



NISSUI
Environmental Report

2014

TOP MESSAGE

Rebirth of the Nissui Group

President's Message

In August 2014, on the Group's 103rd Anniversary, we relocated our head office for the first time in 48 years from Otemachi to Nishi-Shimbashi. We resolved to make this relocation a rebirth for the Nissui Group, and we have begun a review of the Group starting with matters close to home.

The current fiscal year also marks the final year of the Medium-Term Management Plan 2014 (MVIP), which set out the basic management policy of "we will give consideration to the sustainable utilization of marine resources and the preservation of the global environment, and will continue to create diverse values from resources, including marine resources, to contribute to the active lives and a future full of hope for people around the world."

We have made progress in each of the specific targets for the preservation of the earth environment, namely:

- 1) Reduce greenhouse gases by 3% in 3 years for the Group;
- 2) Achieve zero emissions at the domestic plants under direct control;
- 3) Reduce containers and packaging that become waste.

We have also steadily reduced the emission of CO₂, water usage and waste at each plant, warehouse, etc.

The Nissui Group, as a business relying heavily on the bounty of nature, has particularly strong ties to the sea, and in this issue we will present the various initiatives taken by the Group toward the sea.

Major initiatives unique to the Nissui Group include:

- 1) The Fine Chemicals Business, which contributes to people's health by extracting and purifying functional lipids* contained in fish, the sea's bounty;
- 2) The Nippon Survival Training Center, which protects the lives of people who work at sea by providing world-class life-saving training;
- 3) Ocean exploration and deep-sea research that will lead the way for the future of earth and mankind.

The Group also continues to contribute to food and the environment through the preservation of marine ecological systems and biodiversity.




Going forward, the Nissui Group will step up its efforts in order to win the approval and support of its stakeholders as the Group is reborn, and to follow its path toward the development of a sustainable society by continuing to pursue innovative initiatives that are incomparable in the industry.

*Functional lipids: Lipids that are anchored in cell membranes such as the organs and red blood cells of living organisms, which demonstrate physiological functions. Typical examples of functional lipids include EPA and DHA, which are used in pharmaceuticals and functional foods.



Norio Hosomi
President & CEO
Nippon Suisan Kaisha, Ltd.

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Editorial Policies

- Editorial policies** This report is published to report the environmental initiatives made by Nippon Suisan Kaisha, Ltd. to its stakeholders (business partners, employees, shareholders, consumers and local communities) and this marks the tenth time this report has been published. We have upgraded the numerical data on environmental preservation activities by including data on certain domestic Group companies in addition to the non-consolidated data of Nippon Suisan Kaisha, Ltd.
- Period under review in this report** The numerical data of environmental preservation activities presented here are those for FY2013 (from April 2013 to March 2014). The section on the environmental management system and specific examples mainly cover activities from FY2013, with ongoing activities up to July 2014.
- Organizations under review in this report** This report covers Nippon Suisan Kaisha, Ltd. (non-consolidated) and selected domestic consolidated subsidiaries and Group companies. The numerical data of environmental preservation activities represent a combined total of the business locations of the Nippon Suisan Kaisha, Ltd. and the 26 domestic consolidated subsidiaries.
- Referenced guidelines** Environmental Report Guidelines 2012 (Ministry of the Environment)
- Division publishing report contact information** Environment Office, Nippon Suisan Kaisha, Ltd.
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Corporate stance and attitude toward preservation of the environment

We give consideration to sustainable usage of marine resources and preservation of the earth's environment, and contribute to the lives and future of people around the world.

Following the founding philosophy and the basic management policy handed down through its 100-year history, Nissui aims to become a manufacturer that brings tastiness and fun as well as health and beauty from the earth and the sea. Based on the principles set forth in the Environmental Code and, out of gratitude to the earth and the sea, Nissui engages in activities to preserve the environment.

Founding philosophy

Similar to providing tap water, providing a stable supply of marine products is at the origin of Nissui.

“Water is to the water service what marine resources are to the production and supply of marine products.”

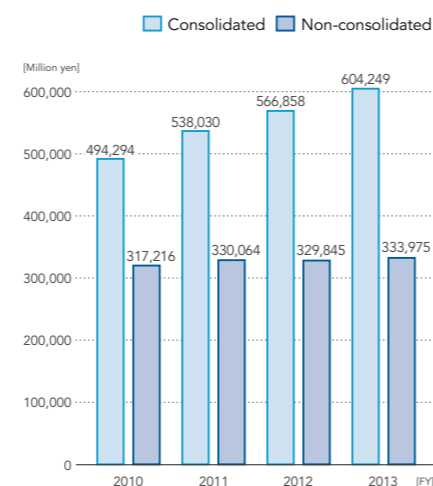
We should search for ocean resources throughout the world, store them in as a fresh condition as possible, build water pipes, as it were, in every market of the world, and supply them while adjusting the market price according to demand.



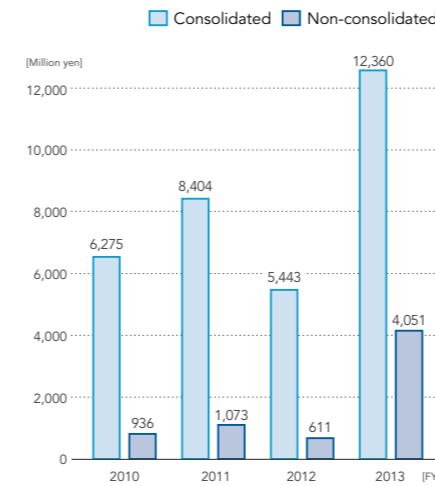
Company Overview (As of August 31, 2014)

Company Name Nippon Suisan Kaisha, Ltd.
Head Office Nishi-Shimbashi Square, 1-3-1, Nishi-Shimbashi, Minato-ku, Tokyo 105-8676 Japan
Founded 1911
Established 1943
Capital 23,729 million yen
Main Businesses **Marine Products Business:** Fishery, aquaculture, purchasing, processing and sales of marine products (fresh fish, frozen fish, oils and fats [fish oil] and meal [feed])
Food Products Business: Development, manufacture and sales of frozen prepared foods, canned and bottled foods, and other processed foods (fish sausage and ham, fish paste [surimi] products, chilled foods and seasonings)
Fine Chemicals Business: Manufacture and sales of general pharmaceuticals, pharmaceutical ingredients and health foods
General Distribution Business: Frozen and refrigerated storage, transport of frozen and refrigerated freight

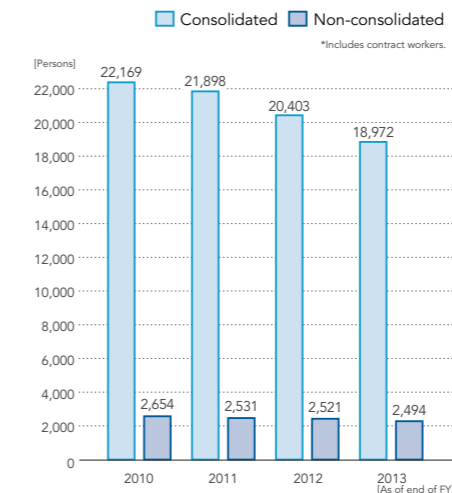
Sales
(FY2010 – FY2013: Consolidated/Non-consolidated)



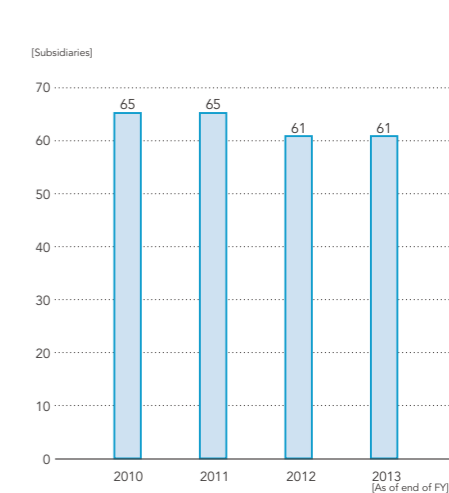
Ordinary income
(FY2010 – FY2013: Consolidated/Non-consolidated)



Number of employees
(FY2010 – FY2013 [As of March 31]: Consolidated/Non-consolidated)



Number of consolidated subsidiaries
(FY2010 – FY2013 [As of March 31])



Basic management policies (From the Medium-Term Management Plan 2014 [MVIP])

The principles of Nissui's management, which set forth the preservation of the earth environment and the creation of values through marine resources.

“We give consideration to sustainable usage of marine resources and preservation of the earth's environment, continue to create diverse values from resources, including marine resources, and contribute to the active lives and a future full of hope for people around the world.”

Environmental Code

Nissui aims to put the Environmental Code into practice through its everyday operations. The preservation of biodiversity was added as the first article of the Code, which serves as the guidelines for environment management.

Environmental philosophy

The basic corporate stance of Nissui, whose business relies on the bounty of nature, is to respect natural resources and interact with the Earth and the sea with gratitude. We shall engage in global business activities which enable us to live in harmony with the global environment, and make continuous efforts to build a sustainable society.

Policies

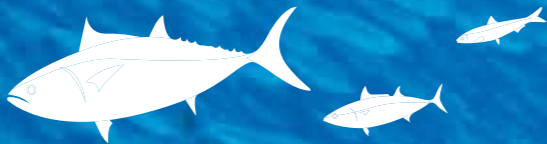
1. We will promote activities mindful of the preservation of the natural environment and biodiversity, and the sustainable use of resources.
2. We will continuously endeavor to build a recycling-oriented society through energy conservation, resource saving, waste reduction, less packaging & containers, environmentally-friendly procurement, and other activities which alleviate the environmental burden.
3. We will build an environmental management system, and aim to operate the system in an effective manner. We will also conduct environmental audits, and strictly enforce compliance with environment-related laws, regulations, etc.
4. We will raise the environmental awareness of each and every one of our employees through environmental education.
5. With respect to society, we will carry out environmental communication activities, and place great importance on environmentally-friendly coexistence with the local community.
6. We will endeavor to make this Environmental Code common to companies affiliated with the Nissui Group.



Special Feature 1

In step with people's lives

Contributing to health through food



We are aiming to become a manufacturer that brings tastiness and fun as well as health and beauty from the earth and the sea. The Nissui Group extracts healthy ingredients from marine resources and offers them as raw materials for various products such as health foods. The following is a report on the Nissui Group's activities that contribute to a healthy lifestyle through food.

We utilize the sea's bounty derived from fish oils for maintaining and managing health.

We hope to use up every last bit of the fish, the precious bounty of the sea. It is this profound appreciation of the earth and the sea that drives us to promote our Fine Chemicals Business which utilizes fish oils extracted from fish. Fish oils contain copious amounts of EPA^{*1}, which is essential for maintaining healthy blood and veins, DHA^{*2}, which is necessary for development of the brain and nervous system in infants, and other functional lipids, which are used as raw materials for pharmaceuticals and health foods.



^{*1} EPA: Eicosapentaenoic acid ^{*2} DHA: Docosahexaenoic acid



Nissui Group's Fine Chemicals Business, which fully utilizes the sea's bounty



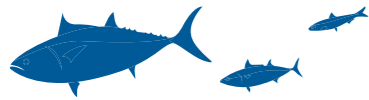
We were the first in the world to successfully extract and purify high-purity EPA.

EPA is an ingredient found mainly in oily fish such as sardines and mackerel. Nissui was among the first to focus on the health benefits of EPA and began its research from as early as the 1970s. After more than 10 years of research, Nissui, in the 1980s, became the first in the world to develop the technology for producing high-purity EPA from the fish oil of sardines. In addition, Nissui has been successful in extracting and utilizing various valuable ingredients such as DHA, which is also extracted from fish oils and Orange Roughy Oil, which has outstanding moisturizing effects on skin.

We deliver the sea's vitality in many forms, from pharmaceuticals to cosmetics.

Ingredients such as EPA and DHA are exported all over the world and are being used as raw materials for a wide range of products, including pharmaceuticals, health foods, baby formula, nutrients and cosmetics, to contribute to people's healthy and comfortable lives. The Nissui Group's Fine Chemicals Business is conducting further research and development of the health benefits of fish oil, while at the same time making contributions to health through medicine and food by selling products to the general consumer through Umi no Genki Club, among others.





Nissui Kashima Plant

Production base of the Fine Chemicals Business, which aims for the 100% utilization of fish oils

100% utilization.

We are also contributing to the reduction of the environmental load.

The Kashima Plant does not waste fish oils, even after they have been distilled for EPA and DHA. The remaining volatile components are used as fuel for the heating medium boiler. Through this process, we not only use up the fish oil and eliminate waste but also break down environmental pollutants such as dioxin through high-temperature combustion. The Kashima Plant has acquired ISO14001 certification (the international standard for environmental management systems), and has also achieved zero waste emissions. The Kashima Plant is contributing to the preservation of the earth environment from various angles.



Kashima Plant



Heating medium boilers which can be fueled by fish oils after distillation

We will continue to be good corporate citizens by participating in activities that contribute to the community.

The Kashima Plant also collaborates with the other companies in the coastal industrial area of Kashima to actively promote activities to contribute to the community including clean-up activities of the beaches and ports by employees and their families, Flower-planting Activities to become more familiar with the area's flowers, and sport events such as the Choshi Marathon. The Kashima Plant hopes to be a good corporate citizen that works together with the community.

Initiatives by the Kashima Plant



Planting activities



Beach clean-up

State-of-the-art production flow that fully utilizes the sea's bounty.

The Nissui Kashima Plant, located in Kamisu, Ibaraki Prefecture, is the base for the Fine Chemicals Business, which concentrates and purifies healthy ingredients from fish oils. Fish oils procured from Japan and from around world are put through a process called "short path distillation" (SPD), in which functional lipids such as EPA, DHA and cholesterol are extracted. Upon completing this process, the lipids go through advanced purification and are delivered as raw materials for pharmaceuticals, foods for specified health uses and baby formula.



Proposal for SPORTS EPA which will allow you to enjoy sports longer and more safely

We will contribute to body-building that will allow runners to compete all the way to the finish line.

EPA contained in fish oils, by enhancing the flexibility of red blood cells and increasing oxygen-carrying capacity, has the effect of building a body that will not run out of steam until the very end. Focusing on these effects of EPA, Nissui is proposing SPORTS EPA based on the concept of "Enjoy sports longer and more safely."

The effects of EPA that solves many of the problems faced in sports

- Improves endurance by making oxygen intake more efficient during exercise
- Lessens fatigue during exercise
- Lessens blood viscosity, reduces the burden on the heart, etc.

Effects of improving endurance and relieving fatigue through the improvement of blood flow

Effects of reducing body fat and preventing obesity through improvement of fat metabolism

- Decreases body fat and increases fat-free mass
- Activates fat metabolism
- Decreases the area of subcutaneous fat and visceral fat
- Stabilizes blood sugar levels

Effects of relieving joint and muscle pain through anti-inflammatory effects

- Alleviates joint and muscle pains
- Controls the production of inflammatory agents during exercise
- Controls cell-damaging agents, etc.

EPA Sports Supplement Series



Sports supplements that contain EPA recommended for everyone who does sports as well as supplements containing specialty ingredients and B-group vitamins formulated for health

EPA's body-improvement effects that are also useful for sports.

Nissui has examined the effects of EPA on training with the cooperation of the long-distance relay team of Juntendo University. The results indicated that in 10,000 km races, runners who took EPA continuously for four months shortened their time by 51 seconds. This and various other research has revealed numerous body-improvement effects of EPA that contribute to athletic performance.

We provide information through exhibits and on the website. We intend to pursue further possibilities of EPA.

In order to popularize the use of EPA in sports, Nissui has co-sponsored such sports events as the Japan Masters Swimming Championships and SPORTEC 2013, and has proposed the use of EPA at free seminars. Nissui has also established the SPORTS EPA Special Site and provides information including ways of building up strength in order to enjoy sports in the long-term. The Nissui Group is taking on the challenge and making proposals that will contribute to health through the utilization of EPA and DHA.



SPORTS EPA Special Site (Japanese only) ▶ <http://sportsepa.com/>



Special Feature 2

In step with society

Making contributions to business and society relating to the sea

In the past Nissui had been engaged in deep-sea fishing in the waters around the world. Even after Nissui withdrew from this business with the advent of the era of 200 nautical miles, human resources with a wealth of marine skills and experience remained. Nissui Marine Industries Co., Ltd. and Nippon Marine Enterprises, Ltd. were established to contribute to Japan's marine business by drawing on these highly trained crew members of fishing vessels and their skills. Both companies have received ISO14001 certification (the international standard for environmental management systems), and pay due consideration to the earth environment, while engaging in businesses involving the safety of those who work at sea and in ocean exploration.



Nippon Survival Training Center (NSTC)

Protecting the lives of those who work at sea through world-class life-saving training

Practical training program based on the certification standards of OPITO*, the global standards on marine survival.

NSTC has developed a training program based on the certification standards of OPITO, the global standards on marine survival. Examples of the types of training include escaping from sinking helicopters using the training pool within the facility, as well as the operation of life boats and rafts, and fire-fighting drills at sea. People who work at sea develop life-saving skills and the appropriate mindset through these varied and practical programs.

*OPITO: An organization established by the U.K. oil and gas industry for the purpose of providing training to enhance survival skills and to develop standards for the safe operations of workers at sea. Certification by OPITO has become a global standard for marine survival training.



▲ Nippon Survival Training Center



▲ Instructors who have been trained at overseas training facilities



▲ Four students receive helicopter water-escape training from two instructors.



▲ Helicopter water-escape training

Japan's first survival training center born from the wealth of experience at sea.

Nissui Marine Industries Co., Ltd. is engaged in a wide range of marine businesses driven by the belief that "the sea holds the key to the future." Its field of business covers all aspects of technology and skills required at sea including port engineering, development of marine resources, dispatch of ship crew, and ship engineering. NSTC was established in 2011 by Nissui Marine Industries as Japan's first survival training center to protect the safety of the people who work at sea.

Company name	Nissui Marine Industries Co., Ltd.
Number of employees	301 (As of March 31, 2014)
Business description	Marine civil engineering, dispatch of ship crew, leasing of coastal shipping vessels, marine resources development-related business, operation and management of shipping vessels, ocean/land engineering, provision and export of shipping materials and equipment, sales of petroleum products, shipping consulting, education and training business, etc.
URL	http://www.nissui-marine.co.jp/

Trainees from a broad range of industries—marine survival training provides the passport to ocean safety.

Overseas, workers in the marine resources development business are generally required to undergo training at an OPITO-certified facility. Consequently, human resources from a broad range of industries including trading firms, plant engineering, ship crew and resource development companies, come to NSTC to receive globally-standardized marine survival training. NSTC survival training provides them with the passport to work safely in the seas around the world.

Special Feature 2

In step with society—Making contributions to business and society relating to the sea

Exploring the seas and researching the earth for the future.

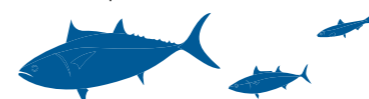
72% of the earth's surface is covered by the sea. Learning about the seas' mechanisms and movements of the deep-sea floor is indispensable to predicting and responding to global climate change and earthquake/volcano activity. In order to solve these mysteries of the sea and the earth, the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) continues to conduct marine observation and research by utilizing its abundant stock of vessels, facilities and equipment. JAMSTEC outsources the operation and maintenance of its vessels including marine survey vessels, manned research submersibles and remotely operated vehicles and the operation of its equipment to Nippon Marine Enterprises, Ltd. The comprehensive capabilities that combine the three technologies of research vessel operation, deep-sea research and research/observation are the unique strengths of Nippon Marine Enterprises.



◀ Support vessel Yokosuka



▼ Manned research submersible *Shinkai 6500*, equipped with the world's leading research functions



Nippon Marine Enterprises, Ltd.

Ocean exploration that will lead the way for the future of mankind



▲ Remotely operated vehicle



Operation of marine survey vessels

▲ Operation of research vessel *Natsushima* and four other vessels



Deep-sea research

▲ Deep-sea cruising, autonomous deep-sea research vehicle *Urashima* (autonomous deep-sea, underwater robot)

Technology of Nippon Marine Enterprises, Ltd.



Research/observation

◀ Observation engineers preparing observation devices

Operation of marine survey vessels and deep-sea research vehicles that challenge the mystery-filled deep seas and the interior of the earth.

Nippon Marine Enterprises, Ltd., since its founding in 1980, has been commissioned by JAMSTEC to operate numerous marine survey vessels and deep-sea research vehicles including the research vessels *Natsushima*, *Kaiyo*, *Yokosuka*, *Kairei* and *Shinsei maru*, the manned research submersible *Shinkai 6500* and the remotely operated vehicle *Kaiko 7000 II*. Nippon Marine Enterprises has successfully participated in a number of missions such as marine observation to seek the cause of global climate changes, uncovering of the unknown ecosystems of the deep sea, the investigation of the area surrounding the epicenter of the Great East Japan Earthquake, the installation of underwater seismographs in the Japan Trench, and the study of radiation off the coast of Fukushima.

DONET Plan: Earthquake/Tsunami Monitoring System in preparation for a Nankai trough earthquake.

In preparation for the anticipated Nankai trough earthquake, which is expected to strike sometime in the future, Nippon Marine Enterprises, Ltd. has been commissioned by JAMSTEC to support the installation of DONET, an earthquake/tsunami observation and monitoring system, in the seafloor off the coast of the Kii Peninsula. By connecting a seismograph with a tsunami gauge, it will be possible to sound warnings before the earthquake reaches land and to accurately measure the size of tsunami waves and calculate the time they will take to make landfall. Nippon Marine Enterprises, with its comprehensive marine capabilities, is contributing to society and to mankind.

Company name	Nippon Marine Enterprises, Ltd.
Number of employees	325 (As of March 31, 2014)
Business description	Operation and maintenance of the research vessels of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), operation of manned research submersibles of JAMSTEC, operation of remotely operated vehicles of JAMSTEC, and support of various survey and research projects
URL	http://www.nmweb.jp/

Photo: Provided by JAMSTEC



In step with the earth environment

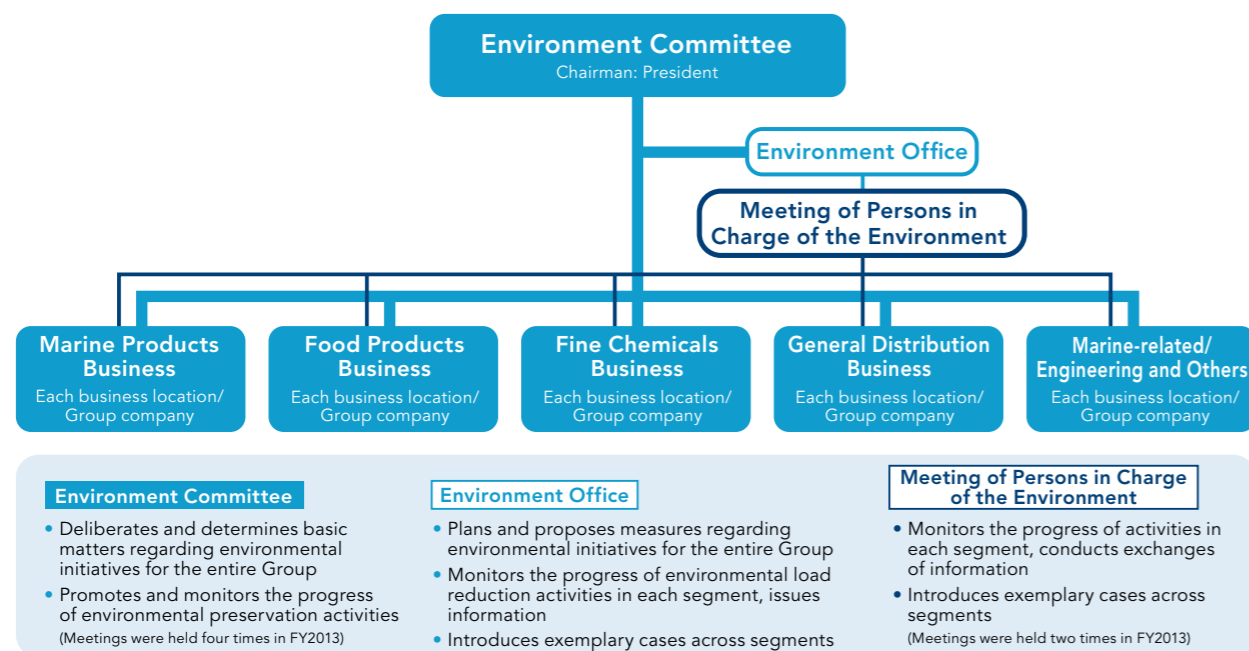
Environmental management

Nissui aims to preserve the environment through its business activities, based on company-wide numerical targets.

Nissui has established an environmental management system based on the Policies prescribed in the Environmental Code. By minimizing the environmental load, which occurs in every aspect of its business activities, Nissui promotes the preservation of the natural environment and biodiversity, and the sustainable utilization of resources. Nissui will aim to build a sustainable society through its business activities by setting numerical targets in the three areas of reduction of CO₂ emission, reduction of waste and reduction of water usage.

System of environmental management

Nissui has established an Environment Committee to oversee and promote environmental preservation activities for the entire Group. Additionally, business locations and Group companies within each business segment have developed environmental management systems to carry out their environmental initiatives and are making efforts to achieve their targets.



FY2013 Targets

Target for reduction of CO₂ emission Reduction of 3% in 3 years from levels of FY2011	Target for waste reduction Reduction of 1.9% from levels of FY2012	Target for reduction of water usage Reduction of 2.4% from levels of FY2012
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Acquisition of ISO14001 certification

Nissui promotes the acquisition of ISO14001 certification, which is the international standard for environmental management. As of the end of July 2014, a total of 63 locations (offices, domestic consolidated subsidiaries, and Group companies combined) had acquired ISO14001 certification.

Environmental risk management

In FY2013, there were no instances of accidents or trouble that would severely impact the environment at any of Nissui's business locations. In addition, Nissui continued to meet all standards on air, water quality, odor, noise and vibration set forth in the laws and regulations following the last year. Nissui is in compliance with the Act on Promotion of Recycling and Related Activities for Treatment of Cyclical Food Resources, Act on the Rational Use of Energy, and the Act on Promotion of Global Warming Countermeasures.

Environmental training and education

In addition to the regular education conducted in the course of training new employees and at conferences for persons in charge of environmental matters, Nissui, starting from FY2012, has been conducting environmental education focusing on biodiversity in which students learned about the current conditions of the earth environment and the steps being taken by Nissui toward the establishment of a sustainable society. In FY2013, 436 employees at 20 business locations took this course.



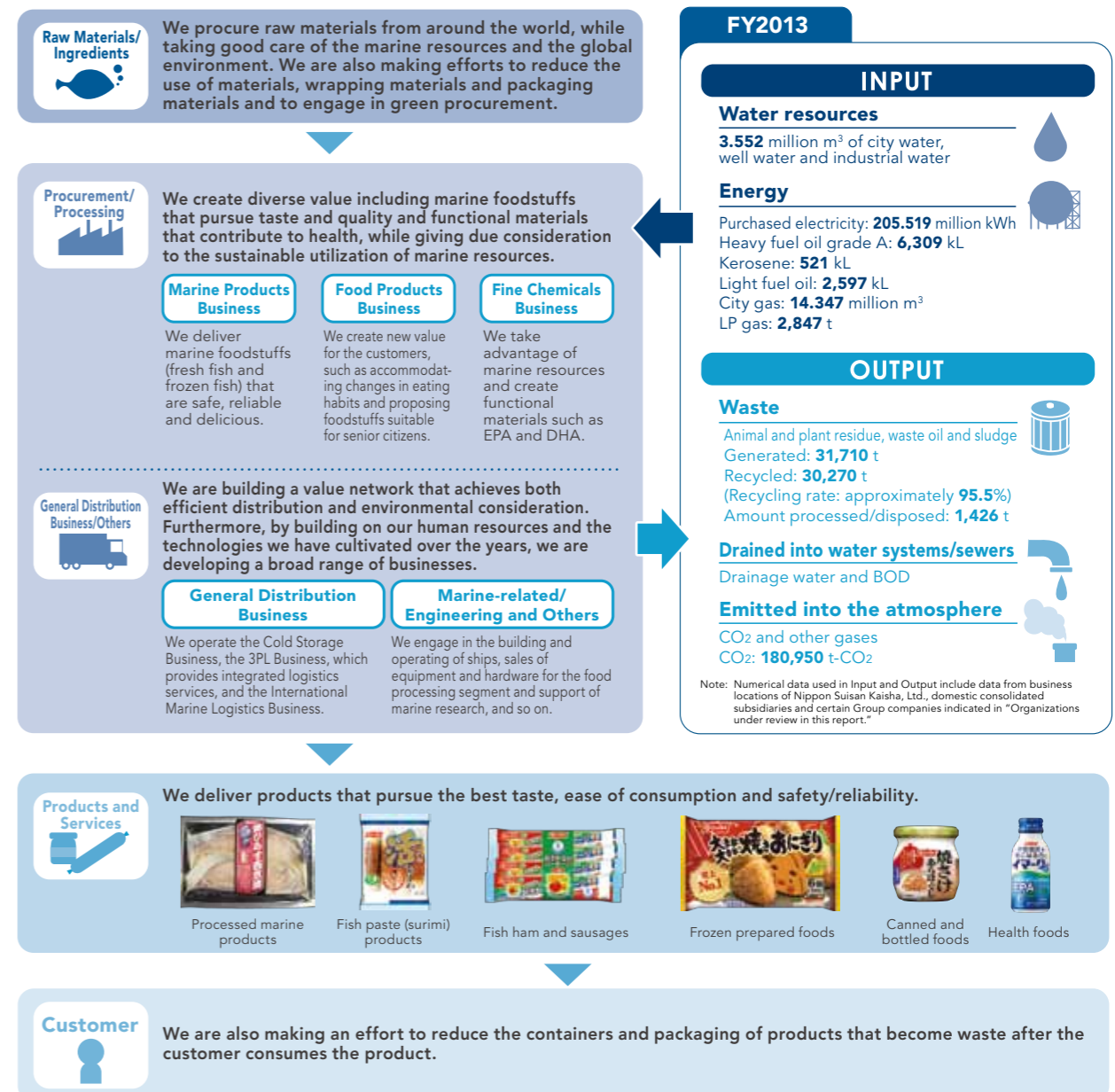
In step with the earth environment

Reducing the environmental load through the supply chain

From the world's oceans to the dining table, Nissui strives to reduce the environmental load through its supply chain.

From the procurement of raw materials, manufacture/processing, and distribution to your table, Nissui strives to reduce the environmental load through its supply chain, by keeping detailed numerical track of the usage status of resources and energy, and the status of disposition of waste, etc., that are generated in every aspect of its business.

Flow of resources and energy in FY2013





In step with the earth environment

Preservation of biodiversity

Nissui will protect marine ecological systems and aim for the sustainable use of marine resources.

Preserving biodiversity is a significant mission for the Nissui Group, whose business foundations comprise marine products, which are benefits of the sea and the earth. The Nissui Group has articulated the preservation of biodiversity in the Policies of its Environmental Code and is aiming for the sustainable use of marine resources that harmonizes with marine ecological systems.

Aquaculture of salmon and yellowtail in harmony with the ecosystem

The Nissui Group is promoting the development of a sophisticated aquaculture technology that will lessen the environmental footprint on marine ecological systems. In December 2013, a Nissui Group company commenced its full-scale salmon aquaculture operations in Sakaiminato, Tottori Prefecture. The salmon, which are being raised from juvenile fish under an integrated system and marketed under the brand name, Sakaiminato Salmon, have become a new source for the supply of marine resources.

Kurose Suisan Co., Ltd. of the Nissui Group has become the first in Japan to successfully commercialize the complete aquaculture of yellowtail. Juvenile fish (artificial seedlings) spawned from eggs harvested from farmed parent fish are raised, and eggs are harvested once again from the cultivated fish once they have matured. Unlike conventional aquaculture, which catches natural juvenile fish, complete aquaculture makes it possible to farm fish independently of the ecological system.

Furthermore, the Nissui Group is promoting innovations in aquaculture technology, including the use of formula feed instead of live bait, to reduce the impact on the marine environment.



Production line of formula feed for bluefin tuna

Initiatives toward ASC certification, which ensures sustainability of commercial aquaculture

ASC certification* refers to the third-party certification system launched in 2010 by such organizations as the WWF (World Wide Fund for Nature) to ensure the sustainability of commercial aquaculture. The ASC holds roundtables to set standards for measuring the impact of aquaculture on the environment, and Kurose Suisan and Nissui took part in the sessions for yellowtail. Kurose Suisan is aiming to become the first operator in Japan to clear ASC's stringent standards and receive ASC certification.



Kurose Suisan's Ei Seedling Center, which produces artificial seedlings from fertilized eggs

*ASC (Aquaculture Stewardship Council) certification

Supporting research activities that look toward the future of marine resources

Additionally, the Nissui Group supports the research activities of the Society for Conservation of Fisheries Resources and Marine Environment (CoFRaME). CoFRaME conducts a broad range of research activities to ensure the sustainable utilization of marine resources. Research results are presented at academic meetings and as academic papers, and are expected to impact the policies of marine resources conservation. The Nissui Group, by employing scientific research, will protect biodiversity and ensure the sustainable utilization of marine resources from a global perspective.



In step with the earth environment

Reducing CO2

Nissui is promoting the systematic reduction of CO2 emissions through various measures, including energy- and electricity-saving efforts based on the ingenuity of our employees.

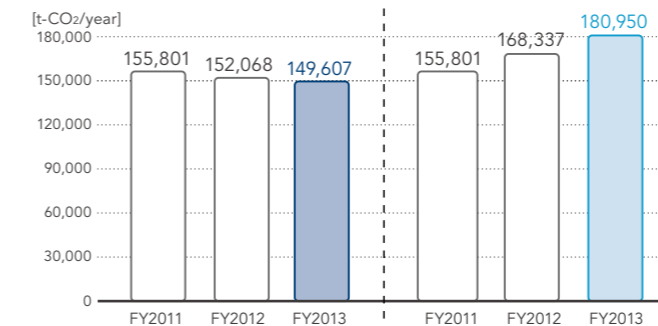
The Nissui Group is making all-out efforts to promote the systematic reduction of CO2 emissions that are considered to be one of the causes of global warming. Nissui promotes the reduction of CO2 emissions by the Group through such measures as energy- and electricity-saving efforts led by the employees, the changeover to energy sources with low CO2 emission coefficients and the use of renewable energy. We are aiming to reduce CO2 emissions by 3% in three years compared to the levels of FY2011.

Amount of CO2 emissions

Total CO2 emissions of Nissui's domestic Group companies for FY2013 were 180,950 t, representing an increase of approximately 7.5% compared to the previous year. This was due to the increase in the emission coefficient per kWh electricity usage of the electric power suppliers. If we are to calculate CO2 emissions based on the same standards as FY2011 (using fixed CO2 coefficients), then total CO2 emissions would be 149,607 t, representing an approximate 4.0% decrease from FY2011, and thus we were able to achieve our target. This decrease was a result of the efforts made to save electricity and energy, as well as the promotion of further elimination of waste, the introduction of LED lighting and other initiatives taken at each business location.

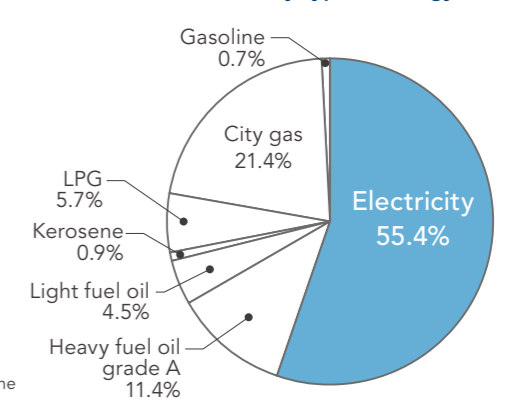
A breakdown of CO2 emissions by the type of energy used shows that CO2 emissions attributable to the use of electricity accounted for 55.4% (56.8% in the previous year), more than half of the total. This was followed by city gas with 21.4% (17.8% in the previous year) and heavy fuel oil grade A with 11.4% (13.0% in the previous year).

Amount of CO2 emissions



Note: The graph on the left was calculated using the CO2 coefficients used by the electric power suppliers in FY2011. The graph on the right was calculated using the CO2 coefficients used by the electric power suppliers in each respective fiscal year.

Ratio of CO2 emissions by type of energy used for FY2013



Initiatives to reduce CO2 emissions

Initiatives to reduce the use of city gas

The five Nissui plants under direct control that mainly used city gas conducted a teleconference to share and implement best practices in initiatives to reduce the use of city gas. Subsequently, various measures, including the addition of insulation materials to piping and equipment, regular checks for escaping steam and energy-saving operations of the boilers, were implemented, which proved effective and led to a reduction in the use of city gas.



Insulation jacket can be seen attached to the blue valve

Reducing electricity use through the removal of scale*

The water used in the outdoor units of freezers and air-conditioners contains minerals which accumulate inside the pipes as scale. Once scale accumulates, it becomes a burden on the freezers, resulting in the use of excess electricity. In response, each business location has installed devices to minimize the build-up of scale, in addition to conducting regular inspections and cleaning, thereby cutting down on increased freezer load.



Outdoor unit of a freezer

*Scale: Calcification of minerals contained in water



Reducing waste and recycling

Aiming to reduce, reuse and recycle waste, Nissui promotes 3R* efforts in all aspects of its business operations.

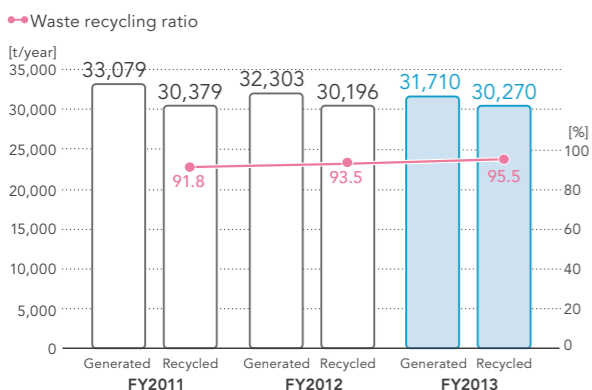
Nissui is making 3R efforts to deal effectively with waste that is generated through business activities in order to make the most of finite natural resources. All domestic factories under direct control are aiming for zero emission and promoting the reduction and recycling of waste. Additionally, we are continuing our efforts to reduce and recycle waste by targeting a 10% reduction of container packaging waste on a per unit basis (compared to FY2011) by FY2014.

*3R: An acronym for Reduce, Reuse, and Recycle, it is a keyword introduced in the Basic Law for Establishing a Recycling-Based Society in 2000 and used in activities for reducing waste and garbage.

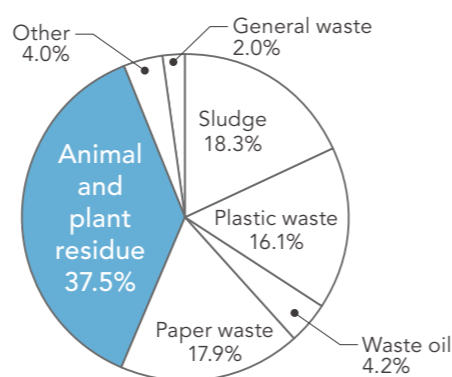
Waste generated/recycled

The Nissui Group aimed to reduce waste by 1.9% from FY2012 levels. As a result, the amount of waste generated for FY2013 was 31,710 t, representing a 1.8% decrease compared to the previous year but slightly short of our target of 1.9%. We are continuing with our efforts to reduce waste through initiatives such as the visualization of the rejection rate and enhancement of the yield of the production line. In FY2013, zero emissions were achieved by four of the nine domestic Nissui plants. In FY2013, the amount of waste recycled was 30,270 t. The recycling ratio was 95.5%, representing a steady improvement from FY2012.

Waste generated/recycled, and recycling ratio



Ratio of waste generated by type of waste for FY2013



Initiatives to reduce waste

Taking on the challenge of reducing waste by 4% through an accumulation of small efforts (Kitakyushu Nissui Co., Ltd.)

Kitakyushu Nissui Co., Ltd. is promoting the reduction of waste by roughly 4% by means of small efforts undertaken as group activities with the participation of all employees. It is making various efforts, including reinforcing the guard installed on conveyor belts to prevent products from falling off, and reducing the number of rejected products by controlling the heat of the Daigaku-Imo production line, in order to achieve its target. Additionally, it has reduced wastefulness throughout the plant through such initiatives as downsizing packaging materials and conducting environmental and energy-saving campaigns that recognized persons who did an outstanding job in cutting back summer peak electricity usage.



Guards to prevent products from falling off the conveyor belt

Initiatives to reduce waste from containers and packaging

As a result of our ongoing efforts to reduce the thickness of plastic trays and film for frozen prepared foods for household use and processed foods, in FY2013, we managed to reduce waste by approximately 37 t. While on a per unit basis, this represented a 0.5% decrease from the previous year, the Group reported a 3.8% increase from FY2011. Going forward, Nissui will continue to make efforts to reduce waste by making containers and packaging more compact and light-weight.



Example of reduced packaging: Ebi-Puri-Puri Fry



In step with the earth environment Reducing water usage

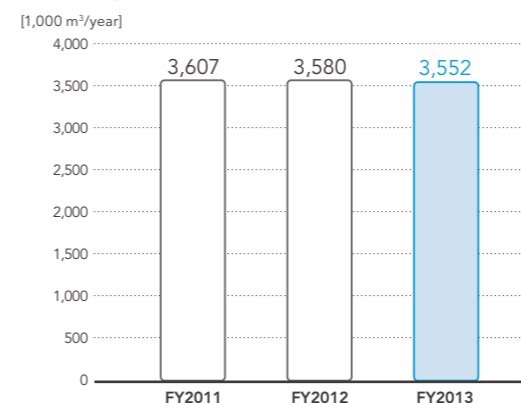
Nissui will continue to treasure our limited and precious water resources.

Only 0.8% of the earth's water supply is suitable for domestic use. In order to protect water resources, the foundation of our businesses, the Nissui Group is promoting ways to systematically reduce usage by conserving and recycling water at its plants.

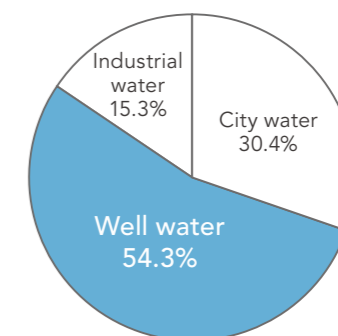
Water usage

The Nissui Group engaged in initiatives to cut back water usage by appropriately 2.4% compared to FY2012. As a result, in FY2013, 3,552 million m³ of water were used. This resulted in only a slight decrease (0.8% decrease) from the previous year. Going forward, we will continue our efforts to save water by means of small group activities with the participation of all employees, such as developing manuals for the cleaning process and the visualization of water usage. A breakdown of the source of water indicates 54% comes from well water, 30% from city water and 15% from industrial water.

Water usage



Ratio of water usage by type of water for FY2013



Received Mottainai (What a Waste) Grand Prize through the effective use of water and energy

(Jonan Plant, Nippo Shokuhin Kogyo Co., Ltd.)

The Jonan Plant of Nippo Shokuhin Kogyo Co., Ltd. received the President of the Jury Award at the 1st Food Industry Mottainai Awards, sponsored by the Council Promoting Comprehensive Biomass Utilization of Resources, an organization affiliated with the Ministry of Agriculture, Forestry and Fisheries.

The Food Industry Mottainai Awards are given to companies that have made outstanding contributions in terms of measures to prevent global warming and saving energy to the end of enabling sustainable development of the food industry. Employees at the Jonan Plant of Nippo Shokuhin Kogyo proactively engaged in improvement activities in 15 areas, including lowering temperatures in production rooms during the summertime and water-saving activities leading to the optimization of coolant water flows, and their efforts were recognized as a model to be followed by all small- and medium-sized enterprises.



Water flow adjustment valve

Installation of a biotope demonstrating the purity of water on the plant premises

A biotope* was installed at the Nissui Anjo Plant, in conjunction with the reconstruction of its drainage canal. The new pond recreates an ecosystem consisting of fish, aquatic insects and plants. The biotope serves not only as a biological monitoring post to gauge the purity of water but also as a place of environmental education for the community. This is an initiative led by the Nissui Group, which is committed to contributing to the community by protecting clean water.

*Biotope: A space that represents the natural habitat of a diverse range of living organisms including fish, insects and plants, indigenous to that area. Recently, building biotopes on corporate premises is gaining popularity. Such biotopes are playing a major role in providing environmental education to children.



In step with society

Coexisting with the local community

As a company that thrives together with the local community, we will continue to engage in activities that are unique to the Nissui Group.

The Nissui Group, as a company that creates diverse values from marine resources, will deepen its relationship with society and with the regional community through activities relating to "Umi to Sakana (the ocean and fish)" and "regional contribution." As good corporate citizens, we will continue to engage in activities that allow us to thrive together with the local community.

Nissui encourages elementary school students, who will grow up to lead the coming generations, to deepen their interest in the ocean and fish.

"Umi to Sakana Competition" Independent Research and Artwork Contest

The "Umi to Sakana Competition" Independent Research and Artwork Contest ("the Competition"), co-sponsored by Nissui, and sponsored and organized by Asahi Shimbun Company and Asahi Gakusei Shimbunsha, reached its 33rd year this year.

As the Japanese consume fewer and fewer fish, it is the purpose of this Competition to encourage elementary school children, who will grow up to lead the coming generations, to deepen their interest and understanding in the ocean and in fish. The Competition asks for submissions of independent research, observation charts, paintings, picture books, essays and handicrafts on what the children have experienced or learned on the theme of "The Ocean, Fish and Us."



Awards ceremony of the 32nd "Umi to Sakana Competition" Independent Research and Artwork Contest

Nissui contributes to society by collaborating with local cultural facilities.

Nissui Pioneer Exhibition

In August 2011, as part of the commemorative activities for its 100th anniversary, the Nissui Group opened the Nissui Pioneer Exhibition in the Nissui Tobata Building in Tobata-ku, Kitakyushu City. The Nissui Pioneer Exhibition continues to provide information "as a source of information for commercial fishing researchers," "as a way of releasing information relating to business activities," "as contribution to the local community in collaboration with other regional facilities," and "as educational assistance in cooperation with the local board of education and schools."

The Nissui Pioneer Exhibition has been collaborating with cultural facilities and industrial heritage sites in Kitakyushu to become one of the main attractions on tours by local continuing-education institutions. The Nissui Pioneer Exhibition also co-sponsors local events, such as sporting events and underwater robot contests, and has become an essential institution to the local community.



Historical Exhibition Room showing a model trawler

Nissui raises the environmental awareness of its employees by providing accessible field experience.

Activities to raise environmental awareness

The Nissui Group, in FY2009, commenced activities to raise environmental awareness with the mission of promoting efforts to increase environmental awareness so that every one of the Nissui Group's employees can take eco-friendly actions. Each employee is engaged in activities that are closely connected to the regional community and to our everyday lives. The Nissui Group has been engaged in ongoing initiatives to raise the environmental awareness of its employees by providing accessible field experience. In FY2013, such initiatives included the hands-on river preservation lecture held for Nissui employees and their families at the site of the Tama River; the 6th Cleanup Project, in which 1,177 people from 75 business locations of the Nissui Group took part to clean up the areas surrounding their business locations; and the hands-on forest preservation lecture held at Utsunuki Green Zone, which is adjacent to the Nissui Tokyo Innovation Center.



Hands-on river preservation lecture held at Tamagawa-Inadazutsumi (Kawasaki City, Kanagawa Prefecture)

Third-party opinion

Upon reading the Nissui Environmental Report 2014

The words, "Rebirth of the Nissui Group," at the beginning of this report, seem to indicate the Group's strong commitment toward bringing about reforms. In addition, the President's message also reinforced the Group's resolution to uphold the basic policy of "we will give consideration to the sustainable utilization of marine resources and the preservation of the global environment, and will continue to create diverse values from resources, including marine resources, to contribute to the active lives and a future full of hope for people around the world." The following pages provided a clear picture of the specific activities taken to preserve the environment including the reduction of greenhouse gases by 3% in 3 years, the achievement of zero emissions by the domestic plants under direct control and the reduction of container and packaging waste.

Furthermore, the Special Features presented various initiatives taken by the Group relating to the sea. Major initiatives included the functional lipids business, the activities of the Nippon Survival Training Center to protect the lives of those who work at sea, and ocean exploration and deep-sea research. The Special Features illustrated

Masahiro Osakabe

Professor
Graduate School,
Tokyo University of Marine
Science and Technology



Prof. Osakabe's fields of study are energy and environmental engineering. He launched the Smart Study Group in 2002 and announced his new concept of energy. He is proposing a new system to address depopulation and aging, which have plagued the Tohoku region since the great earthquake. Prof. Osakabe also lent his insight to the accident analysis in the NHK TV program series "Meltdown," which has won numerous awards, including the Grand Prize of the Agency for Cultural Affairs Art Festival.

Nissui's strong commitment toward corporate social responsibility based on the sea, for example, by cooperating with ocean exploration, while maintaining the importance of contributing to health through food. The well-known magazine *Science* ran a controversial article claiming that marine resources will be depleted by 2048 (Worm et al. 2006), while a UN organization has also recently reported that nearly two-thirds of the world's edible fish will be farm-raised by the year 2030. Additionally, meat consumption among the Japanese has increased four-fold in the past 40 years, which is expected to have various repercussions. The report maintained that under such circumstances, Nissui is contributing to the preservation of the marine environment, safety at sea and ocean exploration while also contributing to the health of the people of Japan, as well as people around the world. Meanwhile, having read about Nissui's contributions to society described in the pages on co-existence with the local community, I have high hopes for Nissui, as it further expands its contributions to society through CSR activities in the future.

In response to third-party opinion

We thank Professor Osakabe for his valuable comments. Professor Osakabe has given us high marks for our commitment toward reforms and our various actions including the preservation of the environment. We will continue to make efforts toward the sustainable use of marine resources in the future and the preservation of the earth environment. Additionally, in terms of our

contribution towards society, which was highlighted by Professor Osakabe, we intend to expand our activities through CSR initiatives. We ask for your continued support and guidance.

Naoto Ihara

Board Member, Executive Officer,
Nippon Suisan Kaisha, Ltd.

Editor's postscript

Thank you for reading Nissui Environmental Report 2014. We have attempted to present the results of the activities of the past year in a plain and easily-understood manner, based on the feedback received from our stakeholders. Please use the enclosed questionnaire to voice your comments and views on this Environment Report.