

## Environmental Protection

The Nippon Soda Group conducts environmental protection activities to minimize the environmental footprint of its business activities. Protection activities include striving to conserve energy, reduce greenhouse gas emissions, conserve resources, reduce the emissions of industrial waste, recycle, reduce emissions of hazardous substances, and reduce our impact on biodiversity and ecosystems.

### Basic Policy

- Continuing efforts to prevent environmental pollution, complying with laws and regulations, and promoting other environmental activities.
- Reduction of environmental burden associated with business operations (prevention of global warming, and reduction in the amount of waste generated and amount of final disposal at landfills).
- Development of products and processes with less environmental burden.
- Implementation of an environmental management system.  
Reduction in the amount of energy consumption while maintaining productivity.
- Water resources conservation.
- Reduction of impact on biodiversity and ecosystems.

## Environmental Protection

### Responses to Climate Change Issues

Efforts to prevent global warming are critical. Nippon Soda participates in the Commitment to a Low Carbon Society, a voluntary action plan promoted by the Japan Business Federation (Keidanren). Under the action plan, we are promoting energy saving to achieve the CO<sub>2</sub> emissions reduction targets.

#### ► Reduction of energy consumption and greenhouse gas (GHG) emissions

Our efforts to improve our rate of energy consumption include the replacement of old and obsolete equipment with highly efficient models, the streamlining of production processes and reduction of energy consumed, and the implementation of power-saving measures. Also, we use the Ministry of the Environment's Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain as a reference in calculating the greenhouse gas emissions caused by our company's activities (Scope 1, Scope 2) and indirect emissions outside the sphere of our company's activities (Scope 3), and work to reduce emissions throughout the value chain.

### Greenhouse Gas Emissions throughout the Supply Chain

Scope 1 emissions	66,595t-CO <sub>2</sub>	Scope 2 emissions	119,472t-CO <sub>2</sub>
<b>Scope 3 emissions</b>			
Purchased raw materials/ services	144,515t-CO <sub>2</sub>	Transport and delivery (downstream)	Not calculated
Capital goods	12,978t-CO <sub>2</sub>	Processing of sold products	Not calculated
Fuel, etc. not included in Scope 1 or 2	None	Disposal of sold products	Not calculated
Transport, delivery (upstream)	31,669t-CO <sub>2</sub>	Use of sold products	Not calculated
Waste generated from business	Not calculated	Leased assets (downstream)	None
Business trips	355t-CO <sub>2</sub>	Franchise	None
Employee commuting	259t-CO <sub>2</sub>	Investment	Not calculated
Leased assets (upstream)	None		

Note: Figures are calculated based on the Ministry of the Environment's "Emission Factor Database (Ver. 3.0) for calculating greenhouse gas emissions, etc., by organizations throughout the supply chain."

## Environmental Protection

### ► Use of renewable energy

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



From the hydroelectric power station to the water tank



Small hydropower facilities of the Nihongi Plant

### ► Promotion of energy saving by the Logistics Department

As a specified consigner designated under the Act on the Rational Use of Energy (Energy Saving Act), Nippon Soda submits a periodic report and a medium- to long-term plan to the Ministry of Economy, Trade and Industry and implements measures to reduce its energy consumption rate.

Nippon Soda has been making efforts to improve logistics efficiency and reduce environmental burden through measures such as modal shifts in transportation, reducing the frequency of trips by using larger transport containers, and adjusting distribution routes. For our modal shift efforts, we were certified in 2013 as an “Eco Rail Mark” company.



## Effective Use of Resources and Reduction of Industrial Waste

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

### ► Proper management of industrial waste and reduction of the final disposal of industrial waste at landfill

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

### ► Zero emissions

Nippon Soda has achieved zero emissions\* for 10 consecutive years.

\* When the ratio of the amount of final disposal of industrial waste at landfill compared to the amount transported to the industrial waste disposal facility is small. Emissions are defined as “Zero emissions” when the ratio of landfill waste is 2% or less.

### ► PCB waste

Each Nippon Soda site properly stores and manages condensers, transformers, mercury lamp ballasts, and other items at each business site and disposes of them appropriately one by one in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB (polychlorinated biphenyl) Wastes, which was revised in 2016.

## Environmental Protection

## Atmosphere and Water Quality Conservation

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

▶ **Reduction of chemical substances specified by the Law for PRTR and Promotion of Chemical Management (PRTR System)**

We are making efforts to reduce emissions of Class I Designated Chemical Substances specified by the PRTR System, one of two sections contained in the Law for PRTR and Promotion of Chemical Management.

▶ **Reduction of emissions of harmful substances into the atmosphere**

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

▶ **Reduction of air pollutant emissions**

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

▶ **Actions to conform to the Fluorocarbons Emission Control Act**

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

▶ **Reduction of harmful substance emissions into rivers and other bodies of water**

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

## Preservation of Biodiversity

Nippon Soda has been taking measures to reduce the environmental burden, use water resources effectively, and prevent pollution of air, water, and soil, mainly in areas where its production sites are located. In recent years, we have added conservation of biodiversity as a priority issue and have been carrying out viable activities at each of our worksites.

▶ **Breeding of killifish originating from the Sakawa river system (Odawara Research Center)**

Odawara City, Kanagawa Prefecture, has been promoting protection activities for killifish, which are listed as an Endangered Species Category II by the Ministry of the Environment. In 1999, we conducted the “Medaka-no Otosan Okasan Sato-oya Seido” (“Killifish Fosterparent Program”), which involves working to protect their habitat and helping to pass their genes down to the next generation.



Breeding of killifish originating from the Sakawa river system

▶ **Supporting the protection of himekomatsu (Japanese white pine) a critically endangered species (Chiba Plant)**

Since taking over the project in 2016, Chiba Plant is continuing with the “Himekomatsu Supporter” project to protect himekomatsu, an endangered tree species in Chiba Prefecture.



November 2016



May 2021

Environmental Protection

Environmental Protection Activities through the “NISSO Group Forest”

On the occasion of the 100th anniversary of our establishment, we began initiatives to protect greenery and water sources as a contribution to the achievement of the SDGs. The Nisso Group established the “NISSO Group Forest” within the “Joetsu KUWADORI Community Forest” in Joetsu City, Niigata Prefecture, the location of the Company’s origin, and continues to make donations to the National Land Afforestation Promotion Organization in order to contribute to the creation of a forest of biodiversity and environmental protection.



Observational field trip to the NISSO Group Forest (Nihongi Plant, September 17, 2020)

► FY 2021 targets and achievement levels (KPIs)

(Achievement levels ●: ≥ 90% ◐: 80-90% ◑: 60-80% ×: ≤ 60%)

- |   |   |
|---|---|
| 1. Environmental issues: Target: Zero events  | Achievement level ×: One event  |
| 2-1. Energy consumption rate:<br>Target: Annual improvement of 1%                                   | Achievement level ×: 4.2% increase<br>(Due to a decrease in production)   |
| 2-2. Energy consumption rate in logistics:<br>Target: Annual improvement of 1%                      | Achievement level ●: 26.6% decrease<br>(Due to a decrease in sales of products with high energy consumption rates in logistics) |
| 3. Reduction in greenhouse gas emissions:<br>Target: Annual reduction of 1%                         | Achievement level ●: 7.6% decrease<br>(Due to a decrease in production)   |
| 4. Water resources conservation:<br>Target: Monitor water resources and promote efficient water use | Achievement level ◐: Carried out water usage surveys, etc.  |
| 5-1. Industrial waste (amount of final disposal at landfill):<br>Target: Annual reduction of 3%     | Achievement level ●: 35% decrease<br>(Due to a decrease in production)  |
| 5-2. Industrial waste (continuation of zero emissions):<br>Target: 2% or less                       | Achievement level ●: 0.8%   |
| 6. Emissions of harmful substances into the atmosphere:<br>Target: Annual reduction of 1%           | Achievement level ●: 20% reduction  |
| 7. Reduction of impact on biodiversity and Ecosystems   | Achievement level ◐: Nurtured endangered species at two sites   |

► Efforts for the future

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