Nisso NIPPON SODA CO.,LTD.

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

## Nippon Soda Group

# CSR Report 2013

Creating New Value through the Power of Chemistry

# NISSO

The basic policy of the Nippon Soda Group is to contribute to society through our business activities using technologies, expertise and human resources that we have developed since our founding, as we improve the general public's confidence and trust in us.

## Editorial Policy

The CSR Report 2013 is designed to provide information on the corporate social responsibility (CSR) and responsible care (RC) activities and results of the Nippon Soda Group to promote transparency and accountability. The information contained in this report is arranged by RC Codes and CSR Core Subjects.

## Guidelines Used as References

The Japanese Ministry of the Environment's Environmental Reporting Guidelines 2007
Japanese Standards Association ISO 26000: 2010 Guidance on Social Responsibility

## Publication Date

July 2013 (Next report scheduled to be issued in July 2014)

## Scope of the Report

This report summarizes CSR and RC activities of Nippon Soda Co., Ltd. and 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 2012 (April 1, 2012 to March 31, 2013). The data on occupational accidents presented in this report are based on the actual results from January 1, 2012 to December 31, 2012.

## International Standards Certifications

■ ISO 14001 is the international standard of the International Organization for Standardization (ISO) for environmental management systems (EMS). It specifies requirements for an environmental management system.

■ ISO 9001 is the international standard of the International Organization for Standardization (ISO) for quality management systems (QMS). It specifies requirements to enhance customer satisfaction, including quality assurance.

■ OHSAS 18001, the abbreviation of Occupational Health and Safety Assessment Series 18001, is the international standard for occupational safety and health management systems (OSHMS). The objective of OHSAS 18001 is to help companies reduce risks and the recurrence of problems by identifying risks related to occupational safety and employee hygiene, developing preventive measures, and implementing such measures (achieving continuous improvement).

## Responsible Care

The Responsible Care (RC) initiative was launched in 1985 in Canada. In 1989, the International Council of Chemical Associations (ICCA) was established and, as of October 2012, 55 countries around the world participate in the Responsible Care initiative. In Japan, the Japan Responsible Care Council (JRCC) was established in 1995 under the Japan Chemical Industry Association (JCIA) by 74 companies, the majority of which manufacture and handle chemical substances, with the aim of standardizing and augmenting environmental and safety activities that were previously conducted by individual companies and raising public awareness of RC activities. As of October 2012, the number of JRCC member companies reached 100. The goal of RC activities can be summed up as follows: “To do what is ethically right” and “to implement proactive measures to reduce risks.”

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## Corporate Profile (as of the end of March 2013)

**Name**: Nippon Soda Co., Ltd.

**Location of Head Office**:
Shin Ohtemachi Bldg., 2-2-1 Ohtemachi, Chiyoda-ku, Tokyo 100-8165 Tel. 03-3245-6054

**Foundation**: February 1920

**Representative Director, President**: Yutaka Kinebuchi

**Executive Senior Managing Director (in charge of technology)**: Tsutomu Kaku

**Stock Listing**: Tokyo Stock Exchange, First Section

**Capital**: 29,166 million yen

**Number of Employees**:
2,539 (consolidated), 1,236 (non-consolidated)

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

## I would like to say a few words on the occasion of the publication of the CSR Report for fiscal 2013.

### CSR Adoption

Nippon Soda Co., Ltd. adopted corporate social responsibility (CSR) in April 2012, in addition to our ongoing efforts to maintain the safety, environment and quality standards appropriate to a chemical company based on the concept of responsible care (RC), which has been promoted since October 1998. We believe that the incorporation of CSR into our RC framework will allow us to further expand our efforts to contribute to society.

### CSR Report

In response to the adoption of CSR in the last fiscal year, the name of the report has been changed from the Environmental Report (Responsible Care Report) to the CSR Report. The CSR Report contains more pages than the former Environmental Report. Some improvements have also been made to the content in order to better ensure the transparency and accountability of our business activities and CSR and RC promotional activities. It is my hope that as many people as possible will understand the activities of the Nippon Soda Group through this report and will provide us with their opinions so that we can make further improvements.

### Achievement of the Long-Term Vision “Chemigress to 100” with an Eye toward the 100th Anniversary

While contributing to society through its products, Nippon Soda has been continuously developing and growing. By 2020, which is the 100th anniversary of our foundation, we are determined to achieve the long-term vision “Chemigress to 100,” the goal of which is to become and remain a sought-after chemical company in the 21st century and well into the 22nd.

### The Ideal Company that Nippon Soda Aims to Become

Nippon Soda aims to become a company that:

1. Focuses mainly on areas essential for the development of a sound society, such as agriculture, medicine, the

# Making the Dreams of the Next Generation Come True

## Becoming a Sought-After Chemical Company in the 21st Century

Through the use of innovative and creative technologies and products, Nippon Soda will continue to focus its efforts on contributing to the creation of a more comfortable society and making the dreams of the next generation come true.

environment and information, and provides a constant stream of new safe and useful products and businesses, thereby making tremendous contributions to society.

2. Increases its presence and indispensability on the international stage as a chemistry-oriented business group that is conscious of the global environment and CSR.
3. Forms a globally competitive corporate group that is highly motivated and ready to take on challenges and enhances the comprehensive value of the entire group so as to make enormous progress.

### Roles of CSR and RC

CSR and RC play an essential role as systems that the Nippon Soda Group will employ to achieve “Chemigress to 100.”

Our ongoing RC activities aim to reduce risk at our chemical-related companies through voluntary assessment from multiple viewpoints. The objective of our CSR is to have our voluntary risk management activities evaluated by stakeholders in order to drive improvements. Through these efforts, we believe that we can contribute to society through our products while comprehensively enhancing our presence and indispensability on the global stage and growing the value of the entire group. By doing so, we hope to make remarkable progress.

As a sound corporate group, the Nippon Soda Group is committed to focusing our efforts on continuous development while contributing to society as a trusted partner.

**Yutaka Kinebuchi**
President
Nippon Soda Co., Ltd.
July 2013

## Long-Term Vision

# Chemigress to 100

Chemigress to 100
Advancing to our 100th birthday in 2020

**Nippon Soda will achieve the long-term vision "Chemigress to 100" by 2020 in order to become our own "ideal company."**

### The Ideal Company that Nippon Soda Aims to Become

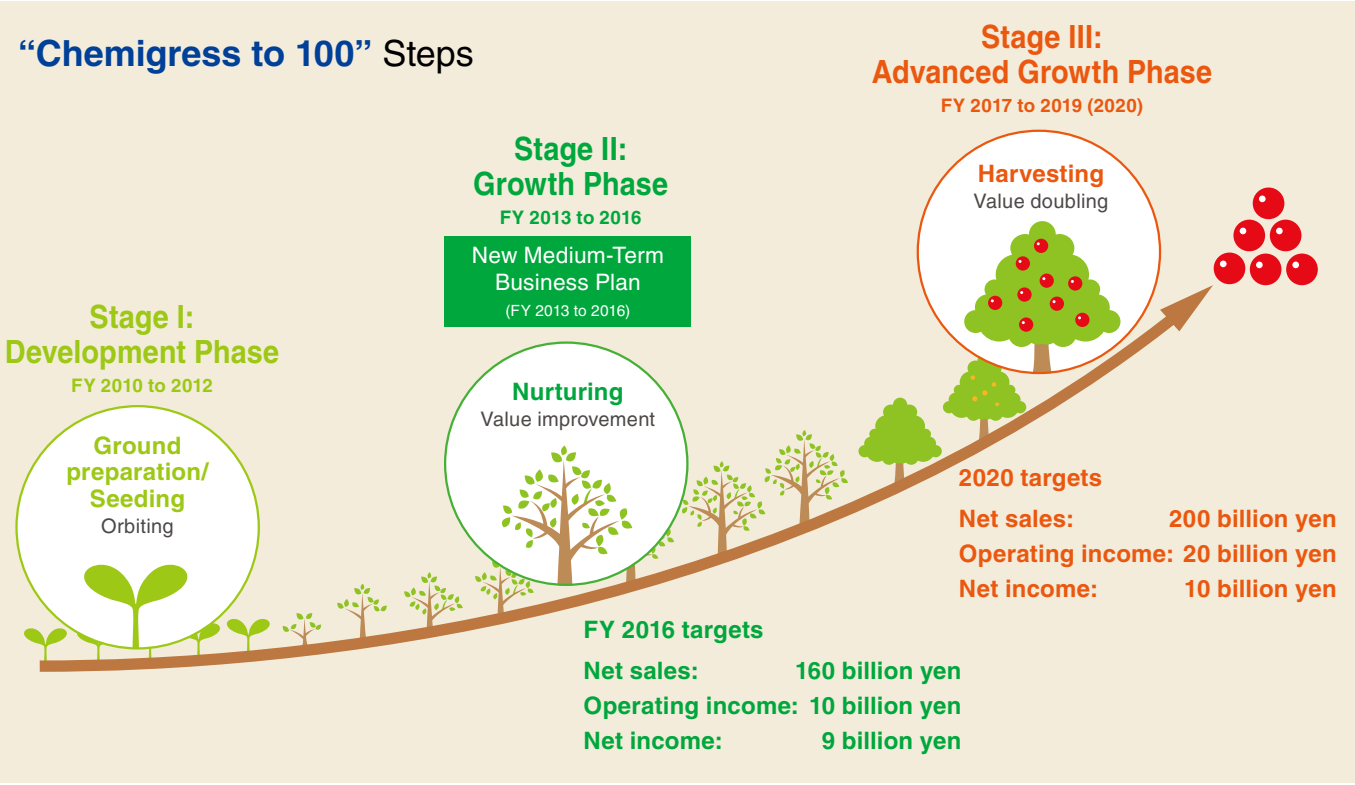
Nippon Soda aims to become a company that:

- Focuses mainly on areas essential for the development of a sound society, such as agriculture, medicine, the environment and information, and provides a constant stream of new safe and useful products and businesses, thereby making tremendous contributions to society.
- Increases its presence and indispensability on the international stage as a chemistry-oriented business group that is conscious of the global environment and CSR.
- Forms a globally competitive corporate group that is highly motivated and ready to take on challenges and enhances the comprehensive value of the entire group so as to make enormous progress.

### Business Strategy

- **Cultivation and development of promising business areas**
  Creating value by focusing efforts on major domains (agriculture, medicine, the environment and information)
- **Responses to globalization**
  Developing differentiated products and business competence
  Establishing a globally competitive supply chain
  Developing personnel with the ability to compete in the international arena
- **Transformation into a corporate group that is truly sought after by society**
  Implementing safety-first and global environment- and CSR-conscious management

### "Chemigress to 100" Steps




The term "**Chemigress**" is a combination of "**chemi**cal" and "pro**gress**." It has been coined to convey our commitment to "contribute to developing a sound society through our business projects and activities, most of which involve chemistry, toward the 100th anniversary of our foundation."

# Summary of New Medium-Term Business Plan (FY 2013 to 2016)

- Regarding this plan as Stage II to achieve the long-term vision “Chemigress to 100” by the 100th anniversary, the speed of growth will be accelerated.
- More management resources, which may include M&As and business partnerships, will be invested in order to ensure the completion of initiatives that remain unfinished since the previous medium-term period to produce tangible profits and, concurrently, expand growth drivers.

## Priority Actions

### 1 Expansion of growth drivers

- In allocating management resources, placing a higher priority on core business categories (agro products, cellulose derivatives and functional polymers) in order to further expand and develop these business lines
- Expanding growth drivers by developing new products in highly promising areas (areas under cultivation) and their peripheral areas
- Focusing more efforts on projects that may produce synergistic effects when combined with corporate projects, including M&As and business partnerships, in addition to advancing into new business areas by using proprietary technologies with unique features

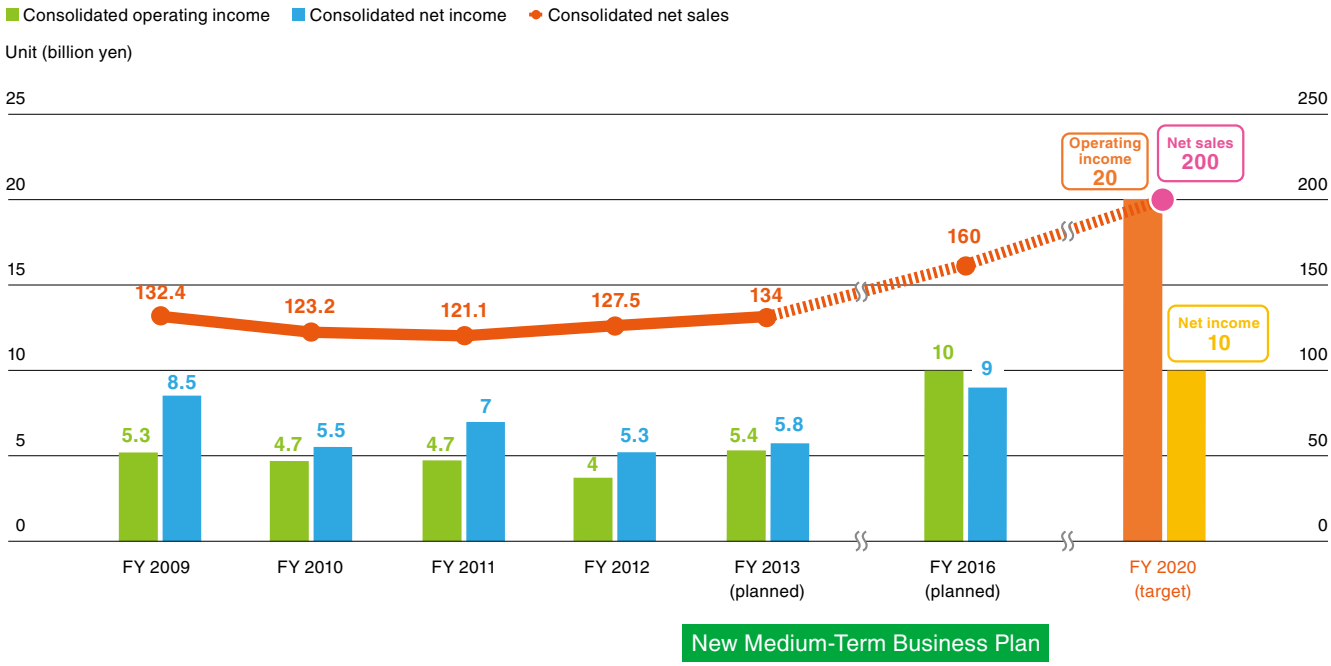
### 2 Enhancement and restructuring of the business base

- Implementing cost reduction in the Manufacturing Department on an ongoing basis
- Developing and implementing drastic measures to improve less competitive business projects
- Enhancing the efficiency of the Management Department
- Developing personnel with the ability to compete in a globalized world

### 3 Improvement of the group’s integrated strength

- Implementing priority actions in an integrated and comprehensive manner, with strengthened cooperation with group companies and effective use of the group’s business resources

## Reference: Numerical targets



Special Section 1

# Chemical Division

## Contributing to Society through the Power of Chemistry
## Chemical Products of Nippon Soda


For aircraft
Engine part material
Polysilane
At sewage purification facilities
Tap water
Nisso Hi-chlon
Sewage
Nisso Merusan
At offices
Smartphone
NISSO PB
Semiconductor
VP-Polymer (polypara-hydroxystyrene)
NISSOCURE
Paper
Caustic soda
Toilet
Take-One
At schools
Swimming pool
Nisso Hi-chlon
For exterior walls
Paint
Bistraiter
For cars
Car navigation system
ITO coated glass
Seat
Phosphorus oxychloride
Oil seal
TODI (specialized polyurethane raw materials)
For building materials
Lumber
Millcut
Adhesives, Paints
Biocut
Sealants
NISSO PB
Organic titanate
Plating
Potassium cyanide, Sodium cyanide

Special Section 2

# Agro Products Division

## Contributing to producing stable yields and improving the quality of agricultural products through ongoing development of products that can be used for extended periods

Demands for foodstuffs, feedstuffs, and biofuel crops have been rapidly increasing due to the increase in both population and environmental problems around the world. Agrochemicals have become essential in reducing farm labor, protecting crops from pests and weeds, ensuring stable yields and improving the quality of products. This is true not only in developed countries where the farming population is aging and the number of farmers is decreasing but also in Brazil and other countries where agriculture is flourishing.

Some people believe that agrochemicals have adverse effects on people, animals and plants. However, synthetic agricultural chemicals currently on the market are registered in accordance with the relevant act only after their safety is proven. It usually takes 10 years and a huge amount of money to receive approval for registration. To prove the safety, the effects on mammals, microorganisms, beneficial insects and fishes must be studied. In addition, genetic toxicity and long-term toxicity tests are required to be performed on more than 30 items in total in order to determine the acceptable daily intake, or the amount that can be consumed daily over a lifetime without causing any harm to humans. (According to the notification issued by the director-general of the Ministry of Agriculture, Forestry and Fisheries titled “Guidelines for Preparation of Study Results Submitted When Applying for Registration of Agricultural Chemicals.”)

Requirements for proper use of agrochemicals on each crop to ensure safety are determined based on results from crop residue tests. To minimize worry about drift onto non-indicated crops, our agrochemical products are registered for use on as many crops as possible. All agrochemical products made by our company are also user-friendly.

Our Customer Service Department, which is staffed by experienced agrochemical salespeople as well as pest and weed specialists, provides information and answers inquiries on how to use our products as well as on technical issues.

Our ongoing efforts will be focused on reflecting the opinions of producers and consumers in order to develop methods to reduce farm labor and ensure the safety of farm workers and subsequently provide safer and more user-friendly products. We believe that by pursuing these efforts we can make a meaningful contribution to society.

### Fungicide — Topsin M

Registered crops: 90 crops or more
Years of use: 41 years
No. of countries where the product is sold: 90 countries
Major crops for which the product is used
In Japan and abroad: Fruits, vegetables, beans, oats, etc.

### Insecticide — Mospilan

Registered crops: 100 crops or more
Years of use: 17 years
No. of countries where the product is sold: 117 countries
Major crops for which the product is used
In Japan and abroad: Fruits, vegetables
Abroad: Cotton, rapeseed, etc.

### Miticide — Nissorun

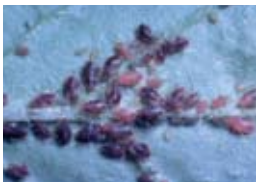
Registered crops: 30 crops or more
Years of use: 27 years
No. of countries where the product is sold: 52 countries
Major crops for which the product is used
In Japan and abroad: Fruits, vegetables
Abroad: Corn, etc.

Examples of indicated crop damage

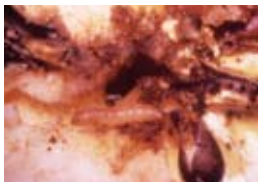
Scab (wheat)

Blue mold (storage disease affecting citrus fruits)

Examples of indicated pests



Green peach aphid (cruciferous vegetable)



Larvae of peach fruit moth (inside an apple)

Examples of indicated spider mites

European red mite (apple)

Citrus red mite (citrus)


Voice

**Producer's comment**

Fusao Yamauchi

Kurume City,
Fukuoka Prefecture

**Agrochemicals are important to protect wheat from scab and its toxins in order to ensure that the wheat that gets on the market is safe.**

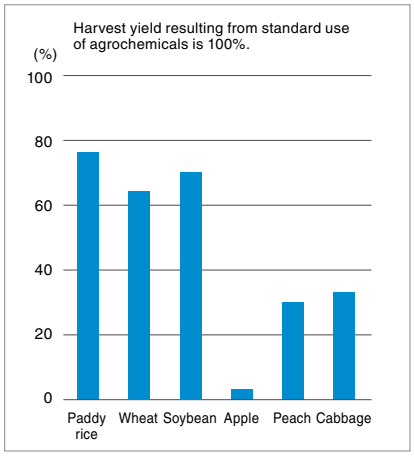
Fusarium head blight (scab), a disease that affects wheat and barley, not only deteriorates the quality of the produce and reduces farm incomes but also causes the production of mycotoxins such as deoxynivalenol (DON). There are strict national standards for DON in wheat grain to ensure safety. Products that contain excessive levels of DON are not allowed to be placed on the market.

In order to reduce DON, which for wheat producers is a formidable enemy, it is important to take appropriate measures during the production phase. One such measure is fungicide spraying at the right time, in the right way. It is also important to select the right fungicide. Topsin M provides many options for customers to choose from.

Topsin M is the most useful and helpful fungicide for wheat producers because it is not only effective in controlling scab but also highly effective in reducing DON. It is available in three formulations: water dispersible powder, which is diluted with water before spraying; powder, which is used as it is; and sol, which can be sprayed using a helicopter. With these features, Topsin M meets specific on-site needs.

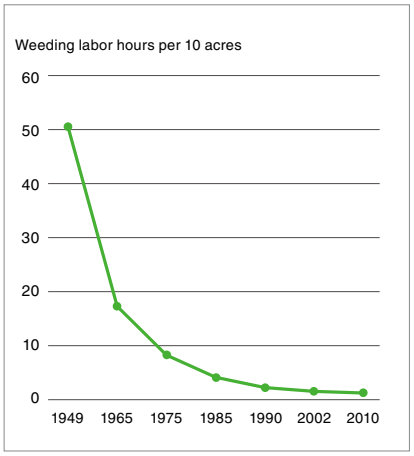
Global warming has brought with it plagues of insect pests as well as other serious problems for agricultural production. To address this situation, we will continue to make the best agrochemicals to allow farmers to easily produce wheat that is safe to consume.

### Damage to agricultural crops when no agrochemicals are used (harvest yield)



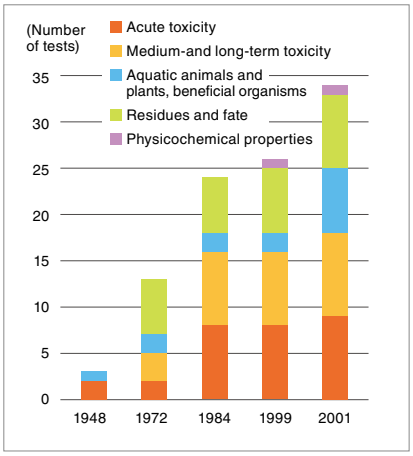

Reference: Adapted from "*Byogaichu to Zasso niyoru Nousakumotsu no Sonshitsu*" ("*Pest and Weed Damage to Agricultural Crops*") (Japan Plant Protection Association, 2008)

### Labor reduction by herbicide application




Reference: Japan Association for the Advancement of Phyto-Regulators

### Change in the Number of Test Items Required for Registration of Agrochemicals




Reference: Japan Crop Protection Association's lecture materials

Special Section 3

# Odawara Research Center

## Establishing a system to produce safe agrochemicals through steady research

### Roles of Research Departments

**Department of Chemical Discovery, Div. 1 and Div. 2**
Synthesizing new chemicals to develop new insecticides, fungicides, herbicides and other agrochemicals effective on insects, fungi, weeds, etc.

**Department of Applied Synthesis**
Conducting research to find ways of inexpensively synthesizing chemicals on a large scale and playing a bridging role between the Research Center and the manufacturing plants

**Department of Biological Research**
Evaluating the activities of innovative chemicals to identify the effects on fungi, insects, weeds, etc.

**Department of Field Research**
Studying how active chemicals show their performance in actually treated plants

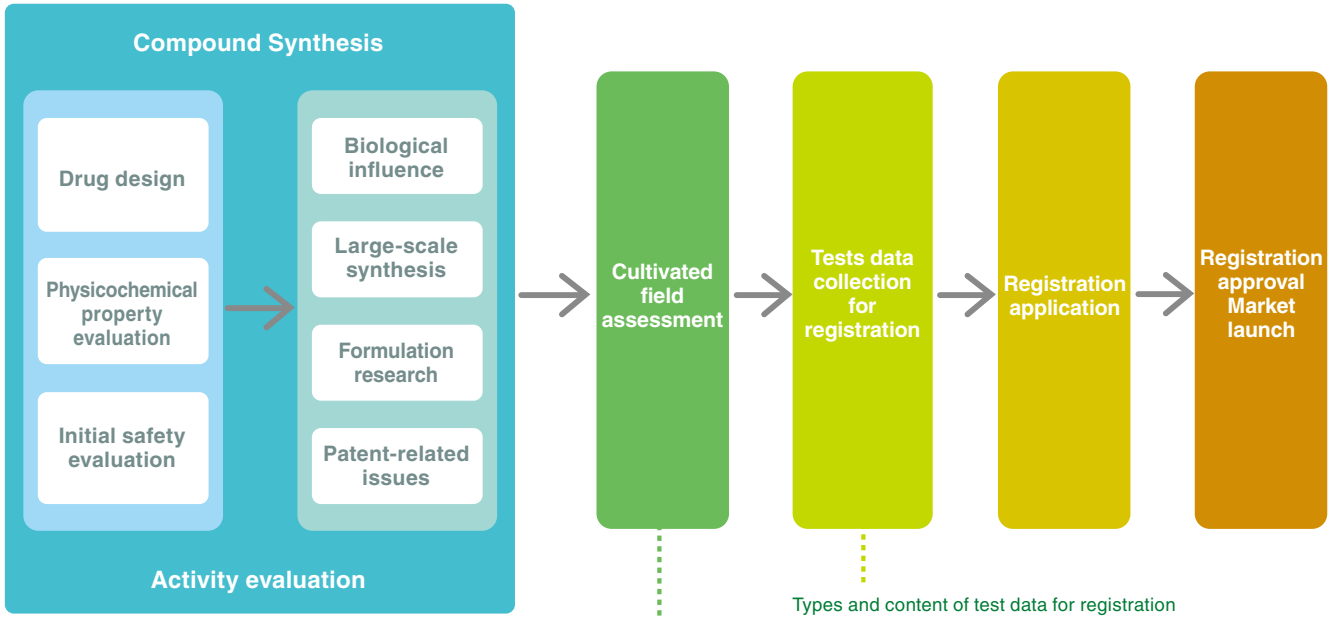
**Department of Formulation Research**
Identifying formulations (powder, liquid, granule, etc.) most suitable for specific chemicals according to their physical properties

**Department of Environmental Science and Toxicology**
Studying impacts on users and consumers of agrochemicals

**Nisso Chemical Analysis Service**
Studying the levels of residues on crops and the effects on organisms living in soil and rivers

**Department of Planning and Administration**
Enhancing each section of the Laboratory Center, including research procedures and facilities, to facilitate activities

## Research System to Ensure Safety and Efficiency




### Types and content of test data for registration

| | |
|---|---|
| 1 Efficacy test | To demonstrate the effectiveness on pests and diseases affecting target crops |
| 2 Phytotoxicity test | To demonstrate that the compound is not harmful to target crops |
| 3 Short-term toxicity test | To identify impacts on users when used in the intended way |
| 4 Residue test | To identify the levels of residues remaining on crops when used in the intended way |
| 5 Chronic toxicity test | To identify the effects of agrochemical residues on crops when consumed by humans |
| 6 Environmental toxicity test<br>6 Ecotoxicity test | To identify the effects of agrochemicals on living organisms living in soil and rivers |

Of the tests above, 1, 2, 4 and 6 are required to be performed in every country where we want to register. All research departments cooperate with each other to meet necessary requirements.

## Research system at the Odawara Research Center

Nippon Soda aims to contribute to the development of society by providing excellent products through chemistry. The Odawara Research Center conducts research and development of chemical products, primarily focusing on agrochemicals. Agrochemicals are used to help plants fight off pests, diseases and weeds during the cultivation of vegetables, fruits, rice and other crops. Our research and development efforts are focused on improving these useful chemicals so that they can be used for longer periods of time. In order to sell agrochemical products, we must receive approval for registration in Japan and each country in which they are marketed. To apply for registration approval, we are required to submit the necessary data to the national government. Only products that have been approved as effective and safe for humans and as having no adverse effects on the environment are allowed to be sold. To ensure the long-term use of our agrochemical products, we have established a system to develop products with loss of efficacy due to tolerance development taken into account. This is a preemptive measure to enable us to be prepared for safety requirements that change each year, to improve the safety assessment results, and to ensure the acceleration and safety of research.

### Voice

**We are promoting new chemical development with a focus on safety from the early stages.**

Shigeji Sugimoto
Department of Planning and Administration

Food is essential for life. I believe that the stable supply of food is the first step toward allowing people to live comfortably. Regulatory requirements for agrochemicals, which play an important role in ensuring a stable supply of food, have become more and more strict every year. In response to this trend, when selecting new compounds, we carefully gather information so that we can take preemptive measures to develop products that will meet ever changing and stringent requirements.

Special Section 4

# Chiba Research Center

## Accelerating the research and development of products sought after in the market so as to contribute to the development of the industry

## Meeting Customer Needs through Company-wide Cooperation

### Chiba Research Center

Development of new products
Quality improvement/Technical support
Market launch/Productivity improvement

### Sales Division

Market research
Technical services

### Plant

Productivity improvement
Quality improvement


Admission tickets


Receipts


Train tickets


Price tags for products

**Thermal paper in daily life**

Thermal paper is used for receipts, labels, tickets and other various items.


Labels for home delivery products


Food labels


Logistic labels


Lottery tickets

**An example of our research**

Familiar Nippon Soda products: developers used for receipts and thermal paper

### Our research efforts are focused on creating novel developers that ensure clear and stable coloring.

At the beginning of every month, working members in charge of developers at the Sales Division, the Plant and the Research Center gather at the Research Center to exchange information. The Sales Division staff provides information on market needs and the plant staff raises issues related to productivity, based on which the direction and progress of the current research and development are confirmed. The Research Center incorporates the meeting results into its research to achieve high-added-value developers needed by the market.

**Voice**

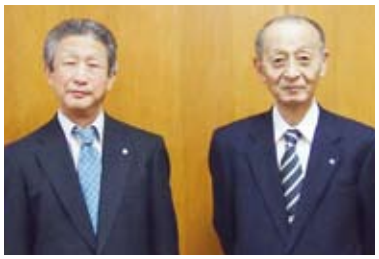
### We propose cutting-edge high-performance products that meet market needs.

Toshiyuki Fukami
Department of Materials Research, Div. 3

The Department of Materials Research, Div. 3 is engaged in research and development of developers used for the thermal paper receipts you often receive when shopping. We make effective use of core technology that we have built over many years to not only develop high-performance products that meet diversified market needs but also to develop people- and environment-friendly products. The developer D-90, which Nippon Soda developed, is manufactured at the Chiba Plant adjacent to our Research Center. We provide the plant with prompt and ongoing technical support to ensure a more stable supply and better quality management.

# New Executive in Charge of CSR and RC

## Replacement of CSR and RC executive



[Right] Hiroharu Hirashita, former Corporate Social Responsibility Department Manager
[Left] Eiji Ito, newly-appointed Corporate Social Responsibility Department Manager

### Greetings from former and new executives

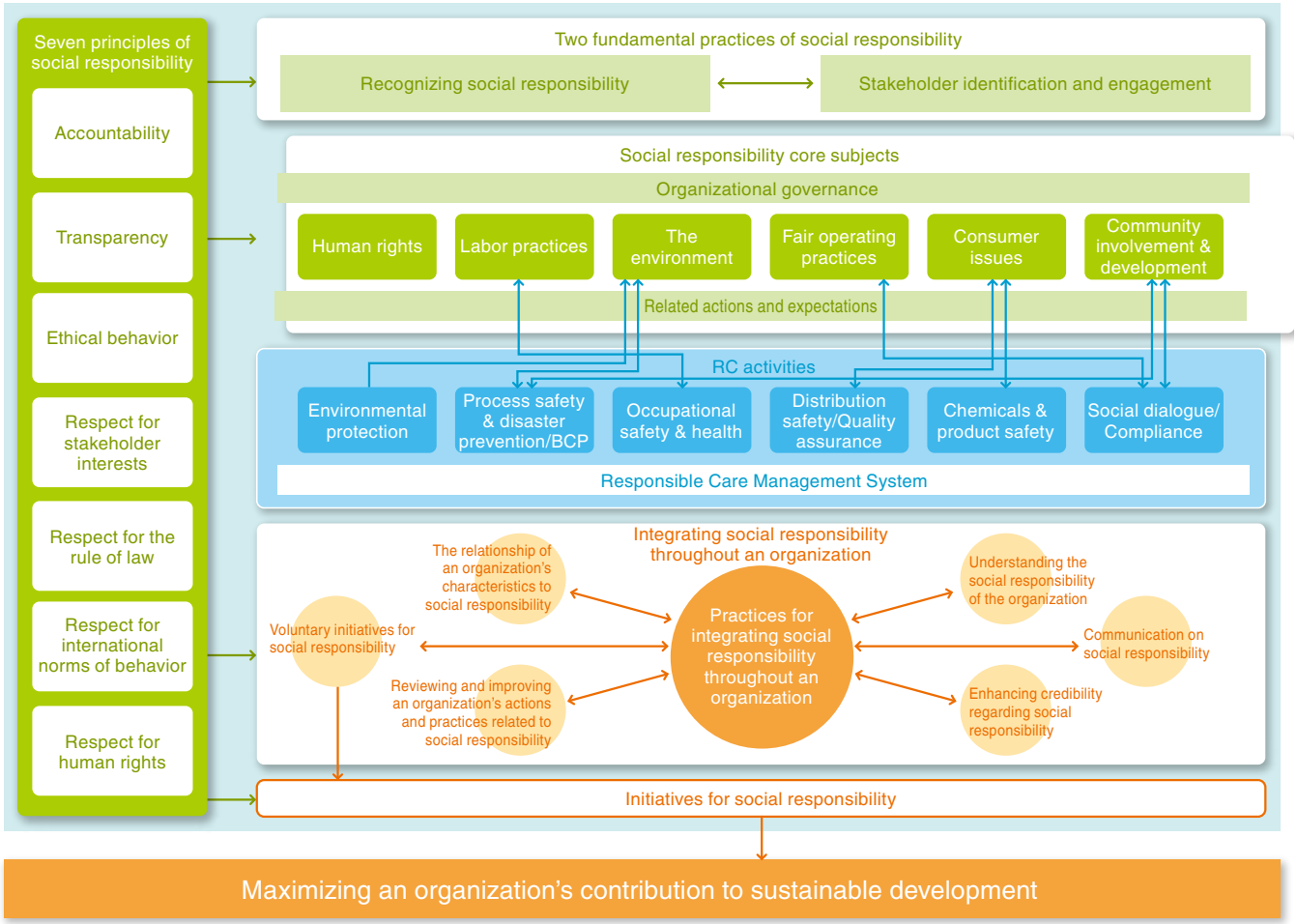
**Hiroharu Hirashita, Advisor, former Managing Director and Corporate Social Responsibility Department Manager (concurrently serving as Trade Administration Department Manager and Production & Technology Division Manager until March 31, 2013)**
We had adopted a business continuity plan (BCP) before the occurrence of the Great East Japan Earthquake in 2011. In fiscal 2012, our CSR programs were implemented on a full-scale basis. Over the past 12 months since the implementation, we have sought out third-party evaluations of our activities as part of our stakeholder engagement. This helped us launch full-scale CSR activities based on the concept of RC. It is my hope that the Nippon Soda Group will continue to grow as a company that contributes to society.

**Eiji Ito, Representative Director, Executive Operating Officer, newly appointed Corporate Social Responsibility Department Manager (concurrently serving as Technology Management and Trade Administration Department Manager and Production & Technology Division Manager from April 1, 2013)**
Efforts will be focused on CSR and RC promotional activities to help the Nippon Soda Group continue to grow as a socially responsible company for the next 100 years, with a particular eye turned toward the 100th anniversary in 2020.

# Relationship between CSR and RC

The Nippon Soda Group conducts all CSR activities based on the “seven principles of social responsibility” and conducts all RC activities in pursuit of the two basic objectives: “To do what is ethically right” and “to implement proactive measures to reduce risks.”

The figure below is based on the CSR conceptual diagram, into which codes (activity items) of RC activities (in blue) are incorporated. There are close relationships, as shown by the blue arrows, between the seven RC Codes (activity items) and the seven core subjects (activity items) of corporate social responsibility. The Nippon Soda Group integrates these activity items and determines the eight policies described on the following page.



# Policies

1 Management system RC and organizational governance CSR

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 RC CSR

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 RC/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 RC

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

5 Distribution safety RC, quality assurance and consumer issues CSR

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 RC

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 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 RC, community involvement and development CSR, fair operating practices CSR and compliance

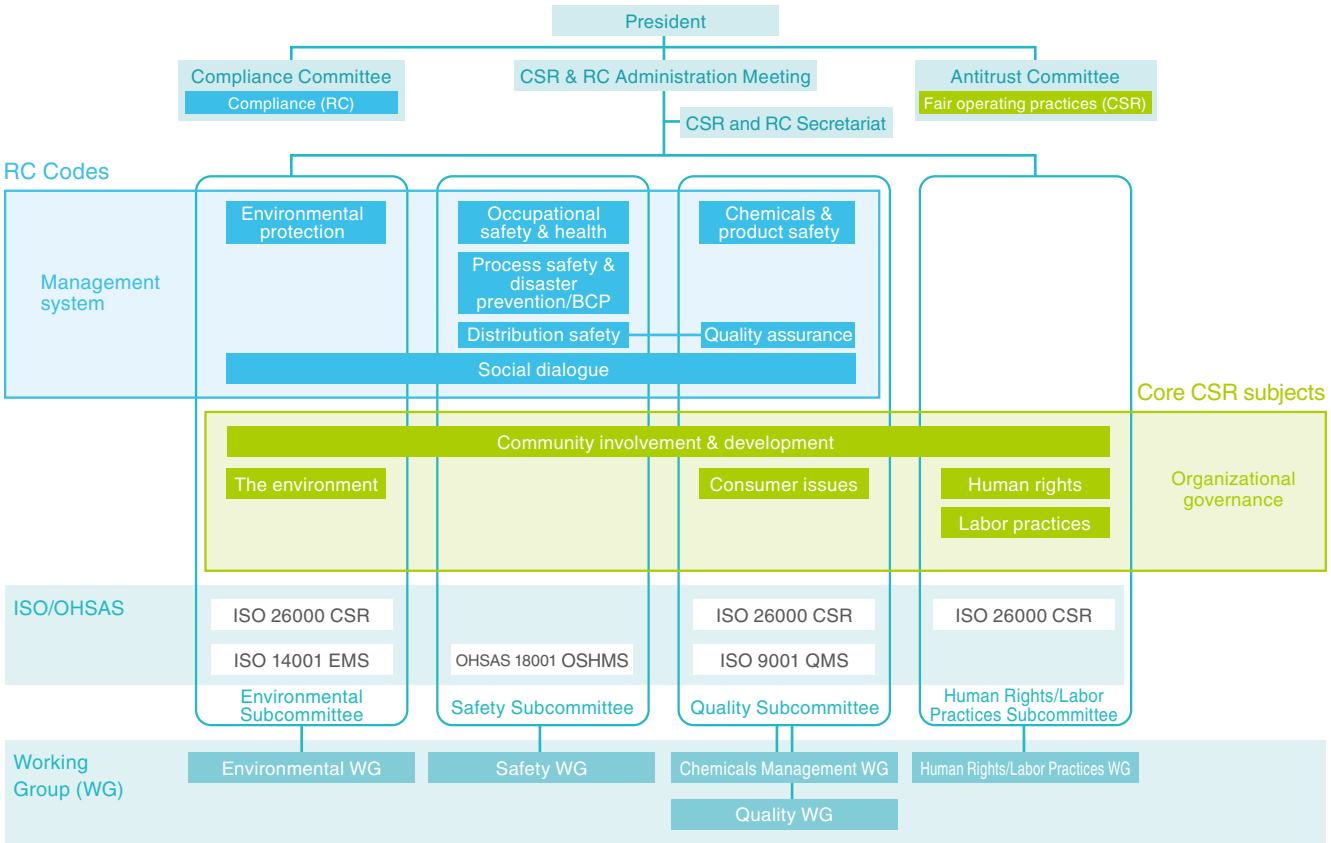
We will make efforts to improve the general public's confidence in us by participating in various environmental protection and safety activities and proactively engaging in dialogue with stakeholders regarding the effects of chemical substances on safety, health and the environment. We will comply with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

8 Human rights CSR and labor practices CSR

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, and influence respect for the rule of law and a sense of fairness that exists in society.

# Promotion System

The Corporate Social Responsibility & Responsible Care Administration Meeting chaired by the President serves as a company-wide decision-making body. It sets annual targets to help the PDCA cycle "spiral up." Held for the purpose of enabling management to review CSR/RC activities, the twice-yearly Meeting is thus attended by all directors and worksite managers.



# New Medium-Term CSR and RC Goals

## Nippon Soda Group's CSR/RC Action Goals (FY 2013–2015 New Medium-Term CSR and RC Goals)

### 1. Management system RC and organizational governance CSR

| | | |
|---|---|---|
| | Goal | Proper implementation |
| | Actions | As basic requirements, "education for personnel to increase their knowledge" is provided and "review of systems for improvement" is made on a regular basis.<br>Completion of the integration of CSR and RC management systems<br>Verification and improvement of the efficiency of internal audits and the RC audit review meeting<br>30% reduction in total non-conformity cases |

### 2. Environmental protection RC CSR

| | | |
|---|---|---|
| (1) Environmental abnormalities | Goal | Zero events |
| | Actions | Establishment of a system to prevent environmental abnormalities from occurring |
| (2) Energy | | |
| 1) Energy use per unit of production | Goal | Annual average improvement of 1% |
| | 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 transport | Goal | Annual average improvement of 1% |
| | Actions | With an eye to meeting the target for saving energy use for transport, focusing efforts to ensure the improvement of the per-unit energy use through the setting, implementation and evaluation of themes for improvement. |
| (3) Waste | | |
| 1) Amount of final disposal at landfills | Goal | 3% reduction from the previous medium term |
| | 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 and 0.5% improvement from the previous medium term |
| | Actions | Continuing to achieve zero emissions at all worksites; 0.5% improvement of zero emission rate |
| (4) Emissions of harmful substances to the atmosphere | Goal | 5% reduction from the previous medium term |
| | Actions | Achieving 5% reduction of emissions of harmful air pollutants by the entire company |

### 3. Process safety and disaster prevention RC/BCP

| | | |
|---|---|---|
| (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

| | | |
|---|---|---|
| (1) Occupational accidents resulting in an absence from work or no absence | Goal | No accidents |
| | Actions | Efforts by top management to raise safety awareness at worksites<br>Work environment-related: Systematic implementation of disaster risk assessment and mitigation measures; Personnel-related: Systematic implementation of awareness-raising efforts at each worksite to prevent disasters |
| (2) Health promotion | Goal | 5% reduction in the total number of absentee days, excluding mental-health-related absence, and 5% reduction in the incidence of personal injury and illness, from the previous medium term |
| | Actions | Guidance for improvement by healthcare professionals and staff in charge of health based on symptoms diagnosed by medical examination<br>Guidance for improvement of mental health care by healthcare professionals and staff in charge of health |

### 5. Distribution safety RC, quality assurance and consumer issues CSR

| | | |
|---|---|---|
| (1) Distribution-related complaints | Goal | 30% reduction from the previous year, complete elimination by the end of the New Medium-Term Business Plan |
| | Actions | Identifying and reducing risks of distribution-related complaints through active involvement by Head Office Logistics and RC Departments;<br>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 the previous year, complete elimination by the end of the New Medium-Term Business Plan |
| | Actions | Creating visual representations of product-related complaint management; Conducting company-wide quality risk assessments to reduce Rank A and B[1] risks by 30% |
| (3) Consumer issues | Goal | Sharing information on issues |
| | Actions | Identifying products for consumers and confirming safety |

1 Rank A risks require immediate action and Rank B risks require action.

### 6. Chemicals and product safety RC

| | | |
|---|---|---|
| (1) Compliance with chemical-related laws and regulations | | |
| | Goal | Zero violations |
| | Actions | Strengthening the management of chemical substances (poisonous and deleterious substances, new chemical substances, etc.) by adopting a new chemical substance control system;<br>Improving regular training programs on chemical substance control (poisonous and deleterious substances, new chemical substances, etc.) |

### 7. Social dialogue RC, community involvement and development CSR, fair operating practices CSR and compliance

| | | |
|---|---|---|
| (1) Local gatherings and community involvement | Goal | 30% increase from the previous medium term |
| | Actions | Increasing the number of dialogues with relevant organizations and concerned local people by 30% from the previous medium term |
| (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 one worksite on average |
| | Actions | Creating more opportunities for stakeholder engagement<br>Incorporating results from stakeholder engagement activities to improve CSR and RC activities |

### 8. Human rights CSR, labor practices CSR

| | | |
|---|---|---|
| (1) Utilization of diverse human resources | Goal | Increased ratio of female, disabled and older employees |
| | Actions | Making effective use of diverse human resources |
| (2) Rewarding workplace that employees can be proud of | Goal | Understanding and improving levels of employee satisfaction with their workplace |
| | Actions | Developing globally competent employees in preparation for overseas business expansion; training the next generation of leaders; educating employees to increase their motivation and let them take pride in their work |

# 2012 Policies and Evaluation Results

Note) Achievement rate ◎: ≥ 90% ○: 90-80% △: 80-60% X: ≤ 60%

| Activity items | Policies | Major goals for FY 2012 | Evaluation results | |
|---|---|---|---|---|
| | | | Nippon Soda | Nisso Group |
| 1. Management system | 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. | (1) Compliance with legal and other requirements related to the environment<br>(2) Compliance with requirements related to products<br>(3) Compliance with legal requirements related to poisonous and deleterious substances | (1) X 2 cases of violations ("Actions responding to instances of non-compliance" section: Environment 1])<br>(2) X 3 cases of violations ("Actions responding to instances of non-compliance" section: Quality 1], 2], 3])<br>(3) X 1 case of violation ("Actions responding to instances of non-compliance" section: Poisonous and deleterious substances 1]) | (1) X 55 cases (CO concentrations violating an air pollution-related law at Aizu Plant of Nisso Metallochemical Co., Ltd.)[1]<br>(2) ◎ Achieved<br>(3) ◎ Achieved |
| 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. | (1) No environmental abnormalities (legal violations)<br>(2) 1% reduction of per-unit energy use from the previous year<br>(3) 1% reduction of per-unit energy use for transport from the previous year<br>(4) Reduction of waste/continuation of zero emissions (≤ 5%)<br>(5) 2% reduction of atmospheric harmful substances from the previous year | (1) X 2 cases of legal violations ("Actions responding to instances of non-compliance" section: Environment 1])<br>(2) X 0.3% increase from the previous year<br>(3) ◎ 7.4% reduction from the previous year<br>(4) ◎ 30.3% reduction of waste from the previous year<br>◎ Zero emission rate at 3.7%<br>(5) X 2.5% increase from the previous year | (1) X 55 cases (CO concentrations violating an air pollution-related law at Aizu Plant of Nisso Metallochemical Co., Ltd.)[1] |
| 3. Process safety & 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. | (1) Zero major accidents at facilities<br>(2) Implementation of the BCP (business continuity plan) | (1) ◎ Risk assessment and implementation of actions<br>(2) ◎ Implementation of the 2nd version | (1) ◎ Achieved |
| 4. Occupational safety & health | We will create an accident-free working environment in order to provide a healthy and happy working experience. | (1) Achievement of zero accidents (absence from work/no absence)<br>(2) Reduction in the incidence of personal injury and illness and the total number of absentee days from the previous year | (1) X Employees: 2 cases involving absence from work, 3 cases involving no absence<br>Affiliate company employees: 1 case involving absence from work, 2 cases involving no absence<br>(2) ◎ Reduction by 7 cases and 139 days from the previous year | (1) X Employees: 2 cases involving absence from work, 1 case involving no absence<br>Affiliate company employees: 3 cases involving absence from work, 4 cases involving no absence<br>(2) ◎ Reduction by 0 cases and 455 days from the previous year |
| 5. Distribution safety/Quality assurance | 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. | (1) Zero major distribution-related accidents<br>(2) Zero major product-related complaints<br>(3) Provision of information on consumer issues and products | (1) ◎ Achieved<br>(2) X 9 cases<br>(3) ○ MSDSs for 90 chemicals updated to meet the GHS requirements | (1) ◎ Achieved<br>(2) ◎ Achieved |
| 6. Chemicals & 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 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. | (1) Zero legal violations<br>(2) Establishment of a legal compliance system | (1) X 1 case ("Actions responding to instances of non-compliance" section: Poisonous and deleterious substances 1])<br>(2) ○ Plan developed to update the Total Chemical Management System | (1) ◎ Achieved<br>(2) ○ Mostly achieved (education) |
| 7. Social dialogue/ 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. | (1) Increase in local gatherings from the same period of the previous year<br>(2) Zero violations of laws and other requirements<br>(3) Stakeholder engagement | (1) ◎ Doubled from the previous year<br>(2) X 4 cases ("Actions responding to instances of non-compliance" section: Environment 1], Quality 2], Poisonous and deleterious substances 1])<br>(3) ◎ Held as scheduled | (2) X 55 cases (CO concentrations violating an air pollution-related law at Aizu Plant of Nisso Metallochemical Co., Ltd.)[1] |
| 8. Human rights/ 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, and influence respect for the rule of law and a sense of fairness that exists in society. | (1) Actual state survey of "utilization of diverse human resources" and development of measures to address the issue by the working group<br>(2) Understanding the actual state regarding "rewarding workplace that employees can be proud of" at our company and other companies and promotion of other relevant activities by the working group | (1) ○ Actual state survey<br>△ Development of measures to address the issue<br>(2) ○ Actual state survey<br>X Questionnaire survey (To be conducted in 2013) | |

## Actions responding to instances of non-compliance

Environment 1) Legal violation: 2 missing drainage-related values required to be measured as per the agreement at Chiba Plant; cause was identified and measures to address the cause and prevent recurrences were taken.

Quality 1) Major quality problem: On April 5, 2012 at Nihongi Plant, foreign substances became mixed in 25-kg packages of potassium carbonate; voluntary recall from 39 companies; cause was identified and measures to address the cause and prevent recurrences were taken.

2) Legal violation: In May 2012, NISSO AMERICA INC., a group company, violated U.S. law and was fined $6,864; tebufenozide; omission of the United States Environmental Protection Agency registration number on the label of an insecticide; cause was identified and measures to address the cause and prevent recurrences were taken.

3) Major quality problem: On September 13, 2012, at Takaoka Plant, a wrong analysis sheet was attached to 25% and 49% caustic soda; correction was notified to 50 companies; cause was identified and measures to address the cause and prevent recurrences were taken.

Poisonous and deleterious substances

1) Legal violation: Nihongi Plant and Head Office failed to register iminoctadine acetate under the Poisonous and Deleterious Substances Control Act; cause was identified and measures to address the cause and prevent recurrences were taken.

1 When industrial waste was placed in the kiln and burner reactor of the industrial waste incinerator, combustion became unstable due to unstable caloric and water content. As a result, CO concentrations deviated from the technical standards (law) for operation and maintenance of incineration facilities set out by the Waste Disposal and Public Cleansing Law 55 times. Since then, the caloric and water content of industrial waste to be burned in the incinerator are adjusted before incineration so as to make the combustion stable to maintain CO concentrations within the permissible range.

# Management RC and Organizational Governance CSR

The Nippon Soda Group has an established management and organizational governance system to effectively promote CSR and RC activities.

## The system, which promotes both CSR and RC activities, is designed to "spiral up" the PDCA cycle[1].

The Nippon Soda Group's CSR/RC Management System requires each worksite to develop a CSR/RC improvement plan (Plan), implement the developed plan (Do), make quantitative evaluations of the plan and its implementation (Check) and implement measures based on quantitative evaluation results (Act) in order to ensure continuous improvement.

### Plan

**1 Policy:**
CSR-related policies consist of seven core subjects and RC-related policies consist of seven RC Codes. Activity items corresponding to the core subjects and RC Codes are integrated to determine eight policies, which are reviewed every year. (Refer to page 16.)

**2 Risk assessment and issue identification:**
In RC activities, risk assessment is conducted: Risks for each of six RC Codes (excluding management system) are identified and reduced to the permissible level. In CSR activities, issues for each of the core subjects are identified and addressed. The identification and improvement activities are implemented every year in accordance with the PDCA cycle.

**3 Legal and other requirements:**
The basic principles of CSR and RC are "to do what is ethically right." Recognizing that the law is the lowest ethical standard, we proactively comply with laws and other requirements but aim for a higher voluntary standard. Related activities are implemented every year in accordance with the PDCA cycle.

**4 Target:**
Based on issues identified in the "risk assessment and issue identification" stage and on "legal and other requirements" for which improvement is needed, targets are determined in accordance with the policy. Target setting is performed every year in accordance with the PDCA cycle.

**5 Plan:**
Specific plans to achieve determined goals are developed by each business site, department and unit every year in accordance with the PDCA cycle.

### Do

**1 System development:**
The CSR/RC promotion system as shown on page 16 is in operation. Working Group meetings are held monthly and Promotion Subcommittee meetings and Administration meetings are held twice a year.

**2 Education/training:**
Both CSR and RC activities are performed by employees and other involved parties. Each business site provides the relevant individuals with education and training on a regular basis in order to not only ensure compliance with laws and other requirements but to also achieve goals and to prevent latent risks at worksites from developing into occupational accidents, environmental abnormalities and/or quality problems.

**3 Communication and stakeholder engagement:**
Details of activities are published in the CSR and other reports. We seek third-party opinions on our CSR and RC activities, which are then incorporated into the activities.

**4 Documentation and document management:**
The Head Office and each business site document specific standards and procedures for CSR and RC activities and manage these documents.

**5 Operational management:**
Standards necessary to implement CSR and RC plans appropriately are established.

**6 Emergency response:**
An emergency response system and procedures are predetermined for earthquakes and other natural disasters, fires, explosions, accidents and occupational accidents. Emergency drills are conducted regularly. A business continuity plan (BCP) is developed and reviewed every year.

### Act

**1 Inspection/monitoring:**
There are procedures for constantly inspecting and monitoring the actual performance of RC activities, such as the progress of the plan, target achievement levels, the progress of daily activities and the status regarding accidents, disasters and failures.

**2 Corrective and preventive measures:**
In the event that an occupational accident, accident, environmental abnormality, quality problem, or other instance of non-compliance or deviation occurs, or is likely to occur, the cause is identified and necessary measures taken. Measures to prevent recurrence are also taken and these measures are rolled out to other similar cases.

**3 Information collection and record management:**
Information on risks, legal and other requirements, and instances of non-compliance and deviation that affect the Nippon Soda Group is collected. Records relevant to maintaining safety are managed appropriately.

**4 Audits:**
The implementation of CSR and RC activities is periodically audited.

### Check

**1 Review by management:**
Management reviews the entirety of CSR and RC activities twice a year.

## Plan-Do-Check-Act cycle

1 The PDCA (plan–do–check–act) cycle is a management method used to facilitate management activities, such as RC activities, production control and quality control, in business activities such as manufacturing. It was advocated by Walter A. Shewhart and W. Edwards Deming after World War II.

# Human Rights/Labor Practices CSR

The Nippon Soda Group focuses on creating a work environment where human rights are respected and all employees can engage in meaningful work.

## Respect for human rights

In accordance with its management philosophy, Nippon Soda's goal is to contribute to the development of society through chemistry. In striving to achieve this, we seek to comply with laws and regulations and promote sound and transparent business practices. As a matter of course, we place the highest priority on respecting and advocating human rights. The Nippon Soda Group Code of Conduct contains a statement of the group's commitment to uphold human rights and prohibit discrimination as well as a declaration that it will respect the unique individuality of each employee, provide various HR systems to promote employee welfare, ensure comfortable and fulfilling working conditions, and eliminate discrimination.

## Personnel system and human development

Nippon Soda's personnel system is designed to help employees improve their ability to achieve self-fulfillment while at the same time properly rewarding them according to their accomplishments.

In fiscal 2011, we carried out a large-scale reform of the personnel system under the basic concept of "promoting employee understanding by disclosing as much information as possible." The reform covered a wide range of issues, such as salaries, bonuses, promotions and appraisals.

We believe that each of the subsystems that make up the personnel system should be designed so as to promote the development of our employees. Furthermore, with the aim of fully supporting those who are willing to learn and grow, we provide equal opportunities for all employees to receive in-company training.

In addition to on-the-job training, our educational and training programs include training according to job grade, manager training, early- and mid-career practical training, and specialized training by job function. We also provide training for self-development, including programs to improve language proficiency and acquire qualifications, along with many other various kinds of training programs.

## Achievement of diversity

In our recruiting activities, we target as broad a range of candidates as possible, meaning we do not discriminate based on nationality, gender or creed. Furthermore, in principle, we offer all kinds of positions for which no academic background is required. We also recruit mid-career workers from outside the company throughout the year. Moreover, unlike other companies, which tend to enforce hiring restrictions, we are ready to employ older workers and people with disabilities.

## Improvement of work-life balance

Productivity depends on workers enjoying a healthy state of mind and body. Nippon Soda has long expended efforts on reducing normal working hours and increasing the amount of leave for its workers. Careful checks are carried out to prevent employees from performing too much overtime or not taking enough leave.

When people are able to maintain a good balance between their work life and their family life, they are less likely to be stressed. Recognizing that child rearing and elderly care are two major challenges faced by a number of people, we provide employees confronting these challenges with support and aid to allow them to fulfill their family commitments in a stress-free manner.

### Total annual working hours per employee (2011)

| Normal working hours (hours) | Early start and overtime hours (hours) | Holiday overtime hours (hours) |
|---|---|---|
| 1836.4 | 127.9 | 7.4 |

| Paid annual leave days taken (days) | Various kinds of leave days taken (days) | Total annual working hours per person (hours) |
|---|---|---|
| 15.3 | 2.2 | 1844.3 |

### Change in the number of employees who took child/family care leave (persons)

| | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| Those who took child care leave | 5 | 6 | 6 | 2 | 7 |
| Those who took family care leave | 0 | 5 | 2 | 1 | 0 |

## Labor-management relations and improvement of working conditions

To maintain cooperative labor-management relations, we hold labor-management council meetings and create additional opportunities for constructive opinion exchange in relation to various daily issues. Our motto in this regard is "dialogue rather than negotiation." Through these efforts, we improve working conditions in a rational manner.

## Measures to maintain health

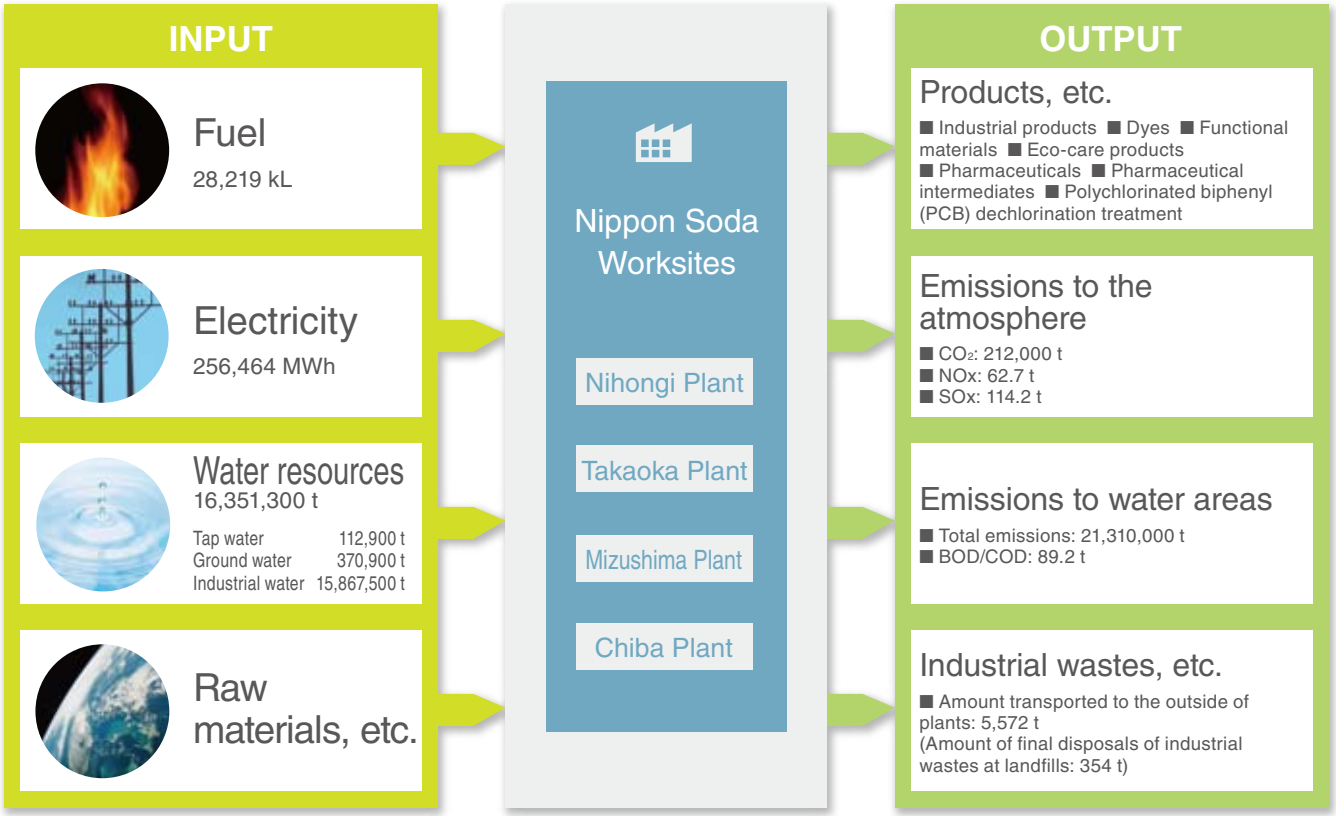
Nippon Soda is actively involved in maintaining and promoting the health of its employees. One of our many efforts is our "*Kenko-ryoku Up Dai-sakusen*" (Health Promotion Campaign). This is an annual company-wide campaign where all employees set their own health improvement targets for the next two-month period and then report on their achievements. Targets selected range from "quitting smoking" to "losing 2 kg" and "walking 10,000 steps a day." Many employees take great pleasure in achieving their targets.

# Environmental Protection RC CSR

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.

## Major environmental impacts

The environment impacts of Nippon Soda's four major plants in fiscal 2012 are shown in the figure below.




## Acquisition of high "environmental ratings" from DBJ

DBJ 環境格付 2009

In December 2009, 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."

DBJ 環境格付 2011

In April 2011, 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."

## Environmental Management Systems (EMS)

Nippon Soda has introduced an environmental management system at all plants and one research center.

## Energy saving

### Reduction of energy consumption and carbon dioxide emissions

Nippon Soda promotes efforts to reduce greenhouse gases. The efficiency of our soda electrolysis technology in particular is ranked among the highest in the world. Furthermore, we place the utmost emphasis on reducing our energy consumption, saving resources and recycling. Changes in the energy consumption and carbon dioxide emissions of Nippon Soda as a whole are shown in Figure 1.

During the period from 1990, the base year of the Kyoto Protocol, to 2012, Nippon Soda not only improved the energy efficiency of its energy-intensive products—typically electrolysis products—but also reduced their energy consumption by converting them into high-function, high-value-added products. Specifically, our fiscal 2012 energy consumption dropped by 2.7% from the previous year. Despite our efforts, however, the carbon dioxide emissions increased by 17.5% from the previous year, due largely to an increase in the carbon dioxide emissions coefficient of electricity. In comparison with the 1990 levels, we cut energy consumption by 39.6% and carbon dioxide emissions by 32.0%.

### Promotion of energy saving by the Logistics Department

Nippon Soda has been making efforts to improve efficiency and reduce environmental impacts in terms of logistics through modal shifts, reducing the number of trips by using larger-sized shipping containers and adjusting logistics distribution routes.

Energy consumption for transportation in fiscal 2012 was 1,738 kL in crude oil equivalent, which is an 8.4% reduction from the previous year.

### Improvement of the energy use per unit of production

In order to accurately assess the amount of energy saved in the manufacturing process, Nippon Soda uses a measurement called the “per-unit energy use,” which is the energy required to produce one ton of products. Figure 2 shows changes in the per-unit energy use.

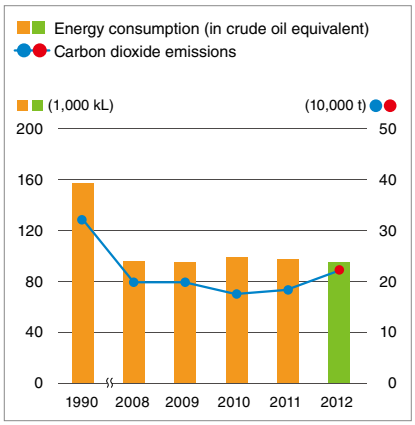



Figure 1 Changes in energy consumption and carbon dioxide emissions

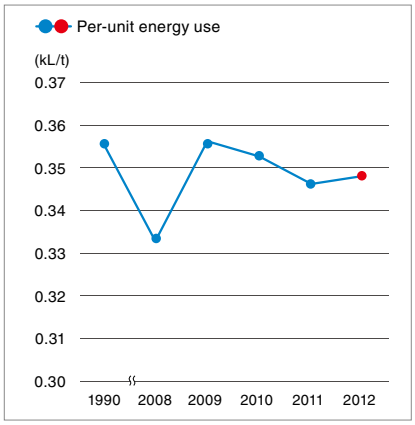



Figure 2 The energy use per unit of production

## Waste reduction

Nippon Soda has been making efforts to reduce industrial waste.

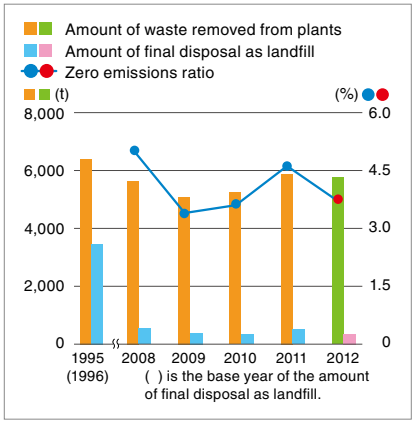
### Reduction of the amount of final disposal as landfill

The Nippon Soda Group reduces the amount of waste going to landfill by reducing the disposal of industrial waste as well as increasing recycling. Figure 3 shows changes in the amount of transported industrial waste and the amount of final disposal going to landfill. In fiscal 2012, in comparison with the base year 1995 (1996 for the amount of final disposal as landfill), the amount of transported waste decreased by 10.3% and the amount going to landfill decreased by 89.7%.

### Zero emissions

Nippon Soda promotes “zero emissions,” defined as the state wherein the amount of waste disposed finally as landfill is 5% or less of the total amount of transported waste.

The change in the zero emissions ratio, or the ratio of the amount of final disposal as landfill to the amount of transported waste, is shown in Figure 3. Nippon Soda has achieved the zero emissions goal.




The amount of waste removed from plants does not include the surplus sludge at Takaoka Plant (which is treated with microbial autolysis at an external facility).

Figure 3 Changes in the amount of transported industrial waste and the amount of final disposal as landfill

# Environmental Protection RC CSR

## Atmosphere and water area protection

### Actions to conform to 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, which was implemented in 2000 and revised in 2008. Changes in the emissions of Class 1 chemical substances specified by the PRTR Law are shown in Figure 4.

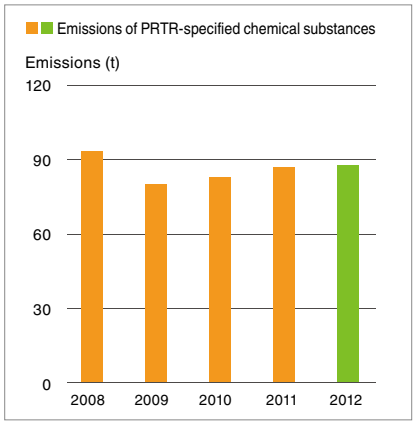



Figure 4 Changes in the emissions of Class 1 chemical substances specified by the PRTR Law

### Reduction of emissions of harmful substances to the atmosphere

Nippon Soda takes measures to reduce emissions of 13 voluntarily controlled harmful air pollutant chemical substances. Changes in the emissions of voluntarily controlled chemical substances to the atmosphere are shown in Figure 5.

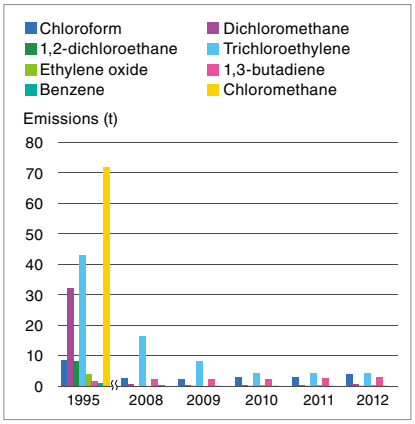



Figure 5 Changes in the emissions of voluntarily controlled chemical substances to the atmosphere

Nippon Soda voluntarily controls the following eight substances: chloroform, dichloromethane, 1,2-dichloroethane, trichloroethylene, ethylene oxide, 1,3-butadiene, benzene and chloromethane.

Chemical air pollutants are trace elements in the air that adversely affect humans, animals, plants and the living environment. Figure 6 shows changes in the 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 (1968).

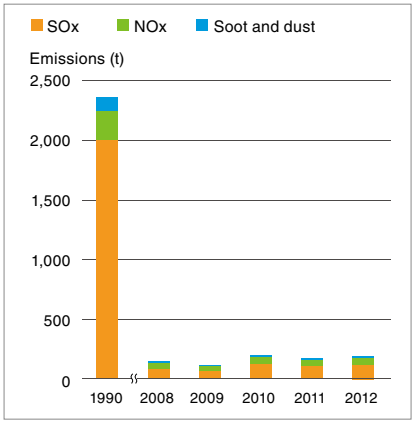



Figure 6 Changes in the emissions of substances controlled by the Air Pollution Control Act

In fiscal 2012, in comparison with the base year 1990, emissions of sulfur oxide, nitrogen oxide, and soot and dust decreased by 94.3%, 73.4% and 91.2%, respectively.

### Reduction of emissions of harmful substances to water

Nippon Soda takes measures to reduce emissions of BOD and COD, which have an impact on the quality of water in the environment. Figure 7 shows changes in the total volume of discharged water and emissions of BOD and COD.

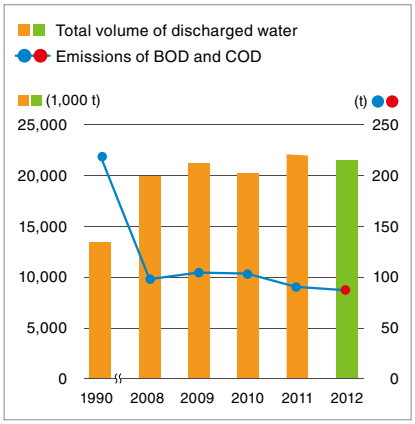



Figure 7 Changes in the total volume of discharged water and emissions of BOD and COD

BOD, or biological oxygen demand, is the amount of oxygen consumed by organic substances in water when they are decomposed by microorganisms. It can be used as an indicator of the level of contamination of rivers by organic substances. COD, or chemical oxygen demand, is the amount of oxygen required to oxidize organic substances in water and can be used as an indicator of water quality.

## Environmental accounting

Environmental-protection-related investments, costs and effects of Nippon Soda in fiscal 2012 are quantitatively identified and evaluated.
The environmental accounting data presented pertain only to Nippon Soda and do not pertain to group companies.
This environmental accounting covers the period from April 1, 2012 to March 31, 2013.
Reference guideline: Ministry of the Environment's Environmental Accounting Guidelines (2005)

### Environmental protection costs

Environmental protection costs (Classification according to business activities)

| Classification | | Major measures taken | Invested amount (unit: million yen) | | | Costs (unit: million yen) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2010 | 2011 | 2012 | 2010 | 2011 | 2012 |
| (1) Business area costs | | | 304 | 143 | 446 | 2,554 | 2,469 | 2,435 |
| Details | 1-1 Pollution prevention costs | Water pollution prevention, air pollution prevention | 245 | 140 | 408 | 1,901 | 1,833 | 1,816 |
| | 1-2 Global environmental protection costs | Global warming prevention | 28 | 3 | 33 | 66 | 80 | 70 |
| | 1-3 Resource recycling costs | Effective use, reduction of waste | 31 | 0 | 5 | 587 | 556 | 549 |
| (2) Upstream and downstream costs | | Use of low-sulfur fuel oil C, precious metal catalyst recovery | 0 | 0 | 0 | 51 | 98 | 81 |
| (3) Environmental activity costs | | Environmental measures, environmental analysis, waste treatment | 0 | 0 | 0 | 486 | 506 | 502 |
| (4) R&D costs | | Research to reduce environmental impact | 0 | 0 | 0 | 307 | 367 | 315 |
| (5) Social activity costs | | Environment-related contributions to external parties | 0 | 0 | 0 | 18 | 1 | 1 |
| (6) Environmental damage costs | | Levies on air pollution, asbestos removal costs | 0 | 0 | 0 | 543 | 92 | 79 |
| | | Total | 304 | 143 | 446 | 3,959 | 3,533 | 3,413 |

The amounts are recorded amounts. Unit: million yen

### Economic effects produced by environmental protection

Economic effects produced by environmental protection (actual effects)

| Details of effects | | Amount (unit: million yen) | | |
|---|---|---|---|---|
| | | 2010 | 2011 | 2012 |
| Revenue | (1) Revenues through recycling | 3 | 1 | 1 |
| Cost saving | (2) Cost saving through energy saving | 178 | 198 | 173 |
| | (3) Cost saving through resource saving | 127 | 127 | 126 |
| | (4) Saving of waste disposal costs | 10 | 1 | 2 |
| | Total | 318 | 327 | 302 |

Voice

Shinichi Sato
Environment & Quality Management Department
Production & Technology Division

### Aiming to achieve environmental protection through minimizing the environmental impact of business activities

In response to increasing social concern over environmental issues, many environment-related laws and regulations have been revised. Our efforts are focused not only on complying with such laws and regulations but also on reducing our environmental impact in cooperation with personnel charged with overseeing environmental affairs at each worksite. In fiscal 2012, we shared information on past cases of environmental abnormalities (legal violations, etc.) as part of a rollout of environmental protection activities to the entire company aimed at achieving "no environmental abnormalities."

# Process Safety & Disaster Prevention RC/BCP

The Nippon Soda Group takes preventive measures to avoid fires, explosions and leakages of chemical substances at its worksites. Particular emphasis is placed on process safety and disaster prevention to protect employees and local residents. We also implement a business continuity plan (BCP) to protect our customers.

## Process safety and disaster prevention

### Risk assessment and reduction through process safety and disaster prevention

The Nippon Soda Group assesses risks for existing facilities and machinery, existing processes, new facility construction and extensions, and new processes. If any unacceptable risks are identified, we take actions to reduce them.

### Safety audit to confirm the safety of plants

The Nippon Soda Group requires that safety reviews and audits be conducted by responsible personnel and specialists in order to ensure the safety of new facility construction and renovation projects.

Covering various aspects such as safety, the environment and quality, these checks consist of a safety audit of the Head Office, a safety review of plants, and a safety review of departments. Each review takes the scale and process of the relevant construction work into account.

### Establishment of an emergency risk management system

We place the highest priority on preventing accidents and disasters. In the event that an unavoidable accident or disaster does occur, we have established an emergency risk management system to minimize damage.

### Disaster prevention system involving local communities

Nippon Soda's manufacturing plants implement regular disaster drills in cooperation with other nearby plants and local governments so as to be prepared for an emergency situation. In order to improve their effectiveness, these drills are conducted in accordance with local environmental and other characteristics unique to each region.

### Standards of behavior to respond to emergencies

Our drills are conducted based on standards of behavior that we have developed in order to be prepared for various tasks in the event of a disaster or accident. Such tasks include communications, taking action and exercising control in an appropriate and prompt manner.

### Regular disaster drills

(June 20, 2012, Takaoka Plant)

(November 30, 2012, Chiba Plant)

Personnel wearing respirators during a drill
(June 20, 2012, Takaoka Plant)

Rescue drill under falling water
(June 20, 2012, Takaoka Plant)

Joint inspection with local firefighters
(November 30, 2012, Chiba Plant)

# Business Continuity Plan (BCP)

## Basic policy

In the event of a natural disaster such as a large-scale earthquake or other crises that can result in serious damage, the social responsibility of Nippon Soda is to ensure protection for local residents, full-time and temporary employees and affiliate company employees from possible harm posed by the company's business sites located in the affected area, where toxins, deleterious substances, hazardous materials, high-pressure gas and a large amount of energy are present. Since the company produces chemicals, agricultural chemicals, medicines, and other products that are indispensable for people's daily life and ingredients of industrial products, if the supply of these products is disrupted due to a disaster or crisis, tremendous inconvenience would be imposed not only on the company's customers but also on general consumers. In this context, Nippon Soda's BCP, or business continuity plan, must above all ensure the safety of its own employees, affiliate company employees and temporary employees and their families and local residents and also promptly safeguard the Head Office, plants, research centers, branch offices and sales offices. The BCP must also be designed to help its own employees, affiliate company employees and temporary employees be fully aware of their individual responsibilities and allow them to take on their assigned role at their discretion in order to execute emergency operations. It is also necessary for the company to establish a system that enables them to act flexibly according to the circumstances. With all the above taken into account, the principles of the BCP are defined as follows:

## Principles of the BCP

❶ 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.

❷ The consciousness of serving the public and community is shared among all personnel throughout the company.

❸ Efforts are focused on protecting the safety of the affected Head Office, plants, research centers, branch offices and sales offices.

❹ 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 using the PDCA cycle

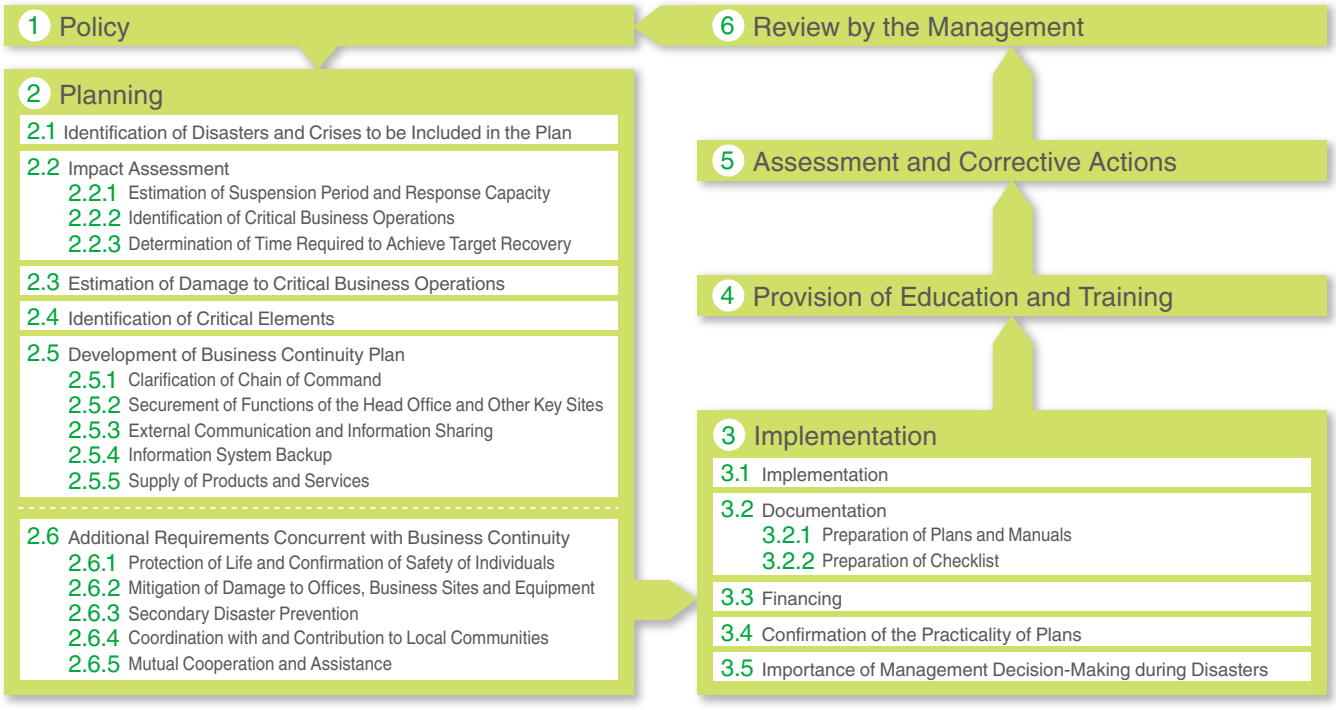
The RC activity is built into the PDCA cycle by incorporating the BCP in the voluntary activity code, helping the BCP "spiral up."

## Continuation of supply of products according to customer needs

The BCP aims to ensure the supply of products to customers as requested at any time. 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.



# Occupational Safety and Health RC

The Nippon Soda Group promotes efforts to create an accident-free working environment in order to provide a healthy and happy working experience. We are implementing various measures to achieve and maintain the goal of no workplace accidents and promote employee health.

## Occupational safety and health management system (OSHMS)

Nippon Soda has introduced an occupational safety and health management system (OSHMS) at all plants and one research center.

The OSHMS is a tool to identify safety policies for worksites and develop, implement, review and maintain the identified policies. Covering also organizational structures and procedures, it helps achieve goals and improve performance systematically by promoting the PDCA cycle.

To integrate OSHMS and RC activities effectively, Nippon Soda places an emphasis on OSHMS risk assessment. The basic objective of RC activities is to identify and assess risks based on RC Codes and to reduce them to permissible levels. The plants and research center identify and assess occupational accident risks and, if they are not permissible, reduce them to permissible levels.

## Efforts to prevent occupational accidents

Nippon Soda uses two approaches in its efforts to prevent occupational accidents: one is to reduce occupational accident risks themselves and the other is to prevent worker errors.

Activities to reduce occupational accident risks themselves mainly consist of efforts to reduce occupational accident risks based on OSHMS risk assessments but also include efforts to reduce risks by identifying "*hiyari-hat*" (near miss) accidents and by sharing information on accidents that have occurred at other business sites and companies. When new plants are constructed and existing ones extended, a safety review and audit are required. Before starting operation, accident risks are reduced to permissible levels.

To prevent worker errors, the following three measures are adopted:

1. 5Ss
2. 4 Safety Cycles
3. Safety-awareness-raising efforts at business sites

The "5Ss" collectively refers to five Japanese words: *seiri* (organizing), *seiton* (tidying), *seiso* (cleaning), *seiketsu* (cleanliness) and *shitsuke* (discipline).

The 4 Safety Cycles are

1. KY[1] before starting operation
2. Pointing and vocalizing during operation
3. Mutually directing attention during operation
4. Identifying "*hiyari-hat*" (near miss) accidents after operation

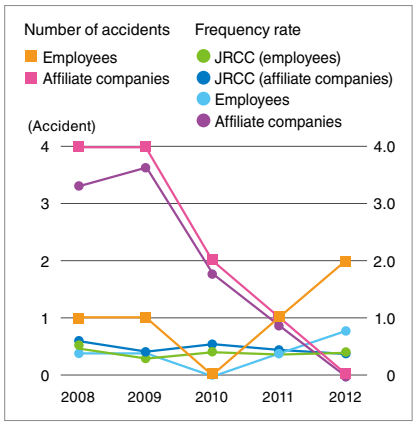
The 5Ss and the 4 Safety Cycles are the two fundamental concepts that form the basis of safety activities for the entire Nippon Soda Group. The top management at each business site takes the initiative in promoting safety awareness among employees so that safety activities are improved through the continuous application of the PDCA cycle.

### Changes in the number of occupational accidents resulting in absence from work and the frequency rate

Changes in the number of occupational accidents resulting in absence from work and the frequency rate are shown in Figure 1.

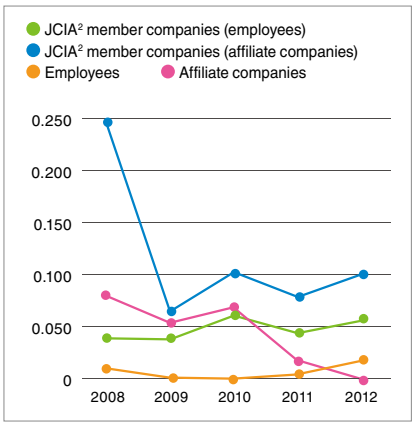
### Changes in the severity rate of occupational accidents and the frequency rate

Changes in the severity rate of occupational accidents and the frequency rate are shown in Figure 2.




Occupational accident frequency rate:
Casualties/Total working hours (per million hours)

Figure 1 Changes in the number of occupational accidents resulting in absence from work and the frequency rate




Severity rate of occupational accidents:
Man-days lost/Total working hours (per 1,000 hours)

Figure 2 Change in the severity rate of occupational accidents

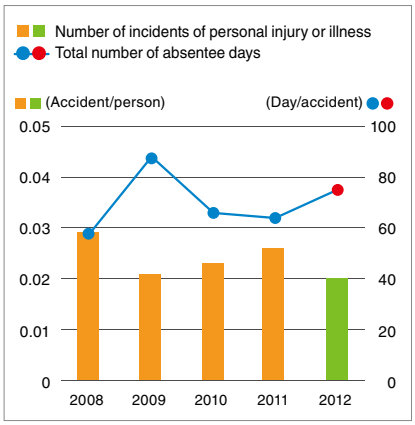



Figure 3 Changes in the number of incidents of personal injury or illness (per person) and the total number of absentee days

Note) The data for Figure 1 and Figure 2 were collected from January 1 to December 31 of each year. The data for Figure 3 were collected from April 1 of each year to March 31 of the following year.

## Health promotion

Recognizing that achieving our production activity goals, preventing occupational accidents and performing CSR and RC activities are all dependent on the well-being of our workers, Nippon Soda makes efforts to promote employee health.

As one such effort based on specific numerical targets, all business sites work to reduce the number of incidents of personal injury or illness and the total number of absentee days related to injury or illness. Figure 3 shows the changes in these numbers.

Each business site develops and implements its own health promotion activities, including a "*Kenko-ryoku Up Dai-sakusen*" (Health Promotion Campaign). Some other examples are warm-up exercises in the morning and after lunch and walking and other exercises during lunch break.

Healthcare staff, consisting of occupational physicians and nurses, provide health guidance based on periodic medical examination results and other data.

Our mental healthcare program consists of the following four components:

1. Self-care
2. Care by administrators in the workplace
3. Care by occupational healthcare staff and other specialists at each workplace
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 mental health check is conducted once a year. To improve care by administrators in the workplace (2), lectures on mental health 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).

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.
2 JCIA stands for Japan Chemical Industry Association.

### Health promotion programs (Takaoka Plant)

Exercise with a ball (1)
(October 16, 2012)

Exercise with a ball (2)
(October 16, 2012)

Lecture on health
(November 12, 2012)

**Voice**

Masayuki Yoshida
Environment & Quality Management Department

### Creating an accident-free working environment in order to provide a healthy and happy working experience

In fiscal 2012, we started implementing a safety patrol program at each business site. We also identify good points of each site and replicate them at other sites in order to eliminate occupational accidents. Health-related lectures are organized and employees are encouraged to take a regular stress test in order to detect and address mental health symptoms at an early stage. For these activities, we are strengthening our cooperation with occupational physicians.

# Distribution Safety (RC), Quality Assurance and Consumer Issues (CSR)

The Nippon Soda Group takes measures to prevent distribution accidents by minimizing hazards, harm and risks of in-transit accidents associated with the transportation and distribution of our products, as well as to protect the safety and health of users of our products and increase customer satisfaction.

## Efforts to ensure transportation safety

### Yellow Card[1]

Nippon Soda promotes the use of Yellow Cards.

### Container Yellow Card[2]

Nippon Soda promotes the use of Container Yellow Cards, mainly for hazardous materials, so that in the event of an emergency those on the scene can make an immediate response.

### Measures to prevent transportation accidents involving hazardous materials

Nippon Soda prepares a "Safety Information List" for mass transportation of highly hazardous and harmful products. The Safety Information List contains information on the transportation route for a designated product, emergency contacts and other information necessary in an emergency situation, such as an accident. In the event of an accident, the list helps responders to establish an emergency operation center from which directions to minimize damage and contain the accident can be issued.

In cooperation with local fire and police departments and other nearby companies, Nippon Soda implements regular distribution-related disaster drills based on the scenario of an accident occurring during the transport of hazardous materials. These drills involve the deployment of tankers, mobile facilities to remove hazardous materials and other equipment that are used in actual settings.

### Distribution-related safety education of distribution companies

Nippon Soda on a regular basis provides distribution companies with education on the hazards and harm associated with various products along with information on safe handling procedures so that our products can be delivered to customers without any problems.

### Transportation risk assessment

Nippon Soda identifies risks associated with the transportation of products. If the identified risks are unacceptable, efforts are made to reduce them to permissible levels. Through these efforts, we are constantly reducing distribution-related risks.

### Request for improvement of customers' facilities

If risks such as potential leakage are identified with regard to facilities where our products are used, Nippon Soda makes a specific request for improvement. This system has proven successful in the past, where customers and users who made improvements in compliance with our request have averted problems.

### Audit of distribution companies

Nippon Soda conducts audits regularly to confirm that companies to which it outsources distribution take appropriate measures to ensure safety. If matters needing improvement are identified as a result of an audit, Nippon Soda requests the company to make improvements and checks the result in the next audit.

## Distribution-related disaster drills

Training on how to wear a respirator
(October 30, 2012 at Head Office)

Inspection of safety valves
(October 15, 2010 at Takaoka Plant [once every three years])
A disaster prevention drill for high-pressure gas transportation in Toyama Prefecture

Treatment of leaked gas using a mobile facility to remove hazardous materials
(October 15, 2010 at Takaoka Plant [once every three years])
A disaster prevention drill for high-pressure gas transportation in Toyama Prefecture

### Change in distribution and other accidents

Figure 1 below shows changes in the number of distribution accidents, defective containers and packages, and defective displays over the last five years.

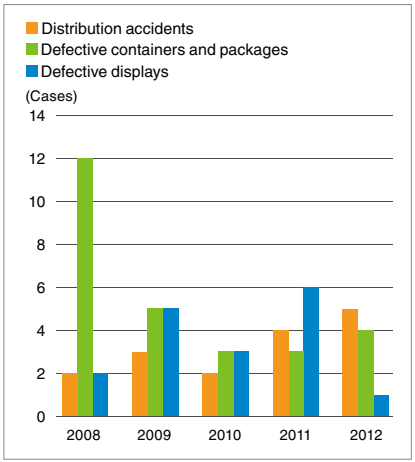



Figure 1 Changes in the number of distribution accidents, defective containers and packages, and defective displays

## Efforts to ensure quality assurance

### Quality management system (QMS)

Each of the plants and one research center of Nippon Soda have met ISO 9001 quality standards, obtained certification and established their own quality management systems.

### Aiming to achieve zero quality complaints

Nippon Soda is making efforts to achieve zero quality complaints. When we do receive a product-related complaint, we follow our established regulations to promptly identify causes, take necessary actions to address the complaints, and take measures to prevent recurrence.

Nippon Soda also conducts quality risk assessments to analyze past product-related complaints, identify each quality risk in processes involving considerable quality risks, and reduce risks to permissible levels. Through this assessment, we prevent product-related complaints from occurring. Figure 2 shows the change in the number of product-related complaints.

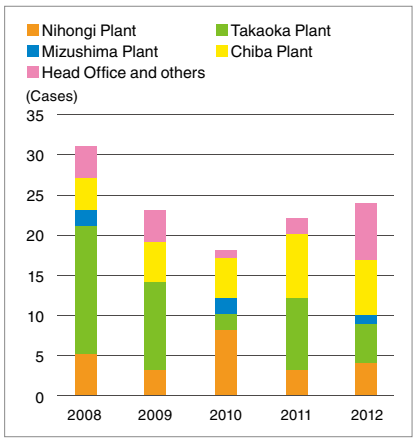



Figure 2 Change in the number of product-related complaints

## Efforts to address consumer issues

Nippon Soda protects the health and safety of consumers who use its products and provides product information to increase customer satisfaction.

To promote these efforts, we revise MSDSs to meet GHS requirements[3] and develop delivery specifications.

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 spillage, fire, explosion or other safety problem that may occur during transport, as well as 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 emergency index number in addition to other information.
3 Please refer to notes 2 and 3 on page 32.



Voice

Susumu Mizuuchi
Environment & Quality Management Department

### Aiming to establish a system that ensures the safe delivery of high-quality products to customers

We take seriously customer opinions about our products and have established a system that enables us to improve quality in a continuous manner. In addition to quality improvement, our efforts are also focused on cooperating with those involved in transportation to make it more environment- and safety-conscious so as to ensure the safe delivery of products to customers in and outside of Japan.

# Chemicals and Product Safety RC

The Nippon Soda Group increases the confidence and trust of customers and the general public in us by taking into account possible hazards and danger that chemicals and products may have to safety, health and the environment, and complies with domestic laws and regulations, international standards, treaties and the like, as well as other regulations that are publicly demanded.

## Management of chemicals

At the Earth Summit in 1992, Agenda 21, an action plan for achieving sustainable development, was adopted and the environmentally appropriate management of chemicals was defined. In 2002, the United Nations Environment Programme Governing Council determined that there was a need for a strategic approach to international chemicals management. Following this, at the World Summit on Sustainable Development, it was agreed to "use and produce chemicals in ways that minimize significant adverse effects on human health and the environment by 2020." In 2006, the Strategic Approach to International Chemicals Management was adopted by the International Conference on Chemicals Management. As these developments indicate, the environment surrounding international chemicals management has been evolving. Taking these circumstances into account, Nippon Soda places an emphasis on promoting efforts related to chemicals management.

## Specific actions for the management of chemicals

To ensure the proper management of chemicals, Nippon Soda takes the following action.

### Actions to comply with laws and regulations regarding the management of chemicals

Companies that use chemicals to manufacture and market products are obliged to comply with a number of laws, regulations and other requirements, including the Poisonous and Deleterious Substances Control Act, the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Act, the Agricultural Chemicals Control Act and REACH[1]. To be well prepared for meeting these requirements, Nippon Soda has established a system to assess the hazardous and dangerous effects of all chemicals used in the pre-manufacturing phase and to survey laws, regulations and other requirements. This system also applies to prototypes for R&D.

### Education and training

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

### Audits of the status of chemicals management

Plants and research centers where chemicals are used undergo regular audits of the status of their chemicals management as part of the RC audit.

Voice

Tetsuya Kato
Environment & Quality Management Department

### Complying with laws and regulations related to the safety of chemicals and products and aiming to build trust with our customers and society at large

Since the agreement on actions to minimize adverse effects of chemicals at the World Summit on Sustainable Development, requirements regarding the management of chemicals have become more and more stringent every year. By focusing our efforts on improving our system to ensure compliance with laws and regulations, providing education and training, conducting audits, preparing MSDSs and product labels according to the GHS Classification System and communicating safety information, we will ensure compliance with laws and regulations and build trust with our customers and society at large.

## Preparation and revision of MSDSs[2] and product labels to meet GHS[3] requirements

We prepare MSDSs and product labels according to the GHS Classification System. Because the GHS system is adopted globally, Nippon Soda prepares MSDSs and product labels used in Japan, Europe, China, Taiwan, Korea and other countries in such a way as to meet the GHS requirements.

## Communication of safety information on chemicals

Nippon Soda participates in the Japan Challenge Program, which is a joint program between government and industry. The objective of the program is to accelerate the collection of safety information on existing chemicals and make such information broadly available to the public. Nippon Soda has registered as a "sponsor" of Phenol, 4-[[4-(1-methylethoxy)phenyl]sulfonyl]-. As such, we have collected safety information about the chemical and submitted a safety information plan and report. We have also formed a consortium for Potassium diethyldithiocarbamate. As a registered sponsor, we have collected safety information about the chemical and submitted a safety information plan.

Nippon Soda also participates in the Global Product Strategy (GPS) and the Japan Initiative of Product Stewardship (JIPS). JIPS was launched by the Japan Chemical Industry Association (JCIA) in May 2009 as a new voluntary initiative of the chemical industry to strengthen chemicals management based on risk assessments and risk management that takes supply chains into account. The basic concept of JIPS is aligned with the Product Stewardship (PS)/GPS initiative of the International Council of Chemical Associations (ICCA). Nippon Soda has prepared two safety summary reports—on hydroxypropyl cellulose and acetoxyazetidine—which have been registered on the ICCA portal page and made publicly available.

1 REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is a European Union regulation that requires companies that manufacture or import chemical substances in the amount of one ton or more per year into the EU 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.
2 MSDS stands for Material Safety Data Sheet. An MSDS is a document that contains information on the safe handling of chemicals and raw materials that contain chemicals.
3 GHS stand for Globally Harmonized System of Classification and Labelling of Chemicals. GHS is a global system for standardizing the classification and labeling (product labels and MSDSs) of chemicals according to their hazards.



Education on the management of poisonous and deleterious substances
(October 18, 2012 at Head Office)

Explanatory meeting on the preparation and revision of MSDSs and product labels to meet GHS requirements
(December 14, 2012 at Head Office)

# Social Dialogue RC, Community Involvement and Development CSR, Fair Operating Practices CSR and Compliance

The Nippon Soda Group participates in various environmental protection and safety activities and engages in stakeholder dialogues on the effects of chemical substances on the environment, safety and health to build trust with society. The Nippon Soda Group also complies with legal requirements to improve transparency.

## Dissemination of information on CSR/RC activities

The Nippon Soda Group disseminates information on its CSR/RC activities by the following means:

❶ CSR Report (formerly, Environmental Report)
Available to anybody in the form of a booklet or via our website.

❷ Reports on activities and plans for activities are submitted to the Japan Chemical Industry Association and distributed at local and other meetings.

❸ Information on our activities is provided during tours of our offices and other gatherings.

## External communication

Nippon Soda regularly holds local gatherings and offers tours of plants and research centers to local residents in order to provide information on our CSR and RC activities and create a forum for opinion exchange. Table 1 shows the number of external communication events held in recent years.

Table 1 External Communication Events

| FY | Local gatherings | Tours of plants and research centers | JRCC[1] local meetings | Others |
|---|---|---|---|---|
| 2010 | 4 | 17 | 1 | 21 |
| 2011 | 3 | 15 | 0 | 37 |
| 2012 | 6 | 21 | 1 | 38 |

1 JRCC stands for Japan Responsible Care Council.

## Stakeholder engagement

Nippon Soda has received diagnoses, verifications, ratings, and third-party feedback as shown below. These results are incorporated into our efforts to accelerate the improvement of the PDCA cycle.

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

- Reviewed on November 2, 2012
- Rated on January 15, 2013

**Rank A (the best)**

### Environmental Responsibility Rating from the DBJ

- FY 2009 **Rank *Matsu***
- FY 2011 **Rank *Take***

### Third-party opinion on CSR Report by DBJ

- Reviewed in 2013

### Diagnosis of disaster prevention capability by Sompo Japan Insurance Inc.

❶ Takaoka Plant on June 7 and 8, 2012
❷ Aizu Plant of Nisso Metallochemical Co., Ltd. on June 14 and 15, 2012
❸ Chiba Plant on August 29, 2012
❹ Nihongi Plant on November 12 and 13, 2012

### RC verification by the RC Verification Center of the Japan Chemical Industry Association

❶ Social dialogue
December 6, 2012 at Takaoka Plant
❷ Distribution safety
December 7, 2012 at Nihongi Plant
❸ Chemicals & product safety
January 10, 2013 at Chiba Plant
❹ RC management system
January 17, 2013 at Head Office

### Survey of "Environmental Oriented Management Index" by Nikkei Inc.

- 13th Survey (FY 2009)
**Ranked 279th (among 484 participating companies)**
- 14th Survey (FY 2010)
**Ranked 338th (among 475 participating companies)**
- 15th Survey (FY 2011)
**Ranked 322th (among 449 participating companies)**
- 16th Survey (FY 2012)
**Ranked 310th (among 438 participating companies)**

## Compliance and Fair Operating Practices

The Compliance Committee, under the direct control of the President, was established as of May 1, 2003 to improve the compliance system and ensure corporate activities based on compliance with corporate ethics and laws and regulations.

The requirements that allow the Nisso 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 Nippon Soda and consolidated companies. In addition, training based on the Code of Conduct to raise awareness of the importance of complying with laws and regulations is regularly provided. A consultation office is available for any employee of Nippon Soda or its group companies to directly consult with the Compliance Committee or a legal adviser upon discovering a violation.

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.

## Relations with employees

The Nippon Soda Group offers opportunities to employees who have made an achievement in the area of CSR and RC activities to present their achievement and be awarded.

### Presentation of successful cases

The Nippon Soda Group offers employees opportunities to present their successful experiences in environmental protection, energy saving, productivity improvement, distribution safety, process safety and disaster prevention, occupational safety and health, and other efforts. Of employees at each business site who have made such a presentation, those whose achievement is particularly outstanding are given an opportunity to make a presentation before the President, directors and business site representatives. This presentation meeting is known as the Company-wide Successful Achievement Presentation Meeting.

The 33rd Company-wide Successful Achievement Presentation Meeting for fiscal 2012 was held on Friday, November 16 at the Head Office and featured 12 presentations.

Presenters at the Company-wide Successful Achievement Presentation Meeting and other participants

### RC Award

The Nippon Soda Group awards business sites, groups and individuals that have made outstanding contributions in the area of RC activities. In fiscal 2012, the following five awards were presented on June 11, 2012.

RC Award winners and others involved

1. Safety Award
   Mizushima Plant “Achievement of no accidents and no disasters”
2. Safety Award
   Chiba Research Center “Extensive implementation of 5Ss using a monthly shift patrol system”
3. Environment Award
   Takaoka Laboratory Tech. 2G, Engineering Sec., Instrument & Electric Sec., Environmental Management Sec. and NHG Environmental Center at Takaoka Plant
   “Efforts to reduce sludge at activated sludge facilities of Environmental Center”
4. Environment Award
   Utility Sec., Manufacturing Department, Chiba Plant
   “Visualization of utility management”
5. Quality Award
   Safety Research Department, Odawara Research Center
   “Contribution to establishing a radioactivity inspection system for factory products and intermediates”

## Contribution to society

As part of its efforts to contribute to society, Nippon Soda conducts cleanup activities in the vicinity of its business sites on a regular basis. The frequency of such activities in recent years is as shown below.

Frequency of cleanup activities for local communities

| FY | Number of local cleanup activities |
|---|---|
| 2010 | 7 |
| 2011 | 6 |
| 2012 | 6 |

Local community cleanup
(June 13, 2012, Chiba Plant)

Voice

Toshihiro Kuroiwa
Corporate Planning Department

### Building increased public trust

Because it uses hazardous, poisonous and deleterious substances to produce agricultural and other chemicals, Nippon Soda places the highest priority on safety in all its business activities, from research through delivery and all the way to disposal. We aspire to improve safety systems and awareness through communication with local communities, employees, affiliates, distribution companies, customers and other involved parties.

Topic 1

# Safety Audits before Trial Operation and the First Shipment

Nisso Namhae Agro Co., Ltd. (NNA)

Safety audits prior to the trial operation of a Topsin manufacturing plant and the plant's first shipment

Plant Manager K. H. Kim at NNA providing an explanation using a diorama

Tsutomu Kaku, Executive Senior Managing Director of Nippon Soda Co., Ltd., giving an address at the opening meeting

Plant Manager K. H. Kim at NNA giving an address at the closing meeting

From October 22, 2012 to January 30, 2013, safety audits were conducted at the Topsin Manufacturing Plant belonging to Nisso Namhae Agro Co., Ltd., which was under construction in Yeosu City in South Korea. After completing the following four safety audits and conducting a trial operation without any safety-, environment- or quality-related problems, the first shipment of products was made on April 3, 2013.

1. Safety audit prior to trial operation — October 22 and 23, 2012
2. Follow-up audit — November 23, 2012
3. Interim confirmation audit — December 11, 2012
4. Final confirmation audit — January 30, 2013


Sending off the first shipment of Topsin on April 3, 2013

# Topic 2 RC Audits of Group Companies

## Koriyama Plant, Nisso Fine Co., Ltd.

September 14, 2012

**Audit summary**

**Important items**

①Plan
②Legal and other requirements
③Corrective and preventive actions for non-conformity and occupational accidents

During the desk audit, opinions were exchanged based on the results described on the pre-RC audit check sheet. Audits were mainly focused on important elements concerning the Management and Manufacturing Departments. For the on-site audit, manufacturing facilities, filling areas, warehouses for raw materials and products, and laboratories were the main focus.

**Good point**

Overall efforts for priority items are systematically undertaken and well managed. The system to ensure compliance with legal and other requirements is designed in such a way that a compliance evaluation sheet is filled in based on a correspondence table for environment-related laws and regulations, and is well controlled.

**Audit result**

Seven CARs[1] were identified and corrective measures were requested. With regard to CARs at manufacturing sites, they were instructed to roll out the corrective actions throughout the plant.

## Chiba Plant, Nisso Metallochemical Co., Ltd.

October 5, 2012

**Audit summary**

During the desk audit, opinions were exchanged based on the results described on the pre-RC audit check sheet. Documents were audited, with a focus on important items. For the on-site audit, manufacturing facilities, filling areas, storage tanks, warehouses for raw materials and products, and laboratories were the main focus.

**Good point**

A safety risk assessment had been adequately carried out based on identified "*hiyari-hat*" (near miss) accidents and the KY board had been effectively used. Efforts to ensure safety were appropriate. A list of legal and other requirements was available and compliance was ensured using this list. Actions to correct and prevent incidents of non-compliance were adequately taken.

**Audit result**

A total of six CARs[1] were identified: three each for the document audit and the on-site audit. With regard to CARs at manufacturing sites, they were instructed to roll out the corrective actions throughout the plant.

1 CAR stands for Corrective Action Request.

# Topic 3 Receipt of a BCM Rating

Nippon Soda received the Development Bank of Japan's BCM Rating certificate.

Masahito Ikeda [right], Director of Environment & Quality Management Department and Deputy General Manager of Corporate Social Responsibility Department, receiving the BCM Rating certificate from Suguru Takahashi [left], General Manager of Corporate Finance Department, Division 1
February 6, 2013


DBJ BCM Rating Certificate 2012

Our efforts in disaster prevention and business continuity management were evaluated as "particularly outstanding."

**Rating** Rank A <the highest>

**Points of commendation**

1. Business continuity efforts are incorporated into the PDCA cycle for disaster management based on RC activities to promote process safety & disaster prevention/BCP activities effectively, resulting in constant improvements.
2. The BCP has been enhanced through communication with a wide range of stakeholders based on the CSR/RC policies and information on the company's efforts is made available to the public.

# Nihongi Plant

950, Fujisawa, Nakago-ku, Joetsu, Niigata 949-2392
Tel: 0255-81-2300 Fax: 0255-81-2341

**Major products manufactured**
Caustic potash, alcoholate, HPC, faropenem sodium, Mospilan, Nissorun, Hi-chlon, HIDION, etc.

**Number of employees:**
296 (as of the end of March 2013)
(including employees of Joetsu Nisso Chemical Co., Ltd.)

**Number of employees of affiliates:**
160 (as of the end of March 2013)

ISO 14001: Certified in March 2000
ISO 9001: Certified in August 1995
OHSAS 18001: Certified in April 2009

Haruo Higuchi
Director and Plant Manager

Located in a rural area at the base of Mount Myoko, Nihongi Plant makes efforts to conduct its activities in harmony with the environment and to promote communication with local communities. Concerted efforts by all employees are made to achieve the goals of CSR and RC activities, comply with social responsibility principles, and contribute to society through business activities that take into account safety and health, environmental protection and quality assurance.

The policy of Nihongi Plant focuses on building trust in the following three areas in the course of its daily business activities:

- Safety..... Trust of employees (zero accidents)
- Environment.... Trust of local communities (zero environmental abnormalities)
- Quality..... Trust of customers (zero complaints)

As part of its efforts to promote CSR activities, which were started on a company-wide basis in April 2012, Nihongi Plant has been placing more emphasis than ever on communicating with local communities. We organize local gatherings to discuss environment-related issues and participate in local festivals as often as possible to seek opinions from local people and help them better understand our activities at the plant. Through these efforts we hope to forge closer relationships with local people.

As an example of our community outreach, we set up a fun and educational learning booth for kids at the local government-sponsored “Science Festival for Children” to help get the next generation excited about chemistry. More than 100 children visited our booth.

Our plant (our company) will celebrate its centennial in 2020. With an eye toward the 100th anniversary, we are working to ensure further growth under the “Chemigress to 100” vision. As we reflect on our 100-year history, which was built on cooperation with local communities, we will lead the way forward toward the next 100 years.

Topics

## The First Safety Meeting to share information on safety activities at each worksite and roll them out to other worksites

On November 20, the First Safety Meeting was held at Nihongi Plant. We invited staff from various Nippon Soda business sites as well as staff of our affiliates to attend as observers. At the meeting, safety activities at different departments of various sites were reported on and discussions were held. Participants mainly consisted of site assistant managers and heads. We believe that the meeting result will be useful to further promote safety activities.

## Progress status of CSR and RC activities

### Management system and organizational governance

Nihongi Plant appropriately implements, maintains and manages management systems for quality, the environment and occupational safety and health. To implement them more effectively, we are now working to integrate these three systems into one.

### Environmental protection

We have an assessment system to better understand environmental impacts that are posed by our plant activities. We take actions, through communication with local communities, to create and maintain an earth-friendly work environment to minimize the impact of our activities on the environment.

### Occupational safety and health

Efforts are focused on constantly improving basic conditions for ensuring safety and OSHMSs for both mind and body to maintain an accident-free working environment in order to provide a healthy and happy working experience and ensure the safety of local communities.

### Chemicals and product safety

We clarify the properties of individual chemicals contained in industrial products, food additives and pharmaceuticals as well as their proper handling methods. Efforts are made to protect the safety and health of all people and the environment. We prepare and provide safety data sheets.

### Human rights/labor practices

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on “creating a work environment where all employees can find their work meaningful.”

### Process safety & disaster prevention/BCP

Efforts are made to prepare for a natural disaster resulting in extensive damage, so that in the case of such an event occurring we can confirm the whereabouts and status and ensure the safety of our employees and affiliate company employees and their families, as well as ensure the safety of residents in local communities.

### Distribution safety, quality assurance and consumer issues

We take measures to ensure the quality of products from the consumer standpoint. Efforts are also made to prevent distribution-related accidents and disasters and ensure distribution safety in order to safely deliver better products to consumers.

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

We promote communication with local communities by organizing local gatherings to discuss environment-related issues, and by participating in local events.

## Plant environment data

Note: Figures in parentheses show the change compared with the FY 2011 result. + indicates an increase and ▲ a decrease.

Unit: t/year (amount of discharged water: 1,000 t/year; $CO_2$: 10,000 t/year)

**Actual environment data in FY 2012**

| Emissions to water | | Emissions to air | | | | Final disposal as landfill |
|---|---|---|---|---|---|---|
| Amount of discharged water | BOD/COD | $CO_2$ | NOx | SOx | Soot and dust | |
| 9,913(▲182) | 18.9(▲3.9) | 6.3(▲0.2) | 23.7(+7.2) | 9.4(▲2.0) | 7.7(▲0.7) | 97.7(▲104.6) |

Unit: t/year

**Emissions of PRTR-designated substances in FY 2012**

| Substance name | Amount of discharged water | | Amount transferred |
|---|---|---|---|
| | Air | Water | |
| Toluene | 19.15(+0.08) | 0.00(0.00) | 0.00(0.00) |
| Fluorine | 0.00(0.00) | 0.00(0.00) | 2.88(▲0.21) |
| Chloroform | 2.44(+0.87) | 0.00(0.00) | 0.00(0.00) |
| Designated substances (15 substances) | 21.82 | | 3.57 |

## Voice

Satoshi Sekihara
Chief clerk

### Responsible for the management of utilities and discharged water treatment to ensure environment protection and stable production

The plant gets its industrial water from the river. It uses water effectively in that water used for cooling and to generate electricity is returned to the river. In addition, sewage from the manufacturing plant is purified using activated sludge and by other means before being discharged back into the river system. We also promote communication with residents in adjacent communities on various occasions, such as local environment-related gatherings, with the aim of achieving harmonious relationships with the natural environment and local communities while using water efficiently and effectively.

# Takaoka Plant

300 Mukaino-honmachi, Takaoka, Toyama 933-8507
Tel: 0766-26-0206 Fax: 0766-26-0300


**Major products manufactured**
Caustic soda, hydrochloric acid, TODI, phosphorus chloride, AOSA, Topsin, STM, pesticide formulation products, etc.

**Number of employees:**
310 (as of the end of March 2013)

**Number of employees of affiliates:**
148 (as of the end of March 2013)

ISO 14001: Certified in November 2000
ISO 9001: Certified in June 1995
OHSAS 18001: Certified in November 2005

Akihiko Kikuchi
Director and Plant Manager

Located beside the Oyabe river, which runs into the sea at the beautiful Toyama Bay, Takaoka Plant has a history and tradition stretching back around 80 years. Furthermore, the plant has promoted cooperative relationships with residents in adjacent communities over that entire period of time, since its foundation in 1934.

Throughout its long history, the plant has specialized in inorganic chemistry, manufacturing caustic soda, chlorine, hydrochloric acid and hydrogen with the use of brine electrolysis—the foundational technology of the chemical industry. It has also specialized in aluminum electrolysis and organic synthesis of pharmaceuticals. Thanks to technologies that have been developed and improved over the years, our business has extended to more general areas of the chemical industry, including the production of agrochemical substances and pharmaceuticals. In cooperation with subcontractors located in Takaoka Plant and local stakeholders, and working under the motto of "coexistence and co-prosperity," our efforts are focused on achieving RC and CSR objectives so that we can contribute to local communities and society at large through the manufacture of chemical products.

Following the Great East Japan Earthquake in 2011, as part of reviewing our BCP, we started to reinforce the earthquake-resistance of the electrolysis plant and to construct a new building for testing and analysis in order to quickly respond to the demand for high-quality products. We are also sending our engineers to overseas manufacturing sites in response to the recent trend for globalization.

Taking technology transfer issues and related problems in the chemical industry seriously, we promote the sharing of knowledge and information and participate in the activities of various local associations. In order to ensure safe and secure operations, we have resumed hiring new graduates and launched our "Plant Power Enhancement Campaign," under which we provide staff with full training.

By ensuring the safe handling of the numerous chemicals we use, reducing our environment impacts and adopting life cycle assessments for energy consumption, we are also aiming to improve our cost competitiveness. Moreover, in order to maintain sound business operations for the next 10 years, we have developed a new medium-term plan and set "Challenge 10 Takaoka" as the plant policy. Our concerted efforts will be focused on achieving the goals of both the plan and the policy. We disclose our achievements to local residents at our annual "Thanking Local Residents" event, based on the firm belief that by gaining the trust of local communities and being regarded as a safe plant by local people we can further enhance our contribution to local communities.

Topics

## Reinforcement of the earthquake-resistance of electrolysis facilities and the construction of a new building for testing and analysis

Takaoka Plant adopted a business continuity plan (BCP) in fiscal 2011 and all departments now conduct their activities accordingly. In fiscal 2012, we started to reinforce the earthquake-resistance of the electrolysis plant and to construct a new building for testing and analysis in order to ensure the safety of facilities and buildings. This is part of our efforts to establish a more disaster-resistant operation system and testing and analysis system. The construction work is continuing as planned.

## Progress status of CSR and RC activities

### Management system and organizational governance

Our basic objective is “to comply with laws and regulations and implement sound and transparent plant management.” In line with this, we set our goals, continue to make improvements and conduct regular reviews based on ISO 14001, OHSAS 18001 and ISO 9001.

### Environmental protection

We comply with the standards for air and water emissions of harmful chemical substances. Efforts are also made to reduce emissions of PRTR-designated substances according to our chemicals management plan.

### Occupational safety and health

We undertake risk assessments to reduce potential causes of hazards and implement four safety cycles to achieve “zero accidents.” Guidance on mental health and other health problems is provided to promote the sound psychological and physical health of employees.

### Chemicals and product safety

We prepare MSDSs and product labels to meet Japanese and overseas requirements. We also provide customers with the most updated product information to ensure “safe management” and “zero use-related problems.”

### Human rights/labor practices

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on “creating a work environment where all employees can find their work meaningful.”

### Process safety & disaster prevention/BCP

Because we use hazardous, poisonous and deleterious substances at the plant, when constructing new facilities, we take into account measures to prevent risks, such as ignition and explosion, at the design stage. With regard to existing facilities, we implement measures to appropriately maintain and upgrade them on a regular basis.

### Distribution safety, quality assurance and consumer issues

We conduct inspections of transport companies and provide them with education and training so that products are delivered safely. Efforts are also made to prevent quality complaints through quality risk assessments, quality inspections and quality meetings.

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

We continue to hold dialogues with the public on various occasions, such as “Thanking Local Residents” events and discussions with environmental monitors and neighborhood councils.

## Plant environment data

Note: Figures in parentheses show the change compared with the FY 2011 result. + indicates an increase and ▲ a decrease.

Unit: t/year (amount of discharged water: 1,000 t/year; $CO_2$: 10,000 t/year)

**Actual environment data in FY 2012**

| Emissions to water | | Emissions to air | | | | Final disposal as landfill |
|---|---|---|---|---|---|---|
| Amount of discharged water | BOD/COD | $CO_2$ | NOx | SOx | Soot and dust | |
| 8,599(▲370) | 50.9(▲1.9) | 12.3(+3.3) | 35.5(+5.4) | 104.8(+3.4) | 2.4(▲1.5) | 235.0(▲20.0) |

Unit: t/year

**Emissions of PRTR-designated substances in FY 2012**

| Substance name | Amount of discharged water | | Amount transferred |
|---|---|---|---|
| | Air | Water | |
| Acetonitrile | 4.20(▲7.89) | 0.00(0.00) | 1.93(▲2.30) |
| Toluene | 6.62(▲2.57) | 0.00(0.00) | 24.20(▲4.15) |
| Chlorobenzene | 11.02(▲3.91) | 1.62(+0.63) | 1.43(▲0.24) |
| Designated substances (24 substances) | 29.68 | | 173.74 |

## Voice

Takasada Nakamura
Environmental Management Sec.

### Aiming to reduce the amount of final waste disposal to “zero” through efforts to reduce and recycle industrial waste

The Environmental Protection Team focuses its efforts on reducing the amount of final waste disposal to “zero” by implementing the 3R concepts. Last year, we emphasized reducing the volume of surplus sludge, resulting in a reduction of discharge. This year, we recycled ash generated after incineration as an ingredient for cement instead of disposing it as landfill. Efforts will be continued to properly treat waste and reduce the final disposal amount to “zero” through sharing information with disposal companies.

Note: The 3Rs are (1) reduce (produce less waste), (2) reuse and (3) recycle. The 3R concept is used as a waste management hierarchy to reduce waste.

# Mizushima Plant

2767-12 Kojima-shionasu, Kurashiki, Okayama 711-0934
Tel: 086-475-0036 Fax: 086-475-0039

**Major products manufactured**
Sodium cyanide, potassium cyanide, diaminomaleonitrile (DAMN)

**Number of employees:**
44 (as of the end of March 2013)

**Number of employees of affiliates:**
26 (as of the end of March 2013)

ISO 14001: Certified in October 2001
ISO 9001: Certified in January 1999
OHSAS 18001: Certified in January 2009

Izumi Takano
Plant Manager

Mizushima Plant started operation in 1969 in the Mizushima Coastal Industrial Zone, which extends outward from the mouth of the Takahashi River in Okayama Prefecture and offers an abundant supply of industrial water, oil and electricity as well as convenient land and sea transportation. At the beginning, the plant was supplied with raw materials from neighboring companies. Fully aware that we deal with cyanide in our production activities, all employees make concerted efforts to promote RC activities (environmental safety, occupational safety, product safety). Furthermore, we make concerted efforts to do the following 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):

- Ensuring high-level maintenance and management through perfect application of the 5Ss,
- Complying with laws and regulations and agreements made by the plant, and
- Setting principles and objectives and reviewing them on a regular basis.

Last year, our plant and affiliates jointly achieved “7,000 days with no work-related accidents or absences.” Furthermore, the plant was certified as an excellent high-pressure gas producer by the Mizushima Industrial Complex Safety and Disaster Prevention Council. To prevent complaints, we conduct quality risk assessments. One of our efforts in environmental protection is a recycling campaign called the “Eco-cap Campaign.” As part of our energy saving efforts, we select equipment and devices that consume less electricity when replacement is necessary. We avoid non-compliance by remaining constantly alert to any changes to laws and regulations. Going forward, further concerted efforts will be made by plant personnel to achieve continuous improvements and ensure safe, stable and trouble-free operation. Through these efforts, we aim to gain the trust of society and become a highly recognized plant.

Topics

## Participating in the Eighth Local Dialogue Meeting for Responsible Care held in the Okayama area

The Local Meeting for Responsible Care is held once every two years in the Okayama region. The Eighth Local Meeting was attended by about 140 people, including government personnel, company representatives, labor union members and representatives of local residents. Deemed a success, the meeting was particularly meaningful in that it provided an opportunity for lively discussion among panel members representing different groups.

## Progress status of CSR and RC activities

### Management system and organizational governance

Fully aware that the plant deals with cyanide in its production activities, all employees at the Mizushima Plant make concerted efforts to promote RC activities and engage in business activities in accordance with the principles of social responsibility in CSR.

### Environmental protection

Our efforts are focused on saving energy and resources and reducing waste and harmful substances in line with environmental policies in order to minimize the impacts of our business activities on the environment.

### Occupational safety and health

We promote measures aimed at achieving the goal of accident-free workplaces in order to provide employees with a healthy and happy working experience. Efforts are focused on improving risk assessments and reducing risks.

### Chemicals and product safety

We give due consideration to the impacts of chemical substances and products on the environment, safety and health. Furthermore, we comply with laws and regulations as well as publicly demanded requirements in order to earn greater public trust.

### Human rights/labor practices

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on “creating a work environment where all employees can find their work meaningful.”

### Process safety & disaster prevention/BCP

To prevent major accidents at our facilities, we update and manage the facilities and promote safe, stable and trouble-free production activities. We also maintain a business continuity plan (BCP) that helps us to make continuous improvements.

### Distribution safety, quality assurance and consumer issues

Efforts are focused on building trust with our customers and generating satisfaction among them as well as reducing the risks of in-transit accidents and preventing distribution-related accidents. As a shipper, we provide RC education to product transportation and storage companies once a year.

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

We participate in opportunities for dialogue with government agencies and local communities through the Emergency Communications Council and other organizations and also participate in local events to deepen the public’s understanding of our business activities and build friendly relationships with local people.

## Plant environment data

Note: Figures in parentheses show the change compared with the FY 2011 result. + indicates an increase and ▲ a decrease.

Unit: t/year (amount of discharged water: 1,000 t/year; $CO_2$: 10,000 t/year)

**Actual environment data in FY 2012**

| Emissions to water | | Emissions to air | | | | Final disposal as landfill |
|---|---|---|---|---|---|---|
| Amount of discharged water | BOD/COD | $CO_2$ | NOx | SOx | Soot and dust | |
| 568(▲29) | 2.6(▲0.6) | 1.2(0) | 3.5(▲1.2) | 0.0(0) | 0.0(0) | 8.7(+1.7) |

Unit: t/year

**Emissions of PRTR-designated substances in FY 2012**

| Substance name | Amount of discharged water | | Amount transferred |
|---|---|---|---|
| | Air | Water | |
| Inorganic cyanides | 0.17(▲0.01) | 0.05(0.00) | 0.009(+0.001) |
| Acetonitrile | 0.00(0.00) | 0.00(0.00) | 0.44(▲0.03) |
| Xylene | 0.00(0.00) | 0.00(0.00) | 0.04(▲0.02) |
| Designated substances (4 substances) | 0.22 | | 0.48 |

## Voice

Hiroshi Sumiya
Technical & Engineering Division

### Concerted efforts by all Mizushima Plant staff to promote CSR and RC activities

Because all the products we manufacture at Mizushima Plant are either poisonous or deleterious substances, not only our employees but also those of our affiliates place an emphasis on ensuring safe, stable and trouble-free operation and establishing a system that ensures safe distribution as well as strongly recognizing the importance of environmentally- and quality-conscious production activities. Our efforts are also focused on increasing the levels of trust and satisfaction of customers and further increasing the trust of society at large.

# Chiba Plant

12-8 Goiminami-kaigan, Ichihara, Chiba 290-8530
Tel: 0436-23-2007 Fax: 0436-22-6588

**Major products manufactured**
NISSO-PB, VP Polymer, Titabond, ITO glass, D-90, Take-One, Merusan

**Number of employees:**
127 (as of the end of March 2013)

**Number of employees of affiliates:**
118 (as of the end of March 2013)

ISO 14001: Certified in July 2000
ISO 9001: Certified in August 1997
OHSAS 18001: Certified in February 2008

Satoshi Tsukamura
Plant Manager

Chiba Plant is located in the Keiyo Industrial Complex and is adjacent to an urban area. In order to engage in manufacturing using various kinds of chemical substances, it is essential that we take proactive safety measures to ensure safety not only for employees but also neighborhood residents. Moreover, we need to maintain the safety and high quality of products in order to gain the trust and satisfaction of customers. To fulfill these requirements, we participate in responsible care activities and make effective use of our technologies and knowledge acquired over years as a chemical company in our efforts to promote environmental protection, occupational safety and health, process safety and disaster prevention, distribution safety, product safety and quality assurance over the entire life cycles of products.

Our plant organizes various opportunities in the form of events to get together with stakeholders. Appreciating their understanding and support of our plant over many years, we will continue to contribute to making society better through business activities involving all employees and utilizing the PDCA cycle appropriately. Our business activities comply 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).

Our efforts are focused on:

- Increasing the trust of society through continuous improvement activities,
- Complying with laws and regulations and agreements made by the plant, and
- Setting principles and objectives and assessing and reviewing them on a regular basis.

Topics

## Received the Environment Award for visualization of utility management in 2011 CSR and RC Activities Commendation

The “visualization of utility management” system is a means of displaying the amount of utilities (electricity, water, steam, etc.) consumed, the amount of emissions and analysis values in a timely manner. The system was recognized as useful in improving compliance and saving energy by visualizing data and was thus awarded a Nippon Soda Group CSR/RC Activities Commendation/Environment Award.

## Progress status of CSR and RC activities

### Management system and organizational governance

Concerted efforts by all staff are made to achieve RC activities in order to carry out sound and transparent corporate activities in compliance with laws and regulations. In business activities, all employees comply with CSR principles and use the PDCA cycle appropriately.

### Environmental protection

Our efforts are focused on saving energy and resources and reducing and recycling waste, and reducing emissions of harmful substances according to the ISO 14001 Environmental Management System in order to minimize the impacts of business activities on the environment.

### Occupational safety and health

We promote measures aimed at achieving the goal of accident-free workplaces in order to provide employees with a healthy and happy working experience in accordance with the OHSAS 18001 Occupational Safety and Health Management System.

### Chemicals and product safety

We give due consideration to the impacts of chemical substances and products on the environment, safety and health. Furthermore, we comply with laws and regulations as well as publicly demanded requirements in order to earn greater public trust.

### Human rights/labor practices

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on “creating a work environment where all employees can find their work meaningful.”

### Process safety & disaster prevention/BCP

Twice a year and with the cooperation of public firefighters and a joint disaster prevention unit, we conduct disaster drills based on the scenarios of a disaster occurring on a weekday, at night or on a holiday. We also maintain a business continuity plan (BCP) that helps us to make continuous improvements.

### Distribution safety, quality assurance and consumer issues

Efforts are made to reduce risks associated with the transportation and distribution of products in accordance with the ISO 9001 Quality Management System to prevent distribution accidents. We also make efforts to maintain quality assurance and contribute to improved customer satisfaction.

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

We take advantage of various opportunities to communicate with local communities and are actively involved in council meetings with other companies and activities to support volunteers.

## Plant environment data

Note: Figures in parentheses show the change compared with the FY 2011 result. + indicates an increase and ▲ a decrease.

Unit: t/year (amount of discharged water: 1,000 t/year; $CO_2$: 10,000 t/year)

**Actual environment data in FY 2012**

| Emissions to water | | Emissions to air | | | | Final disposal as landfill |
|---|---|---|---|---|---|---|
| Amount of discharged water | BOD/COD | $CO_2$ | NOx | SOx | Soot and dust | |
| 2,230(▲90) | 16.8(+3.5) | 1.5(+0.2) | —* | —* | —* | 12.8(▲27.2) |

—* No emission

Unit: t/year

**Emissions of PRTR-designated substances in FY 2012**

| Substance name | Amount of discharged water | | Amount transferred |
|---|---|---|---|
| | Air | Water | |
| Toluene | 7.97(▲0.06) | 0.00(0.00) | 2.74(▲12.37) |
| n-hexane | 5.52(▲0.50) | 0.00(0.00) | 0.00(0.00) |
| 1,3-butadiene | 2.72(+0.20) | 0.00(0.00) | 0.00(0.00) |
| Designated substances (13 substances) | 16.76 | | 29.01 |

Voice

Eiji Koide
RC Administration Sec.
RC/Engineering Department

### Focusing on complying with laws and regulations and improving the local environment with the highest priority on environmental considerations

Being located in an industrial complex, Chiba Plant is required to meet various environmental management standards, such as those for air emissions and water quality. In response, we have established environmental ISO systems and our own monitoring system to ensure compliance with legal requirements and the improvement of the environment in the vicinity of the plant and in neighboring communities on a day-to-day level.

# Odawara Research Center

345 Takada, Odawara, Kanagawa 250-0280
Tel: 0465-42-3511 Fax: 0465-42-2180

Hiroyuki Adachi
Director and Research Center General Manager


## Progress status of CSR and RC activities

Odawara Research Center is engaged in research and development that helps support dietary needs and contributes to making life more comfortable. In our research and development activities, we place emphasis on occupational safety and health, environmental protection, and chemicals and product safety. In our efforts for occupational safety and health, with "achieving zero accidents through collaboration of all staff" as the goal, we have been promoting KYT ("*Kiken Yochi* Training" risk prediction training) and the identification of "*hiyari-hat*" (near miss) accidents with the aim of raising safety awareness and making safety measures routine to ensure a safe work environment. Our efforts in environmental protection have been focused on reducing the environmental impacts of our business activities by reducing emissions of harmful substances and industrial waste and saving energy. Because we deal with a wide variety of chemical substances, we ensure compliance with relevant laws and regulations and improve the management system in such a way as to give consideration to the environment, safety and health.

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on "creating a work environment where all employees can find their work meaningful."

Topics

### Poisonous and deleterious substance manufacturer and dealer registration approved

In investigating new agrochemical products, and industrial use products containing insecticides and/or anti-mold agents, such as construction-related products, our center must handle a variety of chemical substances. While organizations such as ourselves that use poisonous and deleterious substances for the purpose of testing and research are not technically required to register as a manufacturer or dealer, we received approval for registration as a poisonous and deleterious substance manufacturer and dealer in fiscal 2012 after establishing a system that allows us to meet the satisfaction of customers to whom we provide prototypes.

Voice

Keisuke Tashiro
Department of Environmental Science and Toxicology

### Aiming to discover new agrochemicals that can be used safely and with ease

The Department of Environmental Science and Toxicology is mainly engaged in research in the areas of toxicology, metabolism and environmental chemistry with the aim of discovering agrochemicals that can be used safely and with ease. Since we use many chemicals in our research projects, we take measures to improve working methods and management systems and provide training to ensure the safety of workers. We also place emphasis on reducing waste and saving energy in our research in order to promote environmental protection.

# Chiba Research Center

12-54 Goiminami-kaigan, Ichihara, Chiba 290-0045
Tel: 0436-23-2141 Fax: 0436-21-9706

ISO 14001
ISO 9001
OHSAS 18001
(Certified for all three of the above in September 2011)

Akira Kaneko
Research Center Manager
(from April 1, 2013)

## Progress status of CSR and RC activities

Believing that our top priority should be on continuing to develop products that are trusted by society at large, Chiba Research Center is engaged in CSR activities that make effective use of the technology, knowledge and human capital acquired since our foundation, with contribution to society through research and development as our basic policy.

We have frequent dialogues with our stakeholders on the impacts of chemicals on the environment, safety and health to increase public trust.

Our efforts are also focused on complying with legal requirements and increasing transparency regarding both compliance issues and R&D activities that have potential impacts on society and the environment.

Based on the basic policy of the Nippon Soda Group, and through specific implementation of the personnel system and proactive labor-management discussion, we focus our efforts on “creating a work environment where all employees can find their work meaningful.”

Topics

### ISO 9001, ISO 14001, OHSAS 18001 Completing the first ISO surveillance audit

To meet the management standards of the Nippon Soda Group for quality, the environment, and occupational safety and health, Chiba Research Center acquired ISO 9001, ISO 14001 and OHSAS 18001 accreditation in September 2011. In June 2012, we underwent our first surveillance audit, in which the continuation of our activities was confirmed.

We will continue our activities in such a way as to contribute to improving the management of the Nippon Soda Group.

Voice

Kazuya Matsunaga
Department of Administration

### The goal of Chiba Research Center

We believe that manufacturers today are responsible for producing tools that make everyday life more convenient and products that are friendly to the global environment so as to contribute to the public good. Our efforts are focused on developing these tools and products in a safe and timely manner. We aspire to develop a wide variety of products that are useful to society, ranging from end products that make household cleaning tasks easier to the kind of high-function materials needed by the information technology age. We will keep on challenging by absorbing new information and needs based on our accumulated technology and experience.

# Nippon Soda Group Companies

Manufacturing Group Companies

## Nisso Metallochemical Co., Ltd. Certified with ISO 14001/ISO 9001

Katsunori Mikuma
President

3-1-2 Ueno, Taito-ku, Tokyo 110-0005 (Akihabara Shinko Daiichi-seimei Building)
Tel: 03-5688-6381 Fax: 03-5688-1132
URL: http://www.nmcc.co.jp/

Aizu Plant: 1372 Oaza-Bandai, Bandai-machi, Yama-gun, Fukushima 969-3393
Tel: 0242-73-2121 Fax: 0242-73-2668
Chiba Plant: 12-32 Goiminami-kaigan, Ichihara, Chiba 290-0045
Tel: 0436-21-3351 Fax: 0436-21-1237

- Founded in 1916*
- Established as the current corporation in August 1983*
- Capital: 1,000 million yen
- Net sales: 6,200 million yen (FY 2012)
- Number of employees: 125 (as of the end of March 2013)

* The business of Takada Shokai Odera Refinery, founded in 1916, was transferred to Nippon Soda Co., Ltd. in 1928. In 1983, the company was re-established as Nisso Metallochemical Co., Ltd.

### Outline of business

Our efforts are continuously focused on becoming a sought-after supplier based on the following three business areas: waste treatment, non-ferrous metals (zinc alloys), and industrial chemicals (sulfuric acids). As a Fukushima-based company, we commit ourselves to supporting restoration activities and contributing to the development of local communities.

## Nisso Fine Co., Ltd. Certified with ISO 14001/ISO 9001 Equipped with GMP-certified facilities

Tomoaki Kawagishi
President

3-3-6 Nihonbashi Honcho, Chuo-ku, Tokyo 103-8422 (Wakamatsu Building 2F)
Tel: 03-6202-0161 Fax: 03-6202-0168
URL: http://www.nissofine.co.jp/

Isohara Plant: 1309-2 Isohara, Isohara-cho, Kitaibaraki, Ibaraki 319-1541
Tel: 0293-42-2064 Fax: 0293-42-4130
Iwaki Manufacturing Department: 1-6 Yoshima-kogyodanchi, Iwaki, Fukushima 970-1144
Tel: 0246-36-3576 Fax: 0246-36-6687
Koriyama Plant: 1-176 Sasagawa, Koriyama, Fukushima 963-0108
Tel: 024-945-1886 Fax: 024-945-3637
Onahama Plant: 41-26 Yanagi-machi, Onahama-noda, Iwaki, Fukushima 971-8126
Tel: 0246-58-4182 Fax: 0246-58-6277

- Established in April 2012*
- Capital: 300 million yen
- Net sales: 9,194 million yen (FY 2012)
- Number of employees: 209 (as of the end of March 2013)

* Nisso Fine Chemicals Co., Ltd. (established in 2007 as a result of the merger of Koriyama Kasei Co., Ltd., established in 1954, and Ibaraki Kasei Co., Ltd., established in 1971) and Nisso Jushi Co., Ltd. (established in 1965) were merged and the new company was named Nisso Fine Co., Ltd.

### Outline of business

Based on the primary goals of being recognized as an important company and being trusted by customers, we are engaged in the contract manufacturing and marketing of functional dyes, functional resins and pharmaceuticals and agricultural chemicals and their intermediates, as well as manufacturing, processing and marketing synthetic resin molded products, deoxidizers and high-performance desiccants.

## Shinfuji Kaseiyaku Co., Ltd. Certified with ISO 14001/ISO 9001

Ikuo Fujita
President

Head Office/Plant (Gunma Plant)
313 Koyagi-machi, Takasaki, Gunma 370-0071 (located in the Takasaki Oyagi Kogyo Danchi)
Tel: 027-361-6100 Fax: 027-361-6116
URL: http://www.shinfuji-kaseiyaku.co.jp/

Takasaki Plant: 888 Oyagimachi, Takasaki, Gunma 370-0072 (located in the Takasaki Oyagi Kogyo Danchi)
Tel: 027-361-0371 Fax: 027-362-8909

- Founded/Established in October 1975
- Capital: 70 million yen
- Net sales: 1,121 million yen (FY 2012)
- Number of employees: 69 (as of the end of March 2013)

### Outline of business

We are engaged in the contract manufacturing of agrochemical products, such as smoking agents and water-dispersible granules, and the manufacturing, processing, small-size packaging and packaging of general industrial chemicals. Following our acquisition of ISO 14001 certification, we are focusing our efforts on further reducing the environmental impacts of our production activities.

## ALKALINE SAS

Bruno Gastinne
President

Siège social MSSA S.A.S. Pomblière
73600 Saint-Marcel, France
Tel: +33-(0)4-79-24-7070 Fax: +33-(0)4-79-24-7050

- Established in February 2002
- Capital: 10.909 million EUR
- Net sales: 62.954 million EUR (FY 2012)
- Number of employees: 244 (as of the end of March 2013)

### Outline of business

We are engaged in the manufacture and marketing of metallic sodium, chlorine, vanadium chloride, sodium oxide and alkali metals. Being certified with ISO 14001, we give proper consideration to resource and energy efficiency and to environmental protection.

## Nisso Namhae Agro Co., Ltd.

Hiroharu Hirashita
President

Yeosu Head Office
323-1, Nakpo-dong, Yeosu City, Jeollanam-do, 555-716, South Korea
Tel: +82-61-900-3500 Fax: +82-61-900-3560

Seoul Office
18th fl., Kuk-dong Bldg. 60-1, Chungmuro 3-ga, Jung Gu, Seoul, 100-705, South Korea
Tel: +82-2-2267-2708 Fax: +82-2-2267-2724

- Established in June 2011
- Capital: 32,640 million won
- Number of employees: 24 (as of the end of March 2013)

### Outline of business

Nisso Namhae Agro Co., Ltd. manufactures agrochemical progenitors (active ingredients). It was established in June 2011 in Yeosu City, Jeollanam-do, South Korea by the merger of Namhae Chemical Co., Ltd., a Korean fertilizer manufacturer, and Mitsubishi Corporation. Full-scale manufacturing was started in fiscal 2013 and all agrochemical progenitors manufactured by the company are to be sold by Nippon Soda around the world.

## Joetsu Nisso Chemical Co., Ltd.

### Outline of business

Joetsu Nisso Chemical Co., Ltd., an independent contract manufacturing company partially spun-off from the Manufacturing Department of Nihongi Plant, manufactures chemical industrial products such as caustic potash, chlorine and chlorine products. Since our operation is integrated with that of Nihongi Plant, please refer to the CSR and RC Activity Report of Nihongi Plant for our CSR and RC activities.

Haruo Higuchi
President

Head Office/Plant
950 Fujisawa, Nakago, Joetsu, Niigata 949-2392 (within Nihongi Plant)
Tel: 0255-81-2390 Fax: 0255-81-2391

- Established on December 1, 2006

# Nippon Soda Group Companies

Non-manufacturing Group Companies

## Nisso Shoji Co., Ltd. Certified with ISO 14001

3-3-6 Nihonbashi Honcho, Chuo-ku, Tokyo 103-8422
(Wakamatsu Building)
Tel: 03-3270-0701 Fax: 03-3279-6026
URL: http://www.nissoshoji.com/en/

Osaka: 4-4-11 Awaji-machi, Chuo-ku, Osaka-shi, Osaka 541-0047
(Urbanex Awajimachi Building 4F)
Tel: 06-6202-6941 (main) Fax: 06-6229-0924
Nagoya: 3-4-6 Nishiki, Naka-ku, Nagoya, Aichi 460-0003
(Sakura-dori, Otsu Dai-ichi Seimei Building)
Tel: 052-971-9271 (main line) Fax: 052-971-9370

- Established: December 6, 1939
- Capital: 401 million yen
- Net sales: 36,623 million yen (FY 2012)
- Number of employees: 166 (as of the end of March 2013)

Yasuhiko Otaki
President

### Outline of business

Over the last 70-some years, we have developed our business globally in a wide variety of areas, mainly chemicals, including resins, industrial equipment and building materials. While building a lively corporate climate, we will continue to expand our trust network and make efforts to contribute to society for many years to come through our environmentally conscious activities.

## Sanwa Soko Co., Ltd. Certified with ISO 9001 Received Green Management Certification

2-4-1 Shibakoen, Minato-ku, Tokyo 105-0011 (Shiba Park Building B 4F)
Tel: 03-3578-3001 (main) Fax: 03-3578-3014
URL: http://www.sanwasoko.co.jp/english/

Osaka Branch: Daihatsu Building, 2-2-40 Katamachi,
Miyakojima-ku, Osaka-shi, Osaka 534-0025
Tel: 06-6353-7406 (main) Fax: 06-6353-7435
Yokohama Office: Yokohama New Kannai Building 7F, 4-45-1
Sumiyoshi-cho, Naka-ku, Yokohama, Kanagawa 231-0013
Tel: 045-228-1733 (main) Fax: 045-228-1735

- Established: May 1, 1950
- Capital: 1,831 million yen
- Net sales: 5,252 million yen (FY 2012)
- Number of employees: 200 (as of the end of March 2013)

Yoshinori Suzuki
President

### Outline of business

Based on the principles of safety, quality and environmental protection, we provide comprehensive distribution systems suitable for hazardous, poisonous and deleterious substances and pharmaceuticals using our high-function distribution facilities and highly advanced expertise. Through these business activities, we are committed to ensuring sustainable profits and improving our corporate value.

## Nisso Engineering Co., Ltd. Certified with ISO 9001

1-6-1 Kanda Jinbo-cho, Chiyoda-ku, Tokyo 101-0051
(Takii Tokyo Building)
Tel: 03-3296-9201 Fax: 03-3296-9300
URL: http://www.nisso-eng.co.jp/

Osaka Branch: 2-6-8 Honmachi, Chuo-ku, Osaka-shi, Osaka
541-0053 (Senba Central Building)
Tel: 06-6258-6566 Fax: 06-6258-6572
Technology Development Research Center:
47 Goiminami-kaigan, Ichihara, Chiba 290-0045
Tel: 0436-21-6441 Fax: 0436-22-6241

- Established: October 10, 1962
- Capital: 1,000 million yen
- Net sales: 12,264 million yen (FY 2012)
- Number of employees: 132 (as of the end of March 2013)

Note: The company was founded as Shin-nichi Kogyo Co., Ltd. in 1962 and renamed as Nisso Engineering Co., Ltd. in 1967.

Kazuhiro Muto
President

### Outline of business

We provide engineering services ranging from construction of various kinds of plants and selection of systems and equipment to post-delivery maintenance and energy saving. We have our own research facilities and diverse expertise, with which we can meet the needs of a variety of customers.

## Nisso Construction Co., Ltd. Certified with ISO 90001

1169 Fujisawa, Nakago-ku, Joetsu, Niigata 949-2302
Tel: 0255-74-2561 Fax: 0255-74-2757
URL: http://www.nissokensetu.co.jp/

- Established: November 1, 1962
- Capital: 45 million yen
- Net sales: 2,686 million yen (FY 2012)
- Number of employees: 23 (as of the end of March 2013)

Note: The company was founded as Soei Kensetsu Co., Ltd. in 1962 and renamed as Nisso Construction Co., Ltd. in 1967.

Satoshi Arai
President

### Outline of business

Nisso Construction Co., Ltd. is a civil design and construction company providing services in the Joetsu region of Niigata. Last year was the 50th anniversary of our being spun off from Nippon Soda as an independent company. We take orders from the private sector as well as Nippon Soda Group companies. At a time when the number of long-term public works projects is trending downward, we very much appreciate the support of all our stakeholders.

## Nisso Green Co., Ltd.

3-1-2 Ueno, Taito-ku, Tokyo 110-0005
(Akihabara Shinko Daiichi-seimei Building 5F)
Tel: 03-5816-4351 Fax: 03-5816-4355
URL: http://www.ns-green.com/

- Established: April 1, 1999
- Capital: 50 million yen
- Net sales: 1,918 million yen (FY 2012)
- Number of employees: 14 (as of the end of March 2013)

Yoshiki Masuoka
President

### Outline of business

Nisso Green Co., Ltd. has been expanding its business in agrochemicals for golf courses, agrochemicals for home gardening, foliar spray fertilizers, forestry materials, materials for civil engineering and landscape gardening, and materials for raising seedlings. More efforts will be focused on continuing to grow our business as well as contributing to greening the environment using our materials.

## NISSO AMERICA INC.

88 Pine Street, Wall Street Plaza, 14th Floor, New York, NY 10005 USA
Tel: 1-212-490-0350 Fax: 1-212-972-9361
URL: http://www.nissoamerica.com/

- Established: March 1986
- Capital: 1 million USD
- Net sales: 42.227 million USD (FY 2012)
- Number of employees: 9 (as of the end of March 2013)

Kazuhiko Murahashi
President & COO

### Outline of business

NISSO AMERICA INC., which was established in 1986 in New York, the United States, is engaged in the marketing, importing, exporting, advertising, and sales of products made by Nippon Soda in the United States and Canada. Our aim is to increase Nippon Soda' s market share and profits in the two countries.

## NISSO CHEMICAL EUROPE GmbH

Berliner Allee 42, 40212 Düsseldorf, Germany
Tel: +49-211-1306686-0 Fax: +49-211-32-8231
URL: http://nisso-chem.de/

- Established: July 1992
- Capital: 255,000 EUR
- Net sales: 58.288 million EUR (FY 2012)
- Number of employees: 13 (as of the end of March 2013)

Atsuo Omi
President

### Outline of business

NISSO CHEMICAL EUROPE, located in Dusseldorf, Germany, sells products made by Nippon Soda mainly in the EU but also in CIS and North African countries. Two major categories of products we deal with are agrochemicals and fine chemicals.

## Nippon Soda Co., Ltd.

### Manufacturing group companies

- Nisso Metallochemical Co., Ltd. (others)
- Nisso Fine Co., Ltd. (chemicals)
- Shinfuji Kaseiyaku Co., Ltd. (agri-business)
- Joetsu Nisso Chemical Co., Ltd. (chemicals)
- ALKALINE SAS (chemicals)
- Nisso Namhae Agro Co., Ltd. (agri-business)

### Non-manufacturing group companies

- Nisso Shoji Co., Ltd. (trading)
- Sanwa Soko Co., Ltd. (transportation and warehousing)
- Nisso Engineering Co., Ltd. (construction)
- Nisso Construction Co., Ltd. (construction)
- Nisso Green Co., Ltd. (agri-business)
- NISSO AMERICA INC. (agri-business)
- NISSO CHEMICAL EUROPE GmbH (agri-business)

# Nippon Soda Group Network

## Business Site

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

2 Osaka Branch Office: Yodoyabashi Center Bldg., 3-4-10 Kouraibashi, Chuo-ku, Osaka-shi, Osaka 541-0043
Tel: +81-6-6229-7300

## Plant

3 Nihongi Plant: 950 Fujisawa, Nakago-ku, Joetsu-shi, Niigata 949-2392
Tel: +81-255-81-2300

4 Takaoka Plant: 300 Mukainohonmachi, Takaoka-shi, Toyama 933-8507
Tel: +81-766-26-0206

5 Mizushima Plant: 2767-12 Kojima-shionasu, Kurashiki-shi, Okayama 711-0934
Tel: +81-86-475-0036

6 Chiba Plant: 12-8 Goiminamikaigan, Ichihara-shi, Chiba 290-8530
Tel: +81-436-23-2007

## Research Center

7 Odawara Research Center: 345 Takada, Odawara-shi, Kanagawa 250-0280
Tel: +81-465-42-3511

8 Haibara Field Research Center: 62-1 Sakabe, Makinohara-shi, Shizuoka 421-0412
Tel: +81-548-29-0611

9 Bandai Field Research Station: 3967 Sarashina-bikuniyama, Bandaimachi, Yama-gun, Fukushima 969-3302
Tel: +81-242-73-2525

10 Chiba Research Center: 12-54 Goiminamikaigan, Ichihara-shi, Chiba 290-0045
Tel: +81-436-23-2141

## Sales Office

11 Sapporo Office: Takeda Risona Bldg. 3F, 4-1-2 Kitaichijo-nishi, Chuo-ku, Sapporo-shi, Hokkaido 060-0001
Tel: +81-11-241-5581

12 Sendai Office: Sumitomo Seimei Sendai Bldg., 4-10-3 Chuo, Aoba-ku, Sendai-shi, Miyagi 980-0021
Tel : +81-22-227-1741

13 Tokyo Office: Ryoka Bldg., 4-6-2 Nihonbashimuromachi, Chuo-ku, Tokyo 103-0022
Tel : +81-3-3279-6961

14 Nagoya Office: Hirokoji Daiichi Seimei Bldg., 3-1-1 Sakae, Naka-ku, Nagoya-shi, Aichi 460-0008
Tel : +81-52-238-0003

15 Shinetsu Office: Nihongi Plant, 950 Fujisawa, Nakago-ku, Joetsu-shi, Niigata 949-2302
Tel : +81-255-81-2323

16 Takaoka Office: 300 Mukainohonmachi, Takaoka-shi, Toyama 933-0901
Tel : +81-766-26-0239

17 Matsuyama Office: Asahi Seimei Matsuyama-Minamihoribata Bldg., 3-21 Hanazonomachi, Matsuyama-shi, Ehime 790-0005
Tel: +81-89-931-7315

18 Fukuoka Office: Tenjin Mitsui Bldg., 2-14-13 Tenjin, Chuo-ku, Fukuoka-shi, Fukuoka 810-0001
Tel: +81-92-771-1336

19 Bangkok Representative Office: 159/16 Serm- MitTower, 10th FL Room no.103-6 Sukhumvit 21(Asoke)Rd., Klongtoey-Nua, Wattana, Bangkok 10110, Thailand
Tel: +66-0-2661-6433


## Domestic Group Companies

### 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.

### Logistics

f Sanwa Soko Co., Ltd.
g Sanso Unyu Co., Ltd.

### Trading

h Nisso Shoji Co., Ltd.
i Nisso Green Co., Ltd.

### Engineering

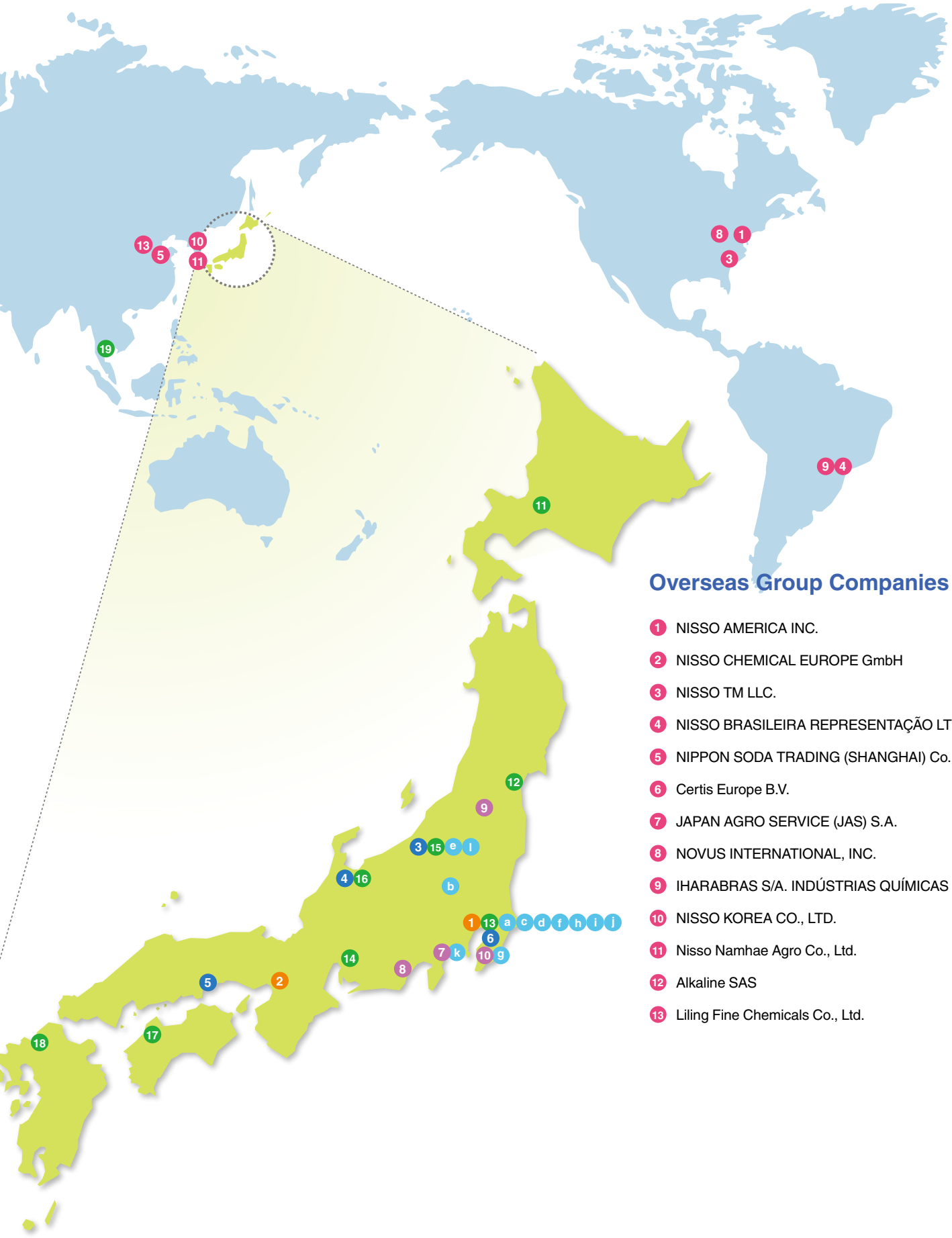
j Nisso Engineering Co., Ltd.

### R&D Consultants

k Nisso Chemical Analysis Service Co., Ltd.

### Civil Engineering and Construction

l Nisso Construction Co., Ltd.




## Overseas Group Companies

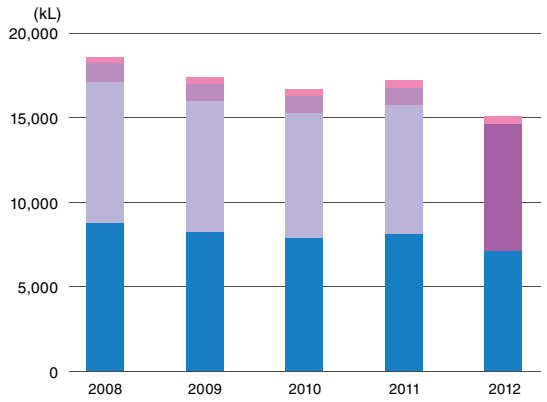
1. NISSO AMERICA INC.
2. NISSO CHEMICAL EUROPE GmbH
3. NISSO TM LLC.
4. NISSO BRASILEIRA REPRESENTAÇÃO LTDA.
5. NIPPON SODA TRADING (SHANGHAI) Co., Ltd.
6. Certis Europe B.V.
7. JAPAN AGRO SERVICE (JAS) S.A.
8. NOVUS INTERNATIONAL, INC.
9. IHARABRAS S/A. INDÚSTRIAS QUÍMICAS
10. NISSO KOREA CO., LTD.
11. Nisso Namhae Agro Co., Ltd.
12. Alkaline SAS
13. Liling Fine Chemicals Co., Ltd.

# Nippon Soda Group Environmental Data Sheet

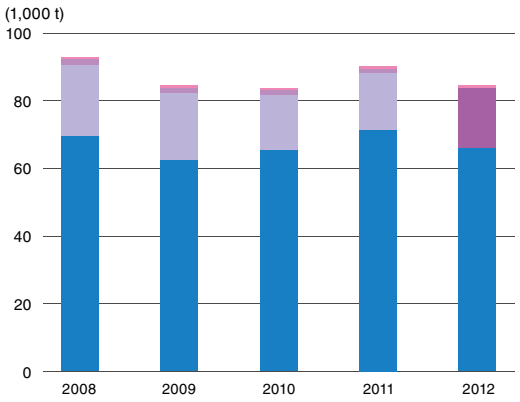
**Manufacturing group companies**

Nisso Metallochemical Co., Ltd. Shinfuji Kaseiyaku Co., Ltd.
Nisso Fine Co., Ltd. ( former Nisso Fine Chemicals Co., Ltd., former Nisso Jushi Co., Ltd.)

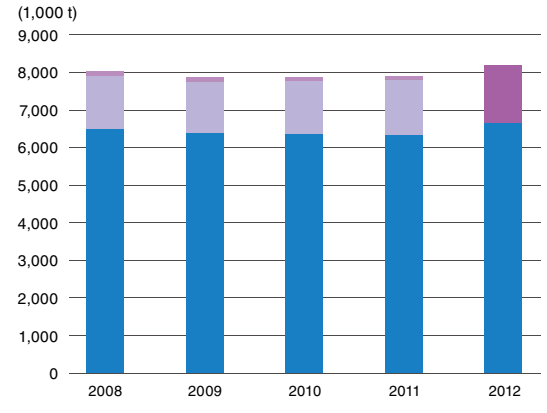
## Change in energy consumption (in crude oil equivalent)



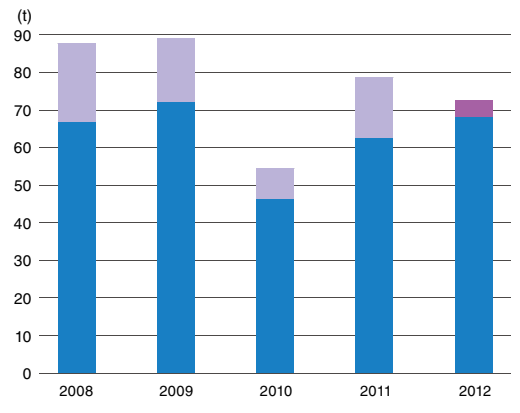

## Change in the amount of carbon dioxide emissions



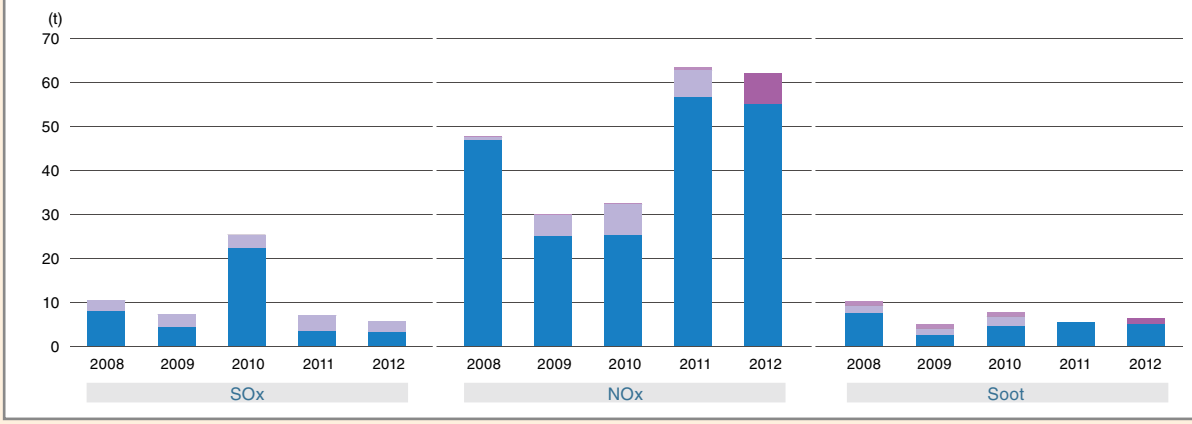

## Change in the total volume of discharged water



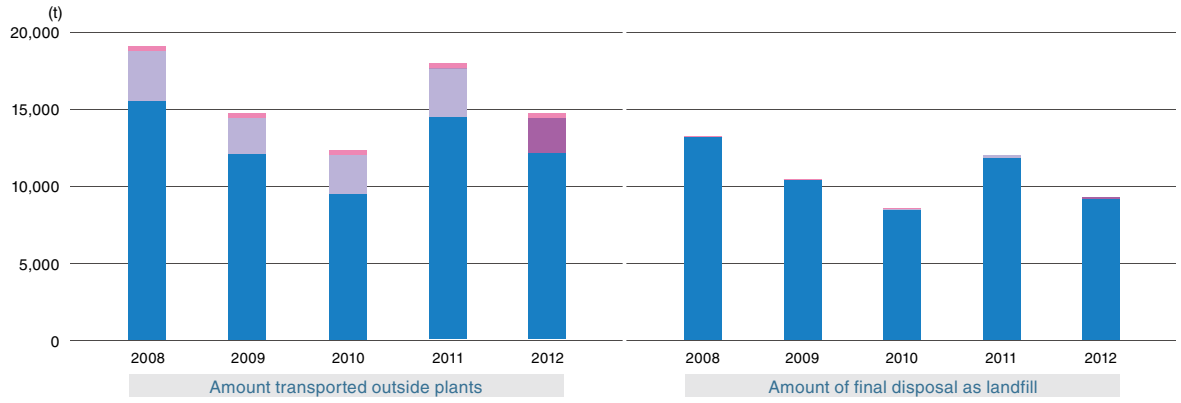

## Change in the amount of BOD and COD emissions




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



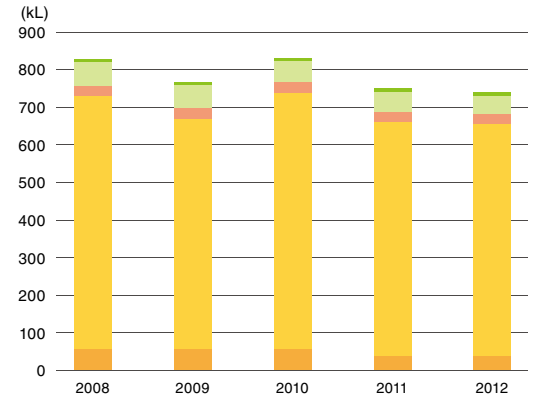
### Change in the amount of industrial waste emissions




**Non-manufacturing group companies**

Nisso Shoji Co., Ltd. Sanwa Soko Co., Ltd. Nisso Engineering Co., Ltd.
Nisso Construction Co., Ltd. Nisso Green Co., Ltd.

### Change in energy consumption (in crude oil equivalent)




### Change in the amount of waste generated


In 2012, Nisso Green disposed of its stock due to the discontinuation of production and sales.

## Note from the editors

The CSR Report was edited mainly by the Corporate Social Responsibility Department and Environment & Quality Management Department of the Production & Technology Division. Results in fiscal 2011 and previous years were reported in the Environmental Report (Responsible Care Report), but reports on results in fiscal 2012 and future years will be known as the “CSR Report.” The editors and other involved parties are pleased to present the CSR Report 2013. You are invited to give us your opinions on this report so that we may improve both the contents and our activities.

# Development Bank of Japan Inc.

## BCM Rating

Seikankyo No. 24-148
December 28, 2012

To Nippon Soda Co., Ltd.

Toru Hashimoto
President & CEO
Development Bank of Japan Inc.

### DBJ BCM Rating Result Notification

This is to inform you of the result of the screening for the DBJ BCM rating that was conducted in response to your request.

1. Result

| Total points (100) | Disaster preparedness assessment (25) | Business continuity preparedness assessment | |
|---|---|---|---|
| | | Hard infrastructure (25) | Soft infrastructure (50) |
| 78.8 | 23.5 | 19.1 | 36.2 |

2. Overall evaluation

Companies with excellent advanced business continuity management

3. Review

A chemicals manufacturer engaged mainly in the electrolytic soda industry, which covers agro products, pharmaceuticals and functional chemicals, Nippon Soda has maintained a high-standard business continuity management system in order to fulfill its responsibility for supplying chemicals to Japan and abroad with the primary emphasis on ensuring the safety of chemical products.

In particular, the following two efforts are noteworthy in that they are the result of your company's sincere attitude of recognizing the social responsibility of firms in this industry: (1) efforts to establish a system that allows the company to efficiently promote activities in the areas of process safety, disaster prevention and business continuity planning by incorporating business continuity efforts into your already firmly established disaster response system based on responsible care (RC) activities, and to constantly take actions to make improvements; and (2) efforts to develop a response plan to address predictable complex disasters at each business site and, based on the developed plan, select important tasks and identify bottlenecks to systematically eliminate them one by one in order to shorten the target time for restoration.

Your company is also engaged in: (3) ongoing efforts to enhance the functionality of the BCP through stakeholder engagement with shareholders, customers, local governments and other organizations in accordance with the CSR/RC policies, which were newly developed in response to the adoption of CSR this fiscal year, and to proactively disclose information on these efforts. These efforts are also noteworthy because they are innovative in that there are still few companies that effectively use the PDCA cycle in implementing their BCP.

Your company is in the implementation phase of the BCP, as described above. But if we may be so bold as to raise an issue that you need to address, it is the improvement of the earthquake-resistance of manufacturing facilities, which serve as the basis for promoting the BCP. All the more because you are fully familiar with the properties of chemicals, we believe it will be possible for you to build resistance that is strong enough to allow business to continue by ensuring the safeguarding of physical infrastructure. Our expectation of your company is that, through these efforts, you will continue contributing to ensuring the resilience of society.

# Third-party opinion on the Nippon Soda Group CSR Report 2013

June 21, 2013
Keisuke Takegahara
General Manager
Environmental Initiative & Corporate Social Responsibility-Support Department
Development Bank of Japan Inc.

The year 2013 is the first year of Stage II (Growth Phase) of the Nippon Soda Group's Long-Term Vision, "Chemigress to 100." It is also the year that the group started publishing annual reports on its CSR efforts, which were started systematically during the last fiscal year. The newly published report, which replaces the Environmental Report (Responsible Care Report) and exhibits substantial improvements in terms of format and contents, is called the "CSR Report."

The most noticeable differences are the increase in the amount of information and improvement in readability. To improve communication, features are presented as "Special Sections" that provide information on the group's contribution to society through its products and research and development activities. Opinions and comments from managerial staff are also presented in the report, which is helpful for readers.

With regard to individual items, conventional RC activities and newly added CSR activities are shown parallel to each other and the new medium-term goals for RC and CSR are related to each other systematically, which I find particularly noteworthy. The company has set specific numerical targets, or key performance indicators (KPIs), for each activity. I believe this, in combination with the serious activity assessment, which is one of the features of RC activities, will help promote better communication with stakeholders and will significantly contribute to elaborating the company's CSR vision.

Another feature unique to the company is the way it approaches safety issues, which are as important as environmental issues. It presents specific examples in process safety and disaster prevention, distribution safety, product safety, and many other safety-related categories. The straightforward discussion of the business continuity plan (BCP) is particularly progressive as there are still few examples of disclosure of such plans.

The company's efforts to proactively disclose information on communication with external parties and stakeholder engagement represents a significant change from previous Environmental Reports.

As these examples show—and because this report is based on an environmental report that is based on sound RC activities—I had the impression that the transition to the CSR Report had been made smoothly. Issues yet to be addressed are the further clarification of the presented CSR vision and thorough understanding and implementation of the vision by all employees. The 2013 report still seems to be somewhat analogous to a grafted tree, with RC as the stock and CSR as the scion. I hope the two will be integrated so as to be virtually inseparable. I am also looking forward to seeing the process whereby the CSR vision evolves to much higher level through interactive communication with stakeholders and the "spiraling-up" of the PDCA cycle based on such communication.

There are many individual themes that I thought would be interesting to see analyzed to a more extensive degree in the context of the BCP. For example, among environmental issues, the possibility of contributing to our "adaptation" to climate change, which was presented at the end of Special Section 2; and among safety issues, the "plant power enhancement" proposed by the Takaoka Plant manager. My expectation is that this report, which emerged in the nurturing stage of the Long-Term Vision, will shed light on the "new values" of the group.

# Japan Chemical Industry Association

## Responsible Care Verification Report

### Responsible Care Verification Report

February 12, 2013

To Yutaka Kinebuchi
President
Nippon Soda Co., Ltd.

Junji Takase
Chief Director
Responsible Care Verification Center
Japan Chemical Industry Association

**■ Objectives of Verification**

Responsible Care Verification is conducted to verify the progress of activities of companies that promote responsible care activities according to the Responsible Care Codes (Codes of Conduct).

**■ Scope of Verification**

The Responsible Care (RC) Verification was conducted at the following business sites according to the schedule given below:

| <Assessment modules> | <Sites verified> | <Dates of verification> |
|---|---|---|
| Social dialogue | Takaoka Plant | December 6, 2012 |
| Distribution safety | Nihongi Plant | December 7, 2012 |
| Chemicals and product safety | Chiba Plant | January 10, 2013 |
| RCMS | Head Office | January 17, 2013 |

**■ Verification Procedures**

The verification was conducted by verifiers according to the standard operating procedures for verification as described below:

- Verification based on documents collating responses to a questionnaire on activities that correspond to the RC Codes selected for this verification and attached materials
- Verification based on interviews with the RC manager and staff in charge of RC at each plant, review of relevant documents and on-site inspections

**■ Comments on RC Activities**

**Overall**

- We appreciate the following efforts of your company: Following your declaration in April 2012 to be engaged in CSR activities, the CSR/RC Management System was established and, under the Corporate Social Responsibility & Responsible Care Administration Meeting supervised by the President, CSR/RC activities have been continuously improved in an effective manner.
- We expect that the new concept of “RC ethics” will be promulgated among all employees and that RC activities will be further improved.

**Social dialogue**

- It is noteworthy that you promote dialogue with local residents using various methods. Our expectation is that you should create visual representations of your efforts to allow further improvements.

**Distribution safety**

- It is noteworthy that you provide education on the properties of your products and conduct emergency drills, including some that cover an extensive area.
- Our expectation is that you will further improve the risk assessment of distribution safety.

**Chemicals and product safety**

- We appreciate your well-rounded risk assessment, which covers both new and existing products and the disposal of these products.
- We expect that activities to ensure the safety of chemicals (products) will be ensured by all employees and further improvements will be made.

**RCMS**

- The CSR/RC Management System established in April 2012 and your efforts to promote CSR/RC management since then are particularly noteworthy.
- We expect that the CSR/RC Management System will be fully implemented and that the CSR/RC activities of the Nippon Soda Group will be further improved.

# Third Party Verification Report on the Nippon Soda Group CSR Report 2013

## Nippon Soda Group CSR Report 2013
## Third Party Verification Report

June 20, 2013

To Yutaka Kinebuchi
President
Nippon Soda Co., Ltd.

Junji Takase
Chief Director
Responsible Care Verification Center
Japan Chemical Industry Association

### ■ Objectives of Verification

The Responsible Care Report Verification was conducted by the Responsible Care Verification Center to verify the Nippon Soda Group CSR Report 2013 (hereinafter referred to as the "CSR Report") prepared by Nippon Soda Co., Ltd. and to present views and comments of experts in the chemical industry on the following issues:

1) The reasonableness of the methods used to calculate and aggregate performance indicators (numerical values), and the accuracy of numerical values;
2) The accuracy of reported information other than numerical values;
3) Responsible care activities; and
4) The characteristics of the 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 reports and based on materials and explanations provided by them.
- At Nihongi Plant, the reasonableness of methods to aggregate numerical values that had been reported to the Head Office and the accuracy of numerical values and information that had also been reported to the Head Office were assessed through interviews with managers responsible for each task and those responsible for the preparation of the reports and based on materials and explanations provided by them, and by checking the evidence.
- 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 Nihongi Plant adopted rational methods for calculating and aggregating numerical values. The numerical values of performance indices within the survey scope were calculated and aggregated accurately. We expect that there will be continued efforts to ensure higher accuracy.

2) The accuracy of reported information
   - We confirmed that information described in the CSR Report was accurate. At the drafting stage of the report, we pointed out some inappropriate wording and difficult-to-understand passages. In the final CSR Report, these were corrected. At present, there are no instances of wording or passages that need to be corrected.

3) Responsible care activities
   - We appreciate the following efforts of your company: the adoption of CSR in April 2012, the revision of the CSR/RC Management System one year later, the improvement of CSR/RC systems, the development of the New Medium-Term CSR and RC Goals, and the implementation of the PDCA cycle. We expect that you will make further efforts to improve your CSR and RC activities.
   - Unfortunately, the number of occupational accidents increased in fiscal 2012 from the previous year. We expect that you will encourage all employees to focus their efforts on identifying the causes and taking actions to prevent recurrences in order to achieve zero occupational accidents.
   - It is noteworthy that you have developed and are implementing the revised BCP to be prepared for large-scale disasters and other emergencies and that you have prepared and are using your own "Safety Information List" containing information on emergency responses by product for the transportation of highly hazardous and toxic products.

3) Characteristics of the report
   - In the report for fiscal 2013, it is particularly noteworthy that the CSR/RC Management System (revised version) was developed in response to the adoption of CSR in 2012 and that CSR/RC promotional systems and activities are well incorporated into the New Medium-Term Business Plan of the Nippon Soda Group.
   - In addition, the special section on "Contribution to Society through Products" is particularly noteworthy. We expect that you will continue your efforts to make the entire report easier for readers to understand and increase its readability, as well as to provide as many numerical values as possible along with explanations for them.

**NIPPON SODA CO.,LTD.**


For inquiries about this report, please contact the following department:

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