

JCIA Annual Report 2015



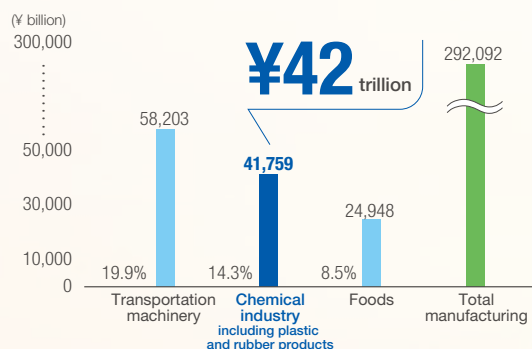
Japan Chemical Industry Association

Providing Value to Society through the Development of the Chemical Industry

Outline of Chemical Industry of Japan Source: "2015 Chemical Industry of Japan by Graphs"

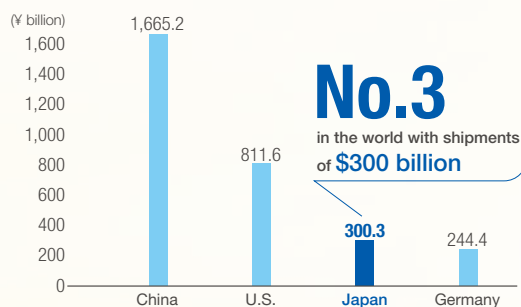
Value of Shipment (2013)

Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]



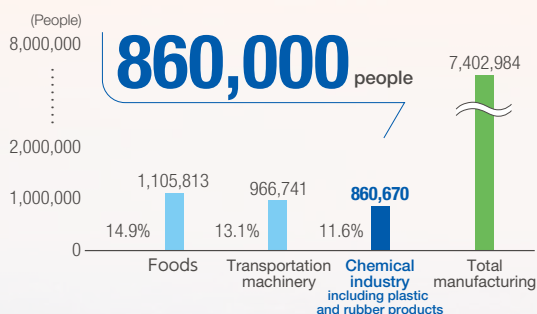
Global Chemical Shipments (2013)

Source: ACC "Guide to the Business of Chemistry 2014"



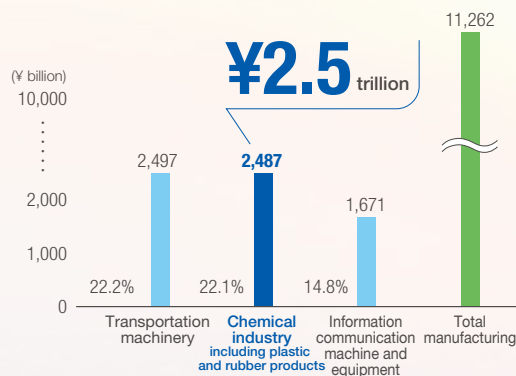
Number of Employees (2013)

Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]



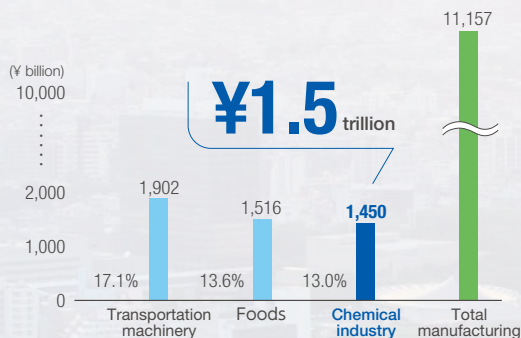
R&D Expenditures (FY 2013)

Source: Ministry of Internal Affairs and Communications, [Survey of Research and Development]



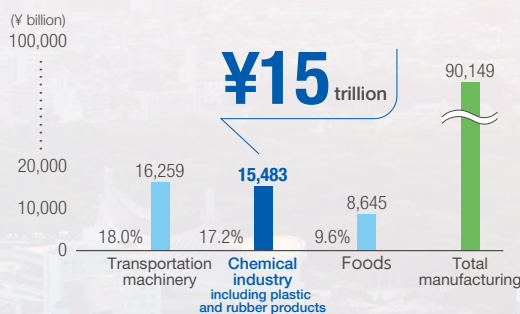
Capital Investment (2013)

Source: Ministry of Finance, [Financial Statements Statistics of Corporations by Industry]



Amount of Value Added (FY 2013)

Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]



Note: Value Added = Production amount - Cost for using raw materials - Domestic consumption tax - Depreciation cost, etc

Role of JCIA

To contribute to the sustainable growth of human society by providing value to, while monitoring changes in the environment surrounding the Japanese chemical industry and working with government bodies, related organizations, academic associations, and the International Council of Chemical Associations (ICCA).



Report Contents

Outline of the Chemical Industry, Role of JCIA, Contents	01
Chairman's Message	03
The Future of Human Beings and the Earth Explored through Chemistry	05
Organizational Chart of JCIA	07

Reports on the Activities of Each Committee

Responsible Care Committee	09	Security Information Management Subcommittee	21
Environment and Safety Committee	11	Fostering Program of Human Resources in Chemistry	22
Technical Affairs Committee	13	Topics	23
Chemicals Management Committee	15	Expectations of JCIA	26
International Activities Committee	18		
Economy and Tax System Committee	19		
Public Relations Committee	20		
Labor Committee	21		

Toward the Realization of a Sustainable Society



Current Situation of Chemical Industry and Main Activities of JCIA

Japan's chemical industry was sluggish during the first half of FY 2014 reflecting the impact of the consumption tax increase in April. However, conditions significantly improved in the second half. Led by firm demand for functional materials for automobiles and electronic devices and assisted by the tailwinds of lower crude oil prices and the lower value of the yen, the industry on the whole was able to register relatively strong results for the year. The exciting news of Professors Akasaki, Amano, and Nakamura receiving the Nobel Prize in Physics for their work in developing the efficient blue LED also remains fresh in our memories. However, optimism fades as we turn to ongoing developments in the global economy. Particularly concerning is the slowdown in the economic growth of China and other emerging economies and continued instability in the European economy.

The Japan Chemical Industry Association (JCIA) is committed to tackling the three priorities of "sharing and applying safety best practices," "creation of innovations that contribute to society," and "enhancing communication with society." JCIA

undertakes a broad range of activities in pursuit of these priorities.

Regarding our first priority of safety, JCIA publishes *Safety and Accident Prevention Guidelines*, which is widely used by JCIA members particularly in Japan. Based on the Guidelines, JCIA has developed training DVDs available in both Japanese and English, and we are currently endeavoring to further expand the use of this material both in Japan and abroad. JCIA is also involved in educating and training core personnel for ensuring safety and security in manufacturing sites. As part of our efforts toward capacity building on the frontlines of manufacturing, we collaborate with other industry associations in organizing and providing a course of lectures titled Industry Safety Theory.

In February 2015, JCIA released its support system for the control and handling of chemicals by users. Entitled BIGDr the system is already being extensively used as a tool for assessing and managing the risk of chemical substances. Furthermore, JCIA is actively engaged in informing the public and deepening its understanding on the subject of compliance and risk-based chemicals management. This program highlights the best

practices of JCIA member companies in the management of chemicals and includes lectures and talks on recent developments in the regulation of chemicals in foreign countries.

In pursuit of our second priority of innovation, JCIA focuses on nurturing the next generation of human resources who are key to the creative process. JCIA continues to reinforce its support for doctoral students through scholarships and by hosting opportunities for exchange between industry and the academic community.

Our third priority of communication targets local communities and society at large. JCIA organizes local dialog meetings on Responsible Care (RC) in chemical and other industrial complexes. These meetings aim to foster communication and the exchange of views with local residents on the subjects of safety and disaster prevention as well as RC. JCIA also actively reaches out to younger generations by conducting chemical experiments shows for children and chemistry classes at high schools and universities during Chemistry Day (October 23) and Chemistry Week.

Building Sustainable Societies

The world today faces the daunting challenges of the Global Agenda. Climate change, environmental pollution, and population explosion are leading to serious problems of food and water shortages, the depletion of fossil resources, and a wide array of health and sanitary problems on a global scale. To build sustainable societies, it is vitally important to overcome these complex and difficult challenges. The world looks to the chemical industry to play a key role in this process as a solutions provider.

With this awareness, chemical industries throughout the world have come together to create the International Council of Chemical Associations (ICCA) and are using this organization as a platform for collaborative action. JCIA is positively involved in the activities of ICCA and serves as the leader in the ICCA Leadership Group on Energy and Climate Change.

JCIA is currently working through ICCA to promote the use of chemical products in reducing emissions of greenhouse gases. In line with this initiative, we are endeavoring to establish and promulgate carbon life cycle analysis (cLCA) methodologies for tracking reductions in greenhouse gas emissions throughout the lifestyle of a product, reaching from the manufacture of the product all the way to its use and final disposal. JCIA is also collaborating with other industries to improve overall industrial energy efficiency. On the international stage, JCIA continues to play a global leadership role in cooperation with the chemical industry associations and government agencies of various

countries. As part of this effort, JCIA has issued recommendations on the role of the chemical industry in the implementation of measures countering climate change in preparation for the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) scheduled to be held in December this year.

JCIA is committed to supporting the promotion of RC in Asian countries. Toward this end, we are actively engaged in education and public information activities, including organizing workshops on Global Product Strategy (GPS).

Changing Industrial Structure and Continued Development of the Chemical Industry

The fusion of the virtual and physical worlds, along with rapid advances in information and communications technology (ICT), have forced industries to change the structure of their businesses from being quantity-based to being quality-based. This trend is represented by such technologies as the "Industrial Internet" in the U.S. and "Industrie 4.0" in Germany, which make the most of Cyber Physical Systems (CPS) emerging from the Internet of Things (IoT), artificial intelligence (AI), big data, and other new IT technologies and tools. This newly unfolding domain literally transcends the boundaries of existing industries, and there is a rising tide of expectation that essential innovations will be born in this environment. There is no doubt that this domain constitutes the primary arena for the next generation of international competition.

It is the mission of Japan's chemical industry to stand on the cutting edge of these developments, fully maintain its competitiveness, and to continuously supply effective solutions to society. JCIA is keenly aware of its role and mission in contributing to the sustainable development of the chemical industry. Toward this end, we shall continue to provide member companies with business support activities in such areas as safety, RC, chemicals management, and generating innovation. Finally, as the representative of Japan's chemical industry, JCIA pledges itself to actively responding to the challenges of the Global Agenda in cooperation with chemical industry associations and federations throughout the world.



Yoshimitsu Kobayashi
Chairman
Japan Chemical Industry Association

The Future of Human Beings and the Earth Explored through Chemistry

Chemistry has existed throughout the history of mankind.

What value can chemistry provide to contribute to sustainable growth?

Improving food, clothing, and shelter

During the first half of the 20th century, when the world's first synthetic resins, synthetic fertilizers, synthetic fibers, and general-purpose plastics were developed, chemistry, of which the results of extensive research began to bear fruit, served to improve the quality of food, clothing, and shelter in Japan and the rest of the world.

Development of characteristics

Development of substitutes for natural substances

Contribution to social and economic development

Synthetic fertilizers

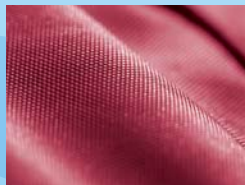
Synthetic rubber

Performance polymers

Engineering plastics

Synthetic fibers

Agricultural chemicals



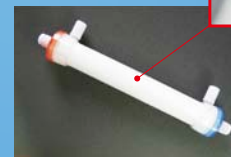
General-purpose plastics

Materials for medical equipment



Synthetic dyes

Catalysts for vehicle exhaust gases



Pharmaceuticals

Contribution to solving problems relating to resources and the environment

Waste water and gas treatment technology



Energy-efficient houses

Development of technology for addressing the problem of pollution

Tackling pollution

In the second half of the 20th century, there was an increase in industrial pollution and lifestyle-related pollution such as vehicle exhaust gases. As a result, air and water pollution was tackled by the chemical industry, which improved manufacturing methods utilizing the power of chemistry.

With progress being made in the development of smart cities, artificial intelligence, and so on, technology is advancing at an accelerating pace, and this is bringing dramatic changes to people's lives. The chemical industry is becoming an increasingly essential presence.

Development of even more advanced materials

Convenient and comfortable living

The energy revolution contributed to the development of chemical technology, and corporations particularly in petrochemicals. The chemical industry has endeavored to harness the power of chemistry, which is closely related to various other fields such as physical science, medicine, and engineering, to make people's lives more convenient and comfortable.

materials with distinctive and functions

Sustainable growth

Optical fibers



Optical catalysts

Materials for touchscreen panels



LED light sources

Materials for IC cards

Biomaterials

Carbon fibers



Materials for IC cards



Artificial photosynthesis catalysts

Materials for making vehicles lighter weight and higher performance



Materials for solar cells

Hydrogen storage materials

Secondary batteries

Fuel cells



Development of energy-saving materials

Tackling resource depletion

Society has developed by making use of limited resources. To ensure that resources do not run out, the chemical industry contributes to progress in the fields of energy conservation and renewable energy, and is therefore helping to realize a sustainable society.

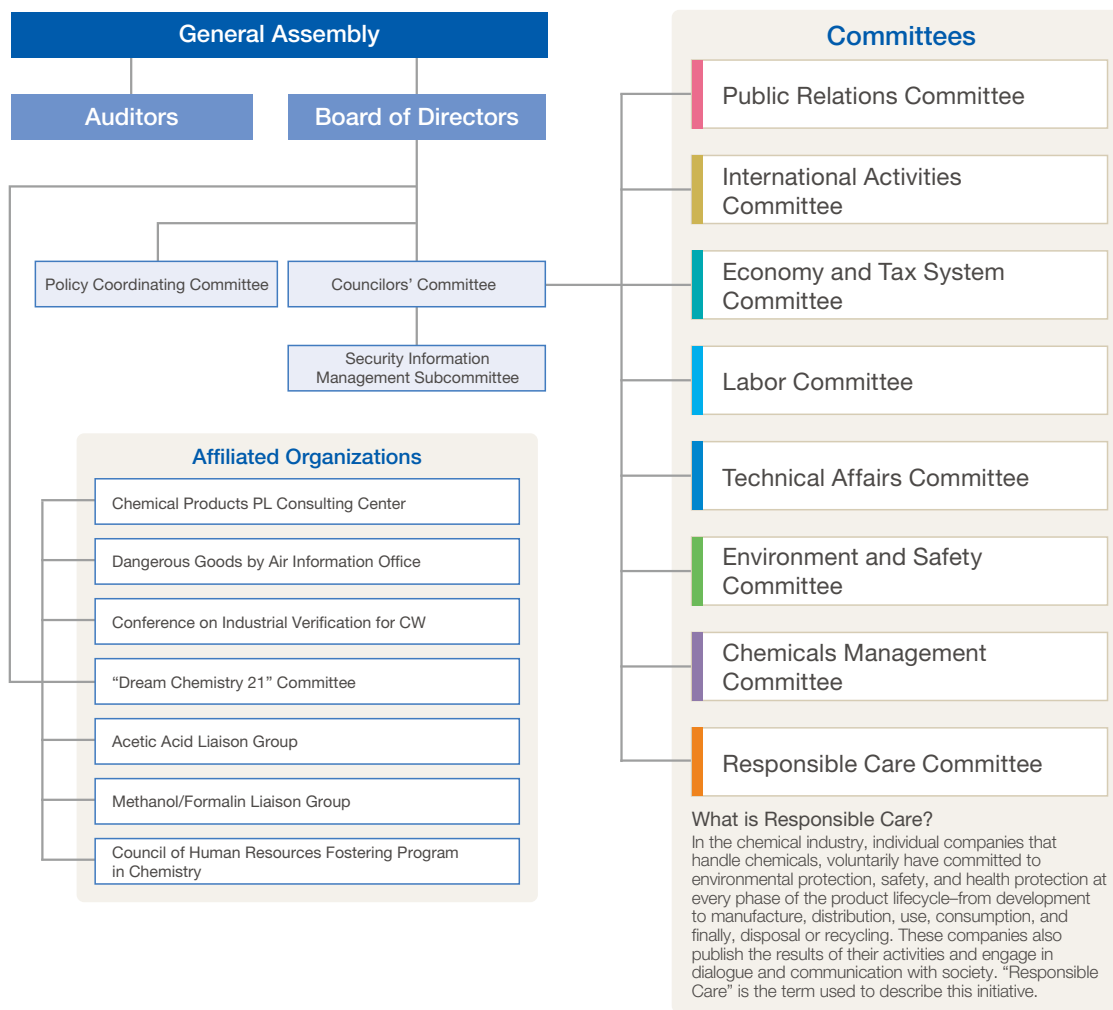
Development of energy-generating materials

Tackling other environmental problems

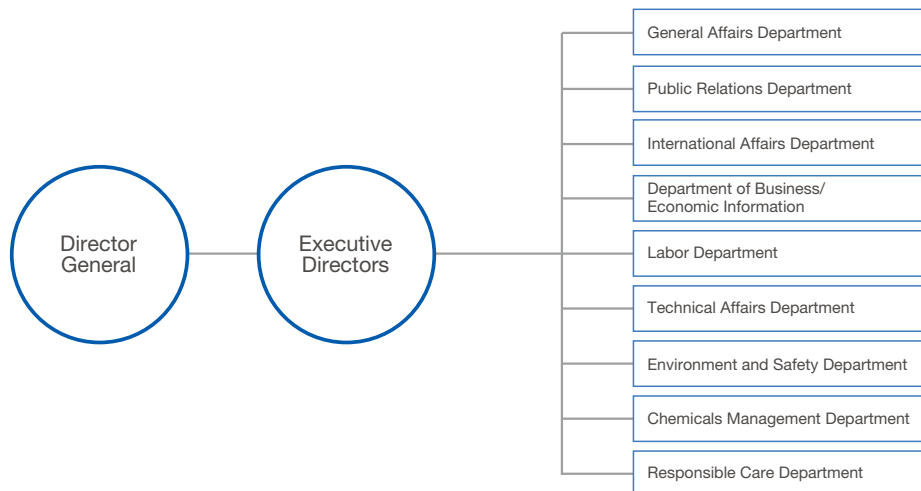
The people that live on the earth have a responsibility to preserve, develop, and coexist with nature. Going forward, the chemical industry will contribute to society by endeavoring to balance the realization of more convenient and affluent lifestyles with consideration for the earth's environment.

Organizational Chart of JCIA

The Japan Chemical Industry Association (JCIA) is organized into the General Assembly, the Board of Directors, Auditors, the Policy Coordinating Committee, Councilors' Committee, business-specific committees and the Secretariat. The General Assembly, which is composed of all JCIA member companies and organizations, is the supreme decision-making body. The Assembly resolves important issues related to JCIA management, as well as the business plan, budget and financial statements. The Board of Directors consists of the Directors elected from among the member companies and resolves issues related to JCIA business and activities.



Organizational Chart of the JCIA Secretariat



JCIA at a glance

Name

Japan Chemical Industry Association (JCIA)

Established

April 1948—JCIA formed as a voluntary association

June 1991—Incorporated as a legal entity

April 2011—Shifted to a general incorporated association

Mission

JCIA seeks to promote the healthy development of the chemical industry through the research and study of production, distribution and consumption of materials relating to the chemical industry. JCIA also focuses on the research and study of various issues relating to technology, labor, environment and chemical safety of the industry, and on planning appropriate measures and actions to the economic prosperity of Japan and the betterment of the national standard of living.

Activities

1. Research and study on the production, distribution and consumption of chemical products.
2. Research and study on issues concerning technology, labor, environment, chemical safety, etc., as well as planning and promoting measures and actions.
3. Commendations for outstanding achievement in new technologies and safety records.
4. Collection and dissemination of information, communications and cooperation with related organizations in Japan and overseas.
5. Public outreach and advocacy activities, workshops and seminars.
6. Other operations besides the above that are necessary to achieve JCIA's mission.

Fiscal year

From April 1 to March 31 of the following year

Members of the Japan Chemical Industry Association (as of June 30, 2015)

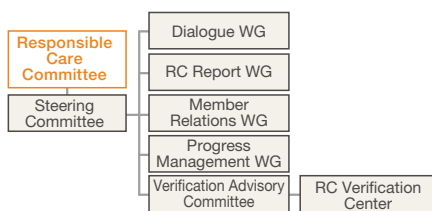
Chairman / Representative Director	Yoshimitsu Kobayashi	(Mitsubishi Chemical Holdings Corporation, Chairman)
Vice Chairman / Representative Director	Masakazu Tokura	(Sumitomo Chemical Company, Limited, Representative Director & President)
Vice Chairman / Representative Director	Kazuhiko Ishimura	(Asahi Glass Co., Ltd., Chairman & Representative Director)
Vice Chairman / Representative Director	Shigehiro Nakajima	(FUJIFILM Holdings Corporation, President & Chief Operating Officer)
Vice Chairman / Representative Director	Kimikazu Sugawara	(KANEKA CORPORATION, Chairman of the Board and Representative Director)
Director	Toshio Asano	(Asahi Kasei Corp., President & Representative Director, Presidential Executive Officer)
Director	Yuzuru Yamamoto	(Ube Industries, Ltd., President & Representative Director)
Director	Michitaka Sawada	(Kao Corporation, President and Chief Executive Officer)
Director	Hideo Ichikawa	(Showa Denko K.K., President & CEO)
Director	Naofumi Negishi	(SEKISUI CHEMICAL CO., LTD., Chairman & Representative Director)
Director	Misao Fudaba	(Daicel Corporation, President, Chief Executive Officer)
Director	Yoshiyuki Nakanishi	(DIC Corporation, Representative Director, President & CEO)
Director	Shinsuke Yoshitaka	(Denka Company Limited, Representative Director, President & CEO)
Director	Kenichi Udagawa	(TOSOH CORPORATION, President)
Director	Masanobu Suzuki	(Nippon Kayaku Co., Ltd., PRESIDENT & CEO)
Director	Masanori Ikeda	(NIPPON SHOKUBAI CO., LTD., Member of the Board, President)
Director	Tsutomu Tannowa	(Mitsui Chemicals, Inc., President & CEO)
Director General	Tetsuo Nishide	(Japan Chemical Industry Association)
Executive Director	Tetsuo Inoue	(Japan Chemical Industry Association)
Executive Director	Fumiaki Shono	(Japan Chemical Industry Association)
Executive Director	Yutaka Haruyama	(Japan Chemical Industry Association)
Executive Director	Yoshihiko Matsumoto	(Japan Chemical Industry Association)
Auditor	Hiroshi Yokota	(Tokuyama Corporation, President and Executive Officer)
Auditor	Toshikiyo Kurai	(MITSUBISHI GAS CHEMICAL COMPANY, INC., President and Chief Executive Officer)

Activity Report: Responsible Care Committee

[Responsible Care Department]

Overview of the committee

The committee harmonizes and invigorates the safety-oriented activities of members and promotes activities aimed at deepening understanding by society. As of April 2015, the committee counts 111 companies as members.



Activities

The Responsible Care (RC) Committee conducts activities with members in five main areas: environmental protection, process safety and disaster prevention, occupational health and safety, chemicals and product safety, and distribution safety. It also publishes the results of these activities in order to deepen communication with society. These activities are mainly conducted by the RC Committee's Steering Committee and the four working groups (WGs): Dialogue WG, RC Report WG, Member Relations WG, and Progress Management WG.

Focus

Local Dialogue Meetings conducted in 15 districts



Yokkaichi Local Dialogue Meeting



Hyogo District Q&A session

When implementing Responsible Care activities, it is important not only for chemical companies to conduct activities to protect the environment, health, and safety, but also to make the results of these activities available to society in order to deepen mutual understanding. Local Dialogue Meetings are held in districts in which members' facilities are concentrated, i.e. districts with chemical complexes. The meetings are held once every two years in 15 districts nationwide, and in 2014 they were held in the eight districts of Eastern Yamaguchi, Osaka, Chiba, Aichi, Yokkaichi, Kashima, Okayama, and Hyogo. Meetings were resumed in the Yokkaichi district, where they had been suspended since 2003, and the Hyogo district, where they had been suspended for the last two times due to the impact of factors such as the Great East Japan Earthquake. The number of local residents attending each meeting differed depending on the district, but ranged between 40 and 70 people. And not only local residents and representatives of companies and government organizations but university professors and other educators also participated in the enthusiastic exchanges of opinions that took place. The company case-study presentations were designed to be easy to understand for local residents. The question-and-answer sessions featured facilitators, which ensured that the local residents asked lots of questions and expressed various views. As a result, an active exchange of opinions occurred. The matters of most interest to local residents were process safety and disaster prevention and responses to earthquakes and tsunami, followed by environmental protection and communication with the community. Through these Dialogue Meetings, understanding concerning RC activities is gradually increasing among local residents.

Local Dialog map



Voice

Achieving coexistence with communities through dialogue

As companies that handle chemicals, to live together sustainably with the people in the local community, it is important for us to work to ensure environmental protection, safety, and health, to make those activities public, and to engage in dialogue. At Local Dialogue Meetings, the seriousness of the local residents and their appreciation for our dialogue initiatives let us know that we are succeeding, and we intend to continuously improve them going forward.

Haruo Kadoya, Leader, Dialogue WG
 [Full-time Director, Chemical Management Environmental Conservation Office,
 CSR Promotion Department, Lion Corporation]



Message

Further promoting independent initiatives, invigorating dialogue with society, and actively participating in international activities

In May 2014, the Board of Directors of the International Council of Chemical Associations (ICCA) revised the RC Global Charter, and most member companies have supported it and committed to it. To implement the Charter, it will be necessary to strive to enhance the quality of RC activities through specific actions such as the sharing of best practices. Another key issue is dissemination and support of RC activities in Asia, which is experiencing rapid economic growth. I believe that this should be done effectively based on the needs of each country.

Tokio Matsuo, Committee Chairman
[Executive Officer, General Manager of CSR Office, Asahi Glass Co., Ltd.]



Topic 1 Promoting the support of the revised RC Global Charter

The revisions to the RC Global Charter were approved by the ICCA Board of Directors in May 2014, and the CEOs of member companies in each country are being asked to provide their signatures to indicate their support for the revised RC Global Charter. JCIA is helping to promote this signing campaign, and has so far secured signatures from 55 companies.



Topic 2 Regular interaction and study meetings for members

Interaction and study meetings for members were held in July 2014 in Osaka, October 2014 in Nagoya, and February 2015 in Tokyo. The theme of the meetings included responding to earthquakes and tsunamis and business continuity planning (BCP). At the Tokyo meeting, the presentation on RC activities was updated.



Topic 3 Responsible Care activity report meetings

RC activity report meetings were held in Tokyo (96 participants) on November 28, 2014 and in Osaka (53 participants) on December 3 of the same year. The meetings featured a lecture on the issue of marine pollution caused by plastics (from Atsuhiko Isobe, a professor at the Research Institute for Applied Mechanics, Kyushu University) and reports from five member companies on the activities they have been engaging in.



Topic 4 Consumer dialogue meetings

Consumer dialogue meetings were held in Osaka (November 25th, 11th time) and Tokyo (December 4, 18th time). In response to a request from a consumers' organization, the Japan Crop Protection Organization discussed the safety and management of agricultural chemicals, while the Dialog WG described the RC activities being performed by different companies.



Topic 5 Support for RC activities in Asian countries

In June 2014 we ran a seminar on Phnom Penh, with a view to launching RC activities in Cambodia. We are also providing ongoing support to the Vietnamese RC association to enable it to join the RCLG.



Topic 6 Harmonization of process safety metrics to be used all over the world

A task force including JCIA members engaged in debate in relation to a plan under which RCLG-affiliated associations will make reports to ICCA based on process safety metrics which was approved at the RCLG conference in April, 2015, then approved by the ICCA Steering Committee, and finally approved by the ICCA Board of Directors in June.



Topic 7 Verification activities

Verification activities are aimed at improving the quality and reliability of Responsible Care activities. In FY 2014, we verified 10 reports on the common theme of preventing process safety incidents, and have now examined a total of 174 cases.

Topic 8 Publication of the quarterly Responsible Care NEWS

The 77th edition of the quarterly *Responsible Care NEWS* was published in May 2015. This quarterly has served to disseminate information for the more than 20 years since we launched our Responsible Care activities in April 1995.

— Awards — The 9th Responsible Care Awards

These awards, which are conferred on individuals or groups that have contributed to spreading and expanding RC activities, are aimed at further motivating and energizing the people engaged in RC activities.

Awards:	Members:	Awarded themes:
RC Grand Prix Award	Operation Training Center, Daicel Corporation	"Skill Transfer, Education and Training in Process Industry"
RC Jury's Special Award	RC Audit Group, Responsible Care Office, Sumitomo Chemical Co., Ltd.	"The Turnaround in Responsible Care Audit of Sumitomo Chemical"
	RC & Quality Assurance Div. Mitsui Chemicals, Inc.	"Development of Responsible Care Activity to Subsidiaries and Affiliated Companies"
RC Outstanding Award	Kao Corporation	"Approach to Measures against Earthquake"
	Human Resources Development Group, AGC Chemicals, Asahi Glass Co., Ltd.	"Deployment of Safety Culture around Asian Area"
	Mizushima Plant, Mitsubishi Chemical Corporation	"Unified Safety Activity with Construction Partner Companies"
RC Award for Effort	JSR Optech Tsukuba Co., Ltd.	"Industrial Waste Reduction Campaign at JSR Optech Tsukuba Co., Ltd."
	Nanyo Complex, TOSOH CORPORATION	"Voluntary RC Activity by Young TOSOH Employees (TRY!!)"
	Saitama Plant, Nissan Chemical Industries, Ltd.	"Continuation of Local Community Exchange Meeting"
	Sustainability Campaign Team, Du Pont Kabushiki Kaisha	"Sustainability Campaign"
	NIPPON KAYAKU FUKUYAMA CO., LTD.	"Basis for the Safety: Efforts toward Firm Establishment of 'Pointing and Calling'"



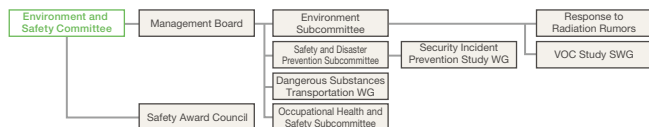
Award winners

Activity Report: Environment and Safety Committee

[Environment & Safety Department]

Overview of the committee

The committee identifies and analyzes domestic and international regulatory trends concerning process safety, the environment, and occupational health and safety, and disseminates the opinions and requests of the industry.



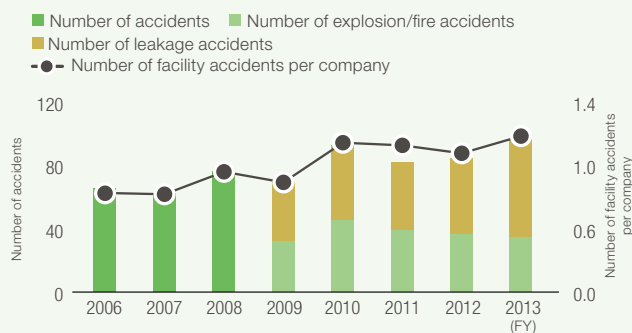
Activities

The Environment and Safety Committee endeavors to address various issues relating to the environment and safety by ensuring that the position and opinions of the chemical industry are reflected in policies and by working closely with relevant groups and organizations. Specific issues are examined when necessary by holding meetings of the Process Safety and Disaster Prevention Subcommittee, the Environment Subcommittee, and the Occupational Health and Safety Subcommittee. In particular, the committee is focused on stepping up action to improve the ability of the chemical industry to ensure safety and to eliminate work-related accidents, as well as on tackling issues relating to the environment and occupational health and safety.

FOCUS

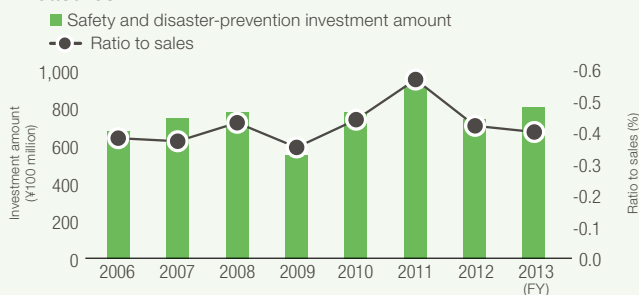
Providing education and raising awareness on the manufacturing frontline

Facility Accident Occurrences (Explosion, Fire, Leakage)



Note: From FY 2009, the number of facility accidents is divided into leakage accidents and explosion/fire accidents.

Investment in Safety, Security, and Disaster-Prevention Measures



The last decade has seen an increase in process safety incidents, and in recent years in particular, there have been some serious accidents at chemical plants. JCIA therefore views “ensuring safety and security” as the number-one task for the chemical industry, and we are therefore implementing a variety of initiatives to “share and apply safety best practices,” which is one of Chairman Kobayashi’s stated goals.

[Key activities]

- Publishing and distributing Japanese and English versions of “Safety and Accident Prevention Guidelines” (omnibus edition / DVD)
- Exchanging information and cooperating with various other groups in the area of security and safety activities and the development of frontline personnel
- Offering course on “Industry safety theory”
- Responding to requests from the joint liaison council of the following three ministries/agencies: Fire and Disaster Management Agency of the Ministry of Internal Affairs and Communications, the Ministry of Health, Labour and Welfare, and the Ministry of Economy, Trade and Industry
- Participating in meetings of the Japan Society of Newer Metals’ Disaster Prevention Strategy and Safety Committee

Voice

Safety and security takes precedence over every business activity!

With the aim of expanding use of the “Safety and Accident Prevention Guidelines” (first edition), this subcommittee has produced an omnibus edition / DVD for educating and training frontline personnel and promoting the transmission of skills. We are working to expand the adoption of these guidelines among members and related groups, and are continuously looking for new ways of utilizing them. In addition, with the aim of preventing accidents relating to the maintenance and inspection of facilities, we launched the “Study Group to Prevent Process Safety Incidents Similar to the One at Mitsubishi Materials,” and this group is now working independently on this issue. To prevent process safety incidents in the future, we will continue working with members to take the lead in taking action.

Shogo Yoshida, Subcommittee Chairman, Process Safety and Disaster Prevention Subcommittee
[General Manager, Environment and Safety Division, Mitsubishi Gas Chemical Company, Inc.]



Message

Safety and peace of mind are the foundation of the chemical industry. We will move forward with “safety first” as the driving force of our international competitiveness. Stay safe!

This fiscal year we produced an omnibus edition of our guidelines and an educational DVD, and we have been promoting their use. We have also been offering the “Industrial safety theory” course in partnership with the Japan Petrochemical Industry Association and the Petroleum Association of Japan, and have been exchanging information with other associations, groups, and academic associations, by utilizing the Guidelines and the Best Practice booklet. As a result, we have enhanced the process safety capabilities and energized occupational safety activities not only in the chemical industry, but in Japanese industry as a whole. Going forward, we intend to continue making safety the source of the chemical industry’s international competitiveness.

Junichi Misumi, Committee Chairman
[Managing Executive Officer, Ube Industries, Ltd.]



Topic 1

Activities of each subcommittee in relation to “Process safety and disaster prevention”, “Environment”, and “Occupational health and safety”

The subcommittees for Process safety and disaster prevention, Environment, and Occupational health and safety met whenever it was pertinent to do so. They responded to developments at government authorities and environment/safety-related study groups both in Japan and overseas, statistical trends, and legal revisions. They quickly identified what was going on, shared this information, and compiled opinions and requests from members.

Topic 3

Exchanging information and cooperating with other groups in the area of security and safety activities

We used the “Safety and Accident Prevention Guidelines” and the “Best Practices of Safety and Disaster Prevention” to exchange information with the Japan Iron and Steel Federation, the Japan Petroleum Institute, the Japan Environmental Management Association for Industry, and the Japan Society for Safety Engineering, and other groups.



Topic 5

Responding to regulations relating to water quality, atmosphere, and soil

In response to the studies by the Ministry of the Environment’s specialist panel on the environment, which represent a first step toward the establishment of laws and regulations, we exchanged, through the Environment Subcommittee, the WET Study Group, etc. opinions with people connected with major industry groups and actively presented proposals to government authorities.

Topic 6

Responding to revisions to the Industrial Safety and Health Act

Regarding the revisions to the Ordinance on the Prevention of Hazards due to Specified Chemical Substances and the Guidelines for the Prevention of Damage to Health by Chemical Substances (Carcinogen Guidelines), JCIA worked to spread understanding and awareness of them among member companies.

Topic 2

Publication and distribution of Japanese and English versions of “Safety and Accident Prevention Guidelines” (omnibus edition / DVD)

With the aim of expanding use of the “Safety and Accident Prevention Guidelines” (first edition), we produced an omnibus edition / DVD and an English version DVD. We explained them to members, related groups, and individual companies, and worked to expand their adoption.



Topic 4

“Industrial safety theory” course

With the aim of promoting safety education in the oil and chemical industries, we have been running the “Industrial safety theory” course in partnership with the Japan Petrochemical Industry Association and the Petroleum Association of Japan since October, thereby enhancing the process-safety capabilities of each of our member companies.



Topic 7

Responding to an urgent request to prevent work-related accidents

The Ministry of Health, Labour and Welfare responded to the recent increase in work-related accidents by issuing an urgent request, and JCIA responded by stepping up the exchange of opinions between industry and government and assisting member companies with measures to prevent work-related accidents.

— Awards — The 39th Annual Safety Awards

These awards are conferred on chemical facilities that have a strong track record in ensuring safety and are implementing excellent safety initiatives that can serve as a model for the industry. The facilities that received awards in FY 2014 have experienced no accidents at all for periods ranging from 7 to 29 years.

Awards:	Members:
JCIA Annual Safety Award Grand Prize	Kashima Plant, KURARAY CO., LTD.
JCIA Annual Safety Award First Prize	Corporate Research & Development (Ube Area), Ube Industries, Ltd. (Special Prize)
	Moka Plant, SABIC Japan Ltd.
	Kitakata Plant, Showa Denko K.K.
	Tatsuno Plant, Showa Denko K.K.



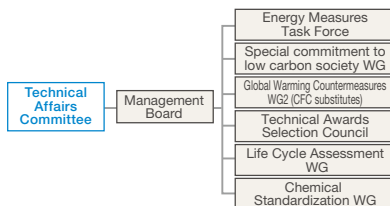
Each of the facilities earned high marks for their proactive efforts to ensure occupational health and safety

Activity Report: Technical Affairs Committee

[Technical Affairs Department]

Overview of the committee

The committee takes action to halt global warming and use energy more efficiently, make use of international standardization, and prevent the leakage of technical information.



Activities

The Technical Affairs Committee gathered information and conducted research on energy-and power-related issues facing chemical companies, and took various measures to tackle global warming. We also managed ISO and JIS standards relating to chemicals, and held lectures to raise awareness of the importance of having an international standardization strategy.

In connection with the action being taken by the chemical industry to prevent the leakage of technical information and protect trade secrets, we also issued requests for revisions to laws and government guidelines.

Focus

Chemical industry initiatives to reduce greenhouse-gas emissions

Because of the presence of greenhouse gases such as CO₂ (carbon dioxide) and methane in the earth's atmosphere, temperatures on the planet are comfortable for humans and other animals. However, due to such factors as deforestation and growing consumption of oil and coal due to increasing industrial activity, the atmospheric concentration of greenhouse gases has been increasing continuously. This has upset the balance, and global warming, which is characterized by temperature rises at the global level, is occurring. If global warming continues at the current rate, a century from now serious effects will probably be seen in various areas. These will include desertification and rising sea levels, changes in ecosystems, and so on.

[In the chemical industry]

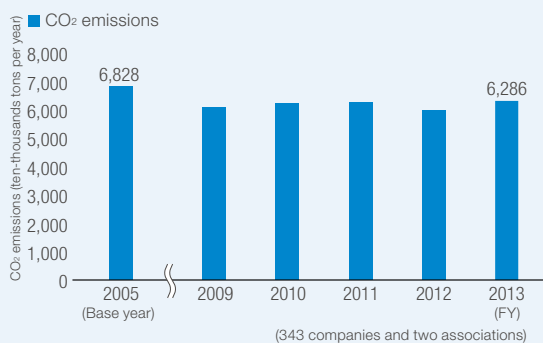
To respond to this situation, since FY 1997 the chemical industry has taken part in the Keidanren Voluntary Action Plan on the Environment, promoting energy efficiency and taking action to reduce CO₂ emissions. The Voluntary Action Plan came to an end following the publication of a report of its achievements in FY 2012, and since FY 2013 the chemical industry has participated in Keidanren's Commitment to a Low Carbon Society, and will be taking the following action until 2020 to reduce global warming:

- 1 Curb CO₂ emissions from domestic operations
- 2 Strengthen ties among entities to curb CO₂ emissions throughout the supply chain by expanding the use of low-carbon products and technologies
- 3 Contribute internationally by expanding the use of Japanese chemical products and processes overseas
- 4 Develop revolutionary technology over the medium to long term with a view to producing commercial versions from 2020 onwards

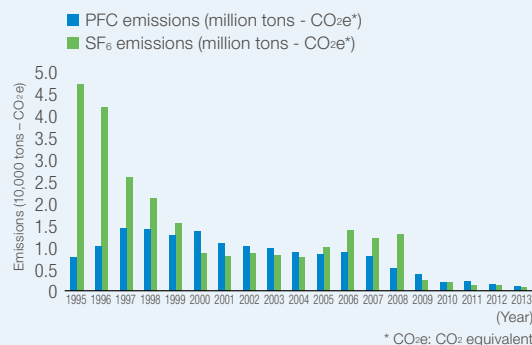
In addition, with Japan setting an emissions reduction target ahead of COP21, which is to be held in Paris this year, the chemical industry has also formulated an action plan for the period from 2020 onwards (Phase II).

We are also taking part in initiatives to reduce emissions of PFCs (perfluorinated chemicals) and SF₆ (sulfur hexafluoride) from manufacturing processes, as these chemicals have a warming potential that is about 10 thousand times greater than that of a comparable volume of CO₂.

CO₂ emissions by companies participating in the Commitment to a Low Carbon Society (2013-2020)



PFCs and SF₆ emitted from manufacturing processes



Message

The chemical industry is delivering solutions to global environmental problems

Working with the ICCA, the global chemical industry is speaking with one voice and taking action based on the cLCA concept (reducing GHG emissions from the use of chemicals) that is recognized by society as helping to improve the earth's environment. It is also participating in Keidanren's Commitment to a Low Carbon Society, and endeavoring to establish a sustainable society. And on the technical side, the Japanese chemical industry will be strengthening cooperation and working to tackle common issues facing the industry.

Hideki Matsuo, Committee Chairman
[Managing Executive Officer, Mitsui Chemicals]



Topic 1

Won an Excellence Award in 17th Ozone Layer Protection and Global Warming Prevention Awards

The JCIA received an Excellence Award in the 17th Ozone Layer Protection and Global Warming Prevention Awards, which are conferred by Nikkan Kogyo Shimbun, Ltd. on groups, companies, etc. with distinguished achievements in protecting the ozone layer by reducing emissions of PCFCs and in tackling global warming. At the award ceremony, which was held on September 9 at the Alumni Hall at Tokai University, Hideki Matsuo, Chairman of the Technical Affairs Committee, went up to the stage, where he was presented with an award certificate and a commemorative shield by CEO Imizu of Nikkan Kogyo Shimbun.



Topic 3 Activities concerning the protection of trade secrets

It is becoming increasingly important to protect trade secrets, which include information about the technologies that form the source of companies' competitiveness.

In conjunction with revisions to "the Unfair Competition Prevention Act" and "Trade Secret Management Guidelines" by the Ministry of Economy, Trade and Industry, the Technical Affairs Committee launched a new working group with the aim of ensuring that the requests of the chemical industry are reflected in the revisions. This working group then compiled requests from the chemical industry concerning the protection of trade secrets and submitted it to the government.

Topic 2 Publication of a supplement to the cLCA global guidelines

To reduce CO₂ emissions, which is a global issue, the JCIA is working to expand the use of, and provide education concerning, the cLCA (carbon-Life Cycle Analysis) methodology, which assesses the contribution of a product to reducing CO₂ emissions over its entire lifecycle.

In October 2013, the International Council of Chemical Associations (ICCA) and the Chemicals Sector of the World Business Council for Sustainable Development (WBCSD) jointly published a set up global guidelines under the title "Enthusiastic Efforts to Contribute to Reducing GHG Emissions." And in FY 2014, a supplement was published to provide concrete examples for difficult-to-understand passages, making the guidelines even easier to apply.



Topic 4 Standardization-related activities

In recent years, international standardization has been attracting increasing attention as a business tool, so the Technical Affairs Committee held lecture meetings twice with the aim of raising awareness of the importance to business of international standardization.

JCIA manages 118 ISO standards and 43 JIS standards. These standards are reviewed every five years. And JCIA is responding to inquiries from users. For the reviews, JCIA established a network involving its member companies and organizations.

— Awards — 47th Annual JCIA Technology Awards

JCIA Technology Awards commend companies that have contributed to the progress of the chemical industry and the economy through the development and industrialization of outstanding chemical technologies. JCIA calls for applications from chemical-related companies and awards Grand Prize, Special Technology Prize, and Environmental Technology Prize for selected excellent achievements.

Awards:	Members:	Awarded themes:
Grand Prize	FUJIFILM Corporation	Negative Tone Development Process Using Organic Solvent to Produce Semiconductors
Special Technology Prize	TAIYO NIPPON SANSO CORPORATION	Business Expansion through the Establishment of Technology to Isolate Oxygen-18 Isotope and Its Commercialization
Environmental Technology Prize	Lion Corporation and FUJI ELECTRIC CO., LTD.	The World's First Development of Palm Fatty Acid Ester as Electric Insulating Oil



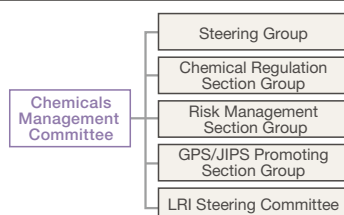
Members of Fujifilm Corporation, winner of the Grand Prize (May 2015, Tokyo)

Activity Report: Chemicals Management Committee

[Chemicals Management Department]

Overview of the committee

The committee deals with regulations at home and abroad related to chemicals management, promotes voluntary activities within the chemical industry and provides support for research/new technology evaluations concerning risk management of chemicals.



Activities

The committee builds close ties with regulatory authorities and other administrative bodies to actively and accurately gather, analyze and communicate information pertaining to regulatory trends for chemicals management that members truly require and find helpful. In addition, we are proactively advocating based upon opinions from members. As a part of its voluntary actions of chemicals management within the chemical industry, the committee is actively promoting ICCA GPS/JIPS activities, tackling new issues, and also supporting research and technology evaluations related to chemical risk evaluation methods.

Focus

Enhancing the functions of JCIA BIGDr and making it partially accessible to the public

- **BIGDr is a web portal that offers a one-stop solution for chemical substance risk evaluations.**

Since it was first made available to JCIA members in August 2013, we have been enhancing the portal's functions to design a user-friendly web portal that assists in the risk evaluation of chemical substances. The unique feature of the portal is that it provides a one-stop service carrying a multitude of functions, such as data gathering, risk evaluation, and information gain required for GPS/JIPS activities.

- **Supporting member business activities**

BIGDr is quite helpful for members' chemicals management.

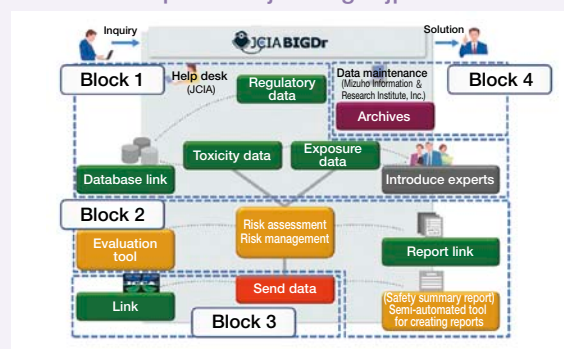
- **Expanding user scope to include member's group companies and supply chains**

Starting with version 2.2+ released in February 2015, we made the portal's general functions available to the public. Chemical substance management can now be conducted within the member's group or by using a shared platform with customers. In this manner, we support our members' business activities.

- **As a Key system for practicing chemicals management based on risks**

We plan to continue to make improvements to the portal in accordance with user needs. We aim to develop a model system that adapts to the global trend "from hazard-based to risk-based" assessment in chemicals management.

- **Access: <http://www.jcia-bigdr.jp>**



Depiction of BIGDr functions

Block 1 (Collect and search data)	This toxicity data database portal is linked to 13 representative databases and contains searchable data on 250,000 different types of substances. Meanwhile, the legal and regulatory information for Japan and other countries can be searched to find data on laws and regulations. Both search engines use a proprietary comprehensive, lateral platform. There is also a collection of more than 80 links to facilitate more in-depth data gathering as well as explanations.
Block 2 (Risk assessment)	We have uploaded a risk assessment tool and support contents available only to members. Using GSSMaker, the popular ECETOC-TRA risk assessment tool can now be used in Japanese-language environments.
Block 3(GPS/JIPS)	We provide contents related to GPS/JIPS activities.
Block 4 (General information)	We have archived three years' worth of email magazines sent out by Mizuho Information & Research Institute, Inc. and the Japan Chemical Industry Ecology-Toxicology & Information Center (JETOC). Users can search by institute or by topic and examine general trends in this field.

Voice

JCIA BIGDr—aiming to achieve the WSSD's 2020 goal

GSSMaker, a new development tool, has made it possible to gather information, assess risk, and create a draft of a safety summary all on our web portal.

In addition, we made part of our general functions open to the public. Towards the 2020 goal adopted by the World Summit on Sustainable Development (WSSD), we plan to develop a full-range of functions to instill risk-based management throughout the industry.



Takanori Hioki, Section Leader, GPS/JIPS Promoting Sec. Gr.

[General Manager of the Safety Evaluation Center, Ecology & Quality Management Division, CSR Division, FUJIFILM Corporation]



Message

Establishing chemicals management as a part of business strategy

In addition to strengthening our support of chemicals management operations for business activities, we also conducted campaigns, and expanded the functions of our integrated web portal for risk assessment, JCIA BIGDr, to further promote member's voluntary activities within the chemical industry, mainly for GPS/JIPS. Going forward, we plan to further our initiatives based on the key words "enhancement and expansion of information communication," "strengthening support for regional enterprises and SMEs," and "promotion of efficient and effective operations."

Osamu Maruyama, Committee Chairman
[Executive Officer, Sumitomo Chemical Company, Limited]

Topic 1 Activities ahead of revisions to chemicals regulations in Japan

Ahead of the review of the Chemical Substances Control Law (CSCL), JCIA moved forward with our considerations of specific policies for risk-based chemicals management and made our recommendations to the regulatory authorities. In addition, JCIA has embarked on creating policy recommendations on behalf of the chemical industry, taking into account potential revisions from FY2015 onward.

In response to the June 2014 revision to the Industrial Safety and Health Act (ISHA), which sets to expand legal obligations for labeling and risk assessments entering into force on June 2016, JCIA examined the development of a new method for risk assessment of mixtures, and considered recommendations on the ideal methods for labeling for companies that handle chemicals.



Topic 2 International Advocacy

JCIA summarized opinions from member companies on new regulations for chemical substances in South Korea and Taiwan, and submitted them to regulatory authorities. Important issues were negotiated at the WTO/ TBT committee through the Japanese government. In the case of South Korea in particular, JCIA proposed to improve the Act on Registration and Evaluation, etc. of Chemical Substances to regulatory authorities in cooperation with the Seoul Japan Club, an association of Japanese-affiliated companies. Accordingly, some of JCIA's opinions were reflected in the enforcement ordinance and the enforcement regulation.

Regarding the EU's Biocidal Products Regulation, particularly the issue of treated articles, which have been subjected to the regulation from September 2013, improvements were made by negotiations with the EU authority through the Japanese government.

For the WHO's recommendation to place high-volume industrial chemicals in the UN Convention on Psychotropic Substances, JCIA expressed our comments on serious impacts to the overall supply chain, and took action on this issue along with the Japanese government. The industry cooperated with ACC¹ and Cefic², and ICCA expressed its concerns. The UN Commission on Narcotic Drugs unanimously agreed to reject the recommendation as a result.

1 ACC: American Chemistry Council
2 Cefic: European Chemical Industry Council

Topic 3 Results of LRI¹ activities

We implemented 20 themes in the second phase of the new LRI, of which five terminated as of the end of the phase. For the third phase starting from March 2015, we adopted three new themes. We are actively disclosing our research performance and outcomes. One example is the release of an environment risk assessment tool (AIST-MeRAM) which was developed by AIST² under subsidization of LRI². The tool is also being released overseas. (Picture: MeRAM presentation at the Ministry of Industry, Thailand in March 2015.)

1 LRI: Long-range Research Initiative
2 AIST: National Institute of Advanced Industrial Science and Technology Long-range Research Initiative

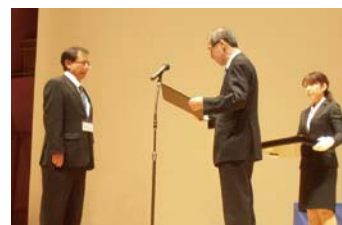


— Awards — The first JCIA LRI* Award

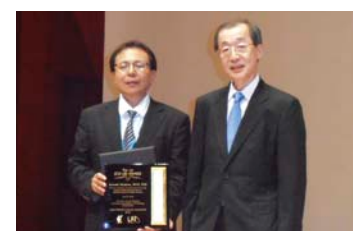
JCIA is implementing LRI to provide long-term support for research related to the impact of chemical substances on human health and the environment. JCIA established the JCIA LRI Award to support and recognize young researchers with excellent research performance in this field. In setting up this award, JCIA enlisted the cooperation of the Japanese Society of Toxicology (JSOT), which has a deep relationship with research fields aimed at by JCIA LRI. We entrust the selection of award candidates to JSOT. The application period was from late March to early April. The winner of this memorable first award was Dr. Satoshi Kitajima, from the National Institute of Health Sciences (NIHS). The Award's ceremony was held on June 30 at the JSOT annual meeting in Kanazawa.

With regard to the "LRI Award," a precedent had been set by Cefic. However, JCIA decided to present this award based on its own policy. In addition to the toxicological field, JCIA is considering expanding the scope of the award to include other fields such as the environment, and is intending to make it a regular event.

*LRI: Long-range Research Initiative



Award's ceremony at the JSOT annual meeting



Dr. Kitajima, the first winner, and Mr. Nishide, Director General, JCIA

Activity Report: Chemicals Management Committee

Topic 4 Issued GPS/JIPS brochure (36 pages) for member corporate management

In January 2015, we issued a brochure entitled "JIPS: Voluntary Chemical Industry Activities for Minimizing Chemical Risk," mainly to lead top executives of the chemical industry to understanding of the importance of risk-based chemicals management and to promote GPS/JIPS for risk-based chemicals management throughout the entire supply chain.



Topic 5 Ongoing GPS workshop in countries in Asia

Based upon the decision by the ICCA Board of Directors, we are continuing to run the GPS Risk Assessment workshops in Asian countries. In FY 2014, the workshops were held in Taiwan, Indonesia, Malaysia, and Vietnam.



Topic 6 Dealing with risk management issues (QSAR seminar)

In October 2014 (basic knowledge) and March 2015 (practical applications), we held a QSAR* seminar for members to promote the dissemination and use of QSAR in the regulations and chemical companies, and shared trends in technology.



*QSAR: Quantitative Structure-Activity Relationship

Topic 7 Executive Director Geert Dancet, ECHA visits JCIA

In April 2015, Geert Dancet, executive director, and Dr. Petteri Mäkelä, international relations officer, of the European Chemicals Agency (ECHA) visited JCIA and met with representatives from JCIA and associated industries. JCIA explained the latest trends in Japan's chemical industry and how it is dealing with regulations in Europe. In addition, we also introduced new information communication schemes on chemical substances in products. Mr. Dancet highly praised Japan's chemical industry on its compliance with European regulations. He also showed a high level of interest in the new information communication scheme. Mr. Dancet made a presentation on recent ECHA activities and closed the meeting by pledging to strengthen cooperation with Japan.

Topic 8 Risk-based chemicals management throughout the supply chain

JCIA is developing the following two activities for the risk-based management of chemicals throughout the supply chain.

- (1) Building chemSHERPA, an information transfer scheme on chemicals in products with the electrotechnical industry, while receiving support from the METI¹.
- (2) SCRUM² project in cooperation with JAMP³ to expand GPS/JIPS activities throughout the entire supply chain and share chemical risk data across various industries. We are examining standard risk assessment methods and discussing the building of an information communication system.

1 METI: Ministry of Economy, Trade and Industry

2 SCRUM: Supply chain Chemical Risk management and Useful Mechanism discussion

3 JAMP: Joint Article Management Promotion-consortium



Column Program on the Introduction of the Chemical Risk Forum

From 2008, JCIA has been implementing the Chemical Risk Forum as a training course for those carrying out chemicals management. We are providing an opportunity for people to acquire a broad range of knowledge and skill to implement risk management. In FY 2014, 18 people from 10 companies (organizations) became new members. Currently the forum's membership consists of 146 people from 60 companies (organizations). The training program consists of ten lectures and is basically designed to educate people engaged in chemicals management. It also provides the latest information on regulatory trends for chemical substances in Japan and abroad. The content leaned more toward practical applications than before. The number of annual members has increased approximately 20% year-on-year.

Also, responding to the requests of member companies and organizations, from FY 2014 we began newly implementing the introductory course of the Chemical Risk Forum. This program was developed to train employees that companies newly assign to handle chemicals management and to provide basic knowledge on chemicals management to people at companies that are planning to newly undertake chemicals management. In FY 2014, a number of people participated in this course which we held three times in Tokyo. We plan to hold this program in the other areas, including regional areas, going forward.



Fumiaki Shono, Executive Director, giving a lecture in introductory course of the Chemical Risk Forum (February 2015)

Activity Report: International Activities Committee

[International Affairs Department]

Overview of the committee

This committee cooperates with other JCIA committees and implements activities that target various international issues, including commerce and trade issues related to the chemical industry.

International Activities Committee — Management Board

Activities

The committee effectively carries out activities connected with EPA, FTA, and other trade and commerce issues with countries and regions such as the US, Europe, and Asia. It also handles activities related to international conferences to deal with issues such as Responsible Care, chemicals management and climate change as well as ICCA-related activities with a view to strengthen support we offer to Japanese companies outside of Japan.

Focus

Recommendations for EPA and FTA negotiations

At present Japan is engaging in EPA (Economic Partnership Agreement) and FTA (Fair Trade Agreement) negotiations with eight countries and regions. This includes the Trans-Pacific Partnership (TPP), and EPA between Japan and the EU, and FTA between Japan, China, and South Korea. To the best of our ability, we grasp each of these negotiations trends and provide information to members through the JCIA website and lectures. In addition, we gather member opinions on EPAs and FTAs connected with the chemical industry, and offer opinions to the government and other

institutions on behalf of Japan's chemical industry. In FY 2014, there were increased opportunities to promote global regulatory cooperation. The JCIA also held an investigative commission to propose recommendations on regulatory cooperation for the Japan-EU EPA to the planning group of the Keidanren Europe Committee. We provided opinion on the direction going forward given current trends and issues in the chemical industry.

Topic 1 Posing opinions at international conferences and policy dialogue

A brisk exchange of opinions was held at the APEC¹ Chemical Dialogue and AMEICC WG-CI² (June and August 2014 and January 2015). The opinions of Japan's chemical industry were reflected in these forums. Also, in June 2015, we invited a lecturer from METI to give a lecture in Singapore.



1 APEC: Asia Pacific Economic Cooperation
2 AMEICC WG-CI: ASEAN Economic Ministers and METI Economic and Industrial Cooperation Committee

Topic 2 Regular meetings between Japan and South Korean associations

We held our fifth regular meeting with the Korea Chemical Industry Council (KOCIC) in December 2014. We shared information on common issues, such as chemicals management, and safety and disaster prevention, and worked to strengthen our relationship.



Topic 3 Presentation on regulations concerning the rules of origin of chemicals

In March 2015, we invited a lecturer from Tokyo Customs to give a presentation on regulations concerning the rules of origin of chemicals. Around 70 members participated. The presentation met the expectations of members and offered a deeper understanding of regulations concerning the rules of origin of chemicals.



Topic 4 ICCA-related activities

Acting as the secretariat office for ICCA, we held various activities at the steering committee meeting in Mexico in April, the Board of Directors meeting in Tokyo in May, and then the Board of Directors and steering committee meetings in Paris in October. The ICCA Board of Directors meeting, which was conducted in May, was held for the first time in Japan. As the secretariat office, we handled preparations and management and successfully carried out the meeting.

Message

Initiatives for tackling international issues in the chemical industry, which is undergoing globalization

As the industry continues to undergo globalization, initiatives to tackle international issues, including trade and commerce issues (tariffs, non-tariffs barriers, the rules of origin of chemicals, and other issues) are becoming increasingly important for Japan's chemical industry. We offer timely opinions on behalf of Japan's chemical industry to the government and other institutions through opportunities such as international conferences and various government committees, and we are working to realize initiatives to tackle global issues.

Toshinori Yamamoto, Committee Chairman
[Managing Director, Member of the Board, Tosoh Corporation]

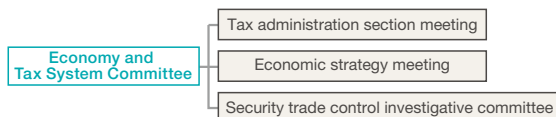


Activity Report: Economy and Tax System Committee

[Department of Business/Economic Information]

Overview of the committee

The committee collects and shares information on the economy and tax systems pertaining to the chemical industry. It also summarizes opinions and expresses the requests and opinions of the industry.



Activities

The government is easing up on various regulations, revising the tax system, and addressing laws and ordinances to achieve a brisk economic cycle for the development of Japan's economy. Amid this environment, with the aim of dealing with changes and ensuring further growth of the chemical industry, we collect and share information related to the economy and tax system and make requests and recommendations on policies. In particular, we are cooperating with other industries to strengthen our activities to promote revisions to the tax system.

Focus

FY 2015 activities to bring about revisions to the tax system



Committee meeting

In June 2014, the Japan Revitalization Strategy was revised. Tax revisions in 2015 were substantial given that strategy revisions included a downward revision to the effective corporate tax rate. We also summarized the chemical industry's requests for tax revisions and lobbied regulatory authorities. The effective corporate tax rate is scheduled to be reduced for several years, while tax programs for promoting R&D will basically remain the same.

We also issued joint requests* along with other industry organizations for the revision of the tax system.

*Joint requests for revisions to corporate taxation that would strengthen the competitive edge of companies (total of 10 organizations); Opposed the expansion of uses for climate change taxes (total of 121 organizations)

Key request in FY 2014

- 1 Review the effective corporate tax rate
- 2 Expand tax programs to promote R&D
- 3 Laxer criteria for applying the consolidated tax payment system
- 4 Radical review of climate change taxes
- 5 Exemption on the main rules of gasoline tax and petroleum and coal tax for raw material used in manufacturing petrochemical products

Topic 1 Edited the handbook on service transactions for Security Export Control

The investigative committee on Security Export Control put together a handbook that covers issues such as questions on service transactions and problems faced by member companies from the perspective of the chemical industry. This handbook on service transactions has been uploaded to the JCIA website.



Topic 2 Lecture on economy and tax system and briefing on Security Export Control

This committee collaborates with the department of METI and holds lectures which offer the opportunity to share information and exchange opinions.

In FY 2014, presentations on Security Export Control (Tokyo and Osaka) and on budget requests and tax system revision requests (September 2014, January 2015) were held.

Message

Maintaining the business environment for the chemical industry and working for industry development

The domestic business environment, including its tax system, export criteria, and various regulations, must undergo constant review to ensure that it matches prevailing needs, so that Japan's chemical industry can achieve further development under the growth strategies of Abenomics. JCIA collects opinions from the far-reaching chemical industry, provides and shares information, and presents opinions and requests. We are carrying out activities to gain equal footing with the international business environment.

Masumi Fukuda, Committee Chairman
[Director & Senior Managing Executive Officer, Daicel Corporation]

Activity Report: Public Relations Committee

[Public Relations Department]

Overview of the committee

This committee carries out PR activities to improve the trustworthiness and presence of the chemical industry, and implements activities to enlighten youngsters on chemicals.

Public Relations Committee — Chemistry Day Promotion WG

Activities

To promote understanding of JCIA's activities, the committee actively communicates both internally and externally the details of JCIA's activities and the initiatives being carried out by Japan's chemical industry. The committee also regularly holds chemical-experiment classes as well as seminars for junior high schools teachers. The goal is to enlighten youngsters, who are our future on chemistry.

Focus

Passing on the dream of chemistry to future generations

We hold chemical-experiment shows where children can experience a number of experiments at once and chemical-experiment classes where small groups of children carry out classroom experiments. We want to make science (chemistry) fun, mainly for elementary school students.

The children's faces beam with smiles and enjoyment as they seriously tackle the experiments they are given.

At the junior high school level, we offer educational support to science teachers. We provided educational assistance, including a seminar for junior and senior high school science teachers (Fukushima, June 2014) and factory tours for junior high school science teachers in Tokyo (Kawasaki, July 2014). We also displayed a booth at the Nationwide Junior High School Science Education Research Group (Zenkoku Chugakko Rika-kyoiku Kenkyu-kai) (Matsue, August 2014).

At the high school level, we conducted our annual activities—the Chemistry Grand Prix and International

Chemistry Olympiad. At the International Chemistry Olympiad in 2014, students representing Japan took one gold medal, two silver medals, and one bronze medal. All the participating students showed exemplary skills and performance.



Chemistry Day: children's chemical-experiment show (Kyocera Dome, Osaka)

Date	Event	No. of participating companies/organizations	Location	No. of participants
Jun.	Tohoku reconstruction aid Children's chemical-experiment class	3 companies	Fukushima	About 1,200 People
Aug.	Summer vacation: chemical-experiment show for children	14 companies, 2 organizations	Tokyo	About 8,000 People
Oct.	Chemistry Day: chemical-experiment show for children	7 companies, 2 organizations	Osaka	About 5,000 People
Six times a year	Children's science experiment class		Tokyo	Total 384 People

Topic 1 Introducing Japan's chemical industry and JCIA activities

Each year "Chemical Industry of Japan" (by graphs) is published. It is an easy to understand explanation of the chemical industry using figures and graphs. The publication is popular both in Japan and abroad. In addition, we issue an annual report that introduces JCIA activities.



Topic 2 Working group to popularize "Chemistry Day"

Working group members are selected from employees engaging in PR at seven member companies. From a wide range of perspectives, the working group considers ways to promote and popularize Chemistry Day and Chemistry Week among the general public. Heated discussions are carried out at each meeting.



Topic 3 JCIA Online PR email magazine

An email magazine is sent out about twice a month mainly to employees in the administrative and PR departments of member companies. The magazine includes announcements of JCIA seminars, chemical-experiment shows and classes and other events and activities, as well as implementation reports.



Message

Aiming to make "Chemistry Day (Oct. 23)" a national event

A key theme of the Public Relations Committee in FY 2014 was the promotion and popularization of Chemistry Day as a general public event. The committee held new events for children and students, including chemical-experiment shows and special classes. At present, our working group, which consists of young PR staff from member companies (half of which are female), continues to offer fresh ideas. The group continues to develop activities that will make the general public more familiar with chemistry.

Masaru Amano, Committee Chairman
[Director & Managing Corporate Officer, Showa Denko K.K.]



Activity Report: Labor Committee

[Labor Department]

Overview of the committee

This committee carries out activities that focus on dealing with human resource development, labor related policies, and laws and regulations in the chemical industry.



Activities

The committee implements various seminars and working group activities, including a seminar on training personnel and labor staff. To deal with labor related policies, and laws and regulations, the committee collaborates with the Keidanren and other industry organizations to offer up opinions. Furthermore, the committee works to sustain proper relationships with labor unions through chemical industry labor and management talks with the IndustriALL Global Union, Japanese Chemical and Energy Industry Affiliates' Federation (IndustriALL-JAF).

Topic 1 Seminars for training personnel and labor staff

An important issue is the training of leaders for human resource departments, which will be responsible for shouldering the next generation of the chemical industry. As such, we have been continuously holding seminars since FY 2000. In FY 2014, we welcomed Mr. Takashi Kamiya, from the Institute of Strategic Human Resource Development as a lecturer, and held a total of eight seminars. There were 14 participants from 13 companies. The theme that was covered was personnel management strategies and the role of the HR department at chemical companies. The purpose of the seminar was to use discussion to think and learn about personnel and labor functions in management and the roles of HR department. Another objective is to create a network among those engaged in the same personnel and labor duties within the chemical industry.

Topic 2 Labor and management talks in the chemical industry

We held labor and management talks with the IndustriALL Global Union, Japanese Chemical and Energy Industry Affiliates' Federation (IndustriALL-JAF) in October 2014 and then again in February 2015. This is an ongoing gathering that is held annually. The executives of labor organizations that belong to the IndustriALL-JAF and governors of the labor relations board committees participate in the talks. Both parties report activities and exchange opinions to enrich communications and sustain proper relations.



Message

Training personnel that are the future of the chemical industry

Yoshihiro Wada, Committee Chairman
[Lead Executive Officer, Asahi Kasei Corporation]

In FY 2014, we poured our energy into dealing with human resources training and labor-related policies, laws and regulations, including the legal system regulating working hours. In FY 2015, we plan to expand our activities for training personnel that will lead the next generation in the chemical industry. In specific, for the first time in seven years we plan to dispatch an overseas research team to Southeast Asia to research labor conditions in the overseas chemical industry. Also, we plan to embark on planning new corporate personnel training programs.



Security Information Management Subcommittee

[General Affairs Department]

Summary of section meeting



For matters related to the security information of JCIA members, we collaborate with the Information-technology Promotion Agency (IPA) to implement planning and proposals derived from comprehensive opinions. In addition to carrying on existing national project activities related to security information, we also engage in a wide range of activities, including participating in new projects, submitting opinions to related ministries and agencies, providing consultation and information to members, sharing information, carrying out educational activities, promoting interaction between members and creating human networks.



Voice

Boosting the level of information security

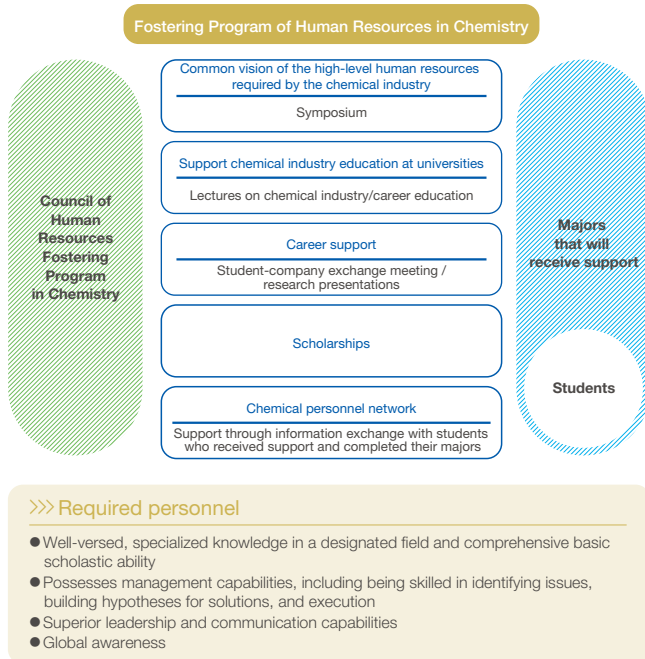
Recently, the threat of cyber-terrorism is increasing and the strengthening of corporate security information measures is an urgent issue. At present there are no perfect measures. Another very difficult issue is maintaining the balance between convenience and cost. In fiscal 2015, we plan to boost the level of security information in the chemical industry by sharing and exchanging information with other members, through public and private sector ties, and furthermore by promoting the strengthening of ties with other associations.

Ichiro Terashima, Subcommittee Chairman
[General Manager, Headquarters, Information System Group, Sekisui Chemical Co., Ltd.]



Fostering Program of Human Resources in Chemistry

Program details



In October 2010, the fostering program of human resources in chemistry was established based on a proposal by the Chemical Vision Study Group, which was set up by METI in 2009. The purpose of this program is to develop young personnel that will contribute to the strengthening of the global competitiveness of Japan's chemical industry and industry promotion. In the program, we express the needs for human resources with doctoral degrees required by the chemical industry, and support doctoral courses that can implement an advanced curriculum responding to the needs and its students. There are 37 JCIA member companies that endorse and participate in this program. We established a council for the developing program for students who will be engaged in the future chemical industry. This group holds exchanges with the member companies, supports job hunting activities, and offers scholarships mainly for graduate students in doctoral programs in chemistry.

Four years has passed since this program was established. In light of the progress being made with current activities, we embarked on rebuilding the framework of this program to further enhance its effectiveness. We plan to enrich this program, adding new activities in educational assistance by the chemical industry and symposiums.

◆ Selecting majors that will receive support

In FY 2014 we implemented the fifth screening to select which courses of study would be given support. In addition to the 24 majors that we have provided aid to thus far, the committee decided to provide support to the Department of Materials and Science and Engineering at the Graduate School of Engineering, Yokohama National University. (Currently there are 25 majors at 15 graduate schools that are receiving support.)

Examples of outstanding activities carried out for each major can be found on the JCIA website.

◆ Industry-academia exchange meeting

In FY 2014, we held an exchange meeting between industry and academia. It was held on October 14 and 15, 2014 at the Tower Hall Funabori, Tokyo. It was part of a collaboration plan with CSJ Chemistry Festa 2014, which was sponsored by the Chemical Society of Japan (CSJ). The key note address was given by Dr. Tetsuya Tsunekawa, vice president and general manager of the R&D division of Toray Industries, Inc. The students receiving support gave research presentations. Also young researchers that took jobs at the member companies after completing their



Student-industry exchange

doctorate degree introduced examples of activities. This was an opportunity to promote interaction between industry and students.

◆ Student-company exchange meeting

In February 2015, we held a student-company exchange meeting in Tokyo and Osaka. The purpose was to provide information to give students a correct understanding of the chemical industry and companies, and to help them design a career path. The students that attended were those that received support under our program to foster human resources in chemistry. In Tokyo 31 member companies participated and in Osaka 21 companies participated. All together, nearly 120 students attended.



Student-company exchange

◆ Scholarships

From among the majors subject to receive our support, we select several ones implementing particularly outstanding activities of human resource development, and grant a scholarship to their recommended students. A scholarship of 200,000 yen per month for a period of three years is granted to each student. In FY 2014, 32 students from 12 different majors at 10 graduate schools were granted scholarships.

◆ Initiatives for chemical industry education

In FY 2014, we established the working group for chemical industry education. The working group undertakes measures to support chemical industry education at universities.

JCIA's international initiatives

Activities as part of the International Council of Chemical Associations (ICCA)

The Board of Directors of ICCA, which is composed of chemical industry associations from around the world, met twice a year. This time, the meeting was held in Tokyo in May, which was the first time in Asia. The implementation and management of the meeting was carried out by JCIA. The Board of Directors meeting was also held in Paris in October 2014, and then in Colorado Springs (US) in June 2015. Global issues shared throughout the chemical industry were discussed. The main topics of discussion were:

- ① ICCA activity plan for the fourth session of the International Conference on Chemicals Management (ICCM 4) to be held in Geneva, Switzerland from the end of September to early October 2015.
- ② ICCA activity plan for the United Nations Framework Convention on Climate Change (COP21) to be held in late November to December 2015.
- ③ Promote the signing of the revised version of the Responsible Care Global Charter by the CEOs of 150 global chemical companies.
- ④ Collaborate with the ICCA, the United Nations Environment Programme (UNEP), and the Organisation for the Prohibition of Chemical Weapons (OPCW) to conduct capacity building activities that will transfer specialized knowledge and develop capabilities for implementing risk assessment and proper management of chemicals in emerging economies and developing nations.

In regard to item ②, as the leader and chair of the ICCA's energy and climate change leadership group, Japan is taking a leading role in activities for COP21, including providing information on initiatives in the chemical industry to reduce the emission of greenhouse gases.

Also, regarding item ④, ICCA has highly praised JCIA for its capacity building activities in Asian countries using its sustainability package.



ICC Board of Directors meeting in Paris in October 2014



Cefic RC awards ceremony was held concurrently with the Paris ICCA Board of Directors meeting. The key note address was given by Tsutomu Tannowa, JCIA director (Mitsui Chemicals, Inc.)



ICCA Board of Directors meeting in Colorado Springs in June 2015

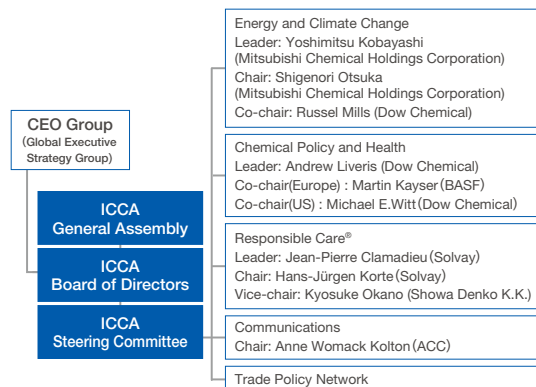
ICCA (International Council of Chemical Associations)

This organization was established by the chemical industry associations of the U.S., Canada, Europe, and Japan in 1989. The number of member countries and regions is approximately 50 including the chemical industry associations of North and South America, Europe, Asia, Oceania, and the Gulf countries and also including observer countries such as China, Russia, and India. ICCA thus contributes to the development of sustainable society through its engagement in voluntary and other activities of which "Responsible Care" is the most representative one.

The organization is comprised of four main leadership groups which implement and promote strategic initiatives toward the solution of challenging issues in the respective fields, and engage in communication, notably offering opinions to policy decision makers. For more information, refer to ICCA website.

<http://www.icca-chem.org>

ICCA Organizational Chart



JCIA's international initiatives

Promotion of RC Integrated Program for Sustainable Development throughout Asia

One important theme being undertaken by JCIA is the promotion of RC Integrated Program for Sustainable Development throughout Asia. JCIA packaged its knowhow on educational assistance related to Responsible Care, chemicals management, and process safety and disaster prevention (see Figure 1). We are carrying out educational support activities and capacity building in countries in Asia, which have undergone rapid economic growth and are becoming more independent. At the same time, we created a roadmap to build reliable relationship with local companies and local Japanese companies, chemical industry associations, and the government (see Figure 2). Through these activities, JCIA is contributing to the improvement of safety and environmental conditions in Asian countries by exerting the leadership role of Japan's chemical industry in countries in the region. JCIA aims

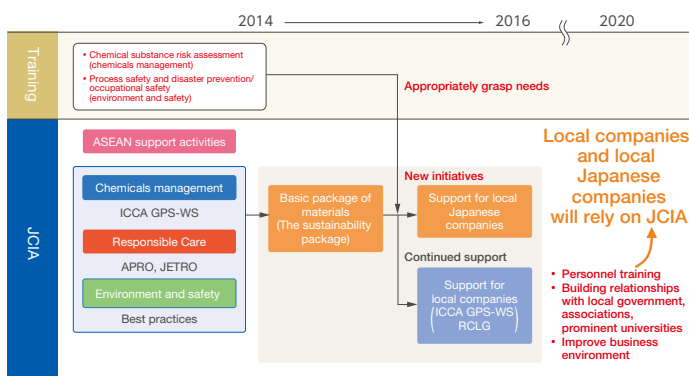
to become a reliable association through its support of local deep-rooted capacity building and other activities.

In FY 2014, we implemented capacity building in Indonesia, Myanmar, Vietnam, Malaysia, and Taiwan. Our actions were well received in each country.

In FY 2015, we aim to optimize our sustainability package to further expand our activities. We plan to continue to gain information and identify needs by talking with local governments, associations, and companies, and add support items that are in line with these needs to our sustainability package.

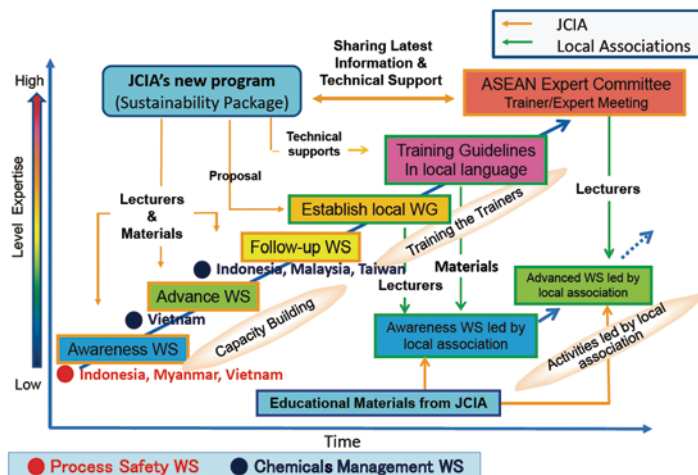
We also plan to expand the contents of our training (enrich our library of DVDs, visit local companies, etc.) by obtaining the cooperation of domestic associations and member companies. We are pouring energies into educating local trainers to build an environmental safety training system locally.

Figure 1: Support using RC Integrated Program



Implementing a workshop

Figure 2: Roadmap of RC Integrated Program for Sustainable Development



Visiting local companies

Member services that the entire association engages in

>>> JCIA seminars



JCIA has been holding bi-monthly JCIA seminars with the goal of providing members with more beneficial information since the second half of FY 2013. Lecture themes are selected from areas in which members

have a high level of interest, including global issues, different industries, chemicals management, safety, the global environment, and innovation. In FY 2014, a total of six seminars were conducted and a total of around 1,000 members participated. Our latest schedule for FY 2015 can be found on the JCIA seminars website (<http://www.jcia-seminars.org/>).

Details of seminars in FY 2014

No. 1	Industry and government initiatives for gender equality
No. 2	Business environment and issues faced by Japanese chemical companies in US and Europe
No. 3	Recent trends in trade secret protection
No. 4	Reality of chemicals management —Examples from individual companies—
No. 5	Chemical industry issues from the perspective of users
No. 6	Business environment and issues in India, which is experiencing pronounced growth

>>> JCIA explanatory meetings for members



We have been holding “JCIA explanatory meetings” for members since FY 2012. These are an opportunity for the Director General and other Executive Directors in charge to directly explain JCIA’s activities to its members. In FY 2014, the meetings were held in Osaka (November 18), Nagoya (November 26), and Tokyo (February 20, 2015). Nearly 200 members attended the meetings. After the meetings were completed, discussion sessions were held so that members could exchange views on a deeper, face-to-face basis.

Agenda for JCIA explanatory meeting (Tokyo; February 20, 2015)

- ① JCIA organization and activities (Director General)
- ② Chemicals management and international activities (Executive Director in charge)
- ③ Environmental safety and Responsible Care (same as above)
- ④ Recent trends concerning climate change and energy (same as above)

>>> JCIA Symposium 2015



Moderator Kayoko Yamamoto,
Editorial Writer & Senior Staff Writer,
Nikkan Kogyo Shimbun

Left: Takeshi Otsu, Vice President, Chemicals & Crop Protection, BASF Japan Ltd.
Right: Masahiro Asami, Director & Corporate Vice President, General Manager, R&D Management Headquarters, Fujifilm Holdings Corporation

Since FY 2013, we have been holding the JCIA Symposium in line with JCIA’s annual General Assembly. In FY 2015, the symposium was divided into two parts. The first part was for lectures by those who won one of the three JCIA awards in the categories of “Annual Safety,” “Responsible Care,” and “Technology.” This offers an opportunity to share best practices with other members. The second part of the symposium consists of a panel session on how people think about and perceive innovation. After special lectures by BASF Japan Ltd. and Fujifilm Holdings Corporation, a panel discussion was held on ideal innovation in the chemical industry. Ms. Yamamoto, an editorial writer & senior staff writer at Nikkan Kogyo Shimbun, an industrial newspaper, acted as moderator.

Chemical industry coming together as one to strengthen industrial safety and build a social safety environment

Masamitsu Tamura,
Professor Emeritus of the University of Tokyo



He has held prominent positions in various academic societies and other organizations, such as the Science Council of Japan, and also membership of governmental committees. He has won many awards including the Prime Minister's award for achievements in safety in 2005, and is the author of numerous publications on safety.

1964 Graduated from Faculty of Engineering, the University of Tokyo
1966 Obtained master's degree from School of Engineering, the University of Tokyo
1969 Completed doctorate at School of Engineering, the University of Tokyo
1969-1976 Worked at Toyobo Co., Ltd.
1977 Lecturer at Faculty of Engineering, the University of Tokyo
1980 Assistant professor at Faculty of Engineering, the University of Tokyo
1980-1982 Visiting professor at the University of Louisiana
1990 Professor at Department of Reaction Chemistry, Faculty of Engineering, the University of Tokyo; after serving as a professor at the Department of Chemical System Engineering, School of Engineering, the University of Tokyo, became a professor in the Department of Environmental Studies, Graduate School of Frontier Science, University of Tokyo in 1999
2004 After retirement, became Professor Emeritus of the University of Tokyo
2004 Visiting professor at the Center for Risk Management and Safety Sciences at Yokohama National University
2005 Full-time professor at the center
2009-2014 Visiting professor at the center

The chemical industry plays a crucial role of delivering value to society through its development and Japan is expected to contribute to the creation of world leading technologies as well as safe, environmental friendly and quality-oriented manufacturing. However, recent safety issues in chemical industries may uproot the foundation of the Japanese chemical industry, therefore, JCIA chairman Kobayashi clearly stressed in his message in this annual report the importance of safety by stating that a priority should be placed on "sharing and applying safety best practices."

The first point toward safety reinforcement in the chemical industry is to promote risk assessment implementation, in order to recognize the existence of risks and to reduce them to below permissible levels. It is essential that such a campaign should involve small- and medium-scale enterprises in collaboration with the Japan Industrial Safety & Health Association (JISHA).

The second point is the development of human resources. Working with the Japan Petrochemical Industry Association (JPCA) and the Petroleum Association of Japan, JCIA holds the "industrial safety theory" course supported by lecturers from the government, academia, and industry. The course provides the participants with basic knowledge on industrial safety and information on safety measures being carried out by chemical companies. In addition, this course also offers an opportunity for cross-company discussions on safety among the participants. Such safety training programs should be more broadly shared and include hands-on experience training.

The third point is that each company and factory assesses the safety levels of its own safety infrastructure and safety culture to acknowledge their weaknesses and overcome them. In JCIA, companies that have received the JCIA annual safety award present their advanced safety measures at

the Safety Symposium, and these are then systematically categorized and shared in the Best Practice booklet*. This could be a helpful reference for reinforcing the level of safety.

The fourth point is to respond to globalization. It is common issue that the Japanese chemical industry should be definitely armed for the future, accumulate technologies and conduct human resource training. We look forward to contributions from JCIA in this regard.

Turning to the issue of building a social safety environment, it is necessary to foster engineers and researchers who establish and implement future industrial safety systems as well as citizens who have basic knowledge about safety and understand industrial safety. In doing so, an integrated systematic safety training program should be established to provide appropriate safety education at each level—from home education, elementary and secondary education, and higher education through corporate training or social education. To this end, the chemical industry should promote not only corporate training, but also support primary and secondary education, contributions to social education and cooperation and sharing roles with universities and other educational institutions.

I believe that the chemical industry should work together toward establishment of close cooperation between industry, government, and academia to reinforce Japan's industrial safety and build a social safety environment. I encourage JCIA to play a central role in this regard.

*Best Practice booklet: "Best Practices of Safety and Disaster Prevention, Industrial Health and Safety"

Editorial policy

"JCIA Annual Report" is issued to inform a wide range of stakeholders about what kind of organization JCIA is and what activities it engages in. The 2015 issue is the third JCIA annual report. In this edition we reported on our activities by committee in an effort to simplify the introduction of our activities and make them easier to be understood. The "Focus" section introduces key themes and the "Topic" section covers our various activities. In addition, JCIA Annual Report Reference Materials provides various data and introduce initiatives related to JCIA activities. JCIA Annual Report is published in the autumn of each year.

Targeted organizations

Targeted organizations are the Japan Chemical Industry Association and member companies and organizations.

Languages

This report is issued in two languages, Japanese and English.

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(Some information from outside this period is included.)

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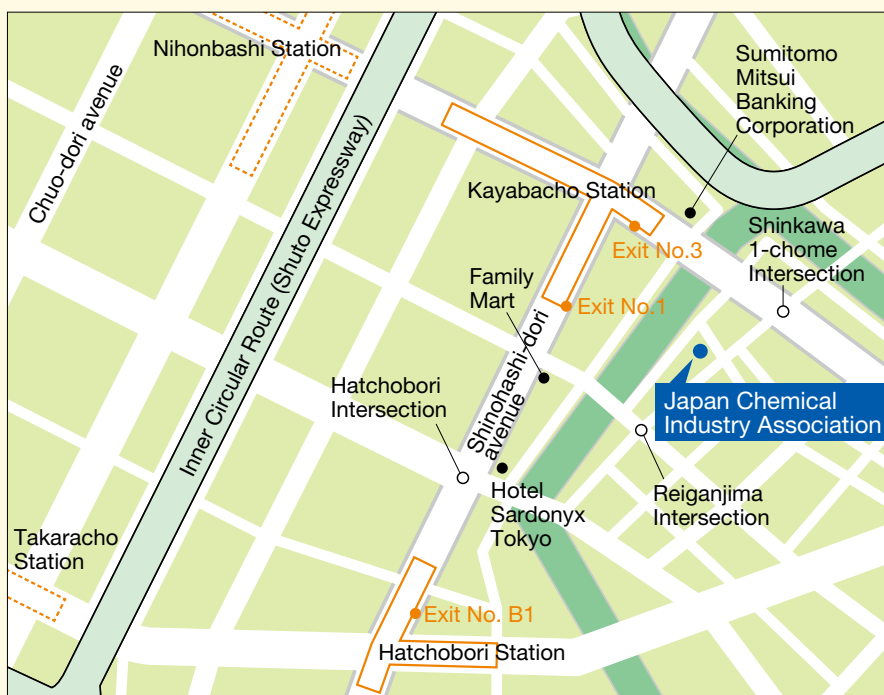
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Approximately 3 minutes on foot

Kayabacho Station (Tokyo Metro Hibiya Line)

Walk straight ahead from Exit No. 1, turn left at the intersection with the Family Mart store, and then turn left at the Reiganjima Intersection.

Approximately 3 minutes on foot

Hatchobori Station (JR Keiyo Line)

Approximately 8 minutes on foot from Exit No. B1



Nikka-chan:
JCIA's official character



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VOC**

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JCIA Annual Report 2015



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