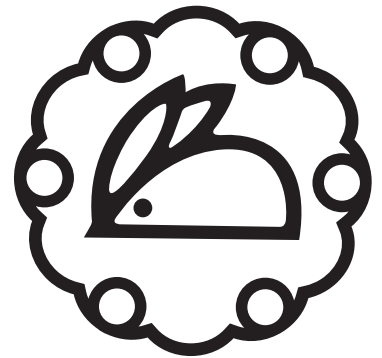


Nippon Soda Group

CSR Report 2019

Corporate Social Responsibility Report

[Online Full Report](#)



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CSR Reporting Policy

Scope of the Report

This report summarizes the CSR and RC activities of Nippon Soda Co., Ltd. and the major Nippon Soda Group companies (three manufacturing group companies: Nisso Metallochemical Co., Ltd., Nisso Fine Co., Ltd. and Shinfuji Kaseiyaku Co., Ltd.; and five non-manufacturing group companies: Nisso Shoji Co., Ltd., Sanwa Soko Co., Ltd., Nisso Engineering Co., Ltd., Nisso Construction Co., Ltd. and Nisso Green Co., Ltd.).

This report provides the actual results for fiscal 2019 (April 1, 2018 to March 31, 2019). The data on occupational accidents presented in this report are based on the actual results from January 1, 2018 to December 31, 2018. The financial data covers 18 consolidated subsidiaries and five equity-method affiliates.

Guidelines Used as References

Global Reporting Initiative: Global Reporting Initiative (GRI) Standards

The Japanese Ministry of the Environment's Environmental Reporting Guidelines 2012

Japanese Standards Association ISO 26000: 2010 Guidance on Social Responsibility

Online Version Publication Date

September 2019

(Next report scheduled to be issued in September 2020)

Responsible Care

Responsible Care (RC) was launched in 1985 in Canada. The International Council of Chemical Associations (ICCA) was established in 1989 and more than 65 countries and regions around the world follow Responsible Care practices.

Editorial Policy

We post detailed information on our website for the purpose of supplementing the booklet version, which provides information on the Nippon Soda Group's basic concept of CSR and CSR activities in an easy-to-understand manner, mainly in relation to three core issues: "CSR activities to improve the corporate value," "CSR activities to protect the corporate value" and "social activities." The results of the Nippon Soda Group's CSR activities are thus reported both in the booklet and via the website. With a focus on transparency and accountability, we designed our CSR report to help readers readily understand the Nippon Soda Group's CSR activities.

[Disclaimer] Our company's plans, prospects, strategies and other information contained in this report, excluding past performances and facts, have been prepared based on currently available information, hypotheses and judgments and are subject to various risks and uncertainties. Our predictions can be affected by various factors, such as future economic situations and industry trends, and may turn out to be incorrect.

Top Commitment

Fulfilling the Dreams of the Next Generation

Nippon Soda will continue to generate innovations that help realize the dreams of the next generation and contribute to achieving a sustainable society.



Akira Ishii

Representative Director
President
Nippon Soda Co., Ltd.

Nippon Soda's business and CSR

FY 2020 is the final year of the medium-term business plan (FY 2018 – FY 2020) that covers the period until 2020, the year that marks the 100th anniversary of the company's foundation. We have been implementing a three-year plan setting out our goals of becoming an ideal company by the centennial anniversary, which is specified in the long-term vision "Chemigress to 100,"* and accelerating structural reforms to further increase the value of our business. More specifically, under the themes of "speed and reform," we are expanding our existing businesses, creating new businesses, promoting development, and enhancing the Group's business foundation, as well as implementing a three-year investment plan worth 50 billion yen for future growth.

CSR is essential to the continued existence of our company. In our efforts to further develop CSR management, we have primarily allocated corporate resources to the following four priority domains: agriculture, health care, the environment and information. With these resources, we have been focusing simultaneously on solving social issues and increasing corporate value through products and solutions by taking advantage of changes in society, the economy and the environment. With the aim of improving our sustainable corporate value, we have also integrated our management strategies and CSR-oriented business management, with our major emphasis on the following three categories of activities: "CSR activities to protect corporate value," "CSR activities to improve corporate value" and "social activities."

The Heisei era, which lasted 30 years, has ended and the Reiwa era has begun. At this time of significant transition, to make FY 2020 a turning point for the further development of the Nippon Soda Group, we will ask all of the Group's employees to join forces and concentrate every possible effort on achieving the aforementioned strategies, and devise strategies for the progress of a new stage of growth in 2020 and beyond.

For further improvement in diversity and governance practices

Diversity is one of our primary strategies to maintain our high level of global competitiveness and keep growing in a sustainable way. Creating a diverse work environment and organization where all employees are given opportunities to demonstrate their individual abilities and work positively in response to a changing environment will lead to innovation. As a chemical group company providing products and solutions useful to address social issues in international settings, we make particular efforts to ensure the compliance of business activities with the Corporate Governance Code and high corporate ethical standards to further improve our corporate governance system in such a way as to meet stakeholders' expectations.

Nippon Soda will continue to contribute to building a sustainable society through generating innovations that help realize the dreams of the next generation and persistent efforts to address environmental changes.

(*) "Chemigress" in "Chemigress to 100" was coined by combining the words "chemical" and "progress." "Chemigress to 100" conveys our determination to contribute to creating a sound society through the chemistry-oriented businesses of our Group toward the 100th anniversary.

Nippon Soda Group's CSR

Founding spirit

The company emblem for Nippon Soda depicts a white hare, surrounded by a hexagonal snowflake. The six sides of this snowflake represent the following: honesty, industriously, originality & ingenuity, cooperation, service and thanksgiving. The white color of the hare and the snowflake represent virtue and a high level of purity.



Basic principles of management

Nippon Soda places primary importance on sound and transparent business management in compliance with law. Its management philosophy is to contribute to social development through chemistry, to meet expectations from stakeholders, including shareholders, business partners, employees and local communities, and to promote environmentally conscious business practices and activities. Under this philosophy, Nippon Soda is committed to growing into a technology-oriented group that develops high value-added products by making best use of its proprietary technologies and expands its business internationally with a focus on chemistry. Our efforts are also directed at enhancing the Group's revenue by developing our business with a focus on the chemicals industry in such areas as commercial distribution, logistics and engineering.

Basic concept of CSR

We are working to improve our corporate value by creating new value through the power of chemistry and contributing to society through products as a chemical group. In this way, we strive to contribute to the enrichment of people's lives, and to resolve the problems affecting our society and the global environment. To achieve these goals, we are advancing the following initiatives.

1. CSR activities to protect corporate value¹

Pursuit of economic performance, and activities to ensure safety, environmental friendliness, quality assurance, etc.

2. CSR activities to improve corporate value²

Making contributions through our business toward resolving social issues so as to help achieve the development of a sustainable society

3. Social activities

Social contributions

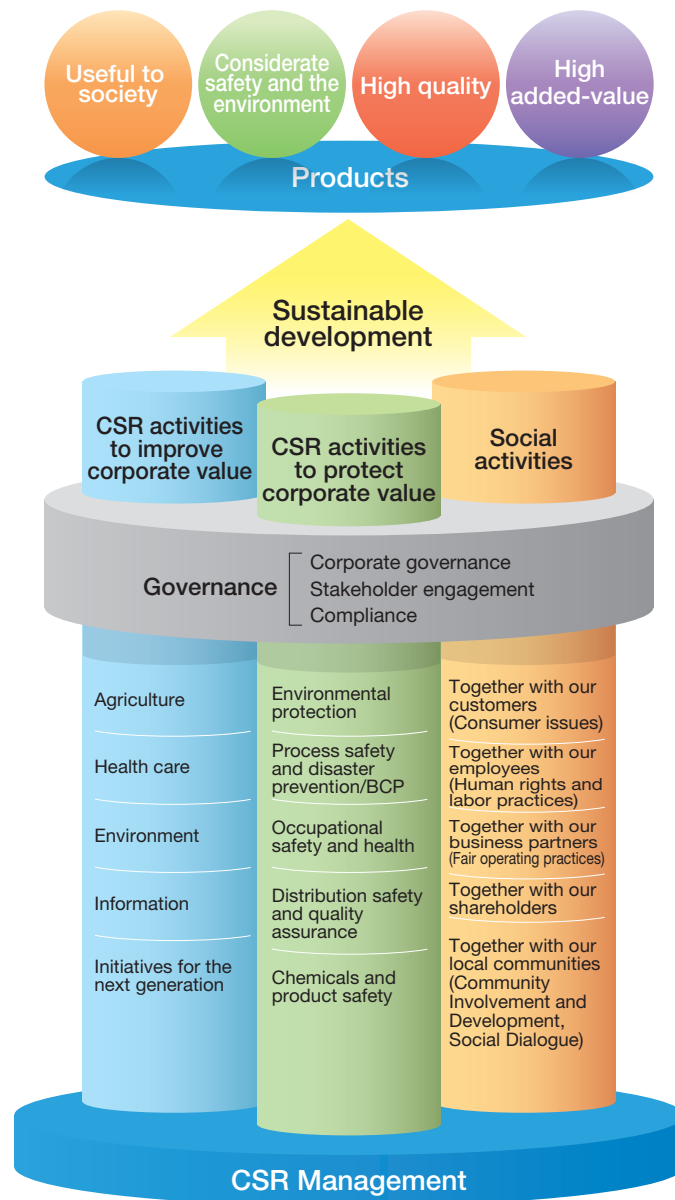
4. Governance

Corporate governance

We are advancing our CSR activities with consideration for the interests of all of our different stakeholders, including shareholders, employees, business partners and local communities. Through these efforts, the Group seeks to play a significant role in realizing sustainable development of our society. At the same time, the Nippon Soda Group is continuing to develop as a sought-after chemical group that meets 21st-century social needs by consistently offering creative and unique technologies and products that contribute to the creation of an enriching society that is able to realize the dreams of the next generation.

1. Nippon Soda's "protective" CSR activities, aiming to minimize negative impact on society, with the primary focus on responsible care (RC) activities as a chemical company

2. Nippon Soda's "proactive" CSR activities, aiming to augment beneficial impact on society, with the primary focus on materiality to address social issues



CSR activities to improve corporate value

Nippon Soda's "proactive" CSR activities, aiming to augment beneficial impact on society, with a primary focus on materiality to address social issues

CSR activities to protect corporate value

Nippon Soda's "protective" CSR activities, aiming to minimize negative impact on society, with a primary focus on responsible care (RC) activities as a chemical company

Social activities

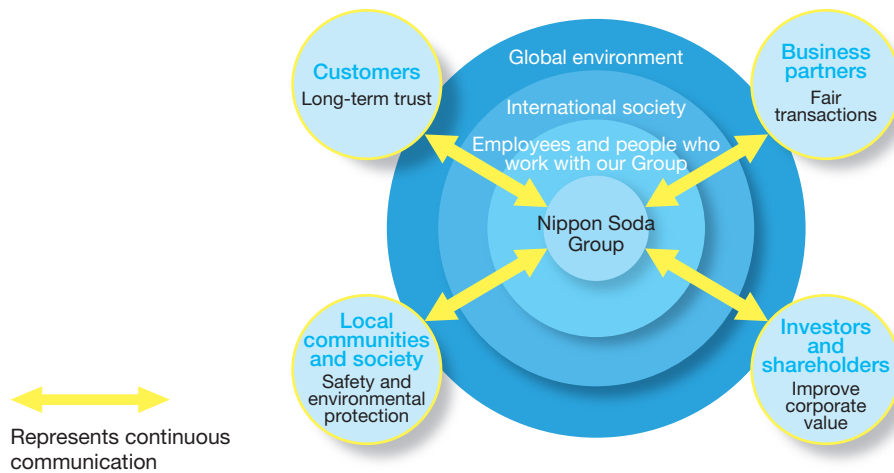
Social contribution activities

Governance

Corporate governance

Stakeholders

The management philosophy of the Nippon Soda Group states that the Group will meet expectations of stakeholders, including shareholders, business partners, employees and local communities, and promote environmentally conscious business practices and activities. The Group will continue in the future to fulfill all social responsibilities to stakeholders.



Business and CSR of the Nippon Soda Group

Nippon Soda Group's business

(as of March 31, 2019)

Chemicals business division

Industrial chemicals	Caustic soda, liquid chlorine, hydrochloric acid, caustic potash, potassium carbonate, soda cyanide, potassium cyanide, aluminum chloride, phosphorus oxychloride, phosphorus trichloride
Chemical products	Metallic sodium, special isocyanates, alcoholate, organotitanium, PCB detoxification treatment agents, various kinds of sulfur derivatives, color developers
Functional materials	NISSO-PB, VP-Polymer, TITA BOND, BISTRATOR
Eco-care products	NISSO HI-CHLON, Nisso Merusan, TAKE-ONE, HIDION, slime removing agents
Pharmaceuticals and pharmaceutical intermediates	NISSO HPC, NISSO DAMN, faropenem sodium
Fungicides for industrial use	Pesticides, Biocut, Millcut

Agro products division

Fungicides	Topsin-M, Befran, Bellkute, Pythilock, Triflumizole, Pancho, Agrocure, Masterpiece, Fantasista, Ethofin, Monsieur Bordeaux, Agrimycin
Insecticides and acaricides	Mospilan, Nissorun, Romdan, Kotetsu, Phoenix, Vermark, Greenguard
Herbicides	Nabu, Hoenest, Eigen, Conclude, Alphard
Others	Smoking agents

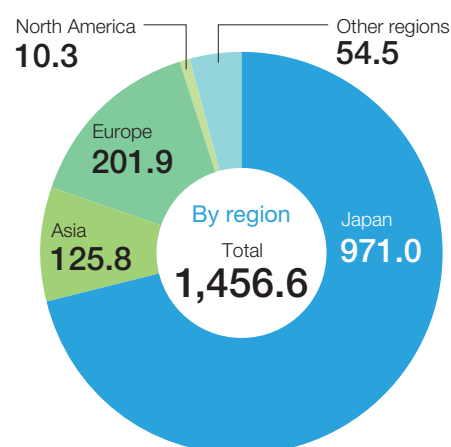
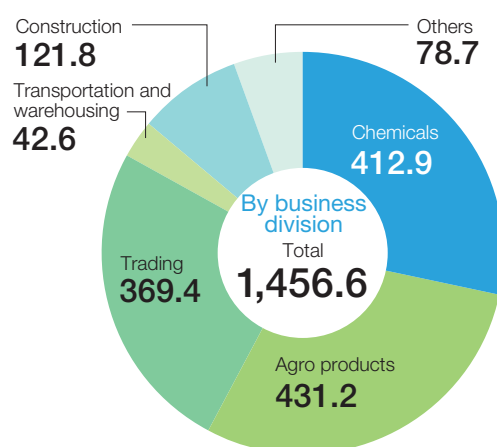
■ **Trading** Chemicals, functional products, synthetic resins, industrial devices, construction-related products

■ **Transportation and warehousing** Warehousing and transportation services

■ **Construction** Plant construction, civil engineering and construction

■ **Others** Non-ferrous metals business, environmental development business, etc.

Net sales (Fiscal year ended March in 2019) Unit: 100 million yen



Corporate profile

Name: Nippon Soda Co., Ltd.

Location of Head Office: Shin Ohtemachi Bldg., 2-2-1 Ohtemachi, Chiyoda-ku, Tokyo 100-8165 Tel. +81-3-3245-6054

Foundation: February 1920

Representative Director, President: Akira Ishii

Stock listing: Tokyo Stock Exchange, First Section

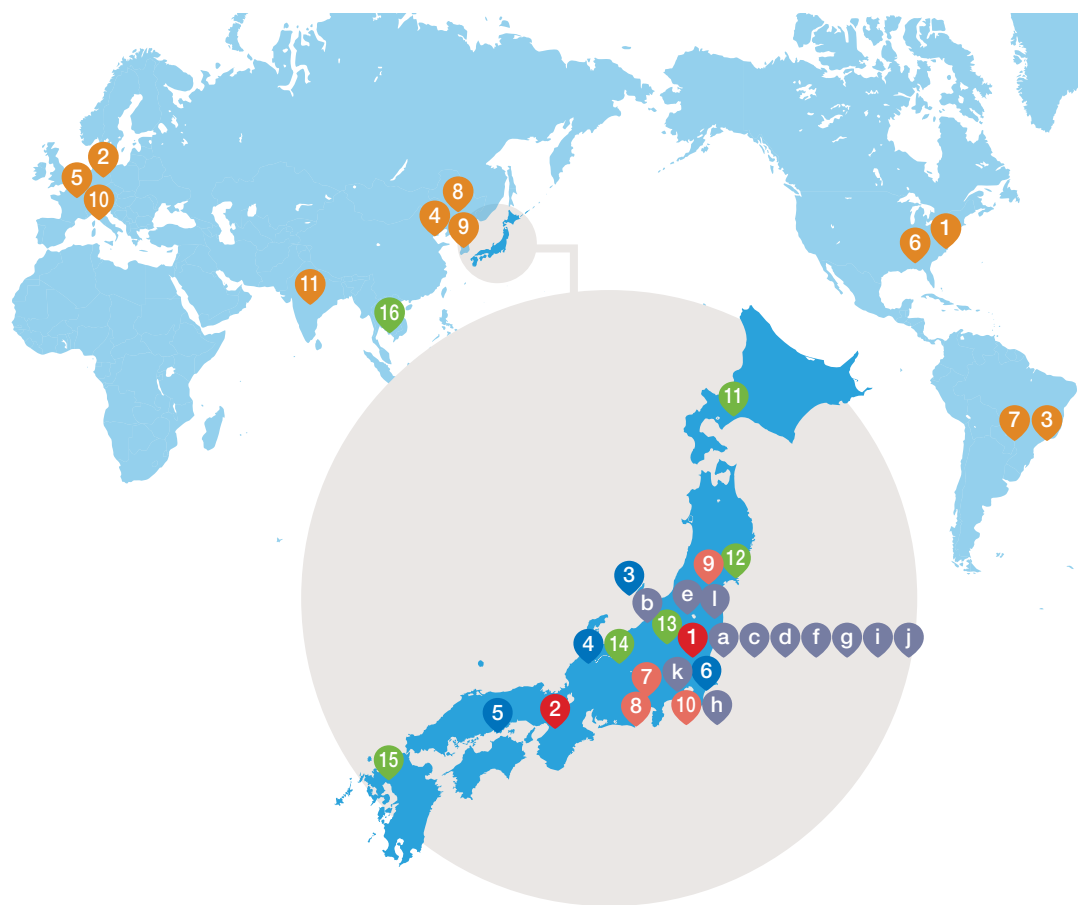
Capital: 29,166 million yen (as of March 31, 2019)

Number of employees: 2,724 (consolidated, including contract employees)

1,311 (non-consolidated, including contract employees) (as of March 31, 2019)

Business description: Manufacturing, processing and marketing of caustic soda, potassium products, chlorine and chlorine products, synthetic resin, dyes, pharmaceuticals and pharmaceutical intermediates, agrochemicals, and various other kinds of chemical industrial products

Brief introduction to the Nippon Soda Group (as of March 31, 2019)



Business Sites

- 1 Tokyo Head Office
- 2 Osaka Branch Office

Plants

- 3 Nihongi Plant
- 4 Takaoka Plant
- 5 Mizushima Plant
- 6 Chiba Plant

Sales Offices

- 11 Sapporo Office
- 12 Sendai Office
- 13 Kanto Office
- 14 Takaoka Office
- 15 Fukuoka Office
- 16 Bangkok Representative Office

Group Companies in Japan

Chemicals

- a Nisso Fine Co., Ltd.
- b Shinfuji Kaseiyaku Co., Ltd.
- c NISSO BASF Agro Co., Ltd.
- d Nisso Metallochemical Co., Ltd.
- e Joetsu Nisso Chemical Co., Ltd.
- f Nisso Green Co., Ltd.

Logistics

- g Sanwa Soko Co., Ltd.
- h Sanso Unyu Co., Ltd.

Trading

- i Nisso Shoji Co., Ltd.

Engineering

- j Nisso Engineering Co., Ltd.

R&D consultants

- k Nisso Chemical Analysis Service Co., Ltd.

Civil engineering and construction

- l Nisso Kensetsu Co., Ltd.

Research Centers

- 7 Odawara Research Center
- 8 Haibara Field Research Center
- 9 Bandai Field Research Station
- 10 Chiba Research Center

Overseas Group Companies

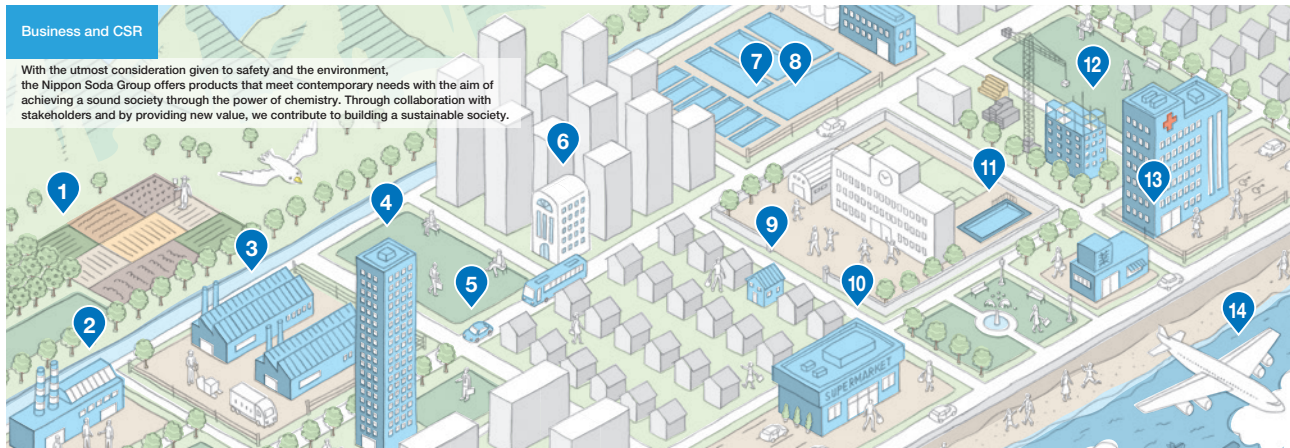
- 1 NISSO AMERICA INC.
- 2 NISSO CHEMICAL EUROPE GmbH
- 3 NISSO BRASILEIRA REPRESENTAÇÃO LTDA.
- 4 NIPPON SODA TRADING (SHANGHAI) Co., Ltd.
- 5 Certis Europe B.V.
- 6 Novus International, Inc.

- 7 Iharabras S/A. Indústrias Químicas
- 8 NISSO KOREA CO., LTD.
- 9 Nisso Namhae Agro Co., Ltd.
- 10 Alkaline SAS (Including 4 group subsidiaries)
- 11 NISSO CHEMICAL INDIA LLP

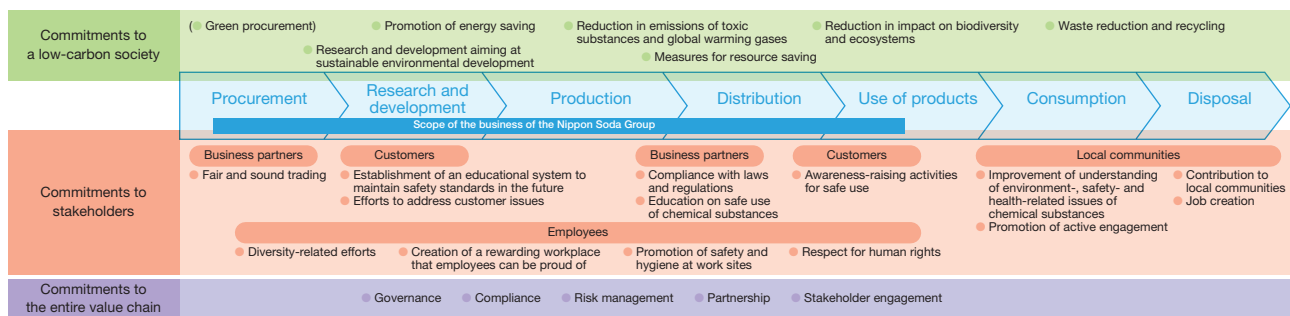
Business activities and value chains

Business and CSR

With the utmost consideration given to safety and the environment, the Nippon Soda Group offers products that meet contemporary needs with the aim of achieving a sound society through the power of chemistry. Through collaboration with stakeholders and by providing new value, we contribute to building a sustainable society.



1 Farms	Fungicides Tripharlie-methyl, Agrocure, Masterpiece, Cyflufenamid, Triflurazole, Mospilan, Tebufenozide, Sethoxydim	4 Offices	Smartphones Semiconductors Paper Toilets	7 Water purification plants	Tap water	11 Schools	Swimming pools
2 Waste treatment facilities	Fly ash from waste incineration PCB treatment	5 Automobiles	Seats Oil seals	8 Sewage treatment plants	Sewage	12 Building materials	Lumber Adhesive agents, paints, sealants Plating
3 Plants	Industrial chemicals Caustic soda, Hydrochloric acid, etc.	6 Exterior walls	Coating	9 Houses	LCD television Laundry detergent Battery Kitchen	13 Hospitals/drugstores	Medicines
				10 Supermarkets	Food packages Recycling label	14 Airplanes	Engine parts



Summary of the new medium-term business plan (FY 2018 – FY 2020)

The Nippon Soda Group has established a new medium-term business plan (FY 2018 – FY 2020) setting out its new business goals. As the final stage of efforts for our long-term vision, “Chemigress to 100,” we are pushing forward with our growth strategies already deployed and advanced and are developing a strong corporate foundation toward further improving our corporate value beyond our 100th anniversary in 2020.

► Basic goals of the new medium-term business plan “Increase business earning power” and “Create new businesses”

Expansion of existing
businesses centered
on growth drivers

Creation of new
businesses and promotion
of development

Enhancement of
the Group's
business foundation

Further development
of CSR management

► Aim for 2020

Long-term vision “Chemigress to 100”

(2011–2020)

- 1 Focus mainly on areas essential for the development of a sound society, such as agriculture, medicine, the environment and information, and provide a constant stream of new safe and useful products and businesses, thereby making tremendous contributions to society.
- 2 Increase our presence and indispensability on the international stage as a chemistry-oriented business group that is conscious of the global environment and CSR.
- 3 Form a globally competitive corporate group that is highly motivated and ready to take on challenges and enhance the comprehensive value of the entire Group so as to make enormous progress.

► Snapshot of the Nippon Soda Group to the 100th anniversary and beyond

The Group envisions advancing to a new stage of growth by reinforcing the business foundation under the new medium-term business plan period.

► Basic goals of the new medium-term business plan

Management indices	Numerical target (FY 2020)	FY 2017 (Results)
Operating margin	6.5% or more (8.0% or more when excluding Trading Business)	4.2%
Ordinary profit	¥13.0 billion	¥9.9 billion
ROE ¹	7.0% or more	6.6%
Investment (in 3 years)	¥50.0 billion (Growth investment = ¥10.0 billion Maintenance and upgrade investment = ¥20.0 billion M&As, etc. = ¥20.0 billion)	

New medium-term business plan

Final stage of the long-term vision,
“Chemigress to 100”

Increase business
earning power

Expansion of existing
businesses

Create new
businesses

Creation of new businesses
and promotion of development
Enhancement of the Group's
business foundation

100th anniversary and beyond

Advance to new stage of growth

Agro products

Significantly improve profitability
through innovation and
strengthening of product portfolio
centered on new agrochemicals

Chemicals

Continually increase share of
high-value-added products
among product composition

1. Each department will improve ROIC (return on invested capital) by continually improving profitability and efficiency, thereby improving ROE (return on equity) of the entire Group.

Further development of CSR management

Balanced implementation of “CSR activities to protect corporate value”
and “CSR activities to improve corporate value”

CSR activities to protect corporate value

Sound and transparent business management to contribute to the development of society

Further enhance our corporate governance practices

► Become a company trusted by all stakeholders

Initiatives to sustain and improve community- and environment-conscious “Nisso Safety” and “Nisso Quality”

Promotion of diversity, work-life balance, career vision and succession plans (preparation for future leaders)

► Acceptance of diversity, become rewarding workplace that employees can be proud of
► Increasing value of personnel

Constantly perform CSR activities

CSR activities to improve corporate value

Initiatives for issues of global society in the major domains of agriculture, medicine, environment and information

Agriculture

► Ensuring food safety and security using agrochemicals
► Contribution to sustainable agriculture



Health care

► Contribution to providing health to all people through pharmaceuticals



Environment

► Contribution to ensuring the environmentally sound recycling of resources using chemistry (water, waste)



Information

► Contribution to the development of information equipment friendly to the environment and people by supplying high-function materials



Further develop our CSR management in order to promote our sound development as a sought-after chemical group

Value Creation of the Nippon Soda Group

Value creation of the Nippon Soda Group

The Nippon Soda Group further develops CSR management and, as a chemical group, creates new value through the power of chemistry and contributes to achieving a sustainable society through products.



Efforts related to human resources (diversity management)

Corporate governance (business management)

(*) “Chemigress” in “Chemigress to 100” was coined by combining the words “chemical” and “progress.” “Chemigress to 100” conveys our determination to contribute to creating a sound society through the chemistry-oriented businesses of our Group toward the 100th anniversary.

Business and SDGs of the Nippon Soda Group

From September 25 to 27, 2015, during a milestone year for the United Nation's development agendas, the United Nations Sustainable Development Summit was held at the UN headquarters in New York. The summit was attended by more than 150 heads of state of member nations and resulted in the adoption of the official document, Transforming our World: The 2030 Agenda for Sustainable Development. This agenda includes declarations and goals, stated as action plans for the prosperity of people and the Earth. The newly established goals, which succeed the Millennium Development Goals (MDGs), are called Sustainable Development Goals (SDGs) and are comprised of 17 goals and 169 targets.

As part of our efforts to conduct "CSR activities to improve the corporate value," the Nippon Soda Group states in the basic CSR policy that the company will make contributions through business toward resolving social issues to help achieve the development of a sustainable society. In line with the CSR policy, the Nippon Soda Group is addressing efforts to meet the Sustainable Development Goals (SDGs) that allow us to make such contributions through our products. One company cannot tackle all of the SDGs alone, but if many different companies throughout the world do what they can toward resolving these issues, we believe that the combined efforts will result in the realization of a sustainable society.



Nippon Soda Group's CSR and materiality

Materiality identification

The Nippon Soda Group focuses its business mainly on the domains of agriculture, medicine, the environment and information, which are essential for the sound development of society, and contributes to society's development by providing a constant and stable stream of new useful products and businesses. For the purpose of conducting business that is useful for developing a sustainable society, we have identified the four aforementioned domains (agriculture, medicine, the environment and information) as medium- and long-term areas of materiality for CSR activities to improve the corporate value. We have also identified materiality issues and KPIs in the four CSR domains that are defined in the CSR basic policy.

Materiality Identification Process

Step 1 Identification and prioritization

- 1 The material issue for the Nippon Soda Group in CSR activities to protect corporate value is defined as continuous efforts to minimize impact on people and the environment, with a recognition that, as a chemical manufacturer, we deal with a wide variety of chemicals.
- 2 Material issues for the Nippon Soda Group in CSR activities to improve the corporate value were identified in line with the GRI G4 guidelines, the ISO 26000 guidelines and SDGs. The materiality assessment in the prioritization step was conducted using a two-dimensional plane with the materiality to stakeholders and the materiality to the Nippon Soda Group as the vertical and horizontal axes, respectively. Issues ranked high both on the vertical and horizontal axes were assessed as high priority.

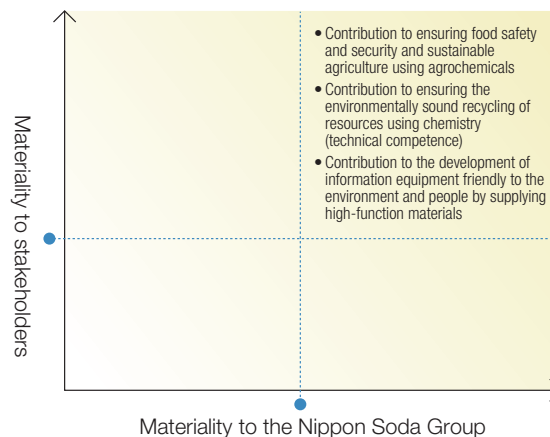
- 3 Reference standards for prioritization

Materiality to stakeholders

- International frameworks, such as the GRI G4 guidelines
- The 2030 Agenda for Sustainable Development, Sustainable Development Goals Fact Sheet, SDGs
- Third-party opinions

Materiality to the Nippon Soda Group

- Management philosophy
- Conformity with Nippon Soda's medium- and long-term business plan
- Opportunities and risks in order to ensure continuous development



Step 2 Validation and identification through expert dialogue

- 1 We held a dialogue with experts to determine if there were any discrepancies between the materiality issues we identified and those that we should consider and recognize in the domains of agriculture, health care¹, the environment and information.

1. For the health care domain, materiality issues were identified in 2017.

(December 8, 2015) ► For details, please refer to the *CSR Report 2016* on pages 13 and 14.

(December 9, 2016) ► For details, please refer to the *CSR Report 2017* on pages 25 through 28.

(December 8, 2017) ► For details, please refer to the *CSR Report 2018* on page 10 and the online version.

(December 12, 2018) ► For details, please refer to *CSR Report 2019* on pages 9 and 10, and the online version.

> Stakeholder dialogue 

Major opinions (What should be considered, their expectations, etc.)

- Every company has its own approach to materiality analysis, some start with social issues and some with their medium-term/long-term vision.
- Many companies select KPIs in the next step.
- I think you should expand the scope of issues to be addressed in the areas of the environment and information to make it as wide as the scope of issues associated with agrochemicals.
- I was convinced that Nippon Soda is sincerely addressing this issue.

- 2 After the dialogue, we made corrections based on participants' opinions and identified material issues that the Nippon Soda Group should address, which have been approved by experts.

Step 3 Reporting to and approval from the Nippon Soda Group's executives

November 20, 2015 A report of the experts dialogue in Step 2 was provided to the Corporate Social Responsibility Administration Meeting.

February 2016 Approval was obtained from the Management Council and the Board of Directors.

May 2016 A report was provided to the Corporate Social Responsibility Administration Meeting.

Step 4 Implementation of PDCA

- Plan** ▶ Plan theme-specific materiality workshops (discussion on developing KPIs: at the beginning of FY 2017)
- Do** ▶ Organize workshops (FY 2017 first half); Develop KPIs (FY 2017 second half)
- Check** ▶ Assess KPIs (at the end of FY 2017) and publish assessment results (at the beginning of FY 2018)
- Act** ▶ Review (conducted annually since December 2016)

Materiality and KPIs within the Four Domains of CSR Defined in the CSR Basic Policies.

	Domain	Materiality		KPI
CSR activities to improve corporate value	Agriculture	Contribution to ensuring food safety and security and sustainable agriculture using agrochemicals (1) Increase in food and feed production (2) Diversification of crop protection (3) Improvement of user safety (safety of chemicals and products) ¹	 p.11	(1) Seminar hosting situation (2) Situation of initiatives (3) Situation of initiatives
	Health care	Contribution to providing health to all people through pharmaceuticals (1) Easy-to-swallow, effective medicines through NISSO HPC	 p.12	(1) Situation of contributions
	Environment	Contribution to ensuring the environmentally sound recycling of resources using chemistry (technical competence) (1) Steady supply of water resources (2) Reduction of environmental impact caused by waste	    p.13	(1) The amount of supplied water (2) Situation of contribution
	Information	Contribution to sustainable plant protection (1) Protection of precious trees such as pines from harmful insects		(1) Situation of contribution
		Contribution to the development of information equipment friendly to the environment and people by supplying high-function materials (1) Supply of high-function materials friendly to the environment and people	 p.14	(1) Number of portable communication terminals using our products
	Initiatives for the next generation	Contribution to addressing climate change by supplying low-carbon products (1) Contribution to achieving a low-carbon society by supplying low-carbon products	 	(1) Change in the number of low-carbon products Situation of progress Situation of contribution
CSR activities to protect corporate value	Environmental protection	(1) Environmental Issues		(1) Number of legal violations
		(2) Energy i. Energy use per unit of production ii. Energy use per unit of transportation		(2) Amount of consumption i. Per unit of production ii. Per unit of transportation
		(3) Reduction in greenhouse gas emissions		(3) Amount of emissions
		(4) Waste i. Amount of final disposal as landfill ii. Zero emissions	 p.15	(4) i. Amount of waste to landfill ii. Zero emissions ratio
		(5) Emissions of harmful substances into the atmosphere		(5) Amount of emissions
		(6) Reduction of impact on biodiversity and ecosystems		(6) Situation of initiatives
	Process safety and disaster prevention/BCP	(1) Major accidents at facilities (2) Maintenance and improvement of a business continuity plan (BCP)	 p.16	(1) Number of accidents (2) Situation of BCP improvement
	Occupational safety and health	(1) Occupational accidents An absence from work/no absence (2) Health promotion	 p.17	(1) Number of occupational accidents (2) Number of incidences of personal injury and illness
	Distribution safety and quality assurance	(1) Distribution-related complaints (2) Product-related complaints	 p.18	(1) Number of distribution-related complaints (2) Number of product-related complaints
	Chemicals and product safety	(1) Compliance with chemical-related laws and regulations	 p.19	(1) Number of legal violations
Social activities	Together with our customers (Consumer issues)	(1) Consumer issues	 p.20	(1) Level of understanding of issues
	Together with our employees (Human rights and labor practices)	(1) Acceptance of diversity (2) Creation of a rewarding workplace that employees can be proud of	 p.21	(1) Quantitative value for diversity (2) Results of survey on employees' satisfaction with their workplace
	Together with our business partners (Fair operating practices)	(1) Business partners	 p.22	(1) Situation on compliance with code of conduct
	Together with our shareholders	(1) Shareholders	 p.23	(1) Situation of dialogues
	Together with our local communities (Community involvement and development, social dialogue)	(1) Local gatherings, community involvement (2) Legal and other requirements (3) Creation of more opportunities for stakeholder engagement	 p.24	(1) Number of dialogues' involvement and details (2) Situation of deviations (3) Number of engagements and details
Governance	Corporate governance	(1) System	 p.25	(1) Governance structure
	Compliance	(1) Legal compliance	 p.26	(1) Violations of laws and regulations

1. Including efforts related to chemicals and product safety among "CSR activities to protect corporate value"

Stakeholder Dialogue 2018

Materiality essential to sustainable development

A stakeholder dialogue was held with experts from outside the Nippon Soda Group on the theme of “CSR activities to improve corporate value,” which aim to increase the positive effect on society, for the purpose of discussing materiality for a chemical company that creates innovative products useful in achieving a sustainable society.



Naomi Yamazaki

- Representative Director, ESG Network of Shareholders & Companies
- Administration Manager, Institutional Investors Collective Engagement Forum



Participants

<Experts from outside the Nippon Soda Group>

Naomi Yamazaki

Representative Director, ESG Network of Shareholders & Companies
Administration Manager, Institutional Investors Collective Engagement Forum

<Nippon Soda>

Noriyuki Haketa, Director and Senior Executive Managing Officer
Supervision of the Corporate Social Responsibility Department

Masahito Ikeda, Executive Officer
General Manager of the Corporate Social Responsibility Department

Masahiro Arichika, Corporate Communications Section,
General Affairs Group,
General Affairs & Personnel Department

Note: The position and job titles of the participants are those effective as of December 2018.

Note: Titles omitted in the text

Noriyuki Haketa
Nippon Soda



Masahito Ikeda, Ph.D.
Nippon Soda



Masahiro Arichika
Nippon Soda



History of the Nippon Soda Group (RC and CSR)

August 1998	Declaration on Responsible Care (RC)
April 2012	Declaration on Corporate Social Responsibility (CSR)
April 2014	Adoption of CSR practices in eight Group companies in Japan
November 2015	1st Stakeholder Dialogue: Material issues were identified and relevant efforts were started.
December 2016	2nd Stakeholder Dialogue
December 2017	3rd Stakeholder Dialogue
December 2018	4th Stakeholder Dialogue

Business activities associated with CSR materiality to improve the corporate value

- **Business activities associated with CSR materiality to improve corporate value Agriculture domain**
 - Initiatives for achieving sustainable agriculture: smart agriculture, drones, seed treatment, microbial pesticides
- **Medicine domain**
 - Healthy life supported by medicine: small easy-to-swallow tablets, longer-lasting effects, preparation of tablets by 3D printing
- **Information domain**
 - Potential of high-performance materials: environmentally friendly high-performance materials, copper-clad laminates for next-generation communications, microfabrication of photoresist materials
- **Environment domain**
 - Achievement of environmentally sound recycling: Sketoile and toilet gel for disaster use

Theme 1

Environmental and social issues that significantly affect the sustainability of business models

What kind of long-term impact will environmental and social issues have on business activities?

- Understand social issues from a global perspective, such as decline in the working population, aging population and declining birth rates in some regions, coupled with population explosion on a global scale.
- In addition to contributions to securing food sources (stable food yields) using agrochemicals, we are considering promoting innovation by taking advantage of the strengths of our existing businesses through promoting research and development covering the entire agricultural value chain. We understand there are high expectations from users for labor saving and safe agriculture.
- For example, we believe that a new seed treatment technique to coat seeds can contribute not only to reducing farm labor but also reducing the environmental impact of agrochemicals. We will consider partnerships with other companies to further expand the application of the technique globally.

[Background]

Environmental and social issues these days directly affect business management. In response, industries and sectors have seen a paradigm shift in their business models. In such a business environment, it is important for companies to correctly identify issues critical to them and to implement long-term strategies for resilience designed to respond to change in 10, 20, and 30 years' time.

Theme
2

Potential “game change” and transformation

If a “game change” occurs, how would business activities need to change?

- The regional characteristics of agriculture will significantly change due to climate change. The types of agrochemicals may also need to change, which can provide new business opportunities. In 2015, we opened the Sarabetsu Experiment Field in Sarabetsu Village in Hokkaido by taking into account environmental issues, where researchers have started research on the influence of regional climate and the new potential of agrochemicals.
- In the domains of information and health care in the chemicals business, we will continue to serve as a material manufacturer with emphasis on addressing issues to respond to market demand with resilience. For example, as a world-leading company in terms of technology to make active ingredients of pharmaceutical excipients work, we will create new markets by “multiplying” this proprietary technology through social change.

[Background]

There has been a move to incorporate the advancement of artificial intelligence (AI) and the Internet of Things (IoT), global environmental issues, and solutions for population issues into strategies for sustainable growth. There has already been a significant change in the automotive industry. In other markets too, a “game changing event” that nobody can predict could be triggered by any new development, such as a change in the distribution channel or the entry of a new player. Investors are carefully observing what kind of game changes companies are anticipating and responding to.

Theme
3

Developing and passing on our corporate philosophy and culture, and improving corporate ethics

How have we contributed to social sustainability? How can we achieve a sustainable society?

- Our corporate culture has placed primary emphasis on “safety and quality” for many years. This culture enables us to develop products that fulfill the dreams of the next generation and achieve sustainable growth through the power of chemistry.
- Both companies and employees are citizens. It is essential for companies to be generally accepted in order to ensure their sustainability. In this respect, we have placed emphasis on ensuring compliance.
- We will further ensure corporate ethics are observed and will take a backcasting approach to ensuring well-functioning corporate governance that responds to the change of the times.

[Background]

To achieve the sustainable growth of a company, changes in governance are required. Investors are carefully judging the effectiveness of the company's governance, with emphasis not only on the governance system but also on its function. The company is required to make strategic decisions more boldly and promptly than ever. To strengthen corporate governance, it should be aligned with corporate ethics. It is also important that all employees are well informed of the corporate ethics policy.

Expert's viewpoint

Naomi Yamazaki

•Representative Director, ESG Network of Shareholders & Companies
 •Administration Manager, Institutional Investors Collective Engagement Forum

The Nippon Soda Group undertakes business activities in compliance with corporate ethics. I would like to focus my attention on how the Group understands long-term social changes and what approach it takes to achieve a sustainable society.

- The Group tries to understand the impact of environmental and social issues on business activities from the perspective of opportunities and risks, and not only establishes a system but also creates an organization that functions well.
- Significant changes are awaiting agrochemicals. The Group is undertaking transformation efforts in labor saving and streamlining in a way unique to an agrochemical manufacturer, with an eye on a potential “game change” in social issues.
- Nippon Soda's corporate culture with primary emphasis on safety and quality has served as a source for sustainable growth. Corporate ethics are observed by all of its companies, including overseas group companies.
- To steadily promote materiality and risk management, the Company is making well-designed efforts to improve the effectiveness of its corporate governance.

CSR Management

Message from CSR officers



Kiyotaka Machii

Director and Executive Officer

Overall Supervision (General Affairs, Personnel Affairs and Finance & Accounting Department),

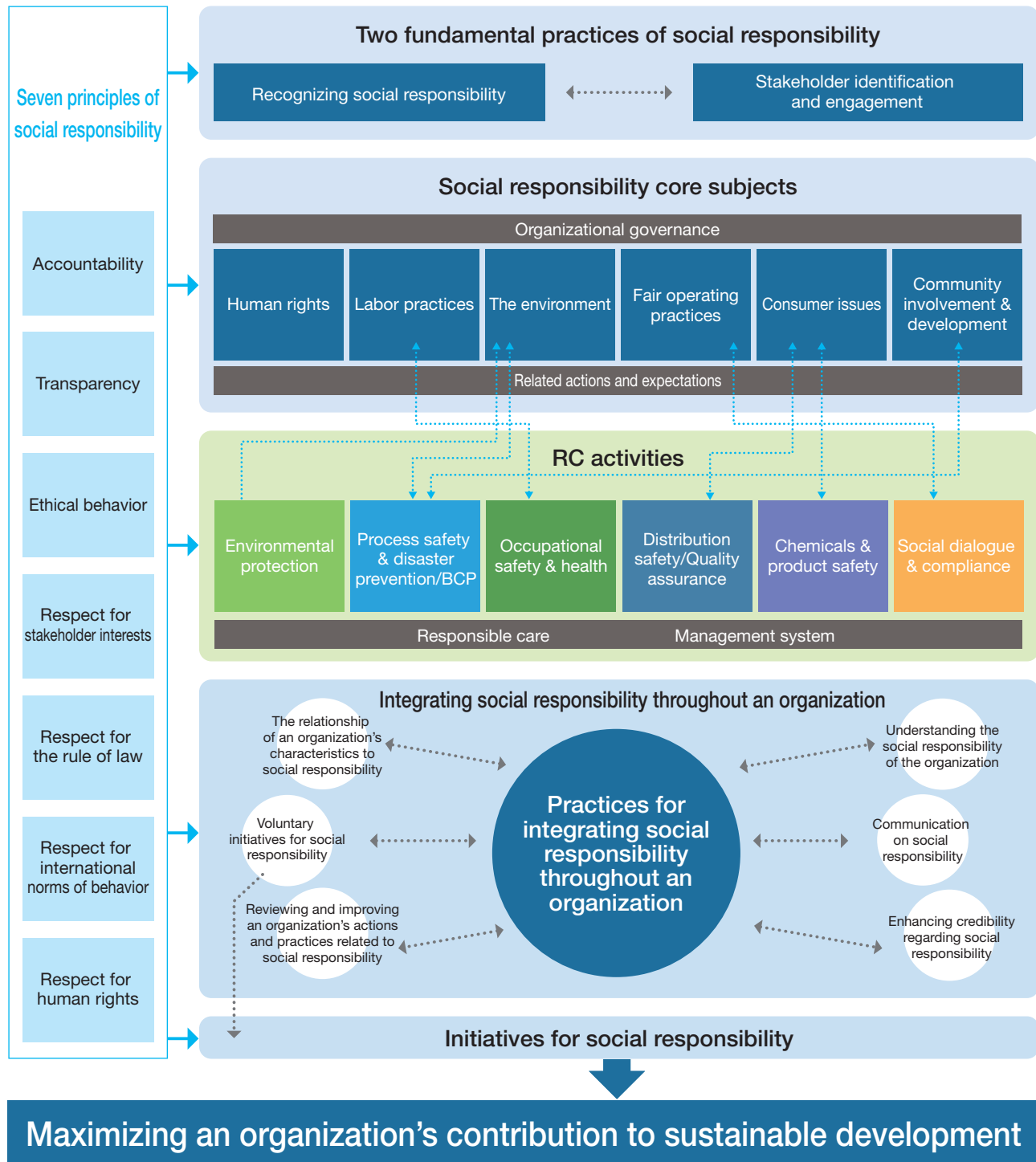
Corporate Social Responsibility Department, and General Manager of General Affairs & Personnel Department

We hope to celebrate the 100th anniversary in 2020 as a chemical group company sought after by society as a result of the achievement of CSR-oriented business management and balanced implementation of CSR activities to protect corporate value and CSR activities to improve corporate value. Our goal is to become a company that all employees can enjoy working at and a global corporate group that values diversity. We are committed to promoting CSR activities with an emphasis on transparency and accountability.

CSR activities

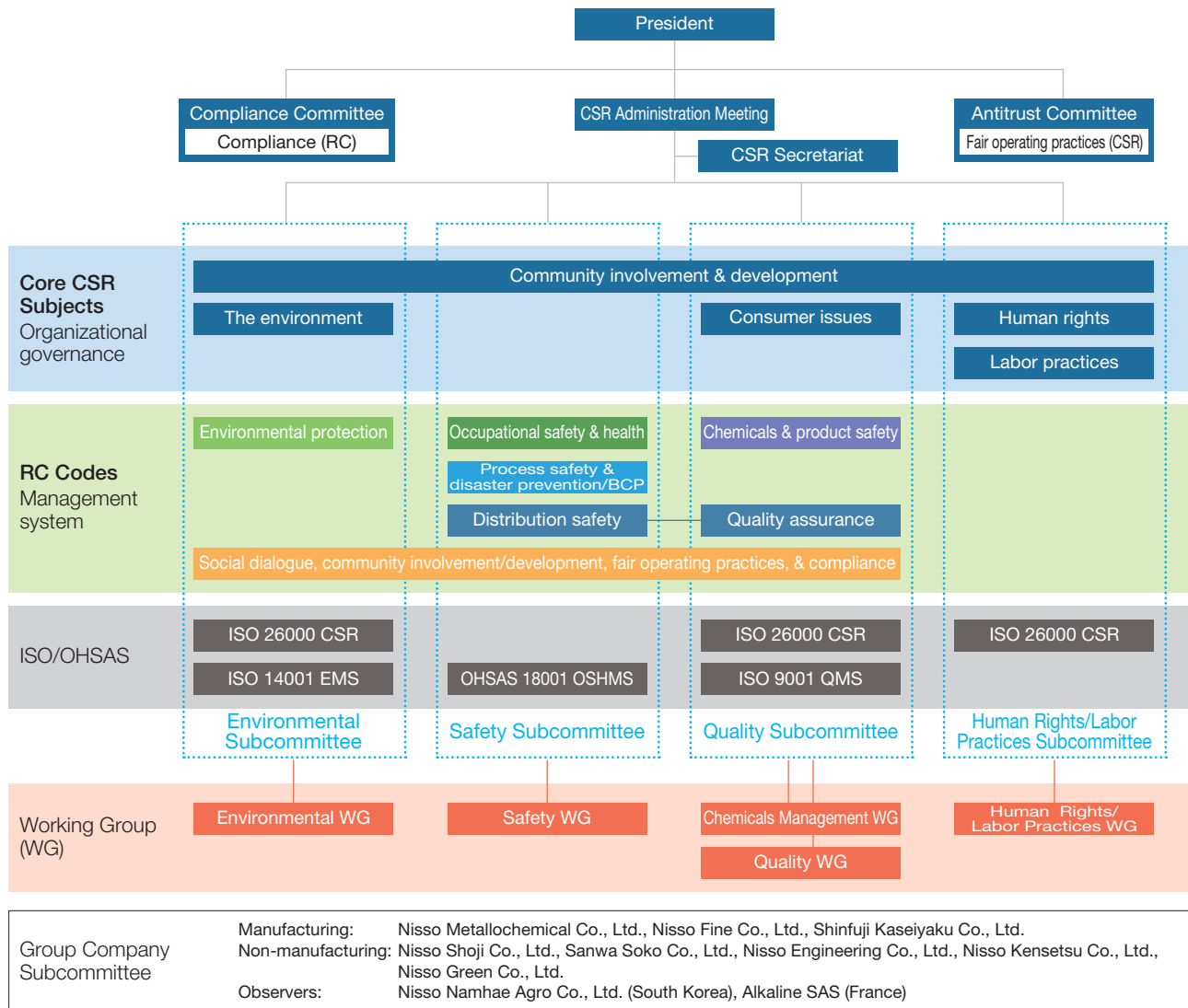
The CSR activities of the Nippon Soda Group include all of the responsible care (RC) codes (activity items). All CSR activity items are based on the seven principles of social responsibility described in the ISO 26000 standard and responsible care is based on the concepts of “doing what is ethically right” and “implementing proactive measures to reduce risks.” The seven RC Codes (activity items) and the seven core subjects (activity items) of CSR are closely related to each other. The Nippon Soda Group integrates these activity items and determines the eight policies.

Relationship between CSR (ISO 26000) and RC



CSR Promotion System

Chaired by the President, the CSR Administration Meeting serves as a company-wide decision-making body to promote CSR activities, including RC. It sets annual targets to help the PDCA cycle “spiral up” and provides a management-level review of CSR activities. Held twice a year, the CSR Administration Meeting is attended by directors, executive officers and worksite managers.

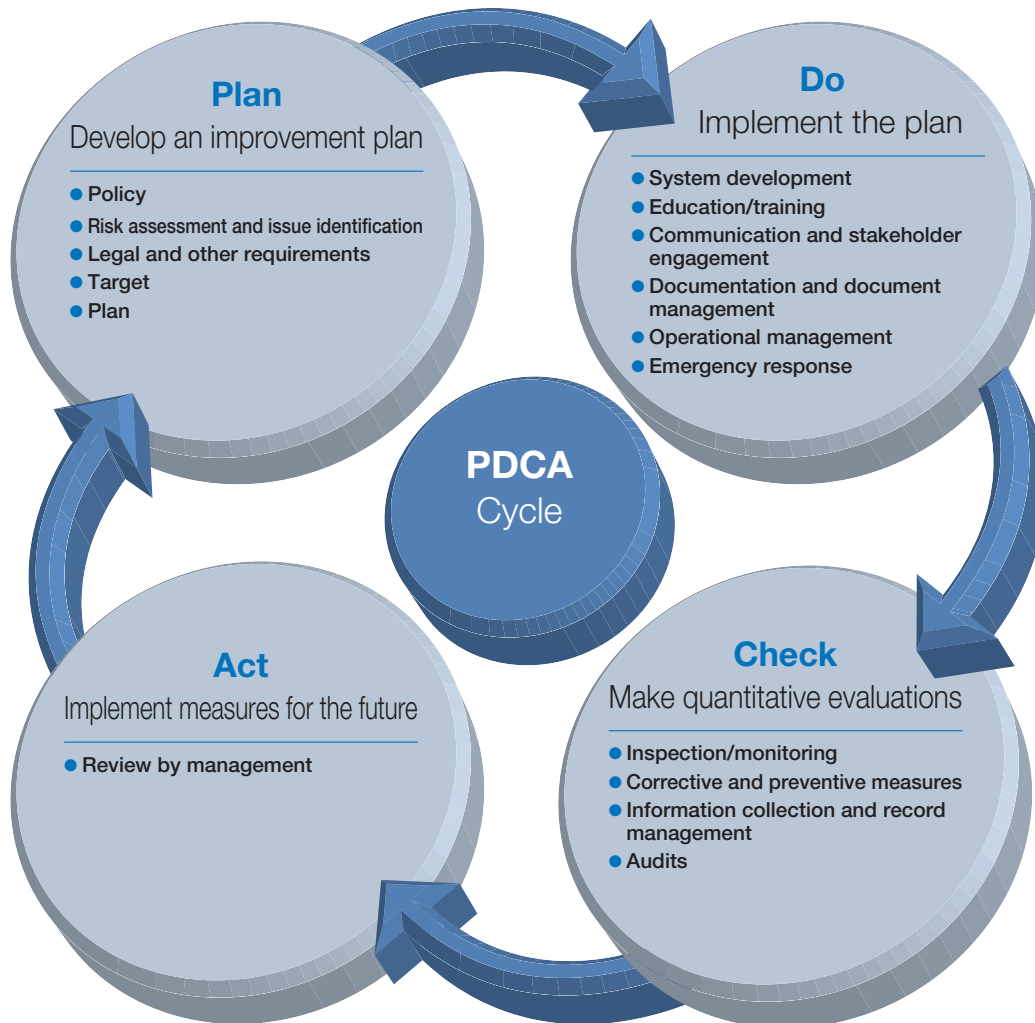


CSR management system

The management system that promotes the CSR activities of the Nippon Soda Group is designed to “spiral up” the PDCA cycle. Each worksite is required to develop a CSR improvement plan (Plan), implement the developed plan (Do), make quantitative evaluations of both the plan and its implementation (Check), and implement measures based on quantitative evaluation results (Act) in order to ensure continuous improvement.

We also conduct a Group-wide audit to assess the appropriateness of activities.

We recommend that the PDCA cycle for CSR activities to protect corporate value be completed in one year by design. The CSR Promotion Subcommittee holds a meeting to review the progress of the PDCA cycle twice a year, in May and November. The progress is also reviewed by management in February and August every year at Corporate Social Responsibility Administration Meetings.



CSR audit

Internal audit

We collectively refer to internal audits, such as QMS, EMS and OSHMS, that are conducted at each site of Nippon Soda as the “CSR audit.” To investigate and verify whether the CSR audit is conducted appropriately, whether the level of audit quality is appropriate, and other relevant issues, a representative from each site and staff in charge at the Head Office convene once a year to hold a CSR Audit, Verification and Review Meeting. Internal audits independently performed by Nippon Soda’s worksites (plants and research centers) are referred to as the CSR audit and the results of internal audits are reviewed at each worksite’s Corporate Social Responsibility Administration Meeting.

Periodic CSR audit

Nippon Soda’s audit team conducts regular (biennial) audits of CSR practices at Group companies.

External audit

All worksites (plants and research centers) and manufacturing group companies undergo external reviews according to ISO 14001, ISO 9001 and OHSAS 18001 and diagnosis of disaster prevention capability with emphasis on disaster prevention and occupational safety by an institute specializing in disaster prevention. Based on their results, ongoing improvement efforts are made.

We are always ready to receive audits by customers, who are our stakeholders, and make improvements in response to their feedback. We also undergo other external audits on an as-needed basis.

Special audits

A special audit is conducted, as needed, in the event of a serious non-conformity or other serious problem under an audit system that can accommodate the situation.

Audits and reviews conducted

Audits and reviews carried out at the Nippon Soda Group for fiscal 2018 (number of times)

Sites	Internal	External	
		Received	Conducted
Head Office	4	0	43
Nihongi Plant	7	33	5
Takaoka Plant	9	9	5
Mizushima Plant	1	6	2
Chiba Plant	27	25	12
Odawara Research Center	2	2	1
Chiba Research Center	13	3	0
Domestic manufacturing group companies (3)	21	48	5
Total	84	126	73

CSR activity policy goals for FY 2020 (within the ISO 26000 Framework)

1 Management system and organizational governance

In order to carry out sound and transparent corporate activities in compliance with laws and regulations, we will continuously implement the PDCA cycle of goal setting, improvement and periodic reviews based on RC Codes and RC ethics.

We will conduct business activities in accordance with the seven principles of social responsibility in CSR: accountability, transparency, ethical behavior, respect for stakeholder interests, respect for the rule of law, respect for international norms of behavior, and respect for human rights. We will also conduct CSR and RC activities in our overseas operations.

2 Environmental protection

We will make efforts to save energy and resources, reduce and recycle waste, and reduce emissions of harmful substances, with the goal of minimizing the environmental impact of our business activities.

3 Process safety and disaster prevention/BCP

We will prevent major accidents at our facilities and promote safe and stable production. We will establish a business continuity plan (BCP) and drive continuous improvement.

4 Occupational safety and health

We will create an accident-free working environment in order to provide a healthy and happy working experience.

5 Distribution safety, quality assurance and consumer issues

We will prevent distribution accidents by minimizing hazards, harm and risks of in-transit accidents associated with the transportation and distribution of our products. We will increase customer satisfaction.

6 Chemicals and product safety

We will increase the confidence and trust of customers and the general public in us by taking into account possible hazards and harm that chemicals and products may have with regard to safety, health and the environment, and we will comply with domestic laws and regulations, international standards, treaties and the like, as well as other regulations that are publicly demanded.

7 Social dialogue, community involvement and development, fair operating practices, and compliance

We will make efforts to improve the general public's confidence in us by participating in various environmental protection and safety activities and proactively engaging in dialogue with stakeholders regarding the effects of chemical substances on safety, health and the environment. We will comply with legal requirements to improve transparency.

8 Human rights and labor practices

We will respect human rights and act in recognition of both their importance and their universality. We will act based on the understanding that socially responsible labor practices are indispensable to social justice and peace, respect for the rule of law, and a fair society.

New medium-term CSR activity goals (FY 2017–2020)

CSR Activity Goals of the Nippon Soda Group (New Medium-Term CSR Activity Goals for FY 2017–2020)

1. Management system^{RC} and organizational governance^{CSR}

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|-----------|--|
| Goal | Proper implementation |
| (Actions) | Continuous improvement using the PDCA cycle;
Increased efforts in implementing measures to prevent problems caused by human error |

2. Environmental protection^{RC/CSR}

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|--|-----------|--|
| (1) Environmental abnormalities | Goal | Zero events |
| | (Actions) | Implementation of measures for reducing risks by evaluating environmental impact;
Planning and implementation of measures to prevent problems caused by human error |
| (2) Energy | | |
| 1) Energy use per unit of production | Goal | Annual improvement of 1% and 4% improvement by the end of the new medium-term CSR plan |
| | (Actions) | With an eye to meeting the energy-saving target, focusing efforts to ensure the improvement in the per-unit energy use through the setting, implementation and evaluation of themes for improvement |
| 2) Energy use per unit of transportation | Goal | Annual improvement of 1% and 4% improvement by the end of the new medium-term CSR plan |
| | (Actions) | With an eye to meeting the target for saving energy use for transportation, focusing efforts to ensure the improvement of the per-unit energy use through the setting, implementation and evaluation of themes for improvement |
| (3) Reduction of greenhouse gas emissions | Goal | Annual reduction of 1% in CO ₂ emissions and 4% reduction by the end of the new medium-term CSR plan |
| | (Actions) | Complete elimination of fluorocarbon release from equipment using fluorocarbons
Implementation of improvement measures linked to energy-saving activities for the achievement of the goals, and regular inspection/maintenance of equipment using fluorocarbons |
| (4) Waste | | |
| 1) Amount of final disposal at landfills | Goal | Annual reduction of 3% in the amount of final disposal at landfills and 12% reduction by the end of the new medium-term CSR plan |
| | (Actions) | With an eye to meeting the reduction target, focusing efforts to ensure the improvement in the per-unit waste generation through the setting, implementation and evaluation of themes for improvement |
| 2) Zero emissions | Goal | Continuation of zero emissions |
| | (Actions) | Continuation of zero emissions at all worksites through reductions in the amount of final disposal at landfills and the amount transported |
| (5) Emissions of harmful substances to the atmosphere | Goal | Annual reduction of 12.5% from FY 2015 and 50% reduction by the end of the new medium-term CSR plan |
| | (Actions) | Planning and implementation of measures to reduce emissions of harmful substances |
| (6) Reduction of impact upon biodiversity and ecosystems | Goal | Planning and implementation of activities aiming to reduce impact upon biodiversity and ecosystems |
| | (Actions) | Contributing to the preservation of biodiversity by reducing environmental impact through environmental preservation activities;
Promoting communication with related parties and striving to collaborate and cooperate to enhance biodiversity |

3. Process safety and disaster prevention^{RC/BCP}

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|---|-----------|---|
| (1) Major accidents at facilities | Goal | No accidents |
| | (Actions) | Achieving zero major accidents at facilities; Reducing risks of major accidents at facilities in accordance with the BCP |
| (2) Maintenance and improvement of the business continuity plan (BCP) | Goal | Maintenance and improvement of the BCP using the PDCA cycle |
| | (Actions) | Improving the emergency operation center and implementing regular emergency drills to ensure preparedness for Tokyo metropolitan and sequential earthquakes |

4. Occupational safety and health^{RC}

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| (1) Occupational accidents resulting in an absence from work or no absence | Goal | No accidents |
| | (Actions) | Reduction of risks through risk assessments; Increased efforts for preventing human error; Activation of safety initiatives (KY, pointing and vocalizing, mutually directing attention, identifying "hiyari-hat" (near miss) accidents, 5Ss, improvement activities, campaigns, etc.) |
| (2) Health promotion | Goal | 5% reduction in the total number of absentee days including mental-health-related absence and 5% reduction in the number of incidents of personal injury or illness (averages for FY 2013–2015) |
| | (Actions) | Follow-up of periodic medical examination results; Mental health checks and their follow-ups; Health education |

5. Distribution safety^{RC}, quality assurance and consumer issues^{CSR}

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|-------------------------------------|-----------|---|
| (1) Distribution-related complaints | Goal | 30% reduction from FY 2015, complete elimination by the end of the new medium-term CSR plan |
| | (Actions) | Identifying and reducing risks of distribution-related complaints through active involvement by Head Office Logistics and RC Departments; Identifying and reducing risks of distribution-related complaints through active involvement by worksites' Logistics and RC Departments |
| (2) Product-related complaints | Goal | 30% reduction from FY 2015, complete elimination by the end of the new medium-term CSR plan |
| | (Actions) | Conducting company-wide quality risk assessments to reduce Rank A and B risks by 30% from the previous year; Increased efforts for the prevention of human error |
| (3) Consumer issues | Goal | Sharing information on issues |
| | (Actions) | Identifying products for consumers and confirming safety |

6. Chemicals and product safety^{RC}

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|---|-----------|---|
| (1) Compliance with chemical-related laws and regulations | Goal | Zero violations |
| | (Actions) | Strengthening the management of chemical substances (for preparation of SDS and labels in and outside Japan) by adopting a new chemical substance control system;
Conducting regular training programs on chemical substance control |

7. Social dialogue^{RC}, community involvement and development^{CSR}, fair operating practices^{CSR}, and compliance

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|---|-----------|---|
| (1) Local gatherings and community involvement | Goal | Maintaining the current number of local gatherings and improving their contents |
| | (Actions) | Continuing to have dialogues with concerned local people and relevant organizations and improving their contents |
| (2) Legal and other requirements | Goal | Zero legal violations |
| | (Actions) | Preparing a list of relevant laws and regulations, checking compliance using the PDCA cycle, taking measures to prevent recurrence of deviations, and rolling out these measures to other similar cases |
| (3) Creation of more opportunities for stakeholder engagement | Goal | Once a year per worksite |
| | (Actions) | Creating more opportunities for stakeholder engagement;
Incorporating results from stakeholder engagement activities to improve CSR and RC activities |

8. Human rights^{CSR}, labor practices^{CSR}

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|--|-----------|---|
| (1) Acceptance of diversity | Goal | Increased ratio of female, disabled, older and foreign employees |
| | (Actions) | The creation of a corporate culture where the abilities of a diverse range of workers can be maximized will be promoted as will the improvement of the work environment |
| (2) Creation of rewarding workplace that employees can be proud of | Goal | Understanding and improving levels of employee satisfaction with their workplace |
| | (Actions) | Promoting mutual communication in the office and improving human resource training |

Akira Ishii

Representative Director, President
Chairman, CSR Administration Meeting
April 1, 2016

Evaluation Results for FY 2019 and CSR Activity Policies for FY 2020 (Activity Policy based on the ISO 26000 Framework)

Item	Goals for FY 2019 (KPI in red)/Plan (P)	Results in FY 2019 (D)	Evaluation (C)
1. Management system and organizational governance	(1) Proper implementation 1) Continuous improvement using the PDCA cycle 2) Strengthening of measures to prevent problems caused by human error	1) The transition to the new version was completed at ISO-certified worksites. The transition was completed at Nippon Soda. The transition was completed at Group companies. 2) Goals for each worksite and each Group company were determined and measures to achieve them were strengthened.	(1) 1) ◎ 2) ○
2. Environmental protection	(1) Environmental abnormalities: Zero events (2) Energy 1) Energy use per unit of production (excluding logistics): Annual improvement of 1% (production base) 2) Energy use per unit of transportation: Annual improvement of 1% (sales base) (3) Reduction in greenhouse gas emissions: Annual reduction of 1% ; No CFC leakage (4) Waste 1) Amount of final disposal as landfill: Annual reduction of 3% 2) Continuation of zero emissions (5) Emissions of harmful substances into the atmosphere: Annual reduction of 37.5% from the fiscal year 2015 (6) Reduction in impact on biodiversity and ecosystems	(1) Nippon Soda: No violations Group: Nisso Metallochemical: 1 deviation from the standard value of wastewater (2) 1) Achieved 0.347 kL/t (2% decrease) 2) Not achieved 0.0248 kL/million yen (7.8% increase) The actual volume of transported products was 50,482 ton-kilos, 2,086 kL in crude oil equivalent (14.3% increase over the previous year) (3) Achieved 204,347 t (8.6% decrease) (4) 1) Not achieved 107 t (20% increase) (Increase in waste glass quantity as a result of the relocation of a research center) 2) Achieved 1.4% (≤ 5%) (5) Achieved 7.0 t (55% decrease) (attributable to the solvent conversion in 2015) (6) Chiba Plant: Himecomatsu S supporter status continued Odawara Research Center: Breeding of <i>medaka</i> obtained from the Sakawa River system continued Other worksites: Participation in outside environmental conservation activities and continued review of activities conducted	(1) × (2) 1) ◎ 2) × (3) ◎ (4) 1) × 2) ◎ (5) ◎ (6) ◎
3. Process safety & disaster prevention/BCP	(1) Major accidents at facilities: Zero accidents 1) Achievement of zero major accidents at facilities 2) Reduction in the risk of major accidents at facilities in line with BCP (2) Maintenance and improvement of a business continuity plan (BCP): Maintenance and improvement of the BCP using the PDCA cycle	(1) 1) Nippon Soda: 1; Group: 1 • Chiba Plant of Nippon Soda: On March 28, during a shutdown of a facility, a pump was broken and caught fire. • Aizu Plant of Nisso Metallochemical: On September 7, during preparation for waste treatment, a fire broke out. 2) Diagnosis of disaster prevention capability: 8; Safety audit prior to trial operation: 6; Special CSR audit: 1 (2) Revised on April 1, 2018; The eighth version was distributed. Each business site: Disaster drill Head Office: Training to establish the Head Office Disaster Response Headquarters	(1) 1) × 2) ◎ (2) ◎
4. Occupational safety & health	(1) Occupational accidents resulting in an absence from work or no absence: No accidents 1) Conducting risk assessments to reduce occupational accidents 2) Strengthening measures to prevent human error 3) Implementing activities to ensure safety (2) Health promotion: 15% reduction in the total number of absentee days, including mental-health-related absence, and 15% reduction in the incidence of personal injury and illness (average in the period from FY 2013 to FY 2015) 1) Follow-up of those undergoing periodic medical examinations 2) Mental health checkups and follow-ups, health education	(1) Not achieved: 10 cases involving absence from work (Nippon Soda: 0; Nippon Soda affiliated companies: 3; Group companies: 5; Group affiliated companies: 2); 16 cases involving no absence (Nippon Soda: 5; Nippon Soda affiliated companies: 3; Group companies: 7; Group affiliated companies: 1) 1) 2) Safety patrols conducted at six worksites 3) Occupational accident prevention survey: A survey with the aim of improving risk responding abilities of on-site workers was conducted by Sompso Risk Management & Health Care on March 5 at Chiba Plant. (2) Not achieved: 61% reduction in the total number of days of absence from the average of the period from FY 2013 to FY 2015 7% increase in the number of occurrences 1) 2) Guidance for improvement was offered by healthcare professionals and in-house health personnel.	(1) × 1) 2) ◎ 3) ◎ (2) △ ◎
5. Distribution safety, quality assurance and consumer issues	(1) Distribution-related complaints: 90% reduction from FY 2015 1) Identification and reduction of risks related to distribution-related complaints through proactive involvement by the Head Office Logistics and RC Departments. Identification and reduction of risks related to distribution-related complaints through proactive involvement by each worksite's Logistics and RC Departments (2) Product-related complaints: 90% reduction from FY 2015 1) 30% reduction in rank A and B risks from the previous year by company-wide introduction of quality risk assessment, strengthening of measures to prevent human error (3) Consumer issues: Sharing information on relevant issues 1) Identifying consumer products and confirmation of their safety	(1) Remained the same since FY 2015 (FY 2015: 3; FY 2019: 3) 1) Inspection and audit of logistics companies and education for them Proposal for improvement of customers' facilities Gathering of information through industry groups (2) 17% decrease from FY 2015 (FY 2015: 18; FY 2019: 15) 1) Rank A: 83% reduction; Rank B: 72% reduction Education to prevent human error was provided at each worksite. (3) 1) Consultations offered mainly by Sales Department; Identifying customers' needs through sales promotion activities and providing information	(1) × 1) ◎ (2) × 1) ◎ (3) ◎ 1) ◎
6. Chemicals & product safety	(1) Compliance with chemical-related laws and regulations (zero violations) 1) Zero violations 2) Strengthening the management of chemical substances by adopting a new chemical substance control system (use of domestic and overseas SDSs, label preparation) 3) Periodic educational programs on chemical substance control	(1) 1) 3 violations (Nippon Soda: 1, Group companies: 2); Corrective actions, prevention of recurrence, sharing of relevant information with other worksites 2) Preparation of SDSs of new products; Revision of SDSs in response to the addition of substances for which notification must be given under the Industrial Safety and Health Act 3) Implementation according to the plan	(1) × ◎ ◎
7. Social dialogue RC, community involvement/development CSR, fair operating practices CSR, & compliance	(1) Local gatherings and community involvement 1) Retention of a certain number of local gatherings and improvement of their contents (2) Legal and other requirements 1) Zero legal violations (3) Creation of more opportunities for stakeholder engagement 1) Once a year per worksite	(1) Achieved (≥ 25 events/year); 49 local gatherings (2) Not achieved: Violations (Corrective actions, prevention of recurrence, sharing of relevant information with other worksites) Nippon Soda: 1 violation of the Poisonous and Deleterious Substances Control Act (Nihongi Plant); fire accident (Chiba Plant); correction recommendations from the Labor Standards Inspection Office (9 recommendations at 3 worksites) Group: Nisso Metallochemical: 1 deviation from the standard value of wastewater, 1 fire accident; Nisso Engineering: 1 correction recommendation from the Labor Standards Inspection Office; Nisso Shoji: 1 violation of the Industrial Safety and Health Act, 1 violation of the Pharmaceuticals and Medical Devices Law; Sanwa Soko: 1 violation of the Customs Law (3) Achieved 1) Verification of the CSR report by the Japan Chemical Industry Association (JCIA) Diagnoses of disaster prevention capability and occupational accident prevention survey by Sompso Risk Management & Health Care Local gatherings	(1) ◎ (2) × (3) ◎
8. Human rights-related CSR/Labor practices	(1) Embracing diversity 1) Increase in the rate of employment of women, disabled people, older people and overseas nationals 2) The creation of a corporate culture where the abilities of a diverse range of workers can be maximized will be promoted, as will the improvement of the work environment (2) Rewarding workplace that employees can be proud of 1) Understanding and improving employee satisfaction 2) Improving in-house communications and programs for human resources development	(1) Embracing diversity 1) • New graduate hires: 10 new graduates were hired for administrative job family in 2019, including 4 women but no overseas nationals (including 1 mid-career hire) • Mid-career hires: 12 hired for administrative job family include 3 women but no overseas nationals • Reemployed: 12 in April and 10 in October; 100% of retirees were reemployed. • Employment rate of disabled people in all companies: 1.95% (as of the end of March) • Explanatory session about employment provided for women, renewal of the website on employment 2) Eligibility for the introduced career development support system was expanded to include managers; An explanatory session was held. The list of requirements for positions was released internally. "Certified as an "Eruboshi" company (August 23) (2) 1) An explanatory session on how to meet work-style reform related bills was held. "Recognized as an excellent health and productivity management enterprise in the White 500 category for two consecutive years (February) 2) Wider acceptance of the idea - Tips for communication were published in an in-house newsletter. • Rank-based training programs were improved.	(1) ○ 1) ◎ ◎ ◎ × ◎ 2) ◎ (2) 1) ◎ 2) ◎

Note: Achievement rate ◎: ≥ 90% ○: 90–80% △: 80–60% ×: ≤ 60%

Future policies (A)	Goals for FY 2020 (P)
<p>1) Transition from OHSAS 18001 to ISO 45001 Progress management is conducted through auditing, by subcommittees and other means.</p> <p>2) Continuous correction and education will be promoted throughout the Group to help employees recognize how to prevent human error.</p>	<p>(1) Proper implementation 1) Continuous improvement using the PDCA cycle</p> <p>2) Strengthening measures to prevent problems caused by human error</p>
<p>(1) Activities to prevent environmental problems will be implemented according to the CSR Plan.</p> <p>(2)</p> <p>1) Energy saving will be promoted according to the plan to reduce the annual energy use per unit of production by 1%.</p> <p>2) The optimization of transportation routes will be considered.</p> <p>(3) Improvement measures will be implemented in conjunction with energy-saving activities. Regular inspections and maintenance in compliance with relevant laws and regulations will be implemented.</p> <p>(4)</p> <p>1) Measures will be implemented to achieve the reduction target.</p> <p>2) The ratio of zero waste emissions will be maintained at < 5.0%.</p> <p>(5) Reduction measures will be implemented continuously.</p> <p>(6) An activity plan will be developed and implemented.</p>	<p>(1) Environmental abnormalities: Zero events</p> <p>(2) Energy 1) Energy use per unit of production (excluding logistics): Annual improvement of 1% (production base) 4% improvement from FY 2016 2) Energy use per unit of transportation: Annual improvement of 1% (sales base) 4% improvement from FY 2016 (3) Reduction in greenhouse gas emissions: 4% reduction from FY 2016; No CFC leakage</p> <p>(4) Waste 1) Amount of disposal as landfill: 12% reduction from FY 2016 2) Continuation of zero emissions</p> <p>(5) Emissions of harmful substances into the atmosphere: 50% reduction from FY 2015</p> <p>(6) Reduction in impact on biodiversity and ecosystems</p>
<p>(1)</p> <p>1) Continuous efforts to prevent recurrence 2) Diagnosis of disaster prevention capability, safety audit prior to trial operation, and special CSR audits will be continued.</p> <p>(2) To be revised on April 1, 2019; The ninth version will be distributed. Each business site: Disaster drill Head Office: Training to establish the Head Office Disaster Response Headquarter</p>	<p>(1) Major accidents at facilities: Zero accidents 1) Achievement of zero major accidents at facilities 2) Reduction in the risk of major accidents at facilities in line with BCP</p> <p>(2) Maintenance and improvement of a business continuity plan (BCP): Maintenance and improvement of the BCP using the PDCA cycle</p>
<p>(1) Efforts to prevent accidents will continue to be promoted, such as the attraction of attention of the entire company by the Central Safety and Health Committee and the CSR Promotion Subcommittee.</p> <p>1)2) Relevant information will be shared among worksites.</p> <p>3) Improvement based on occupational accident prevention survey results will be considered and information on the results will be shared among worksites.</p> <p>(2)</p> <p>1)2) More emphasis will be placed on health guidance for those with abnormal findings in medical examinations; Care will be provided to highly stressed employees at an early stage.</p>	<p>(1) Occupational accidents resulting in an absence from work or no absence: No accidents</p> <p>1) Conducting risk assessments to reduce occupational accidents 2) Strengthening measures to prevent human error 3) Implementing activities to ensure safety</p> <p>(2) Health promotion: 20% reduction in the total number of absentee days, including mental-health-related absence, and 20% reduction in the incidence of personal injury and illness (average in the period from FY 2013 to FY 2015) 1) Follow-up of those undergoing periodic medical examinations 2) Mental health checkups and follow-ups, health education 3) Strengthening efforts to ensure compliance with measures to prevent passive smoking</p>
<p>(1) Inspection and audit of distribution companies and provision of education to them will be continued. Request for improvement of customers' facilities will be continued. Information gathering via industrial organizations will be continued.</p> <p>(2) Quality risk assessment will be continued. Exchange of opinions at internal meetings and sharing of information on measures to prevent reoccurrences at worksites will be continued.</p> <p>(3) The same efforts will be continued.</p>	<p>(1) Distribution-related accidents/complaints: None 1) Identification and reduction of risks related to distribution-related complaints through proactive involvement by the Head Office Logistics and RC Departments. Identification and reduction of risks related to distribution-related complaints through proactive involvement by each worksite's Logistics and RC Departments</p> <p>(2) Product-related complaints: None 1) 30% reduction in rank A and B risks from the previous year by company-wide introduction of quality risk assessment, strengthening of measures to prevent human error</p> <p>(3) Consumer issues: Sharing information on consumer issues 1) Consumer products will be identified and their safety will be confirmed.</p>
<p>1) The chemicals management system will be maintained and improved.</p> <p>2) Will be continued, if necessary.</p> <p>3) Will be continued according to the plan.</p>	<p>(1) Compliance with chemical-related laws and regulations (zero violations) 1) Zero violations 2) Strengthening the management of chemical substances by adopting a new chemical substance control system (use of domestic and overseas SDSs, label preparation) 3) Periodic educational programs on chemical substance control</p>
<p>(1) Implemented according to the plan.</p> <p>(2) Information on the measures to prevent reoccurrences will be shared among worksites for implementation.</p> <p>(3) Implementation will be continued according to the plan.</p>	<p>(1) Local gatherings and community involvement 1) Retention of a certain number of local gatherings and improvement of their contents</p> <p>(2) Legal and other requirements 1) Zero legal violations</p> <p>(3) Creation of more opportunities for stakeholder engagement 1) Once a year per worksite</p>
<p>(1) 1) • Recruitment-related work will be organized and reviewed • Inhouse education to raise employees' awareness, for example, through inhouse newsletters, will be continued. • Diversity training will be continued. • Efforts will be made to improve understanding of the necessity of employing disabled people and develop worksites where they can play an active role. • Networking for the employment of disabled people will be strengthened. 2) Administrative work and specialized work categories of the Career Development Support System will be unified.</p> <p>(2)</p> <p>1) • Change from ES (employee satisfaction) survey to "Great Place to Work/ Organizational Development" survey will be considered. • Improvement of individual time management → Flexible work system • Trial for methods 2) • Interviews using the career vision sheet will be continued.</p>	<p>(1) Embracing diversity 1) The employment rates of women, disabled people, older people, and overseas nationals will be increased.</p> <p>2) The creation of a corporate culture where the abilities of a diverse range of workers can be maximized will be promoted as will the improvement of the work environment.</p> <p>(2) Creation of a rewarding workplace that employees can be proud of 1) Employees satisfaction levels will be identified and improved.</p> <p>2) In-house communications will be strengthened and programs for human resources development will be improved.</p>

Agriculture

Society5.0 for SDGs Agri Tech



The Power of Chemistry

Efforts to achieve sustainable agriculture



The world population is estimated to increase by about 30%, to exceeding nine billion people by 2050. As a result of economic growth, the demand for meat production has increased and it has become necessary to secure not only food for people but also crops used to feed livestock. Due to the limited area for cultivation around the world, agrochemicals are essential in terms of crop protection. They not only ensure yields but also help reduce the labor burden on farmers.

Nippon Soda considers it important to increase the production of food and livestock feed, diversify crop protection, and increase the safety of users of agrochemicals. Based on this idea, we aim to become a chemical group that contributes to addressing agricultural and food issues.

Practical use of drones in spraying agrochemicals in fields

Conventional farming methods are changing in Japan due to the aging population and declining birth rate. As a measure to address this issue, smart agriculture, which helps reduce the physical burden on farmers, has been drawing attention. Smart farming practices include the use of drones to spray agrochemicals, which not only increases the efficiency of farming activities but also reduces the risk of farmers' exposure to agrochemicals, ensuring safe spraying.

Currently, there has been increasing momentum in the market to promote the use of drones, mainly in wet rice cultivation on flat land where airborne spraying of agrochemicals is relatively effective. Nippon Soda is putting its primary focus on the use of drones on field crops, including potatoes and other root vegetables. We are also studying the practical application of drones for fruit trees that are cultivated in mountainous areas with differences in elevation and narrow plots. We will continue conducting studies on new spraying methods to contribute to promoting smart agriculture.

Development of agrochemicals that can be used for a variety of crops

Every agrochemical can be registered for use only for specific crops. If multiple crops are grown within a narrow area, it is necessary to use different pesticides depending on the crops, increasing farmers' workload and costs.

Taking advantage of its many years of experience in agrochemical development, Nippon Soda aims to develop agrochemicals that can be registered for use for a variety of crops. Expanding the scope of target applications allows for effective spraying as well as reduces the risks to nearby crops caused by accidental spraying.

In response to globally increasing awareness of environmental conservation, while placing major emphasis on the chemical pesticides business, we are also focusing on biopesticides. Biopesticides, which control and eliminate diseases and pests in crops using microorganisms and naturally occurring compounds, are suitable for use in fields where higher safety is required. As the reduction of negative impact on ecosystems is a critical issue, we will continue our efforts in developing biopesticides.

Publication of *Nisso Noyaku Yoran (Nisso Agrochemicals Handbook)* on the company's website (Japanese only)

Nisso Noyaku Yoran (Nisso Agrochemicals Handbook) published by Nippon Soda in the form of a booklet has been replaced by an online version since 2018. One of the reasons for the change is that using the booklet form prevented us from providing the most update-to-date information. Another reason is that paperless documentation is environment-friendly, and has been adopted not only by our company but also throughout the entire industry. Information in the online version is updated on the day after a new registration is made. Moreover, a list of QR codes by product is available, which can also be viewed on a smartphone.



▲ *Nisso Noyaku Yoran (Nisso Agrochemicals Handbook)*
“Easy Search on Mobile Phone” screenshot

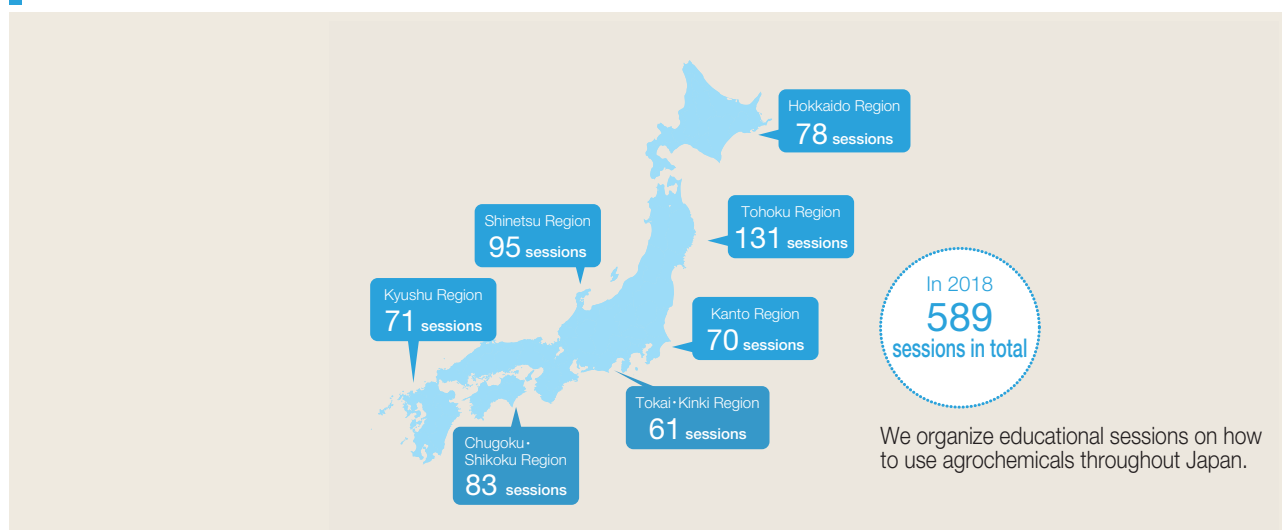
Materiality

Ensuring food safety and contributing to sustainable agriculture using agrochemicals

- (1) Increasing production of food and feed worldwide
- (2) Diversification of crop protection
- (3) Improvement of user safety (safety of chemicals and products)¹

¹ Including efforts related to chemicals and product safety among "CSR activities to protect corporate value"

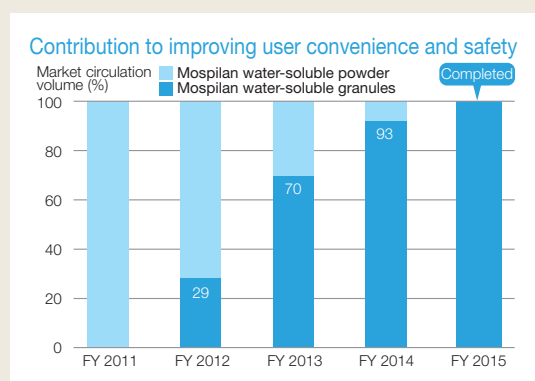
KPI (1) Seminar hosting situation



KPI (2) Situation of our initiatives: Measures to control bacterial diseases

Nippon Soda acquired three chemical agents, Agrimycin, Bactecide and Mycoshield, from Zoetis Japan in September 2018. This has allowed us to provide instructions on how to control bacterial diseases in fruit trees and vegetables. As bacterial diseases are a serious problem, concerns are high. We visit those concerned to hold briefings on control measures against bacterial diseases and research trends.

KPI (3) -1 Situation of transition to granular formula



We improve our products to enhance user convenience and safety. For example, we changed the form of our insecticide MOSPILAN, one of Nippon Soda's best-known products, from water-soluble powder to water-soluble granules. This replacement has helped improve convenience, making it easier to handle the product and reducing dust when used. Reduced dust means reduced exposure of users to the agrochemical, contributing to improving safety.

KPI (3)-2 Discontinuance of the publication of *Nisso Noyaku Yoran* (*Nisso Agrochemicals Handbook*); Easy search with QR codes

Nippon Soda discontinued the publication of the printed version of *Nisso Noyaku Yoran* (*Nisso Agrochemicals Handbook*) in 2018 as information on registered agrochemicals is constantly updated, making information in the printed version obsolete immediately after distribution. For the online version, we update the information on the day after a new registration is made.

A list of QR codes by product is available, which can also be viewed on a smartphone.

Health Care

Society5.0 for SDGs Health Tech



The Power of Chemistry

A healthy life supported by medicines



Japan is facing a population decline in addition to an accelerated declining birth rate and population aging. Nippon Soda focuses efforts on ensuring healthy lives for people in all age groups and helping all people enjoy good health through medicines. The use of NISSO HPC (hydroxypropyl cellulose) in formulating medicinal products allows us to produce medicines that are easier to swallow.

One of Nippon Soda's priority goals is to provide easy-to-swallow and effective medicines formulated by using NISSO HPC. We will develop ingredients that improve the functions of medicinal products and reduce the burden on patients when swallowing medicines so as to improve the quality of life for all people.

Improvement of access to health care

The need for medical products is increasing on a daily basis due to the increasing size of the total global population as well as population aging, which is mainly affecting advanced countries. NISSO HPC has been well received around the world as an excipient essential for formulating medicinal products. Particularly in India and China, where economic growth has been significant, as living standards have improved and sales of medicinal products have been increasing as a result, NISSO HPC has been used more frequently in a wider variety of settings. In response to the increased demand for NISSO HPC, Nippon Soda has decided to invest some five billion yen in building a new product line at Nihongi Plant (Joetsu City in Niigata).

As one of our efforts to improve access to health care in the global market, we opened a new office in India in 2017. We hired local staff and deepened communication with local pharmaceutical manufacturers with whom we otherwise seldom had contact. Through our efforts, we have successfully built up trust with them, thereby increasing the recognition and use of NISSO HPC. We are considering expanding our efforts to include China and Southeast Asia so that we can contribute to ensuring health and well-being for more people in more regions.

Application of our technology used for NISSO HPC to supplements

In Japan, Europe and the U.S., as a result of increasing awareness around healthy lifestyles and preventive health care, there have been an increasing number of people who consume health foods and supplements on a daily basis. As NISSO HPC, which is both safe and highly functional, can be used for food processing, we have provided it for use in the food market, including supplements, under the brand name CELNY for the last 14 years, mainly in Japan, Europe and the U.S.

CELNY demonstrates particularly high functionality in the formulation of natural ingredients that are difficult to process, such as turmeric, glucosamine and mulberry leaf, in producing nutritional supplements. It can incorporate large dosages of these natural ingredients, reducing the amount of supplement tablets that need to be taken in one day. We thus contribute to ensuring healthy lives for all by providing society with an environment where high-quality health foods and supplements that place a lighter burden on the body are available, as well as being economic and convenient.



Cellulose Technical Application Center established in Chiba Research Center

A new facility will be opened to perform demonstrations to customers and others and provide introductory information on formulation technology and quality control methods. The facility will start operating in October 2019 to provide information on products and identify latent needs. With an eye toward global expansion in the future, we will use this facility to publicize and promote our products to overseas customers.



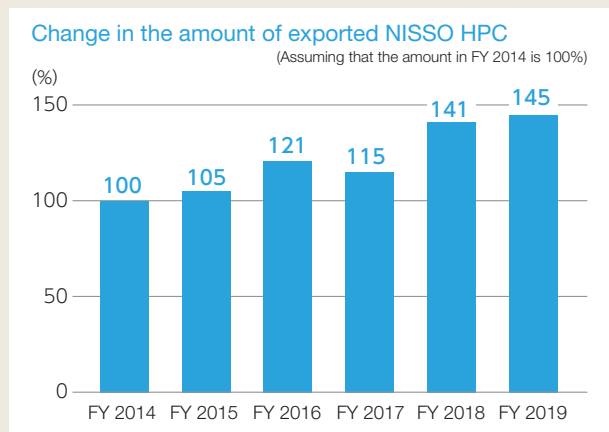
▲ New facility at Chiba Research Center (rendering)

Materiality

Contribution to providing health to all people through pharmaceuticals

(1) Easy-to-swallow, effective medicines through NISSO HPC

KPI (1) Situation of contributions



At present, NISSO HPC is exported to more than 60 countries.

Environment

Society5.0 for SDGs Envi Tech



The Power of Chemistry

Achieving environmentally sound recycling of resources



As the world's population increases, there have been growing concerns over issues related to water resources, which are essential for maintaining comfortable living standards, and adverse effects caused by waste. Nippon Soda places emphasis on ensuring a stable supply of water resources and reducing environmental impact of waste as materiality issues to be addressed. As a chemical company, we ensure hygienic management of water and reduction of substances that have an adverse impact on the human body in order to fulfill our responsibility and contribute to society. In our efforts in sustainable plant protection, we provide an agent for preventing pine tree withering to contribute to the protection of pine forests.

To meet a variety of needs for safe and secure water

Public demand for a safe and secure water supply to support everyday life have been increasing not only in Japan but also in various regions around the world. Nippon Soda's NISSO HI-CHLON is an internationally well-known brand of solid chlorine agent that has been contributing to the management of water hygiene for more than 50 years since its launch in various regions around the world. In Japan, it has been mainly supplied to schools as a water disinfectant for swimming pools. In the Middle East, which is in the tropical dry climate zone, the demand for solid chlorine agents with high stability is increasing. The amount of water that is disinfected and sterilized using NISSO HI-CHLON is about 23 million tonnes per year. More efforts will be focused on accelerating the global supply of this product, mainly in Europe and North America, to contribute to ensuring comfortable lifestyles for people in various regions.

The market for MITAGEN, an enzyme-microbe preparation, has also been expanding, not only in Japan but also in countries such as China, where there has been increasing awareness around reducing the environmental impact of industrial wastewater. Nippon Soda will continue to respond to various needs for safe and secure water with NISSO HI-CHLON and other products.

Reduction of environmental impact in wider regions

About 34 million tonnes of waste is treated annually at incineration plants nationwide, generating about 1.3 million tonnes of fly ash. Nippon Soda's HIDION is a heavy metal stabilizer used to treat fly ash from waste incineration. By mixing the agent into fly ash, the ash is immobilized, preventing lead and other heavy metals from scattering and liquating. In Japan, insolubilization treatment of heavy metals, mainly lead and cadmium, contained in fly ash is legally required. HIDION is highly regarded as an agent for insolubilization treatment. At present, it is sold mainly in Japan. The domestic market, however, is expected to shrink due to various reasons, such as population decline. In response, we are considering expanding sales of HIDION globally. While the quality of HIDION is highly appreciated in China and other countries, there are also issues that should be addressed locally, including costs and technical support, such as mixing before use. We will continue to conduct surveys on these issues so that we can contribute to reducing the environmental impact of waste around the world.



Green Guard: an agent for protecting pine trees, a symbol of Japan's beautiful natural landscape

Pine trees, an iconic symbol of the Japanese landscape, have played important roles in communities as sand breaks and windbreaks. Recently, however, pine forests have been shrinking due to pine wilt disease, which has become a nationwide concern. Green Guard, an agent for preventing pine wilt disease marketed by Nisso Green Co., Ltd., our subsidiary, has been used for business purposes such as public works, contributing to the greening of streets and parks as well as landscape conservation. We have held workshops on plant protection, mainly to local municipalities, which have been attended by many customers.



▲ Injection of Green Guard NEO into a pine tree trunk

Materiality

Contribution to ensuring the environmentally sound recycling of resources using chemistry (technical competence)

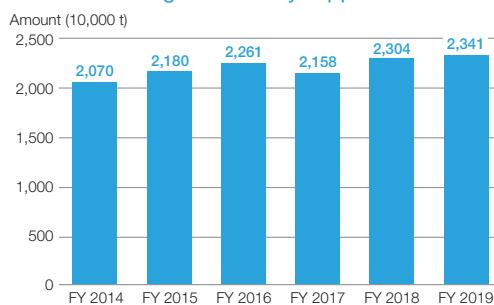
- (1) Steady supply of water resources
- (2) Reduction of environmental impact caused by waste

Contribution to sustainable plant protection

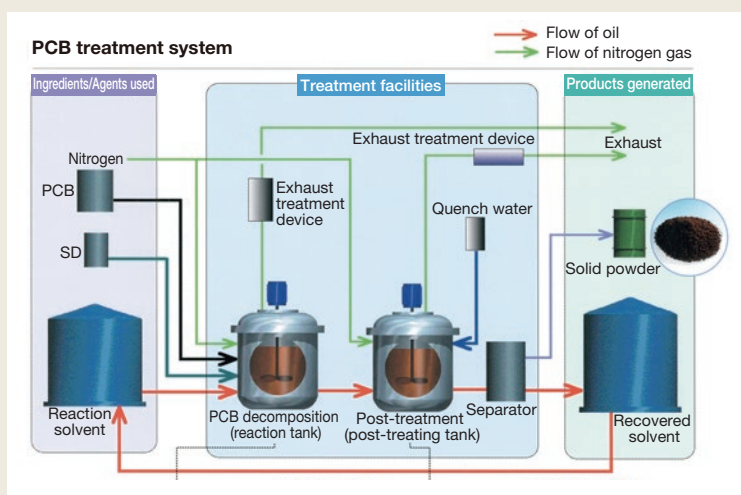
- (1) Protection of precious trees such as pines from harmful insects

KPI (1) The amount of supplied water

The amount of water that can be treated with solid chlorine agents sold by Nippon Soda



KPI (2) Reduction of environmental impact of waste

| PCB detoxification treatment system

Simply reacting chlorine atoms (Cl) in PCBs with sodium (Na) generates a detoxified substance (biphenyl) and salt (NaCl).

Nippon Soda's technology can treat PCB contamination caused in the past and allows detoxified oil to be used as fuel, thus contributing to the environmentally sound recycling of resources.

KPI (1) Situation of our initiatives

In November 2017, we completed acquisition of a plant health business from Zoetis Japan, including Greenguard, an agent for preventing pine tree withering. After assessing the effects of Greenguard, which is designed to be injected into pine trunks, we have concluded that it can help reduce environmental impact. Based on this result, we have added contribution to greening/landscape preservation as a new materiality issue from FY 2019 onward.

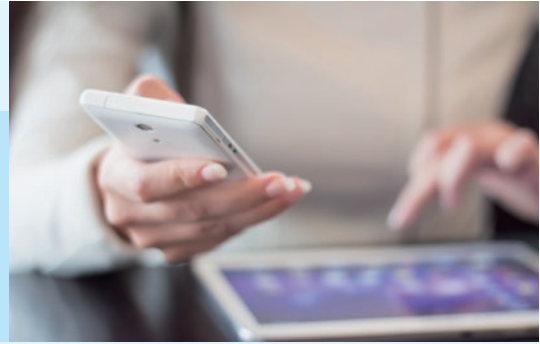
Information

Society5.0 for SDGs Infra Tech



The Power of Chemistry

The potential of high-performance materials



Thanks to high-speed Internet, anybody can now send and receive information. Tablet PCs are used in educational settings and senior citizens carry a smartphone. Products featuring universal design have become available so that a diverse range of people can use them comfortably. One of Nippon Soda's priority activities is to provide high-performance materials friendly to people and the environment in order to contribute to the spread of information terminals that can easily be used by anyone. We supply materials that support the development of information and electronic technology with the aim of achieving business success as well as contributing to the development of the information society.

Copper clad laminates for next-generation communications

The next-generation or 5G mobile communication network, which is expected to be put to practical use in 2020, will enable speedier web conferences and video transmission.

Base stations that receive radio waves from satellites in space need to avoid high frequencies. For copper clad laminates that are used for these base stations, the technology of Nippon Soda's NISSO-PB, which features a low dielectric constant and high insulation in high-frequency regions, is applied. This is one example of how Nippon Soda's functional chemicals are essential materials for advanced information and telecommunications.

We are currently placing emphasis on providing technical services in Japan and overseas to provide information on the potential applications of our materials. The goal of these efforts is to meet demand not only in Japan, Europe and the U.S., but also in emerging markets. We will make ongoing efforts to identify ever-changing public needs and to supply high-quality and environmentally friendly materials in order to support industry and technological innovation.

VP-Polymer, which supports the foundation of a digital society

As a result of the rapid evolution and popularization of smartphones, the demand for semiconductors has been increasing every year. To draw an electric circuit diagram on a semiconductor substrate, an agent called a photoresist is used. Nippon Soda's VP-Polymer, an ingredient in photoresists, can contribute to the manufacture of semiconductor structures, which requires advanced microfabrication techniques. About 20 years ago, Nippon Soda successfully commercialized VP-Polymer before any other company in the world by using a proprietary living anionic polymerization technique.

We now offer different brands that meet the different needs of photoresist manufacturers in Japan and overseas. Nippon Soda's VP-Polymer occupies the highest share among KrF photoresists for semiconductors. Regarding functional polymers, including VP-Polymer, as growth drivers, we are expanding the functional polymer business. Efforts will be made to respond to further increasing demand for functional polymers as well as to offer new polymer materials that meet customer needs.



Increased production capacity for VP-Polymer

As there has been increasing demand for larger-capacity and higher-speed semiconductors, the need for KrF photoresists is increasing. As a result, increasing demand for VP-Polymer is expected into the future. To ensure a constant supply, Nippon Soda increased the production capacity of VP-Polymer manufacturing facilities by 50% at Chiba Plant (Ichihara City, Chiba) in April 2018. The reliable quality of VP-Polymer will continue to support the foundation of a digital society.



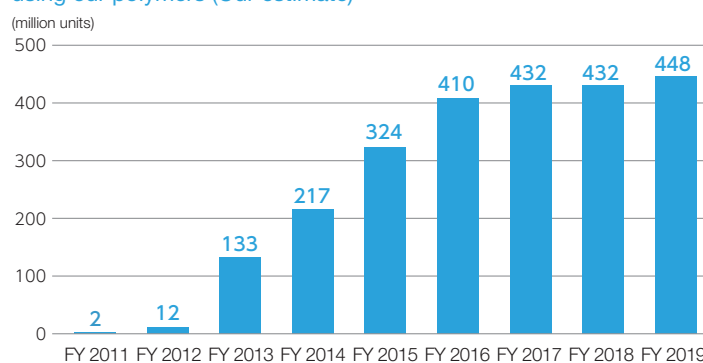
Materiality

Contribution to the development of information equipment friendly to the environment and people by supplying high-function materials

(1) Supply of high-function materials friendly to the environment and people

KPI (1) Number of portable communication terminals using our products

Shipments of portable communication terminals using our polymers (Our estimate)



Development of the next generation of human resources

Human resources development to help all employees maximize their abilities



Emphasis on experiential learning at Nisso Takaoka Academy

The Nisso Takaoka Academy was opened in FY 2016 at Takaoka Plant to provide systematic training programs for newly employed manufacturing personnel. Programs are designed to develop employees who can transfer technologies and maintain the safety and high productivity of manufacturing workplaces. Training is mainly provided to personnel newly employed at all group companies in Japan.

The emphasis of the training is on experiential learning. With their safety assured, participants can experience falling from a high place, water and gas leaks resulting from loose bolts, and other dangerous situations. Participants are provided with opportunities to experience dangers and failures that can be fatal and thus, will not experience them during on-the-job training programs. The valuable experience they gain through the training helps increase their awareness of the need for accuracy and safety in their work, which is reflected in their activities in the workplace.

A new three-year plan to expand educational facilities and equipment used for safety education through actual experience will start to be implemented in FY 2020. The program of safety education through actual experience will be provided to employees in addition to newly employed manufacturing personnel to ensure safety awareness among more employees. The Nisso Takaoka Academy will continue to strengthen human resources.

> [Link to “Schematic diagram of the Nippon Soda’s human resources training system”](#)



Diverse human resources as the source of competitiveness

Nippon Soda believes that having a workforce made up of people with diverse values is essential for generating new innovations and increasing global competitiveness. In this context, we recognize the promotion of diversity as an important management strategy. Efforts to promote diversity include transformation of our personnel systems to make full use of our diverse human resources, improvement of the corporate culture and work environment, and implementation of various other basic support systems. Through these efforts, we aim to become a company where motivated, competent employees can enjoy working and continue to grow and develop regardless of gender, age, nationality, etc. We will also develop training systems for a medium- to long-term period, including a succession plan, with particular emphasis on developing the next generation of workers. With a focus on the next generation of Nippon Soda employees, we will develop a system and environment where individuals with different values can engage in friendly competition with one another to improve themselves, regardless of their track record, and improve the workstyle added value for employees, in order to maximize diverse sets of competencies. Emphasis is also being placed on employing both new graduates and mid-career professionals. Efforts in this regard will include an update of our recruitment website and inviting employees to appear as speakers at explanatory sessions, with the aim of attracting the attention of a large number of people. We will continue our efforts to create a work environment where all employees can maximize their abilities and play an active role as well as develop competent human resources.



Update of the recruitment website

We updated our recruitment website in March 2018. Seeking to attract people who appreciate our business activities and hope to grow together with our company, we publish our message under the slogan of “As long as there is ‘Soda’ in the world.” The website offers information on the value we offer to society through our business activities and how we contribute to society, as well as comments from employees from different workplaces.



Materiality

Development of the next generation of human resources

(1) Educational system to maintain safety standards in the future

KPI (1) Situation of human resources development

Details of the Nisso Takaoka Academy

■ Results in May 2018

36 participants (Nippon Soda Co., Ltd.: Nihongi Plant, Takaoka Plant, Mizushima Plant, Chiba Plant, Takaoka Manufacturing Plant of Nisso BASF Agro Co., Ltd., NSE Hokuriku Office, NMC Aizu Plant, Isohara Plant of Nisso Fine Co., Ltd., Iwaki Manufacturing Department of Isohara Plant of Nisso Fine Co., Ltd.)

| Main training programs for safety

- Special safety education is used to supplement training for handling a lack of oxygen, case studies of disasters, operation of forklifts, and how to handle steam, organic solvents, and electric tools.
- Education on plant maintenance and instrumentation is used to teach knowledge of machine maintenance, P&IDs, electricity, instrumentation, and measurement.
- Education for on-site work teaches the proper usage of tools and equipment, how to install and remove flanges, airtightness testing of pipes, and how to assemble and disassemble pipes.
- External education is employed to teach how to handle respirators, practical safety education with actual experience of hazards associated with working at heights, slinging work, rotating machines, and electricity.

| Objective of the session

To acquire basic knowledge and learn about basic machine structure so as to improve safety awareness



Environmental Protection

With the goal of minimizing the impact of our business activities on the environment, the Nippon Soda Group is engaged in environmental protection with a focus on saving energy and resources, reducing and recycling waste, and reducing emissions of harmful substances.

Basic concept

- Continuing efforts to prevent environmental pollution, complying with laws and regulations, and promoting other environmental activities
- Reduction of environmental impact associated with business operations (prevention of global warming, and reduction in waste generation and waste to landfill)
- Development of products and processes with less environmental impact
- Adoption of environmental management systems (EMSs); Reduction of energy consumption, while maintaining productivity

Environmental protection

Responses to climate change issues

Efforts to prevent global warming are critical. Nippon Soda participates in the Commitment to a Low Carbon Society, a voluntary action plan promoted by the Japan Business Federation (Keidanren). Under the action plan, we are promoting energy saving to achieve the reduction targets for CO₂ emissions in FY 2021.

● Reduction of energy consumption and greenhouse gas emissions

Our efforts to improve our energy use per unit of production include the replacement of old and obsolete equipment with highly efficient models, the streamlining of production processes and reduction of energy consumed, and the implementation of power-saving measures.

We will continue our efforts from various approaches to enhance energy saving and reduce emissions of greenhouse gases.

● Use of renewable energy

The Nihongi Plant draws its industrial water from a river to generate electricity hydraulically using the difference in elevation when returning excess water to the river. Since the establishment of the hydroelectric facility in 1940, generated electricity has been effectively used for production activities at the plant. We will continue to carefully maintain the power station for the continued generation of renewable energy.



From the hydroelectric power station to the water tank



Hydraulic power generation at Nihongi Plant

● Promotion of energy saving by the Logistics Department

As a specified consigner designated under the Act on the Rational Use of Energy (Energy Saving Act), Nippon Soda submits an annual report and an annual plan to the Ministry of Economy, Trade and Industry as well as implements measures to reduce energy use per unit of production.

Nippon Soda has been making efforts to improve efficiency and reduce environmental impact in terms of logistics through modal shifts, reducing the number of trips by using larger-sized shipping containers, and adjusting logistics distribution routes. For our modal shift efforts, we were certified in 2013 as an “Eco Rail Mark” company.



Effective use of resources and reduction of industrial waste

Nippon Soda participates in the Voluntary Action Plan on the Environment promoted by the Japan Business Federation (Keidanren). Under the action plan, we promote industrial waste reduction to achieve the target amount of reduction in the final disposal of industrial waste as landfill.

● Proper management of industrial waste and reduction of the final disposal of industrial waste to landfill

As one of its efforts to help build a recycling-based society, Nippon Soda reduces industrial waste emissions from a long-term perspective and, at the same time, promotes the recycling of industrial waste items and implements other measures to reduce the final disposal amount of industrial waste going to landfill.

● Zero emissions

Nippon Soda has achieved zero emissions* for eight consecutive years.

(*) "Zero emissions" is the state wherein the amount of industrial waste disposed finally to landfill is less than the amount of transported industrial waste, which Nippon Soda defines to be 5% or less.

● PCB waste

Each Nippon Soda site properly stores and manages condensers, transformers, high-pressure mercury lamp ballasts and other devices that contain PCBs in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, which was revised in 2012.

Condensers, transformers and other devices containing high levels of PCBs are registered with the Japan Environmental Storage & Safety Corporation (JESCO) for treatment. Devices containing a small amount of PCBs (5,000 mg/kg or less) are properly treated at a detoxification treatment plant certified under the Waste Disposal and Public Cleansing Act.

Atmosphere and water area protection

Nippon Soda implements various measures to protect the atmosphere and water quality, such as measures to reduce emissions of chemical substances specified by the PRTR Law and toxic substance emissions to water, in accordance with the Air Pollution Control Act, the Water Pollution Prevention Act, and the latest regulatory trends.

● Reduction of chemical substances specified by the PRTR Law

Nippon Soda takes measures to reduce emissions to the environment of Class 1 chemical substances specified by the Pollutant Release and Transfer Register (PRTR) Law.

● Reduction of emissions of harmful substances to the atmosphere

Twelve chemicals among those categorized as priority substances under the Air Pollution Control Act are designated as voluntarily controlled chemical substances by the Japan Chemical Industry Association (JCIA). Of the 12 chemicals, our company currently deals with the following six substances: chloroform, dichloromethane, 1,2-dichloroethane, ethylene oxide, 1,3-butadiene and benzene. We are implementing measures to reduce the emissions of these six substances.

● Reduction of air pollutants emissions

Nippon Soda promotes the reduction of emissions of sulfur oxide (SOx), nitrogen oxide (NOx), and soot and dust. Emissions of these substances from stationary sources are controlled under the Air Pollution Control Act.

● Actions to conform to the Fluorocarbons Emission Control Act

To comply with the Fluorocarbons Emission Control Act, we implement periodic inspections by those with expertise, simplified inspections by the Inspection Manager, measures to prevent fluorocarbon emissions, and other required activities at one worksite at a time.

● Reduction of emissions of harmful substances to water

Nippon Soda has made its voluntary standards stricter than the national regulatory values and the standard values agreed with local municipalities. Based on these strict values, we manage water quality through the monitoring of pollutants and purification at the wastewater treatment plant. Through these efforts, we have reduced emissions of BOD¹ and COD².

We will continue our efforts to strictly control and maintain water quality.

1. BOD (biological oxygen demand): The amount of oxygen consumed by organic substances in water when they are decomposed by microorganisms. It is used as an indicator of the level of contamination of rivers by organic substances.
2. COD (chemical oxygen demand): The amount of oxygen required to oxidize organic substances in water. It is used as an indicator of water quality.

[> Environmental Data](#) 

Preservation of biodiversity

Nippon Soda has taken measures to reduce environmental impact, use water resources effectively, and prevent the pollution of air, water, soil and others mainly in areas where our production sites are located. In recent years, we have included biodiversity preservation in our priority issues and, in order to address this issue, each worksite has been implementing viable activities.

● Breeding of *medaka* originating from the Sakawa river system (Odawara Research Center)

Medaka was a common species in the past in paddy fields, rivers and ponds throughout Japan. Recently, however, its population has drastically decreased due to environmental change. The *medaka* is now classified by the Ministry of the Environment as a Category II endangered species.

The only natural habitat of *medaka* in Kanagawa Prefecture is in Odawara City. *Medaka* inhabiting this area are precious in that it has been proven that their genetic composition has hardly changed from the past to the present. Odawara City in 1999 launched the “*Medaka-no Otosan Okasan Sato-oya Seido*” (“*Medaka Foster-parent Program*”), under which the city has been promoting conservation of *medaka*.

Odawara Research Center joined the program in 2017 and has been engaged in breeding *medaka*. Thanks to its efforts, the population has steadily increased to numbers sufficient to allow offspring to be returned to Odawara City this summer.



Breeding of *medaka* of the Sakawa river system

● Supporting the protection of himekomatsu, a critically endangered species (Chiba Plant)

Chiba Plant launched the “Himekomatsu Supporter” project to protect himekomatsu, an endangered tree species in Chiba Prefecture.

The number of himekomatsu, a scientifically significant species, has rapidly decreased since the 1970s on the Boso Peninsula due to pine wilt disease. Now only about 80 adult trees remain. To make matters worse, hardly any young trees are growing wild and it has become apparent that natural regeneration is hampered by various factors. It is feared that the population of himekomatsu trees in Chiba Prefecture may be endangered. Chiba Plant will constantly implement efforts within its respective capacities.



Himekomatsu

● Midori-no Satoyama Hozen Mori-zukuri (woodland and forest conservation) project (Takaoka Plant)

Two staff members of Takaoka Plant voluntarily participated in the Midori-no Satoyama Hozen Mori-zukuri (woodland and forest conservation) Project. They cleared away undergrowth as part of a tree planting project.

Goals for FY 2019 and results (KPIs)		Achievement levels	
		◎: ≥ 90%	○: 80-90% △: 60-80% ×: ≤ 60%
1.	Environmental Issues: Goal: Zero events		Achievement level ×: Violation of the wastewater agreement, etc. (zero event at Nippon Soda, one event at a Group company)
2-1.	Energy use per unit of production: Goal: Annual improvement of 1%		Achievement level ◎: 2.0% reduction
2-2.	Energy use per unit of transportation: Goal: Annual improvement of 1%		Achievement level ×: 7.8% increase
3.	Reduction in greenhouse gas emissions: Goal: Annual reduction of 1%		Achievement level ◎: 8.6% reduction
4-1.	Waste (amount of final disposal as landfill): Goal: Annual reduction of 3%		Achievement level ×: 20% increase (Increased waste glass due to relocation of research center)
4-2.	Waste (continuation of zero emissions): Goal: 5% or less		Achievement level ◎: 1.4%
5.	Emissions of harmful substances into the atmosphere: Goal: Annual reductions of 37.5% from the fiscal year 2015		Achievement level ◎: 55% reduction
6.	Reduction in impact on biodiversity and ecosystems		Achievement level ◎: Nurturing of endangered species at two sites

Efforts for the future

▶ We will make continuous efforts to minimize the impact of our business activities on the environment. Our efforts to protect the environment will include energy saving, resource saving, reduction of greenhouse gas emissions, preservation of biodiversity, and reduction of the impact on ecosystems.

Process Safety & Disaster Prevention/BCP

The Nippon Soda Group places emphasis on ensuring process safety and preventing disasters in order to prevent major accidents at all plants and to continue safe and stable production. We are also constantly improving our business continuity plan (BCP) to make sure we can keep providing products and services.

Basic concept

- Periodic inspections, ongoing repairs and renovations, and training for operators at each manufacturing site
- Improvement of our risk management system through emergency drills and education to prepare employees for possible accidents and disasters
- Safety reviews by our internal experts to verify safety when facilities are constructed or renovated; Regular diagnoses of our disaster prevention capability conducted by external specialists
- Regular review and improvement of our business continuity plan (BCP), which is designed to help us be prepared for natural disasters such as large-scale earthquakes and other emergencies that could result in extensive damage

Process safety and disaster prevention

Risk management

● Risk assessment of process safety and disaster prevention

We conduct risk assessments of facilities, machines and manufacturing processes. Identified risks are prioritized and, accordingly, measures to ensure the safety of facilities are implemented and inspections are conducted.

● Establishment of an emergency risk management system

We give the highest priority to preventing accidents and disasters. To prepare for unavoidable accidents and disasters, we have established an emergency risk management system and conduct periodic drills and exercises to maintain the system in a sound condition.

● Standards on Emergency Response

The Standards on Emergency Response have been developed to ensure prompt and appropriate communication, response and instruction in the event of a disaster or accident. The Standards on Emergency Response are periodically reviewed and revised. Their effectiveness is confirmed in training drills.

Safety management

● Safety audit to confirm the safety of plants

To ensure the safety of processes in the construction and renovation of facilities, the Nippon Soda Group undergoes safety reviews and audits by managers and internal experts for the inspection of facilities and operations in terms of safety, work environment, quality and other factors.

Facilities of group manufacturing companies undergo periodic CSR audits to assess the management conditions of manufacturing facilities. Assessment results have been incorporated into activities to improve process safety and disaster prevention.

Safety audits prior to trial operation by the Head Office

1) Chiba Plant May 8, 2018

Safety audit before trial operation of the facility to be constructed to increase production of functional polymers for semiconductors

As a result of document and onsite audits, nine safety issues were identified. After all of these safety issues were addressed, the trial operation was completed.



2) Nihongi Plant September 10, 2018

Safety audit before trial operation of the facility for manufacturing industrial chemical products after construction for labor saving

As a result of document and onsite audits, seven safety issues were identified. After all of these safety issues were addressed, the trial operation was successfully completed.



3) Takaoka Plant September 18, 2018

Safety audit before trial operation of the agrochemical facility after construction for streamlining

As a result of document and onsite audits, 20 safety issues were identified and all of them were addressed. During the trial operation, it was revealed that some adjustment work was necessary. The trial operation will be completed after the adjustment work.



4) Nihongi Plant September 20 and October 22, 2018

Safety audit before trial operation of the foundation of the plant for chlor-alkali business after improvement work

It was decided to conduct this construction work during the periodic maintenance of existing facilities. Therefore, a document audit was performed in the first half of the work and onsite audit was performed near its completion. As a result of these audits, 18 safety issues were identified. After all of these safety issues were addressed, the trial operation was successfully completed.



5) Aizu Plant of Nisso Metallochemical January 31, 2019

Safety audit before trial operation of the boiler after fuel conversion and renovation work

As a result of document and onsite audits, 12 safety issues were identified. After all of these safety issues were addressed, the trial operation was successfully completed.



6) Aizu Plant of Nisso Metallochemical March 19, 2019

Safety audit before trial operation of the manufacturing building after renovation work to address environmental issues

As a result of document and onsite audits, 21 safety issues were identified. After all of these safety issues were addressed, the trial operation was successfully completed.



● Diagnosis of disaster prevention capabilities by a third party

The disaster prevention capabilities of Nippon Soda and manufacturing group companies are diagnosed by SOMPO RISK MANAGEMENT & Health Care Inc.

Education and drills for disaster prevention

Nippon Soda provides employees with various kinds of educational and training programs on process safety and disaster prevention for different work assignments to help them acquire knowledge and skills to ensure process safety.

To achieve the target of “no major accidents at facilities,” we will continue to promote efforts to improve activities that are aimed at ensuring process safety and disaster prevention.

● Group training

Each worksite and each department periodically provide their staff members with education and training based on the Action Plan to maintain CSR. For newly employed personnel assigned to manufacturing jobs, the Nisso Takaoka Academy provides educational programs dedicated to new employees. These educational programs include hands-on training on safety and basic on-site work.



“Nisso Takaoka Academy” hands-on learning about electric leaks (On May 9-18, 2018)



“Nisso Takaoka Academy” Lecture (On May 9-18, 2018)



Lifesaving training (Nihongi Plant, May 22, 2018)



Water flow drill on the premises
(Chiba Research Center, June 21, 2018)



Training on how to wear a respirator
(Takaoka Plant, February 7, 2019)



Evacuation drill (Chiba Plant, March 18, 2019)

● Disaster prevention system involving local communities

Each Nippon Soda site implements regular disaster drills, which include drills conducted in cooperation with other nearby plants and local governments. These drills are conducted by taking into account the environment and other characteristics unique to each region so that they can be applied in real settings.



Emergency drill
(Odawara Research Center, May 22, 2018)



Emergency drill/Spring (Nihongi Plant, June 11, 2018)



Emergency drill/Autumn
(Nihongi Plant, November 13, 2018)



Emergency drill (Mizushima Plant, November 20, 2018)



Drill to address environmental abnormalities (Takaoka Plant, November 28, 2018)



Emergency drill (Chiba Plant and Chiba Research Center, February 21, 2019)



Emergency drills conducted (FY 2019)

	First half (dates of drills conducted)	Second half (dates of drills conducted)
Nihongi Plant	Spring plant emergency drill (June 19) Drill for reporting a high-pressure gas leak to the disaster prevention office to prevent disasters (July 18) Emergency communication response training (August 28)	Autumn comprehensive plant emergency drill (November 13) Drill for reporting a high-pressure gas leak to the disaster prevention office to prevent disasters (February 21)
Takaoka Plant	Emergency communication drill at night (April 24) Drill to address environmental abnormalities (May 30) Spring comprehensive plant emergency drill (June 5) Emergency call drill at night [actual dispatch] (August 8) Drill to practice calling 119 (every month)	Fire drill (October 15, 16, 19 and 22) Autumn comprehensive plant emergency drill (November 12) Drill to address environmental abnormalities (November 28) Joint drill with Hokusan Koatsu Gas (November 29) Emergency communication drill at night (December 12) Office emergency drill (March 19) Workplace communication drill at night (March 19) Fire drill (March 11, 12, 15 and 18) Drill to practice calling 119 (every month)
Mizushima Plant	Power outage drill (June 19) Toxic substance (NaOH) spill drill (September 13) Emergency drill for accidents during product transportation, conducted jointly with Mizushima Rinkai Tsuun Co., Ltd. (September 19)	Joint emergency-preparedness drill (using diagrams) (inside the plant) (November 9) Joint emergency drill (with public firefighters using diagrams) (November 20) Toxic substance (HCN) leak drill (December 12) New Year's firefighting training by the Mizushima Plant Disaster Prevention Team (January 9) Toxic substance spill drill (HCN poisoning case) (February 20) Toxic substance (hydrocyanic acid) leak drill at night (March 20)
Chiba Plant	Comprehensive plant emergency drill (May 22) (Joint worksites) Table-top drill (simulation) for on-site leaders, etc. to simulate the operation (July 26) Disaster prevention drill to be prepared for disasters at night and on weekends and holidays (August 27) (Chiba Plant Disaster Prevention Team alone) Comprehensive plant emergency drill (September 26) (Joint worksites, Chiba Plant Disaster Prevention Team alone) Emergency communication drill (April 24, June 12, August 6, September 6)	Joint drill with public firefighters and a joint disaster response unit/ water flow drill (October 22 and 24) Drill to address environmental abnormalities (October 31) Joint marine emergency field training (November 7) Disaster prevention drill to be prepared for disasters at night and on weekends and holidays (February 21) (Joint drill with public firefighters, a joint disaster response unit, and the Chiba Plant Disaster Prevention Team) Evacuation drill (to respond to toxic gas leakage, March 18) Emergency communication drill (October 26 and November 1)
Odawara Research Center (Odawara)	Comprehensive emergency drill (May 22)	Department emergency drill (five departments in total, October to December)
Odawara Research Center (Haibara)	Emergency drill (June 13)	Comprehensive emergency drill (November 28)
Odawara Research Center (Bandai)	—	Emergency drill (November 21)
Chiba Research Center	Comprehensive plant emergency drill (May 22, September 26) Table-top drill (simulation) for leaders etc. to respond to an emergency (July 26) Disaster prevention drill to be prepared for disasters at night and on weekends and holidays (August 27) Emergency communication drill (April 24, August 6) Research Center emergency drill (table-top drill: September 19)	Emergency communication drill (December 11) Comprehensive plant emergency drill (February 21) Evacuation drill (chlorine gas leak, March 19)
Head Office	Safety-confirmation drill (August 22)	Training to establish the Head Office Disaster Response Headquarters (February 20)

Accidents at facilities (fires, etc.)

The following is a summary report on two fires that occurred in FY 2019:

1. Aizu Plant, Nisso Metallochemical Co., Ltd.

- (1) Brief description: On September 7, 2018, a fire broke out while industrial waste that was to be incinerated at the industrial waste pretreatment pit was being mixed using heavy equipment. The fire was immediately extinguished by sprinklers and reported to the public fire department.
- (2) Human casualties: None
- (3) Damage to facilities: One of the detectors of the fire alarm system was broken.
- (4) Cause: The surface of the concrete in the pit where the pretreatment was conducted had peeled off and a steel reinforcement part was exposed. This exposed part touched the metal part of the heavy equipment's bucket and sparked, igniting the industrial waste that was being mixed.
- (5) Recurrence prevention:
 - 1) The concrete pit was repaired. It was decided to check for any abnormalities, such as exposed reinforcement steel in the pit, before mixing waste.
 - 2) A hard rubber pad usually used on the tracks of construction machinery was attached to the tip of the bucket of the heavy equipment to prevent the occurrence of sparks.
 - 3) In addition to existing sprinklers for fire extinguishing in an emergency in the pit, mist sprayers were installed to constantly spray mist during work in order to prevent ignition and to control dust.

2. Chiba Plant, Nippon Soda

- (1) Brief description: On March 28, 2019, a fire occurred during the cleaning of equipment in the manufacturing facility for functional chemicals. After filling the tank with water-based solvent, the worker opened an air vent valve to fill the liquid feeding pump with the solvent. While venting the air, the pump casing gasket was torn at the bottom, from which a fire started. The valves in front of and behind the pump were closed immediately and the fire was extinguished with a powder fire extinguisher. The accident was then reported to the public fire department.
- (2) Human casualties: One (second-degree burn on the right lower part of the face)
- (3) Damage to facilities: One pump was damaged.
- (4) Cause: After the completion of reaction, more hydrolyzable ingredient than usual remained, which accumulated and was attached to the inside of the pump. With the specified composition of the water-based solvent that was used for cleaning, a water layer formed. The water layer (with a water content of 68.5%) was drawn into the pump and the attached and accumulated hydrolyzable ingredient reacted rapidly to produce cracked gas, raising the internal pressure and breaking the gasket, from which gas blew up. It is considered that the heat of this reaction and static electricity caused the fire.
- (5) Reoccurrence prevention:
 - 1) The process management method was changed in such a way that the amount of hydrolyzable ingredient that remains after the completion of reactions does not exceed the normal amount.
 - 2) The composition of the water-based solvent used for cleaning was changed as follows: The water content was reduced to the level where the solvent does not separate into two layers and the hydrolyzable ingredient is deactivated slowly.

Business Continuity Plan (BCP)

● Basic concept of the BCP (business continuity plan)

In the event of a natural disaster such as a large-scale earthquake or other crises that can result in serious damage to our company's worksites, our social responsibility is to ensure the safety of local residents, full-time and temporary employees and affiliate company employees. Based on this concept, the principles of the BCP are defined as follows:

- ① The highest priority is placed on checking on the status and ensuring the safety of Nippon Soda's own employees, affiliate company employees and temporary employees and their families, and ensuring the safety of residents in communities where the company's business sites are located.
- ② The consciousness of serving the public and community is shared among all personnel throughout the company.
- ③ Efforts are focused on protecting the safety of the affected Head Office, plants, research centers, branch offices and sales offices.
- ④ Measures should be taken to establish a system that allows Nippon Soda's employees, affiliate company employees and temporary employees who are engaged in ensuring safety and security to act flexibly and at their discretion according to the circumstances.

● Continuation of supply of products according to customer needs

The BCP of Nippon Soda aims to ensure, in the event of a natural disaster or other crisis, safety as well as the supply of products to customers as requested. To achieve this objective, improvement is accelerated using the PDCA cycle.

Efforts for business continuity

The figure below shows a flowchart of the procedures for continuing business operations.



Disasters and risks covered by the BCP

- | | |
|--|---|
| ① Earthquake | ⑪ External communication failure |
| ② Typhoon | ⑫ Computer system failure |
| ③ Heavy rainfall, flood, tsunami, heavy snowfall | ⑬ Emergency at water discharge destinations |
| ④ Storm, tornado | ⑭ Suspension of the supply of raw materials (including logistics) |
| ⑤ Volcanic eruption | ⑮ Suspension of product distribution |
| ⑥ Abnormal conditions of facilities | ⑯ Occurrence of quality problems |
| ⑦ Influenza, infectious diseases, etc. | ⑰ Terrorism |
| ⑧ A large number of affected employees (their houses and families) | ⑱ Nuclear power accident |
| ⑨ Electric power outage | ⑲ Missile attack |
| ⑩ Suspension of industrial water supply | ⑳ Others |

Goals for FY 2019 and results (KPIs)	Achievement levels ◎: ≥ 90% ○: 80-90% △: 60-80% ×: ≤ 60%
1. Major accidents at facilities: Goal: Zero accidents	Achievement level ×: One fire event at Nippon Soda; one fire event and at a Group company
2. Maintenance and improvement of the BCP	Achievement level ◎: The 8th version was distributed and the 9th version was prepared.

Efforts for the future ▶ We will continue our efforts to achieve the target of “no major accidents at facilities” through the constant improvement of safety management, risk management, education, disaster prevention drills and other measures. We will also improve and review the BCP in a systematic manner.

Occupational Safety and Health

To provide employees with a workplace environment where they can enjoy working, the Nippon Soda Group is implementing various measures to achieve and maintain the goal of no workplace accidents and promote employees' health.

Basic concept

- Introduction of an occupational safety and health management system (OSHMS); Implementation of risk assessments
- Constant development, implementation, review and improvement of measures (PDCA) to ensure safe and healthy workplaces with the aim of achieving the goal of zero occupational accidents
- Provision of health guidance based on medical examination results and implementation of measures to reduce incidents of personal injury or illness to help employees maintain and improve their health
- As mental health care services, performance of stress tests and provision of consultation services by qualified mental health specialists; Establishment and operation of a system to provide appropriate care

Occupational safety and health

Implementation of risk assessment

Under the occupational safety and health management system (OSHMS), we implement the PDCA cycle to achieve predetermined goals and improve performance systematically.

To integrate OSHMS and RC activities effectively, we also place emphasis on OSHMS risk assessment. Each office (plant or research center) periodically identifies and assesses occupational accident risks and, if they are not permissible, takes measures to reduce them to permissible levels.

Efforts to prevent occupational accidents

● Activities to reduce occupational accident risks

With our main focus on activity plans under the OSHMS, we identify *hiyari-hat* (near miss) accidents to reduce risks. We also share information on accidents that have occurred at other business sites and companies to help reduce risks. When new plants are constructed and existing ones extended, a safety review and audit are required. Before starting test operation, we reduce accident risks to permissible levels.

● Efforts to prevent human error by workers

The 5Ss—*seiri* (sorting), *seiton* (setting-in-order), *seiso* (shining), *seiketsu* (standardizing) and *shitsuke* (sustaining the discipline)—and the 4 Safety Cycles (KY¹ before starting operation → Pointing and vocalizing during operation → Mutually directing attention during operation → Identifying *hiyari-hat* [near miss] accidents after operation) are the fundamental concepts that form the basis of safety activities for the Nippon Soda Group. In addition, senior management at each business site takes the initiative in promoting safety awareness among employees so that safety activities are improved through the continuous application of the PDCA cycle.

1. KY is a combination of the first letters of two Japanese words, *kiken* (risk) and *yochi* (prediction). The KY system is designed to identify latent risks associated with work and take preventive measures before they occur.

● Occupational health and safety survey by a third party

An occupational health and safety survey of Nippon Soda is conducted by SOMPO RISK MANAGEMENT & Health Care Inc.

The number of consecutive days and years without an accident resulting in absence from work (as of April 1, 2019), the number of accidents resulting in absence from work of employees (FY 2019)

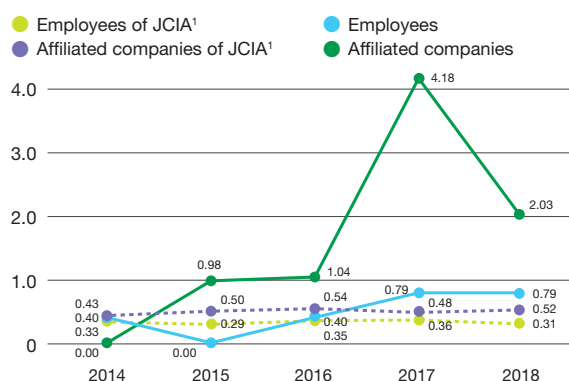
Worksite	The number of consecutive days without an accident resulting in absence from work (years)	The number of occupational accidents causing an absence from work for FY 2018
Head Office	5,786 days (15 years)	0
Nihongi Plant	780 days (2 years)	0
Takaoka Plant	433 days (1 year)	0
Mizushima Plant	9,642 days (26 years)	0
Chiba Plant	5,347 days (14 years)	0
Odawara Research Center	6,736 days (18 years)	0
Chiba Research Center	9,899 days (27 years)	0
Aizu Plant, Nisso Metallochemical Co., Ltd.	913 days (2 years)	0
Chiba Plant, Nisso Metallochemical Co., Ltd.	11,747 days (32 years)	0
Koriyama Plant, Nisso Fine Co., Ltd.	2,496 days (6 years)	0
Isohara Plant, Nisso Fine Co., Ltd.	113 days (0 year)	3
Onahama Plant, Nisso Fine Co., Ltd.	1,147 days (3 years)	0
Shin Fuji Kaseiyaku Co., Ltd.	102 days (0 years)	1
Nisso Shoji Co., Ltd.	5,784 days (15 years)	0
Sanwa Soko Co., Ltd.	34 days (0 year)	1
Nisso Engineering Co., Ltd.	4,914 days (13 years)	0
Nisso Construction Co., Ltd.	9,016 days (24 years)	0
Nisso Green Co., Ltd.	6,940 days (19 years)	0

Number of occupational accidents causing an absence from work at Nippon Soda and its affiliate companies

(Numbers reported in one fiscal year starting on April 1 and ending on March 31 of the next year)

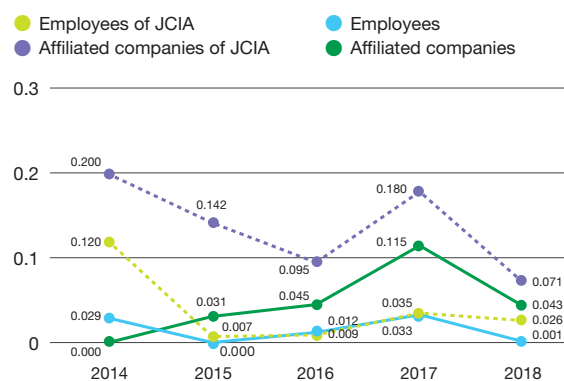
FY	2015	2016	2017	2018	2019
Nippon Soda	0	1	1	3	0
Nippon Soda's affiliated companies	1	0	2	4	3
Group companies	0	5	3	0	5
Group companies' affiliated companies	1	3	2	1	2

Change in occupational accident frequency rates



Occupational accident frequency rate: Casualties/Total working hours (per million hours)
 1. JCIA stands for Japan Chemical Industry Association.
 The data were collected from January 1 to December 31 of each year.

Change in severity rate for occupational accidents



Severity rate of occupational accidents: Man-days lost/Total working hours (per 1,000 hours)
 The data were collected from January 1 to December 31 of each year.

Proactive health management for workers

Health and productivity management

In February 2019, Nippon Soda was recognized again as a “Health & Productivity Outstanding Entity 2019” in the large enterprise category (White 500) under the recognition program jointly undertaken by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi. This is a program to recognize large enterprises that promote outstanding “health and productivity management.” For recognition, their engagement in addressing health-related issues in regional communities or their health promotion activities that are promoted by the Nippon Kenko Kaigi are assessed.

Recognizing the importance of health maintenance and improvement in business management, Nippon Soda, in cooperation with the Nisso Health Insurance Association and the labor union, promotes efforts geared toward supporting physical and mental health. We support employees and their families in their health management and proactively promote health management so that we can provide better value to the public through business activities conducted by healthy and lively employees.



Certified Health & Productivity Management Organization Recognition Program

> https://www.meti.go.jp/policy/mono_info_service/healthcare/kenkoukeiei_yuryouhouzin.html

Health Management Promotion

Health Management Promotion Declaration

The Group considers “people” to be the most important corporate resources to enhance corporate competitiveness and achieve sustainable growth.

It is fundamentally important to maintain health, **both physically and mentally**, in order to have a workplace where individual employees can work willingly and actively. In this context, we emphasize health management as an important issue in business management. To maintain and promote good health of employees and their families, the company, the Nisso Health Insurance Association, the labor union, and the employees' association will make concerted efforts to take various proactive measures.



Mental health care

Our mental healthcare program consists of ① Self-care, ② Care by administrators in the workplace, ③ Care by occupational healthcare staff and other specialists at each workplace and ④ Care by external parties.

To help employees with their self-care ① and provide care by occupational healthcare staff and other specialists at each workplace ③, a stress test is conducted once a year. To improve care by administrators in the workplace ②, lectures on mental health given by external specialists are organized.

Consultations with qualified mental health specialists by phone or face-to-face are also available as part of efforts to provide care by external parties ④. In addition, lectures on mental health are provided by an external organization to help employees manage their own mental health.

[Education and training on occupational safety and health provided at each worksite]



Special training on full safety harnesses
(Takaoka Plant, February 22, 2019)



Ordinary lifesaving training
(Haibara Field Research Center, June 19, 2018)



Lecture by an occupational physician
(Head Office, November 5, 2018)



Lecture on health "Smoking and Health"
(Chiba Plant/Chiba Research Center, October 29, 2018)



Lecture on health "Let's Do Calisthenics"
(Mizushima Plant, February 5, 2019)



Lecture on health "Heat Stroke"
(Nihongi Plant, June 13, 2018)

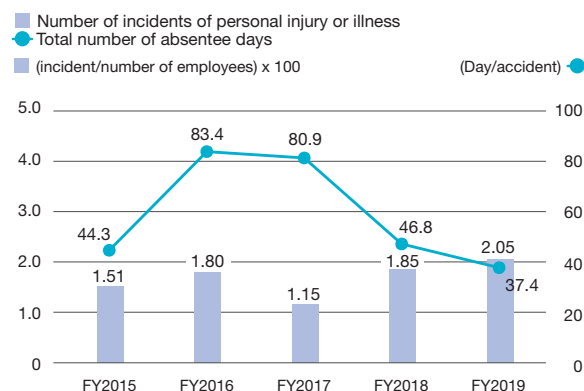


Lecture on mental health
(Chiba Plant/Chiba Research Center, July 25, 2018)



Mental health education for supervisors
(Takaoka Plant, November 9, 2018)

Change in the number of incidents of personal injury or illness (per 100 persons) and the total number of absentee days (per incident)



Note: The data above were collected from April 1 to March 31 of the next year.

► **Goals for FY 2019 and results (KPIs)** Achievement levels ◎: ≥ 90% ○: 80-90% △: 60-80% ×: ≤ 60%

1. Occupational accidents resulting in an absence from work or no absence: Goal: No accidents
Achievement level ×: 10 cases involving absence from work (zero Nippon Soda employees, 3 affiliate company employees, 5 Group company employees, 2 Group affiliate company employee)
16 cases involving no absence (5 Nippon Soda employee, 3 affiliate company employees, 7 Group company employees, 1 Group affiliate company employees)
2. Health promotion: Goal: 15% reduction in the total number of absentee days, including mental-health-related absence; 15% reduction in the incidence of personal injury and illness (average in the period from FY 2013 to FY 2015)
Achievement level △: 61% reduction in the total number of days of absence from the average of the period from FY 2013 to FY 2015; 7% increase in the number of incidents

Efforts for the future ►

With the aim of achieving the goal of zero occupational accidents, we will continue our efforts to reduce risks through continuous risk assessment, strengthen measures to prevent human error, and enhance safety activities. To help employees maintain and improve their health, we provide them with medical examinations, conduct follow-ups of employees undergoing stress tests, and continue good health maintenance activities.

Distribution Safety and Quality Assurance

The Nippon Soda Group promotes efforts to reduce risks associated with the distribution of products to prevent accidents during distribution.

We also provide an environment where customers can use high-quality products safely, comfortably and in a stable manner in order to increase customer satisfaction.

Basic concept

- Reduction in risks of hazards, toxic harm and in-transit accidents associated with the transportation of products to protect the safety and environment not only of customers but also of workers engaged in distribution processes and/or local residents
- Provision of information that helps customers use high-quality products safely, comfortably and in a stable manner
- Provision of products that increase customer satisfaction, while ensuring safety and hygiene for customers

Distribution safety

Measures to ensure safe transportation of hazardous materials

● Transportation risk assessment

Nippon Soda identifies risks from various viewpoints to prevent workers from being injured and products from being damaged in an accident during the loading, unloading and transshipment of products with a forklift, as well as in traffic accidents during transportation by truck to deliver products to customers. Based on identified risks, we take measures to reduce such accidents.

● Efforts to achieve zero distribution-related complaints

To eliminate distribution-related complaints, we conduct a risk assessment to identify and reduce risks associated with distribution. We also conduct inspections and audits at partner distribution companies and provide them with education, and share relevant information with industrial organizations. In addition, we implement measures targeted at reducing complaints arising due to human error.

● Yellow Card¹ and Container Yellow Card²

Nippon Soda promotes the use of Yellow Cards and Container Yellow Cards mainly for products that are classified in the hazardous category. Product labels are constantly revised to reflect the latest legal information, including revisions to relevant laws, in a timely manner. We use wording that complies with the GHS³ requirements and appropriate pictograms and take other measures so that we can be prepared in the event of a disaster to respond quickly to prevent damage from spreading.

1. A Yellow Card is an emergency information card with information about procedures that drivers, fire and police personnel, and other concerned parties should take in the event of a spill, fire, explosion or other safety incident that may occur during transportation. It also contains emergency contacts. The issuance and carrying of Yellow Cards is required by the Poisonous and Deleterious Substances Control Act and other laws.
2. A Container Yellow Card is a label that is affixed to containers. It indicates the United Nations number and guide number defined by the Emergency Response Guidebook in addition to other information.
3. GHS: The Globally Harmonized System of Classification and Labelling of Chemicals (GHS), which was developed and agreed upon by the United Nations Economic and Social Council, is a system for the international standardization of classification and labeling (product labels and SDSs) regarding risks and toxicity of chemicals.



Example of a combined label
The guide number and the United Nations number are printed at the bottom of the Container Yellow Card.

Distribution safety in value chains

● Proposals for improvement of customers' facilities

If there are any safety problems with regard to transportation workers and workers at facilities where our products are received or any risks such as potential for the mixing of foreign substances or spills, Nippon Soda makes a proposal for improvement to the customer in order to prevent disasters and accidents.

Quality assurance

Efforts to ensure quality management

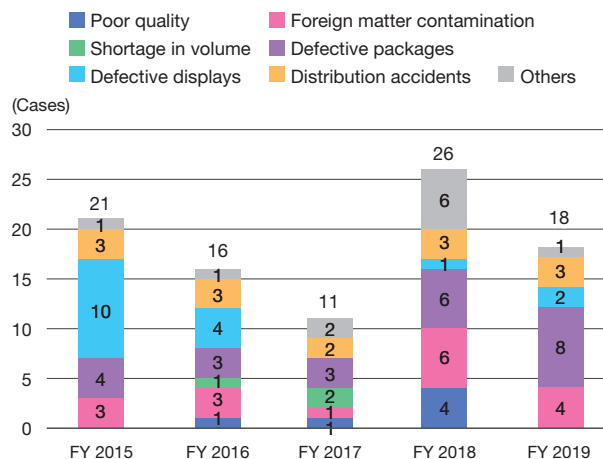
● Quality risk assessment

Nippon Soda assesses quality risks so as to prevent quality complaints from occurring and reoccurring. We identify quality-related risks at each manufacturing site. Our continuous efforts to reduce risks are particularly focused on reducing those ranked A to B, which have the highest risks.

Efforts to achieve zero product-related complaints

To eliminate product-related complaints, we conduct quality risk assessments to identify and reduce risks. We also implement measures to reduce product-related complaints arising due to human error, including providing education on the prevention of human error to employees.

Change in the number of product-related complaints



► Goals for FY 2019 and results (KPIs)

Achievement levels ◎: ≥ 90% ○: 80-90% △: 60-80% ×: ≤ 60%

1. Distribution-related complaints: Goal: 90% reduction from FY 2015 (≤ 0.3 cases) Achievement level ×: 3 distribution-related complaints
2. Product-related complaints: Goal: 90% reduction from FY 2015 (≤ 1.8 cases) Achievement level ×: 15 product-related complaints

Efforts for the future

► To reduce distribution- and product-related complaints, we constantly improve our activities to ensure distribution safety and quality assurance, including inspections and audits of distribution companies, risk assessment, and implementation of measures to prevent human error.

Chemicals and Product Safety

Giving due consideration to potential risks and toxicity of chemicals and products on the environment, safety and health, the Nippon Soda Group complies with laws, regulations and international standards as well as with social norms and expectations so that we can earn greater trust from the general public.

Basic concept

- Compliance with domestic laws and regulations, international standards, treaties and the like, giving due consideration to impact caused by risks and toxicity of chemicals and products on the environment, safety and health
- Compliance with social restrictions that are not covered by law to maintain and ensure trust from customers and the general public
- Implementation of specific measures to ensure the safety management of chemicals, including activities and periodic educational programs regarding chemicals and product safety

Safety of chemicals

Strengthened management of chemical substances using ExESS, a chemical substance control system

We are strengthening the management of chemical substances using the SDS¹ and Yellow Card preparation and management system (ExESS).

We revise SDSs and Yellow Cards whenever relevant laws are revised in Japan and overseas. We prepare SDSs and product labels that are used not only in Japan but also in other countries and regions around the world, such as Europe, the U.S., China, Taiwan, South Korea, Southeast Asia and Turkey, in such a way as to meet the GHS² requirements.

Regular training programs on chemical substance control

We provide employees who handle chemical substances with education on how to comply with Japanese and overseas laws and regulations regarding the management of chemicals.



Educational session for new/transferred employees on chemical substance laws and regulations (Head Office, May 14, 2018)



Explanatory session on revision of laws and regulations (Head Office, February 14, 2019)

Product safety

Actions to comply with laws and regulations

● Actions to comply with foreign laws and regulations

We provide explanatory sessions on how to comply with the EU REACH³ regulation and other overseas laws and regulations.

● Audits of poisonous and deleterious substances at offices

Audits of poisonous and hazardous substances have been done at branches and offices of Nippon Soda and the Group companies since FY 2017. Offices nationwide are divided into two groups, east and west, and each group undergoes an audit every other year.

Communication of safety information on chemicals

The Nippon Soda Group participates in the GPS/JIPS⁴. We have prepared safety summary reports on five substances, including caustic soda and hydrochloric acid, which have been registered on the ICCA⁵ portal page and made publicly available.

1. SDS: A Safety Data Sheet (SDS) is a document that contains information on chemical substances, product names, suppliers, hazardous and toxic properties, safety measures, emergency responses, etc.
2. GHS: The Globally Harmonized System of Classification and Labelling of Chemicals (GHS), which was developed and agreed upon by the United Nations Economic and Social Council, is a system for the international standardization of classification and labeling (product labels and SDSs) regarding risks and toxicity of chemicals.
3. REACH: The Registration, Evaluation, Authorization and Restriction of Chemicals is a European Union regulation that requires companies that manufacture or import into the EU chemical substances in the amount of one tonne or more per year to register these substances and submit chemical safety reports. Chemicals for which data are not submitted (substances that are not registered) are not permitted to be put on the market.
4. GPS/JIPS: The Japan Initiative of Product Stewardship (JIPS) is a voluntary initiative of the chemical industry. Its basic concept is aligned with the Product Stewardship (PS)/Global Product Strategy (GPS) of the International Council of Chemical Associations (ICCA).
5. ICCA: International Council of Chemical Associations

Consideration in animal experiments

Efforts to ensure animal welfare

Scientific use of animals is indispensable for advancing life science and developing agrochemicals and other materials. In such scientific use of animals, due consideration should be given to the fact that animals are living beings. In this context, within the extent that the purpose of scientific use can be attained, it is necessary to use alternative methods to the use of animals as much as possible (replacement), reduce the number of animals used for such use as much as possible with consideration given to the appropriate use of animals (reduction), and minimize the pain and distress of animals as much as possible within the limit necessary for such use (refinement). To fulfil these conditions, it is necessary to consider physiology, ecology, behavior and other characteristics of animals and to appropriately breed, keep and use them for scientific purposes with a feeling of gratitude and responsibility toward them. These aforementioned requirements are stipulated in the Act on Welfare and Management of Animals and the Standards relating to the Care and Keeping and Reducing Pain of Laboratory Animals, which was issued by the Ministry of the Environment.

Odawara Research Center of Nippon Soda established its own regulations for animal experimentation and other relevant standards based on the abovementioned act and standards as well as the Basic Policies for the Conduct of Animal Experimentation in Research Institutions Stipulated by the Ministry of Agriculture, Forestry and Fisheries, and the Guidelines for Proper Conduct of Animal Experiments issued by the Science Council of Japan. The regulations define the responsibilities of the General Manager of the Odawara Research Center and the Animal Experiment Committee.

Odawara Research Center breeds, keeps and uses experimental animals for scientific purposes in compliance with its regulations on animal experimentation and other relevant standards in such a way as to ensure objectivity and transparency as needed and the use of appropriate methods in terms of the welfare and management of animals. Staff members are provided with instructions regarding compliance with the regulations for animal experimentation and other standards by the Animal Experimentation Committee under the supervision of the General Manager of the Odawara Research Center. The committee also ensures that all staff within the research center are properly informed of the regulations for animal experimentation and other standards, and conducts audits and inspections of facilities. These activities are assessed by an external organization (the Japan Health Sciences Foundation) and, in June 2018, the research center was accredited as a facility that conducts animal experiments in a proper manner (Next page).

▶ Goals for FY 2019 and results (KPIs) Achievement levels ◎: ≥ 90% ○: 80-90% △: 60-80% ×: ≤ 60%

1. Compliance with chemical-related laws and regulations: Goal: Zero violations

Achievement level ×: 3 violations (Nippon Soda: Violation of the Poisonous and Deleterious Substances Control Act; Group companies: Violation of the Industrial Safety and Health Act, violation of the Pharmaceuticals and Medical Devices Act)

Efforts for the future ▶

To ensure compliance with chemical-related laws and regulations (zero violations), we will strengthen the management of chemical substances under our new chemical substance management system and promote the compliance of SDSs and product labels with the GHS requirements. We will continue to provide regular training programs on chemical substance control, including training for new/transferred employees, explanatory sessions on revisions of laws and regulations, and explanatory sessions on revisions to relevant laws and regulations of foreign countries.

CERTIFICATE

Odawara Research Center
Research & Development Div.,
Nippon Soda Co.,Ltd.

This certifies that

The laboratory animal facilities of the
aforementioned institution
are compatible with
the "Basic policies for the conduct
of animal experimentation
in the Ministry of Health,
Labour and Welfare"
stipulated by the Ministry of Health, Labour and
Welfare
based on the assessment by
the Center for Accreditation of Laboratory
Animal Care and Use,
Japan Health Sciences Foundation.

Certification number: 18-133
Certification date: June 8, 2018
Valid until: June 7, 2021



Teruo Takayanagi
Director
Japan Health Sciences Foundation

Together with Our Customers (Consumer Issues)

The Nippon Soda Group identifies products with functions that satisfy our customers, and makes efforts toward ensuring safety during the use of our products.

Basic concept

- Provision of safe and reliable products and services that satisfy customers' needs
- Working together with our customers in continuing to create new value that is sought after by society, through the development and provision of products

Improve customer satisfaction

Services by the customer consultation office (Agro Products Division)

The regional salespersons and the section handling inquiries at our Head Office appropriately answer inquiries made on the usage of our products and agrochemicals. We have placed persons in charge of answering customer inquiries within our Public Relations Section of our Product Promotion Department. Inquiries are answered under the motto of providing "swift, accurate and easy-to-understand answers."

Requests and inquiries received from customers are input into our in-house database and the information is shared with our plants, research centers and sales departments. Based on this information, we improve our products and expand the scope of application of our agrochemicals. With regard to complaints about product quality and requests for quality improvement, efforts are made to prevent recurrence and to make improvements for each individual product.

Sales promotion activities with our customers in mind (Chemicals Business Division)

We exhibit actively at trade fairs and other venues, and seek opportunities to have discussions with our customers, so that our products will be considered by more buyers.

Promotion activities rooted in the local community (Agro Products Division)

We visit contracted wholesalers, agricultural co-ops and farmers in Japan to introduce our products and explain the appropriate methods of use. Outside of Japan, we host seminars on our products and the appropriate methods of use for local stores and farmers and invite them to visit agricultural fields where our products are used.

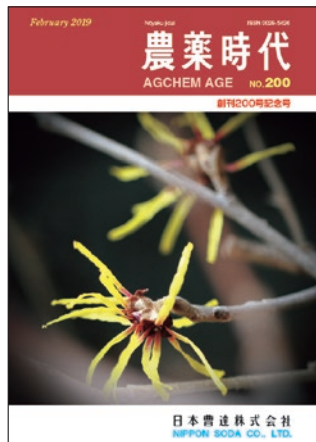


Seminar on the proper use of agrochemicals (Miyagi, January 28, 2019)

Communication with our customers

Sending out information to our users (Agro Products Division)

In response to various kinds of inquiries from our customers, we provide information on registered agrochemicals and the expansion of their scope of usage in a timely manner, while complying with the Agricultural Chemicals Control Act and other related laws, rules and regulations.



Technical informational magazine,
AGCHEM AGE



Informational tools

Safe usage (Chemicals Business Division)

NISSO HI-CHLON, an inorganic solid chlorine agent, is used to disinfect swimming pools at schools and other places. To ensure that HI-CHLON is being used properly, we visit schools using the product with our sales agents to explain proper handling methods. We also contribute to a website called "gakkoupool.com" to provide information needed for managing school pools. We will continue our efforts to develop even better products through direct communication with school officials.



Gakkoupool.com, a website that provides information needed for managing school pools

Development of products that are useful to society

Efforts to reduce plastic waste

As a measure to limit the use of resources and reduce the amount of waste as well as to address the issue of marine plastics, there has been global demand for establishing a system to reduce, reuse and recycle plastics at the earliest possible time. Using technology for creating functional polymers, the Chiba Research Center is developing biodegradable plastics and other biodegradable materials that, after use, can be decomposed into water and carbon dioxide with the help of microorganisms.

Responding to the requests of our customers (Chemicals Business Division)

NISSO HPC (hydroxypropyl cellulose) is used widely throughout the world as an additive that is essential for formulating pharmaceuticals. Since our launch in 1969, we have continued to respond to the needs of pharmaceutical companies, who are our customers. As a result, we now offer 12 grades with different viscosities and particle sizes for the domestic market and 14 grades for the overseas market.

And right now, we are aggressively promoting research and development for enhancing the functionality of pharmaceuticals, both in and outside of Japan, by working with our customers to develop a new grade that is in line with our customers' needs, and by maintaining NISSO HPC's status a frontline product in pharmaceutical formulation.

The safety and high functionality of NISSO HPC also makes possible its use in food processing. Thus, we have recently begun providing it in the food market under the brand name CELNY. This product is attracting particular notice from the nutritional supplement industry as it demonstrates particularly high functionality in incorporating large dosages of such substances as turmeric, glucosamine and mulberry leaf, which are notoriously difficult to make into pills, into tablets made from natural ingredients. This ability is helping to reduce the amount of supplement tablets that need to be taken in one day.



HPC

Together with Our Employees (Human Rights/ Labor Practices)

The Nippon Soda Group focuses proactive efforts on creating a work environment where human rights are respected, and where all employees can find their work meaningful and maximize their abilities.

Basic concept

- Respect for the dignity and human rights of all people.
- Understanding the diversity of cultures, customs, and values and no tolerance for actions that result in discrimination.
- With particular emphasis on promoting diversity and creating rewarding workplaces that all Nippon Soda employees can be proud of, we proactively review our personnel and operation systems to ensure the constant improvement of these systems.

1 Promotion of diversity

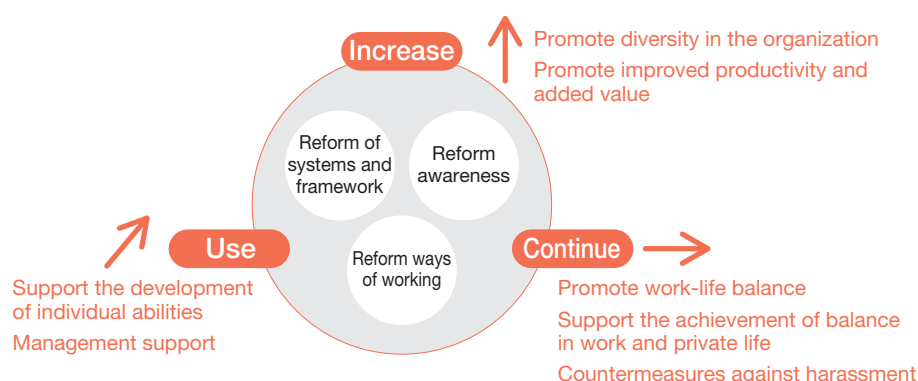
① Development of diversity policy

The aim of our Diversity Policy is to develop ourselves by providing diverse people, regardless of gender, age, nationality and presence or absence of disability, with opportunities to gather and exchange different ideas.

Nippon Soda considers it necessary for a corporate group to value diversity in order to generate new innovations and increase global competitiveness. In this context, we recognize the promotion of diversity as an important management strategy.

Efforts to promote diversity include transformation of our personnel systems to make full use of our diverse human resources, improvement of the corporate culture and work environment, and implementation of other basic support systems. Through these efforts, we aim to become a company where global-minded, motivated, competent employees can enjoy working and continuously grow and develop regardless of gender, age, nationality, etc.

Three pillars of promoting diversity



Major activities in FY 2019

Use

Introduction of the Career Development Support System

● Objectives

- To increase each individual's motivation to take on challenges and help achieve their autonomous career development through respecting their aptitudes and personalities and supporting their growth
- To maximize the organizational capacity through the proper assignment of employees according to their growth
 - Expansion of the eligibility for the career development support system; An explanatory session (September 2018)
 - Career training (July 2018)

- Development of the career vision sheet (September 2018)
- Promotion of communication between supervisors and subordinates (September and October 2018)
- Career interviews
- Release of the list of requirements for positions throughout the company (February 2019)

Promotion of women's active participation

- The General Employer Action Plan was prepared based on the Act of Promotion of Women's Participation and Advancement in the Workplace. As a result of efforts under the action plan, we were certified as an "Eruboshi"¹ company on August 23.

1. Eruboshi: Certification for a company by the Minister of Health, Labour and Welfare to recognize the promotion of women's participation in the workplace and their career development.

Continue

Continuous publication of articles on diversity-related issues in in-house newsletters (since November 2016)

- Harassment prevention training (all year)
- Lectures on work-life balance in various kinds of position-based training (all year)
- Measures to promote the taking of paid holidays were implemented at each site.

Increase

Diversity training, harassment training (February 2018)

- Diversity employment was promoted. (all year)
- Explanatory session about employment provided for women, update of the recruitment website, employment of disabled people

Updated recruitment-related website 

《Articles on diversity in in-house newsletters》



(Diversity is an important management strategy for achieving the sustainable growth of the company)



(Promotion of diversity and communication in the workplace)



(Diversity, health, and productivity management)



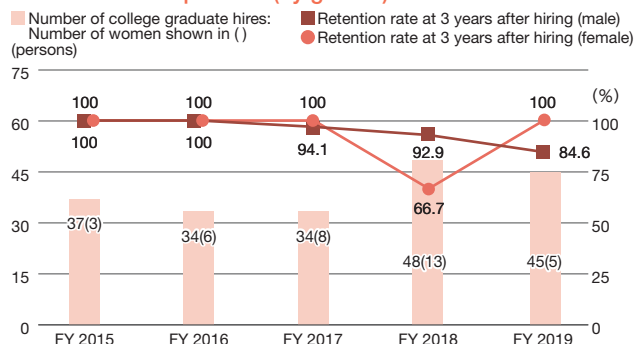
(Diversity-related initiatives for the future)

② Acceptance of diversity

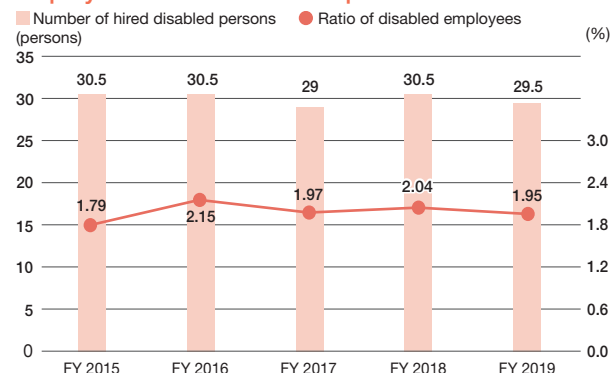
We place emphasis on employing diverse candidates regardless of gender, age, nationality, ability or disability, and regardless of whether they are new graduates or mid-career hires, so as to create a more diverse organization. A group consisting of people with different values should give its members the impetus to broaden their outlook and change their viewpoint.

Workplace diversity training programs designed for directors and executive officers, as well as other specific positions, with the aim of raising their diversity awareness are provided to help them recognize diverse values and to empower individuals and organizations.

Number of hired persons (by gender) and their retention rate



Employment rate of disabled persons



③ Efforts to protect human rights at workplaces

The Nippon Soda Group Code of Conduct, which sets out the requirements that all employees of the Nippon Soda Group must follow, clearly states the commitment to respect human rights and nondiscrimination and declares that we respect the individuality and personal characteristics of every employee and do not take any action that would result in discrimination. To maintain a healthy work environment free from harassment, we provide employees with position-based training on relevant issues. A harassment complaints office is also available.

② Nippon Soda Group's human resources development

It is our mission to make Nippon Soda a company where people gather and grow together in order to continue to achieve our sustainable growth. We believe that professional development is the key to a strong human resources foundation. In addition to on-the-job training, our educational and training programs include position-based training, manager training, early- and intermediate-phase practical training, and specialized training by job function. We also provide training for self-development, including programs to improve language proficiency and acquire qualifications, as well as many other various kinds of training programs.

Educational programs (position-based training)

1. Position G: Management Assistant, Position M II: Manager II, Position M: Manager, Position D: Assistant Manager

Position	Position-based training	Training for line Manager	Core positions		Self-development support
			Administrative work	Specialized work	
Executives	Executives training				
Managers	Position G training ¹	Position M II training ¹	Division managers training		e-Learning Correspondence training Language training
	Position M training ¹		Department managers training	Career training (management)	
Assistant Managers	Position D training ¹		Section managers training	Career training (advanced)	
Staff employees				Career training (basic)	
New employees	Orientation training			Follow-up training	
				On-site practical training	
				Tutor instructions	

③ Rewarding workplace that employees can be proud of

① Improving employee satisfaction

We conduct employee satisfaction surveys for the purpose of creating rewarding workplaces that all Nippon Soda employees can be proud of. The objective of the survey is to help us understand how employees feel about working for the company and the specific conditions of their workplaces, and to identify issues that need to be addressed in order to create environments where they can work with vitality. Identified issues are addressed by implementing appropriate measures so as to increase our employees' job satisfaction.

Change in the number of employees taking child/family care leave

FY	Those who took child care leave (person)		Those who took family care leave (person)	
	Men	Women	Men	Women
2014	1	6	0	0
2015	0	6	0	0
2016	1	2	0	0
2017	2	3	1	0
2018	3	4	0	0
2019	5	10	1	0

Change in the number of employees taking maternity/child care leave and the rates of those returning to work and those remaining for three years after returning to work (by gender)

FY	Employees who took maternity/child care leave (employee)		Rate of employees returning to work (%)		Rate of employees remaining with the company (%)	
	Men	Women	Men	Women	Men	Women
2014	1 (1,151)	7 (134)	100	100	—	50
2015	0 (1,144)	5 (137)	—	100	—	83.3
2016	1 (1,137)	2 (142)	100	100	100	100
2017	2 (1,138)	3 (152)	100	100	100	100
2018	3 (1,130)	6 (159)	100	75	100	100
2019	5 (1,143)	12 (168)	100	100	100	100

The numbers were counted at the first fiscal year of the leave.
The numbers in brackets are the total numbers of men and women respectively at the end of each fiscal year.
Retention rate is for employees who in this fiscal year are in their third year since returning to work.

Total annual working hours per employee

Normal working hours (hours)	Early start and overtime hours (hours)	Holiday overtime hours (hours)	Paid annual leave days taken (days)	Various kinds of leave days taken (days)	Total annual working hours per person (hours)
1,825.0	118.7	7.5	15.3	2.0	1,818.8

② Promoting work-life balance

We are working to create a workplace environment where our employees can continue working despite various lifestyle changes in their lives, such as childbirth, raising a child, and providing nursing care for ailing family members. We are revising our work regulations and advancing working style reforms in order to create a workplace where our employees can pursue their work without compromising their health, and achieve a good balance between their work and private lives.

● Work-life balance related measures

③ Measures to maintain health

Nippon Soda conducts various initiatives related to health management and promotion in order to ensure our employees work with healthy bodies and minds.

Physical health

We implement health programs jointly with the corporate health insurance society. Specifically, we offer various programs in partnership with industrial physicians, such as specified health checkups, specified health guidance, and checkups for lifestyle-related diseases.

Psychological health

Nippon Soda had been providing all employees with a stress check even before the revision of the Industrial Safety and Health Act in 2015.

④ Labor-management relations and improvement of working conditions

Basic working conditions are determined by labor agreements concluded between the company and the labor union and renewed every year. Under the motto of “dialogue rather than negotiation,” we gain an understanding about how our employees are feeling, and create an environment where we are able to engage in labor-management discussion of frontline problems and issues as they are happening.

Number of labor union members (Nippon Soda)

FY	The number of labor union members (person)	Average age (years)	Average length of service (years)	Rate of members (%)
2014	856	40.9	19.9	65.5
2015	845	40.6	19.3	65.0
2016	844	40.4	18.9	64.8
2017	820	39.3	17.6	63.3
2018	824	37.9	15.8	62.7
2019	840	37.7	15.6	63.7

Together with Our Business Partners (Fair Operating Practices)

The Nippon Soda Group promotes sound business activities that are fair and just by conducting dialogues and awareness-building activities with our business partners in order to comply with legal requirements.

Basic concept

- Establishment of a purchasing policy that is predicated upon interacting with our business partners with dignity and integrity and handling business in a fair and just manner
- Promotion of business activities that meet stakeholders' expectations in purchasing activities, such as raw material procurement

Efforts in procurement

● Compliance with the code of conduct

We established the following code of conduct with business partners from whom we make purchases, and are striving to comply with it.

- When assessing numerous vendors to choose a supplier, we determine the most appropriate business partner by comparing and evaluating such criteria as the following in a fair and just manner: quality, price, delivery period, technical competence and stability of supply.
- When consigning production to a business partner, we enter into a contract and conduct transactions based on a full understanding of the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors.

● Concept on procurement

We continue our purchasing activities while confirming the safety and soundness of business partners based on information gathered via trading companies from whom we purchase and results of audits conducted in cooperation with the quality management department of each of our plants.

● Purchasing policy

- Conduct purchasing activities grounded in legal compliance
- Execute raw material procurement that contributes toward realizing stable production
- Consider purchase balance aimed at achieving cost reduction
- Develop a stable procurement system rooted in a BCP (business continuity plan), such as having multiple sources from which to procure raw materials
- Realize appropriate inventory management of raw materials
- Participate in in-house and external training programs with the aim of acquiring knowledge on various laws related to purchasing (Antimonopoly Act, Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, etc.)

● Nippon Soda's responsibilities and approaches

We are working with our business partners to develop relationships that lead to mutual growth by implementing direct and indirect means of gathering information. We are deepening the understanding that our business partners have toward the Nippon Soda Group's purchasing policy and purchasing activities. Through these measures, we continue our efforts to conduct fair, just and sound procurement activities.

Dialogues with our business partners

● Improve awareness on safety and disaster prevention together with our affiliated companies

We provide education on the safe use of agricultural machinery to companies to whom daily operations are consigned at various agricultural fields under the jurisdiction of Odawara Research Center.

In cooperation with our affiliated companies, we are aiming at achieving zero accidents by involving all relevant people. We implement various measures to raise awareness on safety and disaster prevention among employees of affiliated companies who work within our facilities, such as the development of a list that clarifies who has qualifications for operating agricultural machinery and equipment and the management of performance levels.

● Educating transportation companies on distribution safety

The Nippon Soda Group regularly provides education targeting transportation companies. Our educational programs not only provide training to prevent accidents caused by our workers and during transportation, but also information on past complaints received regarding distribution. We share such information to ensure the safe delivery of our products to our customers.



Educational training on distribution safety (Omiya Office of Sanwa Soko, October 18, 2018)

Together with Our Shareholders

The Nippon Soda Group discloses information in a timely and appropriate manner in order to enhance our management transparency and to answer the expectations and trust that we receive from our stakeholders. We are striving to hold constructive dialogues with our shareholders toward realizing continuous growth and to improve our corporate value.

Basic concept

- To maintain constructive dialogues with our stakeholders and investors, which are essential to achieve continuous growth and improve our corporate value over a medium- to long-term period, our President and responsible directors and executive officers are available whenever necessary.
- Information is disclosed in a timely manner, with importance on fairness and accuracy, in accordance with the Timely Disclosure Rules established by the Tokyo Stock Exchange.
- Requests and comments received from our shareholders and investors through dialogues are communicated at our Board Meetings as necessary so that we can reflect them in our management.

Communication

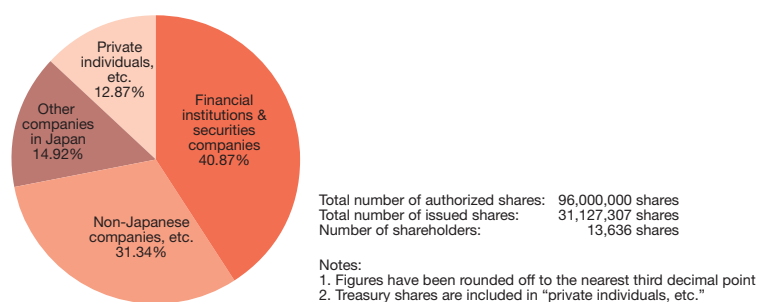
Dialogues with our shareholders

The Nippon Soda Group holds an ordinary general meeting of shareholders in June every year, viewing it as an important opportunity for us to engage in direct conversation with our shareholders.

We deliver the notice of convocation of the general meeting of shareholders at an early date—three weeks before the meeting—in order to help our shareholders acquire a good understanding of the issues that will be reported and the matters for resolution. We also provide pre-delivery disclosure of information on Nippon Soda's website and at the Tokyo Stock Exchange website, before the notice of convocation of the general meeting of shareholders is sent out.

As for the exercise of voting rights, this has been made possible not only in writing but also via the Internet.

We issue our business report (annual report and interim report) twice a year in order to inform our shareholders about the current situation of our company. These business reports are posted on the Nippon Soda website to make them widely available to those other than our shareholders.



Share distribution by type of shareholder (as of March 31, 2019)

Dialogues with investors and analysts

The Nippon Soda Group actively holds dialogues with investors and analysts in order to help them deepen their understanding about our business details and our business performance.

We hold financial results briefings twice a year for institutional investors and security analysts, and also answer their requests for individual interviews. Our President and responsible directors explain in person the performance of the Nippon Soda Group and the growth scenario.

We provide a summary of our financial results in English for institutional investors outside Japan and send them our annual reports every year. Our responsible director visits Europe and Asia to give explanations in person to individual institutional investors in those regions.

The questions and comments received through dialogues with investors and security analysts are input into our in-house database and reflected in the management of our Group where appropriate.

Basic policy on shareholder returns

The Nippon Soda Group makes decisions on profit distribution based on revenue trends and by comprehensively considering such issues as maintenance of stable dividends, enhancement of shareholders' equity, and improving our financial standing. Our basic policy is to provide dividends twice a year, at the middle and end of the fiscal year.

Retained funds are used for improving corporate value, such as by advancing the development of new products and to achieve an early market launch, and for allotment in growth investment such as M&As and business partnerships, as well as for the maintenance and upgrade of investments toward stable and continuous growth.

As for return of profits to our shareholders, we strive to provide a stable and continuous dividend distribution with the goal of realizing a total return ratio of 30% based on the shareholders' return policy stated in the medium-term business plan for fiscal 2018 to fiscal 2020, while also maintaining financial resources for growth investments.

We will also adopt a flexible stance on repurchasing treasury shares as a shareholder return measure to supplement dividends.

$$\text{Total return ratio} = (\text{Total amount of dividends} + \text{total amount of purchase of treasury shares}) / \text{consolidated profit}$$

Together with Our Local Communities

(Community Involvement and Development, Social Dialogue)

We will make efforts to improve the general public's confidence in us by participating in various environmental protection and safety activities and proactively engaging in dialogue with stakeholders regarding the effects of chemical substances on safety, health and the environment.

Basic concept

- Promotion of social contribution activities based on the concept of making contributions through our business toward the development of a sustainable society, from the following viewpoints: contributing to resolving problems pertaining to the global environment; maintaining harmonious relationships with local communities; and contributing to the development of those communities.
- Development of good relationships with local residents through various activities that meet the needs of local communities and that are designed and implemented by each business site and Group company.

Harmonious relationships with local communities

● Contribution to local employment

Nippon Soda contributes to creating local employment opportunities at worksites throughout Japan.

The ratio of the standard minimum wage to the local (prefectural) minimum wage at different worksites in FY 2019 is as shown below:

Comparison of the standard minimum wage to the local minimum wage in FY 2019

Site	Location (prefecture)	Local minimum wage (yen/h)	Our company's standard minimum wage ¹ (yen/h)	Comparison with the minimum wage (%)
Head Office	Tokyo	985	1,127	114.5
Odawara Research Center	Kanagawa	983	1,127	114.7
Chiba Research Center	Chiba	895	1,102	123.2
Nihongi Plant	Niigata	803	1,102	137.3
Takaoka Plant	Toyama	821	1,102	134.3
Mizushima Plant	Okayama	807	1,102	136.6
Chiba Plant	Chiba	895	1,102	123.2

(*) Standard minimum wages for the company were calculated based on the starting wages (same for men and women) for those joining the company at the age of 18 in the manufacturing and non-manufacturing groups. Decimal points were rounded off.

● Participation in cleanup activities for local communities

To fulfill roles and responsibilities as a corporate citizen, we regularly conduct cleanup activities for local communities in the neighborhoods of our worksites. We also actively participate in cleanup activities that are conducted together with people from the local communities, such as eco-walks and cleanup campaigns.

Frequency of cleanup activities for local communities

FY	2016	2017	2018	2019
Nihongi Plant	2	2	2	2
Takaoka Plant	2	2	2	2
Mizushima Plant	1	2	2	0
Chiba Plant & Chiba Research Center	3	3	3	3
Odawara Research Center	0	1	2	2

Dialogues with the local communities

● Communication activities at major worksites

Nippon Soda holds local gatherings and regularly offers tours of plants and research centers to residents in areas where offices are located in order to provide information on CSR activities and receive feedback.

External communication events at major sites (frequency)

FY	Site	Local gatherings	Tours of sites	Local dialogue meeting of the Japan Chemical Industry Association (JCIA) RC Committee	Other
2016	Nihongi Plant	26	1	0	18
	Takaoka Plant	7	41	4	6
	Mizushima Plant	12	0	0	20
	Chiba Plant	0	2	0	19
	Odawara Research Center	2	45	0	8
	Chiba Research Center	0	7	0	0
2017	Nihongi Plant	26	1	0	16
	Takaoka Plant	6	43	1	14
	Mizushima Plant	13	1	2	35
	Chiba Plant	0	2	1	18
	Odawara Research Center	1	49	0	9
	Chiba Research Center	0	2	0	0
2018	Nihongi Plant	25	0	0	16
	Takaoka Plant	6	44	1	77
	Mizushima Plant	15	2	1	40
	Chiba Plant	0	1	0	19
	Odawara Research Center	2	41	0	7
	Chiba Research Center	1	5	0	0
2019	Nihongi Plant	26	5	0	17
	Takaoka Plant	6	34	0	101
	Mizushima Plant	15	1	1	42
	Chiba Plant	1	2	0	10
	Odawara Research Center	1	39	0	9
	Chiba Research Center	0	7	0	0

● Dissemination of information on CSR activities

The Nippon Soda Group disseminates information on its CSR activities by the following means: the CSR Report is available to anybody in the form of a brochure or via our website, and reports on activities and plans for activities are submitted to the Japan Chemical Industry Association and distributed at local and other meetings.

Each of our worksites provides information on our activities through regularly offered tours and other gatherings.

● Dialogue with local residents

Regular gatherings are held at where our worksites are located in order to give us an opportunity to hear the opinions of local residents.

● External communication

Nihongi Plant conducts environmental monitoring in cooperation with five residents living near the plant and Takaoka Plant does this in cooperation with 12 residents representing six local residents' associations in their vicinity.

In FY 2019, we received no reports, either inquiries or complaints. Other offices also have similar monitoring programs.

Major social activities of Nippon Soda

Nippon Soda conducts social activities from the perspective of living in harmony with local communities and for the development of local communities.

Participation in local events

FY 2019				
Site	Name of local event	Date	Summary	Number of participants
Nihongi Plant	Eco-walk (spring and autumn)	May 20 and October 21, 2018	Participation in picking up trash along frontage roads of a main road in Nakago-ku	About 50 people, about 40 people
	Cleaning the plant's west entrance up to the road connecting to the national road	May 13, 2018	Picking up trash along the road (independently conducted by Production Management Section and KAIZEN Team)	13 people
	Fujisawa area autumn festival	August 24, 2018	Participation in a festival held in the plant's neighboring community (carrying the portable shrine)	Plant Manager and 3 staff members
	Nihongi Station Railroad Festival	October 13, 2018	Participation in the Nihongi Station Railway Festival	2 people
Takaoka Plant	Traffic safety guidance on the street	April 6 and 13, 2018		25 people
	Local cleaning activities	June 22, 2018	Cleaning around the plant	197 people
	Traffic safety guidance on the street	September 21 and 28, 2018		25 people
	Disaster prevention training for high-pressure gas transfer	October 10, 2018		5 people
	Local cleaning activities	October 26, 2018	Cleaning around the plant	186 people
	50th Anniversary Ceremony of the Toyama Prefecture High-Pressure Gas Safety Association	October 29, 2018		4 people
	Nisso "Thanking Local Residents" event	November 4, 2018	Plant tour, chemistry experiments for children, panel displays	270 people (40 people from the plant)
	Meeting with environmental monitors	November 21, 2018	Exchange of opinions with environmental monitors	15 people (5 people from the plant)
		November 27, 2018		14 people (4 people from the plant)
	Meeting with local residents	November 29, 2018	Exchange of opinions with local residents	14 people (4 people from the plant)
		December 3, 2018		14 people (3 people from the plant)
		December 4, 2018		15 people (3 people from the plant)

FY 2019

Site	Name of local event	Date	Summary	Number of participants
Mizushima Plant	Cherry blossom party with local residents' associations	April 7, 2018	Networking with local companies and executives of the local residents' association	1 person
		April 8, 2018	Networking with local companies and executives of the local residents' association	2 people
	Honjo ground golf competition	May 12, 2018	Ground golf competition held also for networking with local companies and the Honjo school district	2 people
	Bon dance festival with local residents' association	August 11-13, 2018	Bon dance festival held also for networking with local companies and the local residents' association (four areas in three days)	1 person each
	Kissho-in (Iou Inari Grand Festival)	November 10, 2018	Kissho-in (Iou Inari Grand Festival)	1 person
	Honjo ground golf competition	November 17, 2018	Ground golf competition held also for networking with local companies and the Honjo school district	1 person
	End-of-year joint party between Honjo residents' associations and Kinyo-kai	December 5, 2018	Networking with local companies and executives of the local residents' association	3 people
	Honjo District rice cake making event	December 9, 2018	Networking with local companies and executives of the local residents' association	1 person
	Regular meeting/end-of-year party of Kinyo-kai	December 10, 2018	Networking with local companies and executives of the local residents' association	3 people
	Tsuitachi-kai "New Year's greeting exchange"	January 10, 2019	Networking with local companies and executives of the local residents' association	4 people
	Nisui-kai "New Year's greeting exchange"	January 11, 2019	Networking with local companies and executives of the local residents' association	2 people
	Cherry blossom party with the Utouma and Kanahama residents' associations	March 30, 2019	Networking with local companies and executives of the local residents' association	1 person
Chiba Plant	Goi Rinkai Festival	June 3, 2018	Local residents coming together at Ichihara Ryokuchi Park	10 people
	Wakamiya Hachiman Shrine Grand Festival	July 15, 2018	Grand Festival of Wakamiya Hachiman Shrine	1 person
	Yoro Shrine Summer Grand Festival	July 29, 2018	Summer grand festival of Yoro Shrine	1 person
	Iwasaki bon dance festival	August 4, 2018	Iwasaki bon dance festival at the Ryokuchi Sports Park	1 person
	Dezu bon dance festival	August 4, 2018	Bon dance festival of Dezu-cho Association	1 person
	Kashi bon dance festival	August 4, 2018	Bon dance festival of Kashi-cho Association	1 person
	Tamasaki summer festival	August 18, 2018	Summer festival at the plaza in front of the Tamasaki community building	1 person
	Matsugashima summer festival	August 19, 2018	Summer festival in Matsugashima	1 person
	Kazusa Ichihara Kokufu Festival	September 29, 2018	Local residents coming together at Kazusa Sarashina Park	2 people
	Omiya Shrine autumn festival	November 1, 2018	Autumn festival at the Omiya Shrine	1 person
	Singles event at an industrial complex	November 17, 2018	Singles event held at the Brick & Wood Club	4 people
	Omiya Shrine New Year festival	January 1, 2019	New Year's festival at the Omiya Shrine	1 person
	New Year's festival at Kashi Fuki Inari Shrine	January 1, 2019	New Year's festival at Fuki Inari Shrine in Kashi Park	1 person
	RC Chiba area local dialogue meeting	January 31, 2019	Local dialogue meeting (Environmental protection and process safety and disaster prevention)	5 people
	Setsubun festival of Omiya Shrine	February 3, 2019	Mame-maki (soy bean throwing) at Omiya Shrine	1 person
	Iwasaki Inari Shrine annual spring festival	March 3, 2019	Annual spring festival at the Iwasaki Inari Shrine	1 person
	Spring festival of Dezu-cho Association	March 9, 2019	Spring festival at Yakumo Shrine	1 person
	Kashi Fuki Inari Shrine festival	March 10, 2019	Festival at the Fuki Inari Shrine held in Kashi Park	1 person
	Omiya Shrine spring festival	March 27, 2019	Spring festival at Omiya Shrine	1 person

FY 2019				
Site	Name of local event	Date	Summary	Number of participants
Odawara Research Center	Local community cleanup	May 29, 2018	Cleanup of roads near Odawara Research Center	37 people
	Local community cleanup	November 9, 2018	Cleanup of roads near Odawara Research Center	17 people
	General meeting of the Sakabe District Corporate Social Gathering Association (Haibara)	December 26, 2018	Mayor's lecture, general meeting of the Corporate Social Gathering Association, social gathering with local companies and residents in the Sakabe District	1 person
	Safety prayer festival (Sugawara Shrine)	January 7, 2019		2 people
	Organizers' association for the Sakabe District Corporate Social Gathering Association (Haibara)	January 24, 2019	Meeting to discuss the details of the general meeting of the Corporate Social Gathering Association	1 person

To develop good relationships with local residents, each worksite undertakes diverse activities that match the needs of the area.



Goi Rinkai Festival (Chiba Plant, June 3, 2018)



Environment cleanup in the vicinity of the plant (Takaoka Plant, June 22, 2018)



Nihongi Station Railroad Festival; Unveiling ceremony of wheels and points at the memorial ceremony (Nihongi Plant, October 13, 2018)



Eco-walk (Nihongi Plant, October 21, 2018)



Nisso "Thanking Local Residents" event (Takaoka Plant, November 4, 2018)



Local community cleanup (Odawara Research Center, November 9, 2018)

Stakeholder engagement

We are involved in stakeholder engagement through dialogues with our stakeholders to better understand society's needs and values and to advance business activities that meet the expectations of the local communities.

● BCM rating from the Development Bank of Japan (DBJ)

Reviewed on November 2, 2012

Rated on January 15, 2013 : Rank A (the highest)

● Environmental Responsibility Rating from the DBJ

FY 2015: Rank B

In March 2015, Nippon Soda received a loan from the Development Bank of Japan as a result of receiving high marks under the bank's DBJ Environmental Ratings for our "particularly cutting-edge, environmentally conscious efforts."

● Incorporation into the Meiji Yasuda Women's Participation and Advancement in the Workplace Fund

● Hosting stakeholder dialogue

We hold a stakeholder dialogue to identify materiality in which Nippon Soda needs to be involved.

> [Stakeholder dialogue](#) 

● Efforts to prevent occupational accidents

As part of our stakeholder engagement, SOMPO RISK MANAGEMENT & Health Care Inc. was asked to conduct an occupational health and safety survey (diagnosis) at Chiba Plant on March 5, 2019.

● Implementation of diagnosis of disaster prevention capability

Disaster prevention capability diagnosis was performed by the SOMPO RISK MANAGEMENT & Health Care Inc.

Nihongi Plant November 21 and 22, 2018

Takaoka Plant September 27 and 28, 2018

Chiba Plant September 14, 2018

Nisso Metallochemical Co., Ltd. Aizu Plant May 31 and June 1, 2018

Nisso Metallochemical Co., Ltd. Chiba Plant August 24, 2018

Nisso Fine Co., Ltd. Iwaki Manufacturing Department, Onahama Plant June 22, 2018

Shin Fuji Kaseiyaku Co., Ltd. Takasaki Plant, Gunma Plant June 8, 2018

Signing of and support for economic, environmental and other initiatives, social charters, and principles

Title	Applicable countries	Applicable worksites	Signature date	Voluntary/Mandatory
Declaration on the promotion of responsible care activities	Japan and 43 other countries and regions	All offices, consolidated subsidiaries	October 30, 1998	Voluntary
Declaration on the promotion of CSR activities	Japan and 43 other countries and regions	All offices, consolidated subsidiaries	April 1, 2012	Voluntary
Responsible Care Global Charter	Japan and 43 other countries and regions	All offices, consolidated subsidiaries	December 5, 2014	Voluntary

Membership categories at advocacy organizations and institutions in Japan and abroad

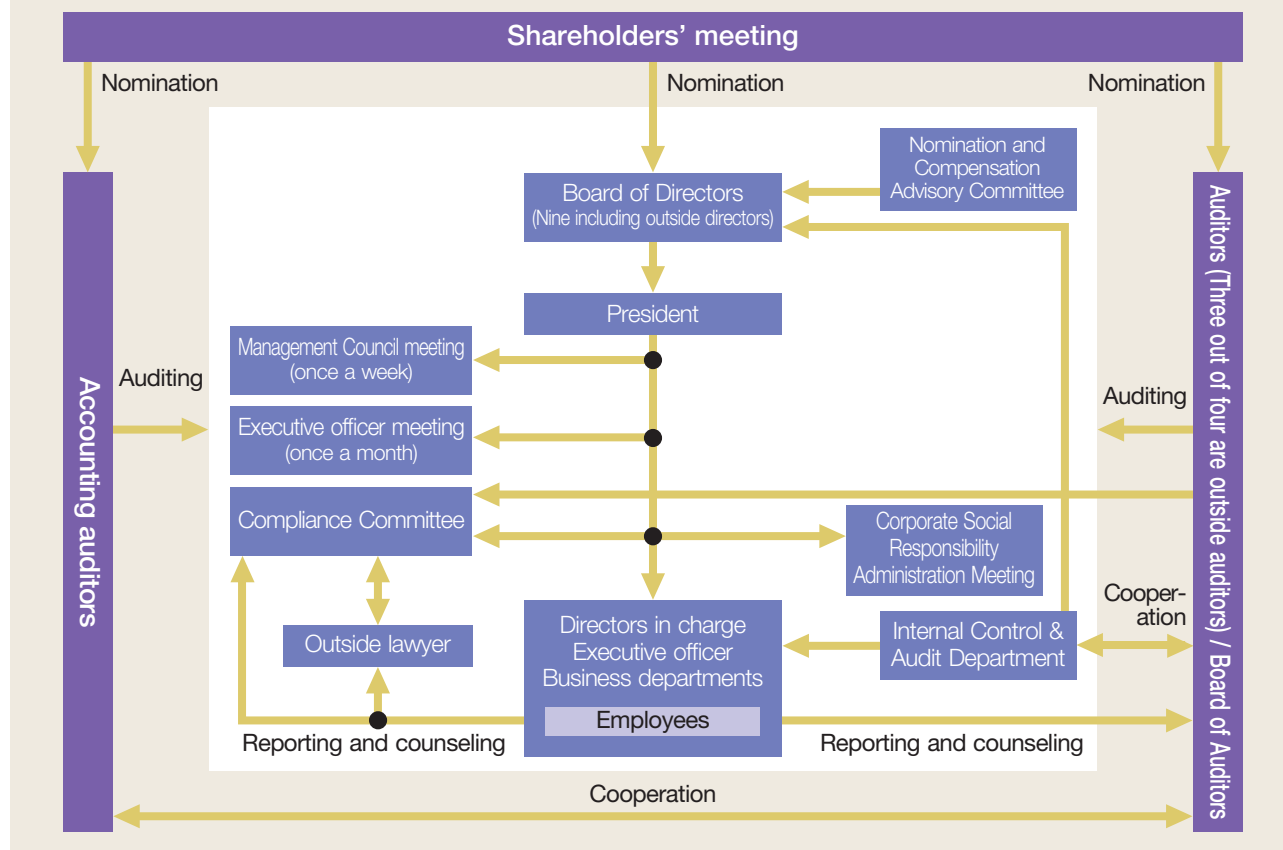
Advocacy institutions	Applicable countries	Membership
International Council of Chemical Associations (ICCA)	Worldwide	Participating as a corporate member of JCIA
Japan Chemical Industry Association (JCIA)	Japan	Corporate member
Global Product Strategy (GPS)	Worldwide	Participating as a corporate member of JCIA
Japan Initiative of Product Stewardship (JIPS)	Japan	Participating as a corporate member of JCIA
Japan Soda Industry Association (JSIA)	Japan	Member

Governance/ Compliance/ Risk Management

We adopt the Corporate Governance Code as the basis for our business activities with an emphasis on sound and transparent business management that complies with the law.

Corporate Governance

Corporate Governance System and Corporate Social Responsibility Administration Meeting



Basic concept

Nippon Soda places primary importance on sound and transparent business management in compliance with the law. Our management philosophy is to contribute to social development by providing superior products through chemistry, to meet expectations from stakeholders, including shareholders, business partners, employees and local communities, and to promote environmentally conscious business practices and activities. Under this philosophy, Nippon Soda is committed to growing into a technology-oriented group that develops high-value-added products by making best use of proprietary technologies and by growing our business internationally with a focus on chemistry. Nippon Soda recognizes the importance of good corporate governance in order to achieve philosophy and to respond promptly and effectively to sudden changes in the business environment.

Corporate governance system

To meet social demands, Nippon Soda complies with the Corporate Governance Code, deepens understanding of social contexts and respects their meaning in order to improve the corporate governance system.

The Board of Directors

The Board of Directors discusses issues governed by laws, regulations and articles of incorporation as well as important decisions related to business management defined by the Board's regulations, and supervises business execution.

The Board of Auditors

The Board of Auditors audits business execution performed by the Board of Directors in cooperation with the Internal Control & Audit Department and accounting auditors.

Outside directors

Outside directors ensure objectivity and rationality in business decision-making by the Board of Directors so as to improve medium-to long-term corporate value.

Effectiveness assessment of the Board of Directors

A self-assessment questionnaire is given to all directors and auditors to determine the effectiveness of business management and improve supervision. Based on questionnaire results, the company analyzes and evaluates the effectiveness of the Board of Directors. In FY 2019, we conducted a third-party evaluation using an external organization to ensure the neutrality and objectivity of the effectiveness assessment.

Compliance

Basic concept

Nippon Soda ensures corporate activities are undertaken in compliance with laws, regulations and corporate ethics by ensuring all employees are fully informed of the Nippon Soda Group Code of Conduct. Our efforts to ensure business management that emphasizes regulatory compliance include the establishment of the Compliance Committee and proper operation of the internal reporting system. Through these efforts, we enhance the internal control system and continue to be a company trusted by society.

The Nippon Soda Group Code of Conduct comprises the following sections:

1	Compliance with laws, rules, regulations and corporate ethics	(1) Fair behavior	(2) Compliance with corporate ethics	(3) Prompt corrective action and strict disciplinary action in response to the violation of a law, rule or regulation
2	Relationships with society	(1) Contribution to society	(2) Compliance with industry laws	(3) Restrictions on political and other donations
		(4) Severance of relationships with antisocial forces	(5) Environmental preservation and protection	(6) Compliance with laws and regulations related to security trade control and imports and exports
3	Relationships with customers, business partners and competitors	(1) Safety of products	(2) Compliance with the Antimonopoly Act	(3) Compliance with suppliers' guidelines for fair transactions and the Subcontract Act
		(4) Prevention of unfair competition	(5) Business entertainment and gifts	(6) Prevention of bribery of foreign public officials
		(7) Appropriate advertising		
4	Relationships with shareholders and investors	(1) Disclosure of management information	(2) Prohibition of insider trading	
5	Relationships with employees	(1) Respect for human rights and prohibition of discrimination	(2) Sexual harassment	(3) Protection of privacy
		(4) Safety and hygiene at worksites	(5) Compliance with labor laws	
6	Relationships with the company and its assets	(1) Compliance with working regulations	(2) Proper accounting	(3) Conflicts of interest
		(4) Prohibition of political and religious activities	(5) Management of corporate secrets	(6) Appropriate use of corporate assets
		(7) Appropriate use of information systems	(8) Protection of intellectual property	
7	Supplementary provisions	(1) Scope of application of this Code of Conduct	(2) Revision and abolition of this Code of Conduct	(3) Violation consultation hotline
		(4) Penalties		

Compliance education

The requirements that allow the Nippon Soda Group to conduct sound business activities are specified in the Nippon Soda Group Code of Conduct, which is distributed to the management teams and all employees of Nippon Soda and consolidated companies. Training based on the Code of Conduct is provided on a regular basis to ensure compliance with laws and regulations.

A compliance survey is conducted among all employees once a year. Training on job-related laws and regulations is also provided at least once a year. In fiscal 2019, major compliance training sessions were held eight times at Nippon Soda and major Group companies.

Education on laws and regulations related to chemicals and product safety

Nippon Soda provides educational and explanatory sessions on laws and regulations related to the management of chemicals on a regular basis.

No.	Programs and details	Site and date	Number of participants
1	Education for new and transferred employees (Contents: chemical substances laws and regulations, Poisonous and Deleterious Substances Control Act, UN Recommendations on the Transport of Dangerous Goods, labels, SDS, YC, internal rules, etc.)	Head Office: First session on April 26 and May 8, 2018 Second session on May 10 and 14, 2018	25 people 26 people
2	Internal explanatory session on the latest trends in chemical regulations in Vietnam (Contents: Notification required for preparing a list of existing chemical substances in Vietnam)	Head Office: May 31, June 1, 4, and 5, 2018	13 people
3	Education on important points to remember in sending products and samples (Contents: UN Recommendations on the Transportation of Dangerous Goods, labels, etc.)	Odawara Research Center:* July 6, 2018 Haibara Field Research Center*: July 18, 2018	42 people 21 people
4	Educational session on chemical substance laws and regulations, internal rules	Chiba Research Center:* July 19, 2018	23 people
5	Internal explanatory session on revision of the small-amount new chemical substance application system under the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.	Head Office, 4 plants, and 2 research centers* November 21, 26, and 28, December 5, 2018	113 people
6	Education on revision of the Agricultural Chemicals Control Act	Head Office, Nihongi Plant,* Takaoka Plant,* Odawara Research Center,* Haibara Field Research Center,* Bandai Field Research Station,* Nisso Chemical Analysis Service Co., Ltd.*: November 20 and 21, 2018 and January 17, 2019	303 people
7	Explanatory session on revision of laws and regulations (Details: Revisions to the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Act, the Poisonous and Deleterious Substances Control Act, the Regulations for the carriage and storage of dangerous goods in ship, the Civil Aeronautics Act and other laws and regulations; revision of JIS standard for SDSs and labels; revisions of overseas laws and regulations, etc.)	Head Office: February 14 and 25, 2019 4 plants and 2 research centers* January 23, February 5 and 27, 2019	52 people 59 people
8	Internal explanatory session on revision of Korean chemical substances regulations (Details: Outline of the revision of Korean chemical substances regulations (K-REACH) and prior-notification in the revised K-REACH)	Head Office: March 4, 5, 6, 14, 22, and 25, 2019	17 people



Education on revision of the Agricultural Chemicals Control Act (Head Office, January 17, 2019)

A fine exceeding the reasonable amount against the violation of laws and regulations related to the provision or use of products and services

No relevant events were reported.

Risk Management

The internal control system

- 1) In accordance with the basic policy regarding the improvement of systems necessary to ensure proper business operation, Nippon Soda establishes and implements systems that ensure compliance and efficient and sound company management as well as providing information on relevant rules throughout the company.
- 2) We promote CSR (corporate social responsibility) practices in order to maintain the trust of society needed to continue our business activities.

Regulations on the risk management of losses and other systems

- 1) We ensure corporate activities in compliance with laws, regulations and corporate ethics by ensuring all employees are fully informed of the Nippon Soda Group Code of Conduct.
- 2) Under the Corporate Social Responsibility Administration Meeting chaired by the President, we promote business activities taking into account environmental protection, occupational safety, product safety and human rights, as well as implement risk management according to corporate rules such as environmental management rules and security management rules, to prevent accidents from occurring.
- 3) Should a serious accident occur, an accident response headquarters is established in accordance with corporate rules, including the security management rules, to address the accident in a cross-sectional and systematic way.
- 4) If a natural disaster, such as a large earthquake, or any crisis that could have disastrous consequences occurs, we shall respond appropriately according to the business continuity plan (BCP).
- 5) Other risks associated with business execution are appropriately addressed by responsible departments in accordance with relevant manuals and other documents.
- 6) The Internal Control & Audit Department, independently from business departments, assesses the appropriateness and efficiency of business activities and the reliability of financial reports and promotes the appropriate functioning of the internal control system in business processes.

Internal audits

The company's Internal Control & Audit Department is independent of business departments. In cooperation with auditors, the Department, on a regular basis, assesses the appropriateness and efficiency of business activities and the reliability of financial reports.

Auditors are familiar with the entire Nippon Soda Group and inspect and monitor the proper execution of internal control. To ensure the reliability of financial reports, they work in close cooperation with accounting auditors. For example, auditors receive regular reports from accounting auditors and sometimes assist with audits.

The risk management system

- 1) Nippon Soda operates a Compliance Committee, which reports directly to the President, to ensure corporate activities in compliance with laws, regulations and corporate ethics throughout the Group.
- 2) The Compliance Committee comprises executive officers as its members. At each department, branch, worksite and Group company, a staff member in charge of compliance is appointed.
- 3) The requirements that allow the Group to conduct sound business activities are specified in the Nippon Soda Group Code of Conduct, which is distributed to the management and all employees of the Nippon Soda and its group companies. In addition, training based on the Code of Conduct is regularly provided.
- 4) A consultation hotline is available to employees of Nippon Soda and its group companies who have violated internal policies or who have discovered violations committed by others to assist them in directly consulting with the Office of the Compliance Committee or a legal advisor or auditor.

Information disclosure to stakeholders

- 1) We disclose management information, such as financial conditions and the status of business activities, in a timely and appropriate manner. As well, we provide clarifications on the company's management philosophy and policy.
- 2) The director in charge of general affairs or the IR general manager plays a leading role to promote constructive communication with investors and shareholders to achieve the sustainable growth of Nippon Soda and improve its medium- to long-term value. If necessary, the company offers opportunities for communication with the Representative Director & President, directors in charge and/or executive officers.
- 3) Requests and opinions from investors and shareholders are conveyed to the Board of Directors and/or those concerned, as necessary, and reflected in business management. Important corporate information is immediately reported to the President via the director in charge of public relations, who also serves as the information handling manager. Appropriate and immediate measures are taken, internally and externally, to address such information.
- 4) We have our own internal insider trading management rules. The Information Management Manager is primarily responsible for information disclosure.

CSR activities

Nippon Soda's basic policy is to contribute to society through its business activities by effectively using the technologies, knowledge and human resources accumulated since its foundation. Based on this basic policy, we engage in CSR practices in order to maintain the trust of society we need to continue our business activities.

At every stage of the product life cycle, from manufacturing to disposal, we promote responsible care (RC) activities in order to conduct business activities that take into account environmental protection, occupational safety, and product safety.

Information security management

Appropriate management and protection of our information assets is one of the priority issues in managing our business. Nippon Soda promotes information security management under the supervision of the director in charge of information systems.

We have developed internal rules, including our policy on information security, and included issues related to the appropriate use of information systems in the Nippon Soda Group Code of Conduct. These efforts are aimed at raising awareness of the importance of information assets.

We strengthen the information security management system of the entire Nippon Soda Group. Efforts to help achieve this goal include drills on suspicious emails to prepare each Group company on how to act to prevent viruses from infecting our computers.

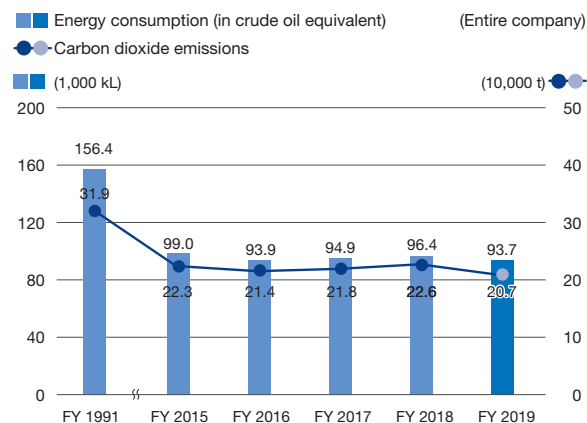
Proper management of personal information

In response to the adoption of the My Number system in January 2016, Nippon Soda developed the Basic Policy for Proper Handling of Specific Personal Information and the Specific Personal Information Handling Regulations to ensure the proper handling of personal information as an organization.

We collect, use, store and handle individual numbers (My Numbers) of executives, employees and their dependents in an appropriate manner, in compliance with laws and regulations related to the handling of personal information and individual numbers, and within the scope of use specified in the basic policy and handling regulations.

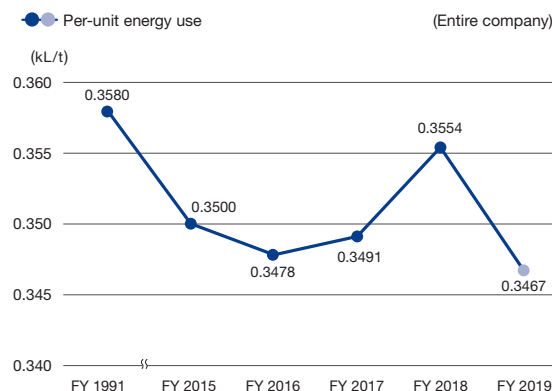
Environmental, Social and Governance (ESG) Data

Environmental data of Nippon Soda

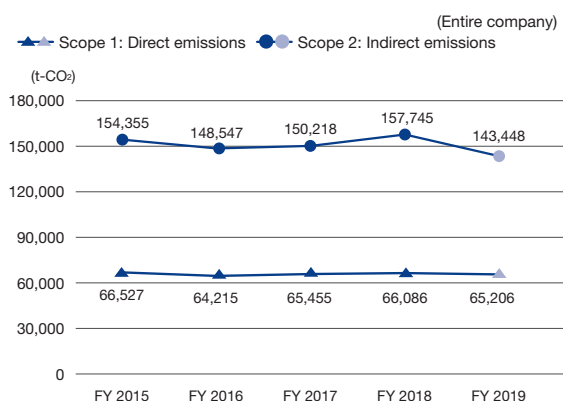
Changes in energy consumption and CO₂ emissions

In FY 2010 and later years, the amounts of consumption at the Head Office, branches and other offices were included. The data collection area at Chiba Plant was changed.

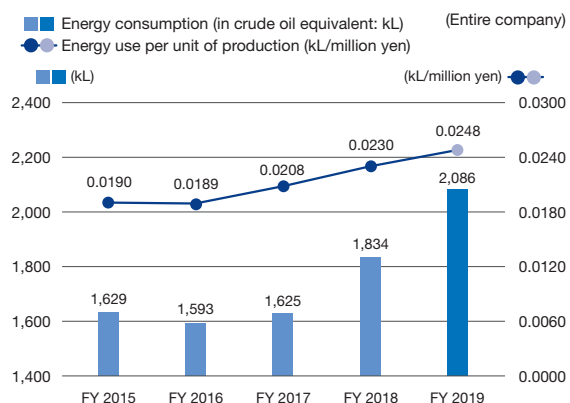
The energy use per unit of production



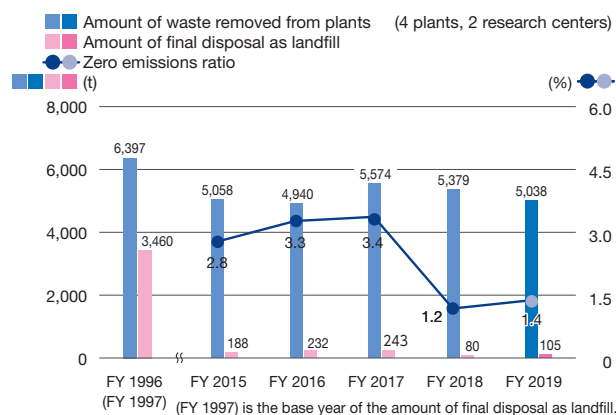
Changes in GHG emissions for Scope 1 and Scope 2



Changes in energy consumption related to transportation and energy use per unit of production

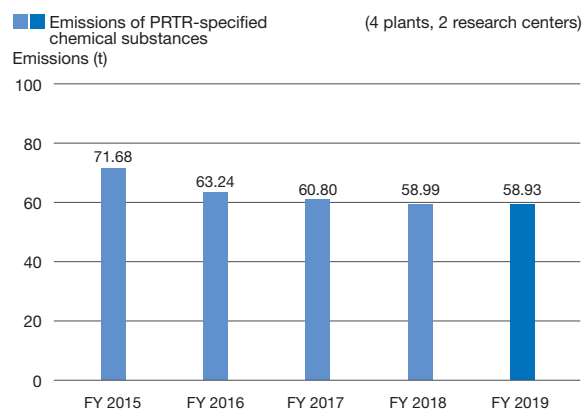


Change in the amount of industrial waste emissions

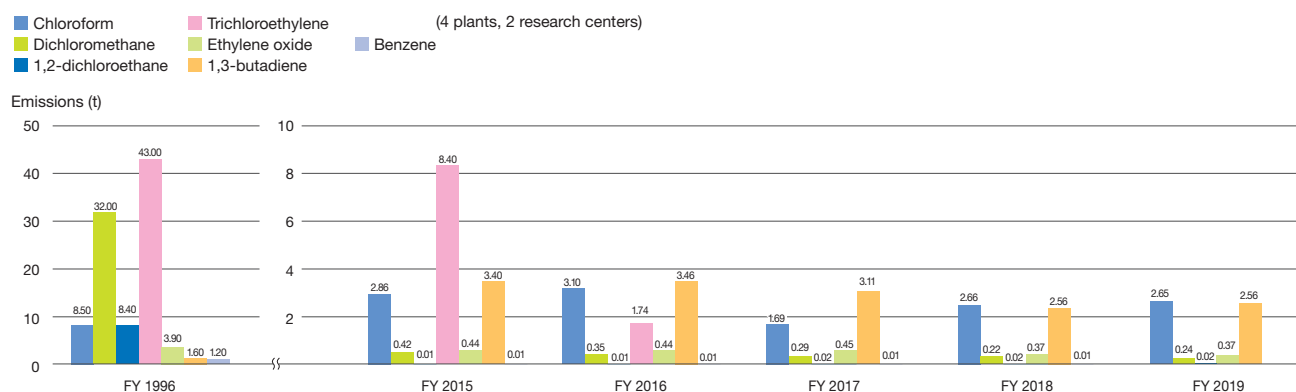


The amount of waste removed from plants does not include the waste sludge of activated sludge process at Takaoka Plant (which is treated with microbial autolysis at an external facility).
Base year of the amount of final disposal as landfill: FY 1997

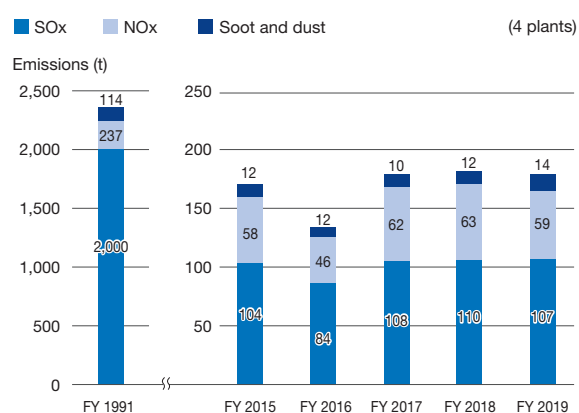
Changes in the emissions of Class 1 chemical substances specified by the PRTR Law



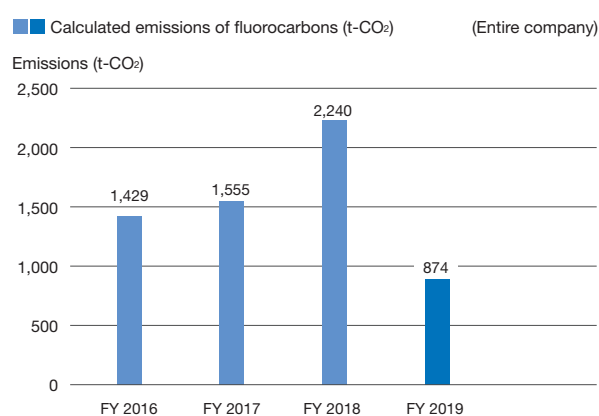
Changes in the emissions of voluntarily controlled chemical substances to the atmosphere



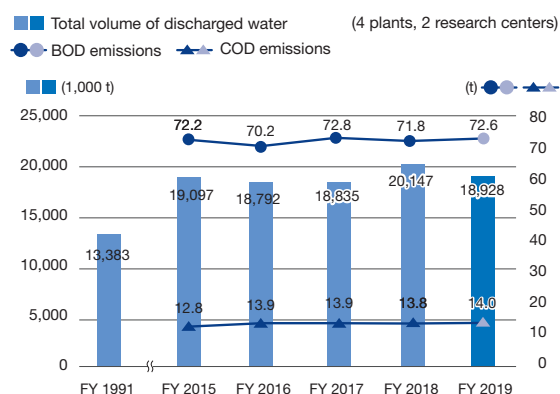
Changes in the emissions of substances controlled by the Air Pollution Control Act



Change in the calculated emissions of fluorocarbons

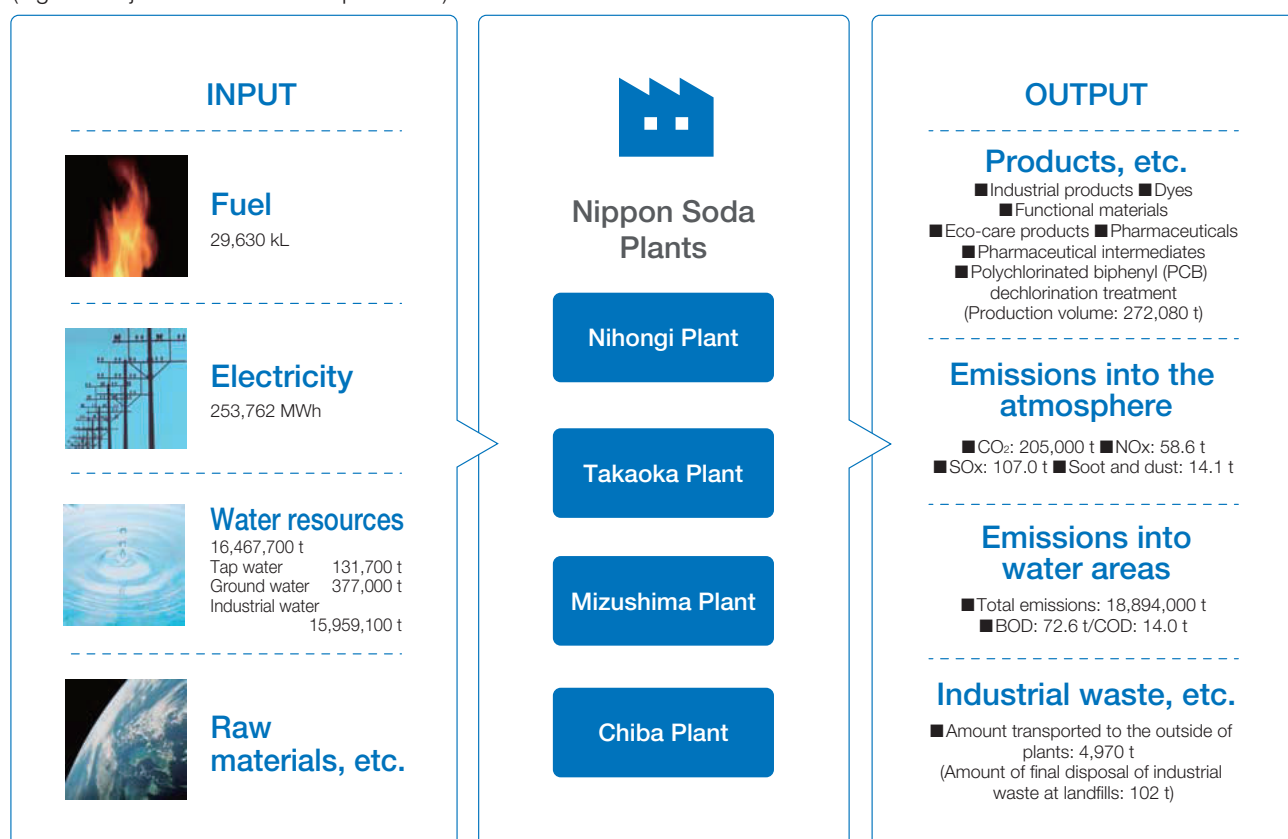


Changes in the total volume of discharged water and emissions of BOD and COD



Major environmental impact data

The environment impact of Nippon Soda's four major plants in Japan in FY 2019 are shown in the figure below:
(Figure: Major environmental impact data)



Violation of environment-related laws and regulations, etc.

(Nippon Soda)

None

(Group companies)

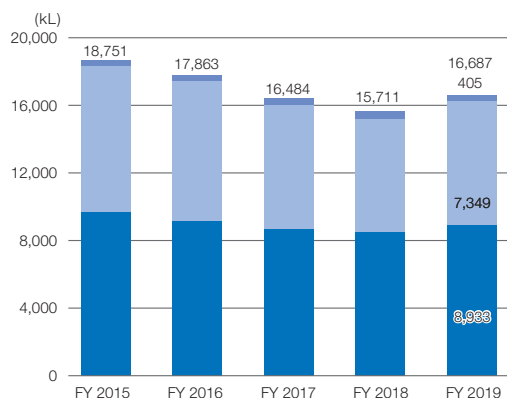
March 22, 2019 at Aizu Plant of Nisso Metallochemical Co., Ltd.: An excess over the standard value of wastewater: It was confirmed that the value of a legally controlled substance contained in discharged water exceeded the standard value due to a failure of the affiliated wastewater receiving company. The violation was reported to the authorities. The plant immediately stopped the discharge of wastewater. The cause was identified and measures to prevent a reoccurrence were taken.

Environmental data of Group companies

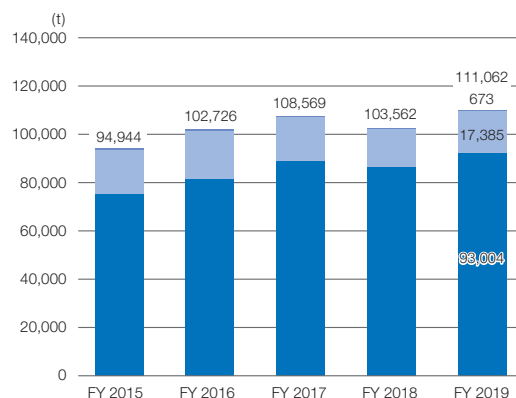
Manufacturing Group company

■ Nisso Metallochemical Co., Ltd. ■ Nisso Fine Co., Ltd. ■ Shinfuji Kaseiyaku Co., Ltd.

Change in energy consumption (in crude oil equivalent)

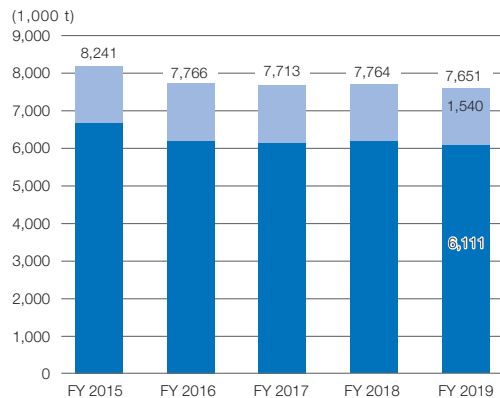


Change in the amount of carbon dioxide emissions

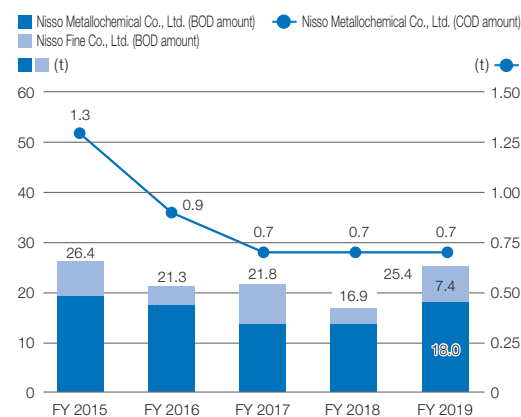


Note: The increase in CO₂ emissions was due to an increase in industrial waste oil received by Aizu Plant of Nisso Metallochemical Co., Ltd. under a contract.

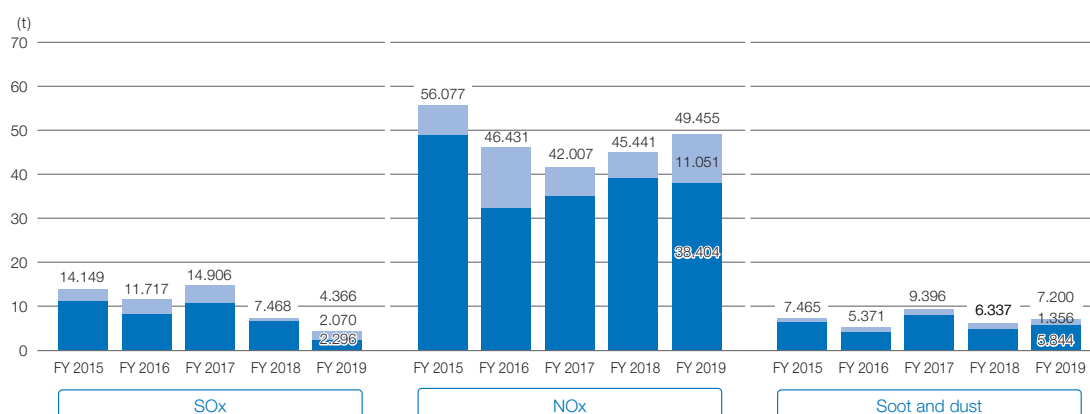
Change in the total volume of discharged water



BOD & COD of wastewater

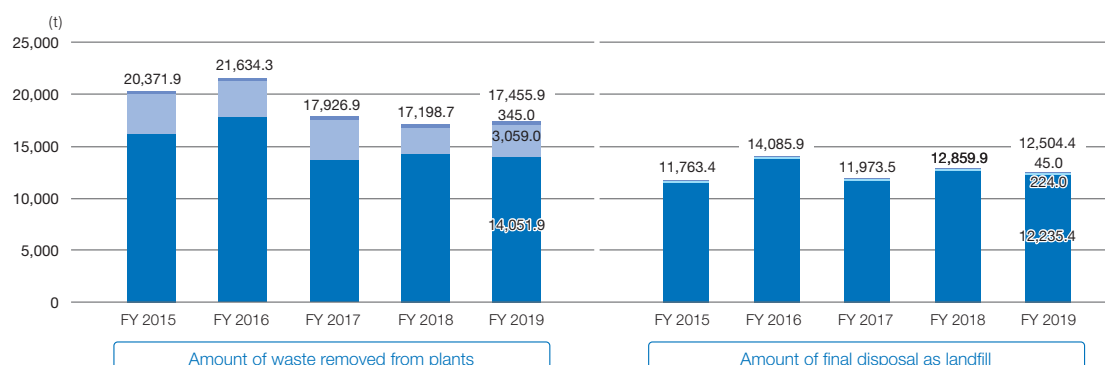


Change in the amount of emissions of substances controlled by the Air Pollution Control Act



■ Nisso Metallochemical Co., Ltd. ■ Nisso Fine Co., Ltd. ■ Shinfuji Kaseiyaku Co., Ltd.

Change in the amount of industrial waste emissions



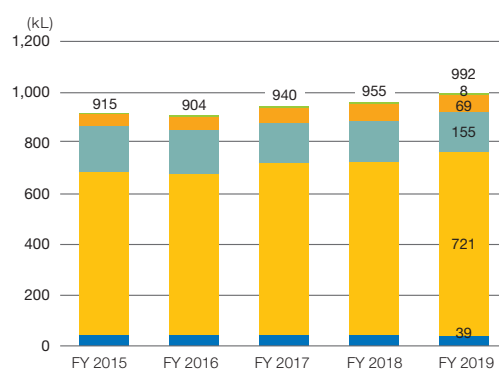
Overseas manufacturing Group companies

(FY)		2015	2016	2017	2018	2019
Alkaline SAS (MSSA) (France)	Energy consumption (MWh)	251,968	277,814	271,004	289,841	299,119
	Total amount of wastewater (1,000 t)	261.85	253.03	235.79	230.62	239.73
Nisso Namhae Agro Co., Ltd. (Korea)	Energy consumption (in crude oil equivalent) (kL)	1,980.93	2,046.18	2,040.68	1,761.83	1,646.67
	Carbon dioxide emissions (1,000 t)	3.96	4.09	4.07	3.48	3.25
	Total amount of wastewater (1,000 t)	115.89	103.98	98.48	90.78	77.30

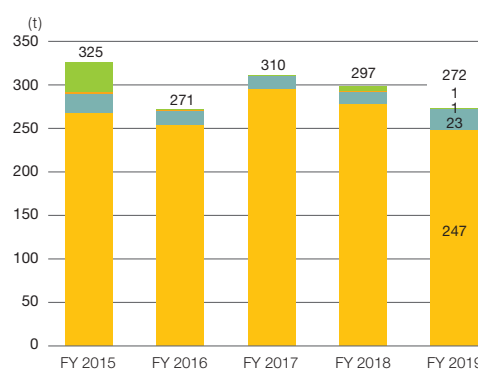
Non-manufacturing Group companies

■ Nisso Shoji Co., Ltd. ■ Sanwa Soko Co., Ltd. ■ Nisso Engineering Co., Ltd.
 ■ Nisso Kensetsu Co., Ltd. ■ Nisso Green Co., Ltd.

Change in energy consumption (in crude oil equivalent)



Change in the amount of industrial waste emissions

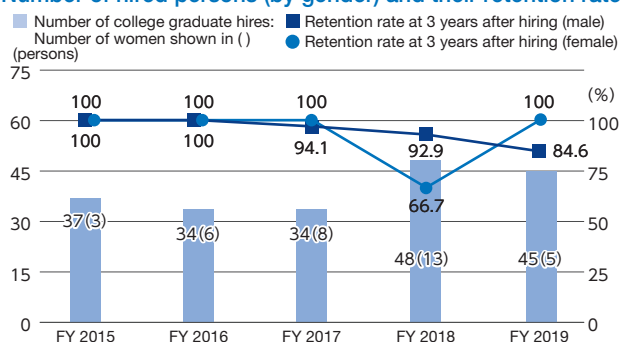


Note: The amount of waste generated at Nisso Shoji Co., Ltd. is not included.
 The amount generated at Sanwa Soko Co., Ltd. is only included in the tabulation for fiscal 2015.

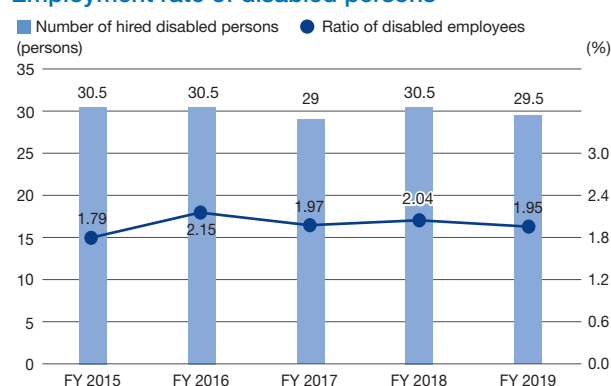
Environmental, Social and Governance (ESG) Data

Social data of Nippon Soda

Number of hired persons (by gender) and their retention rate



Employment rate of disabled persons



Change in the number of employees taking child/family care leave

FY	Those who took child care leave (person)		Those who took family care leave (person)	
	Men	Women	Men	Women
2014	1	6	0	0
2015	0	6	0	0
2016	1	2	0	0
2017	2	3	1	0
2018	3	4	0	0
2019	5	10	1	0

Change in the number of employees taking maternity/child care leave and the rates of those returning to work and those remaining for three years after returning to work (by gender)

FY	Employees who took maternity/child care leave (employee)		Rate of employees returning to work (%)		Rate of employees remaining with the company (%)	
	Men	Women	Men	Women	Men	Women
2014	1 (1,151)	7 (134)	100	100	—	50
2015	0 (1,144)	5 (137)	—	100	—	83.3
2016	1 (1,137)	2 (142)	100	100	100	100
2017	2 (1,138)	3 (152)	100	100	100	100
2018	3 (1,130)	6 (159)	100	75	100	100
2019	5 (1,143)	12 (168)	100	100	100	100

The numbers were counted at the first fiscal year of the leave.
 The numbers in brackets are the total numbers of men and women respectively at the end of each fiscal year.
 Retention rate is for employees who in this fiscal year are in their third year since returning to work.

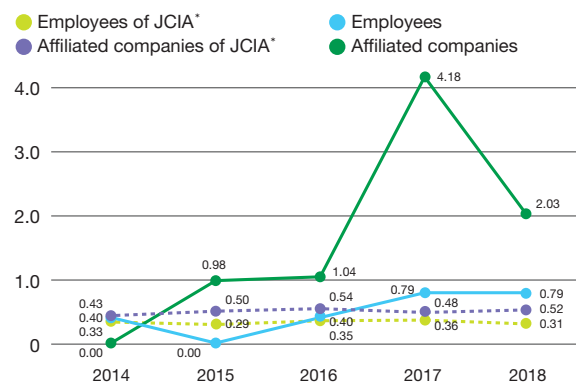
Total annual working hours per employee

Normal working hours (hours)	Early start and overtime hours (hours)	Holiday overtime hours (hours)	Paid annual leave days taken (days)	Various kinds of leave days taken (days)	Total annual working hours per person (hours)
1,825.0	118.7	7.5	15.3	2.0	1,818.3

Number of labor union members (Nippon Soda)

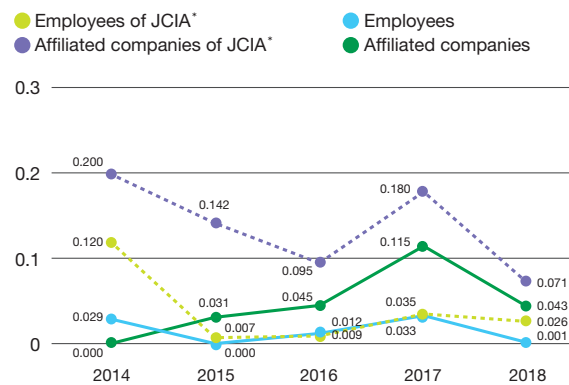
FY	The number of labor union members (person)	Average age (years)	Average length of service (years)	Rate of members (%)
2014	856	40.9	19.9	65.5
2015	845	40.6	19.3	65.0
2016	844	40.4	18.9	64.8
2017	820	39.3	17.6	63.3
2018	824	37.9	15.8	62.7
2019	840	37.7	15.6	63.7

Change in occupational accident frequency rates



Occupational accident frequency rate: Casualties/Total working hours (per million hours)
 (*) JCIA stands for Japan Chemical Industry Association.
 The data were collected from January 1 to December 31 of each year.

Change in severity rate for occupational accidents



Severity rate of occupational accidents: Man-days lost/Total working hours (per 1,000 hours)
 The data were collected from January 1 to December 31 of each year.

CSR Activities at Plants

Nihongi Plant

950, Fujisawa, Nakago-ku, Joetsu, Niigata 949-2392
Tel: +81-255-81-2300 Fax: +81-255-81-2341



Major products manufactured Caustic potash, alcoholate, NISSO HPC, faropenem sodium, Mospilan, Nissorun, NISSO HI-CHLON, HIDION, etc.

Number of employees 325 (as of the end of March 2019)
(Including 66 Joetsu Nisso Chemical employees)

Number of employees of affiliates 223 (as of the end of March 2019)
ISO 14001: Certified in March 2000
ISO 9001: Certified in August 1995
OHSAS 18001: Certified in April 2009

Akira Kaneko, Senior Executive Officer, Nihongi Plant Manager

Nihongi Plant is the birthplace of Nisso. The plant's operations started 99 years ago amid the rich natural environment at the base of Mount Myoko, one of "100 famous Japanese mountains." In this place, we will celebrate our 100th anniversary in February 2020. We have continued our operations while considering the natural environment and gained the understanding and support of local communities and stakeholders through various exchange programs. In recent years, we have participated in a project to create a new type of community together with the Nakago-ku Sogo Jimusho, the Machizukuri Shinko-kai, elementary and junior high schools, and other local residents.

We make concerted efforts involving all employees to achieve the goals of CSR activities and promote business activities that consider safety and health, environmental conservation, and quality assurance in order to contribute to realizing a vibrant society. Our efforts are also focused on being a plant that is trusted not only by everyone working at the plant but also by local residents. Incorporating the achievement of zero accidents and disasters and stable production into our plant's policy, we combine our ideas to make our plant better and to achieve a better future. We will continue our efforts to reach all our ideals.

Actual environmental data in FY 2019

Unit: t/year (amount of discharged water: 1,000 t/year; CO₂: 10,000 t/year)
The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Emissions into water areas			Emissions into the atmosphere				The final disposal of industrial waste at landfill
Amount of discharged water	BOD	COD	CO ₂	NO _x	SO _x	Soot and dust	
7,493 (▲1,205)	8.4 (▲3.7)	—	7.2 (▲0.5)	20.6 (▲7.5)	2.0 (▲5.4)	12.0 (+1.4)	32.3 (+4.3)

Emissions of PRTR-designated substances in FY 2019

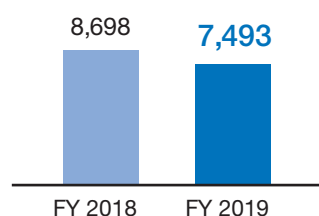
The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Substance name	Amount emission		Amount transported
	Air	Water	
Toluene	21.91 (▲0.29)	0.00 (0.00)	0.00 (0.00)
Fluorine	0.00 (0.00)	0.00 (0.00)	1.94 (▲0.11)
Chloroform	2.79 (+0.53)	0.00 (0.00)	0.00 (0.00)
Designated substances: 15 substances Total emissions: 26.34 t Total amount transported: 1.94 t			

The amount of boron exceeded 1 ton due to increased production of products using it, and is thus required to be reported (from 14 to 15)

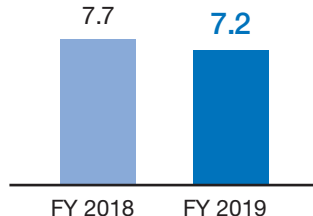
■ Emissions into water areas (1,000 t)

Amount of discharged water

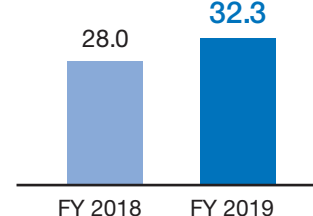


■ Emissions into the atmosphere (10,000 t)

CO₂

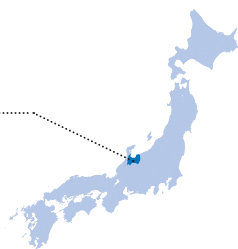


■ The final disposal of industrial waste at landfill (t)



Takaoka Plant

300 Mukaino-honmachi, Takaoka, Toyama 933-8507
Tel: +81-766-26-0206 Fax: +81-766-26-0300



Major products manufactured	Caustic soda, hydrochloric acid, TODI, phosphorous chloride, organotitanium, Secondary battery materials, Topsin-M, Triflamine, pesticide formulation products, etc.
Number of employees	341 (as of the end of March 2019) (Including 17 employees of Nisso BASF Agro Co., Ltd., a manufacturing joint venture)
Number of employees of affiliates	169 (as of the end of March 2019)
	ISO 14001: Certified in November 2000
	ISO 9001: Certified in June 1995
	OHSAS 18001: Certified in November 2005

Atsuo Watanabe, Executive Officer, Takaoka Plant Manager

Takaoka Plant started operation in 1934 by the Oyabe River in Takaoka City, Toyama Prefecture. The area is surrounded by the Tateyama mountain range, the Hida Mountains and the Hakusan mountain range, which provide abundant water, and by Toyama Bay, rich in natural resources. Supported by abundant water and electricity, we manufacture basic chemical products through the electrolysis of sodium, which is the basis of the chemical industry. Using these chemical products as ingredients, we also manufacture functional chemicals and agrochemicals, essential items in a modern society.

There are many issues associated with the process of manufacturing these products, including large amounts of electricity and the generation of waste. Taking these issues seriously, we have been engaged in various efforts for conserving the environment, such as energy reduction and waste recycling. Since Takaoka Plant is a chemical plant, all employees working here handle hazardous substances professionally and safely. We also place strong emphasis on ensuring safety and disaster prevention so that even if an accident does occur we can minimize damage and prevent any impact on the environment or on residents in nearby communities.

We recognize that it is the responsibility of our plant and our company to ensure the safety and security of the environment of Toyama Bay, one of the most beautiful bays in the world, as well as the local communities.

Actual environmental data in FY 2019

Unit: t/year (amount of discharged water: 1,000 t/year; CO₂: 10,000 t/year)
The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Emissions into water areas			Emissions into the atmosphere				The final disposal of industrial waste at landfill
Amount of discharged water	BOD	COD	CO ₂	NO _x	SO _x	Soot and dust	
9,248 (▲135)	64.1(+4.4)	—	10.5 (▲1.6)	31.7 (+2.0)	104.7 (+2.3)	1.8 (+0.6)	62.0 (+19.0)

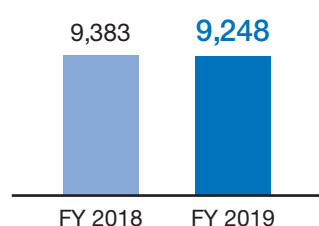
Emissions of PRTR-designated substances in FY 2019

The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Substance name	Amount emission		Amount transported
	Air	Water	
Toluene	0.23 (+0.08)	0.00 (0.00)	26.20 (+12.81)
Chlorobenzene	13.86 (▲0.08)	2.03 (▲0.01)	17.41 (+14.19)
Chloroform	0.17 (▲0.04)	0.01 (0.00)	76.99 (▲18.93)
Designated substances: 20 substances Total emissions: 18.44 t Total amount transported: 132.06 t			

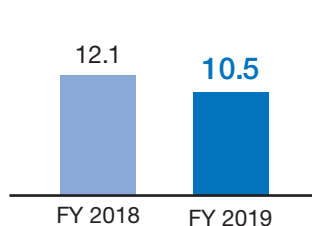
■ Emissions into water areas (1,000 t)

Amount of discharged water

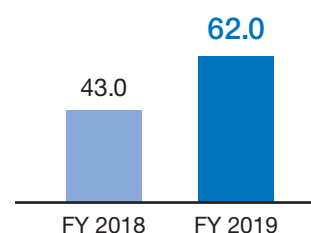


■ Emissions into the atmosphere (10,000 t)

CO₂



■ The final disposal of industrial waste at landfill (t)



Mizushima Plant

2767-12 Kojima-shionasu, Kurashiki, Okayama 711-0934
Tel: +81-86-475-0036 Fax: +81-86-475-0039



Major products manufactured	Soda cyanide, potassium cyanide, NISSO DAMN (diaminomaleonitrile)
Number of employees	56 (as of the end of March 2019)
Number of employees of affiliates	23 (as of the end of March 2019)
ISO 14001:	Certified in October 2001
ISO 9001:	Certified in January 1999
OHSAS 18001:	Certified in January 2009

Hajime Takasawa, Mizushima Plant Manager

Mizushima Plant started operations in 1969 in the Mizushima Industrial Area, which extends from the mouth of the Takahashi River in Okayama Prefecture and has access to abundant supplies of industrial water, oil, and electricity, while being conveniently located for land and sea transportation. In its early days, the plant was supplied with raw materials from neighboring companies. Keenly aware of the highly toxic cyanide that the plant uses during production, all employees working at the plant, including those of affiliated companies, engage in CSR activities in compliance with requirements, including handling ingredients and products, correctly wearing protective clothing, and working safely.

The key goal in our plant's policy is to achieve zero accidents and disasters. Continuous efforts have been made to achieve this goal, such as inspection patrols, emergency drills and other activities to ensure occupational safety and health. To further improve the plant's CSR activities, all plant personnel share information on the progress of CSR activities at the plant through the Mission Visualization (MV) project, based on which they make concerted efforts to achieve improvement.

We will continue our efforts to promote CSR activities so that we are recognized by society for our safe, stable and problem-free operation.

Actual environmental data in FY 2019

Unit: t/year (amount of discharged water: 1,000 t/year; CO₂: 10,000 t/year)
The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Emissions into water areas			Emissions into the atmosphere				The final disposal of industrial waste at landfill
Amount of discharged water	BOD	COD	CO ₂	NO _x	SO _x	Soot and dust	
546 (+46)	—	2.3 (+0.3)	1.2 (+0.2)	6.1 (+1.1)	0.0 (0)	0.0 (0)	5.0 (+0.6)

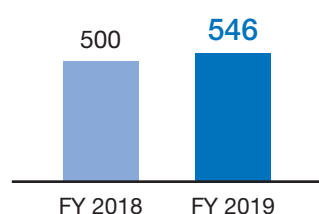
Emissions of PRTR-designated substances in FY 2019

The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Substance name	Amount emission		Amount transported
	Air	Water	
Inorganic cyanides	0.10 (▲0.07)	0.003 (±0.00)	0.02 (±0.01)
Acetonitrile	0.00 (0.00)	0.00 (0.00)	0.15 (+0.15)
Xylene	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Designated substances: 4 substances Total emissions: 0.27 t Total amount transported: 0.17 t			

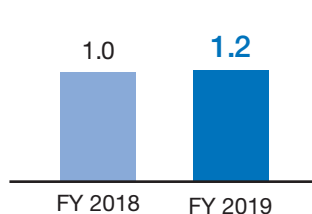
■ Emissions into water areas (1,000 t)

Amount of discharged water

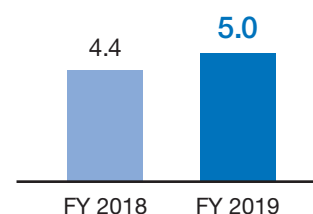


■ Emissions into the atmosphere (10,000 t)

CO₂



■ The final disposal of industrial waste at landfill (t)



Chiba Plant

12-8 Goiminami-kaigan, Ichihara, Chiba 290-8530
Tel: +81-436-23-2007 Fax: +81-436-22-6588



Major products manufactured NISSO-PB, VP Polymer, TITA BOND, D-90, TAKE-ONE

Number of employees 135 (as of the end of March 2019)

Number of employees of affiliates 69 (as of the end of March 2019)

ISO 14001: Certified in July 2000

ISO 9001: Certified in August 1997

OHSAS 18001: Certified in February 2008

Teruo Tachibana, Executive Officer, Chiba Plant Manager

Chiba Plant, located in the Keiyo Coastal Industrial Complex, is not a large general purpose petrochemical plant but a relatively small plant that manufactures many kinds of high-performance material products with unique features in small quantities.

The plant marked the 50th anniversary of its founding in 2019. On the occasion of the anniversary, we are focusing on achieving zero accidents and disasters, particularly on strengthening measures to prevent human errors. Our efforts are also focused on implementing a “well-planned PDCA cycle” to promote the plant’s medium-term plan. The PDCA cycle is an indispensable system for ensuring plant safety. It is possible to improve the effects of the “do” part of the cycle by enhancing the quality of the “plan.” We believe that if all employees deepen their thinking with regard to their work, we can maximize our achievements. Based on this belief, we implement daily CSR activities, including environmental protection, safety and health promotion, and quality assurance.

In accordance with this year’s plant motto of “Jump, Chiba Plant! Toward the next 50 years,” we will further improve the infrastructure of the plant. We will continue our proactive communication with local residents and do our best to prevent disasters so that we can grow into a safer plant with a great future.

Actual environmental data in FY 2019

Unit: t/year (amount of discharged water: 1,000 t/year; CO₂: 10,000 t/year)
The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.
*— indicates facilities with no emissions.

Emissions into water areas			Emissions into the atmosphere				The final disposal of industrial waste at landfill
Amount of discharged water	BOD	COD	CO ₂	NO _x	SO _x	Soot and dust	
1,609 (+81)	—	11.8 (▲1.5)	1.5 (+0.1)	*—	*—	*—	2.5 (▲0.3)

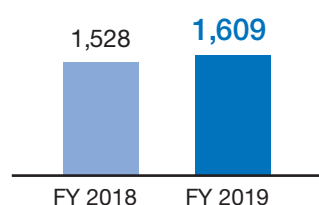
Emissions of PRTR-designated substances in FY 2019

The figure in brackets indicates the difference from the result in FY 2018; + shows an increase and ▲ shows a decrease.

Substance name	Amount emission		Amount transported
	Air	Water	
Toluene	7.23 (▲0.17)	0.00 (0)	0.15 (▲8.59)
n-hexane	4.86 (+1.22)	0.00 (0)	0.00 (0)
1,3-butadiene	3.13 (+0.57)	0.00 (0)	0.00 (0)
Designated substances: 11 substances Total emissions: 15.71 t Total amount transported: 43.66 t			

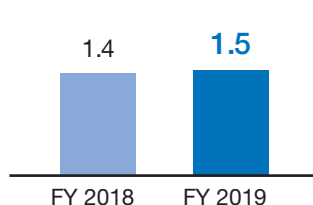
■ Emissions into water areas (1,000 t)

Amount of discharged water

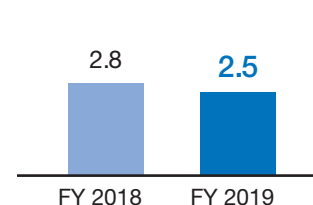


■ Emissions into the atmosphere (10,000 t)

CO₂



■ The final disposal of industrial waste at landfill (t)



Japan Chemical Industry Association

Third-Party Verification of the Nippon Soda Group CSR Report 2019



Nippon Soda Group CSR Report 2019 Third-Party Verification Report

August 5, 2019

To Akira Ishii
Representative Director and President
Nippon Soda Co., Ltd.

■ Objectives of Verification

The Responsible Care® Report Verification was conducted by the Responsible Care Verification Center to verify the Nippon Soda Group CSR Report 2019 (paper and online versions, hereafter "CSR Report") prepared by Nippon Soda Co., Ltd. and to present the views and comments of experts in the chemical industry on the following items:

- 1) the reasonableness of the methods used to calculate and aggregate performance indicators (numerical values) and the accuracy of the numerical values
- 2) the accuracy of reported information other than numerical values
- 3) the details of Responsible Care activities and CSR initiatives
- 4) the characteristics of the CSR Report

■ Verification Procedures

- At the Head Office, the reasonableness of methods to aggregate numerical values reported from each site (office, plant) and the accuracy of reported information other than numerical values were assessed through interviews with managers responsible for each task and those responsible for the preparation of the CSR Report, based on materials and explanations provided by these managers.
- At Takaoka Plant, the reasonableness of methods used to calculate numerical values and the accuracy of numerical values and the information described in reports submitted to the Head Office were assessed. The assessment was made through interviews with managers responsible for each task and those responsible for preparing the CSR Report, based on materials and explanations provided, and by checking evidence as well on-site confirmations.
- Numerical values and information provided in the CSR Report were verified by sampling.

■ Views and Comments

- 1) The reasonableness of the methods used to calculate and aggregate performance indicators (numerical values) and the accuracy of numerical values
 - Both the Head Office and Takaoka Plant applied rational methods to calculate and aggregate numerical values. Within the scope of the assessment, the performance values were accurately calculated and aggregated by comparing them with values for the previous fiscal year, comparing them with production volumes, and applying a different color to each point where input error was made in the past and to each figure of coefficient easily mistaken for another, in order to alert reporters to these points and figures.
 - We were told that the group was considering developing a more rational calculation system for labor-saving and other purposes. It is hoped that a new system will be designed to visualize the process for calculating and aggregating numerical values in order to prevent numerical data from being confined to a "black box," and that this system will be developed and implemented at the earliest possible time.
- 2) The accuracy of reported information other than numerical values
 - It was confirmed that the information described in the CSR Report was accurate. At the draft stage, we pointed out some parts that needed to be improved due to inappropriate descriptions and unintelligible sentences. In this CSR Report, however, these points have been edited and there are no parts that must be corrected.
- 3) The details of Responsible Care activities and CSR initiatives
 - Since the previous fiscal year, you have started publishing the CSR Report both in a booklet containing fewer pages and via a website to help readers more easily understand the Nippon Soda Group's CSR initiatives. We value these efforts to improve accountability. It is hoped that measures to improve the online version, which is intended to supplement the paper version, will be developed further, such as improvements in posting hyperlinks.
 - The connection between SDGs and business management issues has also been discussed in CSR administration meetings. It is hoped that these goals will be incorporated into CSR initiatives and will be implemented next fiscal year, the 100th anniversary, as well as in years to come.
 - You develop a business continuity plan (BCP) based on many assumed risks (19 items), which is reviewed every year. This fiscal year, we valued the fact that you placed emphasis in the BCP on consigned products. It has been confirmed that the BCP is also being reviewed and implemented properly at Takaoka Plant.
- 4) The characteristics of the CSR Report
 - The contents of the booklet mainly focused on CSR initiatives to improve corporate value, CSR initiatives to protect corporate value, as well as social activities and governance. The roles of the booklet and the online version are clearly distinguished: the booklet is designed to be concise and easy to read, while the online version contains detailed supplementary information. The improvement of convenience for readers by this role sharing was highly valued.

Shigeki Nagamatsu
Chief Director, Responsible Care Verification Center
Japan Chemical Industry Association

CSR Verification

SOMPO RISK MANAGEMENT & Health Care Inc.

Opinion on Property Conservation Survey



May 7, 2019
Akira Ishii
Representative Director and President
Nippon Soda Co., Ltd.

Written Opinion on Property Conservation Survey

Dear Mr. Ishii,

■Survey objective

The objective of this property conservation survey is to provide recommendations for improvement that are aimed to enhance each facility's voluntary disaster prevention level. The recommendations proposed are based on on-site surveys and interviews from 6 aspects, including fire risk and disaster prevention equipment.

■Survey flow

The surveys focused on the following aspects: "surrounding environment", "building", "fire risk", "disaster prevention equipment", "fire management" and "natural hazards".

Survey schedule and surveyed properties for FY 2018

Nippon Soda Co., Ltd., Nihonngi Plant	Potassium Group and Electrolyzing Group	2018/11/21-22
Nippon Soda Co., Ltd., Takaoka Plant	FC Group and Nisso SASF Agro	2018/9/27-28
Nippon Soda Co., Ltd. Chiba Plant	2nd FC Group	2018/9/14
Nisso Metallochemical Co., Ltd. Aizu Plant	BPS Group and Bandai Industry Dust Treatment Sec.	2018/5/31-6/1
Nisso Metallochemical Co., Ltd., Chiba Plant	Chiba Plant	2018/8/24
Nisso Fine Co., Ltd., Iwaki / Onahama Plant	Iwaki / Onahama Plant	2018/6/22
Shin Fuji Chemical Co., Ltd., Takasaki/Gunma Plant	Takasaki/Gunma Plant	2018/6/8

■Survey observation and opinion

【Overall】

We recognize that Nippon Soda Group has implemented action guidelines for prompt and appropriate communication, response, and commanding in the event of a disaster and/or accident, and that the guidelines are regularly reviewed, revised, and evaluated for its efficacy by drill.

Good practices and improvement recommendations for each location are as follows:

- 【Nippon Soda, Nihonngi Plant】 The fire risk caused by gas leaks is reduced as the deteriorated natural gas pipes are being replaced per schedule. On the other hand, there is a risk of fire and explosion from delayed detection in the event of a gas leak as gas detectors are not installed at areas using combustible gas. Thus, installation of gas detectors to appropriate locations is recommended.
- 【Nippon Soda, Takaoka Plant】 The release of toxic gas is reduced by completely closing doors and providing ventilation through the inlet when using toxic gas indoors, in addition to providing gas detectors to various locations inside the room. It is recommended to check ground wire regularly as loose connection between the securing bolt and the ground wire increases fire risk from static discharge in case of a leak from piping due to deterioration or upon contact.
- 【Nippon Soda, Chiba Plant】 The risk of fire from electric discharge from leaks of flammable liquid due to loosening or deterioration of bolts is reduced as the pipe flanges have been replaced. However, it is recommended to carryout regular inspection of the ground wire as some of the wires installed to the flange pipes have a risk of becoming detached.
- 【Nisso Metallochemical, Aizu Plant】 The risk of electrical fault due to intrusion of small animals has been reduced as the substation walls are repaired and openings around electric cables are sealed. It is recommended to provide additional extinguishers in buildings where the number of fire extinguishers is insufficient.
- 【Nisso Metallochemical, Chiba Plant】 An emergency dry sand spraying system is installed as a countermeasure against leak of sulfuric acid at the shipping area and spraying drill is conducted regularly. It is recommended that fire hose and nozzle be provided near the fire hydrant.
- 【Nisso Fine, Iwaki / Onahama Plant】 It is recommended to install a static eliminating board as close as possible to the workplace and remove the shielding plate installed in the vicinity of the fire detector that may hamper the detection of fire and delay the triggering of alarms.
- 【Shin Fuji Chemical, Takasaki/Gunma Plant】 It is recommended to install earth bonding strap to pipes carrying combustible powder, where dust explosion hazard exist, and to install seismic sensors to either the boiler or at boiler room for immediate shut off of fuel supply in the event of a major earthquake.

Sincerely,

Yasushi Fuse
Representative Director and President
Sompo Risk Management Inc.

SOMPO RISK MANAGEMENT & Health Care Inc.

Opinion on the Occupational Health and Safety Survey



April 16, 2019

Akira Ishii

Representative Director and President
Nippon Soda Co., Ltd.**Written Opinion on Occupation Health and Safety Survey**

Dear Mr. Ishii,

Below are a summary and our opinion on the occupational health and safety survey

■Survey objective

The objective of this survey is to reduce risk on-site by assisting persons in charge of the manufacturing unit (FC Group) of Chiba Plant to identify high-risk areas and unsafe work practices by themselves.

■Survey flow

The above mentioned workplaces were surveyed on March 3, 2019 for the following items and its results were reported.

"Confirm safety organization during opening meeting", "confirm relevant documents", "identify risk on-site by both Sompo Risk Management (SRM) and persons in charge at each workplace", and "explain different point of views between SRM and persons in charge, and provide recommendations to further enhance safety awareness".

As a part of On the Job Training (OJT), the survey was carried out not only by a surveyor from SRM but also includes the participation of persons in charge on-site.

■Safety organization

- Establishment of safety management organization and education system were confirmed on-site by available documents such as "work operation standard procedure", "hazard identification risk assessment table", "skill level table", "written handover" and various educational materials.
- Incident reports, including work-related accidents, occurred in company plants, affiliated companies and in neighboring companies (different industries), are shared during the monthly Safety Consultation Meeting. The Plant's awareness in safety was also confirmed through its requirement on reporting near miss reports other than work-related accidents, which encourages improvement activities.

■Comment on on-site On the Job Training (OJT)

- Persons in charge of the above mentioned workplaces have demonstrated that they possess basic risk identification skills, through their identification of dangerous areas, good practices, etc. In addition, improvements based on opinions of persons in charge were confirmed in several areas.
- Workers on-site fail to recognize areas posing fall risk probably because they accustomed to seeing it daily.
- In some instances, the participants were not able to recognize the risks present. It is recommended that they take another step and evaluate the surrounding. This step will help them to identify risk factors arising from different scenarios, which will further enhance the Plant's safety.

Ex) Personal protective equipment were worn during parts cleaning, thus this operation was not recognized as dangerous.

⇒The following risks also exist: "risk of washing fluid containing chemical splattering onto nearby staff during washing", "risk of chemical injury when protective equipment are not properly cleaned after each wear", etc.

- It is recommended that the above be implemented throughout other workplaces as well. This will help further enhance the safety awareness of the entire Plant.

Sincerely,

Yasushi Fuse
Representative Director and President
Sompo Risk Management Inc.

Third-Party Opinion / Response to the Third-Party Opinion

To identify new issues related to CSR activities in the future, we sought a third-party opinion from an expert.

As stated in the top message of President Ishii, Nippon Soda has integrated management strategies and CSR-oriented business management to achieve sustainable improvement of the corporate value.

I highly appreciate the company's serious approach to fulfilling this goal by clarifying the framework for the CSR-oriented business management, which consists of three categories: "CSR activities to protect corporate value," "CSR activities to improve corporate value" and "social activities."

A particularly noteworthy point is that Nippon Soda has successfully established and implemented a management system that emphasizes CSR activities to protect its corporate value. This success, I believe, can be partly attributed to their responsible care achievements over many years. The company should continue efforts in this regard.

In its CSR activities to improve corporate value, the company has identified four priority domains based on the dialogues with stakeholders, which is helpful to specifically show, internally and externally, its commitment to improving corporate value. I recommend that the company clarify goals to be achieved in each domain in the future. With regard to improvement of the corporate value, while it is important to report past results based on KPIs, investors and other stakeholders are very much interested in knowing about medium- and long-term goals and strategies to achieve them. It is important to show how your products serve society at present but it is even more important to expand solutions to address social issues, including research and development of new materials and application of existing materials to addressing new issues.

With regard to the third category of "social activities," I recommend that you re-organize your social activities based on the value chain concept. Human rights are viewed only from a narrow perspective, which is limited to employees' human rights, such as diversity and work-life balance. You should identify human rights-related risks in every supply chain, from upstream to downstream, and determine priority risks to establish a system to prevent them from occurring, or do your own form of human rights due diligence. Human rights due diligence is an important practice that is expected to be carried out by companies around the world. Your effort to ensure business partners comply with environmental regulations is commendable but the ISO sustainable procurement standards include not only environmental issues but also human rights issues. Never forget that respecting human rights is critical to both protecting and improving the corporate value.

There is no end goal in CSR activities, in any case. Your constant, untiring efforts are the key to success. I hope that Nippon Soda's CSR activities will continue evolving into the future beyond the commemorative 100th anniversary of Nippon Soda.



Masao Seki

Professor at School of Business Administration, Meiji University
Senior Advisor on CSR at Sompo Japan Nipponkoa Insurance Inc.

Joined Yasuda Fire and Marine Insurance Co., Ltd. (present Sompo Japan Nipponkoa Insurance Inc.) after graduating from the Faculty of Law at the University of Tokyo. Assumed the present position after serving as Director/CSR General Manager. Participated in the development of the ISO 26000 standards as the Japanese industry representative. In 2017, he chaired the revision task force of Keidanren's Charter of Corporate Behavior incorporating SDGs and has played other influential roles in promoting the implementation of CSR in industry. In Keidanren, he has served as CBCC Steering Committee Chairman, Chair of Task Force on Keidanren's Charter of Corporate Behavior, and Chair of the Business and Human Rights Taskforce. Also serves as a member of the Tokyo Olympics and Paralympics City Planning/Sustainability Committee. Books written by him include SDGs-keiei-jidai-ni Motomerareru CSR-towa Nanika (CSR in the SDGs Business Era) (Daiichi Hoki) and ISO 26000-o Yomu (Understanding ISO 26000) (Union of Japanese Scientists and Engineers).

Response to the third-party opinion from an expert

Mr. Seki participated in the stakeholder dialogues in 2016 and 2017, where he provided us with valuable opinions from an expert perspective, based on which we have planned and implemented CSR activities. This year we sought his opinions as a third-party expert. We appreciate his understanding of Nippon Soda's overall CSR activities and valuable opinions on how our CSR activities should be carried out in the future. We will continue our CSR activities to protect the corporate value based on his opinions. With regard to CSR activities to improve the corporate value, we will include efforts to address social issues. In our social activities, we will remind ourselves of the importance of human rights issues and expand our perspectives.

As Mr. Seki mentioned, there is no end goal in CSR activities. We will continue our efforts in improving our CSR activities.



Atsushi Ogihara

General Manager of the Corporate Social Responsibility Department and Environment and Quality Management Group Leader, Nippon Soda Co., Ltd.

Comparative Table with GRI Standards

This report is prepared in reference to the GRI content index and in accordance with the Core option of the GRI Standards.

GENERAL DISCLOSURES		
GRI 102: GENERAL DISCLOSURES 2016		Pages in the online version, corresponding reports and items
102-1	Name of the organization	p.6
102-2	Activities, brands, products, and services	p.6
102-3	Location of headquarters	p.6
102-4	Location of operations	pp.6-7
102-5	Ownership and legal form	p.6
102-6	Markets served	p.6
102-7	Scale of the organization	pp.6-7
102-8	Information on employees and other workers	pp.64-67
102-9	Supply chain	p.8
102-10	Significant changes to the organization and its supply chain	pp.7-8
102-11	Precautionary Principle or approach	pp.21-23, pp.78-83
102-12	External initiatives	p.77
102-13	Membership of associations	p.77
102-14	Statement from senior decision-maker	p.2
102-15	Key impact, risks, and opportunities	p.2, pp.9-11, p.14
102-16	Values, principles, standards, and norms of behavior	p.3, p.80
102-17	Mechanisms for advice and concerns about ethics	pp.64-65, p.80
102-18	Governance structure	pp.78-79
102-19	Delegating authority	p.20, p.78, p.82
102-20	Executive-level responsibility for economic, environmental, and social topics	p.20, p.78
102-21	Consulting stakeholders on economic, environmental, and social topics	pp.61-77
102-22	Composition of the highest governance body and its committees	p.20, p.78, p.82
102-23	Chair of the highest governance body	p.78
102-24	Nominating and selecting the highest governance body	p.78
102-25	Conflicts of interest	p.78
102-26	Role of highest governance body in setting purpose, values, and strategy	p.2, p.20, p.78
102-27	Collective knowledge of highest governance body	p.2, p.9
102-28	Evaluating the highest governance body's performance	p.20, p.78
102-29	Identifying and managing economic, environmental, and social impact	p.4, p.8, pp.11-14
102-30	Effectiveness of risk management processes	pp.19-20
102-31	Review of economic, environmental, and social topics	p.20
102-32	Highest governance body's role in sustainability reporting	p.20
102-33	Communicating critical concerns	p.20, p.78, p.82
102-34	Nature and total number of critical concerns	—
102-35	Remuneration policies	Only for Japanese edition
102-36	Process for determining remuneration	Only for Japanese edition
102-37	Stakeholders' involvement in remuneration	—
102-38	Annual total compensation ratio	—
102-39	Percentage increase in annual total compensation ratio	—
102-40	List of stakeholder groups	p.5, p.8, p.77
102-41	Collective bargaining agreements	p.67
102-42	Identifying and selecting stakeholders	p.5
102-43	Approach to stakeholder engagement	pp.12-13, p.72, p.77
102-44	Key topics and concerns raised	pp.15-18, p.22
102-45	Entities included in the consolidated financial statements	Annual Report
102-46	Defining report content and topic Boundaries	p.1, pp.19-20
102-47	List of material topics	p.4, pp.12-14, p.19, pp.25-26
102-48	Restatements of information	N/P
102-49	Changes in reporting	pp.12-14
102-50	Reporting period	p.1
102-51	Date of most recent report	p.1
102-52	Reporting cycle	p.1
102-53	Contact point for questions regarding the report	Back cover of the paper version of the CSR Report 2019
102-54	Claims of reporting in accordance with the GRI Standards	Comparative Table with GRI Standards
102-55	GRI content index	p.1, Comparative Table with GRI Standards

102-56	External assurance	p.94
MATERIAL ISSUES		
GRI 103:MANAGEMENT APPROACH 2016		
103-1	Explanation of the material topic and its Boundary	p.4, pp.10-14, pp.39-40, p.51, p.56, p.58, p.61, p.64, p.68, p.70, p.72, p.78
103-2	The management approach and its components	p.14, p.21, pp.25-26
103-3	Evaluation of the management approach	pp.25-26
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GRI 201:ECONOMIC PERFORMANCE 2016		
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201-2	Financial implications and other risks and opportunities due to climate change	
201-3	Defined benefit plan obligations and other retirement plans	Only for Japanese edition
201-4	Financial assistance received from government	
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202-1	Ratios of standard entry level wage by gender compared to local minimum wage	p.72
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GRI 203:INDIRECT ECONOMIC IMPACT 2016		
203-1	Infrastructure investments and services supported	
203-2	Significant indirect economic impact	
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GRI 204:PROCUREMENT PRACTICES 2016		
204-1	Proportion of spending on local suppliers	
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GRI 205:ANTI-CORRUPTION 2016		
205-1	Operations assessed for risks related to corruption	p.22
205-2	Communication and training about anti-corruption policies and procedures	
205-3	Confirmed incidents of corruption and actions taken	
ANTI-COMPETITIVE BEHAVIOR		
GRI 206:ANTI-COMPETITIVE BEHAVIOR 2016		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	
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GRI 301:MATERIALS 2016		
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301-2	Recycled input materials used	
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303-1	Water withdrawal by source	p.85
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303-3	Water recycled and reused	
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GRI 304:BIODIVERSITY 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	
304-2	Significant impact of activities, products, and services on biodiversity	
304-3	Habitats protected or restored	p.41
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	
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GRI 305:EMISSIONS 2016		
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305-3	Other indirect (Scope 3) GHG emissions	
305-4	GHG emissions intensity	
305-5	Reduction of GHG emissions	pp.84-85

305-6	Emissions of ozone-depleting substances (ODS)	p.85
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	p.85
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GRI 306: EFFLUENTS AND WASTE 2016		
306-1	Water discharge by quality and destination	p.85
306-2	Waste by type and disposal method	pp.84-85
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306-5	Water bodies affected by water discharges and/or runoff	p.41
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GRI 307: ENVIRONMENTAL COMPLIANCE 2016		
307-1	Non-compliance with environmental laws and regulations	p.25, p.48, p.86
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308-1	New suppliers that were screened using environmental criteria	
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401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	
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GRI 402: LABOR/MANAGEMENT RELATIONS 2016		
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403-3	Workers with high incidence or high risk of diseases related to their occupation	p.52
403-4	Health and safety topics covered in formal agreements with trade unions	
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GRI 404: TRAINING AND EDUCATION 2016		
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405-1	Diversity of governance bodies and employees	p.25, pp.64-65
405-2	Ratio of basic salary and remuneration of women to men	
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GRI 406: NON-DISCRIMINATION 2016		
406-1	Incidents of discrimination and corrective actions taken	
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GRI 407: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	
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GRI 408: CHILD LABOR 2016		
408-1	Operations and suppliers at significant risk for incidents of child labor	
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GRI 409: FORCED OR COMPULSORY LABOR 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	
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GRI 410: SECURITY PRACTICES 2016		
410-1	Security personnel trained in human rights policies or procedures	
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GRI 411: RIGHTS OF INDIGENOUS PEOPLES 2016		
411-1	Incidents of violations involving rights of indigenous peoples	
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412-2	Employee training on human rights policies or procedures	p.65

412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	
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GRI 413:LOCAL COMMUNITIES 2016		
413-1	Operations with local community engagement, impact assessments, and development programs	p.25, pp.72-76, p.77
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414-1	New suppliers that were screened using social criteria	
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Comparative Table with ISO 26000

The following table is a list of activities of the Nippon Soda Group corresponding to the seven core subjects in ISO 26000: Guidance on social responsibility:

Core subjects	Issues	Activities
Organizational governance	Organizational governance	Top Commitment
		Business and CSR of the Nippon Soda Group
		Value Creation of the Nippon Soda Group
		CSR Management
		Governance/Compliance/Risk Management
Human rights	Due diligence	—
	Human rights risk situations	Respect for Human Rights
	Avoidance of complicity	Respect for Human Rights
		Strengthening Relationships with Our Business Partners (Efforts in Procurement)
		Code of Conduct
	Resolving grievances	Risk Management
	Discrimination and vulnerable groups	External Communication
		Respect for Human Rights
	Civil and political rights	Promotion of Diversity
	Economic, social and cultural rights	Code of Conduct
Labor practices	Employment and employment relationship	Respect for Human Rights
		Respect for Human Rights
		Code of Conduct
	Conditions of work and social protection	Human Resources Development
		Promotion of Diversity
		Promotion of Diversity
	Social dialogue	Improvement of Employee Satisfaction
		Labor-management Relations and Improvement of Working Conditions
	Health and safety at work	Employee Satisfaction Survey
		Occupational Safety and Health
Environment	Prevention of pollution	Process Safety & Disaster Prevention/BCP
		Distribution Safety
	Sustainable resource use	Special Section: Initiatives for the next generation
		Nippon Soda Group's Human Resources Development
	Climate change mitigation and adaptation	Environmental Protection: Atmosphere and water area protection
Fair operating practices	Prevention of pollution	ESG Data (Environment)
		Environmental Protection: Effective use of resources and reduction of waste
	Sustainable resource use	ESG Data (Environment)
		Environmental Protection: Responses to climate change issues
	Climate change mitigation and adaptation	ESG Data (Environment)
		ESG Data (Environment)
	Protection of the environment, biodiversity and restoration of natural habitats	Preservation of Biodiversity
		Preservation of Biodiversity
	Anti-corruption	Compliance
	Responsible political involvement	Code of Conduct
Consumer issues	Fair marketing, factual and unbiased information and fair contractual practices	Code of Conduct
		Code of Conduct
	Protecting consumers' health and safety	Efforts in Procurement
		Code of Conduct
	Sustainable consumption	Business and CSR of the Nippon Soda Group
		Business Activities and Value Chains
		Occupational Safety and Health
		Process Safety & Disaster Prevention/BCP
		Efforts in Procurement
	Consumer service, support, and complaint and dispute resolution	Chemicals and Product Safety
		Dialogue with Business Partners
Community involvement and development	Consumer data protection and privacy	Dialogue with Investors, Analysts and Shareholders
		Code of Conduct
	Access to essential services	Communication with Customers
		Distribution Safety and Quality Assurance
	Education and awareness	Chemicals and Product Safety
		Special Section: Health Care—A healthy life supported by medicines
	Community involvement	Special Section: Agriculture—Efforts to achieve sustainable agriculture
		Special Section: Environment—Achievement of the environmentally sound recycling of resources
	Education and culture	Consideration in Animal Experiments
		Quality Assurance
Community involvement and development	Employment creation and skills development	Chemicals and Product Safety
		Improve Customer Satisfaction
	Technology development and access	Proper Management of Personal Information
		Improve Customer Satisfaction
	Wealth and income creation	Special Section: Agriculture—Seminars on the proper use of agrochemicals
		Improve Customer Satisfaction, Communication with Customers
	Health	Harmonious Relationship with Local Communities
Community involvement and development	Social investment	Dialogue with Local Communities
		CSR Activities
	Health	CSR Activities