34% who graduated from college, and 9% for elementary school graduates.

TRANSPORTATION. The pedicab or tricycle rules the road in most villages, with 70% mentioning the three-wheeled contraption as their most common form of transportation. The motorbike or “*habal-habal*” comes next at 27% followed by bicycles (7%), public transportation (5%), Ceres bus (5%), multicab, bus, and car or truck.

HOUSING. It is common for houses to be built from a combination of materials, with cement as the dominant wall type, followed by bamboo. Most roofing is made of corrugated tin, followed by thatch from nipa groves.

HOUSEHOLD ASSETS. Mobile phones are the most common gadgets in the households, with 79% of respondents saying they have at

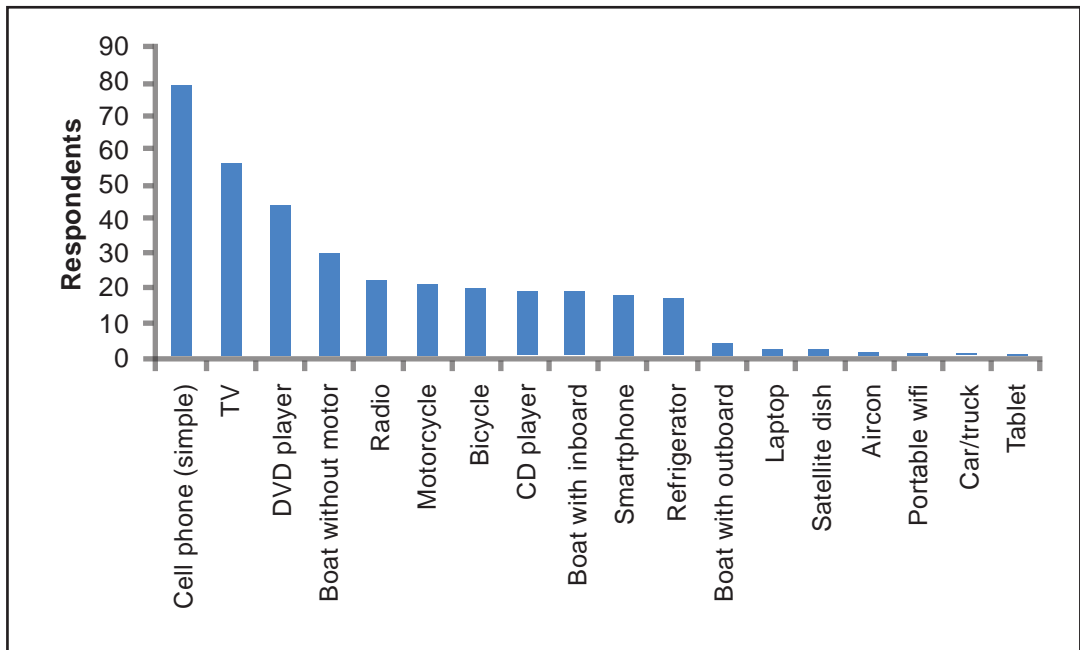


Figure 1: What they own

least one simple hand phone, showing that they are quite well-connected. More than half of the respondents have TV sets, while many have DVD players. About a third of respondents have paddle boats, while less than 20% have motor boats.

For cooking, most respondents use firewood (94%) as fuel source, followed by electricity or gas (11%); scrap wood (12%); and charcoal (4%). For their water supply, most households (60%) are connected to the water district, followed by common water (23%) and well or pumps (14%). Minor sources of water include springs, barangay water system, and hand pumps.

HEALTH CARE. With many fishing villages located far from urban centers, it is not surprising that local health facilities are the most accessible for fishers. Majority of respondents (72%) go to community health centers while only 18% go to hospitals when they get sick. The rest go to natural healers and clinics.

Food Security

Maize and rice were listed as staple food by respondents, who also rely on fish as the main source of protein in their diet. On average, each household consumes 17 kilos of fish per month. Most of the respondents (75%) said they eat fish every day, indicating the importance of fisheries not just for livelihood but also food security in these areas.

Except for one respondent, everyone said the fish that they eat comes from Tañon Strait. Although not all were aware of the exact name of the body of water where their villages are located, through probing conversations, it became clear that the fish they consume comes from Tañon Strait.

Meat is a luxury for most coastal residents, with only 3% saying they have it in their meals several times a week. The highest percentage of respondents said they only consume meat a few times per week (43%) while nearly a third say they only eat meat on special occasions.

There is a sufficient level of food insecurity in these villages, with over 80% of respondents saying they were sometimes or often worried that there might not be enough food for everyone in the household. Many say they either have to reduce the size of their meals, or even skip meals, during some months due to lack of food.

category, while only 8% are considered rich. Moalboal, a popular tourist destination, has the highest number of respondents in the top wealth ranking. The graph below shows the wealth ranking per municipality: Rank 1 stands for poor, 2 for middle class, 3 for better off, and 4 for rich.

Wealth Ranking

The survey tried to capture the multidimensional nature of poverty that extends beyond economic indicators, such as the poverty line within their local context, through a series of questions. Based on their answers, majority of the respondents are in the lower middle class

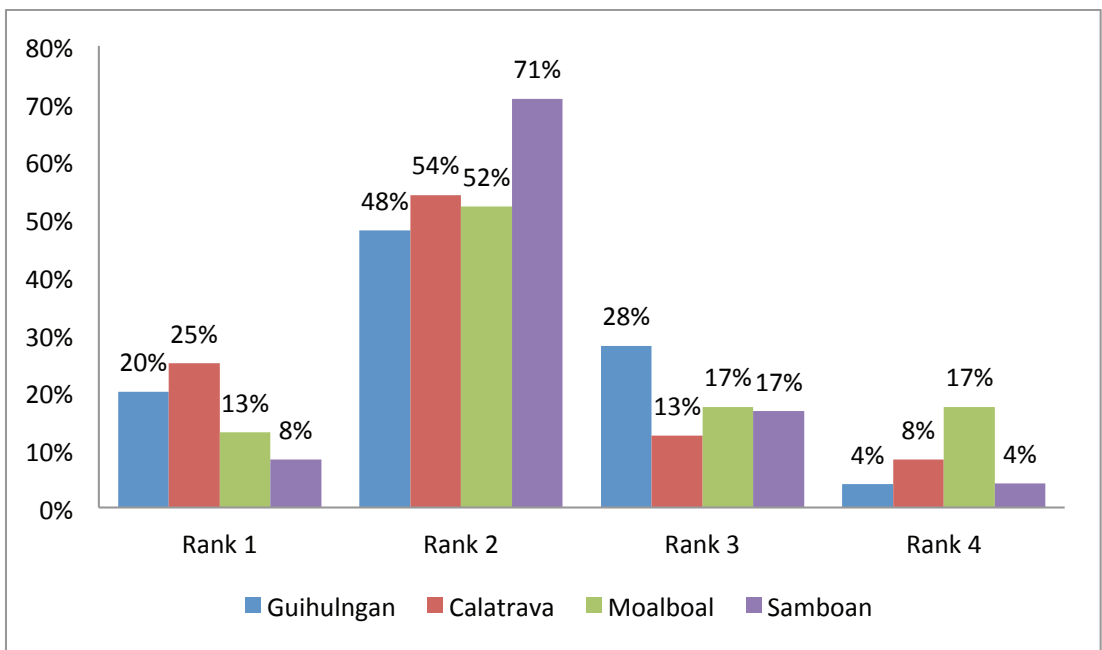


Figure 2: Wealth ranking by municipality

CHAPTER 2

UNSAY ATONG MAKITA?

Marine life and coastal habitats



Unsay ato? In another context, this question can take on a different meaning, and refer instead to a community's sense of ownership over their natural environment. What is ours? What is there for us to protect, because if we don't take care of these resources, we will be destroying our own lives?

In this chapter, the biophysical results of Oceana's fish catch survey in May 2015 provide a snapshot of the resources that can be found in the protected area.

Tañon Strait is one of the most biologically unique marine environments in the Philippines. It is characterized by a narrow shoreline of fringing reefs sharply sloping towards the deep water. On the northern edge, it opens out to the Visayan Sea and on the southern edge to Bohol Sea; these bodies of water are both known to be rich traditional fishing grounds in the country.

It is not surprising then, to encounter diverse types of fishes and marine organisms in the catch of fishers. These range from organisms

related to the coastal marine habitats (mangrove, seagrass beds, coral reefs, sandy-soft bottom) to the pelagic waters, and up to the deeper waters. Most of the commercially valuable catches observed are pelagic species. Some are demersal and only a few are reef-related species.

There were at least 90 kinds of fish and other invertebrates observed during the May 2015 survey. Below are the lists of these species, classified according to type of marine habitat.

Seagrass bed off Toledo City © OCEANA/Danny Ocampo





© OCEANA/Danny Ocampo

REEF-ASSOCIATED FISH

* These are dependent on coral reefs during most of their life cycle.

Scientific Name	Common Name	Local Name
<i>Abalistes stellatus</i>	starry triggerfish	tikos
<i>Abudefduf vaigensis</i>	Indo-Pacific sergeant	palata
<i>Amblyglyphidodon aureus</i>	golden damselfish	palatang dalag
<i>Amblyglyphidodon leucogaster</i>	yellowbelly damselfish	palatang itom
<i>Caesio caerulea</i>	blue and gold fusilier	solid
<i>Carangoides sexfasciatus</i>	orange-spotted trevally	lison, brunsi
<i>Chromis atripectoralis</i>	black-axil chromis	palata
<i>Dascyllus trimaculatus</i>	three-spot dascyllus	palatang dalag
<i>Hologymnosus sp.</i>		labayan
<i>Naso minor</i>	slender unicorn fish	kalangkang
<i>Oxycheilinus diagrammus</i>	cheek-lined wrasse	labayan
<i>Paracaesio sp.</i>		bilason
<i>Pterocaesio pisang</i>	banana fusilier	lukihok, kutdan
<i>Pterocaesio randalli</i>	randall's fusilier	solid, apingan, alukihok
<i>Pterocaesio tessellata</i>	one-striped fusilier	lukihok
<i>Sargocentron cornutum</i>	threespot squirrelfish	ganting
<i>Scarus sp.</i>	parrotfish	
<i>Thalassoma lunare</i>	moon wrasse	labayan



Goldband goatfish © OCEANA/Chris Krenz

DEMERSAL

They inhabit the seabed most of their lives, and usually have a high market value.

Scientific Name	Common Name	Local Name
<i>Bembrops sp.</i>		sunugan
<i>Charybdis feriata</i>	crucifix crab	kurusan
<i>Ctenogobius aurocingulus</i>		bunog
<i>Dactyloptena orientalis</i>	oriental flying gurnard	balongon
<i>Gerres filamentosus</i>	whipfin silver-biddy	batuhanon, putian, samolok
<i>Gerres oyena</i>	common silver-biddy	nylon, nylon-nylon,
<i>Gymnocranius sp.</i>	emperor fish	katambak
<i>Hapiosquilla melanoura</i>	mantis shrimp	antilik, hantilik
<i>Hypoptychus sp.</i>	sand eel	diwit-diwit, sihag-sihagan
<i>Nemipterus bathybius</i>	yellowbelly threadfin bream	lagaw
<i>Nemipterus nematophorus</i>	doublewhip threadfin bream	lagaw
<i>Nemipterus zysron</i>	slender threadfin bream	lagaw
<i>Parupeneus chrysopleuron</i>	yellowstripe goatfish	timbangan
<i>Pisodonophis sp.</i>	snake eel	obod
<i>Platycephalus laevigatus</i>	rock flathead	tiki-tiki
<i>Platycephalus sp.</i>	flathead	asoos
<i>Priacanthus hamrur</i>	lunar-tailed bigeye	baga
<i>Saurida tumbil</i>	greater lizardfish	tiki-tiki, malangutin, karaho, tambod
<i>Upeneus mollucensis</i>	goldband goatfish	salmonete
<i>Upeneus sulphureus</i>	yellow goatfish	salmonete
<i>Upeneus tragula</i>	darkband goatfish	timbangan
<i>Upeneus vittatus</i>	yellowstripe goatfish	timbangan
<i>Terapon jarbua</i>	jarbua theraon	bugaong
<i>Valamugil sp.</i>	mullet	gisaw



Bridled grouper © OCEANA/Chris Krenz

DEMERSO-PELAGIC

These species are found within the mid-layer of the ocean's water column, and spent parts of their life cycle feeding and reproducing in both the seabed and open water.

Scientific Name	Common Name	Local Name
<i>Atule mate</i>	yellowtail scad	mamudlong
<i>Carangoides uii</i>	Japanese trevally	samin-samin
<i>Epinephelus epistictus</i>	dotted grouper	kinsan
<i>Epinephelus heniochus</i>	bridled grouper	inid
<i>Gnathanodon speciosus</i>	golden trevally	badlon
<i>Heniochus diphreutes</i>	schooling bannerfish	kulamperos
<i>Lepturacanthus savala</i>	savalai hairtail	diwit
<i>Lutjanus fulviflamma</i>	black-spot seaperch	alum
<i>Lutjanus lutjanus</i>	bigeye seaperch	lalagan
<i>Megalaspis cordyla</i>	torpedo scad	bakulan
<i>Neopinnula orientalis</i>	sackfish	tangigihon
<i>Pristipomoides filamentosus</i>	rosy snapper	lambo, sagisihon
<i>Scolopsis bilineata</i>	two-line monocle bream	asoos
<i>Scolopsis monogramma</i>	monocle bream	batuhanon
<i>Siganus canaliculatus</i>	smudgespot spinefoot	danggit
<i>Siganus guttatus</i>	golden spinefoot	kitong
<i>Sphyaena obtusata</i>	striped seapike	tabangko, batog, rumpi



Baby sardines (*lupoy*) © OCEANA/Yasmin Arquiza

PELAGIC

These are found in the top layer of the water column, living and feeding in the open sea.

Scientific Name	Common Name	Local Name
<i>Atherina sp.</i>	silversides	guno
<i>Auxis thazard</i>	frigate tuna	ilason, hilason
<i>Decapterus kurroides</i>	redtail roundscad	pulag ikog
<i>Decapterus macarellus</i>	mackerel roundscad	garitoy
<i>Decapterus macrosoma</i>	long-bodied roundscad	budloy, garitoy, manulsog
<i>Decapterus tabl</i>	roughear roundscad	malapati, budloy
<i>Euthynnus affinis</i>	kawakawa	bansikol
<i>Katsuwonus pelamis</i>	skipjack	tulingan
<i>Loligo duvaucelli</i>	indian squid	alumiyagan, lumiyagan
<i>Ostorhinchus (Apogon) kinesis</i>	rifle cardinalfish	
<i>Sardinella gibbosa</i>	goldstripe sardines	tuloy
<i>Sardinella spp.</i>	sardines	tuloy, malangsi, malubgas,
<i>Selar crumenophthalmus</i>	purse-eyed scad	gutob, tamarong
<i>Spratelloides gracilis</i>	slender sprat	binulabed
<i>Stolephorus spp.</i>	anchovy	manubig, libgaw
<i>Taeniamia macroptera</i>	dusky-tailed cardinalfish	lagao
<i>Tylosorus crocodilus</i>	hound needlefish	bawo-ulo



Giant squid (*dalupapa*) © OCEANA/Mary Ann Mayo

DEEPWATER

These lesser known species can be either demersal or demersopelagic, but are often found in much deeper waters. They are not as widely consumed as other fish.

Scientific Name	Common Name	Local Name
<i>Acropoma sp.</i>	glowbelly	anoos, amag-amag, kasu, lagaw sa moros
<i>Bodianus sp.</i>		insik-insik
<i>Chlorophthalmus sp.</i>	greeneye	green mata
<i>Heplobrotula sp.</i>		ito-ito
<i>Malakichthys sp.</i>	acropoma	abu
<i>Myctophum sp.</i>	lantern fish	talagmatay
<i>Myripristis pralinia</i>	soldierfish	ganting
<i>Satyrichthys rieffeli</i>	spotted armoured-gurnard	baka-baka
<i>Thysanoteuthis rhombus</i>	diamond back squid	dalupapa

When measured, the weighted mean length for some of the commercially significant species indicated that some are caught before they could at least spawn once. This was shown by their smaller mean length, compared to the length at maturity.

Market surveys are good indicators of the species composition found in Tañon Strait, especially if the traders know the exact source of the fish they are selling and what gear was used.

In a survey of 25 stalls, traders indicated that some of the fish had been caught by ringnet or purse seines (*kubkub*). Majority of them, or 92% of the stalls, bought their fish from municipalities along Tañon particularly Alegria, Badian and Samboan. These towns are reported to be the home ports of commercial fishing vessels. Fish vendors from Moalboal openly said most of the fish were caught by ringnet or purse seiners from Alegria.

Outside the protected area, other sources for the traders are Dumaguete, Cadiz, and even as far as General Santos City in the southern tip of the Philippines.

Majority of species observed in the market are pelagic fishes. Some are associated with coastal marine habitats while others are deepwater ones, which is not surprising given the geo-physical characteristic of the Strait.

A separate enforcement monitoring survey commissioned by Oceana in November reported that the most commonly caught fish inside the protected area are tuna, matangbaka, galunggong and other deep water fish, anchovy, and reef fishes.

Seahorse in Toledo's seagrass beds

In partnership with the civil society organizations Save Tañon Strait Citizens Movement and the Knight-Stewards of the Sea, Oceana volunteered in May 2015 to do a visual assessment and documentation of an

area proposed as the site for a dump-and-fill project of Toledo City is a third-class coastal city located on the western side of the province of Cebu along the Tañon Strait.

The activity was spurred by the Sangguniang Panlungsod (city council) of Toledo City's approval of their Mayor's request for the project that would cover 11 hectares of near-shore habitats, situated largely in Barangay Poblacion, to build a mixed-use complex of commercial and recreational establishments. Dumping and filling-in portions of the sea would undeniably smother and kill its plant and animal life, and the amount of siltation produced could also extend to surrounding areas.

As citizens concerned with the potential impact of the project on the fisheries and ecosystems of Tañon Strait, the three groups assembled 17 volunteer divers and invited members of the media to document the activity. Staff from DENR Region 7's Conservation and Development Division also joined the assessment, and officials of Barangay Poblacion in Toledo City actively participated as surface support for the duration of the activity.

The main objective was to document the status of the marine ecosystems found in the proposed site. Volunteer divers took photos and videos to provide initial data to the local government units (LGUs), government agencies, civil society and other stakeholders, in the hope that a more in-depth study could be conducted to determine the proposed project's impact on the ecosystems, fisheries, and other resources in the area that would be covered by the proposed fill-and-dump project.

Three dives were scheduled on May 23, 2015 beginning at 7:00 am, during the lowest tide, and ending at 1:00 pm, just before the highest tide. The first dive was conducted beyond 200 meters from the outermost boundary of the proposed reclamation site. The second dive was conducted within 200 meters from



Seahorse in silted seabed near proposed reclamation site off Toledo City © OCEANA/Danny Ocampo

the outermost boundary of the proposed reclamation site. The third dive was supposed to be conducted within the proposed reclamation site, but it had to be called off, following the directive of Toledo City police officers who said they were enforcing orders from the Toledo City Hall to stop the assessment.

The proposed area is located between the Toledo City Ferry Terminal and the New Toledo Power Plant. Several effluent pipes coming from the Toledo Public Terminal, the Public Market, and the adjacent Commercial Arcade drain into this area.

The water was generally turbid, with visibility ranging from four to eight meters. Warm water was experienced by the divers, who were later informed that this

came from the power plant. The substrate was generally sand and silt, with substantial areas covered by seagrass or silted seagrass beds.

Despite the coastal pollution, schools of fish and a fair amount of juvenile fish were found in the area. Among the fish species observed were goatfish, mojarra, goby, lionfish, cardinal fish, damselfish, bream and other schooling pelagic fish that the divers were unable to identify. Other marine life observed include shrimps, crabs, seahorse, and nudibranchs. According to local residents, seahorses are more numerous during the southwest monsoon or *Habagat* season. Many of them fish and glean in the area regularly to supplement their income.



Fern seagrass © OCEANA/Danny Ocampo

Seagrass beds and small colonies of juvenile massive corals were also found, covering a significant area. One notable species is the fern grass, which is found only in the South China Sea and the coasts of northern Australia. According to the 2015 Red List of the International Union for the Conservation

of Nature (IUCN), fern seagrass beds are already declining in Malaysia and Singapore due to coastal development. In the Philippines, the same species is threatened by eutrophication, siltation, pollution, dredging, and unsustainable fishing methods, according to a 2003 study.

Seagrass species found in the proposed dump and fill site in Toledo City, Cebu

Scientific name	Common name
<i>Halophila spinulosa</i>	Fern seagrass
<i>Halophila ovalis</i>	Paddle weed
<i>Halophila decipiens</i> (?)	Paddle grass
<i>Halodule</i> sp. (possibly <i>H. univervis</i> and <i>H. pinifolia</i>)	
<i>Cymodocea</i> sp.	



CHAPTER 3

UNSAY PANGINABUHI?

Fisheries in the strait

What do people do for a living? In May 2015, the fish catch monitoring survey of Oceana found out that while fisheries is dominant, coastal residents also rely on diverse sources of livelihood.

Fishing is a very important source of livelihood in the three municipalities and one city surveyed in Tañon Strait, with nearly half of respondents (48%) depending on fisheries as a primary livelihood source. Farming is a far second,

with just 8% of respondents relying on it while ferrying passengers on local transport comes third. The figures indicate low levels of industrialization and opportunities for salaried jobs.

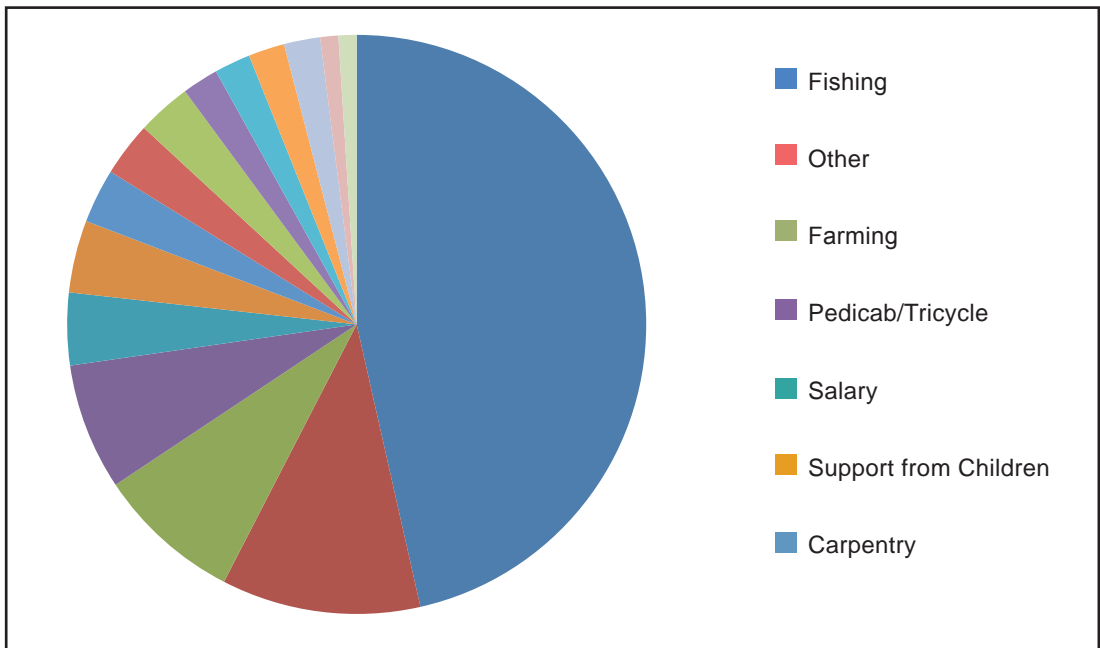


Figure 3: Primary source of livelihood



Secondary sources of livelihood are much more diversified, although fishing is still dominant with 14% of respondents, while selling goods or having “sari-sari” stores comes second. The

wider variety of sources includes manual labor such as laundry and manicure services, carpentry, and welding.

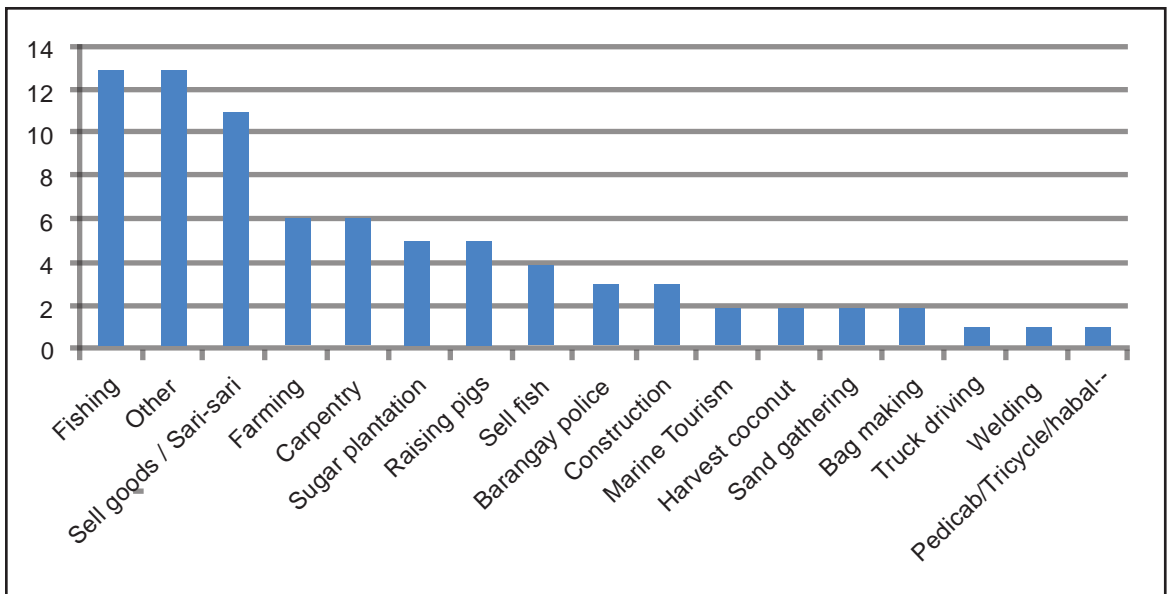


Figure 4: Secondary sources of livelihood

Among the households interviewed, many did not have large pieces of land, which could explain the relative lack of agricultural prominence. Over one third of respondents (42%) do not grow any crops, while one third do not raise farm animals. Those who engage in planting grow coconuts, fruits, vegetables, maize, and ornamental plants. Residents who raise livestock focus mostly on chicken (65%) followed by pigs (36%), goats (20%) and cows (6%).

Average monthly income corresponds with expenditure for the most part in the surveyed households. In some cases, one was stated as being higher than the

other, but there doesn't appear to be a clear trend. The most common category (about 40% for both) is a monthly income and expenditure of PhP 1,500 to PhP 3,000. This figure translates to a daily income of about PhP 50-100/day, or USD 1.05-2.10/day, within the range of the international poverty line, pegged at USD 1.90/day as of October 2015. Income for the highest wealth category is about four times that of the lowest range, with 11% of respondents living under the poverty line. Although there are many factors involved as well as seasonal fluctuations, the figures show that these coastal villagers live largely in poverty when compared to global levels.

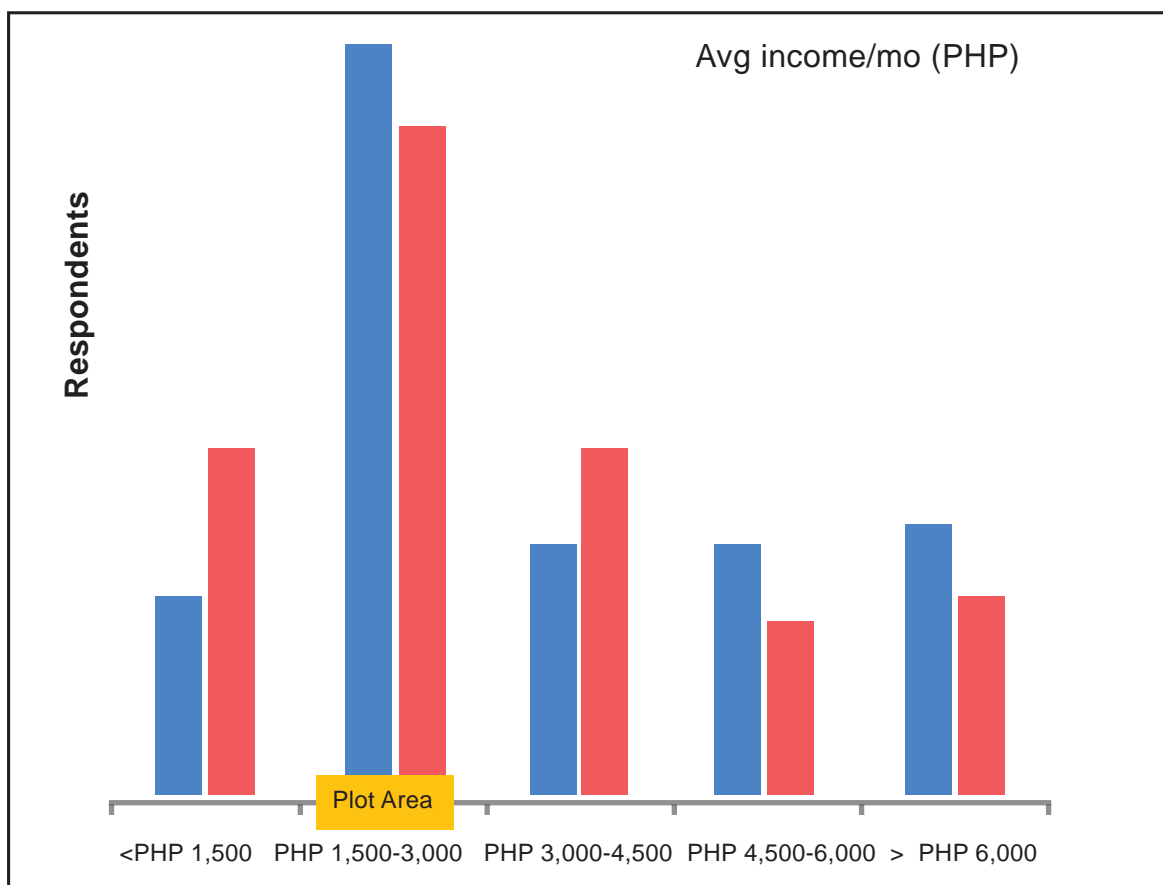


Figure 5: Average monthly household income and expenditure

Fisheries

Almost one-third of the respondents are not engaged in fishing, and among the majority who do, most of the catch is sold to consumers. There is a strong correlation between the act of fishing and selling catch, indicating that fishing is primarily

used as a form of livelihood, rather than for recreation. About one quarter of fishing households get all their cash income from fishing.

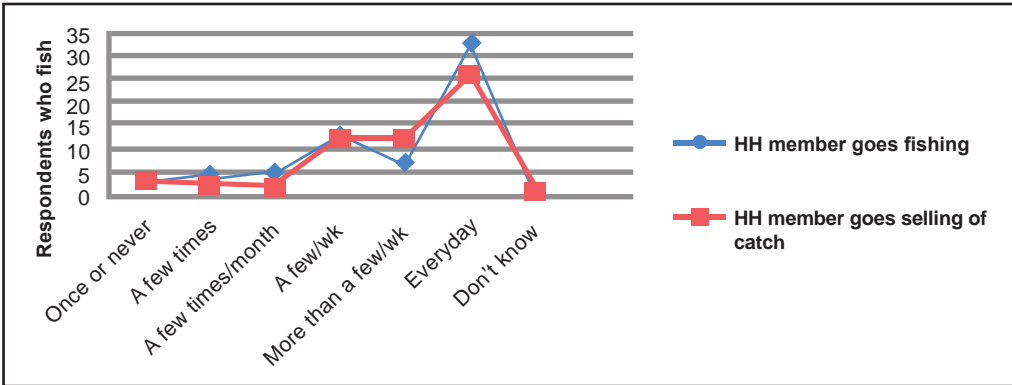


Figure 6: Frequency of fishing and selling catch in the last 6 months

Fishing households are engaged in a variety of fisheries-related activities. Aside from catching fish, which is the most common activity, they are involved

in selling their catch (88%), reef gleaning (59%), financial services or lending (20%), and selling cooked food (5%).

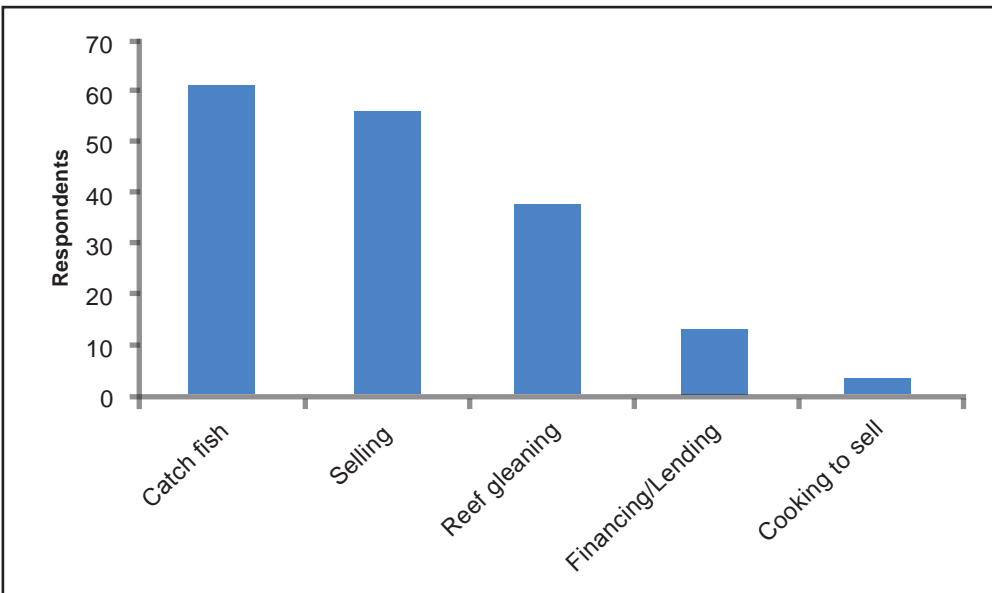


Figure 7: Fisheries activities in the past 6 months

Coastal and fishing population in Negros island (TSPS)

Municipalities/ Cities	Province	Total Population (2010)	Total Coastal Population (2010)	Number of Fishers
San Carlos City	Negros Occidental	129,981	75,151	1,393
Guihulngan City	Negros Oriental	93,675	44,768	No data
Tanjay City	Negros Oriental	79,098	40,233	249
Bais City	Negros Oriental	74,722	31,952	1,896
Calatrava	Negros Occidental	79,009	31,157	No data
Sibulan	Negros Oriental	51,519	24,097	No data
Escalante City	Negros Occidental	93,005	21,900	772
Vallehermoso	Negros Oriental	36,943	20,025	543
Toboso	Negros Occidental	41,658	17,497	No data
Manjuyod	Negros Oriental	41,107	17,201	1,231
Ayungon	Negros Oriental	46,146	14,544	958
Amlan	Negros Oriental	22,206	13,909	559
Bindoy	Negros Oriental	39,416	11,993	834
San Jose	Negros Oriental	19,098	9,939	122
Tayasan	Negros Oriental	34,609	7,716	363
La Libertad	Negros Oriental	38,904	7,452	267
Jimalalud	Negros Oriental	29,044	6,205	575

Source: BFAR Region 7 as of 2015 except for San Carlos City (municipal fisheries profile) and Escalante City (fisheries resource management plan 2009-2013)

Research by Karen Gatus

Level of fishing effort

A survey of municipal fisheries was done in five areas and compared with the results of the baseline study conducted by the Coastal Resource Management Project (CRMP) in 2004. All these areas are within the 'low fishers density' (501 to 1500 fishers per municipality) category.

Most of the fisher-respondents confine themselves to Tañon Strait, with 76% indicating that they are fishing within their municipalities' 15-km boundaries. Fishing is done year-round, as Tañon Strait is not that exposed to the maximum impact of the southwest and northeast monsoons.

As a form of livelihood, fishing in Tañon Strait is not very rewarding, as shown by the

relatively very low catch per unit of fishing effort. This is measured in the number of kilos of fish they can obtain in one hour of fishing. Majority of fishing activities are artisanal using several varieties of hook and line, gillnet, bottomset longline, squid jigs, and bagnet. There is a general perception that the number of fishers, for both commercial and municipal sectors, is increasing and the volume of catch is decreasing through the years. There are no changes perceived in the size and kinds of fishes caught in the area.

The survey showed that fishers are not catching much, with the highest catch at only five kilos per hour using a bagnet. In many cases, especially for hook-and-line,

Coastal and fishing population in the province of Cebu

Municipalities/Cities	Total Population (2010)	Total Coastal Population	Number of Fishers
Toledo City	157,708	59,552	1,533
Balamban	71,237	42,412	399
Medellin	50,047	40,615	900
San Remigio	51,394	31,568	1,671
Santa Fe	27,270	25,507	546
Asturias	44,732	25,110	3,211
Pinamungajan	57,997	22,552	897
Tuburan	58,914	21,472	446
Daanbantayan	74,897	21,338	no data
Badian	37,699	20,841	815
Moalboal	27,676	17,911	2,131
Barili	65,524	16,776	205 Fulltime fishers; 495 Part-time fishers; 165 Commercial fishers
Bantayan	74,785	16,665	5,276
Dumanjug	46,754	13,543	214
Tabuelan	22,292	12,897	1,001
Aloguinsan	27,650	12,487	393
Alegria	22,072	11,505	987
Santander	16,105	11,049	161
Samboan	18,613	10,793	178
Malabuyoc	18,426	10,425	152
Ginatilan	15,327	8,565	115
Madridejos	34,905	7,872	no data
Ronda	18,582	7,591	530
Alcantara	13,556	6,089	279

Source: BFAR Region 7 as of 2015 except for Barili and Balamban (coastal resource management plans)

Research by Karen Gatus

fishers could not even manage to get one kilo per hour. The fishing practices and gear listed on page 30 are only the ones observed during the survey, and given the ingenuity of Filipino fishers, it is possible that there are others not covered here.



©OCEANA/Jenn Hueting

Fish catch and gear used in Tañon Strait

Fishing Gear (English term)	Fishing Gear (Visayan translation)	Types of fish caught	Average catch per unit effort (kg/hr) for CY 2015
bagnet	basnig	sardines, wrasses, lizardfish	5
gillnet	patulay	scads	3
gillnet	pokot	sardines, squid, fusiliers, scads, biddies, snappers, breams, goatfishes, big eyes, mackerels, lizardfish, cardinals	2
squid jig	panglumiyan	squids	1
gillnet	Kurantay	Indian mackerel	1
fish jig /squid jig	angkla	diamond back squids	1
squid jig	pang-nokos	squid	1
hook and line	crystal/rentik	scads and big-eyes	1
bottomset longline	palangre	cardinal fish, flatheads, hairtails, wrasses, moray eels, breams, sackfish, goatfish, big eyes, gurnards	0
hook and line	birik-birik	scads	0
hook and line	rapala	scads	0
hook and line	palabay/salabay	hairtails, sardines, scads, triggerfish, anchovies, trevally, ponyfish, breams, cardinal fish, mackerel, jobfish	0
hook and line	bunso-bunso	squids, scads, big eyes	0
hook and line	pasol	wrasses, sergeant fish, fusiliers, dascyllus, bannerfish, unicorn fish	0
hook and line	hawihw		0
hook and line	isda-isda		0
squid jig	kulambutan		0
hook and line	lasdak	scads, mackerels, sardines	0
surface longline	pahawin		0

In Samboan municipality in Cebu, gillnets had the highest catch rate for small pelagic species such as small tuna (*ilason*), sardines (*tuloy*), and big-eye scad

(*tamarong*). Jigs, which target mostly squid, are used for longer periods with a minimal catch rate. Hook and line fishers usually catch roundscad.

Samboan, Cebu (May 2015)

Fishing Gear (English)	Fishing Gear (Visayan)	Types of fish caught	Fishing time (hours)	Average catch per unit effort (kg/hr) for CY 2015
jig	angkla	squid	12	1
hook and line	birik-birik	Bali sardinella, scissortail sergeant, scads	5	0
jig	isda-isda		4	0
gillnet	patulay	scads, frigate tuna, sardines	13	1
gillnet	pokot	Bali sardinella, scads	4	3
hook and line	rapala	manudlong	5	0
hook and line	salabay/pakatay	Bali sardinella, lizardfish, scads, Indian mackerel, big-eye tuna	6	0

In Calatrava in Negros Occidental, squid jigs had the highest catch level in a relatively shorter period of time. Some types of gillnets are interesting because they seem to be catching both demersal and pelagic fishes, which means fishing gear like *kurantay* is

exploiting a large part of the water column. The bottomset longline, on the other hand, are catching mostly bigeyes (*baga, baga-baga*). Calatrava is near the northern opening of the Strait, towards the rich fishing grounds of the Visayan Sea where the soft bottom substrate offers more diversity of fishes.

Calatrava, Negros Occidental (May 2015)

Fishing Gear (English)	Fishing Gear (Visayan)	Types of fish caught	Fishing time (hours)	Average catch per unit effort (kg/hr) for CY 2015
jig	angkla	squid	2	2
gillnet	kurantay	Indian mackerel	2	1
hook and line	palabay	anchovy, Bali sardinella, jobfish, breams, cardinalfish, trevally, hairtail, Indian mackerel, scads, ponyfish, sardine	4	0
bottomset longline	palangre	gurnard, wrasses, big eye, breams, cardinalfish, flathead, moray eel, sackfish	5	1
jig	panglumiyan	squid	10	1
gillnet	pokot	snapper, big eye, breams, cardinalfish, flathead, goatfish, lizardfish, squid	4	0
	sapyaw/sabot	snapper, rabbit fish	1	13

Small-scale fishers in the Municipality of Guihulngan, Negros Oriental use mostly squid jigs to catch a variety of species, including the diamond-back

squid known as giant squid (*dalupapa*). Local fishers were also observed using both gillnet and hook and line in coral reef areas.

Guihulngan, Negros Oriental (May 2015)

Fishing Gear (English)	Fishing Gear (Visayan)	Types of fish caught	Fishing time (hours)	Average catch per unit effort (kg/hr) for CY 2015
jig	angkla	squid	8	0
hook and line	bunso-bunso	scads	12	0
hook and line	crystal/rentik	baga, бага-бага	12	1
jig	lumiyagan	squid	8	0
bottomset longline	palangre		2	0
gillnet	pokot	reef fish	7	0

The municipality of San Jose, Negros Oriental is situated in the southern opening of the Strait towards the biodiversity-rich Bohol Sea, and thus

it has a more interesting and diverse catch. Bagnets and gillnets more efficient than hook and line in catching small pelagic fishes.

San Jose, Negros Oriental (May 2015)

Fishing Gear (English)	Fishing Gear (Visayan)	Types of fish caught	Fishing time (hours)	Average catch per unit effort (kg/hr) for CY 2015
bagnet	basnig	wrasses, lizardfish, sardines, silversides	3	3
jig	kulambutan	squid	3	0
hook and line	lasdak	Bali sardinella, scads, Indian mackerel	5	0
bottomset longline	palangre	demersal fishes	3	0
gillnet	pukot	fusiliers, silversides	3	4



Fishers in Moalboal © OCEANA/Yasmin Arquiza

The coastline and nearshore waters of Moalboal, Cebu are mostly reserved for tourism, which might explain the less diverse type of fishing gear used

and lower yield compared to other areas surveyed. The only gear observed that had some marine catch during the survey was the squid jig.

Moalboal, Cebu (May 2015)

Fishing Gear (English)	Fishing Gear (Visayan)	Types of fish caught	Fishing time (hours)	Average catch per unit effort (kg/hr) for CY 2015
hook and line	pahawin		2	0
jig	pangnokos	squid	2	1
hook and line	pasol	fusiliers, wrasse, bannerfish, sergeant, unicorn, dascyllus	8	0
gillnet	pokot	foatfish, scad	4	0

Fishers in Tañon Strait spend a maximum of 12 hours at sea, most on their own (80%) while the rest belongs to groups of up to five fishers. Most of the fishers had been fishing for more than 10 years.

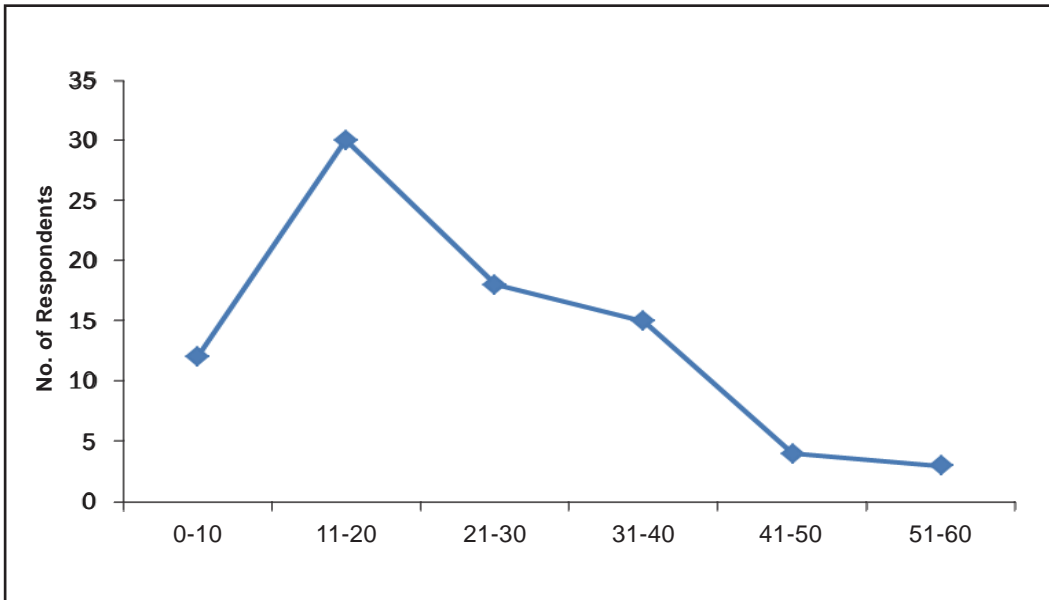


Figure 8: Length of time respondents had been fishing in Tañon Strait

Duration of fishing in Tañon Strait

No. of hours spent at sea	No. of Respondents	Percent Distribution
1	11	13
2	11	13
3	10	12
4	10	12
5	9	10
6	8	9
7	8	9
8	5	6
9	5	6
10	4	5
11	3	3
12	2	2

After fishing for six hours, this was all that one respondent got as his catch for the day. Another fisherman, an 80-year-old man, came back to shore after 12 hours at sea with only his hook and line but no catch.



© OCEANA/CHRIS KRENZ

Prevalence of payao

Often marked by buoys that serve as a warning to boats crisscrossing the strait, they have become increasingly conspicuous in recent years. The payao is a floating fish aggregating device, often consisting of a raft anchored by a weighted line with suspended materials such as palm fronds to attract schooling species commonly found in deeper waters.

An enforcement monitoring expedition commissioned by Oceana last

November made daily observations for a week, and noticed a substantial number of the fish aggregating devices. These payao are used by commercial fishing vessels that are unregistered and unlicensed. They use small light boat markers to designate the target payao for fishing and attract fish. Overall, the enforcement monitoring team observed 27 commercial fishing boats in the area within one week.



CHAPTER 4

UNSAY HAGIT?

Commercial fishing and other challenges

What are the concerns of coastal residents? In all the community activities done by Oceana in 2015, the same narrative seems to be repeated over and over again: commercial fishing is taking away abundant marine life that used to feed their families and provide for their daily needs.

In 1998, then-President Fidel V. Ramos issued Proclamation 1234 declaring the Tañon Strait Protected Seascape (TSPS) in recognition of the extraordinary abundance and diverse assemblage of dolphins and whales that use these waters as feeding, breeding, and nesting grounds.

In February 1999, his successor President Joseph Estrada created the Tañon Strait Commission to “undertake and regularly update a comprehensive survey and inventory of the physical and natural resources and maintain an accurate data of the most economic and socially beneficial development for the basin.” The body was supposed to be composed of 11 representatives from government line agencies, one from the private sector, and one from a non-government organization. But nothing has been heard of the Commission since its formation.

Tañon Strait is also covered by the National Integrated Protected Areas System (NIPAS) Act of 1992, which mandates a General Management Plan (GMP) and a Protected Area Management Board (PAMB) for these special sites. Under the law, the narrow body

of water would be managed by three provinces: Cebu, Negros Oriental, and Negros Occidental.

In 2009, then-Governor Gwendolyn Garcia of Cebu issued Executive Order 9 to form the TSPS Cebu side Executive Committee, which was criticized by some sectors for supposedly replicating the functions stated in the NIPAS law.

It seems that these government issuances were not disseminated widely, as Oceana’s media and audience survey and subsequent field activities showed that many coastal dwellers are not aware about Tañon Strait’s declaration as a protected seascape.

Roger Ibuogan, the barangay captain of Tuble in Moalboal for the last eight years, is one of the more than 300 members of the Tañon Strait PAMB, which he described as “walay klaro” (vague) during Oceana’s media and audience survey in January. The PAMB convened for the first time the following month, in February 2015, giving a ray of hope that the management body could become more active in the near future.

Even the government employees who are tasked to supervise the strait are in a quandary, as revealed in key informant interviews.



Map showing route of expedition undertaken by Oceana Philippines in September 2015

Vicente Calizar, Chief of the Coastal and Marine Management Division of DENR Region VII, sees “weak harmonization of laws in the TSPS.” He adds, “The protocols have never been reviewed before it can be implanted. The people do not know what they have to protect.” A trained forester, Calizar served as a protected areas supervisor in the past.

Manric Barillo, Coastal Resource Management Coordinator of Negros Oriental, sees the TSPS as a controversial measure because it was a “midnight agreement during the Ramos administration.” The foreign-funded Coastal Resource Management Project (CRMP), Barillo adds, was able “to clarify the role” of TSPS in 2000. However, the proclamation lacked teeth, so that in 2007,

a Japanese firm was able to conduct energy exploration activities in parts of Tañon Strait, he recalls.

Viernov Grefalde, Tañon Strait's park superintendent from 2012 to early 2015, says there is a need to reinforce regulations due to "so many people who are in conflict because of the resources in Tañon." He says the presence of smaller marine protected areas within the much larger TSPS complicates matters. A 25-year veteran with the DENR, Grefalde believes that the coastal villages of Tañon need more information and education campaigns so that protecting the strait becomes a community effort.

A common complaint among government personnel is that many non-government organizations and research groups have taken interest in TSPS, but few have shared data with the DENR and BFAR.

Commercial fishing inside protected area

Although some local government units have their own fisheries ordinances, 'the implementation and enforcement of laws is lacking,' according to Grefalde.

In the Philippines, the Fisheries Code gives municipal fishers preferential access to fishing grounds within 15 kilometers from shore. This means that Tañon Strait, which is only 27 kilometers at its widest, is generally reserved for municipal fisheries only. Yet, commercial fishing operations are still prevalent, their vessels catching large volumes of fish and outpacing municipal fishers who rely on the sea's bounty as a source of food and income.

To verify reports about commercial fishing vessels operating in the Strait, as reported by partner communities during field visits, Oceana conducted a weeklong expedition in September 2015. The main goals of the expedition were to document commercial fishing activities inside TSPS, and to determine gaps in the

implementation of fisheries laws in the protected area (see map on page 37).

The expedition team found mostly ringnet or purse seines in the southern part of the Strait. Docked in Hagnaya Port were mostly Danish Seines, which are banned throughout Philippine waters and are the subject of ongoing lawsuits against the Bureau of Fisheries and Aquatic Resources. Two suspected baby bagnet vessels were observed on the shores of Jibitnil Island, while modified round haul seines were observed in operation in the waters off Bantayan Island; these vessels fall within the 3.1 to 10-gross ton category for commercial fishing boats.

In total, about a dozen commercial fishing vessels were documented and their locations pinpointed using a GPS device. All of them were carrying active fishing gear, and were documented either transiting from or engaging in fishing operations.

Two commercial fishing vessels were documented with the same name. On another occasion, an unmarked vessel had a very similar paint scheme and design with a marked fishing vessel, suggesting that the two boats may have a single registry name.



Different vessels with the same name © OCEANA/Edward Lorenzo





Dolphins share the waters with fishers getting their catch from the payao in the middle © OCEANA/Yasmin Arquiza

Most of the commercial fishing operations were being done in areas where *payaos* (fish aggregating devices) were deployed. The sheer number of payao seen in the strait is certainly a cause for concern.

Municipal fishers in Moalboal are among those who have decried the incursion of commercial fishing boats in their waters, saying these have contributed to the decrease in fish catch. Tuble barangay captain Roger Ibuogan sees the need to strictly enforce the laws against commercial fishing ‘not only to protect the Strait but the fisher folk as well.’ He says trawl fishers from Barili and Badian have encroached in their waters. Fishers in barangay Basdiot blame the vessels using the lamba-lamba and fine meshed nets for destroying the corals. In nearby Saavedra, the local fishing association reported that vessels using ‘kubkob’ would catch even the fingerlings.

According to the Saavedra fishers, ‘*dagkong tawo*’ or influential people own the commercial vessels seen in Moalboal, making it almost “impossible to enforce the law.” The sentiment is echoed on the other side of the strait, in Barangay Olympia in Bais City: some of the men who joined Bantay Dagat recall one incident when they reported to authorities the presence of a large commercial fishing vessel using ring nets near the island. They were alarmed when they found out that “someone powerful” owned the boat. “*Nag-apil mi sa Bantay Dagat ug nag sige seminar. Nagbantay na mi sa dagat ug nahulog nga ang gitumban namo dagkong tawo.*”

Dagkong tawo ang among kalaban. Naa’y naga suporta sa ilaha,” (We joined Bantay Dagat and attended seminars. We guarded the sea but as fate would have it, we stepped on the toes of powerful people), one fisher noted.

Members of Bantay Dagat in Guihulngan had a similar experience. In April 2014, they found themselves going after heavily armed illegal fishers who were allegedly from Barile. There are also commercial fishers who use compressor, cyanide and chlorine powder to catch fish. Fisheries officer Francisco Rizon says many of them resort to illegal fishing because the penalties are “very affordable.”

An enforcement monitoring expedition in November further validated the prevalence of commercial fishing operations, as well as destructive fishing activities like dynamite and cyanide fishing, the latter done mainly through the use of a breathing apparatus called a compressor. Earlier, during the Oceana expedition, an interview with a community leader yielded some information on the sources of blasting caps for dynamite fishing operations, giving some insights about its supply chain.

Destruction of precious marine habitats

During the expedition, Oceana scientists conducted dive surveys in selected sites and found destructive fishing impacts on the seafloor of Tañon Strait, even within locally established marine sanctuaries.



Smoke billows out of an industrial complex on the shores of Bais Bay, where fishpens are increasing in number © OCEANA/Edward Lorenzo

In the Malusay sanctuary in Guihulngan, about 90% of the corals were dead and covered with silt and algae. Very few fishes were observed, and mostly the species were of lesser value.

The adjacent Hilaitan Sanctuary, even though left unprotected in recent years, had much better live coral cover with plenty of individual mushroom, encrusting, and foliate forms. Divers also noted the presence of a relatively undisturbed seaweeds cover (*Padina spp.*). The diversity of fishes is relatively good, with greater abundance and the presence of bigger fishes observed. According to a Bantay Dagat member, this sanctuary used to be well maintained but protection has become lax lately. As a result, abandoned gillnets and fish traps with frames made of bamboo materials were seen “ghost fishing,” or catching fish unintentionally, a waste of precious marine life.

Down south, the tourist destination of Bais Bay is obviously in a dire condition. It is congested with fish corrals and other small scale fishing operations such as gillnet, traps, drive-in gillnet, and hook and line. Water quality is poor due to high levels of organic nutrients; this is indicated by the uncharacteristic abundance of green algae growing in clumps and covering most of the shallower parts of the bay, sharing the habitat with the seagrasses *Enhalus*

acoroides and *Thalassia spp.* Another indicator species of high organic pollution are the clumps and super abundance of sea urchins (*Diadema setosum*) in the bay.

At the Panagsama beach in Moalboal, on the Cebu side of the strait, live coral cover was poor, possibly due to unrelenting pollution from the tourist establishments choking the shoreline. Notable species observed were some butterfly fishes, a small shoal of sardines followed by fusiliers, a few yellow-orange dotted trevally, less than five small barracuda, and two green sea turtles.

In Samboan, divers scoured the reef slope and reef crest inside the sanctuary and outside its perimeter. There were no signs of blasted areas or lost fishing implements, but some sacks were collected. A piece of rope suspected to be part of a marker indicating the borders of the sanctuary was also observed.

In the fishing town of Sta. Fe in Bantayan island, the dive site was mostly rubble and sand, possibly due to continuous disturbance. Coral rubble and signs of possible cyanide activities, such as dead corals that were bleached white, were observed. Types, number, and sizes of fishes are not impressive, but the presence of high value mollusks indicate that the area had a much higher level of biodiversity in the past.

Coastal pollution

Up and down the strait, signs of human activities that destroy coastal and marine habitats are everywhere. The enforcement monitoring survey commissioned by Oceana observed activities associated with heavy industries in the coastal areas, mariculture projects, and ecotourism-related structures atop certain atolls.

In the tourist town of Moalboal, resort owner Evelyn Abenido-Maligon sums up the lament of local residents on the blatant disregard for laws and ordinances by some business owners when she says, “*Wala na ka’y makita na dagat. Paglantaw nimo, semento na tanan. Wala na’y daplin dagat.*” (You can no longer see the ocean. When you look out, all you see is concrete. There’s no more seashore.)

Sugar powerhouse San Carlos City, in Negros Occidental, has made a name for itself in the renewable energy industry but the environment-friendly veneer obscures a possibly unintended negative impact. It is the home of the San Carlos Solar Energy Inc. and San Carlos Bioenergy, Inc. (SCBI), which partly provide for the energy needs of the city and generate additional income. Some of the raw material for SCBI, a bio-ethanol plant, comes from the mountains of sugarcane sap from the big sugar mills in the city. Residents have complained about the foul smell and according to SCBI, it has implemented several measures to lessen the pollution. During a field visit by Oceana in January 2015, however, there was still a noticeable amount of wastewater beside the Bantay Dagat headquarters, turning their section of the Tañon Strait into a reddish brown expanse.

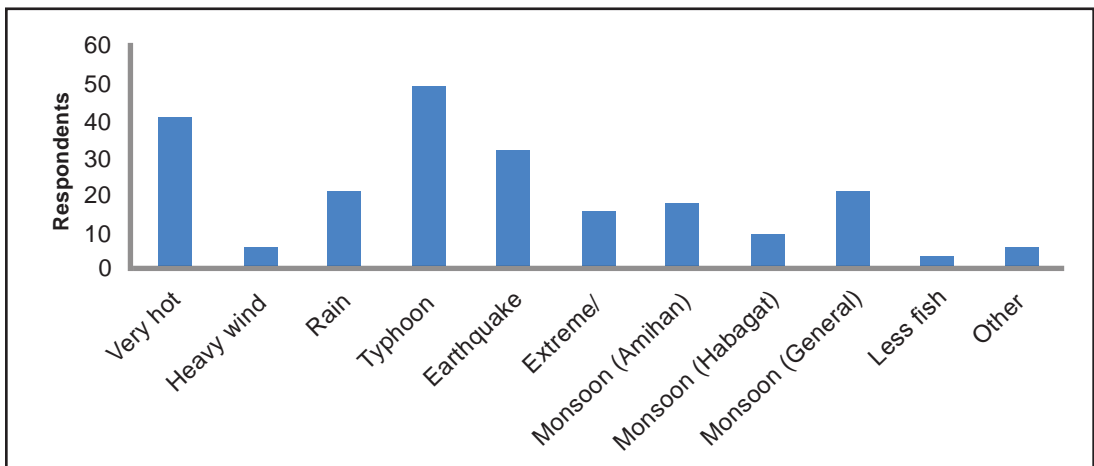


Figure 9: Weather impact among fishers

Impact of climate change

During the fish catch survey in May, an overwhelming 98% of the respondents said they were highly affected by the unpredictability and severity of weather. Strong typhoons, increasing heat, and the seasonal monsoons (habagat and amihan) figured prominently among their responses.

Changing weather patterns have affected the ability of fishers to go out to sea. Trends show that fishing activities decline during perceived “difficult months” when the weather is rough,

affecting their main source of livelihood. These are the months when the monsoon makes it unsafe to go fishing (34% of respondents), there are strong winds (34%) and less fish (16%), or big waves (15%) prevent small boats from going out to sea. This is also the period when households experience hardships due to rain, typhoons, lack of money to pay school fees and budgeting, harvesting constraints, and lack of work.



Bamboo traps left on the seafloor continue to catch fish unintentionally, a problem known as “ghost fishing” © OCEANA/Danny Ocampo

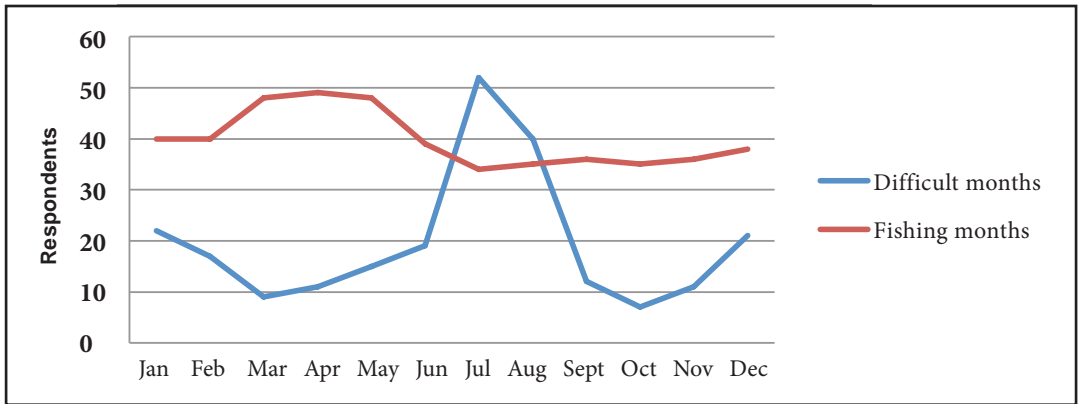


Figure 10: Annual cycle of weather impact on fisheries

Decreasing fish catch

When asked about their perception on whether the abundance of fish catch had increased in the last five years, most fishers noted a downward trend. However, there were no perceived changes in the sizes and types of fish caught inside the protected area.

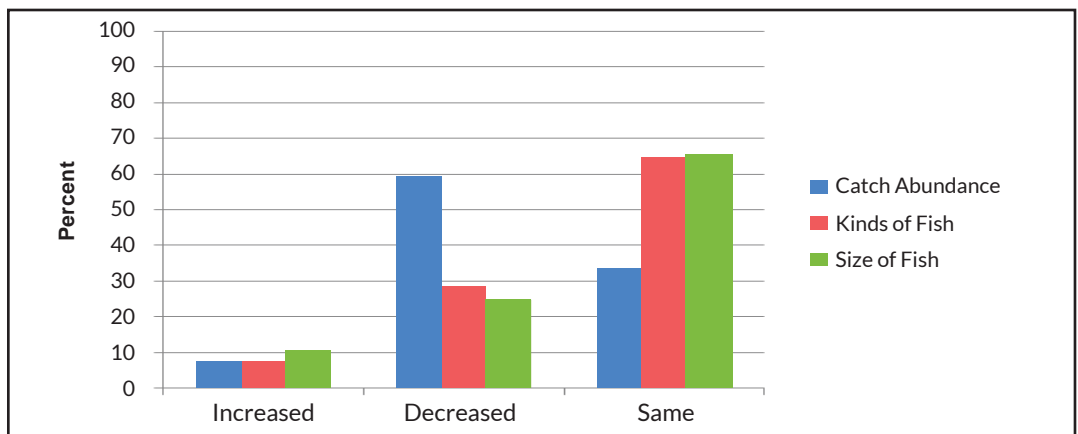


Figure 11: Perception on the status of fisheries in Tañon Strait

One possible explanation for the decline in fish abundance is the perception that the number of people engaged in commercial and municipal fishing activities has been increasing through the years. Fishers surveyed said 61% were using non-motorized boats while the rest had motorized vessels, which could account for the lower fish catch.

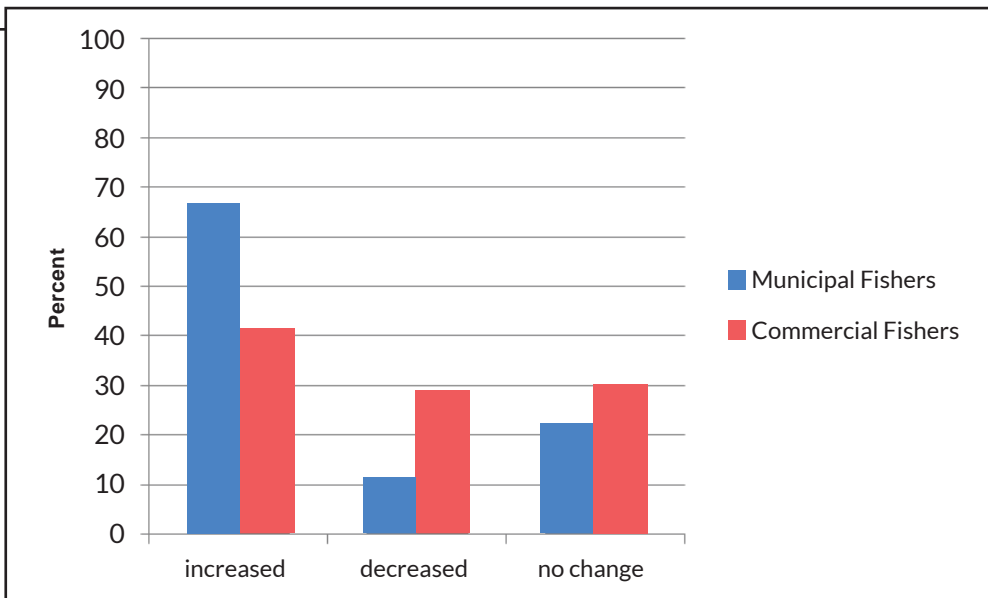


Figure 12: Perception on the population of fishers in TSPS

Oceana marine scientist Marianne Pan-Saniano reflects on her field experiences

During our survey in Samboan, we had some difficulty getting respondents because of inconsistent answers regarding their docking schedules. The fishers also had two different docking areas that are relatively far from each other. One fish trader even questioned our presence, irritatingly asking why we were supposedly “picking on” small municipal fishers when we should be investigating fishermen instead from Ginatilan, where there are many big commercial fishing vessels equipped with sonar that catch more fish. The fish trader had a small fishing vessel that uses a ring net.

Overall, however, the team met enthusiastic partners from local government units (LGU) and people’s organizations (PO). Most of the municipal mayors assigned some of their officers, usually the fisheries or agriculturist or environment officer, to accompany us in identifying possible areas for the survey. They were looking forward to partnership and collaboration for future protection and conservation activities in Tañon Strait.

The people from Guihulngan were particularly notable, with several staff from the Municipal Agriculture Office (MAO) and members of the Malusay Fish-Loving

People accompanying the team for the duration of the survey. They were very concerned about illegal fishing, and wanted clarity regarding the protocol in apprehending violators due to confusion in the jurisdiction of their waters. This was a common issue heard from the people we met during the survey: they were told that since Tañon Strait is a protected seascape, there are no municipal waters. It’s a topic that is unlikely to get resolved very soon, as local government units assert their authority and duty to lay down zoning plans.

Commercial and municipal fishers, particularly in the Cebu municipalities surveyed, appear to have developed a mutually beneficial relationship in sharing fish catch. In Moalboal, municipal fishers would allow commercial fishers in their fishing grounds in return for “donations” of approximately one kilo of fish to each household in the village. In the case of Samboan, commercial fishing vessels would allow small fishing vessels to enter their nets before these are closed. Municipal fishers would then scoop out fish, usually sardines, which their boats can carry and sell to fish traders waiting on the shore.



Small-scale commercial fishing in Samboan © OCEANA/Yasmin Arquiza

Dump-and-fill projects

In May 2015, Oceana joined other stakeholders in Tañon Strait in opposing a proposed project in Toledo City that would transform 11 hectares of coastal waters into a concrete mixed-use complex of commercial and recreational establishments. Despite opposition from Barangay Poblacion, where the site is located, the city council approved the Mayor's request by a mere resolution of no objection to the project.

Environment advocates pointed out that the city government violated its duty, as stipulated in the 1987 Constitution and the Local Government Code, to maintain a healthful and balanced ecology. Furthermore, no scientific studies were presented by the proponents of the dump-and-fill project, in violation of environmental laws. This is alarming, considering that Toledo City is part of the Tañon Strait Protected Seascape (TSPS).

The following violations were pointed out:

Non-compliance with the rules on Environmental Impact Assessment (EIA)

The proponents failed to show that an Environmental Impact Assessment (EIA) has been conducted and the corresponding Environmental Compliance Certificate (ECC) issued from approving authorities.

Under the law, specifically Executive Order 146, the Philippine Reclamation Authority and other government agencies authorized to reclaim land are required to seek approval from the National Economic Development Authority (NEDA) Board. For projects in environmentally critical locations, such as protected areas like Tañon Strait, clearance from the DENR is required.

According to DENR Department

Administrative Order (DAO) 2003-30, a public hearing should be conducted as part of a valid EIA process to ensure timely, informed and meaningful participation from communities that could be potentially affected by the project. There was no evidence that this was done, and instead, the Toledo City government ignored the opposition from the Sangguniang Barangay of Barangay Poblacion.

No valid public consultation as prescribed by the Local Government Code

The absence of a public hearing is also a violation of the Local Government Code, which requires the proponent to present the scope and impact of major projects to stakeholders and other community members. This is precisely why the Sangguniang Pambarangay of Poblacion, Toledo City could not give its consent to the project.

Violation of the National Integrated Protected Areas System (NIPAS) Act

Reclamation projects necessarily destroy plants and animal species, their habitats, and the livelihood of people dependent on healthy life support systems for their sustenance. During the marine survey of Oceana and its partners, divers found seagrass beds, corals, various species of fish, and other living organisms thriving in the area adjacent to the proposed dump and fill site. The presence of these species disproves the claim that the ecosystem in the project site is a “dead zone” and at the very least, it may be classified as degraded and can therefore be rehabilitated.

The marine assessment proves that the proposed project blatantly violates the NIPAS Act, which lists the following among the prohibited acts under Section 70:

a. Hunting, **destroying**, disturbing, or mere possession of **any plants or animals** or products derived therefrom without a permit from the Protected Area Management Board (PAMB)



Reef gleaning in Madrilejos, Bantayan island © OCEANA/Candeze Mongaya

b. **Dumping of any waste products detrimental to the protected area**, or to the plants and animals or inhabitants therein

d. **Mutilating, defacing or destroying objects of natural beauty**, or objects of interest to cultural communities (of scenic value)

g. **Constructing or maintaining any kind of structure**, fence or enclosures, conducting any business enterprise without a permit

The proposed dump-and-fill project would further degrade this part of Tañon Strait, and inhibit the ability of the marine environment to regenerate and provide habitats for spawning marine organisms. Even seemingly barren areas such as silted coastal seabeds are still ecosystems that serve as host to a variety of marine life. If left undisturbed, they will regenerate.

Filling necessitates dumping waste products, and these materials are often left in exposed or unsanitary conditions. Any reclamation undertaken will result in the construction of structures. Undeniably, the proposed project will destroy the natural beauty of Tañon Strait and Toledo City’s coastline.

CHAPTER 5

UNSAY BUHATON?

Protecting the Strait



What should we do? Here's a summary of recommended actions from the expedition and enforcement surveys, as well as the media and audience study done by Oceana in 2015.



Create a fisheries management plan

This can be done by the TSPS Protected Area Office, in coordination with the Bureau of Fisheries and Aquatic Resources (BFAR) and academic institutions. Data from a strait-wide fish catch monitoring survey may be used to determine the status of fisheries, and more importantly, the strait's carrying capacity for fisheries. The information should be the basis for a fisheries management plan, which has to include appropriate harvest control rules and reference points for TSPS. Measures are also needed to rehabilitate neglected marine sanctuaries, such as Hilaitan in Guihulngan, for the benefit of fishers.

Remove commercial fishers from the protected area

Some local governments have enacted fisheries ordinances allowing the operation of small and medium-scale commercial fishing vessels in their municipal waters. This goes against sound management principles for fisheries in a protected area. Local legislation has to be harmonized with TSPS regulations, to ensure clarity regarding the ban on commercial fishing vessels operating within the protected area.

Coordination with BFAR has to be done to obtain a list of all commercial fishing vessels based in or operating within TSPS, so the PAMB can require them to register with the Protected Area Office.

Photos by Ferdinand Edralin and Candeze Mongaya



Moonrise in Santa Fe, Bantayan island © OCEANA/Candeze Mongaya



Patrol boat in Samboan © OCEANA/Edward Lorenzo

The PAMB or the local government units can require the use of vessel monitoring measures (VMM) for commercial fishing vessels transiting or docking within the protected area, in line with new rules in the amended Fisheries Code passed last year.

Reduce illegal and destructive fishing

During the Tañon expedition, the Oceana team documented a patrol conducted by two (BFAR) vessels in the municipality of Samboan. This serves as a deterrent against illegal fishers, but sadly, this is not being done in all local government units.

The Protected Area Supervisor should craft a Strait-wide enforcement plan in coordination with LGUs, BFAR, and other national government agencies. Funds should be allocated for enforcement operations in the protected area.

Regulate the use of payao (fish aggregating devices)

To determine the actual number of payaos for purposes of regulation, it may be necessary to geo-tag each unit, preferably with participation from concerned municipalities and fishing communities. An inventory is the first step in enacting policies on the regulation, control, and use of these fishing devices.

There are existing policies on unregulated fish aggregating devices in Philippine waters. The Bureau of Fisheries and Aquatic Resources

(BFAR) and LGUs (Section 16, RA 8550, as amended by RA 10654) may rationalize the use of payaos through appropriate regulatory mechanisms and ordinances. The PAMB can also use another existing policy, the Joint DENR-DA-DILG-DND Memo No. 2000-01 dated 05 July 2000 entitled "Guidelines on the Establishment, Management and Utilization of Artificial Reefs in the Municipal Waters," to craft rules about the use of payao.

Stop illegal dump-and-fill projects

With many local governments looking at reclamation projects as a potential source of revenue, it is necessary for the PAMB to require proponents to fulfill the following:

- Strictly comply with EIS regulations, the Local Government Code, NIPAS law, and the Climate Change Act and Disaster Risk Reduction and Management Law
- Conduct in-depth scientific study of the proposed reclamation site and its adjacent areas to determine the resources that may be affected, subject to validation by an independent scientific advisory group
- Present the results of these studies, as well as the breadth and scope of the proposed dump and fill project, to stakeholders so they can make informed decisions



© OCEANA/Candeze Mongaya

In the case of Toledo City, septage and sewage that are currently being discharged directly into the port area need to be treated, and the polluters and the agencies not performing their mandates under anti-pollution laws held accountable for their actions.

Enhance information campaigns

To address the low level of public awareness about TSPS and fisheries laws, some of the suggested measures are the following:

- Seminars and workshops about the resources inside TSPS including their status, laws governing Tañon Strait, good practices in coastal communities that have actively protected marine sanctuaries, and comparison with efforts done in similar marine protected areas
- Broadcasting of information tidbits about Tañon Strait and radio debates focusing on various issues affecting Tañon Strait
- Distribution of simple and easy-to-read materials that residents can use as reference such as primers, comics, flipcharts, etc.
- Billboards in thickly populated coastal areas, with endorsers coming from media networks that are popular among residents
- Integration of a Tañon Strait lesson plan in elementary and high school curricula in coastal communities, and school-based competitions such as essay writing contests, photography, mural painting, and stage presentations that focus on why Tañon Strait needs protection
- Workshop and training on the economic advantages of protecting Tañon Strait, including livelihood activities that add value to fisheries in coastal communities
- Community-based activities like fiestas and product fairs that showcase the livelihood of communities along the strait, such as danggit making in Olympia and native bag production in Basdiot