

Nippon Soda Group

Integrated Report 2021

 **NIPPON SODA CO.,LTD.**

For inquiries, views, and comments regarding *Integrated Report 2021*, please contact us via the following website.
<https://www.nippon-soda.co.jp/e/contact/>

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 **NIPPON SODA CO.,LTD.**

Create New Value through
the Power of Chemistry
and Increase Corporate Value
by Contributing to Society.

Product capabilities
contributing to
stable revenue



Net sales
139.4
billion yen

Multiple businesses
in global niche
domains



Ratio of
overseas sales
Over **37.7%**

Research and
development
and production
technology that
create long-selling
products



Research and
development
investment
5.8 billion yen

A spirit of good
people doing good
work



Number of
employees
2,770

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Nippon Soda Group

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* Unless otherwise indicated, values are rounded to the nearest increment.

Editorial Policy

Integrated Report 2021 comprehensively conveys the activities of the Nippon Soda Group to increase its corporate value, and achieve its medium- to long-term goals, in both financial and non-financial terms. When producing this Integrated Report, we strove to provide an easy-to-understand overview of our value creation process by referring to the Guidance for Collaborative Value Creation of the Ministry of Economy, Trade and Industry. From FY 2021, Nippon Soda has replaced the conventional CSR Report with the Integrated Report. The ESG information included in the CSR Report is now posted on the Nippon Soda website in a new document entitled ESG Data Book 2021.

Period of This Report

April 1, 2020-March 31, 2021 (FY 2021)
* Also contains some information from beyond this period.

Scope of This Report

Nippon Soda Co., Ltd. and Nippon Soda Group companies.

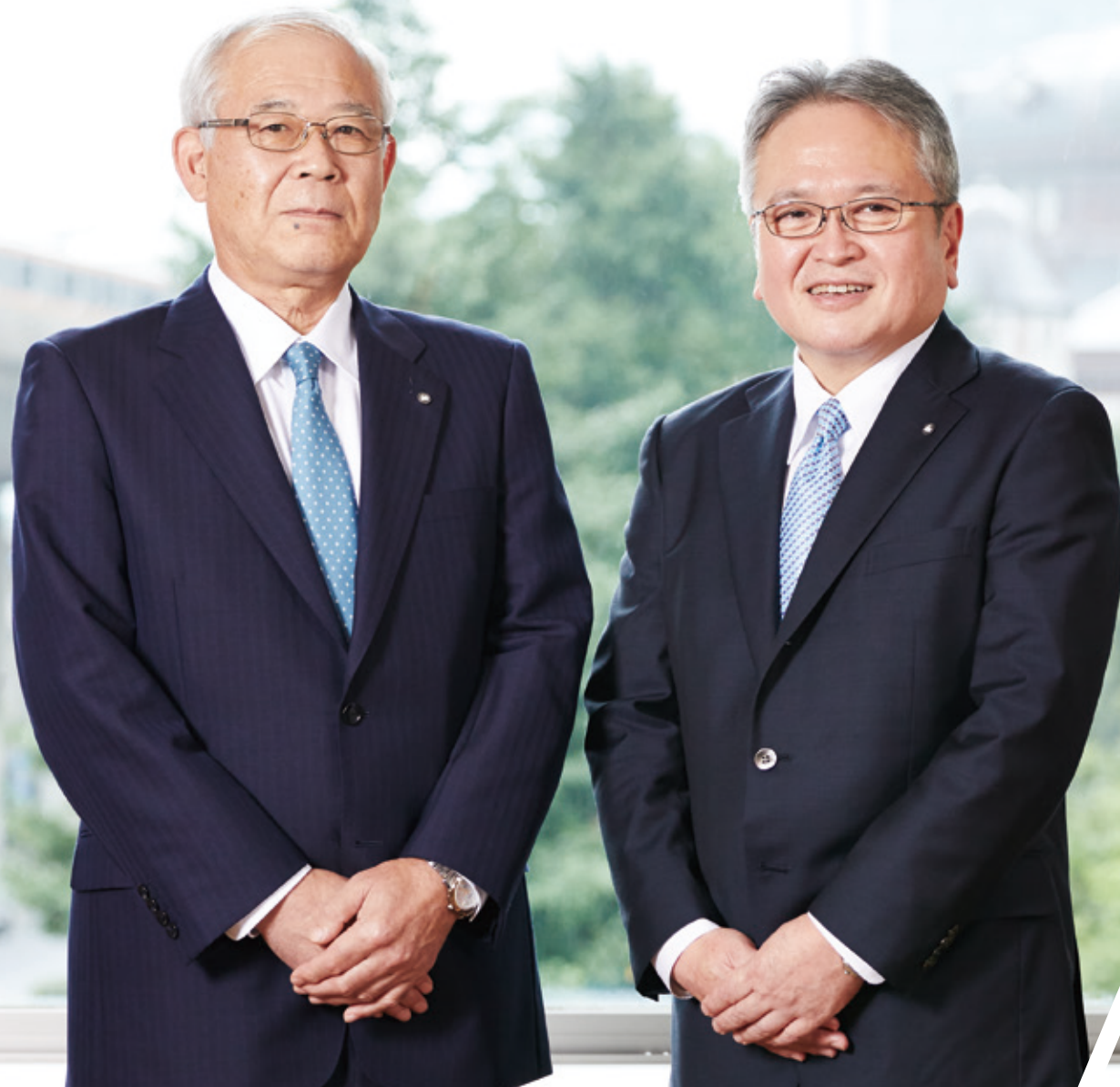
Third-party Verification

In the interest of ensuring the transparency and reliability of the information contained in Integrated Report 2021 and ESG Data Book 2021, third-party verification has been performed by the Japan Chemical Industry Association. ESG Data Book 2021 contains a statement regarding third-party verification.

Forward-Looking Statements

Integrate Report 2021 includes forward-looking plans and strategies, as well as forecasts and outlooks for business performance. Please note that various factors may cause actual results to differ from these forecasts and outlooks.





Akira Ishii
Representative Director,
Chairman

Eiji Aga
Representative Director,
President

**As a Company That Creates
New Value through the Power
of Chemistry, We Will Enhance
Our Corporate Value by
Contributing to Society.**

Please allow us to begin by offering our sincere condolences to those who have lost loved ones as a result of the COVID-19 pandemic, while also expressing our deepest sympathies to those who have contracted or been affected by the virus. We would also like to take this opportunity to express our deepest thanks to all the healthcare and essential workers who have worked unceasingly throughout this unprecedented crisis.

Thanks to the support of all our stakeholders, in 2020, Nippon Soda was able to celebrate its 100th anniversary. In Nippon Soda's 101st year, which began April 1, 2021, both of us assumed new roles at the Company. I, Akira Ishii, took up the position of Representative Director and Chairman, while I, Eiji Aga, took up the position of Representative Director and President. Looking ahead, we will do everything in our power to achieve sustainability alongside our stakeholders.

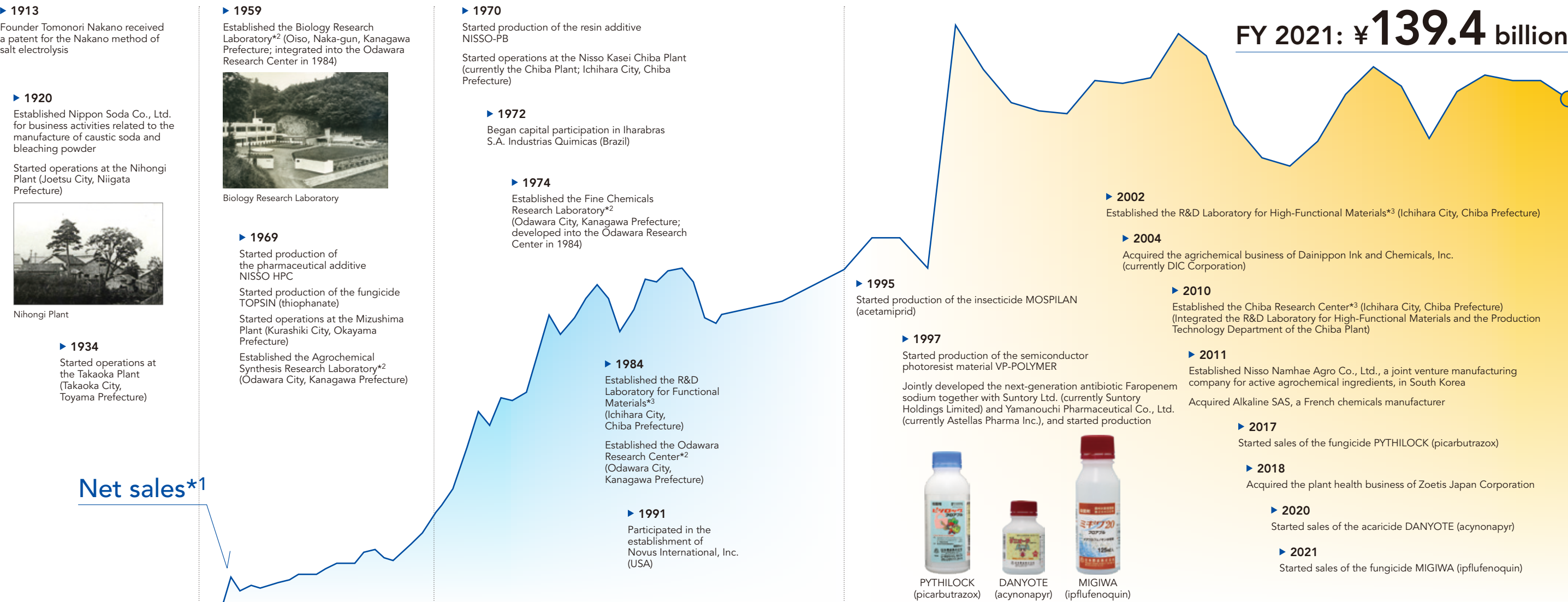
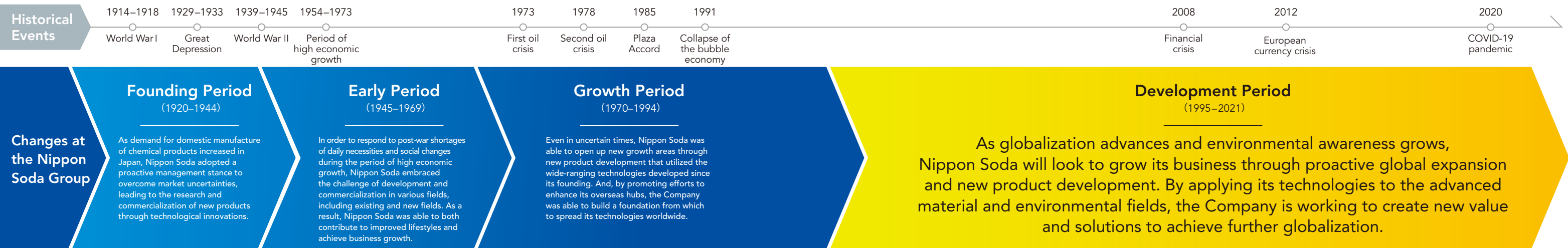
Social problems that have severe impacts on economic development are becoming more and more apparent. These problems can be attributed to environmental issues such as climate change and resource depletion, as well as food-related issues brought about by population increases and, in Japan, worker shortages. And so, for corporations, long-term initiatives in line with ESG (environmental, social, and corporate governance) and the SDGs (sustainable development goals) are essential, and corporate integrity is key if we are to create value alongside our stakeholders. At Nippon Soda, to achieve sustainable growth through enhancement of both our corporate and social value, we will promote sustainability-focused management through the following: CSR Activities to Protect Corporate Value and CSR Activities to Improve Corporate Value.

In 2020, we used a backcasting approach to formulate our long-term vision "Brilliance through Chemistry 2030." We also identified materialities (important issues) in the four fields that would help us improve corporate value—agriculture, healthcare, environment, and ICT. Through the provision of products and services that can cater to social issues and environmental changes, we will strive to contribute to sustainability.

At the Nippon Soda Group we will work to create new value through the power of chemistry, and engage in sincere corporate activities that meet the expectations and earn the trust of our wide-ranging stakeholders.

History of Value Creation

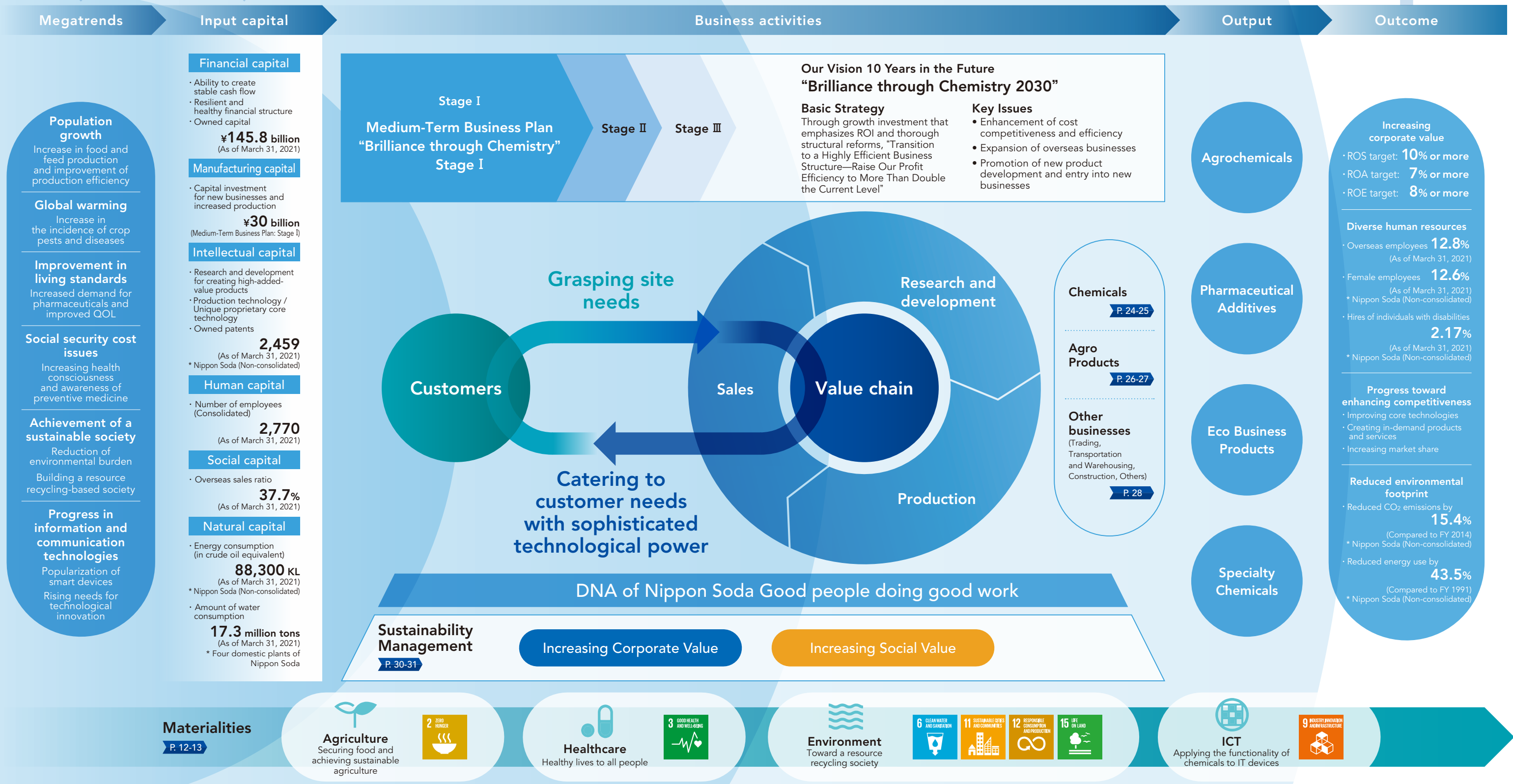
Since its founding in 1920, the Nippon Soda Group has diversified into business fields such as agriculture, healthcare, the environment, and information. Furthermore, we have successively created products that meet the needs of the times. By using the power of chemistry to solve the issues facing society and by creating value with an eye on the future, we will continue to contribute to the creation of a society in which every person can live with peace of mind.



Based on our mission, "Create new value through the power of chemistry and increase corporate value by contributing to society," the Nippon Soda Group will endeavor to solve social issues, increase its corporate value and social value by providing chemicals and related services, and build value creation processes that achieve sustainable growth.

Creating value together with our stakeholders

Create new value through the power of chemistry.



The Human Resources Who Have Supported Nippon Soda's R&D and Technologies Since Its Founding

The source of value creation at the Nippon Soda Group is found in our unceasing effort in research and development, our technical capabilities that have responded to market demands, which change with the times, and the human resources who have supported the aforementioned work. When thoroughly examining our achievements, you can see that the strength and concepts of our founding spirit have been inherited and continue to thrive. Even in today's era of diverse change and the never-ending wave of issues, growth at the Nippon Soda Group is supported by our DNA of having confidence in our ability to determine the correct path forward without wavering from our convictions, and by our passion for research and technology aimed at solving difficult challenges one by one.

Origin of the Company Emblem



The Company emblem for Nippon Soda is a snow rabbit. Specifically, it is a white hare surrounded by a hexagonal snowflake. The emblem is based on the following episode. In the winter of 1920, shortly after the Company's founding, a meeting was being held at the Nihongi Plant in Niigata Prefecture in regards to the logo to be used on product containers. Suddenly, a pure white rabbit jumped into the room, ran around, and then disappeared outside.

At that time, our Company's main products were caustic soda and bleaching powder. In the case of these products, a higher purity results in a purer white color. Therefore, the pure white rabbit represented the high quality of our products. Furthermore, rabbits excel at running up mountains but not running down. This was a perfect symbol of Nippon Soda at that time, in terms of how we were striving to become a growth company with high-quality chemical products that are not affected by recessions. The six sides of the hexagonal snowflake represent the following ideals: honesty, industriousness, originality & ingenuity, cooperation, service, and gratitude. This is a perfect anecdote for Nihongi City, Niigata Prefecture, which receives some of the heaviest snowfall in Japan. Furthermore, this episode is linked to the world of chemistry, where facts, chance and ideas are all linked together.

Although favorable conditions did not exist at the time of our founding, we were able to overcome adversity with the spirit of "Good people doing good work."

Nippon Soda was founded in 1920, a period of great recession after World War I. Furthermore, many more difficulties were lying ahead. Conversely, it was also an era when Japanese industry was heading for development. The unceasing efforts for improvement, innovation, and research and development led to the development of today's Nippon Soda Group. These efforts were supported by valued employees. The spirit of "Good people doing good work" is still alive today.

Words from our founder Tomonori Nakano —

"In no way does the Nihongi area present any advantages for industry in terms of transportation, terrain, or supply and demand. Furthermore, during one-third of the year, the area suffers from heavy snow that completely buries homes. Shortly after our founding, Nippon Soda faced the Great Depression after World War I. There was no conglomerate backing our company. Indeed, Nippon Soda was founded in a very disadvantageous era. Nevertheless, we were blessed with one thing—the human element. Our employees joined together and worked with great devotion. Even though I was a managing director, the factory manager and I would don dirty clothes and crawl under the machines. We worked both day and night. Thanks to these efforts, we were able to build outstanding products and launch them on the market. It was also fortunate that we worked in the chemical industry, which had the highest demand of any industry in Japan. It can also be said that we possessed an exceptional spirit toward business and policy toward management.

The chemical industry must constantly adapt to advances in science and evolve into more efficient methods. We have always maintained our commitment to improving and innovating our equipment and operation, and to researching and industrializing new products. In some areas, our business moved ahead of the science. Even when the existence of our company was in danger due to extreme financial difficulties, we actively encouraged these kinds of technological advancements. "Good people doing good work." This was the greatest strength of Nippon Soda. As a result, we were able to overcome our inconvenient location, damage from snow, and industry stagnation.

"Celebrating the 20th Anniversary of Our Company" (Nippon Soda Company Newsletter; May 1940)



The DNA of Nippon Soda

From our founding to the present, a large number of outstanding engineers have supported the growth of Nippon Soda and driven our recovery from difficult predicaments. During the war, we were placed under military supervision and forced to respond to development requests in various fields. There is an anecdote that says when the German airship Zeppelin flew to Japan, Nippon Soda was responsible for the emergency supply of depleted high-purity hydrogen. At that time, only Nippon Soda was able to supply such a large amount of high-purity hydrogen.

After World War II, the Company continued to face difficulties as it was unable to settle upon its products and business fields. However, even under these circumstances, the Company was committed to launching new businesses. In 1950, we submitted Japan's first petrochemical business plan to the Ministry of International Trade and Industry (currently the Ministry of Economy, Trade and Industry). However, due to the pioneering nature of the plan, we were unable to receive financing from banks and were forced to abandon the plan. The plan was ahead of its time and was eventually recognized and highly evaluated as having played a leading and enlightening role in the petrochemical industry.

After that, Japan entered a period of high economic growth. Even though Nippon Soda's sales grew, we continually failed to secure profits due to the interest burden associated with large capital investments. Under these circumstances, engineers focused their research and development in a new direction; namely, on fine chemicals such as pesticides and polymer fields centered on urethane. We promoted a shift from quantity to quality. These efforts eventually led to the creation of high-added-value products.


The Nippon Soda Group has been willing to invest in technology even in difficult times, and our engineers have worked hard to develop new products, strengthen cost competitiveness, establish overseas production technology, and reduce our environmental burden. This spirit has been inherited as the DNA of the Group and is the driving force behind all that we have accomplished. The Nippon Soda Group will continue to "contribute to society through the power of chemistry" and realize a future of "Brilliance through Chemistry" based on technological capability and passion.



Using the Power of Chemistry to Provide Value Ideally Suited to Customer Needs

Hydroxypropyl cellulose (HPC), which is used as a binder to form pharmaceutical tablets, boasts wide-ranging support both in Japan and overseas for its outstanding stability and functionality. In the 1960s, Japan relied on imports of HPC, but as pharmaceutical companies placed great importance on stable quality and supply, calls grew for domestically produced HPC. In response to these needs, we undertook development of NISSO HPC, and commenced sales in 1969. Since featuring in the Japanese Pharmacopoeia in 1971, thanks to the product's excellent quality and our discovery of customers' latent needs through thorough communication, sales volumes have risen, and we have been able to gradually expand our product supply structure. In 2005, the product was registered as a food additive, and we extended its applications from pharmaceuticals to health food products such as supplements. Further, through collaboration with staff at our overseas hubs, we have been able to reinforce our global technical service system. Through communication of the latest technological data in frontier fields, the product continues to see remarkable growth in global niche markets. Looking ahead, using the power of our world-leading technologies, quality, and human resources, we will continue working to provide outstanding value.

R&D and Production Capabilities Centered on Our Accumulated Technologies



Research and Development


Our research and development effectively utilizes the fundamental technologies and core technologies that we have developed over the past 100 years in the following three areas: 1) development of new products, 2) the technological improvement of existing products, and 3) the development of peripheral markets.

In April 2021, we consolidated and integrated the operations of the Odawara Research Center and the Chiba Research Center. The Odawara Research Center is now in charge of both research and development on agrochemicals, as well as research and development on chemicals for functional materials and electronic materials.

In the development of agrochemicals, we are accumulating a track record of technological improvements that will lead to the development of new products. The Nippon Soda Group possesses a research system that can advance all phases from basic research to field experiments. We have the major advantage of being able to carry out highly efficient and swift research and development, and product development that combines evaluation and exploration.

For the development of chemical products, we have established an integrated system for all stages from the development of functional chemical products that make full use of our proprietary technologies to research for commercialization and streamlined process improvements.

The Odawara Research Center conducts research and development in cooperation with various departments such as marketing, technology/services and manufacturing, while working to improve the technological capabilities of each department.



Production

For over 100 years, we have been continuously improving our production technology, and in so doing we have developed proprietary manufacturing technologies and established a safe, stable, and efficient production system.

We have production technology research centers at our Nihongi, Takaoka, Mizushima, and Chiba plants. In addition to establishing mass-production technology for newly developed products, we are engaged in improving existing production processes. We are developing proprietary manufacturing technologies with high productivity in collaboration with research departments through various technological developments and engineering research.

Beginning in 2019, we have been working to build a system that enables efficient use of experimental equipment and human resources engaged in research. Furthermore, a new research building that consolidates and integrates research facilities at the Takaoka Plant and the Nihongi Plant is scheduled for completion in 2022. The Nippon Soda Group is also accelerating product development by strengthening synergies with manufacturing process know-how and manufacturing know-how, and by improving operational efficiency.

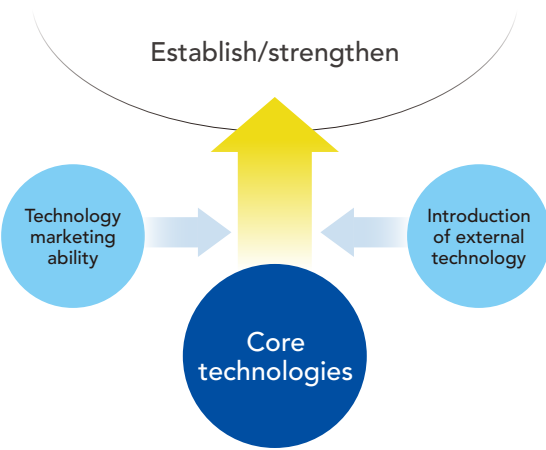
Each research center supports a safe and stable production system and complies with all applicable laws and regulations, while paying attention to occupational safety and health.

The Nippon Soda Group is embracing the challenge of creating new businesses that solve global issues. We have positioned the four fields of agriculture, healthcare, environment, and ICT as materialities (important issues). Based on the keywords of “fusion of knowledge,” “fusion of technology,” and “global,” the Odawara Research Center and the production technology research centers located in each plant serve as important bases that support value creation.

Establishing and Strengthening Core Technologies to Bolster Existing Businesses and Create New Businesses

The Nippon Soda Group possesses many excellent core technologies. However, when considering future market needs and changes in the social environment, it is essential to introduce new technologies, as well as to establish and further strengthen core technologies. Therefore, we will strengthen our technology marketing abilities, broaden our assessment and understanding of new needs, and establish a system that can respond more flexibly.

By collecting information from various chemical markets, analyzing technological trends in each field, and examining solutions that cater to needs brought about by social change, we are unearthing new possibilities while staying alert to trends in even more areas. For example, we examine whether or not there are any aspects of commercially available products that can be substituted by the Group's technology. On top of that, we will create new value by improving and increasing the sophistication of our proprietary technologies, and by developing new technologies while cooperating with external parties.



Utilizing AI in the Research of New Chemicals and the Development of New Materials

Nippon Soda has launched an AI working group to consider various initiatives for digital transformation (DX). In terms of material development, we are striving to create a system for efficient research and development. This involves introducing materials informatics* with the aim of using AI to strengthen data science. Regarding the development of agrochemicals, we have been working on computational chemistry-based methods to support the creation of new chemical products. In order to further strengthen these initiatives, we will proceed with digital transformation and the reconstruction of our databases.

In terms of production, Nippon Soda is working to rationalize work, save labor, and create a system that will enhance safe and stable operation. We will also promote the development of AI human resources that can support these technologies.

* Efforts in which informatics methods that utilize statistical analysis, etc., are used to search for new materials from a large amount of data

Accelerating R&D Using External Technologies

In creating new businesses, open innovation is key—that is, making use of not only internal resources, but also external research resources and technologies. At Nippon Soda, we are promoting open innovation through collaborations with external institutions in industrial and academic circles.

Themes	Progress, Results and Outlook	Nippon Soda's Strengths
Development of a new porous material with a metal-organic framework (MOF) (An industry-academia collaboration project with Prof. Mao Minoura and his research team from the Chemistry Department of the College of Science at Rikkyo University)	<ul style="list-style-type: none">▶ We hope to be able to mass-produce MOF materials that could be used in hydrogen gas tanks and other clean energy options▶ We are currently promoting industrial applications	Synthesis technologies accumulated through our development of agrochemicals, and production technologies
Development of a platinum-tungsten solid-solution alloy nanoparticles (Joint research with Prof. Hiroshi Kitagawa and his research team from the Graduate School of Science, Kyoto University)	<ul style="list-style-type: none">▶ When used in the electrolysis of water, this technology can generate a hydrogen evolution reaction that achieves the world's highest level of catalytic activity▶ We are currently engaged in efforts aimed at social implementation	Processing technologies to particulate and separate metals
Development of a new compound for thermally activated delayed fluorescence (TADF) material, a next-generation organic electroluminescence material (Joint development with Kyulux, Inc.)	<ul style="list-style-type: none">▶ Kyulux, Inc. has enhanced the performance and quality of its TADF material, and greatly improved production efficiency of the new compound▶ The compound will help us gain a foothold in the organic electroluminescent display business	Long-accumulated, advanced organic material development capabilities and synthesis know-how
Development of an anion adsorbent with a nanoporous structure (Joint development with Takahashi Metal Industries Co., Ltd.)	<ul style="list-style-type: none">▶ The adsorbent can quickly and efficiently adsorb and remove anions, such as phosphoric acid and fluorine, found in wastewater▶ The adsorbent can adsorb approximately three times more and is nearly three times faster than conventional adsorbents▶ In addition to its suitability for repeated use, the adsorbent phosphorous can be collected and recycled	Advanced production technology capabilities and practical use development capabilities

COLUMN

Optimized Production Processes and Rapid Product Development Using AI and Other Digital Technologies

At the Nippon Soda Group, as part of our long-term vision and three-year medium-term business plan, we are promoting digital transformation (DX) in order to optimize research and development, and promote the development and early launch of new products. In April 2020, we launched the cross-company DX Promotion Group as we work toward introducing digital technologies such as

AI, IoT, and materials informatics. Further, at the Nihongi Plant, which is our main production site, we will build a production technology research building with the latest AI and computer-aided engineering facilities, aiming for completion by May 2022.

For more details, see TOPICS (P. 29)



Agriculture

Securing food and achieving sustainable agriculture



The world population is expected to reach ten billion in 2050, and a large amount of food and feed will be required. Also, the global warming megatrend will increase the outbreak of agricultural pests. The Nippon Soda Group supplies safe and effective agrochemicals that are highly rated around the world. We expect needs for higher levels of safety to continue increasing, so we will create new agrochemicals that are safer and more effective by using advanced synthetic technology to contribute to the world's food supply. Additionally, we will utilize information and communications technology (ICT) and other technologies to support labor-saving pest control work and the production of high-quality crops.

Achieving Sustainable Agriculture

In order to secure crops for food and feed to meet the demands of an increasing population, and due to an aging farming population and worker shortages, the introduction of smart agriculture* and the development of safe agrochemicals is essential. In Japan, where multiple crops are cultivated together on a small field, the use of different agrochemicals increases workloads and costs. At the Nippon Soda Group, we are promoting the registration of single agrochemicals that can be used for a variety of crops to make spraying more efficient.

In the field of biopesticides, we are developing and supplying internally developed biopesticides to reduce the impact on ecosystems.

* Modern agriculture that achieves labor savings and high-quality production through the use of robotics technology and ICT

Continually Releasing New, Internally Developed Agrochemicals on the Market

The development of new agrochemicals requires more than ten years and vast investments. At the Nippon Soda Group, we successively launched three new proprietary agrochemicals between 2017 and 2021.

The fungicide PYTHILOCK (picarbutrazox) is now also being developed as a seed treatment following the conclusion of global licensing agreements with major overseas manufacturers. Elsewhere, in addition to the domestic sale of our acaricide DANYOTE (acynonapyr), we are also engaged in overseas development. Further, the fungicide MIGIWA (ipfluenoquin) can be used against a wide range of pests, and is being simultaneously developed in Europe and the United States.



Healthcare

Healthy lives to all people



In advanced nations, health consciousness and awareness of preventive medicine are increasing due to social security cost issues and the sustainability of healthcare systems. The demand for pharmaceuticals is increasing in emerging nations as well due to improvement in living standards. The cellulose derivative supplied by the Nippon Soda Group is widely used domestically and abroad as a binder for pharmaceutical tablets that make medicine easier to take, and it is also being developed for use in food processing for supplements, etc. In the future, we will continue to develop support services for high-performance products and formulation technologies and actively research and develop products that contribute to improving people's health and life.

Improving Access to Healthcare

In India and China, where demand for pharmaceuticals has increased with improvements in living standards, use of our pharmaceutical additive NISSO HPC is increasing. To cope with this increasing demand, we have dispatched NISSO HPC specialists to our offices in India and China. We are increasing awareness of NISSO HPC by working with research institutes around the world and providing technical services to pharmaceutical manufacturers.

Applications for NISSO HPC are expanding into fields outside of pharmaceuticals, and it is also sold under the name CELNY in nutraceuticals markets. CELNY facilitates the intake of active ingredients in small doses. In these ways, we are contributing to people's daily health in response to increasing health consciousness and awareness of preventive healthcare.

The Cellulose Technical Application Center, a Place for Creating Value Alongside Customers

In order to demonstrate the superior performance of NISSO HPC, the Cellulose Technical Application Center (CTAC) was established in the Chiba Research Center in October 2019. Further, amid the COVID-19 pandemic, we hosted online technical seminars, offered live online training programs, and posted improved technical information videos through the CTAC Online website.

As a facility for creative collaboration alongside our customers, CTAC boasts cutting-edge equipment that can perform everything from trials to analysis and evaluation. CTAC functions as a platform for innovation to further improve the quality of pharmaceuticals, etc. CTAC is also attracting attention from overseas and, as such is also contributing to overseas sales of NISSO HPC. We will continue to expand sales of NISSO HPC in global markets.



Environment

Toward a resource recycling society



Achieving a sustainable society is a goal shared around the world. Tackling environmental problems such as global warming and resource depletion will help achieve this goal, and corporations are increasingly expected to lead those efforts. The Nippon Soda Group utilizes the water treatment technology, resource recycling technology, technology for adsorbing and removing harmful substances, and other technologies developed over its long history, to come up with various environmental solutions and develop business. For sustainable plant protection, we are also contributing to the protection of the pine forests that are a feature of the beautiful, unique natural landscapes of Japan.

Achieving Sound Resource Recycling and Sustainable Plant Protection

Our internally developed heavy metal fixative HIDION is mixed into fly ash; the heavy metal is immobilized, preventing lead and other heavy metals from scattering and liquating. HIDION is used at many waste incinerators and is highly regarded as an agent for reducing environmental burden. Also, Group company Nisso Metallochemical Co., Ltd. is contributing to the creation of a recycling-based society through its recycling business.

At the Nippon Soda Group, we work to conserve biodiversity through the protection of plants and forests. GREEN GUARD, an agent for preventing pine wilt, contributes to the greening of streets and parks, as well as landscape conservation. Additionally, we hold workshops on plant protection, mainly for local municipalities.

Promoting Future Research and Development Themes

While enhancing our proprietary technologies and further sophisticating our core technologies, at the Nippon Soda Group we are driving the development of new products and the creation of new businesses. In an industry-academia collaborative project with Rikkyo University (a group led by Prof. Mao Minoura from the Chemistry Department of the College of Science), we developed new materials with metal organic frameworks (MOFs). The technologies we accumulated through many years of research on agrochemicals contributed to this achievement. We are also examining its use as a safe, hydrogen gas storage material, and aim to commercialize it for use as a molecular gas cylinder in fuel cell vehicles.

Further, through joint research with Kyoto University, we have developed a technology that, when used in the electrolysis of water, can generate a hydrogen evolution reaction with the highest level of catalytic activity in the world. We are engaged in efforts to apply this technology to the spread of clean energy and the creation of a safe, eco-friendly society.



ICT

Applying the functionality of chemicals to IT devices



Smart devices are becoming more popular around the world as the progress in information and communication technologies accelerates. This market is expected to grow significantly in the future.

The Nippon Soda Group uses its precision polymerization technology and organic synthesis technology to provide high-performance polymers for use in materials for next-generation 5G communications devices and photoresists for semiconductors. In order to meet the needs of future technological innovations, we are focusing on developing new materials for use in a wide range of fields.

NISSO-PB for Next-Generation Communications

The need for remote work, teleconferencing, and online classes has suddenly increased due to the spread of COVID-19, and this change has resulted in a rapid increase in communication base stations and servers.

NISSO-PB, which boasts low dielectric properties and high heat resistance in high frequency domains, is utilized in the copper clad laminates in 5G communication equipment. At the Nippon Soda Group, we are working to reinforce our technical services to create demand not only in Japan, Europe and the US, but also in emerging markets.

The provision of high-functional materials to the information and electronics fields will continue to be an important theme, and we will focus on developing new materials and supporting technological innovation.

VP-POLYMER, Supporting the Foundation of a Digital Society

To draw an electric circuit on a semiconductor substrate, a photosensitive polymer is required. The Nippon Soda Group's VP-POLYMER makes use of a living anionic polymerization technique developed for NISSO-PB, and contributes to the manufacture of semiconductor structures, which require advanced microfabrication techniques.

In line with increasing demand for VP-POLYMER, we completed construction to expand the production capacity of the Chiba Plant in order to secure a stable supply.

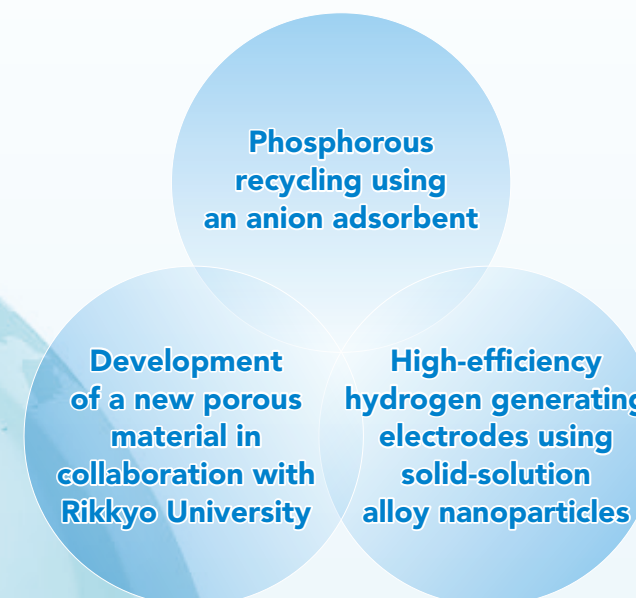
We continue to respond to expansion of the information and communications fields while developing new polymer materials that meet customer needs.

Innovations to Achieve a Low-carbon Society

At Nippon Soda, we understand that climate change is a major problem facing society. As such, we have long engaged in efforts to enhance technologies that can provide solutions to the issue. Further, in addition to supplying low-carbon products, we have worked to increase our expertise by collaborating and promoting research with external institutions, aiming to acquire technologies that we believe are key for the social implementation of our solutions.

Currently, we are providing a range of environmental solutions based on water treatment technologies, resource recycling technologies, and adsorption and removal technologies for harmful substances. We are also focusing on hydrogen, which is a resource that can greatly contribute to a low-carbon society. Hydrogen is garnering worldwide attention as it does not produce CO₂ when used as energy. Hydrogen thus has an important role to play in achieving sustainability, and at Nippon Soda, we are examining its potential as next-generation clean energy.

Nippon Soda Group Initiatives



Feature

Achieving a Low-carbon Society



The World's First Synthesis Technology for Platinum-tungsten Solid-solution Alloy Nanoparticles

Through joint research with Kyoto University, we became the first in the world to synthesize a solid-solution alloy nanoparticle using platinum and tungsten. When used in the electrolysis of water, this technology succeeded in generating a hydrogen evolution reaction (HER) that demonstrated the world's highest level of catalytic activity. The hydrogen generation efficiency per unit mass of platinum is approximately 3.6 times higher than current HER electrode catalysts, a dramatic improvement in electrocatalytic activity. Previously, as platinum and tungsten have different oxidation-reduction potentials, it had been difficult to synthesize the two using conventional manufacturing methods. With the use of inter-element fusion technologies, however, mixing platinum and tungsten at an atomic level became possible. The results of this joint industry-academia research project were received with wide acclaim from external parties, and were even noted in an international journal published by the American Chemical Society.

At Nippon Soda, one of our strengths is our extensive knowledge of inorganic metal chemistry, which is due in part to our long-term research into metallic sodium and metallic lithium. Through these platinum-tungsten solid-solution alloy nanoparticles, and the ensuing progression in the development of materials for HER catalysts, we look forward to the spread of clean energy and the creation of a safe, eco-friendly society.

Key Elements of the New Development



Environmentally Friendly R&D for a Sustainable Society

At the Nippon Soda Group, we possess numerous excellent core technologies. In particular, we have strengths in organic synthesis technologies used in R&D on agrochemicals, production technologies that uphold efficient, stable production, and manufacturing management. In an industry-academia project with Rikkyo University that made use of these unique technologies, we succeeded in the development of a new functional porous material—a metal-organic framework (MOF). As MOFs can store hydrogen gas, we are planning to apply them to safe hydrogen gas storage materials, while we also believe they could help to spread and promote hydrogen fuel cell vehicles. Further, in line with growing environmental awareness across the globe, we have engaged in the development of agrochemicals without the use of petroleum, while we have also stayed ahead of the curve in our research, as proven by our involvement in the dawn of biopesticides. With our environmentally friendly production methods and expertise, we have considerable advantages in an array of fields.

In our long-term vision and medium-term business plan, our focus is on the four fields of agriculture, healthcare, the environment, and ICT. While anticipating future needs, we will look to launch new businesses. Moreover, while continuing to proactively incorporate external technologies and ideas, we will work to create next-generation innovations and further contribute to sustainability in society and the environment.



Carrying the Power
of Chemistry Forward
and Contributing
to the Achievement
and Development
of a Sustainable Society

Eiji Aga

Representative Director, President

My Hopes for
the Company in
Its 101st Year

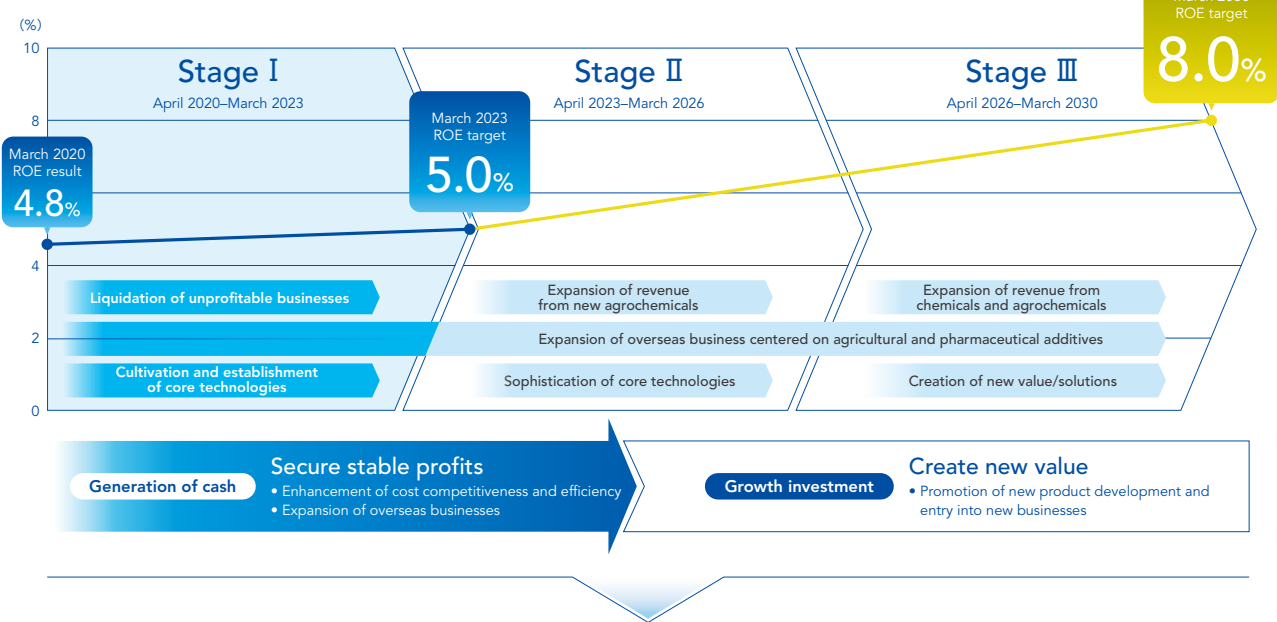
I would like to begin by expressing my sincere thanks to all of our shareholders and investors for their continued support. I assumed the role of Representative Director and President in April 2021. As the Company enters its 101st year, I feel a strong sense of responsibility as the new president of Nippon Soda. While respecting and appreciating the Company's tradition, I am fully committed to further increasing our corporate value in anticipation of the next 100 years. To improve on the source of our value creation, and achieve change with a view to the future, I will work to guide the Company through structural reform and new value creation. It is essential that, while valuing the weight of our history, our young employees can work with a spring in their step. We must achieve strong corporate growth that enhances their desire to work with us for the long term. This, I believe, is the role I have to fulfill as president of the Company.

Stage I:
Steady Progress
in Establishing
a Robust
Foundation

In the long-term vision we formulated in May 2020, we outlined our aims to achieve sustainable growth through reforms to build a business portfolio that produces stable earnings and is resilient to changes in the business environment. Looking ahead, "Transitioning to a Highly Efficient Business Structure—Raising Our Profit Efficiency to More Than Double the Current Level" will shape our basic strategies, and we will therefore move away from a profit- and loss-based management approach to an ROI (return on investment)-based management approach that considers capital efficiency. We are currently moving forward with efforts to reform our business structure into one that is more efficient. As part of these efforts, we are working to shift to a high-added-value product lineup, and by selling and reorganizing businesses that do not justify capital costs. For example, we are promoting growth investments that prioritize investment efficiency. Our targets for FY 2030—the year ending March 31, 2030 and the final year of our long-term vision—are to achieve more than 10% ROS (operating margin), more than 7% ROA (operating profit ÷ total assets), and more than 8% ROE (net profit ÷ equity capital) .

The ten year-period of our long-term vision has been split into three stages, each of which is a medium-term business plan with its own progressive milestone. Our first medium-term business plan, "Brilliance through Chemistry Stage I," is a three-year period in which we are aiming to establish a robust foundation. Through measures mainly aimed at expanding our high-added-value businesses and liquidating our unprofitable businesses, we will increase profitability and stability, with ¥7 billion net profit and 5% ROE as our targets. In FY 2021 (the year ended March 31, 2021), the first year of Stage I, net sales totaled ¥139.4 billion (down 3.7% year on year), operating profit came to ¥10.0 billion (up 22.7% year on year), ordinary profit was ¥12.7 billion (up 23.6% year on year), net profit stood at ¥7.4 billion (up 8.9% year on year), and ROE at 5.1% (up 0.3 pt year on year). These figures marked a favorable start, with all achieving the medium-term business plan targets in the very first year. Regarding shareholder returns, we achieved a dividend payout ratio of 43.1% with an annual dividend of ¥110. Meanwhile, total return ratio, which includes the purchase of treasury shares, was 108.2%.

Roadmap of the Long-Term Vision "Brilliance through Chemistry 2030"



We will generate stable cash flows in existing businesses and create new value through growth investment.

In the Chemicals Business, although applications for automobiles, pulp, and aircraft slumped in the first half of the year due to impacts from the COVID-19 pandemic, continued strong performance in pharmaceutical additives contributed to a gradual recovery in the second half of the year. The Agro Products Business, meanwhile, felt little impact from changes in the external environment, and progressed strongly mainly due to sales for export. In the Trading Business, external factors caused a decrease in sales, while the Construction Business felt impacts from a reduction in plant construction work. Note that the Chemicals Business posted an impairment loss of ¥1.7 billion due to structural reforms in some facilities (fixed assets) related to fine chemicals, as well as in caustic potash and other related businesses. Despite an increasing number of restrictions on our business activities brought about by the pandemic, we were able to execute specific structural reform initiatives, and take a huge step toward transforming our business portfolio, a key element of our long-term vision.

**Creating New Value
through Expansion
of Existing
Businesses and
Strategic Growth
Investments**

Regarding our growth driver, the pharmaceutical additive NISSO HPC, we have completed work to increase production capacity at our Nihongi Plant, and began shipping from this new facility in July 2021. As demand grows for NISSO HPC not only in pharmaceutical applications, but in healthcare, such as for health supplement tablets and other food products, there are huge expectations from customers for the product's capabilities—namely its outstanding compressibility—and our advanced expertise in quality control and global technical services. As such, we are already moving forward with preparations for another production facility expansion focusing on future demand. For our Agro Products, we are investing in mass-production facilities for our new acaricide DANYOTE (acynonapryr) and new fungicide MIGIWA (ipflufenquin), both of which went on the market in Japan in FY 2021, and will focus on developing and expanding sales of both products overseas. Further, with an eye on overseas expansion for our existing agrochemicals,



**Materialities to
Increase Corporate
Value and Help
Resolve Social
Issues**

we are working to optimize our logistics and production systems to enhance profitability. In the field of ICT, we have begun supplying samples of a new resin for use in 5G communication equipment, and we are also examining a new production system. Elsewhere, we are working with external corporations to conduct joint R&D on next-generation organic electroluminescence materials that do not use rare metals, utilizing the extensive library of compounds and knowledge of synthesis technologies we have accumulated in our Agro Products Business. We are aiming for mass production by 2022.

Based on our CSR Activities to Protect Corporate Value and CSR Activities to Improve Corporate Value, we have adopted the idea of dynamic materiality, and are enhancing the effectiveness of our initiatives through continued monitoring of each. Further, the KPIs for each materiality were determined based on the long-term changes we experienced in Responsible Care, CSR, and sustainability, while also taking ESG into account. The four fields we have identified as materialities—important issues that we believe will contribute to society and increase corporate value—are agriculture, healthcare, environment, and ICT. Through solutions in these fields, we will increase our corporate value. In “Brilliance through Chemistry Stage I,” our medium-term business plan for 2020–2022, we have targeted agriculture and healthcare as two fields in particular for proactive growth investments.

In the field of agriculture, as the Ministry of Agriculture, Forestry and Fisheries’ “Green Food System Strategy,” the European Green Deal, and other initiatives for a Sound Material-Cycle Society gain momentum, at Nippon Soda we are making steady progress with new growth opportunities. Specifically, we are working to expand sales of low-risk agrochemicals such as biopesticides, develop biostimulants, and develop formulations for smart agriculture. To date, we have launched numerous agro products in compliance with safety standards that have become increasingly diverse over time. In Europe and other overseas markets, however, food safety regulations are becoming more stringent every year. As such, with an eye on long-term growth, we are investing in the R&D of products that comply with new, high-level safety criteria, so that we can contribute to agriculture and food security.

In healthcare, in addition to rising health consciousness, fields of application are expanding for our NISSO HPC pharmaceutical additive. Up until now, NISSO HPC has seen worldwide support as an essential additive for formulating pharmaceuticals, but as a result of its safety and outstanding functionality, it has also been garnering attention in food product markets, where it is sold under the CELNY brand name. Due to its excellent ability to formulate tablets from turmeric and other natural ingredients, supply volumes are increasing for use in supplements. Further, in the sodium stearyl fumarate (SSF) business—which we acquired from Maruzen Chemical Trading Co., Ltd. in 2020—we are conducting R&D on how to apply NISSO HPC technologies to SSF to formulate tablets with materials that are difficult to mold. Looking ahead, we aim to help all people lead healthy lives through the development of new applications and fields for NISSO HPC.

Initiatives and Effective Technological Development Aimed at a Low-carbon Sound Material-Cycle Society

As a chemical company, at Nippon Soda we are engaged in Company-wide business activities with the aim of reducing our environmental impact. In our production processes, through research into production technologies we have optimized energy consumption, introduced energy-saving equipment, and implemented other energy-saving measures. Through these efforts, we are continuously working to improve our energy consumption. Further, in addition to our existing efforts aimed at a modal shift in transportation, we have also launched a logistics improvement project. And so, in reviewing logistics within our worksites and shortening lines of flow, we are aiming to reduce our energy consumption. Further, by withdrawing from the caustic potash business, in 2022 we expect to be able to reduce our GHG emissions by 32% compared to FY 2014.

In recent years, hydrogen has been attracting attention as a next-generation energy source to be utilized in the realization of a low-carbon society. At Nippon Soda, as a result of an industry-academia collaboration, we have succeeded in the synthesis of a platinum-tungsten solid-solution alloy nanoparticle. When used in the electrolysis of water, this technology can generate a hydrogen evolution reaction (HER) with the highest level of catalytic activity in the world. This technology will be significant in the manufacture of hydrogen energy—a clean alternative to fossil fuels—and there are huge expectations from all circles for it to be an effective technology for achieving carbon neutrality. Moving forward, while carefully considering changes in our business environment, we will look to make strategic investments aimed at the development and implementation of carbon neutral technologies. Meanwhile, as we work to create a Sound Material-Cycle Society, resource recycling is a key issue. At Nippon Soda, we have long provided products that contribute to the reduction of industrial waste. More recently, we have succeeded in the joint development of a new adsorbent that can quickly and efficiently adsorb, remove, and recycle phosphoric acid and other elements found in wastewater. We are currently examining its commercial potential as an effective product for a Sound Material-Cycle Society.

Respecting Diverse Mindsets and Creating an Organization That Achieves Growth through Stimulation

Labor mobility is accelerating every year. At Nippon Soda, we are reinforcing our efforts to improve working environments, diversity, and resilience.

As an organization, it is essential that, from a diversity standpoint, we create a more open workplace culture. Until last year, I was the director in charge of human resources, and I always had great expectations of individuals who could constantly provide new stimulation. When I was younger, on occasion I could be quite impertinent and not afraid to speak my mind. But it was thanks to my superiors—who valued our individuality—and the excellent network I had around me, that I was able to get to where I am today. An in-house culture that respects diverse mindsets and facilitates lively discussions is paramount for corporate growth. Diversity in gender, age, nationality, ability and disability, and the sharing of diverse ideas among these individuals, can lead to corporate development. To ensure that the ideas of our employees are not dismissed simply based on the judgement of their superiors, I hope to create an organization that facilitates the open exchange of opinions, and form workplaces that are brimming with more energy than ever before. In doing so, looking beyond our long-term vision toward sustainable corporate growth, the aim is to create a company that our employees can be proud to call their own.

Due to the COVID-19 pandemic, we are accelerating workstyle reforms, with many offices adopting open seating plans and work-from-home systems. While maintaining a thorough business continuity plan as a chemical company, now is an opportunity for us to overthrow existing concepts and

Strong, Flexible Growth Over the Next 100 Years



incorporate different office locations, changes in personnel deployment, and other measures that will help us create a working environment that enables diverse personnel to demonstrate their full capabilities.

Further, in line with changes to the Corporate Governance Code in 2021, a key issue for us is to reinforce our development of core personnel who can lead the next generation of our business. We are therefore examining succession plans and medium- to long-term personnel development schemes. Moreover, to secure personnel who can lead businesses that contribute to growth in overseas markets, when the timing is right we will look at sending promising young employees overseas, and hiring from overseas ourselves.

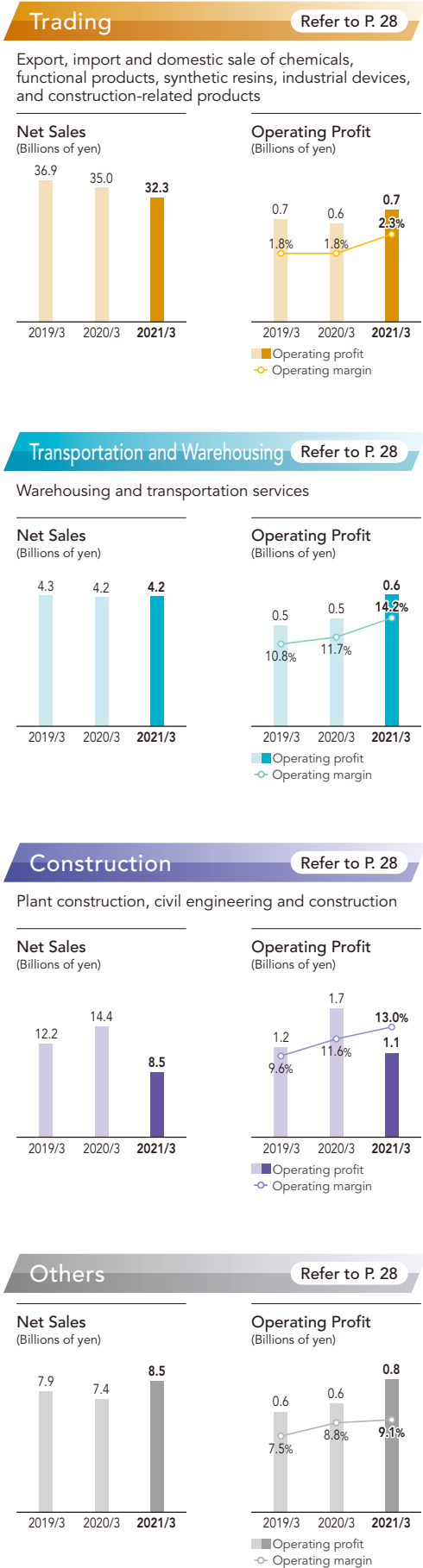
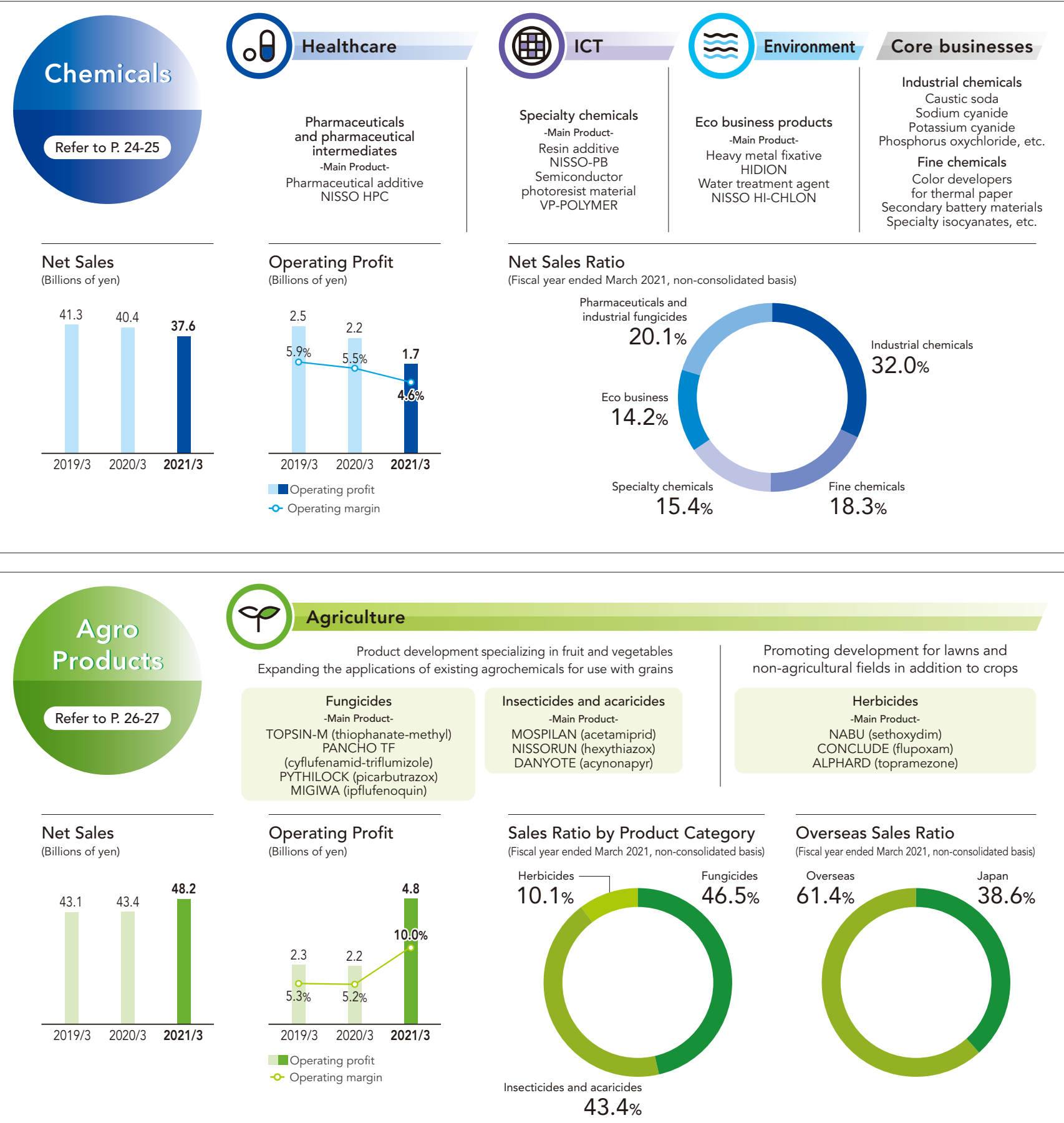
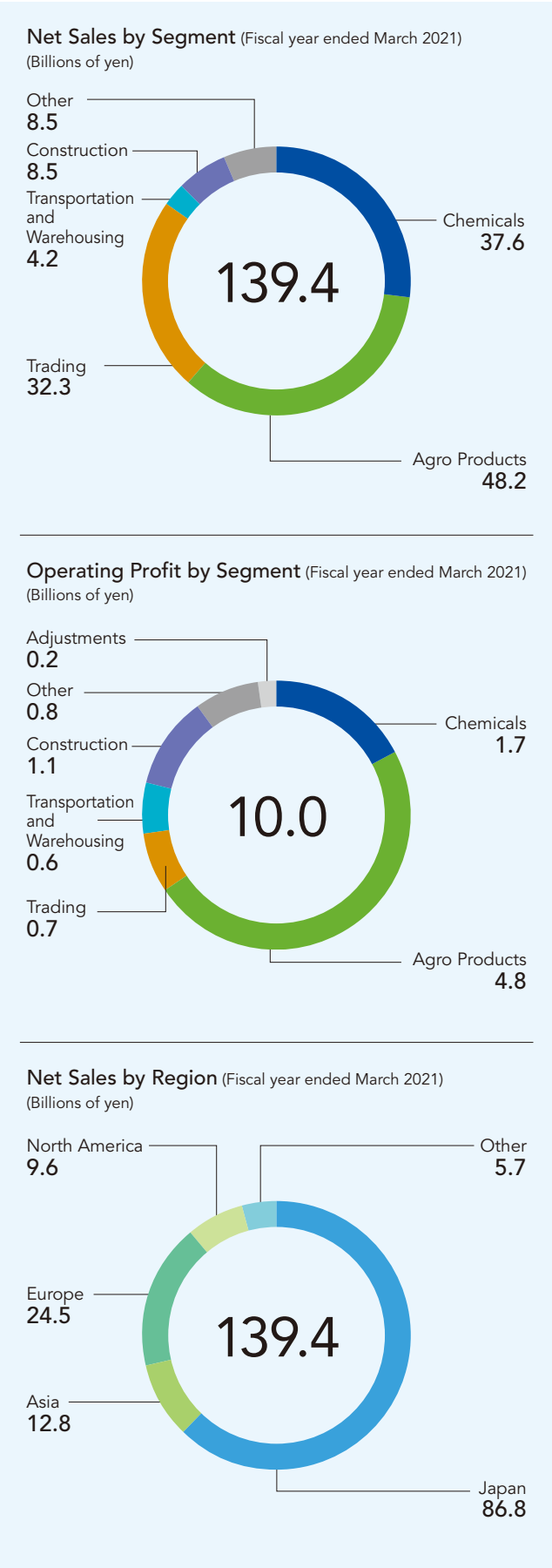
My aim is to steer Nippon Soda toward sustainable growth as a chemical company that creates new value for the next generation through original products and services suited to contemporary society. In doing so, I hope we can contribute to the achievement and advancement of sustainability. To realize this goal, not only will I work to maintain the unique, sincere, and honest corporate culture built by our predecessors, I will look to make the transition to a strong, flexible company that can transform social changes into growth opportunities.

Regarding shareholder and investor returns, we will strive to maintain stable dividends based on the shareholders' return policy outlined in "Brilliance through Chemistry Stage I." And, in addition to establishing a sound, robust financial base, we aim to achieve sustained profit growth.

In the next 100 years, we will remain focused on our efforts to create new value for the next generation through the power of chemistry. To our various stakeholders, I ask for your continued support, and ask that you look forward to the future of the Group.

Eiji Aga
Representative Director, President

The Nippon Soda Group is a corporate group that uses chemistry to create superior products and services around the world, and contributes to the realization of a sound society. The Chemicals and Agro Products businesses are the core of the Group. They primarily involve the manufacture and sale of chemicals, and the provision of services.



Chemicals

Health consciousness and interest in preventive healthcare are on the rise, yet at the same time we are facing such environmental issues as global warming and the creation of a recycling-based society. Progress in information and communication technologies that support the popularization of smart devices, etc., are becoming worldwide trends. In this environment, the Chemicals Business considers the materiality (important issues) of the market to be healthcare, environment, and ICT. By concentrating on offering the technologies and services that we have developed over many years in these fields, we can contribute to healthy living, help achieve environmentally sound recycling of resources, and innovate technology in the information and communication fields.



50 years
of experience

Domestic top-level
industry penetration rate

Overseas sales ratio:
62%

➤ NISSO HPC

Pharmaceutical additive NISSO HPC is a derivative obtained by reacting propylene oxide with cellulose. It is used as a binder to form tablets primarily for pharmaceuticals. As one of the few additives that dissolves both in water and alcohol, it provides high performance for pharmaceuticals through its binding force that increases the hardness of tablets, leading to the gradual, sustained release of active ingredients. For these reasons, it has been well recognized as an additive essential for the manufacture of pharmaceuticals. For example, its outstanding binding force can help to reduce tablet size, its excellent sustained release properties can reduce dose frequency, while it can also maintain the concentration of active ingredients in blood. In these and other ways, NISSO HPC offers outstanding performance in response to the issues facing customer applications. The Nippon Soda Group possesses manufacturing facilities and management systems that conform to very high-quality control standards. Our trust in "quality" is the brand power of NISSO HPC.

The worldwide market for pharmaceuticals is growing about 4% a year. While NISSO HPC boasts the top-level industry penetration rate in Japan, demand is also increasing in Europe, North America, and also in the markets of emerging countries like India and China, where living standards continue to improve. By accelerating efforts to expand sales of NISSO HPC, bringing new pharmaceutical additives to markets, improving product performance, and offering support services for pharmaceutical formulation technologies, we will look to grow our business over the medium to long term.

Under the brand name CELNY, NISSO HPC is also seeing increased use in food product fields such as supplements. Thanks to its superior binding force, CELNY enables the formulation of tablets containing many natural ingredients, which typically are difficult to form. This means that the quantity and frequency of supplements that need to be taken can be reduced.

To further enhance the product's added value, in May 2020 we acquired a sodium stearyl fumarate (SSF) business. In the future, we expect to be able to combine use of NISSO HPC and SSF in an array of pharmaceutical tablets, and use this

combination to create tablets from materials that are difficult to form, and increase tablet hardness.

To meet the increasing demand for NISSO HPC, we began work to increase the production capacity of the Nihongi Plant (Joetsu City, Niigata Prefecture) by 30%, and construction was completed in July 2021. We have positioned the Cellulose Technical Application Center (CTAC) as a hands-on collaborative facility where we can work with customers to create new value for NISSO HPC. We are also focusing on R&D as we aim to expand applications of NISSO HPC. Even amid the pandemic, we are conducting online meetings with our customers and engaging in active discussions to develop new solutions.



The expanded Nihongi Plant



Proprietary living anionic
polymerization technology

Supply capabilities that respond
to increasing demand

➤ Resin Additive NISSO-PB

Our resin additive NISSO-PB, which is a functional polymer, is a unique liquid polymer that was developed from our living anionic polymerization technology. It does not deteriorate much as it ages, and has various superior characteristics such as electrical properties, high heat resistance, chemical resistance, and water resistance. As such, it is used in adhesives, resin additives, and paint and coatings. Its demand as a resin modifier of printing materials for use in flexographic printing plates, which is expanding worldwide, is firm, and demand has recently been increasing in the ICT field as a material for touch panels for smartphones and tablets and as an additive in copper clad laminates used in base stations for wireless communications.

Demand in the electronic materials field lies in communications technologies such as 5G. By accurately identifying needs in this field, we aim to have our materials adopted as the industry standard while creating new businesses.

➤ Semiconductor Photoresist Material VP-POLYMER

VP-POLYMER is a polymer derived from the living anionic polymerization technique used for NISSO-PB, and it is used in KrF photoresist materials for semiconductors. As the need increases for larger-capacity and higher-speed semiconductors, demand is increasing for VP-POLYMER because of the transition from i-Line photoresists to KrF photoresists and the popularization of 3D NAND memory. In 2018, construction to expand the Chiba Plant (Ichihara City, Chiba Prefecture) was completed, providing a stable supply system.

We will continue to provide new polymer materials to meet customer needs in the future.



Proprietary dissolution rate
control technology

Expansion of major products

➤ Developments in the Water Treatment Field

The Nippon Soda Group's environmental business started with agents for disinfecting and sterilizing water. In this field, one of the Nippon Soda Group's strengths is technology to control dissolution rate. This technology, which is the result of accumulated research, has much in common with that used for drug delivery systems (DDS)* for pharmaceuticals. We have many examples of collaborative development of solutions for market needs that our partners such as manufacturers and trading companies pick up. A representative example is a jointly developed kitchen product that removes slime from drains.

The market for MITAGEN, an enzyme-microbe preparation that improves the performance of wastewater treatment, has

also been expanding, not only in Japan but also in countries such as China, where there is increasing awareness of the need to reduce the environmental burden of industrial wastewater.

Looking ahead, we will position our ALM-S1 heavy metal fixative for wastewater as a strategic product, look to grow it into a core product that stands alongside HIDION, our heavy metal fixative for fly ash treatment, and in turn grow our environmental business.

* Technology to control the delivery of drugs within the body and maximize the effect of the medicine while minimizing side effects



Visit our website for more details on our main products
https://www.nippon-soda.co.jp/e/fields_and_products/

Agro Products



As a result of the increase in meat production due to worldwide population growth and economic growth, the need to improve the efficiency of the production of food and feed has become an issue. At the same time, there are concerns about an increase in crop pests caused by global warming. The Nippon Soda Group considers contributions to ensuring food safety and security and sustainable agriculture using agrochemicals as materiality (important issues), and will contribute to solving agricultural and food-related problems under the themes of increasing production of food and feed worldwide, diversifying crop protection, and improving safety for users of agrochemicals.



Increasing sales in niche markets around the world, particularly fungicides, insecticides, and acaricides for fruit and vegetables

Market Environment for Agrochemicals

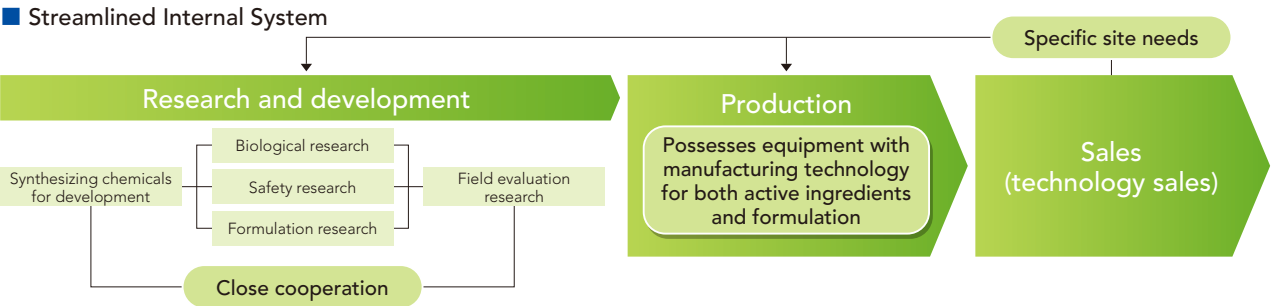
Although the demand for food will increase with population growth, the amount of arable land remaining worldwide is limited. Therefore, the demand for agrochemicals that make it possible to ensure crop yields and reduce labor is expected to grow mid-to-long term. However, the barrier is high to bring products to the market that are safe and environmentally friendly to water, soil, etc., and various aspects must be considered from the research and development stage. As development costs of new agrochemicals increase due to stricter safety standards, one issue we must look at is how to compete with ever-growing, major international agrochemical manufacturers that focus on the grain market.

The Nippon Soda Group is developing specialized products for fruit and vegetables. These are very niche markets with comparatively less competition with major overseas manufacturers and generic products, and there is no competition with genetically modified seed varieties that reduce the need for agrochemicals. However, by expanding the application of existing products to the grain market, we intend to reduce the impact of costs through increased sales volume and economies of scale. Additionally, by supplying agrochemical ingredients to major overseas manufacturers and developing mix formulations, we can expand globally while differentiating our products from generic products.

The Value Chain and Our Strengths

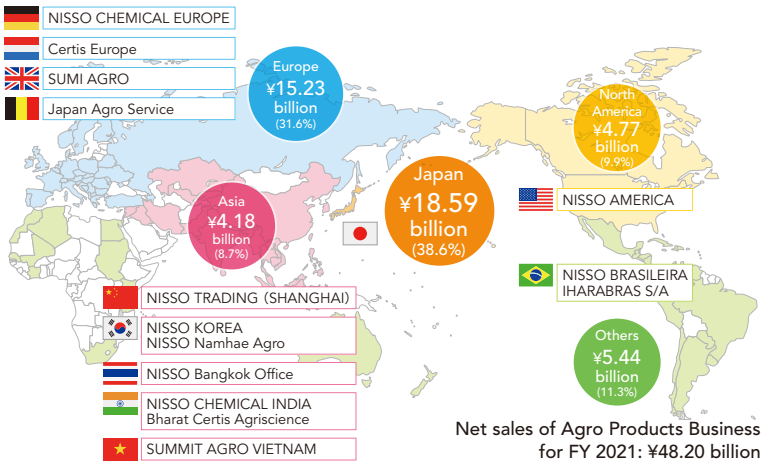
The sales staff of the Nippon Soda Group are knowledgeable about agriculture technology, and they conduct awareness-raising activities and hold seminars domestically and abroad to give farmers and community members an accurate understanding about the safety and usage of agrochemicals. They also exchange information with farmers and pay attention to even their smallest needs while providing feedback to the research and development department. In addition, they contribute to the improvement of existing products and the development of new agrochemicals through repeated evaluation and analysis.

In terms of production, our comprehensive system means that all processes from the manufacture of active ingredients to the formulation of agrochemicals can be performed within the Group. We have created a value chain that can be consistently managed within the Group. It encompasses synthesizing chemicals for development, biological research, safety research, formulation research, field evaluation research, production, and sales, which allows us to develop and manufacture agrochemicals efficiently.



Promoting Global Expansion

The Nippon Soda Group started expanding overseas early on, and in FY 2021 the overseas sales ratio reached about 61%. Because we are developing products specifically for fruit and vegetables, our sales ratio in Europe is increasing, but as we are also expanding the application of our products for grains, our sales in North and South America have also been increasing recently. In particular, we see Brazil as a major market, and through local distributors we are collecting requests and information from customers to develop products and further expand sales. Also, we are focusing on promotion and awareness-raising activities in countries in Asia such as India, Indonesia, Thailand, and Vietnam as we aim to contribute to securing a higher food yield in the global market.



Efforts to Bring New Agrochemicals to Market

Based on our “food safety and security” motto, we develop safe agrochemicals only after estimating and evaluating their effects on the human body, and investigating and analyzing the actions of metabolites and degradants in animals, plants, and the environment. For the frontlines of food production, we select potential compounds for use in new agrochemicals while placing top priority on efficacy only against pests that are causing problems or may pose a future problem with local food production, low residual agricultural chemical content, and activity with a low dose.

As agrochemicals can only be registered for use with specific crops, for farmers who grow multiple crops within a narrow area, using the correct pesticides for the correct crops can be both an operational and financial burden. At the Nippon Soda Group, using our long experience in the development of agrochemicals, we are examining ways to register agrochemicals for multiple crops in one go so as to reduce the burden on farmers.

Since 2017, in Japan we have commenced sales of the fungicide PYTHILOCK (picarbutrazox), the acaricide DANYOTE (acynonapyr), and the fungicide MIGIWA (ipflufenquin). In the near future, we will work to achieve 10 billion yen in sales through these three agents.

Product name	Classification	State of development / characteristics	Launch
PYTHILOCK (picarbutrazox)	Fungicide	<ul style="list-style-type: none">New modes of action, effective against fungi that are resistant to existing fungicidesOn sale in Japan and South Korea, under development for vegetables for Europe and the USConclusion of global licensing agreement with Syngenta, under development as a new seed treatment agentRegistered in the US in March 2021Expected to be registered in Canada in the second half of 2021	2017
DANYOTE (acynonapyr)	Acaricide	<ul style="list-style-type: none">New modes of action, and effective against resistant spider mitesImmediate effectivity and low impact on beneficial insectsWent on sale in Japan in October 2020, under development for the US	2020
MIGIWA (ipflufenquin)	Fungicide	<ul style="list-style-type: none">New modes of action, effective against fungi that are resistant to existing fungicidesEffective against a wide range of pests, expected to become a major fungicideCommenced domestic sales in February 2021Applications made for registration in the US and Europe, and under development for other regions	2021

Expanding Applications Based on Existing Agrochemicals

For our existing, main agrochemicals such as the fungicide TOPSIN-M (thiophanate-methyl) and insecticide MOSPILAN (acetamiprid), the spread of generic products has caused challenges in maintaining revenue. We will thus work to increase sales by expanding applications from fruits and vegetables to grains.

In differentiating TOPSIN-M (thiophanate-methyl) from generic products by developing a mix formulation, we will look to expand sales in the markets of emerging nations. Meanwhile, MOSPILAN (acetamiprid) has cleared strict usage standards in Europe, and opportunities for sales are increasing. By diversifying the methods of application and pests the product can be applied to, we will seek registration in various countries overseas, and move forward with measures to extend product lifecycles.

In addition to expanding our product portfolio through business acquisitions, we will work to expand into related fields such as greening businesses, while focusing on synergy with existing products. In response to increasing global awareness of environmental protection, we will also focus on developing biopesticides.

Product name	Classification	State of development / characteristics	Launch
TOPSIN-M (thiophanate-methyl)	Fungicide	<ul style="list-style-type: none">Become established in North and South America for soybeansExpand sales in the markets of emerging nations, particularly for paddy rice in AsiaDifferentiation from generic products by developing mixing agents	1971
NISSORUN (hexythiazox)	Acaricide	<ul style="list-style-type: none">Consistent performance with corn and nuts in the USBecome established in Asia for paddy rice, expand applications for vegetables	1985
MOSPILAN (acetamiprid)	Insecticide	<ul style="list-style-type: none">Expand sales of mix formulations for soybeans in BrazilAim to expand sales as a replacement for competitive products in EuropeIncrease sales opportunities because of use restrictions of competitive products	1995
PANCHO TF (cyflufenamid-triflumizole)	Fungicide	<ul style="list-style-type: none">Consistent performance in Europe for fruit, vegetables, and wheatExpand application to fruit and vegetables in the US	2003

Highly specialized trading, transportation and warehousing, construction, and other businesses

Trading

Nisso Shoji Co., Ltd. is a specialist trading company that handles functional chemicals, synthetic resins, industrial devices, and environment-related products. Since its founding, it has gone on to expand its business domains. Overseas, it is currently making progress with regional strategies suited to each market, predominantly in Asia and India.

It has set “pharma / healthcare,” “plant solutions,” and “life innovation” as three strategic fields for growth, and in the future, it will continue to enter other new business fields.



Transportation and Warehousing

Sanwa Soko Co., Ltd. was established when the transportation and warehousing departments were spun off from Nippon Soda. With its accumulated knowledge in handling substances including particularly dangerous, toxic and hazardous chemicals and pharmaceuticals, the company boasts the latest logistics facilities, and can build high-quality logistics systems that can instantly respond to clients' needs. Based on its “safe and reliable” motto, the company provides a total logistics service that encompasses everything from selecting logistics sites to delivery in and out of warehouses, storage, customs, distribution processing, and final delivery.



Construction

Nisso Engineering Co., Ltd. offers a comprehensive range of engineering services for various plants, systems, and equipment, while it also offers post-delivery maintenance and energy-saving measures. In particular, the company has extensive expertise in manufacturing equipment and engineering technology for handling specialty chemicals and pharmaceuticals, and has earned a high degree of trust with its powder handling technologies.

In addition to sophisticating its milli-scale devices and other proprietary technologies, the company is working to improve its engineering capabilities and work productivity by utilizing AI and IoT.



Others

Nisso Metallochemical Co., Ltd. utilizes chemical manufacturing technology, alloy manufacturing technology, high-difficulty waste treatment technology, and others to offer recycling-based environmental solutions, and in turn contribute to the creation of a recycling-based society.

Elsewhere, Nisso Fine Co., Ltd. manufactures functional products, has a resin-forming business, and provides consignment production services.



TOPICS

Establishment of a New Production Technology Research Building at the Nihongi Plant

Promoting digital transformation with the introduction of advanced equipment using AI and other technologies

The Nihongi Plant is responsible for researching and improving manufacturing technologies, designing manufacturing processes and building facilities for new products, and providing manufacturing technology support to Group manufacturing hubs both in Japan and abroad. It is predominantly a production site for chemicals and agrochemicals, and is in charge of production of the pharmaceutical additive NISSO HPC, which is the Nippon Soda Group's core product. Aiming to promote digital transformation at the Nihongi Plant, we have invested 1.3 billion yen into the creation of a new production technology research building inside the plant grounds. Construction began in March 2021, and is expected to be completed in May 2022.



Artist impression of completed building

- ▶ Scheduled for completion in May 2022
- ▶ Three floors; total floor area of 1,866 m²

Key Point 1

Introduction of advanced equipment

The new research building will contain the latest equipment utilizing AI and computer-aided engineering. By rapidly ascertaining optimal production process conditions through computer simulations, it will be possible to shorten development times, quickly enable mass production, and in turn reduce production costs.

Key Point 2

Horizontal deployment of accumulated technologies and expertise

We will roll out the technologies and expertise we accumulate through digital transformation (DX) at the Nihongi Plant to the Takaoka Plant, Mizushima Plant, Chiba Plant, and other Group plants in Japan. We will also promote digital transformation at all of our domestic production sites.



Izumi Takano

Director, Executive Managing Officer (Supervision of Technology, Purchasing & Logistics Dept., Responsible Care Management Dept., and Manager, Trade Administration Dept., and General Manager, Research & Development Div.)

Linking the Project to a Robust Business Foundation and Further Improving Corporate Value

Up until now, research facilities within the Nihongi Plant had been located in separate areas. With the construction of this new production technology research building, however, we will be able to integrate our research functions, and we hope to make effective use of our resources, such as experimental facilities, research personnel, and more. Further, by reinforcing synergy between our manufacturing process expertise and manufacturing know-how, we will accelerate efforts to commercialize pharmaceutical additives and agrochemicals. This new project is linked to elements of our long-term vision and medium-term business plan—optimizing R&D, promoting new product development, and quickly bringing new products to market. We will make steady progress to ensure we can further enhance our corporate value.



Responsible Care Activity
Base to Achieve “Brilliance
through Chemistry” and Drive
Sustainability-focused Management

Kiyotaka Machii

Director, Executive Managing Officer
(Supervision of Administration, CSR Promotion,
and Internal Control & Audit Dept.)

At the core of our sustainability-focused management is our practice of Responsible Care with respect to the environment and society, all of which began with our Declaration on the Promotion of Responsible Care Activities in 1998. Responsible Care promotes voluntary health, safety, and environmental activities in everything from development, manufacturing, logistics, and use, to post-use disposal and recycling of chemical substances. The results of these activities are disclosed, and social dialog completes the PDCA cycle. In this way, Responsible Care activities are closely linked to the core elements of sustainability-focused management: ethical behavior; response to social needs and quick, continuous improvements; and proper information disclosure and communication with stakeholders. We believe these are prerequisites for continued business activity, and have termed them CSR Activities to Protect Corporate Value.

In what areas of society, then, can we offer solutions? The four fields in which we feel we can contribute have been identified as our materialities (important issues): agriculture, healthcare, environment, and ICT. In addition to making contributions through our existing products and services, we will seek to enhance and expand our businesses through R&D and M&As. We have defined these activities as CSR Activities to Improve Corporate Value, and believe they are closely linked to the United Nations' SDGs.

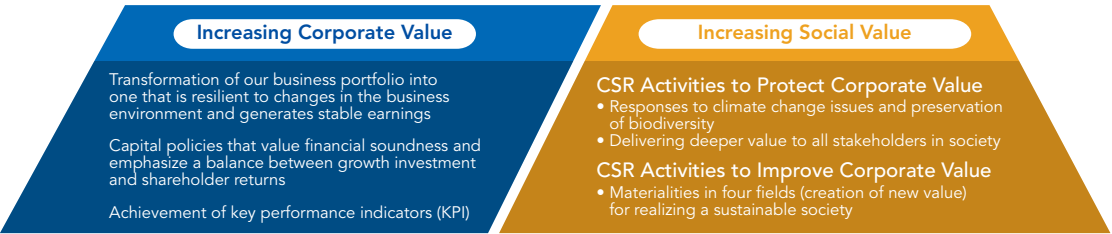
To ensure continuous implementation of CSR Activities to Improve Corporate Value and CSR Activities to Protect Corporate Value, it is paramount that we share our philosophy across our Group companies with a top-down approach, and thorough corporate governance will be essential if we are to succeed in doing so. In 2020, we transitioned to a company with an Audit and Supervisory Committee comprising 11 directors, four of whom are

independent outside directors. In giving directors who are members of the Audit and Supervisory Committee voting rights, we have been able to further reinforce our monitoring functions.

Reducing greenhouse gas (GHG) emissions is a key theme of sustainability-focused management. At Nippon Soda, through the Japan Chemical Industry Association, in 1997 we participated in the Voluntary Action Plan on the Environment,* and in 2013 the Commitment to a Low Carbon Society.* We are thus involved in a wide range of global warming countermeasures, such as efforts to reduce CO₂ emissions from our business activities, and activities to curb CO₂ emissions throughout the supply chain through the spread of low-carbon products and technologies. Further, as a company, we understand the huge expectations placed on us as a manufacturer of chemical products. Not only because we work in an industry that produces high emissions, but also because we are expected to make huge contributions to innovations in materials. Currently, we are investing in various research projects, such as those seeking to create new hydrogen-related materials. Through efforts to enhance efficiency at our manufacturing sites with energy-saving measures and improved energy consumption rate, as well as the continuous launch of new products that are suited to a low-carbon society, we hope to play our part in reducing GHG emissions.

Achieving the goals set out in our long-term vision “Brilliance through Chemistry 2030” is essential if we are to undertake sustainability-focused management. As we aim to achieve the KPIs and other targets in Stages I-III of our long-term vision—each of which is a medium-term business plan—we will work together as Group to drive a range of policies that will help us achieve them ahead of schedule.

* Led by Keidanren (Japan Business Federation)



Materiality Concept

In May 2020, Nippon Soda Group identified new materialities (important issues) in the four fields of agriculture, healthcare, environment and ICT to contribute to the creation of a sustainable society and increase corporate value in the Group's long-term vision “Brilliance through Chemistry 2030,” and its medium-term business plan 2020-2022 “Brilliance through Chemistry Stage I.” As a framework for increasing the effectiveness of the Group's materiality initiatives, we will utilize the monitoring functions of CSR Activities to Protect Corporate Value and CSR Activities to Improve Corporate Value.

Materiality

CSR Activities to Protect Corporate Value*

As a corporate organization that lives up to the trust of society, we will address three key issues: Initiatives for the environment, Social activities, and Governance.

Initiatives for the Environment	<ul style="list-style-type: none">Tackling climate change (participation in the Low Carbon Society Action Plan of the Ministry of Economy, Trade and Industry)Tackling the preservation of biodiversity (promoting activities to preserve forests and water sources)
Social Activities	<ul style="list-style-type: none">Promoting dialogue with consumers, business partners and local communities, and responding appropriatelyPromoting diversity, work-life balance and career programsConducting constructive dialogue with shareholders and investors and disclosing information in a timely and appropriate manner
Governance	<ul style="list-style-type: none">Enhancing corporate governance (transition to a company with an audit and supervisory committee)Promoting compliance management (enhance and properly operate systems and conduct training)

Responsible Care Activities

Management System and Organizational Governance	Environmental Protection	Process Safety and Disaster Prevention/BCP
Occupational Safety and Health	Logistics Safety and Quality Assurance	Chemicals and Product Safety
Together with Our Customers (Consumer issues)	Together with Our Employees (Human rights and labor practices)	Together with Our Business Partners (Fair operating practices)
Together with Our Shareholders and Investors	Together with Our Local Communities (Community involvement and social dialogue)	

For more details, see ESG Data Book 2021 (P. 9-12, 25-61)

CSR Activities to Improve Corporate Value

Aiming for the realization of a sustainable society, we are working on material issues in four fields: Agriculture, Healthcare, Environment, and ICT

Agriculture
Securing food and achieving sustainable agriculture

- Contribution to the global supply of food
- Diversification of crop protection
- Streamlining and improving labor efficiency in farming production

Healthcare
Healthy lives to all people

- Support services for high-performance products and formulation technologies

Environment
Toward a resource recycling society

- Steady supply of water resources
- Reduction of environmental burden caused by waste

Achieving sustainable plant protection

- Protection of precious trees such as pines from harmful insects

ICT
Applying the functionality of chemicals to IT devices

- Supply of high-performance materials that are friendly to the environment and people



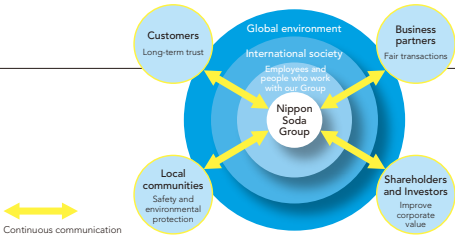
As part of our efforts to conduct CSR Activities to Improve Corporate Value, the Nippon Soda Group states in the basic CSR policy that the Company will make contributions through business toward resolving social issues and to help achieve the development of a sustainable society. In line with the CSR policy, the Nippon Soda Group is addressing efforts to achieve the Sustainable Development Goals (SDGs) that allow us to make such contributions through our products.

One company cannot tackle all of the SDGs alone, but if many different companies throughout the world do what they can toward resolving these issues, we believe that the combined efforts will result in the realization of a sustainable society.

For more information on the Nippon Soda Group's CSR concept, please refer to the following website:
<https://www.nippon-soda.co.jp/e/environment/management/>

Stakeholders

The management philosophy of the Nippon Soda Group is to meet expectations from stakeholders, including customers, shareholders and investors, business partners, employees and local communities, and promote environmentally conscious business practices and activities. The Nippon Soda Group will continue to play a significant role in realizing the sustainable development of our society. At the same time, the Group is continuing to develop as a sought-after chemical group that meets 21st-century social needs by contributing to the creation of a prosperous society based on its desire to create new value through its unique technologies and products.





Human Resources Strategy

The Nippon Soda Group's long-term vision, "Brilliance through Chemistry 2030," has identified "Enhancement of cost competitiveness and efficiency," "Expansion of overseas businesses," and "Promotion of new product development and entry into new businesses" as key issues. In implementing these strategies, our people are one of our most important management resources. We need to transform ourselves into an organization that further promotes innovation while fully utilizing the strengths we have built up over the years. We are committed to promoting diversity, developing human resources, and creating a rewarding workplace that employees can be proud of, with the aim of building an environment and organization that allows each and every one of our diverse employees to maximize their abilities, to grasp changes in society's circumstances, and to work with a positive mindset.

For more details, see ESG Data Book 2021 (P. 48-52)

Basic Policy

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

Promotion of Diversity

Diversity is one of our primary strategies for maintaining a high level of global competitiveness and sustainable growth. We believe that the creation of such a diverse work environment and organization that allows each and every one of our employees to demonstrate their abilities to the fullest extent, to grasp changes in the environment, and to work with a positive mindset will lead to the creation of new innovation.

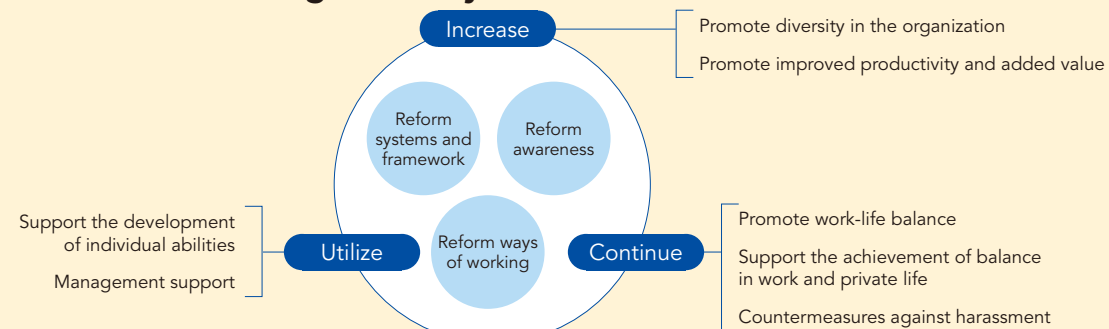
Diversity Policy

The aim of our Diversity Policy is to develop the Company by bringing together diverse people, regardless of gender, age, nationality, race, religion, and disability, while providing opportunities to gather and exchange different ideas.

We believe that having a workforce with diverse values is essential for generating new innovations and increasing global competitiveness. In this context, we recognize the promotion of diversity as an important management strategy.

As part of these efforts, we are building a foundation with both tangible and intangible measures, including a shift to a personnel system that makes the most of diverse human resources, improvement of organizational climate, and improvement of the workplace environment. We aim to be a company where motivated and capable people from around the world can thrive and shine, and grow and develop on a sustainable basis.

Three Pillars of Promoting Diversity

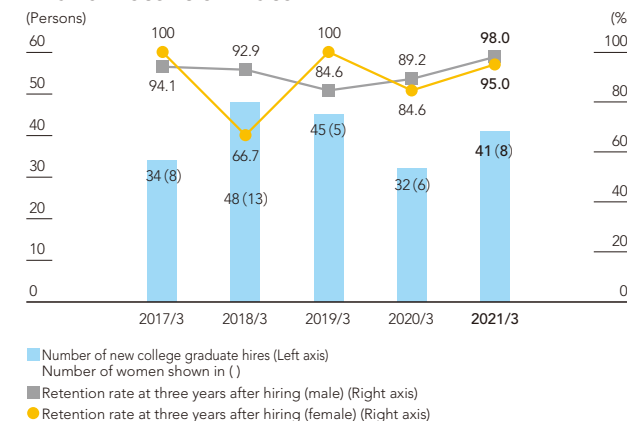


Embracing Diversity (Women and Disabled Persons)

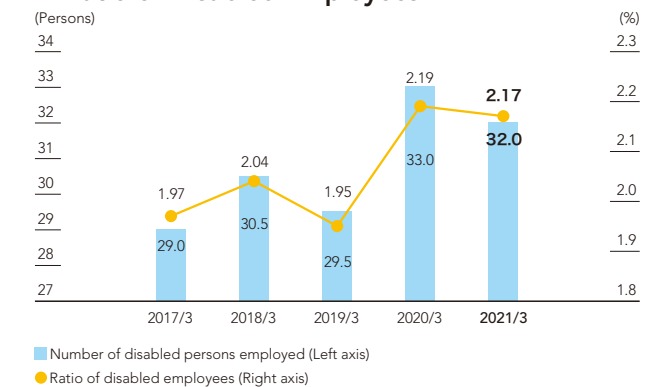
At Nippon Soda, we place emphasis on employing diverse candidates regardless of gender, age, nationality, disability, and regardless of whether they are new graduates or mid-career hires, so as to create a more diverse organization. A group of people with different values should give its members the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

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

Number of Hired Persons (by Gender) and Retention Rate



Number of Disabled Persons Employed and Ratio of Disabled Employees



Acquired Eruboshi Certification Based on the Act on Promotion of Women's Participation and Advancement in the Workplace

In August 2018, Nippon Soda was awarded Eruboshi certification by the Minister of Health, Labour and Welfare. It is awarded to companies with excellent implementation of initiatives to promote the active participation of women. This certification system is based on the Act on Promotion of Women's Participation and Advancement in the Workplace, and companies with an excellent implementation status that have formulated an action plan for the promotion of women's participation and submitted a notification to that effect are eligible to receive certification. The Company met the criteria in four items, including hiring, working hours, ratio of managers,

and diversity in career courses, and was awarded the Level 2 Eruboshi certification, out of the three levels. In our action plan, we formulate and implement plans to increase the success of our female employees with the aim of increasing corporate value and sustainable growth through diversity.



Acquired Kurumin Certification Based on the Act on Advancement of Measures to Support Raising Next-Generation Children

Nippon Soda works to promote healthy work-life balance. We have made efforts to create workplaces that allow our employees to enjoy their work and private lives in good health, and ensure job continuity even while dealing with lifestyle changes, including childbirth, childcare and other caregiving. As a result of these efforts, in October 2020 we acquired Kurumin certification from

the Minister of Health, Labour and Welfare, designating Nippon Soda "a company in support of childcare."



Enhanced Recruitment Efforts

With an eye on Nippon Soda's next generation, we are focusing on strengthening our recruiting activities to create an environment in which employees with diverse values can engage in friendly competition without being limited by past experience. For newly hired graduates, we are working to deepen understanding of the Company in as many people as

possible, regardless of gender, age or nationality, by introducing female employees on our website and by carefully responding to questions during online seminars and other events. At the same time, we shall continue to expand employment opportunities for a diverse range of human resources, including mid-career hires and people with disabilities.

Human Resources Development

In order for Nippon Soda to continue to grow in the future, the development of human resources is essential. The foundation of human resources development is education and training. In addition to on-the-job training (OJT) at the workplace, the Company conducts a variety of programs, including position based training, management training, specialized training by job type, and support for self-development to improve language skills and obtain qualifications, as well as other programs.

Educational Programs (Position-based Training)

Position	Age	Position-based training	Training for line managers	Career Development Support Program	Self-development support
Executives		Executives training			
Managers	50s	Level 3 training	Department managers training		
		Level 2 training	Section managers training		
	40s	Level 1 training			
Assistant managers	30s	Assistant managers training	Team managers training		
Staff employees	30s			Career training (advanced) (at 10 years of employment)	e-Learning Correspondence training Language training
	20s	Follow-up training		Career training (basic) (at 5 years of employment)	
New employees	20s	Orientation training		Tutor instructions (Specialized work) On-site practical training (Administrative work)	

Career Development Support Program

At Nippon Soda, we believe that it is imperative that each and every employee strives to develop their skills with a high degree of awareness in order to achieve sustainable growth in today's rapidly changing society. To support the realization of these goals, the Career Development Support Program mainly targets young to mid-career employees, helping each one of them to envision where they want to be in five to ten years' time and to manage their own skill development plans to achieve this

goal. Specifically, it aims to develop human resources who can create value with a view to the future of the Company as well as their own, based on three key elements: "Career training," as an opportunity to improve their awareness of career development, "Career vision sheets," as an opportunity for employees to draw and review their ideal image once a year, and "Career interviews," to further clarify their vision by communicating their thoughts.

Overseas Study and Training of Research and Development Personnel

With the aim of acquiring cutting-edge technology and forming global human networks, we conduct overseas research, and dispatch researchers to laboratories in organic synthesis, polymers and molecular biology. Friendly rivalry with overseas researchers has led to a higher level of research, and collaboration with the institutions to which they are dispatched can be anticipated.

In addition, we have established an overseas training program so that employees can experience what it takes to conduct business within different cultures. After passing a selective examination, the trainees spend a year studying foreign

languages abroad and undergoing practical training at overseas affiliated companies. Based on the broad view and career perspectives obtained from this experience, these employees are active in various departments.

Overseas study and training are currently stopped due to the spread of COVID-19, however we are planning to implement initiatives that offer increased opportunities for overseas work in order to foster our next generation of leaders.

Trainee (right) with a supervisor (left) who is a trainee educator in exhibition support in overseas training at Novus International Inc.



Rewarding Workplaces That Employees Can Be Proud Of

The Nippon Soda Group focuses proactive efforts on creating a work environment in which each and every employee feels a sense of fulfillment and can maximize their abilities. We support employee growth, and encourage independent career development. At the same time, we gather feedback from labor unions and other channels on what systems and work environments are desirable to support employee growth, strive to reduce overtime, and take measures to address these issues. In addition, we also provide platforms for reviews so that those in management can work more efficiently.

Number of Employees Who Take Childcare and Family Care Leave

	Number of employees taking childcare leave		Number of employees taking family care leave	
	Men	Women	Men	Women
2016/3	1	2	0	0
2017/3	2	3	1	0
2018/3	3	4	0	0
2019/3	5	10	1	0
2020/3	4	4	0	0
2021/3	8	6	1	0

Number of Employees Taking Maternity and Childcare Leave and the Return to Work/Retention Rate

	Number of employees taking maternity and childcare leave		Rate of employees returning to work (%)		Retention rate (%)	
	Men	Women	Men	Women	Men	Women
2016/3	1 (1,137)	2 (142)	100	100	100	100
2017/3	2 (1,138)	3 (152)	100	100	100	100
2018/3	3 (1,130)	6 (159)	100	75	100	100
2019/3	5 (1,143)	12 (168)	100	100	100	100
2020/3	4 (1,143)	4 (170)	75	100	100	100
2021/3	8 (1,220)	6 (176)	100	100	75	100

* The number of employees who have taken the leave is counted in the fiscal year in which they started maternity/postpartum leave and childcare leave. The numbers in parentheses are the total numbers of men and women, respectively, at the end of each fiscal year.
Retention rate is for employees who in that fiscal year were in their third year since returning to work.

Total Annual Working Hours per Employee

Scheduled working hours (hours)	Early start and overtime hours (hours)	Holiday working hours (hours)	Paid annual leave days taken (days)	Other paid leave days taken (days)	Total annual working hours per person (hours)
1,823.6	79.0	4.5	14.6	1.9	1,777.8

* Calculation period: FY 2021 (April 2020-March 2021)

Promoting Work-Life Balance and Health Maintenance

① Promoting work-life balance

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

• Physical health

We implement health programs jointly with the corporate health insurance society. Specifically, with the cooperation of occupational physicians, we conduct specific health examinations, specific health guidance, and health checkups for lifestyle-related diseases.

• Mental health

Nippon Soda conducts stress checks for all employees and has a consultation service available through specialized doctors, clinical psychologists, and external organizations.

② Measures to maintain health

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

Labor-Management Relations and Improvement of Working Conditions

The Company views negotiations with labor unions as an opportunity to engage in dialogue with its employees, and to discuss how to create working conditions that are consistent with the times. We are creating an environment in which employees and management can discuss issues and problems in the workplace.

Number of Labor Union Members

	Number of labor union members (persons)	Average age (years)	Average length of service (years)	Percentage of members (%)
2016/3	844	40.4	18.9	64.8
2017/3	820	39.3	17.6	63.3
2018/3	824	37.9	15.8	62.7
2019/3	840	37.7	15.6	63.7
2020/3	853	37.9	15.8	65.0
2021/3	940	39.1	16.7	67.4

* Nippon Soda (non-consolidated)

TOPICS

Promoting Workstyle Reform through Digital Transformation

In April 2020, the DX Promotion Group was established in the Corporate Strategy Department to formulate and execute a vision for the future of the Group's digital infrastructure from a management perspective. We will enhance our competitiveness by improving research and technology through the use of digital technology, and by improving operational efficiency. Specifically, in R&D, we are working to create a system for efficient research and development and to accelerate the pace of new product development using machine learning. In the area of production activities, we are

currently focusing on digital transformation (DX) to ensure safe and stable operations, but we are also looking ahead to future initiatives to streamline operations and save labor.

Further, in 2021 we trialed a work-from-home system at our Head Office. In addition to our promotion of paperless operations and our efforts toward creating a free-seating office environment, and by providing a healthy work-life balance along with a fulfilling office environment, we are moving ahead with workstyle reform.



Environmental Protection

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

For more details, see ESG Data Book 2021 (P. 25-28)

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 energy consumption while maintaining productivity.
- Water resources conservation.
- Reduction of impact on biodiversity and ecosystems.

Environmental Protection Goals of the Nippon Soda Group (New Medium-Term Activity Goals for FY 2021–2023)

	Goal	Initiatives
(1) Environmental abnormalities	Zero events	Implement measures for reducing risks by evaluating environmental impact Plan and implement measures to prevent problems caused by human error
(2) Energy		
① Energy consumption rate	Annual improvement of 1% and a 3% improvement in comparison to FY 2020 at the completion of the new medium-term plan	With an eye to meeting the reduction target, focus on improving the energy consumption rate through setting, implementation, and evaluation of themes for improvement.
② Energy consumption rate in logistics	Annual improvement of 1% and a 3% improvement in comparison to FY 2020 at the completion of the new medium-term plan	With an eye to meeting energy-saving logistics targets, focus on improving the energy consumption rate in logistics through setting, implementation, and evaluation of themes for improvement.
(3) Reduction of greenhouse gas emissions	CO ₂ emissions will be reduced by 1% for the year, and by 3% in comparison to FY 2020 when the new medium-term plan is completed. Eliminating trouble of fluorocarbon leakage from equipment	With an eye to meeting the reduction target, implement improvement measures in conjunction with energy-saving activities. Conduct periodic inspections and maintenance of equipment using Freon
(4) Water resources conservation	Monitor water resources and promote efficient water use	Maintain and improve water quality in wastewater from business sites and consider reducing water consumption
(5) Industrial waste		
① Amount of final disposal at landfill	Annual reduction of 3% in amount of final disposal at landfill A 9% reduction compared to FY 2020 when the new medium-term plan is completed	With an eye to meeting the reduction target, focus on improving the waste generation rate through the setting, implementation, and evaluation of themes for improvement
② Zero emissions	Continuation of achieving zero emissions	Continue to achieve zero emissions at all worksites by reducing the amount of final disposal at landfills and amount transported to the industrial waste disposal facility
(6) Emissions of harmful substances into the atmosphere	Annual improvement of 1% and a 55% improvement in comparison to FY 2015 at the completion of the new medium-term plan	Plan and implement measures to reduce emissions of harmful substances
(7) Reduction of impact on biodiversity and ecosystems	Continue activities to reduce the impact on biodiversity and ecosystems	Contribute to the preservation of biodiversity by reducing environmental burden through environmental protection activities. Strive to enhance, collaborate, and cooperate in the field of biodiversity through communication with relevant organizations

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 CO₂ emissions reduction targets.

Reduction of energy consumption and greenhouse gas emissions

We are engaged in a wide range of measures to reduce our energy consumption rate. These efforts include replacing our aging equipment with high-efficiency equipment, streamlining and increasing labor efficiency in our production processes, and implementing energy-saving measures. Further, we use the Ministry of the Environment's Basic Guidelines on Accounting for Greenhouse Gas (GHG) Emissions Throughout the Supply Chain when calculating GHG emissions from our business activities (Scopes 1 and 2) as well as indirect emissions from outside our business activities (Scope 3). In this way, we work to reduce emissions throughout the supply chain.

Use of renewable energy

At the Nihongi Plant, we draw industrial water from a nearby river and use the difference in elevation when returning it to the river for small-scale hydroelectric power generation. Since its construction in 1940 until today, the plant has been effectively using this energy in its production activities. Moving forward, we will carefully maintain the power generation facilities at the plant for their stable generation of renewable energy.

Promotion of energy saving by the Logistics Department

As a specified consignor under the Act on the Rational Use of Energy, every year we submit a periodic report and a medium- to long-term plan to the Ministry of Economy, Trade and Industry, and work to reduce our energy consumption rate.

We have 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. In 2013, we were certified with the Eco Rail Mark from the Ministry of Land, Infrastructure, Transport and Tourism for our modal shift initiatives.

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 amount 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 going to 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. We define "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.

Atmosphere and Water Quality Conservation

Nippon Soda implements various measures to protect the atmosphere and water quality, such as reducing the amount of chemical substances specified by the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes and measures to reduce harmful substance emissions into 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 Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (PRTR system)

We are making efforts to reduce emissions into the environment of Class I Designated Chemical Substances specified by the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (PRTR system).

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 12 chemicals, our Company currently deals with the following six substances: chloroform, dichloromethane, 1,2-dichloroethane, ethylene

oxide, 1,3-butadiene and benzene. We are implementing measures to reduce the emissions of these six substances.

Reduction of air pollutant emissions

Nippon Soda promotes the reduction of emissions of sulfur oxide (SO_x), nitrogen oxide (NO_x), 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 its 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 that can be implemented 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.

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

The Chiba Plant continued with the "Himekomatsu Supporter" project it started in 2016 to protect himekomatsu, an endangered tree species in Chiba Prefecture.

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 Nippon Soda 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 on September 17, 2020)



Process Safety and Disaster Prevention

The Nippon Soda Group emphasizes process safety and disaster prevention in order to prevent serious accidents at all plants and to ensure the continuation of safe and stable production. We are also constantly improving our business continuity plan (BCP) to ensure a stable supply of products and services.

For more details, see ESG Data Book 2021 (P. 29-34)

Basic Policy

- Regular inspections, repair and renewal of equipment and training of operators at each manufacturing site.
- Improvement of the risk management system through emergency drills and education to prepare employees for possible accidents and disasters.
- Safety reviews by internal experts to verify safety when facilities are constructed or renovated. Regular diagnoses of disaster prevention capabilities by external specialists.
- Regular reviews of and improvement in the business continuity plan (BCP), which is designed to ensure preparedness for natural disasters such as large-scale earthquakes and other emergencies that could result in extensive damage.

➤ Risk Management

Risk assessment of process safety and disaster prevention	We conduct risk assessments related to safety and disaster prevention for facilities, machines and manufacturing processes. Identified risks are prioritized and, accordingly, measures to ensure the safety of facilities are implemented and inspections are conducted in sequence.
Establishment of an emergency risk management system	We give the highest priority to preventing accidents and disasters. On the other hand, to prepare for accidents and disasters, we have established an emergency risk management system and conduct periodic drills and exercises to maintain the system in sound condition.
Standards on Emergency Response	The Standards on Emergency Response have been developed to ensure prompt and appropriate communication, response, and instruction in the event of a disaster or accident, and their effectiveness is reviewed and revised periodically, and confirmed through training.

➤ Safety Management

Safety audit to confirm the safety of plants

To ensure the safety of processes in the construction and renovation of facilities, Nippon Soda Group managers and internal experts conduct safety reviews and audits for facilities and operations in terms of safety, work environment, quality and

other factors.

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

➤ Education and Drills for Disaster Prevention

Nippon Soda provides a variety of process safety and disaster prevention training for employees to acquire the knowledge and skills to ensure their safety. We will continue to promote safety and disaster prevention activities with the aim of further improving our safety and disaster prevention activities to achieve the target of "no major accidents at facilities."

Group training

Each department conducts regular education and training in

accordance with the RC activity plan. We provide new employees with new employee training on safety and basic operations.

Disaster prevention system involving local communities

Each Nippon Soda site implements regular disaster drills, which include drills conducted in cooperation with other nearby plants and local communities.

➤ Business Continuity Plan (BCP)

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

- (1) The highest priority is placed on checking the status and ensuring the safety of Nippon Soda's own employees, affiliated company employees and temporary employees and their families, and ensuring the safety of residents in communities where the Company's business sites are located.
- (2) The consciousness of serving the public and community is shared among all personnel throughout the Company.

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

(4) Measures should be taken to establish a system that allows Nippon Soda's employees, affiliated company employees and temporary employees who are engaged in ensuring safety and security to act flexibly and at their discretion according to the circumstances.

Supply of products according to customer demands

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



Occupational Safety and Health

The Nippon Soda Group strives to create a workplace in which employees can feel the joy of their work. To achieve this goal, we are working to achieve and sustain zero occupational accidents and to promote employee health.

For more details, see ESG Data Book 2021 (P. 35-39)

Basic Policy

- Introduction of an Occupational Safety and Health Management System (OSHMS), and implementation of risk assessments. Acquisition of OHSAS18001 or ISO 45001 certification
- Continuous implementation of PDCA (Plan-Do-Check-Act) to ensure safe and healthy workplaces with the aim of achieving the goal of zero occupational accidents.
- Provision of health guidance based on medical examination results and implementation of measures to reduce incidents of personal injury or illness to help employees maintain and improve their health.
- As a mental health care service, we perform stress tests and provide consultation services by qualified mental health specialists. We have established and are operating a system that allows us to take appropriate action.

➤ Implementation of Risk Assessment

We are systematically improving the achievement and performance of the targets we have set through the PDCA cycle set out in OSHMS. To integrate OSHMS and Responsible Care (RC) activities effectively, we also emphasize OSHMS risk

assessment. Each office (plant or research center) periodically identifies and assesses occupational accident risks and, if they are not acceptable, takes measures to reduce them to permissible levels.

➤ Efforts to Prevent Occupational Accidents

Establishment of Safety and Health Committees

In line with Article 19 of the Industrial Safety and Health Act, at Nippon Soda we have established Safety and Health Committees at each of our worksites. The committees meet once a month, aiming to prevent occupational accidents and health hazards, and maintain and promote employee health. In addition, we have also established a Central Safety and Health Committee, chaired by the Responsible Care Management Department General Manager. It comprises safety and health supervisors from each department and worksite, and meets in principle twice a year. In addition to the views of management, the central committee incorporates wide-ranging opinions from labor unions and health insurance associations in order to improve working environments.

Activities to reduce occupational accident risks

Mainly in accordance with activity plans set forth in OSHMS, we are reducing risks through the elimination of near-miss incidents and by drawing on examples of disasters at other worksites and other companies. When new plants are constructed or when plants are expanded, we require safety reviews and audits to reduce disaster risk to an acceptable level before starting test operations.

Efforts to prevent human error by workers

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

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

Third-party Occupational Health and Safety Survey

At Nippon Soda, we undergo occupational health and safety surveys by Sampo Risk Management Inc. (Surveys were cancelled in FY 2021 to prevent the spread of the COVID-19 pandemic)

➤ Health Management

Nippon Soda considers the maintenance and promotion of health to be an important management issue. In March 2021, Nippon Soda was recognized again in the 2021 Certified Health & Productivity Management Organizations Recognition Program (White 500) for the fourth year in a row under the program jointly conducted by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi. Nippon Soda, in cooperation with the health insurance association and the labor union, promotes efforts geared toward supporting the physical and mental health of employees.





Logistics Safety and Quality Assurance

The Nippon Soda Group promotes efforts to reduce risks associated with the distribution of products to prevent logistics accidents. We also enhance customer satisfaction by providing a safe and secure environment in which our customers can use our high-quality products in a stable manner.

For more details, see ESG Data Book 2021 (P. 40-41)

Basic Policy

- Reduction of the risk of hazards, toxicity and accidents during transportation of products. Ensuring the safety of our customers, those involved in the distribution process and local residents, and protect the environment.
- Provision of information that helps customers use high-quality products safely, comfortably and in a stable manner.

Logistics Safety

Measures to ensure safe transportation of dangerous goods

- **Logistics risk assessment**

The Nippon Soda Group takes measures to reduce risks from various perspectives to prevent accidents involving workers and products caused by traffic accidents during forklift loading, unloading and trans-shipment of products, as well as during truck transportation.

- **Promotion of Yellow Card*¹ and Container Yellow Card (product labels)*²**

The Nippon Soda Group promotes the use of Yellow Cards and Container Yellow Cards mainly for products that are classified as hazardous materials. Product labels are revised to reflect the latest legal information, including revisions to relevant laws, in a timely manner. We appropriately implement wording that complies with GHS*³ requirements and appropriate pictograms and take other measures so that we are prepared in the event of a disaster to respond quickly to prevent damage from spreading.

Logistics safety in value chains

- **Proposals for improvement of customers' facilities**

In the event that there is a problem with the safety of the transport company or the customer's workers at the customer's product receiving facility, or if there is a risk of foreign matter entering the facility or spills, the Nippon Soda Group makes proposals for improvement and works to prevent accidents and disasters.

*¹ A Yellow Card is an emergency information card with information about procedures that drivers, fire and police personnel, and other concerned parties should take in the event of a spill, fire, explosion or other incident during transportation. It also contains emergency contacts. The issuance and carrying of Yellow Cards is required by the Poisonous and Deleterious Substances Control Law and other laws.

*² A Container Yellow Card is a label that is affixed to containers with the United Nations number and guide number defined by the Emergency Response Guidebook.

*³ Globally Harmonized System of Classification and Labelling of Chemicals (GHS): A system for the international standardization of classification and labeling of chemicals, which was agreed upon by the United Nations Economic and Social Council. It is a system of international hazard classification standards and labeling methods (product labeling and SDS) for chemical hazards.

Quality Assurance

Efforts to ensure quality management

- **Quality risk assessment**

Nippon Soda actively engages in quality risk assessment with the goal of preventing the occurrence of product-related complaints and the recurrence of such complaints. We make continuous efforts to identify quality-related risks from each manufacturing site and reduce the risks, especially the high-risk A and B grades.

Efforts to achieve zero product-related complaints

To eliminate product-related complaints, we conduct quality risk assessments to identify and reduce risks. We are also working to reduce product-related complaints due to human error through human error prevention training for employees.



Chemicals and Product Safety

The Nippon Soda Group takes into consideration the potential environmental, safety and health impacts related to the hazards and toxicity of chemical substances and products, complying with laws and regulations and international standards, while also complying with regulations based on social demands, so as to earn the trust of customers and society.

For more details, see ESG Data Book 2021 (P. 42-44)

Basic Policy

- Compliance with domestic laws and regulations, international standards, and treaties etc., giving due consideration to the environmental, safety and health impacts related to the hazards and toxicity of chemical substances and products.
- Compliance with social restrictions that are not covered by law to maintain and ensure trust from customers and the general public.
- Specific measures to ensure the safety management of chemical substances, including activities and periodic educational programs regarding chemicals and product safety.

Safety of Chemicals

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

We are strengthening the management of chemical substances through the use of the chemical substance management system (ExESS)*¹, which we use to create SDSs*² and Yellow Cards. We prepare and revise SDSs and Yellow Cards to comply with revisions to laws in Japan and overseas. We also adopt GHS for SDS and product labels for Europe, the United States, China, Taiwan, South Korea, Southeast Asia, Turkey, and other countries as well as Japan. In FY 2021, to transfer Japanese SDSs to the revised Japanese Industrial Standard (JIS) version, we conducted work on ExESS, and provided the personnel of each relevant worksite with education. We are proceeding with the revision of the SDSs.

Regular training programs on chemical substance control

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

*¹ ExESS: Developed by Lisam Systems (Belgium).

*² SDS (Safety Data Sheet) documents describing information on chemical substances, product names, suppliers, hazards, precautionary safety measures, emergency response, etc.

Product Safety

Actions to comply with laws and regulations

The Nippon Soda Group takes actions to comply with domestic and overseas laws and regulations (including the EU REACH regulation*³) and conducts audits of poisonous and deleterious substances at sales offices and branches.

In FY 2021, programs were held online to prevent the spread of the COVID-19 pandemic.

Communication of safety information on chemicals

The Nippon Soda Group participates in GPS/JIPS*⁴. We have prepared safety summary reports on four substances, including caustic soda and hydrochloric acid, which have been registered on the ICCA*⁵ portal page, and made them publicly available.

*³ REACH (Registration, Evaluation, Authorization and Restriction of Chemicals): European chemicals regulations. European regulations state that businesses that manufacture or import one ton or more of products per year are required to register the substances they handle and submit safety test data, and that substances for which data is not submitted (registered) cannot be sold.

*⁴ GPS (Global Product Strategy): A voluntary industry initiative based on risk assessment and risk management with a global product strategy as the basic concept, taking into account the supply chain. JIPS (Japan Initiative of Product Stewardship): ICCA's Product Stewardship, an international initiative.

*⁵ ICCA (International Council of Chemical Associations).

Consideration in Animal Experiments

Odawara Research Center has formulated its own regulations for animal experimentation and other relevant standards based on the Act on Welfare and Management of Animals, the Ministry of the Environment's Standards Relating to the Care and Keeping and Reducing Pain of Laboratory Animals, the Ministry of Agriculture, Forestry and Fisheries' The Basic Policy on Animal Experimentation Performed at Research Institutions, and the Science Council of Japan's Guidelines for Proper Conduct of

Animal Experiments. These activities are validated by an external organization (the Japan Pharmaceutical Information Center*⁶) and the facility was certified in June 2018 as a facility that conducts animal experiments in a proper manner (certification was renewed in July 2021).

*⁶ The Japan Pharmaceutical Information Center (JAPIC) has taken on certified businesses from the Japan Health Sciences Foundation, which was disbanded in March 2021.



Relationship with Local Communities and Dialogue with Society

The Nippon Soda Group participates in a variety of activities with regard to environmental protection and safety, and engages in dialogue with stakeholders on the environment, safety, and health with the aim of improving public trust in the Group.

For more details, see ESG Data Book 2021 (P. 57-61)

Basic Policy

- Based on the concept of “contributing to the sustainable development of society through business activities,” promote CSR activities from the viewpoints of contributing to resolving global environmental issues, a harmonious relationship with local communities, and contributing to the development of local communities.
- Develop good relationships with local residents through various activities that meet the needs of local communities and that are designed and implemented by each business site and Group company.

➤ Harmonious Relationship with Local Communities

Contribution to local employment

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

Further, to ensure a healthy work-life balance and enhance job satisfaction, we communicate with labor unions to formulate working conditions in line with current trends. As a result, not only does our standard minimum wage continue to be above legal minimum wage in all areas we conduct business, we are also contributing to raising income levels in our regions.

Participation in local cleaning activities

In order to fulfill our role and responsibility as a corporate citizen, we regularly carry out local cleaning activities around our worksites. We also actively participate in local cleaning activities in tandem with local communities, such as so-called eco-walks and cleanup campaigns.

➤ Social Dialogue with Local Communities

Nippon Soda holds local gatherings and regularly conducts tours of plants and research centers for residents in areas where worksites are located in order to provide information on CSR activities and exchange views and comments.

➤ Major Social Activities of Nippon Soda

Nippon Soda conducts social activities from the perspective of living in harmony with local communities and for the development of local communities. Each of our worksites is engaged in a variety of activities that match the needs of the community and strive to build good relationships with local residents.

➤ Stakeholder Engagement

We are engaged in stakeholder engagement to deepen our understanding of society's needs and values through dialogue with our stakeholders, and to promote business activities that meet the expectations of local communities.

DBJ Environmentally Rated Loan Program

2019 Highest Rank

In March 2020, we were awarded the highest rank in Development Bank of Japan Inc.'s DBJ Environmentally Rated Loan Program. We were given the highest rating for our environmental management systems and initiatives, including our especially progressive approach to environmental awareness.



Corporate Governance

Corporate Governance Highlights

Directors	Directors who are members of the Audit and Supervisory Committee	Outside directors	Female directors
8 persons (Average duration of tenure: 2.75 years)	3 persons	4 persons (36.4%)	2 persons (18.2%)

Nomination and Remuneration Advisory Committee	Number of meetings of the Board of Directors	Number of meetings of the Board of Auditors*	Number of meetings of the Audit and Supervisory Committee*	Number of Management Council meetings	Number of meetings with investors
3 persons (President and two outside directors)	16	4	12	44	233

* Nippon Soda transitioned to a company with
an audit and supervisory committee in June 2020.

Basic Concept

Nippon Soda places primary importance on sound and transparent business management in compliance with the law. Our management philosophy is to contribute to social development by providing superior products through chemistry, to meet expectations from stakeholders, including shareholders, investors, business partners, employees and local communities, and to promote environmentally conscious business practices and activities.

Under this philosophy, we are committed to growing into a technology-oriented group that develops high-added-value products by making best use of its proprietary technologies and expands its business with a global point of view and a focus on chemistry.

In addition, we recognize that the enhancement of corporate governance is an important management issue for realizing our management philosophy and responding quickly and appropriately to rapid changes in the business environment.

► Corporate Governance Report (Japanese only) https://www.nippon-soda.co.jp/environment/pdf/governance_report.pdf

➤ A History of Strengthening Governance

Aiming to Strengthen Governance

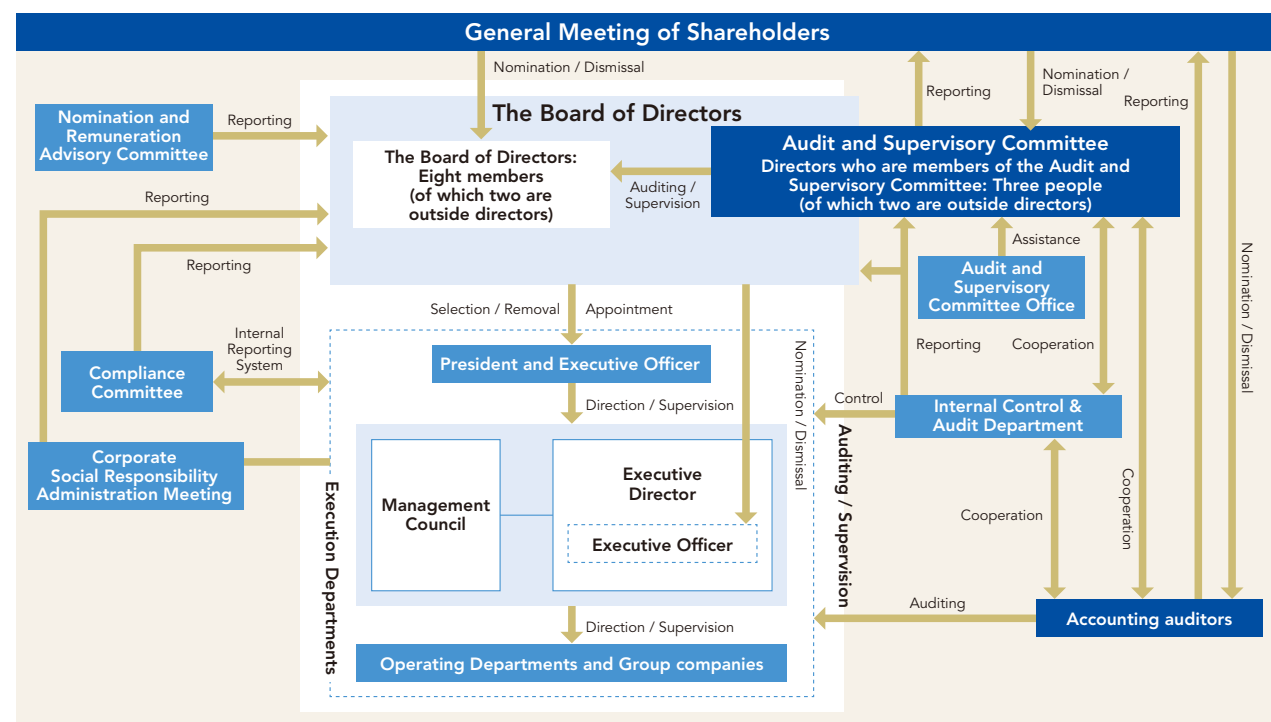
- Strengthen management supervision and improve operational agility
- Increase the diversity of the Board of Directors
- Enhance management transparency and fairness
- Strictly comply with laws and regulations and corporate ethics

FY 2013	Established a CSR Administration Meeting Abolished the executive retirement benefit system
FY 2014	Introduced an executive officer system (number of directors reduced from 14 to 7) Nominated 1 outside director
FY 2016	Nominated 2 outside directors (increased by 1 person, including 1 woman) Started effectiveness assessment of the Board of Directors
FY 2017	Reviewed the executive compensation system (introduced a performance-based stock compensation plan, board benefit trust (BBT))
FY 2018	Established Remuneration Advisory Committee
FY 2019	Established Nomination and Remuneration Advisory Committee Utilized external organization for effectiveness assessment of the Board of Directors
FY 2021	Transitioned to a company with an audit and supervisory committee

Corporate Governance System

The Nippon Soda Group is fully aware of its fiduciary responsibility in accordance with Japan's Corporate Governance Code and is committed to enhancing its corporate governance structure.

Corporate Governance Structure



General Meeting of Shareholders

The Nippon Soda Group holds an ordinary general meeting of shareholders in June every year, viewing it as an important opportunity to engage in direct dialogue with our shareholders. We deliver the notice of convocation of the General Meeting of Shareholders at an early date so that our shareholders may acquire a good understanding of the issues that will be reported and the matters for resolution at the shareholders' meeting. We also provide pre-delivery disclosure of information on Nippon Soda's website and at the Tokyo Stock Exchange website, before the notice of convocation of the General Meeting of Shareholders is sent out. Voting rights may be exercised not only in writing but also via the Internet.

Board of Directors

The Board of Directors is responsible for making important management decisions (based on clear standards, such as amounts above a certain level) as stipulated by laws and regulations, the Articles of Incorporation, and the Board of Directors Rules, as well as supervising the execution of each director's duties. The tenure of directors (excluding directors who are members of the Audit and Supervisory Committee) is set at one year to ensure that they are able to respond quickly to changes in the environment and to clarify their management and operational responsibilities.

Audit and Supervisory Committee

Two of the three directors who are members of the Audit and Supervisory Committee are outside directors. Directors who are also members of the Audit and Supervisory Committee not only attend Management Council meetings, but also inspect important documents (approval requests) and receive explanations of important matters directly from the relevant directors, executive officers, department, or subsidiary, in an effort to gain an accurate understanding of corporate information throughout the Group while also monitoring and verifying whether or not related departments are handling and responding to the situation and whether or not internal controls are being legally and appropriately executed. In addition to this, they work closely with the accounting auditors to ensure the reliability of our financial statements, in particular, by receiving regular reports from them and attending some of their on-site audits.

Nomination and Remuneration Advisory Committee

In order to enhance the fairness and objectivity of executive personnel and executive compensation, we have established a Nomination and Remuneration Advisory Committee consisting of two outside directors and the President. The Committee advises and makes recommendations to the Board of Directors on executive personnel and compensation.

Management Council

In accordance with the Management Committee Operation Rules, Nippon Soda's Management Council, consisting of the President, directors who concurrently hold the position of executive officer as well as others requested by the President to attend, generally meets once a week (with auditors). It discusses important issues involving business execution other than issues that must be discussed by the Board of Directors, in order to make quick decisions on issues related to business execution.

Compliance Committee

Nippon Soda operates a Compliance Committee, which reports directly to the President, to ensure corporate activities in compliance with laws, regulations and corporate ethics throughout the Group. The Compliance Committee comprises executive officers. At each department, branch, worksite and Group company, a staff member in charge of compliance is appointed.

Corporate Social Responsibility Administration Meeting

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

Director Nomination Policy

Decisions on the nomination of director candidates and the selection and dismissal of senior management are made by resolution of the Board of Directors based on the advice and recommendations of the Nomination and Remuneration Advisory Committee. Also, candidates for the position of director, who are members of the Audit and Supervisory Committee, are determined by the Board of Directors after obtaining approval from the Audit and Supervisory Committee. To ensure that they are suitable for their responsibilities, candidates for directors and senior management are selected in accordance with the following criteria:

- (1) Extensive business experience
- (2) Excellent managerial sense
- (3) Leadership, drive and planning skills
- (4) Proper character and insight
- (5) Healthy in body and mind

Candidates for outside directors are nominated in accordance with the requirements of the Companies Act and the Tokyo Stock Exchange, and include those with expertise and extensive experience who can be expected to provide constructive and candid views and comments on the Company's management.

In the event of any impropriety or significant violation of relevant laws, regulations or the Articles of Incorporation in the performance of duties by senior management, or any other reason that makes it difficult for them to properly perform their duties, they shall be removed from their position.

Effectiveness Assessment of Board of Directors

At Nippon Soda, to improve the Board of Directors' decision making on appropriate execution of duties and to strengthen their supervisory functions, since FY 2016, all directors and auditors have been asked to complete self-assessments in the form of questionnaires. In the fourth year, FY 2019, we commissioned an external organization to conduct interviews and analyze and assess the results. Based on the results, in FY 2020 self-assessments were implemented as usual. In FY 2021, questionnaires were again given to all directors, including

directors who are audit and supervisory committee members, and we examined and discussed the current effectiveness of the Board of Directors, confirming that, overall, the Board of Directors is functioning effectively. However, we also recognized areas to improve with regards to the meeting agenda and ways to reinforce the Board of Director's monitoring functions. Looking ahead, we will engage in efforts to improve management of the Board of Directors and further enhance its effectiveness.

Outside Directors

Nippon Soda has four highly independent outside directors, (including two directors who are also members of the Audit and Supervisory Committee) in an effort to enhance the ability of the Board of Directors to contribute to the Company's sustainable growth and to increase medium- and long-term corporate value. Regarding independent outside directors, in accordance with the requirements of the Companies Act and the Tokyo Stock

Exchange regarding independence, the Company nominates individuals who are unlikely to have conflicts of interest with general shareholders and who are able to ensure objectivity and rationality in the Company's decision making and contribute to increasing corporate value. Specifically, none of the following must apply to the person:

- (1) A person who does business with the Company or its subsidiaries as a principal customer or an executive person thereof
- (2) A primary business partner of the Company or its subsidiaries or an executor of such business
- (3) A consultant, certified public accountant, lawyer or other professional who has received a large amount of money or other assets from the Company or its subsidiaries in addition to director's remuneration
- (4) A person who has fallen into any of the above categories (1) to (3) in the past year
- (5) The spouse or a relative within the second degree of kinship of the following persons:
 1. a person who falls under (1) to (4) above
 2. a person who is, or has been in the past one year, an executive of the Company or its subsidiaries
 3. a person who is currently, or has been in the past one year, a non-executive director of the Company or a subsidiary of the Company

➤ Skills Matrix

Directors				Specialist expertise and experience						
Name	Gender	Position	Director tenure	Corporate management	Finance/accounting	Business strategy/portfolio	R&D/production technology	Internationality	ESG/sustainability	Legal affairs/risk management
Akira Ishii	Male	Director Chairman (Representative Director)	12 years	●		●				
Eiji Aga	Male	Director President (Representative Director)	1 year	●		●		●		
Izumi Takano	Male	Director Executive Managing Officer	2 years				●		●	
Kiyotaka Machii	Male	Director Executive Managing Officer	2 years		●			●	●	
Osamu Sasabe	Male	Director Managing Officer	New appointment		●	●				
Junko Yamaguchi Outside Independent	Female	Director	2 years			●			●	
Mitsuaki Tsuchiya Outside Independent	Male	Director	1 year	●	●					
Nobuyuki Shimoide	Male	Director	2 years	●		●				
Keichi Aoki	Male	Director Audit and Supervisory Committee member (Full-time)	1 year		●					●
Shigeo Ogi Outside Independent	Male	Director Audit and Supervisory Committee member	1 year		●			●		●
Yoko Waki Outside Independent	Female	Director Audit and Supervisory Committee member	1 year							●

➤ Executive Remuneration

Policy on decisions

Nippon Soda's executive compensation is determined based on a balance of common practices, company performance and employee salaries. A resolution was passed on June 26, 2020, at the 151st Ordinary General Meeting of Shareholders to set the total amount of remuneration for directors (excluding directors who are members of the Audit and Supervisory Committee) and directors who are members of the Audit and Supervisory Committee at no more than ¥350 million and no more than ¥100 million per year, respectively.

Director remuneration shall be determined within the limits of the total amount of remuneration approved by the General Meeting of Shareholders, and shall be discussed and decided by the Board of Directors based on the advice, recommendations and findings of the Nomination and Remuneration Advisory Committee. The Board of Directors delegates decisions regarding directors' basic remuneration, as well as directors' (excluding outside directors') performance-linked remuneration, evaluation remuneration, and stock-based remuneration, to the Representative Director and President. We believe that the Representative Director and President is most suited to evaluating the departments of each director while considering overall business performance and other factors. The appropriateness of decisions made regarding remuneration

are confirmed in advance by the Nomination and Remuneration Advisory Committee.

Executive remuneration for FY 2021 was discussed by the Nomination and Remuneration Advisory Committee on June 23, 2020. Based on their findings, director remuneration and share benefit trust points were discussed and determined at the Board of Directors' Meeting on June 26, 2020. Audit and supervisory committee member remuneration was determined following discussions at an Audit and Supervisory Committee Meeting, within the total amount of remuneration approved by the General Meeting of Shareholders.

Following confirmation that methods for determining remuneration were in line with the decision policy, that the resulting remuneration conformed to the decision policy discussed at the Board of Directors' Meeting, and that the findings of the Audit and Supervisory Committee were respected, we have determined that individual director remuneration for FY 2021 is in line with the decision policy.

As stipulated in the Articles of Incorporation, the number of directors (excluding those who are members of the Audit and Supervisory Committee) is limited to 10 persons, and the number of directors who are members of the Audit and Supervisory Committee is limited to five persons.

by type). Note that outside directors, part-time directors, and directors who are members of the Audit and Supervisory Committee are paid only basic remuneration and are not subject to performance evaluation.

Remuneration system

Individual director remuneration consists of (1) basic remuneration, (2) performance-linked remuneration, (3) evaluation remuneration, and (4) stock-based remuneration, the ratios of which are shown in the table on the page 47 (Overview of Decision Policy on Individual Remuneration: (e) Decision policy on ratio of remuneration

■ Overview of Decision Policy on Individual Remuneration

(a) Decision policy on basic remuneration	The amount is determined based on the role and position of the director.
(b) Decision policy on performance-linked remuneration	Calculated by the following formula, using an index that shows the results and performance of the current fiscal year. Policy on decisions (formula) Prior-fiscal year performance-linked remuneration + Adjustment of performance-linked remuneration for the current fiscal year * Adjustment of performance-linked remuneration for the current fiscal year Calculations are based on two indices: Increase or decrease in consolidated ordinary profit and Increase or decrease in non-consolidated operating margin. These two indices demonstrate the level of achievement of consolidated and non-consolidated business results, and as appropriate measures to evaluate the achievements and level of contribution of each executive, they have been selected as indices for performance-linked remuneration. For executives of sales departments, in addition to these indices, the performance of their relevant departments are also taken into consideration. Consolidated ordinary profit and Non-consolidated operating margin for FY 2021 were as follows: ・ Consolidated ordinary profit: 2,431 million yen ・ Non-consolidated operating margin: 35.2%
(c) Decision policy on evaluation remuneration	Calculated based on the level of achievement of the targets set by each director at the beginning of the term.
(d) Decision policy on stock-based remuneration	We have introduced a Board Benefit Trust (BBT) system to act as an incentive to enhance corporate value over the medium to long term. BBT works on a position-based points system, and points are awarded using the following formula. (Formula) Standard points based on position x Index coefficient for the current fiscal year * Index coefficients for the current fiscal year ・ The current fiscal year's ROE ・ Increase/decrease in consolidated operating profit (the amount of increase/decrease in the current fiscal year's actual results compared to the average of the previous three years) The index coefficients are determined within a range of 0% to 150% using a matrix table with the above two items as axes.
(e) Decision policy on ratio of remuneration by type	Approximate ratios Basic remuneration: 60–65%; Performance-linked remuneration: 25–30%; Evaluation remuneration: 5–10%; Stock-based remuneration: Approx. 5%
(f) Decision policy on period and conditions of remuneration	Fixed monthly remuneration includes basic remuneration, performance-linked remuneration, and evaluation remuneration. For stock-based remuneration, points are awarded to each director on the day of the Ordinary General Meeting of Shareholders, and the cumulated points are given as company stock (part in cash) at the time of retirement of the relevant director. However, to promote director's sound execution of duty, if the director in question is found to have acted illegally, that director may lose the right to acquire company stock.
(g) Decisions on individual remuneration	Based on decisions by the Board of Directors regarding basic remuneration, performance-linked remuneration, evaluation remuneration, and stock-based remuneration, decision-making authority on individual remuneration belongs to the Representative Director and President. To ensure that this authority is appropriately exercised, prior to making a decision on the relevant amount, the Representative Director and President briefs and holds discussions with the Nomination and Remuneration Advisory Committee and seeks their approval.

■ Total Amount of Remuneration

Classification	Total amount of remuneration (Millions of yen)	Total amount of remuneration by type (Millions of yen)			Number of eligible persons
		Basic remuneration	Performance-linked remuneration	Stock-based remuneration	
Directors (excl. Audit and Supervisory Committee members) (Outside directors)	213 (21)	140 (21)	66 (—)	6 (—)	11 (3)
Directors (Audit and Supervisory Committee members) (Outside directors)	36 (16)	36 (16)	— (—)	— (—)	3 (2)
Auditors (Outside auditors)	18 (11)	18 (11)	— (—)	— (—)	4 (3)
Total (Outside directors and outside auditors)	268 (50)	195 (50)	66 (—)	6 (—)	18 (8)

*1 The above number of persons and amount of remuneration includes that of three directors (one outside) and four auditors (three outside) who retired on June 26, 2020, due to the expiration of their terms of office.
*2 Nippon Soda transitioned to a company with an audit and supervisory committee on June 26, 2020, following resolution at the 151st Ordinary General Meeting of Shareholders on the same day. Amounts for auditor remuneration are those prior to our transition to a company with an audit and supervisory committee, while amounts for director remuneration (Audit and Supervisory Committee members) are those post-transition.
*3 We have introduced BBT as a form of stock-based remuneration.

Basic Policy

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

The Nippon Soda Group Code of Conduct

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

Compliance Promotion System

Nippon Soda has a Compliance Committee, which reports directly to the President, to ensure corporate activities in compliance with laws, regulations and corporate ethics throughout the Group. The Compliance Committee comprises executive officers as its members. At each department, branch, worksite and Group company, a staff member in charge of compliance is appointed.

The Nippon Soda Group has established a consultation desk, whereby an employee of the Group who has committed an infraction or becomes aware of an infraction by another employee, can consult directly with the Compliance Committee Secretariat, an outside attorney or an Audit and Supervisory Committee member.

Composition of the Compliance Committee



Compliance Promotion and Education

We have formulated the Nippon Soda Group Code of Conduct, which specifies matters to be observed by the Nippon Soda Group in order to carry out sound corporate activities. This Code of Conduct is distributed to the executives and all employees of Nippon Soda and its consolidated subsidiaries, and we provide ongoing training to ensure thorough compliance with laws and regulations. We conduct legal education and training related to

our operations once a year or more, and in FY 2021, we conducted a total of 32 major compliance training sessions for Nippon Soda and major Group companies. In addition, we conduct an annual compliance survey of all employees to determine their understanding of the Code of Conduct.

Status of Establishment of Internal Audit System

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

Regulations on the Risk Management of Losses and Other Systems

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

Internal Control Audits

The Company's Internal Control & Audit Department, which is independent of the operating divisions, works closely with the directors who are also members of the Audit and Supervisory Committee, to assess the appropriateness and efficiency of business activities and the reliability of financial reports. The directors who are also members of the Audit and Supervisory Committee keep abreast of developments throughout the Nippon Soda Group and monitor and verify the proper execution of internal controls. Furthermore, to ensure the reliability of financial information and other information, they work in close cooperation with the accounting auditors, who report regularly and attend some of the audits.

Information Security Management

Appropriate management and protection of our information assets is one of the priority issues in managing our business. Nippon Soda promotes information security management under the supervision of the executive in charge of the Information Technology Department. In addition to the development of internal regulations such as the Information Security Policy, we are working to raise awareness of the importance of information assets by advocating the appropriate use of information systems in the Nippon Soda Group Code of Conduct. We are taking measures to strengthen the information security management system of the entire Nippon Soda Group, including training at Group companies on how to deal with suspicious emails to prevent viruses from infecting our computers.

Business and Other Risks

1. Market risks

- (1) Some of the Group's businesses include products and services that are subject to economic fluctuations. Therefore, if market conditions fluctuate significantly due to changes in the economic environment, the Group's results of operations could be significantly affected.
- (2) In the Agro Products Business, earnings tend to increase in the fourth quarter due to the seasonal nature of demand. In addition, the Group's business results may be significantly affected by weather fluctuations, as the Group's businesses tend to be susceptible to weather conditions.
- (3) Predominantly through the Chemicals Business and the Agro Products Business, the Group conducts business on a global scale. Moreover, around 50% of our sales in the Chemicals Business and the Agro Products Business were overseas. As such, unforeseen changes in local laws and regulations in each country or region; large-scale epidemics; accidental factors caused by wars, riots, or terror; trade wars caused by national or regional conflict; and/or other factors could have a significant impact on our business performance. Tasked with collecting information on risks and analyzing business trends in each country and region we conduct business, we have therefore established local subsidiaries to act as our hubs in those areas.

2. Exchange rate fluctuation risk

- (1) The Group operates on a global basis and foreign currency fluctuations affect net sales and materials procurement costs in foreign currencies. For this reason, we seek to mitigate the impact on operating results through forward foreign exchange contracts.
- (2) Since the yen-translated figures of overseas consolidated subsidiaries and equity-method affiliates in the consolidated financial statements are influenced by foreign exchange rates, dramatic fluctuations in foreign exchange rates may have a significant impact on the Group's performance.

3. Raw materials procurement risks

If the Group is unable to secure the materials used in its products, or if the price of materials fluctuates drastically, the Group's performance could be significantly affected. For this reason, we strive to ensure stable procurement of materials and reduce the impact of rising material prices on our business performance by implementing measures such as lowering the cost of our products and appropriately shifting the costs to sales prices.

4. Legal and regulatory risks

While the Group conducts its business activities in compliance with the laws and regulations in Japan and abroad, growing global environmental awareness tends to tighten regulations on chemical products. Therefore, if environmental regulations become more stringent than expected and require substantial additional investments in the future, our business performance could be significantly affected.

5. Research and development risks

The Group invests a large amount of management resources in the development of new products. However, in research and development, particularly in the Agro Products Business, the development and period for validating the efficacy and safety of a product may take a long time, and the research and development costs and commission fees for studies involved in up-front investment are significant, so if the research theme is not put to practical use, the Group's results of operations may be significantly affected.

6. Product liability risks

As a manufacturer of chemical products, the Group is working on Responsible Care (RC) activities (voluntary risk reduction activities) for quality management, and in particular, we are striving to improve management based on ISO 9001. In addition, we conduct product liability (PL) risk assessments prior to the sale of new products and make quality improvements in accordance with ISO 9001 to ensure that PL problems are avoided. However, there is no guarantee that all products will be defect-free and free of PL issues. For this reason, the Group carries product liability insurance to protect itself in the event of an accident. However, if an unanticipated serious quality defect occurs, the Group's business performance could be significantly affected.

7. Accident and disaster risks

As a manufacturer of chemical products, the Group is acutely aware of the risks associated with manufacturing. We engage in Responsible Care activities with respect to quality, environmental protection, occupational safety & health, process safety and disaster prevention, logistics safety, chemicals and product safety, etc., and strive to prevent accidents at our production facilities and chemical product storage facilities. Nevertheless, if an unforeseen accident or a large-scale natural disaster were to cause damage to personnel or property at our manufacturing facilities, or if damage were to occur in the areas in the vicinity of our plants, there may be a significant impact on our business results due to a loss of trust from society in the Group, the cost of measures to deal with the accident and disaster, and lost opportunities due to the suspension of production activities.

8. Application of impairment accounting risks

If the value of the Group's business assets substantially declines, or if the Group does not expect to recover its investment due to a decline in profitability or other factors, recording an impairment loss could have a material impact on the Group's results of operations.

9. Retirement benefit obligations risks

The Group's employee retirement benefit costs and obligations are calculated based on actuarial assumptions, such as the rate of return on plan assets and the discount rate, so if the actual results differ substantially from the assumptions due to abrupt changes in the market environment or other factors, the Group's results could be significantly affected.

10. Intellectual property infringement risks

The Group manages its intellectual property rights strictly. However, it may not be able to fully protect its intellectual property rights in certain countries and may not be able to completely prevent infringement by third parties, which could have a significant impact on the Group's business results.

11. COVID-19 pandemic risks

As some of the Group's businesses include products and services that are affected by economic fluctuations, significant fluctuations in market conditions due to changes in the economic environment caused by COVID-19, as well as stagnation of our business activities caused by the spread of infection among employees, could have a significant impact on the Group's business results. In addition to accurately ascertaining and analyzing market trends, with employee safety as our foremost priority, we will implement telework systems and other measures to prevent the spread of infection, so that we can maintain our business activities.

Messages from Outside Directors

Responding to Society's Diverse Expectations through Further Promotion of Diversity

The corporate culture at Nippon Soda is one that openly takes on board and solves any issues brought to its attention, and this demonstrates the Company's honesty and reliability. It is also enthusiastically engaged in governance reforms, which require continued effort. With its thorough respect for external opinions, it is clear to see management's intent to revitalize the Board of Directors, maintain transparency, and function in a coordinated manner.

FY 2021 was the first year of the Company's long-term vision and its medium-term business plan. The fact that the Company was able to embark on efforts to reform its business portfolio despite the impacts of the pandemic can be seen as a great achievement.

On the other hand, an increasing number of the Company's management decisions have been influenced by multifaceted issues from different directions, a representative example of which is climate change. To further raise corporate value, Nippon Soda must look at innovations and new services. To do so, while securing competent human resources, the Company will have to promote diversity so that it can incorporate new perspectives and values. My aim is to help the Company enhance its governance efficacy so that it can make optimal management decisions by incorporating diverse expertise and experience, and by widening its perspectives. In response to environmental and social challenges, as requirements for corporate value change at unprecedented speed, I believe it is paramount that the Company fulfills its role through sustained momentum in the face of change, and becomes a widely recognized member of society. I will provide thorough support to ensure that Nippon Soda can enhance its contact points with society, use the power of chemistry to respond to the contemporary needs it discovers, and in turn become a leading presence in the resolution of social challenges. In doing so, I will give my all to raise the Company's corporate value.



Junko Yamaguchi
Outside Director

Utilizing the Company's Robust Business Foundation to Promote Highly Efficient Management and Achieve Sustainability



Mitsuaki Tsuchiya
Outside Director

It has now been one year since I assumed the role of outside director, and in this year, I have seen the effectiveness of Nippon Soda's sound corporate governance structure. With the increase in number of outside directors, the launch of the Nomination and Remuneration Advisory Committee, and the transition to a company with an Audit and Supervisory Committee, the Company's governance structure has been progressively strengthened. I also believe that there is high awareness of governance both among management and other levels within the Company. In line with revisions to the Corporate Governance Code in 2021, the Company must aim to further reinforce its governance structure and strengthen the roles and functions of the Board of Directors. At the same time, it is essential that the Company looks at the development of core personnel from a medium- to long-term perspective, and further accelerates its initiatives in the field of sustainability.

In FY 2021, while the Company moved forward with drastic structural reforms in the caustic potash business, it was able to increase exports of its agro products and begin sales of proprietary new agrochemicals, despite the severe business environment caused by the pandemic. As a result, the Company posted a net profit that exceeded the targets set out in its medium-term business plan, marking an incredibly favorable start in the plan's first year. In its shareholder returns, too, the Company made steady progress with the acquisition of treasury shares and an improved dividend payout ratio. Moving forward, the Company's next task will be to further enhance efficiency and profitability as it aims to achieve its long-term vision, 10 years from now. The Company will also need to strengthen its four materiality initiatives to ensure it can contribute to the creation of a sustainable society.

As a company involved in R&D related to chemicals that generates new products through its own unique technologies, Nippon Soda boasts excellent technological capabilities, a stable earning capacity, and a sound financial base. From my position as an outside director, I will continue to proactively offer my advice and proposals so that the Company can utilize these strengths to enhance management efficiency and contribute to sustainability.

Directors and Executive Officers

Directors



Board of Director Meeting attendance: 16/16

Akira Ishii
Representative Director, Chairman

April 1976
April 2009
June 2009

Joined the Company
Manager, Personnel Dept.
Director, General Manager, Corporate Planning Dept. and Affiliates Dept. and Manager, Personnel Dept.

April 2011
June 2011

Director, General Manager, Corporate Planning Dept. and Manager, Personnel Dept.
Director, General Manager, Corporate Planning and Manager, Personnel Dept.

April 2013
June 2013

Director, General Manager, Agro Products Div.
Director, Executive Managing Officer, General Manager, Agro Products Div.

June 2015
April 2021

Representative Director, President
Representative Director, Chairman (current position)



Board of Director Meeting attendance: 12/12 (since becoming company director)

Eiji Aga
Representative Director, President

April 1985
April 2010

Joined the Company
Manager, Fine Chemical Dept., Chemicals Business Div.

February 2012
April 2015

Executive Vice President, Alkaline SAS
Manager, Business Strategy & Administration Dept., Chemicals Business Div.

April 2017

Executive Officer, General Manager, Chemicals Business Div. and Supervision of Osaka Branch Office

April 2018
April 2020

Executive Officer, General Manager, Chemicals Business Div.
Executive Officer, Supervision of Human Resources Dept.

June 2020
April 2021

Director, Executive Officer, Supervision of Marketing & Sales, Human Resources Dept. and Purchasing & Logistics Dept.
Representative Director, President (current position)



Board of Director Meeting attendance: 16/16

Izumi Takano
Director, Executive Managing Officer, Supervision of Technology, Purchasing & Logistics Dept., Responsible Care Management Dept., and Manager, Trade Administration Dept., and General Manager, Research & Development Div.

April 1984
April 2005
April 2010

Joined the Company
Manager, Manufacturing Dept., Takaoka Plant
Manager, Production Planning & Management Dept., Production & Technology Div.

April 2012
April 2015
April 2018

General Manager, Mizushima Plant
Executive Officer, General Manager, Takaoka Plant
Senior Executive Officer, General Manager, Research & Development Div.

June 2019
April 2020

Director, Senior Executive Officer, General Manager, Research & Development Div.
Director, Executive Managing Officer, General Manager, Research & Development Div. and General Manager, Production & Technology Div.

April 2021

Director, Executive Managing Officer, Supervision of Technology, Purchasing & Logistics Dept., Responsible Care Management Dept., and Manager, Trade Administration Dept., and General Manager, Research & Development Div. (current position)



Board of Director Meeting attendance: 16/16

Kiyotaka Machii
Director, Executive Managing Officer, Supervision of Administration, CSR Promotion, and Internal Control & Audit Dept.

April 1983
April 2013

Joined the Company
Group Leader, Overseas Sales 1 Group, Agro Products Div.

April 2014

Manager, Overseas Sales 1 Dept., Agro Products Div.

April 2015
April 2016
April 2018

Manager, Corporate Planning Dept.
Executive Officer, Manager, Corporate Strategy Dept.
Executive Officer, Manager, General Affairs & Human Resources Dept.

June 2019

Director, Executive Officer, Supervision of Administration (General Affairs Dept., Human Resources Dept. and Accounting Dept.) and Corporate Social Responsibility Dept., and Manager, General Affairs & Human Resources Dept.

April 2020

Director, Executive Managing Officer, Supervision of Administration (Secretariat Dept., Human Resources Dept., General Affairs Dept. and Finance & Accounting Dept.), Corporate Social Responsibility Dept., Internal Control & Audit Dept., and Responsible Care Management Dept.

June 2020

Director, Executive Managing Officer, CSR Promotion, and Internal Control & Audit Dept., Secretariat Dept., General Affairs Dept., Finance & Accounting Dept., Responsible Care Management Dept. and Manager, Trade Administration Dept.

April 2021

Director, Executive Managing Officer, Supervision of Administration, CSR Promotion, and Internal Control & Audit Dept. (current position)



Board of Director Meeting attendance: N/A (new appointment)

Osamu Sasabe
Director, Executive Officer, Human Resources Dept., and Manager, Corporate Planning Dept., and Group Leader, DX Promotion Group

April 1986
April 2012
April 2016
April 2018
April 2019
April 2020

Joined the Company
Manager, Information Systems Dept.
Manager, Finance & Accounting Dept.
Manager, Corporate Strategy Dept.
Executive Officer, Manager, Corporate Strategy Dept.

Executive Offices, Group Leader, Corporate Strategy Group, Corporate Strategy Dept., and Group Leader, DX Promotion Group, Corporate Strategy Dept.

Executive Offices, Manager, Corporate Strategy Dept. and Group Leader, DX Promotion Group

April 2021
June 2021

Director, Executive Officer, Human Resources Dept., and Manager, Corporate Strategy Dept., and Group Leader, DX Promotion Group (current position)



Board of Director Meeting attendance: 16/16

Junko Yamaguchi
Director (Outside Director)

April 1979
March 1993
July 1999

Joined Nippon Telegraph and Telephone Public Corporation (currently NIPPON TELEGRAPH AND TELEPHONE CORPORATION)
Director, Corporate Business Division, Omiya Branch
Executive Manager, Consumer & Office Business Department, NTT Communications Corporation

April 2004
April 2007

Vice President, Incubation Development Department, NTT Resonant Incorporated
Director, Info-Communications Research Department, Foundation for MultiMedia Communications

June 2014
June 2018
June 2019

Audit & Supervisory Board Member, NTT EAST-MINAMIKANTO CORPORATION
Senior Advisor, NTT EAST-MINAMIKANTO CORPORATION
Outside Director, the Company (current position)



Board of Director Meeting attendance: 12/12 (since becoming company director)

Mitsuaki Tsuchiya
Director (Outside Director)

April 1977
September 2000

Joined The Industrial Bank of Japan, Limited
General Manager, ALM Planning Dept., Mizuho Holdings Inc.

April 2002

General Manager, Secretariat Office, Mizuho Corporate Bank, Ltd.

April 2004

Executive Officer and General Manager, Secretariat Office

March 2006
April 2008

Managing Executive Officer in charge of Sales
Deputy President & Executive Officer, Mizuho Trust & Banking Co., Ltd.

June 2008
April 2011

Representative Director and Deputy President
Executive Officer and Vice President, Mizuho Financial Group, Inc.

June 2011
April 2012
June 2012

Director and Vice-President
President and CEO, Mizuho Research Institute Ltd.
Auditor (outside), The Japan Atomic Power Company (current position)

June 2017

Outside Corporate Auditor, Japan Bank for International Cooperation (current position)
Director, Audit and Supervisory Committee member, ASAHI INDUSTRIES CO., LTD.
Corporate Auditor, Dai-ichi Leasing Co., Ltd.

June 2019
June 2020

Outside Director, Godo Steel, Ltd. (current position)
Outside Director, the Company (current position)



Board of Director Meeting attendance: 16/16

Nobuyuki Shimoide
Director (part-time)

April 1983
April 2013
April 2015

Joined the Company
Manager, Corporate Planning Dept.
Executive Officer, General Manager, Corporate Planning Dept. and Affiliates Dept.

April 2016

Executive Officer, Assistant to President (Special Missions)

June 2016
April 2019

Managing Director, Nisso Engineering Co., Ltd
Executive Managing Officer, General Manager, Corporate Strategy Dept.

June 2019

Director, Executive Managing Officer, Supervision of Business Strategy & Administration (Corporate Strategy Dept. and Information Technology Dept.) and Internal Control & Audit Dept.

April 2020

Director, Executive Managing Officer, Manager, Corporate Strategy Dept.

April 2021

Director, Executive Managing Officer, and Manager, Corporate Strategy Dept.

June 2021

Director, the Company (current position)
Representative Director, President, Nisso Fine Co., Ltd. (current position)

Directors Who Are Members of the Audit and Supervisory Committee

* In June 2020, we transitioned to a company with an audit and supervisory committee.



Board of Director Meeting attendance: 16/16 (four as auditor prior to transition to a company with audit and supervisory committee)
Audit and Supervisory Committee Meeting attendance: 12/12
Board of Auditor Meeting attendance: 4/4

Keichi Aoki
Director
Audit and Supervisory Committee member (Full time)

April 1981
April 2010
April 2014

Joined the Company
Manager, Secretariat
Group Leader, General Affairs & Legal Group and Secretariat Group, General Affairs & Human Resources Dept.

June 2016
June 2020

Full-time Audit and Supervisory Board member of the Company
Director and Audit and Supervisory Committee member of the Company (current position)



Board of Director Meeting attendance: 16/16
Audit and Supervisory Committee Meeting attendance: 12/12
Board of Auditor Meeting attendance: 4/4

Shigeo Ogi
Director (Outside Director)
Audit and Supervisory Committee member

November 1974
August 1979
July 1990
July 1997
October 2003
October 2013
December 2015
June 2016
June 2020

Joined Deloitte Haskins & Sells
Registered as a Certified Public Accountant
Partner, Tohmatsu & Co. (currently Deloitte Touche Tohmatsu LLC)
Senior Partner
Chief, Financial Industry Group (Deloitte Touche Tohmatsu)
Chief, IFRS Center of Excellence (COE), Deloitte Touche Tomatsu
Chief, Ogi CPA Office (current position)
Audit & Supervisory Board Member, the Company
Outside Director and Audit and Supervisory Committee member, the Company (current position)
Outside Auditor, ALCONIX CORPORATION (current position)



Board of Director Meeting attendance: 12/12
Audit and Supervisory Committee Meeting attendance: 12/12 (since becoming company director)

Yoko Waki
Director (Outside Director)
Audit and Supervisory Committee member

October 2002
January 2012
June 2019
June 2020

Registered as attorney-at-law (Dai-ichi Tokyo Bar Association) and joined South Toranomon Law Offices
Partner (current position)
Independent Director, HIGASHI TWENTY ONE CO., LTD. (current position)
Outside Director and Audit and Supervisory Committee member of the Company (current position)

Executive Officers

Executive Managing Officer
Tateshi Tsujikawa
President, NISSO CHEMICAL EUROPE GmbH and Chairman, NISSO AMERICA INC.

Executive Officer
Shoichi Akagawa
General Manager, Chemicals Business Div. and Manager, Osaka Branch Office

Executive Officer
Kazunori Akatsuka
General Manager, Takaoka Plant

Executive Officer
Yasuyuki Miyazawa
General Manager, Chiba Plant

Executive Officer
Atsuo Watanabe
General Manager, Production & Technology Div., and Manager, Production Planning & Management Dept.

Executive Officer
Masashi Mizoguchi
General Manager, Agro Products Div.

Executive Officer
Nobuyuki Hori
Executive Officer (and present Managing Director, Nisso Fine Co., Ltd.)

Executive Officer
Teruo Tachibana
General Manager, Nihongi Plant

Executive Officer
Osamu Shimizu
General Affairs Dept., and Manager, Finance & Accounting Dept.

Executive Officer
Masatsugu Hatayama
General Manager, Odawara Research Center, Research & Development Div.

10-year Financial and Non-financial Highlights

		2012/3	2013/3	2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3	2021/3
Operating Results											
Net sales	(Millions of yen)	121,118	127,581	140,649	148,062	142,711	128,647	141,230	145,663	144,739	139,363
Operating profit	(Millions of yen)	4,706	4,094	6,399	7,285	7,415	5,365	6,390	7,906	8,135	9,980
Operating profit on sales (ROS)	(%)	3.9	3.2	4.5	4.9	5.2	4.2	4.5	5.4	5.6	7.2
Share of profit (loss) of entities accounted for using equity method	(Millions of yen)	5,209	4,246	2,705	6,338	11,728	4,898	2,239	(1)	1,841	1,856
Ordinary profit	(Millions of yen)	9,365	8,317	9,740	14,924	18,952	9,908	9,204	8,888	10,312	12,743
Profit attributable to owners of parent	(Millions of yen)	7,044	5,303	5,833	10,945	14,313	8,785	6,378	5,802	6,759	7,360
Financial Position											
Total assets	(Millions of yen)	179,230	193,344	204,297	221,285	220,587	217,302	219,457	216,212	210,556	227,975
Net assets	(Millions of yen)	91,671	100,246	108,224	127,181	131,489	138,069	144,801	144,916	144,440	149,203
Equity ratio	(%)	48.1	48.9	50.0	54.6	58.5	62.3	64.6	65.6	67.1	63.9
Interest-bearing debt	(Millions of yen)	49,529	50,985	50,696	49,343	49,847	39,240	31,939	26,116	29,220	39,145
Debt-to-equity ratio*1	(Times)	0.58	0.54	0.50	0.41	0.39	0.29	0.23	0.18	0.21	0.27
Return on equity (ROE)	(%)	8.4	5.9	5.9	9.8	11.5	6.6	4.6	4.1	4.8	5.1
Operating profit on assets (ROA)	(%)	2.7	2.2	3.2	3.4	3.4	2.5	2.9	3.6	3.8	4.6
Cash Flows											
Cash flows from operating activities	(Millions of yen)	9,867	9,836	11,260	9,588	10,639	41,236	12,085	11,677	12,449	13,821
Cash flows from investing activities	(Millions of yen)	(7,949)	(10,783)	(11,805)	(4,600)	(9,424)	(7,858)	(8,327)	(15,280)	(10,399)	(13,770)
Free cash flow*2	(Millions of yen)	1,917	(947)	(545)	4,988	1,215	33,377	3,758	(3,603)	2,050	51
Cash flows from financing activities	(Millions of yen)	(554)	203	(1,888)	(2,776)	(1,323)	(14,620)	(9,485)	(7,534)	(1,161)	1,722
Cash and cash equivalents at end of period	(Millions of yen)	14,434	14,346	12,402	14,853	14,494	33,146	27,585	16,536	17,200	19,253
Per Share Indicators											
Earnings per share	(Yen)	231.56	174.35	191.79	359.80	464.03	287.04	211.35	192.27	224.28	255.17
Net assets per share	(Yen)	2,831.29	3,105.82	3,362.05	3,971.73	4,144.56	4,485.10	4,698.59	4,698.10	4,734.24	5,165.07
Dividend per share	(Yen)	30	30	40	50	60	60	60	60	80	110
Dividend payout ratio	(%)	13.0	17.2	20.9	13.9	12.9	20.9	28.4	31.2	35.7	43.1
Others											
Capital expenditure	(Millions of yen)	5,061	9,412	6,115	7,987	6,764	6,512	8,589	8,026	8,824	7,718
Depreciation	(Millions of yen)	6,092	5,761	6,480	6,436	6,242	6,397	6,532	6,966	7,578	7,662
R&D costs	(Millions of yen)	5,738	5,941	6,480	6,343	6,670	6,495	7,250	6,241	6,127	5,791
Non-financial Indicators											
Carbon dioxide emissions	(Thousand tons)	184	217	222	223	214	218	226	207	203	188
Energy consumption (in crude oil equivalent)	(ML)	97.1	94.5	94.8	99.0	93.9	94.9	96.4	93.7	93.1	88.3
Number of employees (consolidated)	(Persons)	2,507	2,539	2,501	2,507	2,664	2,684	2,683	2,724	2,744	2,770

This document has been translated from the Japanese original for reference purposes only. In the event of any discrepancy between this translation and the Japanese original, the Japanese original shall prevail.

Note 1: Figures shown have been rounded down to the nearest million.

Note 2: The Company carried out a reverse stock split of its common shares on a one-for-five basis on October 1, 2018. All per share indicators are calculated on the assumption that the reverse stock split was executed.

Note 3: Carbon dioxide emissions and energy consumption (in crude oil equivalent) are reports related to Nippon Soda (non-consolidated).

1 Debt-to-equity ratio = Interest-bearing debt ÷ Equity capital *Equity capital = Net assets – Share acquisition rights – Non-controlling interests

*2 Free cash flow = Cash flows from operating activities + Cash flows from investing activities

Financial Review

Operating Results

The economy in Japan during the fiscal period under review deteriorated due to the stagnation of economic activity brought about by the COVID-19 pandemic, and there was continued uncertainty surrounding the future.

Under such circumstances, at the Nippon Soda Group we formulated our long-term vision (fiscal year ending March 2021–March 2030) and our medium-term business plan (year ending March 2021–March 2023), and poured all our efforts into various measures aimed at enhancing corporate value.

In the period under review, although sales fell in both the Chemicals and Trading Businesses, and plant construction

work decreased in the Construction Business, sales for export in the Agrochemicals Business were strong. As a result, net sales totaled ¥139,363 million (down 3.7% year on year), operating profit stood at ¥9,980 million (up 22.7% year on year), and ordinary profit totaled ¥12,743 million (up 23.6% year on year).

Elsewhere, due to impairment losses from structural reforms in the caustic potash and related businesses, as well as impairment losses from fine chemicals facilities (fixed assets), profit attributable to owners of parent increased to ¥7,360 million (up 8.9% year on year).

Sales of eco business products fell due to a drop in demand for our water treatment agent NISSO HI-CHLON.

Despite an increase in sales of our pharmaceutical additive NISSO HPC, overall sales of pharmaceuticals and industrial fungicides fell due to a drop in sales of pharmaceutical ingredients and industrial fungicides.

Trading

Net sales for the fiscal period under review totaled ¥32,316 million (down 7.7% year on year), while operating profit stood at ¥730 million (up 14.6% year on year). This was due to a decline in sales in both inorganic and organic materials, and a decrease in expenses.

Transportation and Warehousing

Net sales and operating profit for the fiscal period under review totaled ¥4,224 million (basically unchanged from the previous period) and ¥599 million (up 21.7% year on year), respectively, on the back of the robust warehousing business despite weakness in transportation.

Construction

Net sales and operating profit for the fiscal period under review totaled ¥8,507 million (down 41.0% year on year) and ¥1,103 million (down 34.3% year on year), respectively, due to a decrease in plant construction works.

Others

Net sales and operating profit for the fiscal period under review totaled ¥8,540 million (up 16.2% year on year) and ¥781 million (up 21.3% year on year), respectively.

Results by Segment

Chemicals

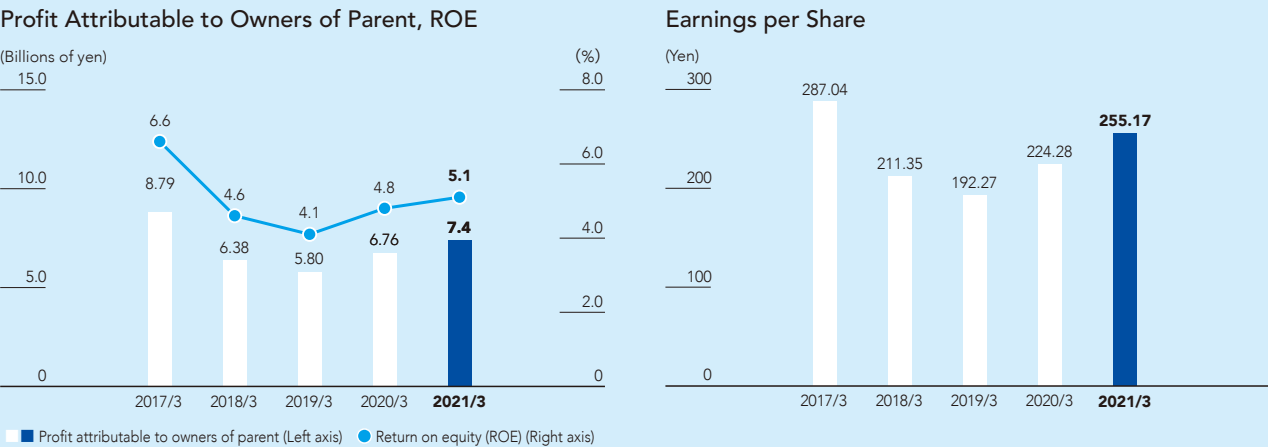
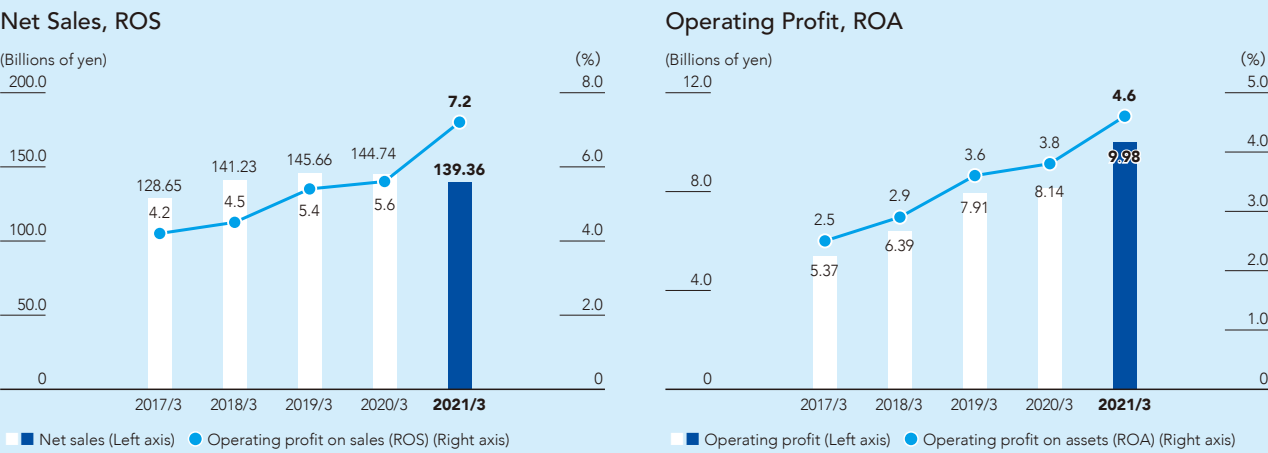
Due to stagnant economic activity brought about by the COVID-19 pandemic, sales of industrial and fine chemicals decreased.

As a result, net sales and operating profit for the fiscal period under review totaled ¥37,569 million (down 7.0% year on year) and ¥1,722 million (down 22.3% year on year), respectively.

Industrial chemicals saw a decline in sales due to weaknesses in caustic soda.

Fine chemicals experienced a drop in sales due to a decrease in specialty isocyanates and secondary battery materials.

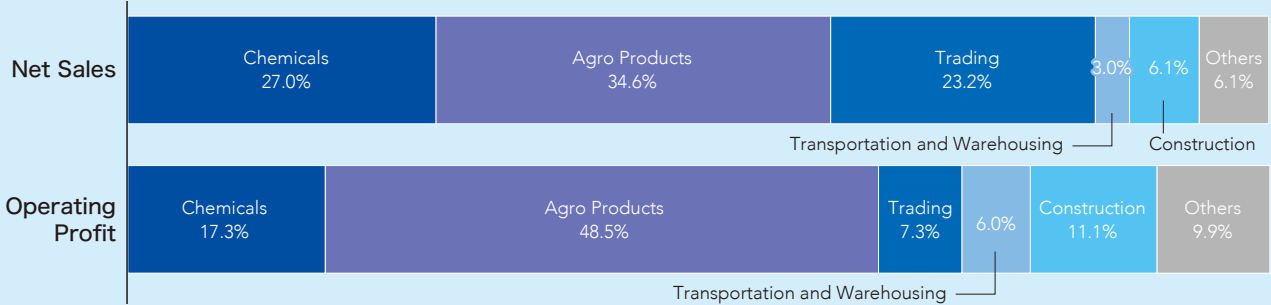
Specialty chemicals marked a rise in sales due to increases in sales of VP-POLYMER, a KrF photoresist material.



Consolidated Results for the Fiscal Year Ended March 2021 (By Segment)

	2019/3		2020/3		2021/3	
	Net Sales	Operating Profit	Net Sales	Operating Profit	Net Sales	Operating Profit
Chemicals	41.29	2.45	40.39	2.22	37.57	1.72
Agro Products	43.12	2.29	43.39	2.24	48.20	4.84
Trading	36.94	0.67	35.00	0.64	32.32	0.73
Transportation and Warehousing	4.26	0.46	4.20	0.49	4.22	0.60
Construction	12.18	1.17	14.42	1.68	8.51	1.10
Others	7.87	0.59	7.35	0.64	8.54	0.78
Adjustments	—	0.28	—	0.23	—	0.21
Total	145.66	7.91	144.74	8.14	139.36	9.98

Revenue Structure in the Fiscal Year Ended March 2021



Financial Position

Total assets as of March 31, 2021 stood at ¥227,975 million, an increase of ¥17,419 million from March 31, 2020.

Total liabilities were ¥78,772 million, an increase of ¥12,656 million from March 31, 2020.

Net assets increased ¥4,763 million from March 31, 2020, totaling ¥149,203 million.

Cash Flows

Cash and cash equivalents for the fiscal year ended March 31, 2021 increased ¥2,053 million to ¥19,253 million. This was mainly attributable to profit before income taxes of ¥9,351 million (including ¥1,856 million of share of profit of entities accounted for using equity method, a non-cash item), depreciation of ¥7,662 million and ¥1,456 million in interest and dividend income received, as well as purchase of property, plant and equipment of ¥11,924 million.

Research and Development

In order to promote the development of high-added-value products based on its characteristic, unique technologies, the Nippon Soda Group has been making efforts in R&D aimed at developing various chemicals using functional materials and precise synthesis technologies in the Chemicals Business and new agrochemicals by the Agro Products Business, based on the keywords of “fusion of knowledge,” “fusion of technologies,” and “global.” To prepare for expected changes in the business environment, the Group also seeks to reinforce and expand its existing products, forcefully push forward with the development of new products in peripheral areas related to existing businesses as well as focus areas, and enhance the technological strength of the entire Group through technological partnerships with affiliates, as well as entering new technology areas and creating new businesses through the active use of its proprietary technologies.

The R&D situation of each segment during the fiscal year under review was as follows.

Total R&D costs were ¥5,791 million (4.2% of consolidated net sales). The number of R&D personnel was 349 for the entire Group (12.6% of total employees).

Chemicals

In the specialty chemicals area, the Group is carrying out development that leverages its technological characteristics in fields such as new polymer materials using precise polymerization technology, new adsorbents for collecting valuable resources, and organic EL (electro-luminescence) materials. Furthermore, the Group is seeking to aggressively expand into new areas while enhancing the competitiveness of existing products, including cellulose derivatives, liquid polybutadiene products, color developers, environmental chemistry-related products such as eco business products, photocatalysts and biocides, and organic metals-related products.

In the precision synthesis area, the Group aims to create new products through the development of key intermediates using its unique ability to handle raw materials such as phosgene, hydrocyanic acid and metallic sodium, and the development of new manufacturing technology.

The R&D costs of Chemicals were ¥1,260 million.

Agro Products

Amid growing interest in food safety and security, the Group has been carrying out research mainly in agrochemicals for farming and gardening that show activity with a low dosage and have low persistence.

It is also aggressively promoting development abroad, including Europe and the United States, for Picarbutrazox (NF-171), a fungicide that shows a prominent effect against downy mildew and Pythium blight. The applications of the product include foliar spraying on cucurbits and leafy vegetables as well as seed treatment for major grain groups such as corn, etc. In October 2020, the Group launched Acynonapyr (NA-89), an acaricide that has a new mode of action, and the product is gaining in popularity. Ipflufenquin (NF-180), a fungicide that is effective against a broad range of diseases, was registered in Japan in July 2020. Overseas development has also been proceeding steadily, and various tests for registration are being carried out on a global basis. Furthermore, the Group is conducting research on subsequent promising compounds to advance them to the next phase.

Apart from agrochemicals, biopesticides AGROCARE (*bacillus subtilis*) and MASTERPIECE (*pseudomonas rhodesiae*) have been achieving steady sales. The Group will continue to make efforts to enhance its lineup of biopesticides that utilize the various functions of microorganisms.

The R&D costs of Agro Products were ¥4,523 million.

Others

In the environmental development business, the Group is engaged in research to improve the recycling process of difficult-to-process industrial waste. The R&D costs of others were ¥7 million.

Capital Expenditure

The Nippon Soda Group determines its capital expenditure plan based on demand forecasts and investment efficiency. During the fiscal period under review, the Group made capital investments of ¥7,718 million, mainly in the development of high-value-added products and enhancing competitiveness. The capital expenditure of each segment was as follows.

Chemicals

The Chemicals Business made capital investments of ¥5,293 million mainly in the enhancement, streamlining, maintenance and updating of the manufacturing equipment of its products.

Agro Products

The Agro Products Business made capital investments of ¥771 million mainly in the enhancement, streamlining, maintenance and updating of the manufacturing equipment of its products.

Trading

The Trading Business made capital investments of ¥3 million mainly in streamlining, maintenance and updating.

Transportation and Warehousing

The Transportation and Warehousing Business made capital investments of ¥663 million mainly in streamlining, maintenance and updating.

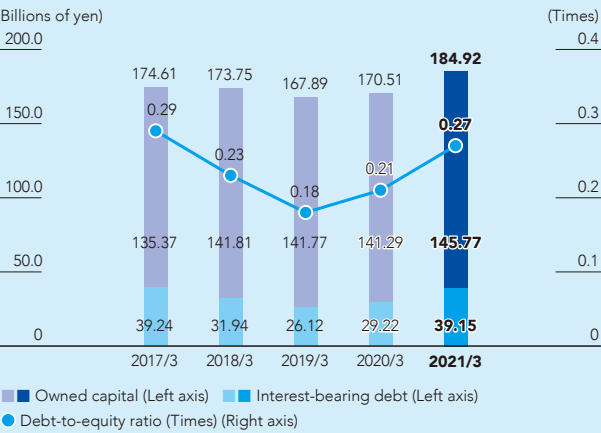
Construction

The Construction Business made capital investments of ¥60 million mainly in streamlining, maintenance and updating.

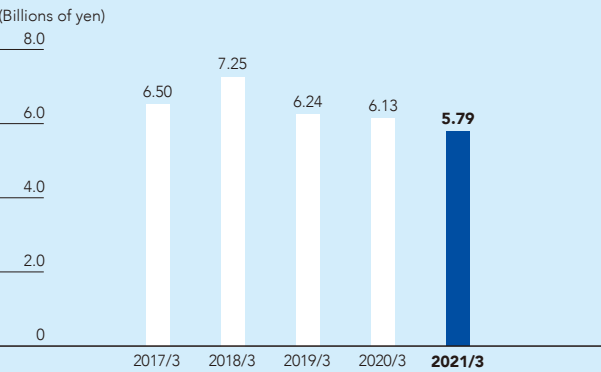
Others

Other business made capital investments of ¥925 million mainly in streamlining, maintenance and updating of equipment related to environmental development.

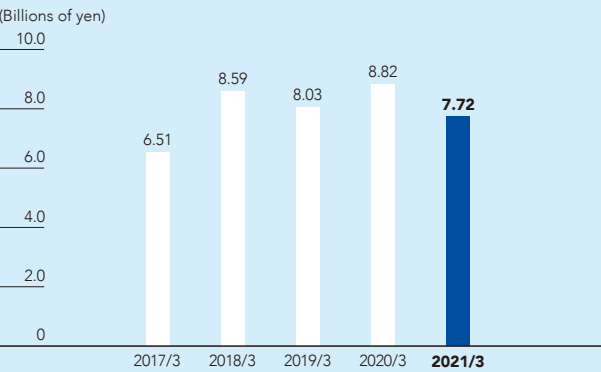
Owned Capital, Interest-bearing Debt, Debt-to-Equity Ratio



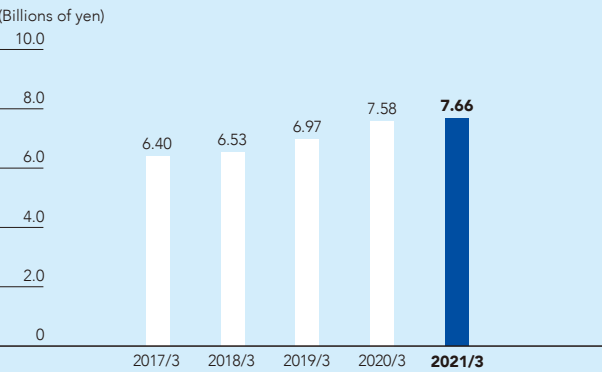
R&D Costs



Capital Expenditure



Depreciation



Consolidated Balance Sheets

	(Millions of yen)	
	As of March 31, 2020	As of March 31, 2021
Assets		
Current assets		
Cash and deposits	17,229	19,286
Notes and accounts receivable - trade	41,063	42,946
Electronically recorded monetary claims - operating	2,514	2,310
Inventories	30,644	32,116
Others	4,865	3,895
Allowance for doubtful accounts	(200)	(204)
Total current assets	96,117	100,351
Fixed assets		
Property, plant and equipment		
Buildings and structures	61,937	63,678
Accumulated depreciation	(43,590)	(44,631)
Buildings and structures, net	18,347	19,046
Machinery, equipment and vehicles	114,195	116,957
Accumulated depreciation	(96,140)	(98,990)
Machinery, equipment and vehicles, net	18,055	17,966
Tools, furniture and fixtures	11,793	11,966
Accumulated depreciation	(9,910)	(9,923)
Tools, furniture and fixtures, net	1,882	2,042
Land	14,909	14,930
Construction in progress	6,037	8,310
Others	1,636	2,138
Accumulated depreciation	(358)	(712)
Others, net	1,277	1,425
Total property, plant and equipment	60,509	63,722
Intangible fixed assets		
Goodwill	13	187
Others	4,868	5,333
Total intangible fixed assets	4,881	5,521
Investments and other assets		
Investment securities	35,436	41,695
Retirement benefit assets	7,816	10,979
Deferred tax assets	3,455	3,339
Others	2,338	2,367
Allowance for doubtful accounts	(1)	(1)
Total investments and other assets	49,046	58,381
Total non-current assets	114,438	127,624
Total assets	210,556	227,975

	(Millions of yen)	
	As of March 31, 2020	As of March 31, 2021
Liabilities		
Current liabilities		
Notes and accounts payable - trade	15,129	14,764
Electronically recorded obligations - operating	2,383	1,942
Short-term borrowings	14,420	16,172
Income taxes payable	993	2,226
Provision for bonuses	2,953	3,925
Others	6,392	5,531
Total current liabilities	42,272	44,562
Non-current liabilities		
Long-term borrowings	13,514	21,535
Deferred tax liabilities	3,200	5,117
Retirement benefit liability	2,634	2,465
Provision for environmental measures	543	1,003
Others	3,951	4,087
Total non-current liabilities	23,843	34,209
Total liabilities	66,116	78,772
Net assets		
Shareholders' equity		
Share capital	29,166	29,166
Capital surplus	29,359	25,141
Retained earnings	85,111	89,364
Treasury shares	(3,184)	(3,338)
Total shareholders' equity	140,453	140,334
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	4,959	9,825
Deferred gains or losses on hedges	(163)	89
Foreign currency translation adjustment	(3,491)	(6,075)
Accumulated remeasurements of defined benefit plans	(465)	1,594
Total accumulated other comprehensive income	838	5,434
Non-controlling interests	3,147	3,434
Total net assets	144,440	149,203
Total liabilities and net assets	210,556	227,975

Consolidated Statements of Income

	(Millions of yen)	
	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2021
Net sales	144,739	139,363
Cost of sales	106,818	100,590
Gross profit	37,920	38,773
Selling, general and administrative expenses	29,785	28,793
Operating profit	8,135	9,980
Non-operating income		
Interest income	21	6
Dividend income	679	685
Share of profit of entities accounted for using equity method	1,841	1,856
Insurance income	45	381
Others	665	765
Total non-operating income	3,252	3,695
Non-operating expenses		
Interest expenses	230	256
Foreign exchange losses	250	—
Others	593	674
Total non-operating expenses	1,074	931
Ordinary profit	10,312	12,743
Extraordinary income		
Gain on sales of investment securities	58	124
Gain on sales of non-current assets	49	11
Total extraordinary income	108	135
Extraordinary losses		
Loss on abandonment of non-current assets	367	380
Loss on sales of investment securities	158	145
Impairment loss	1,609	1,742
Provision for environmental measures	—	633
One-hundredth anniversary commemorative expenses	187	97
Loss on compensation	—	431
Others	70	97
Total extraordinary losses	2,393	3,527
Profit before income taxes	8,027	9,351
Income taxes - current	1,656	2,922
Income taxes - deferred	(593)	(1,123)
Total income taxes	1,063	1,798
Profit	6,964	7,552
Profit attributable to non-controlling interests	204	192
Profit attributable to owners of parent	6,759	7,360

Consolidated Statements of Comprehensive Income

	(Millions of yen)	
	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2021
Profit	6,964	7,552
Other comprehensive income		
Valuation difference on available-for-sale securities	(2,288)	5,034
Deferred gains or losses on hedges	60	108
Foreign currency translation adjustment	(632)	735
Remeasurements of defined benefit plans	(834)	2,023
Share of other comprehensive income of entities accounted for using equity method	(951)	(3,011)
Total other comprehensive income	(4,646)	4,889
Comprehensive income	2,317	12,442
(Breakdown)		
Comprehensive income attributable to owners of parent	2,269	11,956
Comprehensive income attributable to non-controlling interests	47	485

Consolidated Statements of Changes in Equity

Fiscal year ended March 31, 2020

(Millions of yen)							
	Shareholders' equity						
	Share capital	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity		
Balance at beginning of period	29,166	29,359	80,166	(2,250)	136,441		
Changes during period							
Dividends of surplus			(1,814)		(1,814)		
Profit attributable to owners of parent			6,759		6,759		
Purchase of treasury shares				(938)	(938)		
Disposal of treasury shares		(0)		5	5		
Net changes in items other than shareholders' equity							
Total changes during period	—	(0)	4,944	(933)	4,011		
Balance at end of period	29,166	29,359	85,111	(3,184)	140,453		
	Accumulated other comprehensive income						
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Accumulated remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance at beginning of period	7,220	(163)	(2,100)	373	5,328	3,146	144,916
Changes during period							
Dividends of surplus							(1,814)
Profit attributable to owners of parent							6,759
Purchase of treasury shares							(938)
Disposal of treasury shares							5
Net changes in items other than shareholders' equity	(2,260)	0	(1,390)	(838)	(4,490)	1	(4,488)
Total changes during period	(2,260)	0	(1,390)	(838)	(4,490)	1	(476)
Balance at end of period	4,959	(163)	(3,491)	(465)	838	3,147	144,440

Fiscal year ended March 31, 2021

(Millions of yen)							
	Shareholders' equity						
	Share capital	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity		
Balance at beginning of period	29,166	29,359	85,111	(3,184)	140,453		
Changes during period							
Dividends of surplus			(2,645)		(2,645)		
Profit attributable to owners of parent			7,360		7,360		
Purchase of treasury shares				(4,837)	(4,837)		
Disposal of treasury shares		0		2	2		
Cancellation of treasury shares		(4,680)		4,680	—		
Transfer of retained earnings to capital surplus		462	(462)		—		
Net changes in items other than shareholders' equity							
Total changes during period	—	(4,217)	4,252	(154)	(119)		
Balance at end of period	29,166	25,141	89,364	(3,338)	140,334		
	Accumulated other comprehensive income						
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Accumulated remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance at beginning of period	4,959	(163)	(3,491)	(465)	838	3,147	144,440
Changes during period							
Dividends of surplus							(2,645)
Profit attributable to owners of parent							7,360
Purchase of treasury shares							(4,837)
Disposal of treasury shares							2
Cancellation of treasury shares							—
Transfer of retained earnings to capital surplus							—
Net changes in items other than shareholders' equity	4,866	253	(2,584)	2,059	4,595	286	4,882
Total changes during period	4,866	253	(2,584)	2,059	4,595	286	4,763
Balance at end of period	9,825	89	(6,075)	1,594	5,434	3,434	149,203

Consolidated Statements of Cash Flows

(Millions of yen)		
	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2021
Cash flows from operating activities		
Profit before income taxes	8,027	9,351
Depreciation	7,578	7,662
Amortization of goodwill	236	25
Impairment loss	1,609	1,742
Share of loss (profit) of entities accounted for using equity method	(1,841)	(1,856)
Increase (decrease) in provision for bonuses	54	970
Increase (decrease) in allowance for doubtful accounts	9	(3)
Decrease (increase) in retirement benefit assets	(483)	(464)
Increase (decrease) in retirement benefit liabilities	48	(155)
Increase (decrease) in provision for environmental measures	(181)	460
Interest and dividend income	(700)	(692)
Interest expenses	230	256
Loss on abandonment of non-current assets	381	390
Loss (gain) on valuation of investment securities	22	31
Loss (gain) on sales of investment securities	99	21
Decrease (increase) in trade receivables	6,797	(1,205)
Decrease (increase) in inventories	(3,383)	(1,271)
Increase (decrease) in trade payables	(5,941)	(1,185)
Others	545	164
Subtotal	13,108	14,243
Interest and dividend received	1,350	1,456
Interest paid	(231)	(257)
Income taxes paid	(1,778)	(1,621)
Cash flows from operating activities	12,449	13,821
Cash flows from investing activities		
Purchase of property, plant and equipment	(10,481)	(11,924)
Proceeds from sales of property, plant and equipment	236	31
Purchase of intangible assets	(404)	(789)
Purchase of investment securities	(51)	(1,337)
Proceeds from sales of investment securities	498	605
Payment of loans receivable	(17)	(276)
Collection of loans receivable	51	208
Payments for retirement of property, plant and equipment	(186)	(295)
Others	(43)	8
Cash flows from investing activities	(10,399)	(13,770)
Cash flows from financing activities		
Net increase (decrease) in short-term borrowings	(245)	1,393
Proceeds from long-term borrowings	4,673	9,863
Repayment of long-term borrowings	(2,525)	(1,539)
Dividends paid	(1,810)	(2,636)
Purchase of treasury shares	(940)	(4,844)
Dividends paid to non-controlling interests	(46)	(198)
Others	(267)	(313)
Cash flows from financing activities	(1,161)	1,722
Effect of exchange rate change on cash and cash equivalents	(225)	278
Net increase (decrease) in cash and cash equivalents	664	2,053
Cash and cash equivalents at beginning of period	16,536	17,200
Cash and cash equivalents at end of period	17,200	19,253

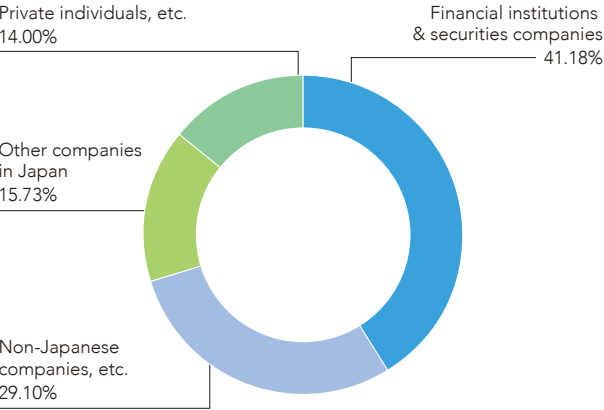
Company Information / Shareholder and Investor Information

(As of March 31, 2021)

Corporate Profile

Name:	Nippon Soda Co., Ltd.
Head Office:	2-2-1, Ohtemachi, Chiyoda-ku, Tokyo 100-8165, Japan
Tel:	+81-3-3245-6054
Representative:	Eiji Aga Representative Director, President
Established:	February 1920
Share capital:	¥29,166 million
Fiscal year end:	March
Number of employees:	2,770 (consolidated) 1,396 (non-consolidated)
Stock code:	4041
Stock listing:	First Section, Tokyo Stock Exchange
Number of shares constituting one trading unit:	100 shares
Total number of authorized shares:	96,000,000 shares
Total number of issued shares:	29,391,807 shares (Includes 1,100,006 shares of treasury stock)
Number of shareholders:	13,150 (221 less than March 31, 2020)
Fiscal year:	April 1 to March 31
Annual general meeting of shareholders:	June of each year
Dividend record dates:	Year-end dividend: March 31 Interim dividend: September 30
Shareholder registrar:	Mizuho Trust & Banking Co., Ltd. 1-2-1, Yaesu, Chuo-ku, Tokyo 103-8670, Japan
Handling office:	Stock Transfer Agency Department of the Head Office of Mizuho Trust & Banking Co., Ltd. 1-2-1, Yaesu, Chuo-ku, Tokyo 103-8670, Japan Contact: Stock Transfer Agency Department Mizuho Trust & Banking Co., Ltd. 2-8-4 Izumi, Suginami-ku, Tokyo, Japan 168-8507 Tel.: 0120-288-324 (toll-free within Japan only)

Share Distribution by Type of Shareholder



* Figures have been rounded off to the nearest second decimal point
* Treasury shares are included in "Private individuals, etc."

Major Shareholders

Name of shareholder	Number of shares held (Thousands of shares)	Shareholding ratio (%)
Custody Bank of Japan, Ltd. (Trust Account)	1,992	7.04
The Master Trust Bank of Japan, Ltd. (Trust Account)	1,967	6.95
Mitsui & Co., Ltd.	1,015	3.59
Nippon Soda Client Shareholding Association	956	3.38
The Norinchukin Bank	884	3.13
Mizuho Bank, Ltd.	816	2.89
JP MORGAN CHASE BANK 385632	809	2.86
JP MORGAN CHASE BANK 380684	670	2.37
Sompo Japan Insurance Inc.	513	1.81
Resona Bank, Limited	480	1.70

Note 1: The Company holds 1,100,006 shares of treasury stock. They are not included in the list of major shareholders above. Treasury shares do not include the 69,840 shares held by the share benefit trust for officers.
Note 2: The calculation of shareholding ratio does not include treasury shares.

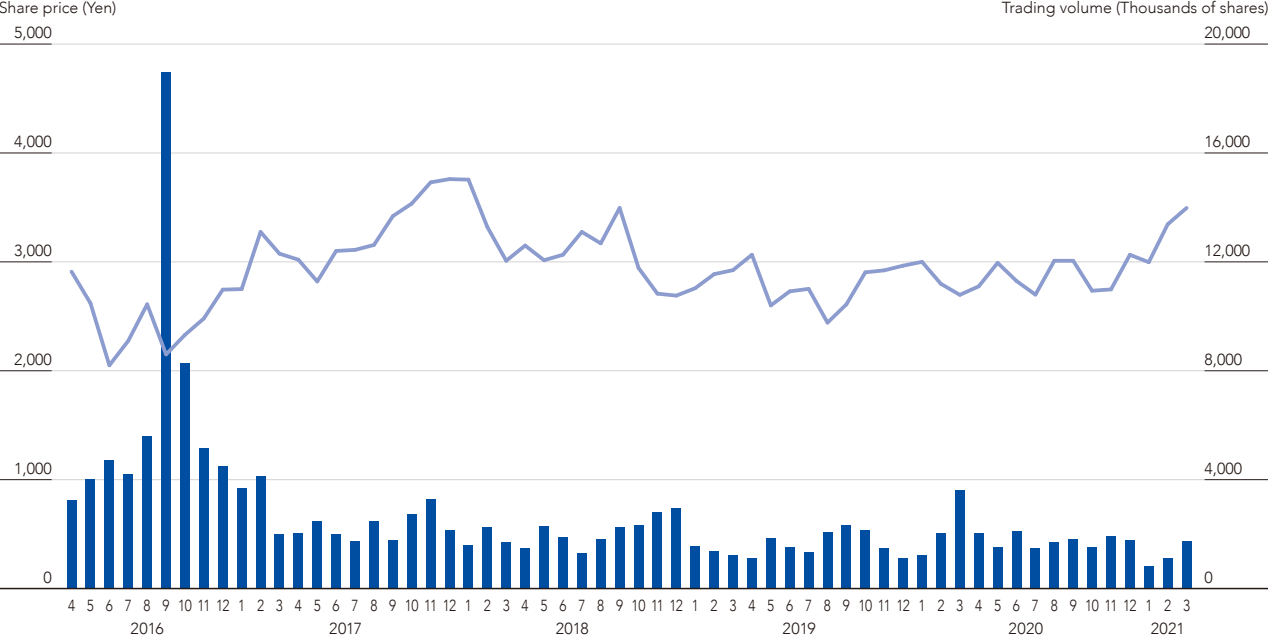
Group Companies

Consolidated subsidiaries

- Chemicals**
 - Nisso Fine Co., Ltd.
 - Shin Fuji Kaseiyaku Co., Ltd.
 - Nisso Metallochemical Co., Ltd.
 - Trading**
 - Nisso Shoji Co., Ltd.
 - Nisso Green Co., Ltd.
 - Logistics**
 - Sanwa Soko Co., Ltd.
 - Sanso Unyu Co., Ltd.
 - Engineering**
 - Nisso Engineering Co., Ltd.
 - Civil engineering and construction**
 - Nisso Kensetsu Co., Ltd.
- Overseas**
 - NISSO AMERICA INC.
 - NISSO CHEMICAL EUROPE GmbH
 - Nisso Namhae Agro Co., Ltd.
 - Alkaline SAS, and four other companies
- Affiliated companies accounted for by the equity method**

 - NOVUS INTERNATIONAL, INC.
 - IHARABRAS S/A. INDÚSTRIAS QUÍMICAS
 - Certis Europe B.V.

Share Price and Trading Volume



	2017/3	2018/3	2019/3	2020/3	2021/3
Profit attributable to owners of parent	(Billions of yen) 8.79	6.38	5.80	6.76	7.36
Total dividends	(Billions of yen) 1.82	1.82	1.82	2.40	3.13
Dividend payout ratio	(%) 20.9	28.4	31.2	35.7	43.1
Purchase of treasury shares	(Billions of yen) 2.00	—	—	0.94	4.83
Total return ratio	(%) 43.4	28.4	31.2	49.4	108.2

Note: The Company carried out a reverse stock split of its common shares on a one-for-five basis on October 1, 2018. All per share indicators are calculated on the assumption that the reverse stock split was executed.

Website Information

Please access the following websites for details about the Company.

Corporate Website
<https://www.nippon-soda.co.jp/e/>

CSR Information
<https://www.nippon-soda.co.jp/e/environment/>

Investor Relations
https://www.nippon-soda.co.jp/e/financial_fact/