

Global "sukima" ideas



**Nippon Kayaku Group
Sustainability Report**

2023



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Message from the President

Mission in *KAYAKU Vision 2025 (KV25)*

The Nippon Kayaku Group aims to be a company with a strong presence that can consistently provide happiness and delight to the environment, society and all stakeholders under the KAYAKU spirit.



The Nippon Kayaku Group's Corporate Vision is embodied by the KAYAKU spirit: "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences." We have inherited this KAYAKU spirit since the time of our founding and consistently engaged in our business activities with the attitude that we must do useful work for the world and its people. The KAYAKU spirit is the beliefs supporting the strengths of our group. While our individual jobs and workplaces may differ, the KAYAKU spirit serves as the fundamental basis for the judgments and actions of all Group officers and employees.

Based on the KAYAKU spirit, we have defined our mission for the Nippon Kayaku Group as a company with a strong presence that can consistently provide happiness and delight to the environment, society and all stakeholders under the KAYAKU spirit. As a scenario roadmap for achieving this vision, we have formulated the Medium-term Business Plan *KAYAKU Vision 2025 (KV25)*, which began in April 2022.

The key focus of KV25 is a set of five key company-wide material issues (Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform), which are the subject of efforts by the Materiality Cross-Functional Team (M-CFT). In 2021, we created a "visible room of the Vision" to enable us to grasp changes in social conditions and quickly reflect them in our strategies at any time. We set up a place (room) where the persons in charge of each issue can gather and review progress, and discuss and implement measures as and when needed. We recognize that fostering an organizational culture of mutual inspiration, proposal, and cooperation to achieve goals and make constant improvements is essential for the implementation of KV25, and we form a habit of A3 (KAIZEN)* mind in our entire organization to activate "Ceaseless Progress".

On June 28, 2023, we reorganized our corporate organization from a business group system to a business unit system, and shifted from a divisional control system to a "Officer-in-Charge" system. By eliminating business groups and turning them into business units, we aim to strengthen the responsibility and authority of each group head for business operations and enable flat and speedy decision making.

In September 2021, we joined the United Nations Global Compact (UNGC). We will incorporate the UNGC's 10 principles—covering the themes of human rights, labor, environment, and anti-corruption—into our day-to-day operations and strategies and contribute to the creation of a sustainable society by achieving the goals set forth under the Sustainable Development Goals (SDGs) through our business activities.

Going forward, we will continue to enhance our corporate governance and work to ensure thorough compliance, strengthen our management base, and increase our corporate value while practicing sustainable management with a high sense of ethics. I ask for the continued support of all our stakeholders moving forward.

July 2023
Nippon Kayaku Co., Ltd.
President and Representative Director

*A3(KAIZEN): Awareness reform activities—based on awareness of reducing costs—designed to develop individual and organizational strengths (skills and expertise) and autonomy, to make the Nippon Kayaku Group an energetic company.

Messages from Group Company Presidents

The Nippon Kayaku Group is engaged in business operations in 12 countries and regions around the world. Here, we present messages from the presidents of 24 Group companies.



Czech Republic Mobility & Imaging Business Unit

Kayaku Safety Systems Europe a.s. President Akinori Kanno

Kayaku Safety Systems Europe has been manufacturing and selling automotive safety components since 1999, in the city of Vsetin, in the eastern part of the Czech Republic. The products we supply are important safety components which help to protect the lives of vehicle occupants. We supply high-quality products to the market, with safe operation as our top priority. Going forward, we will continue to implement sustainable management, giving consideration to environmental issues, improving the quality of life for our employees, and aiming to contribute to our local community through various charitable activities.



China Mobility & Imaging Business Unit

Kayaku Safety Systems (Huzhou) Co., Ltd. General Manager Takumi Fujita

Kayaku Safety Systems (Huzhou) (KSH) manufactures and sells safety-related components for automotive applications, contributing to the reduction of damage caused by automobile accidents by continuing to safely provide high-quality products. In addition to responding appropriately to China's increasingly stringent safety and environmental requirements, we also implement rigorous corporate governance and compliance measures. We will also work to increase economic value through continuous cost reductions. Going forward, KSH will continue working to earn the trust of all its stakeholders by practicing the **KAYAKU spirit** in accordance with the Nippon Kayaku Group's Basic Policy on Sustainable Management.



Mexico Mobility & Imaging Business Unit

Kayaku Safety Systems de Mexico, S.A. de C.V. President and Representative Director Susumu Tokutake

Kayaku Safety Systems de Mexico (KSM) was founded in May 2007. Despite cultural differences in Mexico, we have been working continuously to spread the **KAYAKU spirit**, our corporate vision, and have provided a stable supply of high-quality automotive safety components to countries around the world. Going forward, we will aim for the goals of long-term growth and continued progress while making further efforts to coexist in harmony with our various stakeholders, including planet Earth itself. KSM has also adopted an ideal vision for itself as a Nippon Kayaku Group company. This vision includes new initiatives that the company has never attempted before, such as in working to reduce greenhouse gases emissions. While they are aware of the term sustainable management, it seems that many Mexican employees do not yet fully understand its details—but I believe that all of our employees will work together as a team to implement sustainable management, because the **KAYAKU spirit** has been instilled in them. And I think that it is only by realizing our vision that we can build a better, more sustainable future.



Malaysia Mobility & Imaging Business Unit

Kayaku Safety Systems Malaysia Sdn.Bhd. Managing Director Eishi Sato

Kayaku Safety Systems Malaysia was established in Malaysia in 2012, for the manufacture and sale of automotive safety components. The products we supply are installed in vehicles on the road in ASEAN member countries and other countries around the world. Safety and quality are the top priorities in our production activities. We practice sustainable management under the **KAYAKU spirit**, which is the corporate vision of the Nippon Kayaku Group. Going forward, we will continue to contribute to improving safety in our automotive society through the supply of automotive safety components, and aim to secure and maintain the trust of our stakeholders.



Japan Mobility & Imaging Business Unit

POLATECHNO CO., LTD. President and Representative Director Hirokazu Karino

POLATECHNO has made a new start as Nippon Kayaku's Joetsu Plant. Going forward, we will continue to make safety our top priority as we work to maintain a safe and comfortable workplace with zero industrial accidents. We aim to create a sense of unity in the workplace and optimize manufacturing while working to create a greater sense of camaraderie among employees. As a strategy to help improve the global environment, we are actively engaged in energy-saving activities and efforts to reduce industrial waste output, such as utilizing and firmly establishing MFCA, reusing water, improving waste liquid treatment methods, and recycling waste plastics. Looking ahead, we will aim to create a Joetsu Plant that is both friendly to the global environment and firmly rooted in the local community, as we continue contributing to the enrichment of life and the creation of a sustainable society through the stable supply of distinctive products to the world.



Netherlands Mobility & Imaging Business Unit

Dejima Optical Films B.V. Managing Director Jan Willem Venema

At Dejima Optical Films we design, develop and produce -among others- Liquid Crystal Polymer based optical films for the display industry and other applications. With these activities we contribute to the "Light Control Business" of Nippon Kayaku. We are fully committed to sustainable management of Nippon Kayaku. Since the start of Dejima in 1999 we recycle as much as possible our packaging material of Twistar™ that is shipped to the Joetsu plant in Niigata as well as for the raw materials that we receive from Joetsu factory. When we built our new facility in 2008 much effort was put in the design to minimize energy consumption and various equipment was installed for energy recovery from our manufacturing plant. Furthermore the waste gas of organic solvents of our coating lines is catalytically oxidized in an incinerator in order to minimize environmental pollution. The electric power required for our plant has a so-called green-label and is certified generated by wind energy. With the sharp increase of the energy prices we are now studying the possibility to install solar power panels on the roofs of the buildings, although it will be only capable to serve a limited percentage of our power consumption. At Dejima we take into account human and environmental safety in all our management decisions.



United States Mobility & Imaging Business Unit

MOXTEK, INC. President and CEO Michiyuki Yamamoto

MOXTEK contributes to society by utilizing cutting-edge nano-optical and X-ray technologies for imaging and analysis equipment. The basic aspects of our sustainability activities are (1) growing together with local communities and (2) making contributions to society, rooted in technology. We actively support local community activities; cooperating with science-related extracurricular activities at elementary schools that participate in programs to support homeless people. At the same time, we also cooperate actively with efforts to unravel the mysteries of the universe and its origins, such as through our contributions to NASA exploration of Mars and space telescope projects. We are deeply rooted in the local community and make efforts to contribute to the development of science.



United Kingdom Mobility & Imaging Business Unit

RaySpec Ltd. Managing Director Josh Wong

RaySpec places a key emphasis on legal compliance, works to create a workplace environment with consideration for equal opportunities and good health without discrimination, and conducts its business operations in a fair and impartial manner. We consider the environmental impact of all new product development efforts and actively engage in energy-saving initiatives, both through our capital investments and day-to-day activities. RaySpec actively involves itself with charitable organizations and supports fundraising activities. RaySpec products use systems that can evaluate and limit the use of hazardous substances to determine failure modes of machines and check the quality of products, contributing to the safety and well-being of people around the world.



China Mobility & Imaging Business Unit

WUXI POLATECHNO OPTICS CO., LTD. General Manager Hiroyuki Emori

WUXI POLATECHNO OPTICS (WPLC) is engaged in the production of materials for liquid crystal projectors, post-processing of polarized films for automotive applications (Wuxi), and sales activities in China and other Asian countries (Shenzhen). In China, too, the environmental and safety-related demands placed on companies are increasing, and it is necessary for us to understand and adapt to changes surrounding environmental and social issues. WPLC has already introduced green electric power, and is also engaged in energy-saving activities and efforts to reduce wastewater and waste output. To adapt to such changes, we believe it is important for each and every one of our employees to comply with the Nippon Kayaku Group Charter of Conduct and Code of Conduct, have an awareness of safe operation, and work together as a team. Going forward, WPLC will continue to practice the **KAYAKU spirit** and contribute to the creation of a sustainable environment and society.



Japan Fine Chemicals Business Unit

NIKKA FINE TECHNO CO., LTD. President and Representative Director Nagafumi Saito

NIKKA FINE TECHNO is a domestic trading company in the Nippon Kayaku Group. We aim to be a trading company that "realizes" our customers' "desires" by proposing and selling the most suitable products from our wide range of commercial materials. Furthermore, in order to always be "a company that changes, adapts, and develops", each and every one of our employees will comply with our "Charter of Conduct and Code of Conduct", and we will prove worthy of all stakeholders' trust through the practice of sustainable management under the **KAYAKU spirit**.



South Korea Fine Chemicals Business Unit

Nippon Kayaku Korea Co., Ltd. President and Representative Director Naoki Shiraiwa

Nippon Kayaku Korea imports and sells products of the Fine Chemicals Business Unit, engages in contracted manufacturing operations in South Korea, and exports and sells various products and raw materials. Since we handle a diverse range of business divisions there are inevitably many relevant laws and regulations (especially three key chemical-related laws), and we work to ensure compliance with those laws and regulations. Going forward, we will seek to enhance our corporate governance to ensure transparency and fairness in our business operations. Although our contribution may be small, we will make every effort to enhance environmental and social value and work as a team to implement sustainable management and meet the expectations of all stakeholders.



Japan Fine Chemicals Business Unit

Kowa Sangyo Co., Ltd. President and Representative Director Takuya Sakuramoto

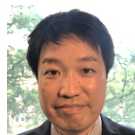
Kowa Sangyo mainly handles manufacturing operations at Nippon Kayaku's Asa Plant, as well as related transportation and inspection operations. Based on our basic philosophy of prioritizing safety first over everything, each and every one of our employees engages in business activities in accordance with the Nippon Kayaku Group Charter of Conduct and Standards of Conduct. In order to achieve sustainable management, we first implement small changes that we can make in our work, such as eliminating wasteful energy consumption and reducing waste output. Through sustainability training and education, we hope to link these efforts to changes in individual employee awareness, so that every employee feels motivated to try and make a difference. Going forward, we will continue working to meet the expectations of all stakeholders, both as a member of the Nippon Kayaku Group and as a company with close ties to local communities.



United States Fine Chemicals Business Unit

NIPPON KAYAKU AMERICA, INC. President Naofusa Miyagawa

NIPPON KAYAKU AMERICA operates in North America, selling fine chemicals that contribute to the conservation of energy and resources, and engaging in sales promotions and technical support for automotive safety components. As a business operator that handles chemical products we comply with laws and regulations, conduct rigorous quality control checks and sell safe and environmentally friendly products. We also engage in initiatives to propose products, technologies and services to customers and partners that can contribute to the realization of a sustainable society, not only from an environmental perspective but also from the perspective of social and economic value. Going forward, we will remain mindful of the **KAYAKU spirit** as we continue in our efforts to contribute to the creation of a more sustainable society, however small our contribution may be.



China Fine Chemicals Business Unit

KAYAKU CHEMICAL (WUXI) CO., LTD. General Manager Katsuhiko Oshimi

KAYAKU CHEMICAL (WUXI) is a wholly owned subsidiary of Nippon Kayaku, established in 2002 for the manufacture and sale of UV-curable resins for electronic components. Last year, we were privileged to be able to celebrate the 20th anniversary of our establishment. In 2020, we began handling selling cleaners for LCDs and semiconductors, and are expanding our operations with the aim of achieving local production for local consumption in the Chinese market. In China, many issues—such as environmental problems—have arisen as a result of rapid economic development, and the conditions facing companies are becoming increasingly severe. In view of these conditions, sustainable management will become even more important to ensure the continuity and development of our business. At KAYAKU CHEMICAL (WUXI) we aim to realize the **KAYAKU spirit**. To implement sustainable management, we believe that it is of the utmost importance for each and every one of our employees to act in accordance with the Nippon Kayaku Group Charter of Conduct and the Code of Conduct. Going forward, we will continue to contribute to society by providing the high-quality products required by customers in a broad sense; not simply because everyone else is doing it, but by acting with a strong sense of moral responsibility while respecting local culture, history and business customs.



Germany Fine Chemicals Business Unit

Euro Nippon Kayaku GmbH Managing Director Yoshiyuki Dejima

Euro Nippon Kayaku sells fine chemicals in Europe. Europe was the first region in the world to declare the goal of achieving zero effective emissions of greenhouse gases (becoming climate neutral) by 2050. Under the European Green Deal, efforts to integrate environmental policies with economic and social policies are accelerating faster and faster, and there are expectations for transformations from conventional society and the creation of new businesses. Under these conditions, we aim to contribute to the creation of a sustainable society by supplying the best, safest and most environmentally friendly products to as many customers as possible.



United States Fine Chemicals Business Unit

KAYAKU Advanced Materials, Inc. President & CEO Jeremiah J. Cole Jr.

KAYAKU Advanced Materials is located in Westboro, Massachusetts, USA. KAM has approximately 110 employees and is a specialty materials provider bringing innovative materials to the microelectronics marketplace. The Company is deeply committed to the responsible management of its business, through a strong foundation of principles including operational integrity, ethical business practices, good governance, uncompromising regulatory compliance and the explicit respect for our environment and community. The Company strives to provide its employees with an innovative, safe, diverse, inclusive, and respectful workplace, where individual contributions and personal development are highly valued and encouraged. Our corporate values are shaped by strict adherence to "**KAYAKU spirit**" which guides us to act responsibly in all we do. This, we believe, provides long term value to our customers, employees, community, and the Nippon Kayaku Group.



Japan Fine Chemicals Business Unit

Teikoku Taping System Co., Ltd. President and CEO Ichiro Tomonaga

Teikoku Taping System (TTS) designs, develops, manufactures, sells and provides maintenance services for semiconductor manufacturing equipment.

The "TTS Values" outlined in our corporate philosophy include ideas that clarify the ideal vision of our company, our goals, and basic management concepts. Through these TTS Values, we maintain awareness of sustainable management and activities to promote sustainability from our daily business process to all activities.



Thailand Fine Chemicals Business Unit

NIPPON KAYAKU (THAILAND) CO., LTD. President and Representative Director Tetsuya Tomita

NIPPON KAYAKU (THAILAND) was established in 2018 with the main roles of selling Fine Chemicals Business Unit products in the ASEAN and South Asian regions, procuring raw materials and intermediates from those regions, and conducting research in related markets.

Looking ahead, all of our employees will work together to ensure compliance and make significant contributions to local communities in countries in the ASEAN and South Asian regions by providing safer materials, and materials that can contribute to energy conservation.



China Fine Chemicals Business Unit

WUXI ADVANCED KAYAKU CHEMICAL CO., LTD. General Manager Kazuhiko Kosano

WUXI ADVANCED KAYAKU CHEMICAL manufactures dyes for textiles, paper and inkjet printing, based on a management policy of delivering human-oriented, environmentally friendly, and customer-satisfying products. In addition to requirements for environmental conservation and safe production, the requirements for carbon neutrality in China are becoming increasingly challenging. Going forward, we will continue to conserve energy and reduce wastewater and waste output in our production processes while giving maximum consideration to improving the working environment for our employees. At the same time, we will deliver highly safe dyes with Bluesign® certification and increase our lineup of products that lead to the conservation of energy and resources and reduction of environmental impact by customers, as we work to contribute to the creation of a sustainable society.



Japan Life Science Business Unit

NIPPONKAYAKU FOOD TECHNO CO., LTD. President and Representative Director Tomomasa Tsuchibuchi

NIPPONKAYAKU FOOD TECHNO manufactures and sells preservatives such as ethanol preparations and oxygen absorbers that help preserve the quality of food products, and health food ingredients such as chitosan. Through the provision of excellent products and high value services that ensure food safety and health based on sustainable management, we aim to contribute to society by reducing food loss (with preservatives) and proposing good health through food (with health food ingredients). In order to realize the **KAYAKU spirit** as a member of the Nippon Kayaku Group, we place our highest priorities on safe operation, compliance, and care and consideration for the environment. We work to ensure that each and every one of our employees complies with the Nippon Kayaku Group Charter of Conduct, in order to answer to the trust and expectations of our customers.



China Fine Chemicals Business Unit

Shanghai KAYAKU International Trading Co., Ltd. General Manager Ryo Fujimori

Shanghai KAYAKU International Trading sells dye and pigment-related products such as textile dyes, inkjet inks for printing, and coloring agents for heat sensitive applications to Asian markets, primarily China. In order to support efforts in the textile industry, such as the protection of water resources in the supply chain and the improvement of working environments, as represented by ZDHC, in addition to safe and secure products we will continue to provide various solutions such as problem solving and process shortening, contributing to customer reductions in wastewater output, energy conservation, increased productivity and improvements in the work environments at factories.



Taiwan Life Science Business Unit

Taiwan Nippon Kayaku Co., Ltd. General Manager Daisuke Komagata

Taiwan Nippon Kayaku engages primarily in product sales and market research for the Life Science Business Unit and Fine Chemicals Business Unit. Currently we are engaged in three key initiatives to help realize the **KAYAKU spirit**: (1) working to improve the quality of daily operations to accurately grasp customer needs and communicate them to the relevant departments within the company; (2) contributing to local cultural and economic exchanges by actively participating in and cooperating with various activities and events such as the Japan Exchange Association and the Taipei Municipal Industrial and Commercial Association; and (3) maintaining constant awareness of the **KAYAKU spirit** by establishing a Corporate Vision Board in the middle of the company offices and carrying portable reference cards at all times when engaging in daily activities. Going forward, we will continue to actively engage in sustainability promotion activities to contribute to local communities.



China Kayaku (Shanghai) Co., Ltd. General Manager Masayuki Arakawa

Working under the **KAYAKU spirit**, Kayaku (Shanghai) Co., Ltd. is working to strengthen corporate governance and ensure thorough compliance. Our job is to provide useful information and services to reduce business risks and support the resolution of management issues for Nippon Kayaku and its Group companies in China. Specifically, we share legal and tax-related information relating to business operations, carry out various activities to drive corporate governance and compliance, provide legal services, interpretation and translation services, operate a public relations desk and handle investigations.

**Japan Wako Toshi Kaihatsu Co., Ltd. President and Representative Director Osamu Hiroshige**

Wako Toshi Kaihatsu operates a real estate business that leases (1) commercial building facilities owned in Wako city to general supermarket operating companies, and (2) three company housing buildings owned in the Tokyo metropolitan area to Nippon Kayaku. Through our business, we would like to be a company that is needed by customers, and help to bring a smile to people's faces through involvement in clothing, food, and housing. We will also align ourselves with our suppliers to solve social issues, ensuring thorough compliance and engaging in sustainable management based on the **KAYAKU spirit**. Specifically, we will work to improve the value of our real estate holdings (1) by improving energy and resource efficiency by using energy-saving components / devices and highly durable materials, and (2) by improving the comfortability, healthfulness, and safety of users by developing and enhancing infrastructure and disaster prevention equipment.



Sustainable Management

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Message from the Executive Director in charge of Sustainability

In April 2022, the Nippon Kayaku Group established its Basic Policy on Sustainable Management. Through a combination of efforts in our businesses activities and initiatives relating to materialities under **KV25**, which combine five key company-wide material issues with supplementary key sustainability issues, we engage in sustainable management to create environmental, social and economic value.

In order to integrate our sustainability efforts with our business activities, we established the Sustainable Management Meeting under the direct supervision of the Board of Directors. The Meeting deliberates and reports on important matters relating to the general sustainability of the company, society, and the environment, together with important matters relating to business activities, and implements sustainable management throughout the Group.

With regard to addressing climate change, which is one of our company-wide material issues, we announced our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in 2022, analyzed scenarios in each business unit and disclosed the results in our integrated report and on our sustainability website. By strengthening our efforts to reduce environmental impact and disclose information, we improved our evaluation score in the CDP Climate Change Report from the previous year's B score to an A- score.

With regard to human resource management, in 2023 we established policies on human resource development and improving our internal environment. Based on these policies, we will work to build a human resource development system that encourages the autonomous growth of each employee and supports the creation of diverse careers in line with the wishes of Individual employees; and create an internal environment that ensures diversity and fosters a comfortable and rewarding work culture, where employees can work actively, with enthusiasm and motivation.

With regard to human rights initiatives, in 2022 we established the Nippon Kayaku Group Human Rights Policy, which we have translated into English, Chinese, Spanish, Malay, and Czech, and are working to share with all Group executives and employees. In line with the United Nations Guiding Principles on Business and Human Rights, we will enhance our process for identifying, preventing, mitigating, and correcting adverse impacts on human rights, and fulfill our responsibility of respect for human rights.

Going forward, we will continue to contribute to the creation of a sustainable society through our business activities, practice sustainable management worthy of the trust placed in us by all of our stakeholders, and link this to the improvement of corporate value.



Member of the Board
Senior Managing Director
Yoshitsugu Ishida

Sustainable Management

Policy and Basic Approach

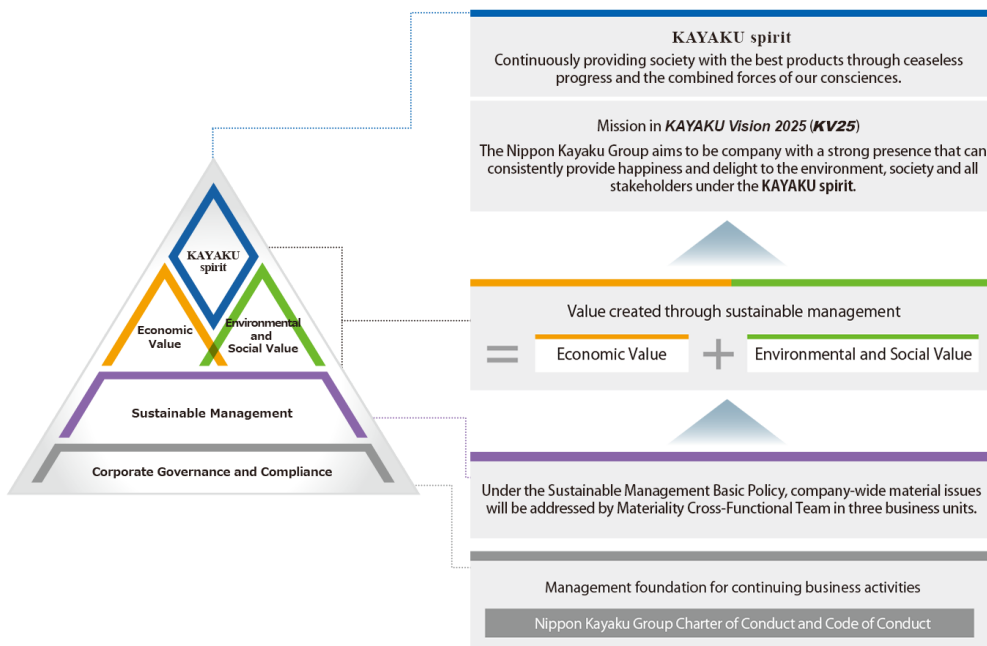
Basic Policy on Sustainable Management

Under its corporate vision, the **KAYAKU spirit**, the Nippon Kayaku Group will practice sustainable management that responds to the trust placed in it by all of its stakeholders, by ensuring transparency and fairness in management and contributing to the creation of a sustainable environment and society through its business activities.

(**KAYAKU spirit**: Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences.)

The KAYAKU spirit and Sustainable Management

The Nippon Kayaku Group's Corporate Vision is embodied by the **KAYAKU spirit**: "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences." Under the **KAYAKU spirit**, we aim to create environmental, social and economic value by engaging in sustainable management, create a sustainable society, and increase our corporate value. As a standard of conduct to realize the **KAYAKU spirit**, we have established a Nippon Kayaku Group Charter of Conduct and Code of Conduct. In all of our corporate activities, we respect fundamental human rights, comply with laws and regulations, engage in fair business activities and respond to the trust of all stakeholders.

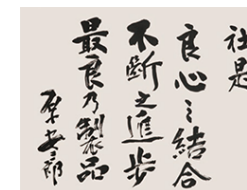


◆ Origin of the KAYAKU spirit

Founded 1916

Company credo established 1962

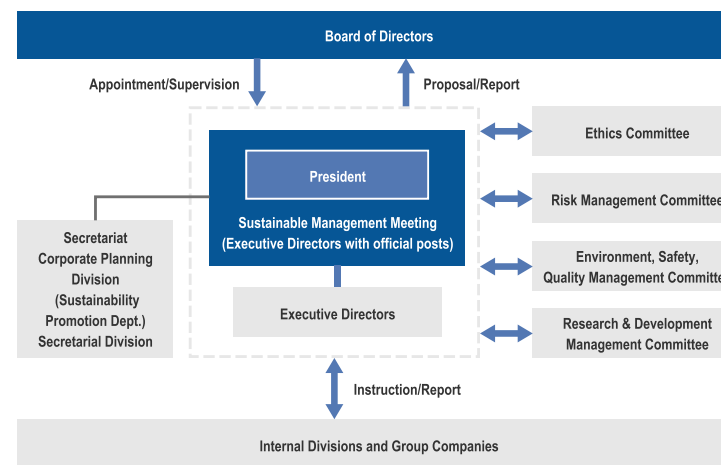
Yasusaburo Hara—our third president, who was involved in the Group's management for many years—established the company credo in 1962, with the desire to convey the important ideas that should be shared by all officers and employees in an easily understandable manner. This is the origin of the **KAYAKU spirit**.



Company credo : The combined forces of our consciences , Ceaseless progress , The best products

System

The Nippon Kayaku Group has created a Sustainable Management Meeting, chaired by the President under the direct supervision of the Board of Directors to implement sustainability initiatives throughout the Group. In principle, Sustainable Management Meetings are held on a weekly basis to discuss and report on all matters relating to the sustainability of the corporate group, society, and the environment. Agenda items are approved by the Sustainable Management Meeting before discussion and reporting at Board of Directors meetings. Under the umbrella of the Sustainable Management Meeting, we have established four subcommittees: the Ethics Committee, the Risk Management Committee, the Environment, Safety, Quality Management Committee, and the Research & Development Management Committee. The committees hold meetings on a regular basis and discuss and report to the Sustainable Management Meeting to ensure the transparency and fairness of management.



Medium-term Business Plan and Sustainable Management



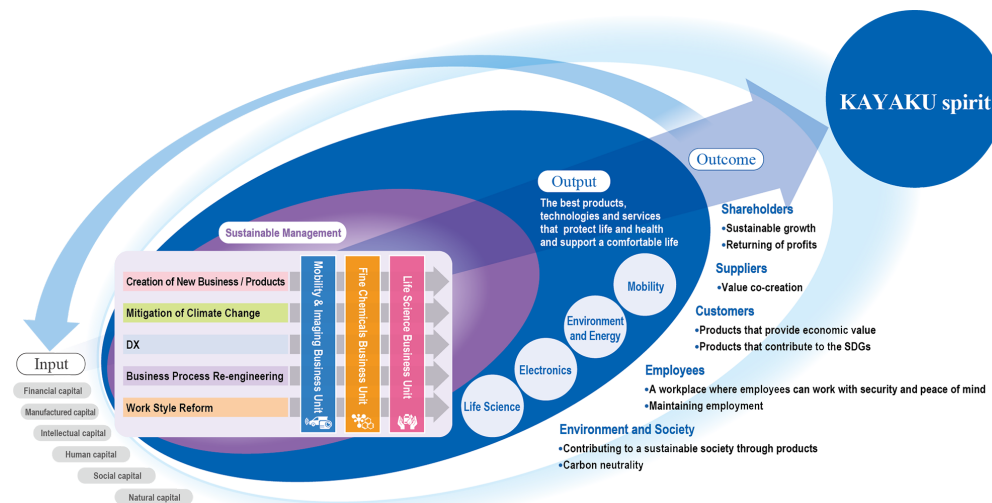
The new Medium-term Business Plan, **KAYAKU Vision 2025 (KV25)**, is positioned as a strategy for implementing sustainable management. Through the activities of our three business units and KV25 Materiality initiatives, we will contribute to the creation of a sustainable society by creating economic, environmental and social value.

Basic Strategies of the **KAYAKU Vision 2025**

Implement sustainable management	Provide economic, environmental and social value and contribute to solving social issues by implementing a value creation process
Prioritize allocation of management resources based on our business portfolio	Prioritize the allocation of management resources to products that are expected to grow in our three business units (Mobility & Imaging, Fine Chemicals and Life Science)
Group-wide, cross-functional team addressing important issues (materiality)	Achieve sustainable growth as a group-wide, Materiality Cross-Functional Team (M-CFT) engaging in initiatives relating to materialities (Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform).
Strengthening the management base	<ul style="list-style-type: none"> Ensuring safety Improving the quality of products and services Ensuring compliance Strengthening governance

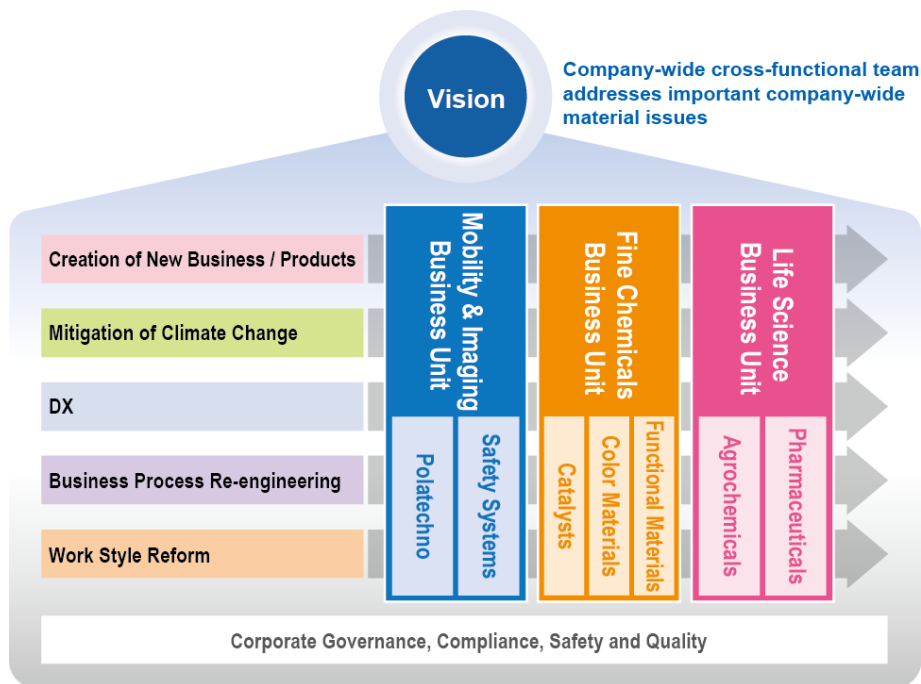
Nippon Kayaku Group's Value Creation Process

KV25 uses six forms of capital as inputs to implement sustainable management through the integration of the Group's three business units and M-CFT, to provide society with the best products, technologies, and services in four key fields: Mobility, Environment and Energy, Electronics, and Life Science. We aim to increase corporate value continuously by delivering economic, environmental and social value to all stakeholders.



Important Company-wide Material Issues (Materiality) for Achieving Our Mission

The foundations for all of the Nippon Kayaku Group's business activities are corporate governance, compliance, safety and quality. **KV25** focuses on initiatives in five company-wide material issues: Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform, as a group-wide cross-functional project. By integrating the activities of the Group's three business units and the M-CFT, we will create synergy effects and realize our mission for the Nippon Kayaku Group.



Instilling within the Company

To deepen employees' understanding of our corporate vision and policies on sustainable management and to instill those ideas Companywide, the Nippon Kayaku Group utilizes various opportunities and communication tools, such as the Nippon Kayaku Group Corporate Strategy Meeting and Medium-term Management Strategy Meeting, collective training such as training for new employees and training for newly appointed managers, e-learning, and internal newsletters. In FY2022, to coincide with the start of the new Medium-term Business Plan **KAYAKU Vision 2025**, we prepared an explanatory booklet detailing our corporate vision, sustainable management, the Medium-term Business Plan and the Nippon Kayaku Group Human Rights Policy. We also produced carry cards and noticeboard displays stating the corporate vision and mission of the Nippon Kayaku Group. We engage in awareness raising activities so that employees can always check this information, making decisions and acting in ways that reflect the corporate vision and mission.

The explanatory booklets, carry cards and noticeboard displays have been translated into the six languages of the countries where we maintain manufacturing sites (Japanese, English, Chinese, Spanish, Malay and Czech), and have been distributing to all executives and employees of the Nippon Kayaku Group.

We aim to achieve a sense of unity in group management by sharing our corporate vision and sustainable management policies among Group employees working in manufacturing, development, sales and management in various positions around the world.



Explanatory booklet

Noticeboard Displays

Japanese

English

Chinese

Spanish

Malay

Czech

List of Awareness Raising Activities and Training Programs

Name of training program	Main themes covered	Main target	FY	Training format	Frequency (Times)	Attendance rate
Sustainability training	Corporate Vision, Basic Policy on Sustainable Management, Corporate value creation process, KVZ5 Materiality, ESG evaluation by external organizations, Mitigation of Climate Change, Respecting Human Rights	Executives and employees (including contract employees and part-time employees), temporary employees	2022	e-learning	5	Average of 84%
Sustainability training (formerly CSR training)	Corporate Vision, GRI standards, stakeholders, sustainability, Mitigation of Climate Change, Respecting Human Rights	Executives and employees (including contract employees and part-time employees), temporary employees	2021	e-learning	7	Average of 82%
New employee training*	Sustainable Management of the Nippon Kayaku Group, Mitigation of Climate Change, Respecting Human Rights	New employee	2022	Group training	1	100%
Newly appointed manager training*	Sustainable Management of the Nippon Kayaku Group, Mitigation of Climate Change, Respecting Human Rights	Newly appointed managers	2022	Group training	2	100%

* Held annually

KAYAKU spirit Promotion Efforts Using Kayakuma the Bear

We have created a mascot character called Kayakuma the Bear, to make **KAYAKU spirit** a concept that is more familiar to all Nippon Kayaku Group employees around the world. This character appears in the section of our internal newsletter where we introduce our sustainability activities and exemplary activities for implementing our corporate vision, using visual depictions that are easy to understand for all audiences. The mascot has also been incorporated into our daily stationery, including memo pads and clear file folders, and even the designs of our conference rooms. This ensures our employees are always aware of Kayakuma the Bear, and in touch with our corporate vision in all aspects of their work. We have filed for a trademark for Kayakuma the Bear and utilize the character widely as a symbol of the Nippon Kayaku Group in newspaper ads and on novelty items at company events such as factory festivals.

> [Kayakuma's Room](#)



Kayakuma the Bear, a mascot character



Conference room and employee locker

The SDGs and the **KAYAKU spirit**

The SDGs are a set of 17 social, economic and environmental goals to be addressed by various bodies, organizations and entities by FY2030, adopted unanimously by UN member states with the goal of building a sustainable world.

The philosophy of the SDGs is synonymous with the Nippon Kayaku Group's corporate vision of continuously providing society with the best products through ceaseless progress and the combined forces of our consciences, and we believe that corporate activities for the realization of the **KAYAKU spirit** are consistent with the actualization of the SDGs, although the scale and targets are different from those of the United Nations.

The Nippon Kayaku Group's Sustainability Action Plan utilizes the SDG Compass to link each key sustainability issue (materiality) with one or more of the 17 SDGs.

Going forward, the Nippon Kayaku Group will continue working to generate environmental, social and economic value, create a sustainable society, increase its corporate value, and contribute to the achievement of the SDGs.

SUSTAINABLE DEVELOPMENT GOALS



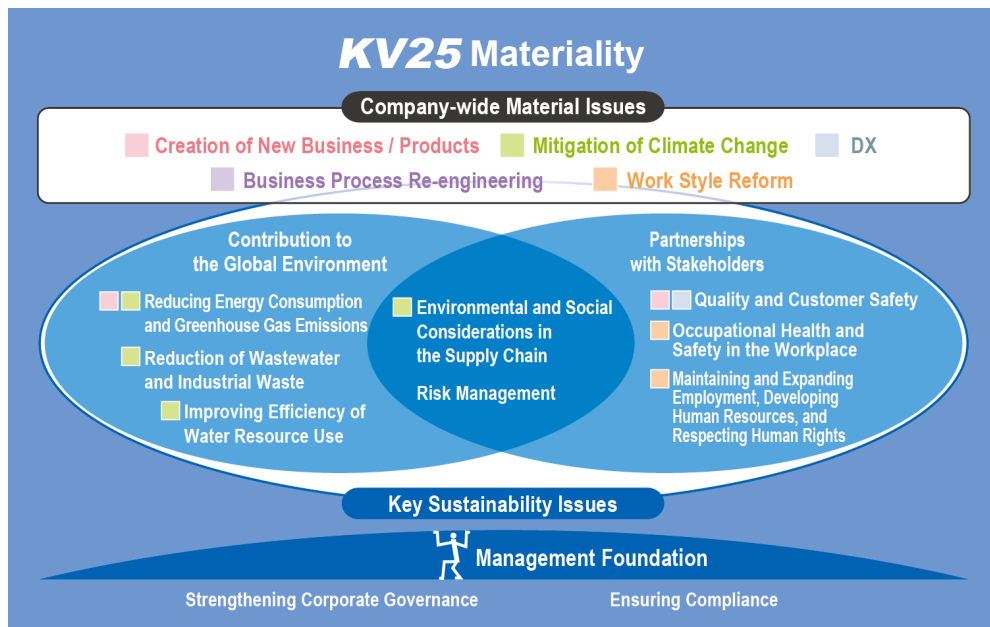
Important Issues (Materiality)

KV25 Materiality

In order to realize its mission of being a company with a strong presence that can consistently provide happiness and delight to the environment, society and all stakeholders under the **KAYAKU spirit**, the Nippon Kayaku Group has analyzed disparities between its goals and the current situation and identified five key company-wide material issues (materiality) to be addressed as priorities: Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering and Work Style Reform.

We have also appropriately identified key themes faced by the Group in implementing sustainable management, from both internal and external perspectives, defined them as key sustainability issues (materiality), and formulated a Sustainability Action Plan linked to our business activities.

KV25 places top priority on addressing these company-wide material issues and the key sustainability issues that supplement them, to contribute to the creation of a sustainable environment and society based on our Basic Policy on Sustainable Management. **KV25** Materiality is a generic term combining these company-wide material issues and key sustainability issues.



* The "■" symbol in front of each key sustainability issue indicates that initiatives addressing company-wide material issues also link to initiatives addressing sustainability-related issues.

Company-wide Material Issues Initiatives

In order to realize its mission, the Nippon Kayaku Group analyzed disparities between its goals and the current situation and identified five key issues that should be prioritized in company-wide cross-organizational projects, as company-wide material issues: Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering and Work Style Reform. Our Materiality Cross-Functional Team (M-CFT), composed of members selected from multiple divisions, is working to instill awareness of initiatives addressing company-wide material issues and speed up the resolution of each issue.

Company-wide material issues	Initiatives
Creation of New Business and Products	Creation of New Business and Products Team will collaborate with our three business units to create new businesses and products in the four fields of Mobility, Environment & Energy, Electronics, and Life Science, transcending the boundaries of existing organizational units and contributing to the realization of our mission.
Mitigation of Climate Change	We will work to prevent global warming—such as the reduction of greenhouse gases emissions—and achieve carbon neutrality, and make united efforts with each plant and research institute to combat climate change risks.
DX	Our current goals are to drive DX (digital transformation) throughout the Group, increase sales through process transformation, and expand our businesses by reducing costs. Specifically, we will work to achieve DX in the areas of (1) IT education and awareness reform, (2) strengthening IT infrastructure through ERP and IT infrastructure restructuring, etc., (3) R&D, production, sales/marketing and management business processes.
Business Process Re-engineering	We will work to improve our asset efficiency and earning power by reviewing our group business management, business operation / control (management) and cost control methods, and by improving work efficiency and productivity through A3 (KAIZEN)* activities aimed at business process improvement—to eliminate all kinds of waste—and cost reduction.
Work Style Reform	We will work to implement workstyle reforms and personnel system reforms to enable every employee to work energetically and increase employee engagement, with the aim of being a good, strong, energetic company.

* A3 activities (KAIZEN): Awareness reform activities—based on awareness of reducing costs—designed to develop individual and organizational strengths (skills and expertise) and autonomy, to make the Nippon Kayaku Group an energetic company.

Method for Identifying Key Sustainability Issues

To appropriately grasp issues facing the Nippon Kayaku Group from both internal and external perspectives and respond to the expectations and demands of stakeholders, the Group identified key medium-term CSR issues in 2019.

To coincide with the start of the new Medium-term Business Plan—**KAYAKU Vision 2025**—and the shift from CSR management to sustainable management, in April 2022, we changed the term "key CSR issues" to "key sustainability issues" and reviewed them in order to appropriately respond to the diversification of our business activities and various changes in social issues.

STEP 1

Recognition of themes

- We identified themes based on those identified in the GRI Standards on requirements demanded by our diversifying society, with the addition of the Group's previous key sustainability issues (**KAYAKU Next Stage** Medium-term Business Plan Key CSR Issues).

STEP 2

Creating point scores from internal and external opinions

- A. Point scores from external assessments
Industry-specific assessment standards for the Company from multiple international assessment bodies promoting responsible investment and SASB* industry-specific requirements were linked to key themes and converted into point scores as external evaluations.
- B. Point scores from internal assessments
The key themes of the Medium-term Business Plan for each internal business division and corporate division were linked to key themes and converted into point scores as internal evaluations.

* SASB: Sustainability Accounting Standards Board. A US-based non-profit organization that formulates and publishes industry-specific sustainability disclosure standards.

STEP 3

Mapping materialities

- The themes "strengthening corporate governance" and "thorough compliance" were identified as the most important issues for corporate survival, while other themes were mapped as materialities based on point-scored internal and external evaluations. Threshold values were added to a point-based map, with themes exceeding those values identified as materialities.

STEP 4

Validation and approval

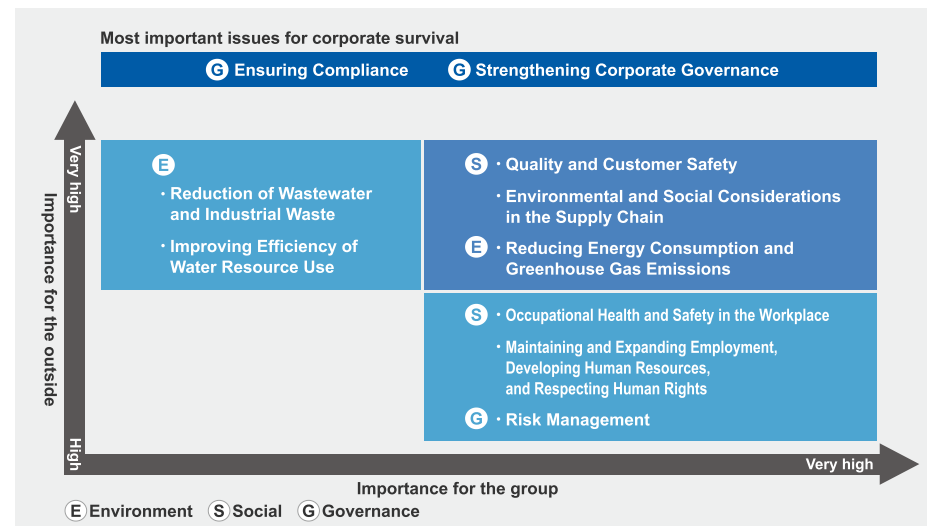
- The methods used for identifying materialities and results obtained were reviewed by the Sustainable Management Committee—one of the Company's decision-making bodies—while at the same time incorporating the opinions of experts in the field of sustainability, and approved after two sessions of discussions.

Key Sustainability Issues Initiatives and KPIs

The Nippon Kayaku Group has formulated a Sustainability Action Plan linking its business activities with the identified key sustainability issues. We also utilize the SDG Compass to link each materiality with one or more of the 17 SDGs. By implementing initiatives to achieve the KPIs in the Sustainability Action Plan, we will contribute to the achievement of the SDGs and the creation of a sustainable society.

Key Sustainability Issues

We have classified our key sustainability issues into three categories—most important issues for corporate survival, most important issues, and important issues—and established action plans for each issue.



Sustainability Action Plan

The Nippon Kayaku Group's Sustainability Action Plan utilizes the SDG Compass to link each key issue (materiality) with one or more of the 17 SDGs. By managing and disclosing the progress of KPIs every year and implementing sustainability activities, the Group aims to create environmental, social and economic value, help to achieve the SDGs (i.e., to create a sustainable society) and increase corporate value.

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Most important issues for corporate survival	Ensuring Compliance		<ul style="list-style-type: none"> Exercise thorough compliance, which is a basic principle for conducting corporate activities, and engaging in fair business operations Maintain and enhance an open corporate culture with a high sense of ethics 	Number of serious compliance violations ^{*1}	0	0	<ul style="list-style-type: none"> No significant compliance violations Compliance training incorporates the theme of psychological safety in the workplace and was conducted at all Group companies in Japan As a result of checking all Group companies for the presence of internal reporting services, external reporting services and the establishment of regulations, we determined that reporting services had not been established at three overseas Group companies
				Compliance training rate	100%	97%	
				Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	
Strengthening Corporate Governance			<ul style="list-style-type: none"> Strengthen corporate governance of the entire group and manage in a highly transparent and sound manner 	Number of times that the assessment on the effectiveness of the Board of Directors meetings is evaluated	Once per year	Once	<ul style="list-style-type: none"> Conducted a questionnaire about assessment on the effectiveness of the Board of Directors, ascertained the current situation, identified issues, and formulated measures under an action plan. Improvements underway. Enhanced timely disclosure information, Corporate Governance Report and disclosure of Company's Articles of Incorporation in English Promoted adoption of DX in management of the Board of Directors Appointed one independent Outside Audit & Supervisory Board Member Promoted formulation of intellectual property policy and strategy for intellectual properties (responding to the revised Corporate Governance Code) Promoted disclosure policies for human resource development and enhancing the internal work environment (responding to the revised Corporate Governance Code)
					Number of times internal business audits are performed by the Audit Division	60 times in four years	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Most important issues	Quality and Customer Safety		<ul style="list-style-type: none"> Enhance our quality control and quality assurance systems by continuously improving our quality management system and ensuring thorough quality-related governance Implement quality management, improve production efficiency and reduce process abnormalities through digitalization 	Number of serious complaints by customers ^{*2}	0	1	<ul style="list-style-type: none"> In FY2020 and FY2021 web conferencing systems and similar solutions were used for most activities including quality audits, quality education and training, and quality improvement activities due to the COVID-19 pandemic, but practical activities have now resumed In terms of educational activities to improve quality assurance and quality, to coincide with the start of KV25, we created a Quality Mandat that forms the basis for the systematic implementation of various quality-related education
					Number of serious quality process abnormalities in processes ^{*2}	0	
Most important issues	Environmental and Social Considerations in the Supply Chain	 	<ul style="list-style-type: none"> Practice supply chain management with consideration for environmental and social aspects, based on the Sustainable Procurement Guidelines 	Response rate for confirmation of consent to Sustainable Procurement Guidelines	(Non-consolidated) 90%	(Non-consolidated) 99%	<ul style="list-style-type: none"> Sent questionnaires based on the details of sustainable procurement guidelines to roughly 300 companies ranked the highest in terms of purchase amounts, collected responses from 229 of them and statements confirming agreement from 226 As no suppliers with human rights or environmental issues were identified based on the details of the sustainable procurement questionnaires that were retrieved, no requests to formulate improvement plans were issued. The details of responses will be checked at the suppliers we plan to audit in FY2023.
					Formulation and implementation of improvement plans using questionnaires to suppliers	(Non-consolidated) Disclose progress	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Most important issues	Reducing Energy Consumption and Greenhouse Gas Emissions Reduction of Wastewater and Industrial Waste Improving Efficiency of Water Resource Use	 	<ul style="list-style-type: none"> Implement energy-saving and global warming countermeasures and achieve FY2030 environmental targets Identify issues and clarify strategies for achieving carbon neutrality by FY2050 	Greenhouse gas emissions (Scope 1+2)	(Targets to be achieved by FY2030) 88,324 tons or less (32.5% reduction or higher compared with FY2019) (Targets to be achieved by FY2022) 119,252 tons or less	108,107 tons	<ul style="list-style-type: none"> Introduction of MFCA and the solar power PPA model were promoted as a part of efforts to reduce greenhouse gas emissions Total waste produced declined by 3.3% compared with FY2021 The recycling of waste that was traditionally disposed of in landfill was further promoted, with the recycling rate improving to 85.0%, and the zero emission rate improving down to 0.8%. Development Status of Environmentally Friendly Products and Technologies [Safety Systems Business] Development of reduced weight cylinder type inflator / green propellant MGG [Polatechno Business] Improved production process, promoted reduced waste generation and emissions treatment energy through product design improvements [Functional materials] In the area of thermosetting resins for CFRP, we introduced customers to development products with potential for rollout Developed a thermosetting resin that uses bio-derived raw material [Color materials] Developed industrial ink jet (for coated paper, flexible packaging and textile printing) Released and expanded sales of heat-sensitive non-phenol developer Accelerated development of PLA (biodegradable) textile dye [Catalysts] Promoted joint development of catalyst for hydrogen production Conversion of Asa Plant's petroleum-based boiler to LPG underway Developed catalyst that helps reduce raw material usage and improve target material yield utilizing materials informatics technologies
				VOC emissions	(Non-consolidated) Disclose results	(Non-consolidated) 38.7 tons	
				COD emissions	(Non-consolidated) Disclose results	(Non-consolidated) 171.8 tons	
				Total waste output	(Non-consolidated) Disclose results	(Non-consolidated) 27,621 tons	
				Recycling rate	(Non-consolidated) 80% or higher	(Non-consolidated) 85.0%	
				Zero emission rate	(Non-consolidated) 1% or less	(Non-consolidated) 0.8%	
				Goal setting in line with SBT and consideration and implementation of specific measures	Disclose progress	Earned A- CDP (climate change) score Implemented improvements to accuracy of Scope 3 emission calculations	
				Disclosure in line with TCFD recommendations	Disclose progress	Information Disclosed	
				Develop products and technologies with consideration for environmental issues	Disclose progress	Listed in Topics	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Important issues	Occupational Health and Safety in the Workplace	 	<ul style="list-style-type: none"> Strengthen the foundation for safe operation by thoroughly enforcing basic rules on safety and health and improving equipment and work procedures Implement health and productivity management and provide a workplace environment with a healthy work-life balance where employees can work with enthusiasm 	Number of serious accidents ³	0	0	<ul style="list-style-type: none"> No accidents requiring time off work occurred on a non-consolidated basis at Nippon Kayaku, including Group companies and affiliates within Nippon Kayaku business premises Continuously obtaining Health & Productivity Management Outstanding Organizations certification. Promoted activities to maintain and advance employee health to maintain certification We failed to reach the target percentage of employees taking paid leave, but as previously, we continued to implement awareness raising activities via the Company intranet, had human resources and labor personnel call on employees to take paid leave at each workplace, set days on which employees are recommended to take paid leave, and implemented other measures Mental health training ended in the third year of the three-year plan The percentage of employees undergoing health checks was maintained at 100% We started conducting engagement surveys and conducting interviews with companies that conduct surveys to determine the level of health & productivity management. Full-scale adoption is planned for the following fiscal year.
				Acquisition of certifications under the Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category)	(Non-consolidated) Continued certification	(Non-consolidated) Certification for 2023 Certified Health & Productivity Management Organization Recognition Program (Large Enterprise category)	
				Percentage of paid leave taken	(Non-consolidated) 70% or higher	(Non-consolidated) 63.7%	
				Percentage of employees who take mental health training	(Non-consolidated) 100%	(Non-consolidated) 100%	
				Percentage of employees receiving regular health checkups	(Non-consolidated) 100%	(Non-consolidated) 100%	
				Ascertaining and improving employee satisfaction through questionnaire surveys	(Non-consolidated) Disclose progress	-	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Important issues	Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	 	<ul style="list-style-type: none"> Promoting diversity and inclusion through the recruitment of diverse human resources, effective HR assignment and exchanges Pass down and strengthen technical capabilities in monozukuri (manufacturing) and achieve globalization in human resources through ongoing human resource development Engage in business operations that pay care and consideration to the human rights of employees and all other people involved in the supply chain 	Percentage of female employees in management posts ^{*4}	(Non-consolidated) 10% or higher	(Non-consolidated) 9.0%	<ul style="list-style-type: none"> Lectures on self-directed career development delivered by female managers for human resources and labor personnel. Lectures delivered by female industrial physicians regarding the advancement of health specific for women. Considered holding training sessions for female employees Continued collaboration with special support schools as an initiative to employ people with disabilities. Collected information about companies engaged in advanced initiatives to expand the job areas and increase employment of people with disabilities through tours and sessions to exchange opinions Conducted e-learning-based training regarding the Nippon Kayaku Group Human Rights Policy and Human Rights Due Diligence System Senior management conducted workshop to identify and evaluate human rights risks. Detected to reconsider methods for risk identification and evaluation.
				Percentage of employees with disabilities	(Non-consolidated) Achieve legal minimum employment rate	(Non-consolidated) 1.98%	
Important issues	Risk Management		<ul style="list-style-type: none"> Respond to various business-related risks and ensure business continuity by maintaining production systems, ensuring the proper procurement of raw materials, and strengthening measures against disasters 	Amount invested in education and training per employee	(Non-consolidated) Disclose results	(Non-consolidated) ¥83,002 / person	<ul style="list-style-type: none"> Implemented Top 5 risk control activities at each factory of Nippon Kayaku (non-consolidated) and all Group companies (trends include increasing risks such as rising geopolitical risks, sharply rising raw material prices, and disruptions to the supply of raw materials) Conducted interviews regarding points considered to be important for the top 5 risks at two domestic factories and four overseas Group companies Domestic Group companies continued to use an emergency communication system introduced in FY2021 as a BCP drill in preparation for the occurrence of earthquakes BCP drills were conducted under local consulting and guidance of Chinese Group companies
				Training hours per employee	(Non-consolidated) Disclose results	(Non-consolidated) 14.9 hours	
				Number of training sessions held on human rights	Once or more per year	Once	
				Human rights due diligence: human rights impact assessment rate	(Non-consolidated) FY2022: 100% (Consolidated) FY2025: 100%	(Non-consolidated) Incomplete	
				Implementation rate of risk control activities for business, etc., and top five risk control activities	100%	100%	
				Number of BCP drills conducted	Once or more per year	2 times	

*1 Number of serious accidents as judged by the Ethics Committee

*2 Losses of 10 million yen or more

*3 Accidents involving three or more people requiring time off work, or resulting in fatalities

*4 Targets for the end of FY2024

Risks and Opportunities for Key Sustainability Issues

The Nippon Kayaku Group recognizes risks and opportunities relating to its identified key sustainability issues. By reducing risks and incorporating opportunities that lead to new business growth, we aim to help create a sustainable society and further increase corporate value.

	Key sustainability issues	Risks	Opportunities
Most important issues for corporate survival	Ensuring Compliance	<ul style="list-style-type: none"> Loss of social credibility due to compliance violations Damage to corporate value Sluggish business activities 	Earning the trust of stakeholders
	Strengthening Corporate Governance	Stagnation of business activities	<ul style="list-style-type: none"> Earning the trust of stakeholders Improvement of social credibility
Most important issues	Quality and Customer Safety	<ul style="list-style-type: none"> Customer disaffection due to quality nonconformities Loss of social credibility due to violations of laws and regulations governing aspects such as quality control and labeling 	Earning the trust of customers by supplying high-quality products
	Environmental and Social Considerations in the Supply Chain	Adverse effects on corporate activities due to illegal acts or compliance violations by suppliers	<ul style="list-style-type: none"> Creation of a sustainable society Increased long-term competitiveness
	Reducing Energy Consumption and Greenhouse Gas Emissions	<p>[Transition risks]</p> <ul style="list-style-type: none"> Increased operating costs due to the impact of tougher emissions regulations Price increases for electric power and LPG, etc. Rise in raw material prices due to the impact of tougher emissions regulations Increase in costs for environmental disclosures and LCA calculations, etc. 	<ul style="list-style-type: none"> Growth of semiconductor-related materials and materials that contribute to achieving lower power consumption, due to the shift to smart cities and the growth of DX Growth of materials for next-generation storage cells / batteries Growth of plastic / resin-type materials that contribute to the weight reduction of vehicle / mobility frames Growth of optical materials for reducing the weight of EVs and sensor materials for use in autonomous driving technologies
	Reduction of Wastewater and Industrial Waste	<p>[Physical risks]</p> <ul style="list-style-type: none"> Increase in costs due to flood damage caused by typhoons, heavy rain, high tides / storm surges, etc. Impact of water shortages on operations Decline in labor productivity due to rising temperatures 	<ul style="list-style-type: none"> Growth of bio-stimulants which contribute to maintaining and improving agricultural productivity, and expanding applications for existing agrochemicals in tackling pests which become new problems as a result of the expected rise in temperatures
Important issues	Occupational Health and Safety in the Workplace	<ul style="list-style-type: none"> Loss of social credibility due to accidents and scandals Decline in labor productivity and outflow of human resources 	<ul style="list-style-type: none"> Fostering a safety culture Improving employee work-engagement
	Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	<ul style="list-style-type: none"> Standardization of thinking and loss of new business opportunities due to bias in human resource attributes and skills Loss of social credibility due to human rights violations 	<ul style="list-style-type: none"> Fostering a corporate culture that generates new ideas through diversification of values Contributing to the creation of a sustainable society and increasing long-term competitiveness
	Risk Management	Increase in management-related risks	Ensuring business continuity in emergencies

Implementing Responsible Care

Message from the Executive Director in charge

The Nippon Kayaku Group provides society with the best products, technologies and services that bring happiness to people's lives, with consideration for the environment, safety and quality throughout the product lifecycle, from the procurement of raw materials to production, distribution, use, and disposal.

In our business activities, we endeavor to identify and reduce risks and prevent accidents and disasters, and safeguard the safety and health of every employee, based on philosophy that safety takes precedence over all else. In addition to conducting systematic employee education and training, we anticipate potential hazards relating to daily work tasks and chemical agents, and take proactive measures to ensure worker safety.

By operating an integrated quality management system in which our head office and factories work together, we work to continuously strengthen our daily quality improvement activities to prevent customer complaints and process abnormalities and improve customer satisfaction. In terms of environmental initiatives, in April 2022, we declared our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and are working to reduce greenhouse gas emissions with a view to achieving carbon neutrality by 2050. Looking ahead, we will contribute to the creation of a sustainable society with the aim of improving economic, environmental and social value through our business activities while appropriately grasping and analyzing climate change-related risks.



Member of the Board
Senior Managing Director
In Charge of Technology Unit
Yoshimi Inoue

Policy and Basic Approach

The Declaration on Environment, Health and Safety, and Quality

The Nippon Kayaku Group, under the spirit of its corporate vision and Responsible Care*, has formulated The Declaration on Environment, Health and Safety, and Quality, in order to maintain and enhance its environmental protection, health and safety and quality assurance practices. We are also implementing this declaration using organized activities.

The Declaration on Environment, Health and Safety, and Quality

Enacted November 7, 1995

Amended May 22, 2017

The Nippon Kayaku Group, under its corporate vision of "KAYAKU spirit," which calls for continuously providing society with the best products through ceaseless progress and the combined forces of our consciences, we will contribute to the realization of a sustainable society that safeguards the life and health of customers, and supports a comfortable life.

◆ Fundamental policies

1. We will strive to maintain and improve the environment, people's health and safety across the entire product lifecycle, from R&D to production, distribution, sales, recycling, and disposal.
2. We will strive to conserve the environment by introducing and developing technologies that are useful toward reducing waste, carrying out the appropriate disposal of waste, conserving resources, conserving energy, and implementing global warming prevention measures.
3. We will actively provide business partners with information needed for the safe usage and handling of our products and for conserving the environment.
4. We will enhance the quality of not only products, but operating processes as well, and also work to enhance customer satisfaction.
5. We will heighten employee knowledge and skills through education and training and achieve our goal of zero pollution, zero disasters, zero accidents and enhanced quality.
6. We will disclose information so that stakeholders correctly understand our business activities and also strive to engage in dialogue with local communities and government authorities.

June 25, 2019

Nippon Kayaku Co., Ltd.

President and Representative Director

* Responsible Care: A voluntary activity under which companies that manufacture or handle chemical substances actively take measures considerate of the environment, safety and health across all processes from the development of chemical substances to their production, sale, consumption and disposal. The initiative began in Canada in 1985 and has now spread to encompass various countries around the world including Japan.

Our Responsible Care Policy

All Nippon Kayaku Group companies share a common mindset in efforts to prioritize safety above all and seek to prevent environmental and safety-related accidents and disasters, including compliance with laws and regulations not only domestically but also overseas. All Group employees engage in Responsible Care activities in line with the Declaration on Environment, Health and Safety, and Quality, working toward the realization of the **KAYAKU spirit**.

The Nippon Kayaku Group Annual Responsible Care Policy was created based on policies to be continued from FY2019 onwards, with a focus on safety and health activities with a key emphasis on identifying unsafe behaviors through 30-second patrols and fixed-point observations; the implementation of environment, health and safety audit with a key emphasis on risk assessments; and targets aimed at decarbonization, to achieve the environmental targets of the Medium-term Business Plan by FY2030. The policy is checked yearly, including with domestic Group companies. The main themes added to the FY2023 policy related to Japan's Industrial Safety and Health Act and the handling of partial revisions to its regulations. Going forward, the Group will continue to conduct Responsible Care activities based on this policy.

Nippon Kayaku Group Annual Responsible Care Policy

◆ < Targets >

- Serious accidents / disasters: zero
- Serious environmental accidents / disasters: zero
- Serious traffic accidents: zero

◆ 1. Key issues in Responsible Care

- Companywide total Scope 1 + Scope 2 CO₂ emissions of 115,386t or less (common across the Group) (Companywide CO₂ emission reduction rate: at least 12% compared with FY2019 levels)
- Domestic Zero emission rate: 1% or lower
- Bolstering 30-second patrols and implementing fixed-point observation

◆ 2. Initiatives aimed at achieving zero accidents and disasters

- Audit methods with an emphasis on risk assessments
- Fixed-point observations tailored to the characteristics of each business site
- Strengthening measures to prevent heat stroke

◆ 3. Improvement of occupational health and safety in the workplace

- Appropriate response to the revised Industrial Safety and Health Act
- Identifying and following up on high-stress workplaces through stress checks and organizational analysis
- Appropriate operation of a health checkup results database
- Maintaining Health & Productivity Management Outstanding Organization Recognition Program

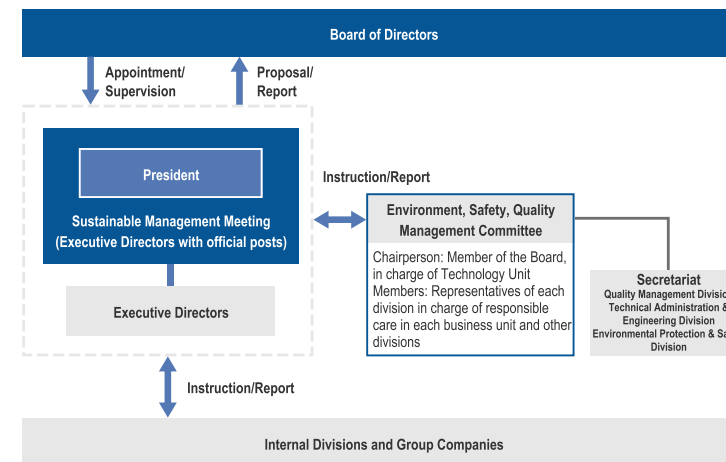
◆ 4. Activities to achieve environmental targets

- Enhancing external disclosure of climate-related information
- Strengthening of measures to reduce Scope 3 emissions (expanded requests for disclosure of emissions from raw materials, improved ton-kilometer accuracy, revisions to waste generation calculation methods)
- Strengthened promotion of MFCA (expansion of applicable business sites)
- Proper operation of cloud-based environmental data aggregation system (common across the Group)
- 3% annual reduction of Scope 1 + 2 CO₂ emissions at each business site (challenging target) (common across the Group)
- Establishment of methods to calculate product-derived emissions
- Development of plastic waste reduction targets and implementation of measures

System

The Nippon Kayaku Group has established the Environment, Safety, Quality Management Committee as an exclusive committee of the Sustainable Management Meeting, chaired by the President. The committee oversees the Nippon Kayaku Group's Responsible Care activities. The Environment, Safety, Quality Management Committee is representatives from divisions tasked with Responsible Care in each business unit and representatives from each general administrative division not belonging to a business unit. The committee deliberates over the implementation status of activities based on the Responsible Care Policy, issues with the activities, progress responding to those issues, draft policies for the following fiscal year, and draft policies and measures for solving issues related to climate change. The committee then reports and makes recommendations to the Sustainable Management Meeting.

The Environmental Protection & Safety Division implements environment, health and safety audit at Nippon Kayaku business locations and Group companies as an organizational activity, and reports the results of those activities to the Environment, Safety, Quality Management Committee.



Responsible Care Audits

◆ Basic Approach

Based on annual plans, Responsible Care audits are conducted for each Nippon Kayaku business location and some Group companies in the form of "environment, health and safety audit". Environment, health and safety audit are an initiative to check that business activities are being conducted properly with adequate consideration being given to the environment, safety and health, and to encourage improvements to any identified issues.

Environment, health and safety audit involve checks based on themes including Responsible Care, environmental conservation, security and disaster prevention, logistics safety, biodiversity, occupational safety, compliance, enhancement of health management, and the control of chemical substances. By providing advice and suggestions for improvements, we endeavor to prevent compliance violations, misconduct and mistakes while maintaining and improving the environment, health and safety. These activities fulfill the function of helping to build, maintain and improve the internal control systems of Nippon Kayaku and Group companies.

◆ Management System

Environment, Health and Safety Audit Team

The team is made up of the general manager of the Environmental Protection & Safety Division (team leader), members of the Environmental Protection & Safety Division (audit and secretariat) and the headquarters of the labor union.

Audit Items

- Progress of Responsible Care activities based on a Responsible Care progress checklist
- Implementation status of risk assessments for work processes and equipment with high hazard risks
- Status of action taken to deal with accidents that have occurred in the past, and the effects of recurrence prevention measures
- Site patrols (30-second patrols and fixed-point observations)
- Status of chemical substance storage and management
- Environment, health and safety system and status of compliance with related laws and regulations
- Other necessary matters related to Responsible Care

Targets

- Each business location of Nippon Kayaku (7 plants, 3 research facilities, 2 offices and 3 other sites)
- Domestic Group companies (3 companies within Nippon Kayaku business locations, 1 company outside Nippon Kayaku business locations)
- Overseas (China) Group companies (3 companies)

Frequency

Audit activities are implemented at a frequency of once every one or two years, determined based on the scale of the business location assessed, and the assessment results in the previous fiscal year. Follow-up audits may also be conducted based on the details of audit results and the status thereafter (no follow-up audits were conducted in FY2022).

Reporting of Audit Results

Audit results are provided as feedback based on the following classifications

- Positive points: excellent initiatives that will serve as a reference for other business locations and Group companies
- Issues: Items involving risks that could lead to accidents, environmental incidents or compliance violations
- Items of concern: Items that require improvement through health and safety, environmental conservation or compliance initiatives
- Suggestions: Points that if implementations could further improve environmental, health or safety efforts, even if there are currently no issues

The audit results are reported to business locations and Group companies that underwent assessment, related operating departments, the Environment, Safety, Quality Management Committee, and the Audit Division. In response to the results, the business locations or Group companies that were assessed employ the PDCA cycle to systematically implement improvements to the problem areas identified.

◆ Targets and Results

Environment, Health and Safety Audit Results (number of sites assessed)

Assessed business locations and group companies		FY2022
Plants		7
Research facilities		2
Offices		2
Domestic group companies	Inside business locations	3
	Outside business locations	1
Overseas group companies*		3
Total		16

* For overseas group companies, web conferencing systems are used to only go through Responsible Care progress checklists.

FY2022 Audit Results (number of issues identified across all 16 assessed sites)

Identification category	Responsible Care progress checklist	Risk assessment, etc.
Positive points	28	20
Issues	2	3
Items of concern	26	40
Suggestions	8	8

Initiatives

Disclosure of Results of Legal Violations

The Nippon Kayaku Group endeavors to prevent violations of environmental laws, environmental accidents and similar incidents from taking place, and has put in place systems to take prompt action should any such incidents occur. In FY2022, there were no accidents or violation of laws or regulations that had a material impact on the environment or accidents or violations of regulations related to water quality and quantity across the Nippon Kayaku Group as a whole. In addition, the Group was not subject to any fines, penalties, or other sanctions.

Number of Environmental Violations and Accidents

	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Cases of non-compliance with environmental laws and regulations	Consolidated	Cases	0	0	0	0	0
Number of major environmental accidents	Consolidated	Cases	0	0	0	0	0
Violations of laws and regulations, fines related to major environmental accidents and costs of penalties	Consolidated	Yen	0	0	0	0	0

Management of Chemical Substances

◆ Response to Laws, Regulations and Various Standards

Working on its sustainable management system, Nippon Kayaku formulates matters to be implemented regarding chemical substance control and specific action plans based on them through the Environment, Safety, Quality Management Committee, and pursues initiatives in accordance with those plans.

Response to Laws and Regulations on Chemicals in Japan

When releasing a new product on the market, it is necessary to make filings, registrations, volume notifications and conduct other procedure in accordance with the regulations of each country. In Japan, we respond by filing applications for new chemical substances under the Chemical Substance Control Act^{*1} and the Industrial Safety and Health Act^{*2}, and by submitting quantity notifications under the Chemical Substance Control Act. Additionally, in response to the revised PRTR Act^{*3} that went into effect in 2023 and the revised Industrial Safety and Health Act that will take effect in 2024, we will enhance systems for the appropriate management of released quantities and the self-directed control of chemical substances.

With the ongoing establishment and revision of chemical substance control legislation around the world, we deal with the laws and regulations of other countries and regions including Europe, the United States and Asia in addition to Japan by making use of databases for searching domestic and overseas laws and regulations while obtaining information about regulatory trends and amendments in a timely fashion in order to implement an appropriate response to laws and other requirements.

*1 Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

*2 Industrial Safety and Health Act

*3 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Response to GHS and Providing of SDS for All Products

Due to the adoption of GHS^{*} in various countries, it has become necessary to publish SDS that comply with local laws and regulations in the local languages of the countries concerned, and to affix compliance product labeling. In terms of the efforts we have taken, in Japan we have responding appropriately to JIS revisions made in 2019 by making changes to our SDS and product labelling and acting in accordance with the revisions.

The Fine Chemicals Business Unit operates an SDS generation system (3E generate) that incorporates an extensive range of translations along with data on physical properties and toxicity, and uses it to issue SDS that comply with local laws and regulations, and to ensure products have GHS labeling.

* GHS: Globally Harmonized System of Classification and Labeling of Chemicals

Responding to Overseas Laws and Regulations Concerning Exported Chemicals

In the EU, REACH regulations^{*} went into effect in June 2007. All chemical substances (including chemical substances contained in chemical products), whether existing or new, which are manufactured or imported into the EU in the amount of one ton or more annually, are required to be registered with data on safety testing and other information. Since the regulations went into effect, various countries have strengthened their regulations concerning the registration of chemical substances. We check these regulatory trends as they arise and ensure that we respond to them without omission.

In the Fine Chemicals Business Unit, the Chemical Management Dept. of Quality Assurance Division oversees and supports the control of chemical substances including (1) handling chemical substance registration systems in Japan and overseas, (2) monitoring trends in legislation concerning chemical substances in various countries, formulating response measures, disseminating the information among relevant departments and providing instructions on action to take, and (3) managing product SDS issuance and product labeling.

* Registration, Evaluation, Authorisation and Restriction of Chemicals

Measures to Mitigate Risks in the Manufacturing and Handling of Chemical Substances

Against the backdrop of newly introduced requirements to conduct risk assessments at business locations that involve the manufacturing or handling of chemical substances due to the revised Industrial Safety and Health Act that went into effect in 2016, for new or changed operations involving the handling of substances subject to mandatory risk assessments and hazardous substances, Nippon Kayaku implements risks assessments using a database developed in-house and engages in risk mitigation measures when safety reviews are carried out. For the expansion of substances requiring risk assessments due to the revised Industrial Safety and Health Act that will go into effect in 2024, we will make improvements to our database and conduct risk assessments that comply with the provisions of the revised law, implementing centralized management to enable Companywide risk management.

We will post GHS pictorial labels in locations where chemical substances are handled so that workers recognize the hazards of chemical substances they could be exposed to.



We make sure that workers recognize the hazards of the chemical substances to which they could be exposed.

Training

Nippon Kayaku has created tiered training programs for each plant, and has made improvements to the content of its training on chemical laws and regulations including the so-called three SDS laws, namely the PRTR Act, Industrial Safety and Health Act and Poisonous and Deleterious Substances Control Act, with the aim of improving safety awareness.

Industry and International Initiatives

The Nippon Kayaku Group is a member of the Japan Chemical Industry Association and has supported LRI activities since 1999. We contribute through the partial funding of research costs and also attend committee meetings.

LRI stands for the Long-range Research Initiative, and is an endeavor promoted through cooperation between the chemical industries of Japan, the United States and Europe (Japan Chemical Industry Association, American Chemistry Council and European Chemical Industry Council). It is one of the voluntary activities of the International Council of Chemical Associations (ICCA), and supports long-term research into the effects of chemical substances on human health and the environment, with a focus on endocrine disruption, neurotoxicity, chemical carcinogenesis, immunotoxicity and the refinement of risk assessments.

> [LRI](#)

Responsible Care Index

- > [Environmental Management](#)
- > [\[Important Issues\] Reducing Energy Consumption and Greenhouse Gas Emissions](#)
- > [Prevention of Air Pollution](#)
- > [\[Important Issues\] Reduction of Wastewater and Industrial Waste](#)
- > [\[Important Issues\] Improving Efficiency of Water Resource Use](#)
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- > [Environmental Accounting](#)
- > [\[Important Issues\] Quality and Customer Safety](#)
- > [\[Important Issues\] Occupational Health and Safety in the Workplace, Health and Productivity Management](#)

Human Resources Management

Message from the Executive Director in charge

In the **KV25** Materiality section of our Nippon Kayaku Group Medium-term Business Plan, **KAYAKU Vision 2025**, we are working on Work Style Reform as a company-wide material issue, and Maintaining and Expanding Employment and Developing Human Resources as key sustainability issues. We recognize that people are an important driving force for corporate value improvement and creating a sustainable society.

In March 2023, we established our Human Resource Development Policy and Internal Environment Improvement Policy. The purpose of these policies is to reaffirm the Nippon Kayaku Group's philosophy with regard to people, which has been passed down for many years, and to encourage many excellent human resources from outside the Group to participate in our company.

Under this philosophy, we will work to create an organizational culture and work environment where employees with various values respect each other, work with enthusiasm, demonstrate their various abilities, and play active roles.



Senior Director
General Manager of Human Resources Division
Makoto Takeda

Policy and Basic Approach

Human Resource Development Policy

Under our corporate vision, the **KAYAKU spirit**, we aim to create environmental, social and economic value by engaging in sustainable management, create a sustainable environment and society, and increase our corporate value.

We have established the following human resource development policy to help realize the **KAYAKU spirit**.

- Fostering autonomous human resources who can increase their creativity and expertise and act autonomously
- Fostering human resources who can boldly attempt new challenges in response to environmental changes without fear of failure
- Fostering human resources who can play active roles with a global perspective

To realize our human resource development policy, we have prepared various training programs such as grade/level-based group education, selective education, and e-learning, and are working to enhance human resource development.

Internal Environment Improvement Policy

We place an emphasis on ensuring diversity, fostering a comfortable and rewarding work culture and increasing employee engagement, so that employees can work with motivation and enthusiasm, while empathizing with the **KAYAKU spirit** and developing a relationship of mutual trust with senior management.

In terms of our personnel system, we have established a "position class" (job grade) system that enables appropriate assignment and treatment irrespective of age, gender, career background, educational background, nationality, etc., and a system based on roles and responsibilities that allows employees to voluntarily take on challenges in promotion to managerial positions.

In human resource development, we encourage the autonomous growth of each employee by supporting employees who want to grow and learn for themselves; and support the formation of diverse careers in line with the wishes of individual employees.

Indicators

Action Plan on Measures to Support Raising Next-generation Children

In accordance with the Act on Advancement of Measures to Support Raising Next-Generation Children, Nippon Kayaku has formulated the following action plan and is pursuing a number of initiatives to develop an employment environment in which employees can balance work and childcare responsibilities, and foster a comfortable work environment, including for employees who are not raising children.

Details of the action plan have also been shared with the labor union and disclosed externally, as well as disseminated among all employees on the Company intranet.

Action Plan on Measures to Support Raising Next-generation Children (Part 4)

Nippon Kayaku has formulated the following action plan to establish a comfortable workplace environment that allows employees to display their potential and achieve a balance between work, private life, raising children and other commitments.

◆ 1. Period of the plan

April 1, 2022 to March 31, 2025 (three years)

◆ 2. Details of the plan

Target 1: Develop an in-house environment that enables employees who are raising children to balance their work life and home life

[Details of specific initiatives]

- Increase the percentage of eligible male employees taking childcare leave to at least 30%
- Increase the percentage of eligible male employees taking childcare leave including leave for childcare purposes to at least 50%
- Support employees who are expecting the birth of a child in balancing pregnancy, childbirth and childcare with work and in returning to the workplace through individual interviews and other measures
- Provide the supervisors of employees who are expecting the birth of a child with guidance on procedures to consider and basic knowledge
- Continue to hold meetings of a dedicated committee made up of members of labor and management to implement new measures and consider the details of plans

Target 2: Develop support systems for employees during pregnancy and after childbirth

[Details of specific initiatives]

- Establish consultation services
- Set up a dedicated page on the Human Resources Division intranet site to provide the information that is necessary before and after childbirth
- Provide training and education on childcare and related matters for managers and supervisors
- Consider introducing a model workplace commendation system
- Share articles where employees talk about going on maternity leave and their experiences before and after childbirth in the company newsletter

Target 3: Revising working styles, developing diverse working conditions that contribute to a healthy work-life balance and creating a comfortable work environment

[Details of specific initiatives]

- Strive to reduce overtime work
- Institute no-overtime days
- Set days on which employees are encouraged to take paid leave
- Encourage employees to take anniversary leave as part of promoting the use of paid leave

Target 4: Initiatives for local communities regarding measures to support raising next-generation children

[Details of specific initiatives]

- Accept children from the local community for company tours
- Run internships for young people
- Consider holding bring-your-child-to-work days

Status of Progress (FY2022) (Japanese) 

Initiatives

- > [\[Important Issues\] Occupational Health and Safety in the Workplace, Health and Productivity Management](#)
- > [Comfortable Workplace Environment](#)
- > [\[Important Issues\] Maintaining and Expanding Employment, Developing Human Resources](#)
- > [\[Important Issues\] Respect for Human Rights](#)

Stakeholder Engagement

Policy and Basic Approach

The Nippon Kayaku Group aims to be a company that can respond to the trust of all its stakeholders—including employees, customers, suppliers, shareholders and investors, and local communities—and provide happiness and delight. We value dialogue with stakeholders and use a variety of opportunities and communication tools to continuously and appropriately disclose information and engage in two-way communication to improve our business activities. Looking ahead, in addition to meeting the expectations and demands of our stakeholders, we will continue to fulfill our responsibilities to society through our business activities.

> [Multi-Stakeholder Policy \(Japanese\)](#)

Stakeholders of the Nippon Kayaku Group



Stakeholders	Overview of the initiative	Methods of communication
Employees	<p>We believe that the central players in all corporate activities are people: human resources. We respect the human rights of each and every employee and strive to create a workplace environment where employees can work with security and peace of mind. We aim to be a company where employees can feel their own growth and workplace motivation (job satisfaction) through work.</p>	<ul style="list-style-type: none"> Talent management system Training to improve employee engagement * Fostering a rewarding and comfortable working environment using the above Compliance awareness surveys, mental health checks Internal newsletters Compliance Hotline Discussions with labor unions
Customers	<p>We strive to gain the trust and satisfaction of our customers by pursuing high quality and providing the best products, technologies and services with care and consideration for both social and environmental issues.</p> <ul style="list-style-type: none"> Automotive module manufacturers and users of optical films / materials Users of resins, colorants, and catalysts Healthcare professionals and patients Agrochemical manufacturers, wholesalers and retailers, agricultural cooperatives 	<ul style="list-style-type: none"> Confirmation of needs through sales activities Improvement of products and services Plant / factory tours Provision of information via our websites Safety guidance on agrochemicals and suggestions on pest control methods
Suppliers	<p>Together with our suppliers, we promote sustainable procurement in all aspects of the supply chain, from research and development to the procurement of raw materials, manufacturing, sales, and logistics, with consideration for respect for human rights and various other issues including environmental conservation, industrial health and safety, legal compliance and fair transactions.</p>	<ul style="list-style-type: none"> Visits, online meetings / interviews, exchanges of information through day-to-day business negotiations, etc. Sustainable procurement questionnaire Purchasing briefings
Shareholders and investors	<p>We have established a Disclosure Policy and are working to ensure that shareholders and investors can appropriately understand the Company's business situation and various initiatives—by disclosing information in a timely, fair and impartial manner.</p>	<ul style="list-style-type: none"> Financial results briefing General meetings of shareholders Telephone conferences One-on-one meetings Provision of information via websites and integrated reports
Local communities	<p>We have established business locations around the world and act as a member of each local community. In addition to social contribution activities, we contribute to the sound, sustainable development of local communities such as by actively supporting the development of the next generation and exchanging information with local governments.</p>	<ul style="list-style-type: none"> Social contribution activities (plant festivals, cleaning activities) Plant tours Support for development of the next generation Exchange of information with local governments

Coordination with Local Communities

The Nippon Kayaku Group has concluded various agreements with the local governments and local communities where its business sites are located. We comply with various agreements concerning the environment, pursue initiatives to reduce our environmental impact, and contribute to safety and security in local communities.


Nippon Kayaku’s Agreements with Local Entities



Business site	Agreement	Local entity
Himeji Plant	Memorandum on effluent control	Himeji City
Fukuyama Plant	Agreement on environmental pollution control	Hiroshima Prefecture and Fukuyama City
Asa Plant	Agreement on water pollution control	Yamaguchi Prefectural Fisheries Cooperative
	Agreement on environmental protection	Sanyo-Onoda City
Tokyo Plant	Green agreement	Adachi City
	Agreement on establishing Colored Effluent Issue Council	Tokyo Metropolitan Bureau of Sewerage No. 2 Control Office
	Agreement on mutual disaster relief support in case of an earthquake	Shinden Neighborhood Association and Shinden 1-chome Residents' Association in Adachi City
	Agreement to provide the general public with access to a small water pump storage facility	Senju Fire Department
Takasaki Plant	Agreement on assistance from voluntary firefighting brigade	Regional fire departments including that of Takasaki City
Kashima Plant	Agreement on environmental pollution control	Ibaraki Prefecture, Kashima City, Kamisu City
Tokyo R&D Administration Office	Provision of firefighting facilities 1. Provision of water for firefighting 2. Deployment of a boat for rescues 3. Firefighting group cooperation site 4. Use of rooftop as a lookout	Tokyo Fire Department Akabane Fire Station

Participation in External Initiatives

The Nippon Kayaku Group believes that it is important not only to comply with international norms but also to cooperate with various organizations and other companies. As such, we actively participate in domestic and overseas initiatives and promote activities aimed at realizing a sustainable society.

External Initiatives We Participate in

Name	Timing / period of participation	Scope	Relationship with corporate philosophy and background to approval
 <p>United Nations Global Compact</p>	2021	Whole group	<p>Based on the KAYAKU spirit—the Nippon Kayaku Group's Corporate Vision—we are working to create environmental, social and economic value by engaging in sustainable management, create a sustainable society, and increase our corporate value.</p> <p>By incorporating the ten principles of the United Nations Global Compact, in the four fields of Human Rights, Labour, Environment and Anti-Corruption into daily operations and strategies, we expect each company to proactively engage in sustainability promotion activities. As a responsible company, the Nippon Kayaku Group supports the ten principles and works to resolve social issues in order to contribute to the sound globalization and the creation of a sustainable society.</p> <p>We have also joined Global Compact Network Japan (GCNJ), which is Japan's local network of the UN Global Compact, and conduct activities as a GCNJ member company. In theme-specific subcommittee activities in which GCNJ member companies and organizations play a central role, we discuss and exchange information regarding sustainability approaches and initiatives. In FY2022, we took part in the following 14 subcommittees.</p> <ul style="list-style-type: none"> • ESG subcommittee • Environmental management subcommittee • Kansai subcommittee • Supply chain subcommittee • CSV subcommittee • GC internal awareness raising research subcommittee • Human rights education subcommittee • Human rights due diligence subcommittee • Anti-corruption subcommittee • Disaster risk reduction (DRR) subcommittee • SDGs subcommittee • Reporting research subcommittee • WEPs subcommittee • Circular economy subcommittee

Name	Timing / period of participation	Scope	Relationship with corporate philosophy and background to approval
 <p>TCFD</p>	2022	Whole group	<p>The Nippon Kayaku Group has set forth a basic sustainable management policy in its Medium-term Business Plan KAYAKU Vision 2025 (KV25), starting as of FY2022. By pursuing the creation of environmental, social and economic value in responding to climate change, the Group will work to help create a sustainable society and further increase its corporate value. The social impact of responses to climate change is significant, and the Nippon Kayaku Group considers it to be an important issue.</p> <p>In March 2022, we declared our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), To communicate well with a wide range of stakeholders, we actively disclose information on Governance, Strategy, Risk Management, and Metrics and Targets—based on the TCFD recommendations framework.</p> <p>This approach is consistent with the Nippon Kayaku Group's Basic Policy on Sustainable Management. Going forward, we will accelerate our efforts to reduce greenhouse gases emissions and build a recycling-oriented society, in line with the TCFD recommendations.</p>
 <p>Responsible Care Global Charter</p>	2008	Japan	<p>The Nippon Kayaku Group signed the Responsible Care Global Charter in 2008, and also signed the revised Global Charter in 2014.</p> <p>As a Group, we handle numerous chemical substances and develop, manufacture, and sell a large number of chemical products. We will continue to engage proactively in Responsible Care activities in order to realize the KAYAKU spirit—the Nippon Kayaku Group's Corporate Vision—of continuously providing society with the best products through ceaseless progress and the combined forces of our consciences.</p>

Main Membership Qualifications

Name	Time of enrollment	Membership qualifications	Activities
KEIDANREN (Japan Business Federation)	1946	Permanent secretary	<p>The Nippon Kayaku Group endorses and participates in KEIDANREN's purpose of contributing to the autonomous development of the Japanese economy and the improvement of people's lives.</p> <p>We also participate in the Board of permanent secretaries, the Administrative Reform Promotion Committee, the Social Security Committee, and the Diversity Promotion Committee.</p> <p>We contribute to the construction of a sustainable society and economy by expanding diverse interactive relationships that transcend the boundaries of specific industries, and by making wide use of the knowledge and experience of the economic community.</p>
Japan Chemical Industry Association	1948	Auditor General Steering Committee	<p>Yasusaburo Hara, the third president of Nippon Kayaku, served as the first chairperson of the Japan Chemical Industry Association for over 14 years, from its founding in 1948.</p> <p>Yasusaburo Hara laid the foundation for the post-war reconstruction of the chemical industry and paved the way for the introduction and development of the petrochemical industry, which would play a key role in Japan's period of rapid post-war economic growth.</p> <p>We carry on the will of Yasusaburo Hara by contributing to the further development and improvement of the chemical industry.</p>

Name	Time of enrollment	Membership qualifications	Activities
Japan Dyestuff and Industrial Chemicals Association (JDICA)	1948	Trustee	Yasusaburo Hara, the third president of Nippon Kayaku, served as the first chairperson of Japan Dyestuff and Industrial Chemicals Association (JDICA) for 33 years, starting in 1948. We carry on the will of Yasusaburo Hara by contributing to formulation, promotion, investigation and research into policies on safety, the environment, internationalization and business support in the chemical industry.
Japan Pharmaceutical Manufacturers Association (JPMA)	1968	Council member	The Nippon Kayaku Group endorses and participates in JPMA's aim of contributing to the improvement of the health and medical care of people in Japan and around the world through the development of innovative and highly useful pharmaceuticals, and the sound development of the pharmaceutical industry. As a drug discovery-type pharmaceutical company, we contribute to the sound development of the pharmaceutical industry through the creation and implementation of visions for code compliance, distribution optimization, promotion, clinical evaluation, PMS, quality, pharmaceutical regulatory affairs, and R&D.
Japan Biosimilar Association	2016	Trustee company Chairman	The Japan Biosimilar Association was launched in April 2016 by four companies involved in the biosimilars businesses, with the aim of spreading and promoting biosimilars. Nippon Kayaku participates actively as one of the founding members. Through the Japan Biosimilars Association, we contribute to controlling medical expenses by making recommendations and exchanging information with stakeholders, including government, and to improving treatment access for patients who are hesitant to use bio-pharmaceuticals for economic reasons.
The Pharmaceutical Manufacturers' Association of Tokyo	1948	Trustee	The Pharmaceutical Manufacturers' Association of Tokyo is made up of all manner of pharmaceutical manufacturers and manufacturers of new drugs, generics and OTCs, etc. As a pharmaceutical company in eastern Japan, we contribute to the improvement of medical care through the review and exchange of information on regulatory affairs, intellectual property, drug safety, and education and training.
Japan Investor Relations Association	1993	Council member	Nippon Kayaku participates in the collection of information and the creation of a network among IR representatives, with the aim of improving the quality of IR activities. We strive to achieve better communication with shareholders and investors and to improve credibility in financial and capital markets.

Innovation through Business

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Nippon Kayaku Group Products and Technologies for Creating a Sustainable Future

The Nippon Kayaku Group aims to be a company that is essential to the world, by developing high value-added products based on "Global SUKIMA Ideas" which may even come to prominence in niche areas. We contribute to the resolution of social issues by providing the best products, technologies and services for the creation of a sustainable society.

Mobility & Imaging Business Unit Safety Systems Business PARASAFE

Outline of Products and Services

PARASAFE® ("PARASAFE") is an emergency parachute system for industrial-use drones. When a drone is about to fall due to unforeseen circumstances, the PARASAFE system fires a parachute to slow the drone's speed of descent and reduce the shock of impact upon collision with the ground. The Nippon Kayaku Group is a global supplier of explosives and gas generators for automotive airbags, and PARASAFE uses the same technology as automotive safety components that achieve high reliability. Using PARASAFE enables safe and secure use of drones.

Innovation and Novelty

PARASAFE and its use combine know-how cultivated in the pyrotechnics safety and automotive safety components businesses, which Nippon Kayaku has inherited from the time of its founding, and our new specialist technologies.

1. Pyrotechnics safety: industrial explosives are excellent materials that generate constant energy, instantaneously and reliably. However, one wrong step in handling these explosives can lead to a major accident or disaster. Having been involved with explosive products for many years since our founding, our thorough knowledge of their properties and safe handling is a major advantage for Nippon Kayaku.
2. Development capability for high-performance parts: Our advantage lies not only in our ability to develop materials, but also safety components combining high performance with reliability and durability. We make all parts ourselves, leveraging know-how cultivated through the development of automotive safety components, such as material component shape design, simulations of movement during operation, and prototype construction and evaluation.
3. Sensing programming technology: A device called ATS (Autonomous triggering system) is required to detect dangerous drops in altitude and activate safety components. We are also working to deliver an ATS that is optimal for PARASAFE operation, such as selecting necessary sensors from drone flight data and simulations, and developing operating programs for safety components.



External Environment Factors

- Looking ahead, industrial drones are expected to play an active role in various applications such as logistics, inspection, measurement and surveying, and disaster relief operations to create a more convenient society. In Japan, we took a step toward practical application in December 2022 with the enactment of Level 4 legislation for unmanned aerial vehicles (flight outside of visual sight, without assistance, in populated areas).
- Industrial drones are expected to achieve rapid widespread use in the future, and the overall market scale for airframes, peripheral devices, and services for logistics and inspection applications which are the key target markets for PARASAFE is expected to reach 250 billion yen by 2025.
- As a new initiative, the development of flying cars is also underway as the next advancement in air mobility through the application of drone technologies, and the exploration of new social concepts shifting from logistics and inspection applications to transporting people has begun.

As described above, the scope of business relating to aerial drones is rapidly increasing. At the same time, ensuring safety is the most important factor, and it is necessary to take appropriate measures.

Environmental Value

- When a drone falls during flight at sea, in some cases it may lead to marine pollution due to the scattering of materials being transported, or gasoline from hybrid drones themselves. Even in such cases, marine pollution can be prevented through the use of PARASAFE.
- When a drone falls while flying in the mountains, in some cases it may lead to forest fires due to ignition and batteries caused by fallen equipment, etc. Even in such cases, forest fires can be prevented through the use of PARASAFE.
- By utilizing PARASAFE when a drone falls, damage to the drone body can be reduced, so the generation of waste can also be reduced.
- By encouraging the adoption of drones equipped with PARASAFE in society, the use of clean energy will increase because CO2-emitting vehicles currently used for logistics and transportation will be replaced with energy-saving drones and other aircraft.

Social Value

The practical application of drones will make it possible to finish various tasks efficiently in a short period of time, and it is expected that this will contribute to increasing convenience in society. But no matter how high the reliability of flight may become, the risks in the unlikely event of a fall (crash) cannot be underestimated.

- In the event of accidents in drone-related businesses, installing PARASAFE on drones will help to reduce collision damage not only to the drones themselves but also to people, buildings, automobiles, etc., on the ground, and to reduce credit and credibility risks such as compensation for damages and criminal penalties.
- Encouraging the adoption of drones equipped with PARASAFE in society will be useful for a stable supply of daily necessities and pharmaceuticals to depopulated areas.
- Encouraging the adoption of drones equipped with PARASAFE in society will also enable response in areas where it is difficult for humans to conduct inspections in person, which will help to improve safety and reduce costs.

Contribution to the SDGs



Relation to **KV25** Materiality

- > [Company-wide Material Issues: Creation of New Business and Products](#)
- > [Company-wide Material Issues: Mitigation of Climate Change](#)
- > [Key Sustainability Issues: Reducing Energy Consumption and Greenhouse Gas Emissions](#)
- > [PARASAFE product information](#)

Mobility & Imaging Business Unit

Polatechno Business (MOXTEK)

Portable X-ray Sources for Border and Airport Security

The Mox140G is a compact, lightweight, portable X-ray source that can operate at a high voltage potential of 140kV. It is ideally configured for portable X-ray backscatter imaging, and is used particularly in the security market, such as for border security and airport security applications.

External Environment Factors

Demand for security screening equipment is increasing due to recent increases in terrorist attacks and illegal immigration, increases in the deployment of security solutions for border and airport security applications, and increases in narcotics smuggling.

Innovation and Novelty

The security market demands solutions that can see through a variety of objects, including backpacks, car seats, tires, and exterior metal panels. Seeing through thick objects or objects made of heavy elements such as iron by X-ray backscattering requires an X-ray source that can emit higher energy X-rays. In order to emit high-energy X-rays, the X-ray source must operate at a high voltage, but using a high-voltage X-ray source tends to make the device larger and more cumbersome. Having a small, lightweight, portable X-ray source can greatly reduce restrictions on the range of locations where inspections can be conducted. The Mox140G has a major advantage in the security market because it is portable in size and weight, yet can operate at a high voltage of 140kV.



Portable X-ray backscatter imaging
* Image used courtesy of Viken Detection.

Environmental and Social Value

Use of the Mox140G significantly reduces illegal financing, narcotics and weapons trafficking, and contributes to the eradication of all forms of organized crime, including terrorism.

Contribution to the SDGs



Relation to **KV25** Materiality

- > [Company-wide material issues: Creation of New Business and Products](#)

Mobility & Imaging Business Unit Polatechno Business (MOXTEK) Environmental Monitoring by XRF (X-ray Fluorescence)

MOXTEK offers high-performance, high-durability X-ray sources, highly durable window materials with high X-ray transmittance, and competitively priced detectors—all key parts of XRF analysis devices.

External Environment Factors

There is growing social interest in safety, such as in the regulation of environmental pollutants (heavy metals, etc.) Devices for use at scrap sorting sites (for the purpose of mineral recycling) and soil testing sites must be easily portable (lightweight) and enable inspections to be completed very rapidly.

Use

Common applications of XRF include the analysis of petroleum and other fuels, plastics, rubber and textiles, pharmaceuticals, food products, cosmetics and body care products, fertilizers, geological materials, mining samples, slag, cement, heat-resistant materials, and glass. XRF is also used for monitoring contaminated solid waste, wastewater, cleaning fluids, pools and filters, as can also be used for sorting materials such as minerals with high speed and accuracy. A selection of detectors is also available depending on the usage environment, ranging from bench-top to handheld types. XRF is widely used at laboratories, various facilities, outdoors, and at various sites in the field.

How XRF (X-ray Fluorescence) Works

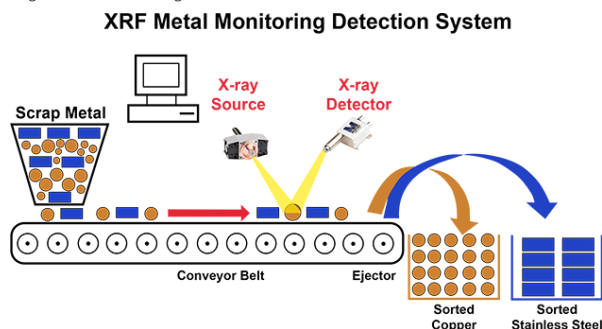
When X-rays are fired at an object, X-rays with energies specific to the elements that make up that object are returned. The X-ray detector analyzes the elemental composition of the object based on the energies of these returned X-rays. This method of elemental analysis can be used for all basic states of matter (solids, liquids and gases), and is one of the techniques used in day-to-day analysis.

Innovation and Novelty

MOXTEK offers high-performance, high-durability X-ray sources, highly durable window materials with high X-ray transmittance, and competitively priced detectors—all key parts of XRF analysis devices. The handheld Magnum (a lightweight, compact X-ray source), window coverings with DuraCoat technology offering superior performance in harsh environments, and customer-friendly XPIN detectors are used in a range of applications, including environmental monitoring and material sorting.



Soil tests



Material sorting

Environmental and Social Value

Through rapid elemental analysis, we can analyze the environment in which we live and contribute to a more comfortable and livable global environment. In sorting of materials for recycling, XRF sorts more materials faster. MOXTEK pursues and provides even higher performance parts for an earth-friendly environment.

Contribution to the SDGs



Relation to *KV25* Materiality

> [Company-wide material issues: Creation of New Business and Products](#)

Fine Chemicals Business Unit Catalysts Business Development of Catalysts that Contribute to the Realization of a Hydrogen Society

In the Catalysts Business, we work on developing catalysts that contribute to the creation of a hydrogen society.

External Environment Factors

Deadliest natural disasters related to extreme weather have increased, and this seems to be caused by global warming derived from ever-increasing amount of carbon dioxide and other greenhouse gasses generated by the consumption of fossil fuels such as petroleum and coal. Under these circumstances, there is a need for the development of new energy sources which do not emit greenhouse gases. Hydrogen, which does not emit carbon dioxide on combustion, has been attracting attention as a clean source of energy, and its stable supply is expected to various applications such as fuel cells for automobiles and power generators.

Innovation and Novelty

For producing hydrogen using catalysts, we focus on an environment-friendly method that thermochemically decomposes water by concentrating sunlight and solar heat in a reaction field where water vapor and catalysts coexist. This method is characterized by its ability to use renewable energy and to generate cost advantages by employing a three-dimensional reaction field. In October 2021, taking advantage of our expertise and technology, we developed a catalyst for hydrogen production and provided its prototype to our partner's pilot plant. Production of hydrogen will be carried out there, and the acquisition of initial data including economic efficiency will be completed by the end of FY2023. We will subsequently proceed with scale-up studies based on the data, and a commercial plant using our catalyst is expected to start its operation from 2025 onwards. Furthermore, discussions are underway to develop catalysts for hydrogen carriers which enable efficient storage, transport and extraction of hydrogen by significantly reducing its volume. We continue to explore how we make most of our catalyst technology and contribute to the entire hydrogen energy system.



Environmental and Social Value

Hydrogen can make a significant contribution to the fight against global warming as a clean energy source which does not emit carbon dioxide when combusted. In addition, hydrogen can be produced and procured from a variety of resources, thus contributing to energy diversification and energy security.

Contribution to the SDGs



Relation to *KV25* Materiality

- > [Company-wide material issues: Mitigation of Climate Change](#)
- > [Key sustainability issues: Reducing Energy Consumption and Greenhouse Gas Emissions](#)

Life Science Business Unit Agrochemicals Business Introduction of Biostimulant materials

In the Agrochemicals Business, we began handling Biostimulant materials to help achieve sustainable agricultural production.

External Environmental Factors

As area of arable land is limited despite the continued trend of worldwide population growth, at this rate per-capita food production is undoubtedly expected to decline. Moreover, climate change caused by global warming and other factors reduces agricultural production efficiency. Compounded with sharply rising material prices, there are concerns that food security will be increasingly threatened.

Biostimulants are now attracting attention as materials that could help solve these issues.

Innovation and Novelty

Biostimulants act upon on plant physiology along a different path to nutrients, as agricultural materials that enhance plants' resistance to "abiotic stresses" such as drought, cold weather, salinization and physical damage (hail and wind damage), improving yields and quality as a result. Seaweed extract, amino acid materials and humic acid are some specific examples of Biostimulants. These materials are expected to have effects such as promoting the nutrient absorption, activating photosynthesis or accelerating flowering and fruit setting. In the Agrochemicals Business, we believe that our expertise in evaluation and formulation technologies will maximize the efficacy of Biostimulants, aiding in the further progress and widespread adoption of Biostimulant materials.



Our Biostimulant items



The plants to the left of the entrance have been treated with Biostimulant materials. The plants on the right are untreated.

Environmental and Social Value

Biostimulants are expected to draw out the inherent qualities of crops and soil environments and reduce the excessive use of agrochemicals and fertilizers, thereby reducing the negative impact on the environment and preserving ecosystems at crop production sites.

Contribution to the SDGs



Relation to *KV25* Materiality

- > [Company-wide Material Issues: Creation of New Business and Products](#)
- > [Agrochemicals Group Website \(Japanese\)](#)

Business of Nippon Kayaku Group

* Listed according to the organizational structure up to June 28, 2023.

Functional Chemicals Business

Vision

Contributing to enriched lifestyles and a sustainable society by providing valuable products utilizing our technologies

Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality
Functional materials		
Semiconductor market to grow to 100 trillion yen by 2030	<ul style="list-style-type: none"> Synergies in semiconductor-related products Design of functional molecules 	Providing important and unique materials <ul style="list-style-type: none"> Expansion in semiconductor-related business areas such as substrates, encapsulants, cleaners, and manufacturing equipment Development and launch of resins for use in next-generation communications equipment (low-dielectric materials) Expansion of epoxy resin production capacity
Color materials		
<ul style="list-style-type: none"> Expansion of the digital printing market Expansion of the sensing market Expansion of the dimming glass market 	<ul style="list-style-type: none"> Extensive colorant technologies covering a wide span of fields from traditional dyes to functional colorants Precision organic synthesis 	Contribution to digitalization and resource conservation with our inkjet colorants and functional colorants <ul style="list-style-type: none"> Expansion of industrial inkjet inks, improvement of production systems Mass production and expansion of imaging sensor materials Mass production and expansion of dichroic colorants
Catalysts		
Acrylic acid and methacrylic acid markets continue to grow by 5 to 6%	Optimal customization of catalyst composition and technical services	Providing catalysts with high-yield to contribute to CO ₂ reduction and affluent lives <ul style="list-style-type: none"> Improvement of catalysts for higher yields of acrylic acid and methacrylic acid Secure repeat orders and development of new customers Development of catalysts contributing to a carbon-neutral society
Polatechno		
<ul style="list-style-type: none"> Evolution and expansion of automotive display functions Growing demand for recycling rare metals 	<ul style="list-style-type: none"> Optical and electromagnetic wave control technologies and microfabrication technologies Proprietary high-durability dye synthesis technologies for polarizers 	Light-controlling products made from proprietary materials contributing to the realization of a Super Smart Society <ul style="list-style-type: none"> Expansion of new applications for X-ray analysis device parts / materials and inorganic polarizers Expansion of new in-car applications of highly durable polarizers such as parts / materials for HUDs

Pharmaceuticals Business

Vision

Developing excellent pharmaceuticals and medical devices that provide new diagnostic and treatment opportunities
Stable supply of Biosimilars and generic drugs, contributing to people's health

Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality
<ul style="list-style-type: none"> Pharmaceutical industry vision (quality and stable supply, manufacturing and sales, bio-pharmaceuticals, domestic manufacturing and development, encouraging use) Expansion of the CDMO market Annual drug price revisions 	<ul style="list-style-type: none"> Consistent business operation from R&D to manufacturing, sales, quality assurance, pharmacovigilance and post marketing surveillance Top domestic anti-cancer drugs lineup and specialized MR Manufacturing technology for highly pharmacologically active substances 	New drug
		<ul style="list-style-type: none"> Increasing share for ALAGLIO® in TURBT* Expansion of DARVIAS® scheduled to be launched in FY2022 Maximizing value through drug fostering and evolution
		Biosimilars
		<ul style="list-style-type: none"> Measures to promote biosimilars through the revision of medical fees Expansion of lineup through introduction of new biosimilars
		Generic anti-cancer drugs
		<ul style="list-style-type: none"> Expanding sales of Pemetrexed and Temozolomide Development and launch of the new generic drugs Establishment of a production system to increase generic drug production
Working toward the vision for FY2030		
		Enhancement of pipeline <ul style="list-style-type: none"> Development of new drugs in collaboration with external organizations Introduction of new drugs and medical devices

* TURBT: Transurethral Resection of Bladder Tumor (surgery to remove bladder tumors using an endoscope and excision loop)

Safety Systems Business

Vision

Provide safety solutions to people around the world with products that support changing mobility technologies, and become a global brand that contributes to society

Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality							
<ul style="list-style-type: none"> Global automobile production will recover from the impact of the COVID-19 pandemic, while the impact of semiconductor shortages continues in the short term The installation rate of safety components is increasing, primarily in emerging countries Growing new demand due to EVs, etc. Expansion of applications such as drone transportation, etc., and demands for safety assurances 	<ul style="list-style-type: none"> Technology and inherited expertise to handle explosives safely Industry top-level market share in automotive safety components Global expansion of locations 	Inflators	<ul style="list-style-type: none"> Expansion of production bases for cylinder-type inflators (Japan, China, Malaysia) Expand of sales to customers in China and South Korea Developing next-generation inflators 	Micro gas generators / squibs / pyrotechnic products	<ul style="list-style-type: none"> Securing next-generation module projects from customers Securing increased volume projects, such as for rear seats Expansion of applications such as pedestrian protection and electric current shut-off Consideration of new pyro device applications 	Drone safety components			Enhancement of pipeline <ul style="list-style-type: none"> Expansion of sales of PARASAFE® for 25kg drones launched in 2021 Development and early market launch of PARASAFE® for 15kg drones Development of safety parts for flying cars and large drones
		Inflators							
		<ul style="list-style-type: none"> Expansion of production bases for cylinder-type inflators (Japan, China, Malaysia) Expand of sales to customers in China and South Korea Developing next-generation inflators 							
		Micro gas generators / squibs / pyrotechnic products							
		<ul style="list-style-type: none"> Securing next-generation module projects from customers Securing increased volume projects, such as for rear seats Expansion of applications such as pedestrian protection and electric current shut-off Consideration of new pyro device applications 							
Drone safety components									
		Enhancement of pipeline <ul style="list-style-type: none"> Expansion of sales of PARASAFE® for 25kg drones launched in 2021 Development and early market launch of PARASAFE® for 15kg drones Development of safety parts for flying cars and large drones 							

Agrochemicals and Other Businesses

Vision

Support the food supply, and contribute to the development of sustainable agriculture by continuing to provide excellent eco-friendly agrochemicals and related technologies and services

Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality							
<ul style="list-style-type: none"> Domestic crop protection market remains at the current level, overseas crop protection market is growing due to increased demand for food Introduction of a pesticide re-evaluation system has raised the bar for obtaining and maintaining domestic agrochemical business registration Strategy "MeaDRI" (Sustainable Food Systems) promotes innovation that enables the reduction of agrochemicals (risk conversion) Smart agriculture, development of new low-risk agrochemicals, development of new control technologies and products 	<ul style="list-style-type: none"> Insecticides and soil fumigants in the vegetable and fruit tree domain Formulation know-how (innovative formulations) Operating activities combining technical services and information provision Manufacturing technologies (from raw ingredients to product formulation) 	Japan	<ul style="list-style-type: none"> Flometoquin formulations (FINESAVE®), expansion of FUMON® Expansion of sales by expanding the scope of agrochemical registration Expanding sales of TELONE™, Asahi D-D Response to the agrochemical re-evaluation system for DIAZINON® and other agrochemicals Expansion of contracted manufacturing 	Overseas	<ul style="list-style-type: none"> Rebuilding the EVISECT® business by restructuring the supply chain Registering and expanding sales of Flometoquin preparations 	Working toward the vision for FY2030			<ul style="list-style-type: none"> Development of new innovative formulations Development and introduction of biostimulants Development of new insecticides
		Japan							
		<ul style="list-style-type: none"> Flometoquin formulations (FINESAVE®), expansion of FUMON® Expansion of sales by expanding the scope of agrochemical registration Expanding sales of TELONE™, Asahi D-D Response to the agrochemical re-evaluation system for DIAZINON® and other agrochemicals Expansion of contracted manufacturing 							
		Overseas							
		<ul style="list-style-type: none"> Rebuilding the EVISECT® business by restructuring the supply chain Registering and expanding sales of Flometoquin preparations 							
Working toward the vision for FY2030									
		<ul style="list-style-type: none"> Development of new innovative formulations Development and introduction of biostimulants Development of new insecticides 							

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Environmental Management

Policy and Basic Approach

The Nippon Kayaku Group's environmental initiatives play a part in the key sustainability issues of **KAYAKU Vision 2025** as a contribution to global environmental conservation, and the Group is implementing the targets laid out under its Responsible Care Policy as a key issue. In these activities, the Group complies with domestic and overseas environment-related laws, regulations, and agreements, etc., and anticipates environmental risks that will occur in product development, manufacturing processes, and business activities. These activities are a companywide initiative contributing to global environmental conservation, taking into account factors such as the reduction of environmental impact, prevention of pollution, energy conservation, climate change, resource conservation, and reduction of waste.

➤ [The Declaration on Environment, Health and Safety, and Quality](#)

Responsible Care in the Nippon Kayaku Group

All executives and employees of the Nippon Kayaku Group share the common recognition that safety is prioritized above all else, and comply with local laws and regulations both in Japan and overseas, working to prevent accidents and disasters relating to the environment and safety, in line with the Declaration on Environment, Health and Safety, and Quality.

The Nippon Kayaku Group Annual Responsible Care Policy is formulated each fiscal year based on policies that the Group believes should be continued from FY2019 onward, by reviewing targets that supplement key sustainability issues and efforts to achieve those targets, to ensure the environment, safety, and health of Nippon Kayaku itself and its domestic Group companies.

The Nippon Kayaku Group will continue to promote Responsible Care activities based on these policies.

Nippon Kayaku Group Annual Responsible Care Policy (Excerpt of policies related to the environment)

◆ Target

Serious environmental accidents / disasters: zero

◆ 1. Key issues in Responsible Care

- Companywide total Scope 1 + Scope 2 CO₂ emissions of 115,386t or less (Companywide CO₂ emission reduction rate: at least 12% compared with FY2019 levels)
- Zero emission rate: 1% or lower (Nippon Kayaku non-consolidated)

◆ 4. Activities to achieve environmental targets

- Enhancing external disclosure of climate-related information
- Strengthening of measures to reduce Scope 3 emissions (expanded requests for disclosure of emissions from raw materials, improved ton-kilometer calculation accuracy, revisions to waste generation volume calculation methods)
- Strengthened promotion of MFCA (expansion of applicable business sites)
- Proper operation of cloud-based environmental data aggregation system
- 3% annual reduction of Scope 1 + 2 CO₂ emissions at each business site
- Establishment of a method for calculating CO₂ emissions during product manufacturing
- Development of plastic waste reduction targets and implementation of measures

System

➤ [System for implementing Responsible Care](#)

Environmental Management System Certification Status

The Nippon Kayaku Group continues to acquire ISO14001 certification, the international standard for environmental management, and provides services by developing and manufacturing environmentally friendly products.

Nippon Kayaku began acquiring ISO14001 environmental management system certification in 1998, and all seven factories in Japan have obtained certification. Additionally, seven overseas group companies have obtained certification. The Group will continue considerations for acquiring ISO14001 certification for all Group companies, including those located overseas.

➤ [ISO14001 Certification](#)

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Reducing Energy Consumption and Greenhouse Gas Emissions Reduction of Wastewater and Industrial Waste Improving Efficiency of Water Resource Use	 	<ul style="list-style-type: none"> Implement energy-saving and global warming countermeasures and achieve FY2030 environmental targets Identify issues and clarify strategies for achieving carbon neutrality by FY2050 	Greenhouse gas emissions (Scope 1+2)	(Targets to be achieved by FY2030) 88,324 tons or less (32.5% reduction or higher compared with FY2019) (Targets to be achieved by FY2022) 119,252 tons or less	108,107 tons	<ul style="list-style-type: none"> Introduction of MFCA and the solar power PPA model were promoted as a part of efforts to reduce greenhouse gas emissions Total waste produced declined by 3.3% compared with FY2021 The recycling of waste that was traditionally disposed of in landfill was further promoted, with the recycling rate improving to 85.0%, and the zero emission rate improving down to 0.8%. Development Status of Environmentally Friendly Products and Technologies [Safety Systems Business] Development of reduced weight cylinder type inflator / green propellant MGG [Polatechno Business] Improved production process, promoted reduced waste generation and emissions treatment energy through product design improvements [Functional materials] In the area of thermosetting resins for CFRP, we introduced customers to development products with potential for roll-out Developed a thermosetting resin that uses bio-derived raw material [Color materials] Developed industrial ink jet (for coated paper, flexible packaging and textile printing) Released and expanded sales of heat-sensitive non-phenol developer Accelerated development of PLA (biodegradable) textile dye [Catalysts] Promoted joint development of catalyst for hydrogen production Conversion of Asa Plant's petroleum-based boiler to LPG underway Developed catalyst that helps reduce raw material usage and improve target material yield utilizing materials informatics technologies
			VOC emissions	(Non-consolidated) Disclose results	(Non-consolidated) 38.7 tons	
			COD emissions	(Non-consolidated) Disclose results	(Non-consolidated) 171.8 tons	
			Total waste output	(Non-consolidated) Disclose results	(Non-consolidated) 27,621 tons	
			Recycling rate	(Non-consolidated) 80% or higher	(Non-consolidated) 85.0%	
			Zero emission rate	(Non-consolidated) 1% or less	(Non-consolidated) 0.8%	
			Goal setting in line with SBT and consideration and implementation of specific measures	Disclose progress	Earned A- CDP (climate change) score Implemented improvements to accuracy of Scope 3 emission calculations	
Disclosure in Line with TCFD Recommendations	Disclose progress	Information Disclosed				
Develop products and technologies with consideration for environmental issues	Disclose progress	Listed in Topics				

Medium-term Environmental Targets and Results

The Nippon Kayaku Group has established new medium-term environmental targets for FY2021 onward, and has started environmental conservation activities to achieve them.

In the newly established medium-term environmental targets, the scope of Scope 1+2 greenhouse gas emissions under "prevention of global warming" (32.5% reduction or higher by FY2030 compared with FY2019) has been expanded to include group companies (consolidated). Reducing emissions at a rate of around 3% every year to achieve this target, the target for FY2022 would be 119.2 thousand tons or less. Actual emissions for FY2022 were 108.1 thousand tons (a 17.4% reduction compared with FY2019), so we have achieved our target, and are steadily reducing emissions. In relation to this theme, in March 2022, the Nippon Kayaku Group endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and will continue to follow the TCFD recommendations by actively disclosing not only the state of reduction of greenhouse gas emissions, but also information on initiatives to build a sustainable, recycling-based society, such as information on risks and opportunities relating to climate change.

In the area of "reducing our chemical substance footprint," we reported both VOC emissions and COD emissions as actual results, without setting targets. VOC emissions increased slightly from the previous fiscal year, and COD emissions increased in line with changes in the items being produced.

In the area of "reduction of waste," we reported total waste produced as actual results without setting a target. For recycling rate (excluding container reuse) we have set a target of 80% or higher, and a zero emission rate of 1% or less. Total waste produced in FY2022 was lower than the previous fiscal year, as a result of continued waste separation and reduction efforts at each plant and business site. With regard to recycling rate and zero emission rate, as a result of continued recycling efforts at each business site and ongoing efforts to reduce environmental impact, we were able to not only achieve our targets for recycling rate and zero emission rate, but also improve upon them.

◆ Progress in Results for Medium-term Environmental Targets

Category	Scope	Item	Target	FY2020*1	FY2021	FY2022
Prevention of global warming*2	Consolidated	Greenhouse gases & Scope 1 & 2*3 emissions	Target for FY2030: 88,300 tons or less (32.5% reduction or more compared to FY2019) (Reference: FY2022 results): 119,200 tons or less	117,800 tons (10.0% decrease)	112,200 tons (14.2% decrease)	108,100 tons (17.4% decrease)
		Reduction of chemical substance footprint	VOC*4 (volatile organic compound) emissions COD*5 emissions	(Report results) (Report results)	33.3 tons 122.6 tons	52.1 tons 124.2 tons
Reduction of waste	Non-consolidated	Total waste produced	(Report results)	25,153 tons	28,424 tons	27,621 tons
		Recycling rate (excluding container reuse)	80% or more	81.6%	82.3%	85.0%
		Zero-emissions rate*6	1% or less	1.6%	1.0%	0.8%

*1 Includes Joetsu Plant. Note that Joetsu Plant is outside the scope of the former medium-term environmental targets established for the period up to FY2020.

*2 Medium-term environmental targets for the period up to FY2030: Reduced by 32.5% or more (88,300 tons or less) compared to FY2019 (130,800 tons)

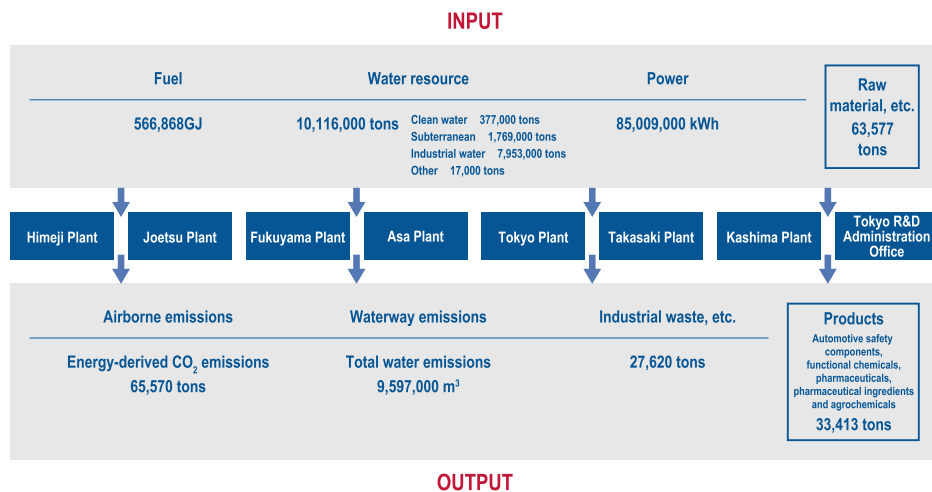
*3 Scope 1: Direct emissions of greenhouse gas by the business itself (emissions from the burning of fuel, manufacturing processes, etc.)

Scope 2: Indirect emissions from the use of power, heat and steam provided by other companies.

*4 Tally for volatile organic compounds (VOCs) includes not only the chemical substances that are required to be reported by government ordinance (PRTR law), but also the chemical substances designated by the Japan Chemical Industry Association.

*5 Chemical oxygen demand (COD): This refers to the amount of oxygen needed to oxidize a substance under water, and is one of the major indexes for measuring water quality.

◆ FY2022 Material Flow in Business Activities (Relevant organization: Nippon Kayaku non-consolidated)



[Important Issues]

Reducing Energy Consumption and Greenhouse Gas Emissions

Policy and Basic Approach

In recent years, we have been faced with a rising sense of crisis about climate change as we witness abnormal weather conditions and devastations of the natural environment in various parts of the world. This has resulted in an acceleration of the global trend toward decarbonization as seen at COP27 (27th UN Climate Change Conference), with the Japanese government declaring a green growth strategy based on the Paris Agreement that seeks to achieve carbon neutrality by 2050. The Nippon Kayaku Group has also endorsed the Paris Agreement, and in addition to the FY2030 medium-term environmental targets adopted in 2020, the Group is working with the ultimate goal to achieve carbon neutrality by FY2050, with an eye to the future.

In order to make a significant reduction to our greenhouse gas emissions, the Nippon Kayaku Group will confront the issues of climate change not only by implementing comprehensive energy-saving efforts but also by installing power sources such as solar power that have low CO₂ emissions and by switching to power derived from recycled energy that has a low emissions coefficient. We also aim to achieve decarbonization throughout our value chain by providing products that contribute toward realizing a decarbonized society and by promoting supplier engagement to that end.

Information Disclosure Based on the TCFD Recommendations

Governance

The Sustainable Management Meeting, chaired by the president, deliberates, reviews and evaluates the business plan and other items related to the Nippon Kayaku Group's future responses to climate change. The results of such deliberations, reviews and evaluations are reported to the Board of Directors and, under this structure, are subject to being observed and supervised by the Board. Furthermore, the Environment, Safety, Quality Management Committee (chaired by Executive Director In Charge of Technology Unit) has been created as one of the specialized committees under the Sustainable Management Meeting to oversee the implementation of climate change initiatives. This committee delves deeper into issues related to climate change from a standpoint that extends across the entire Group.



Strategy

Nippon Kayaku has multiple businesses being deployed on a global scale, and is presented with various risks and opportunities depending on the business area. In order to identify the impact that climate change can have on each business, we evaluated the climate-related risks throughout the Group in accordance with the TCFD recommendations, and further considered the opportunities in each business area. In identifying the risks and opportunities related to climate change, the time period when the risks will emerge has been defined as follows.

	Period	Reason
Short-term	FY2022 to FY2025 (4 years)	Period falling within the Medium-term Business Plan KAYAKU Vision 2025 (KV25) that started in FY2022
Medium-term	Up to FY2030	In line with goals for FY2030 that are set in the Nippon Kayaku Group Environmental Targets of the Medium-term Business Plan
Long-term	Up to FY2050	In line with the year set as the goal for Japan's NDC target

◆ Climate-related Risks

Business risks related to climate change are based on the IPCC's Representative Concentration Pathway (RCP 2.6, 8.5) scenarios, IEA's Sustainable Development Scenario (SDS) and the Stated Policies Scenario (STEPS) for both the 2°C and 4°C scenarios.

◆ Risks in Transitioning to a Decarbonized Economy for the 2°C Scenario

Category	Major risks	Period of risk emergence	Financial impact	Major countermeasures
Policies & regulations	Increased operation costs from tighter emissions regulations	Short to long term	Medium	<ul style="list-style-type: none"> Implement dispersed power for each site, such as solar power and high-efficiency cogeneration power generators Reduce material loss by utilizing MFCA and implement comprehensive energy-saving activities Encourage suppliers to reduce emissions through engagement activities
	Rising price of electricity, LNG, etc.	Short to long term	Medium	
	Increased raw material costs from tighter emissions regulations	Short to long term	Medium	
Market & reputation	Increased costs from disclosure of environmental information and LCA calculations, etc.	Medium to long term	Small	<ul style="list-style-type: none"> Rationalize the emissions calculation method at each site and systemize the LCA calculations

◆ Physical Risks from the 4°C Scenario

Category	Major risks	Period of risk emergence	Financial impact	Major countermeasures
Acute & chronic physical risks	Increased costs from flood damage caused by typhoons, heavy rain events, high tides, etc.	Short to long term	Medium	<ul style="list-style-type: none"> When building new plants, account for the possibility of flooding when considering the geographical situation and the configuration and placement of equipment Strengthen efforts to save water used during production, and consider reusing and recycling water Enhance the work environment such as by improving air-conditioning, and promote the automation of high-temperature work processes
	Impact on operations due to water shortage	Medium to long term	Small	
	Reduced labor productivity due to increased temperatures	Medium to long term	Small	

◆ Opportunities in Each Business Area in Transitioning to a Decarbonized Economy for the 2°C Scenarios

Business area	Business environment		Opportunity	Period of opportunity creation	Financial impact*
Safety Systems	Tightened regulations against greenhouse gas emissions in various countries & regions	<ul style="list-style-type: none"> Demand for methods of mobility and transportation with relatively low emissions is expanding globally. Sales of internal combustion engine vehicles are greatly restricted by region. 	<ul style="list-style-type: none"> The compact-size, lightweight characteristics, and shape of automotive safety components are diversifying with the introduction of EVs and autonomous driving. Demand for safety components for unmanned aerial vehicles such as drones is expanding. 	Short to long term	Large
Polatechno			<ul style="list-style-type: none"> Demand for safety display device materials such as sensors and HUDs is expanding with the introduction of EVs and autonomous driving. Demand for polarizing plates that contribute to low power consumption of display devices is also expanding. 	Short to long term	Medium
Functional Materials		<ul style="list-style-type: none"> Advances in social changes, such as growth of smart cities Heightened demand for increased energy efficiency of electronics products Increased demand for storage batteries able to handle large output fluctuations in response to expanding use of recyclable energy 	<ul style="list-style-type: none"> Increase in semiconductor materials from growth of smart cities and DX Expansion of functional materials that help reduce energy consumption of display devices Expansion of low-emission materials due to the increased shift in raw materials toward biomass feedstock Expansion of resin materials that help make mobility frames more lightweight 	Short to long term	Large
Color Materials		<ul style="list-style-type: none"> Global expansion of demand for mobility/transport methods that have relatively low emissions 	<ul style="list-style-type: none"> Expansion of ink for digital on-demand that enables low-carbon printing Expansion of dimming glass/film that controls incident sunlight 	Short to long term	Large
Catalysts			<ul style="list-style-type: none"> Growth of catalyst for producing green energy, such as hydrogen Growth of catalyst for promoting the use of biomass-derived raw materials 	Medium to long term	Large
Pharmaceuticals			<ul style="list-style-type: none"> Studying items within the entire range of business activities that will become opportunities 	Short to medium term	Small
Agrochemicals		<ul style="list-style-type: none"> Direct impact is limited 	<ul style="list-style-type: none"> A certain level of temperature increase is expected even for the 2°C scenario, thus expanding the use of biostimulants that help maintain and improve agricultural productivity Expanded use of existing agrochemicals to deal with new problems with pests 	Medium to long term	Small

* Financial impact: Large = 2 billion yen or more; Medium = 0.5 to 2 billion yen; Small = 0 to 0.5 billion yen

Risk Management

The Nippon Kayaku Group identifies the reducing energy consumption and greenhouse gas emissions as a key sustainability issue related to climate change.

The M-CFT Mitigation of Climate Change Team was created to coincide with the start of the KV25 under a governance system comprised of the Board of Directors, the Sustainable Management Meeting and the Environment, Safety, Quality Management Committee. This response team serves a central role in identifying and evaluating climate change risks, while also executing other specific measures such as actively implementing energy-saving efforts and pushing forward with environmental investments.

Metrics and Targets

As a metric against the risk of climate change, the Nippon Kayaku Group has established the target of reducing greenhouse gas emissions (Scope 1 and 2) for the entire Group by 32.5% in FY2030 compared to FY2019. In order to achieve this target, we are starting by aiming to reduce greenhouse gas emissions by 3% every year during the KV25 period. We are also conducting advanced studies on making a shift to green energy such as hydrogen and ammonia in order to achieve carbon neutrality for Scope 1 and 2 by FY2050.

Also, in order to enable us to include Scope 3 in establishing future targets on reducing emissions, we have been working on enhancing the accuracy of our Scope 3 calculation methods in anticipation of being able to individually determine the amount of emissions for each product (carbon footprint). Our calculation results for Scope 1, 2 and 3 have been examined by a third party since FY2022. In order to reduce Scope 3 emissions, we will work together with our business partners in reinforcing efforts to reduce environmental impacts throughout the entire supply chain.

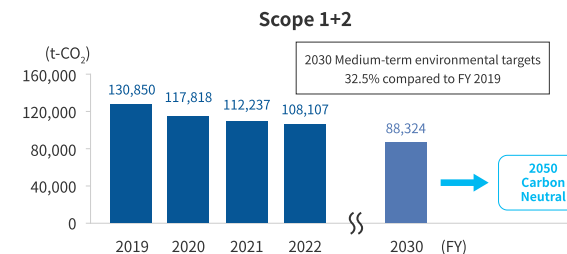
◆ Reduction in the Amount of Greenhouse Gas Emissions

In the Paris Agreement adopted at COP21, held in 2015, each country pledged to pursue CO₂ emission reduction targets at the national level, with the aim of limiting the increase in global average temperatures to "below 2°C," and working towards a level of "below 1.5°C" above pre-industrial levels. The Nippon Kayaku Group has also adopted medium-term environmental targets, specifically of reducing the amount of CO₂ emitted from energy sources by at least 32.5% or more by FY2030, compared with FY2019, as a standalone target for Nippon Kayaku (non-consolidated) in FY2020, and expanded the scope to the entire Nippon Kayaku Group in FY2021.

In addition to energy saving and optimization of production processes, the Nippon Kayaku Group is also working to introduce power sources with low CO₂ emissions, such as solar power, and switch to low-emission-factor electric power derived from renewable energy. Our Scope 1 and 2 emissions, which are used as metrics in our FY2030 medium-term environmental targets, have been diminishing every year as shown below.

Scope 1: Direct emissions of greenhouse gas generated from a source owned or managed by the business operator themselves (emissions from fuel usage, manufacturing processes, etc.)

Scope 2: Indirect emissions of greenhouse gas from the use of power, heat or steam supplied by another business (emissions from purchased power, etc.)



◆ Disclosure of Data on CO₂ Emissions (Scope 3) throughout the Supply Chain

In recent years, there has been an increasing tendency for companies to keep tabs on, manage and disclose information on indirectly emitted CO₂ throughout the supply chain. At the Nippon Kayaku Group, we are not only aggregating and managing Scope 1 and Scope 2 emissions as before, but are also calculating Scope 3 emissions within the supply chain.

Since FY2017, Nippon Kayaku has been calculating Scope 3 emissions on a non-consolidated basis, but from FY2019, this has been expanded to include both domestic and overseas Group companies. The Nippon Kayaku Group will continue to calculate and manage our data based on the General Guidelines on Supply Chain GHG Emission Accounting issued by the Ministry of the Environment, in order to systematically implement initiatives to reduce CO₂ emissions throughout the supply chain.

Scope 3: Indirect emissions other than Scope 2 (emissions from raw material procurement, employee commuting, business travel, waste processing consignment, product usage, disposal, etc.)

Category	Emissions (thousand ton-CO ₂ /year)			
	FY2019	FY2020	FY2021	FY2022
1 Purchased products and services	243.6	237.3	294.5	275
2 Capital goods	42.7	42.9	26.8	29.6
3 Fuel- and energy-related activities not included in Scope 1 or 2	22.4	21.2	22.3	21
4 Transportation and distribution (upstream)	19.0	17.6	22.3	19.7
5 Waste generated in operations	26.5	28.8	31.8	16.2
6 Business travel	0.8	0.8	0.8	0.8
7 Employee commuting	2.5	2.4	2.4	2.4
8 Leased assets (upstream)	Included in Scope 1 or Scope 2			
9 Transportation and distribution (downstream)	1.0	1.0	1.6	1.5
10/11 Processing/usage of sold products	-	-	-	-
12 End-of-life treatment of sold products	15.4	23.2	26.4	23
13 Leased assets (downstream)	0.4	0.4	0.4	0.4
14/15 Franchise/investments	-	-	-	-
Total of Scope 3	374.3	375.6	429.3	389.6
Scope 1	36.2	35.3	37.5	35.5
Scope 2	94.7	82.5	74.7	72.6
Total of Scope 1+2+3	505.2	493.4	541.5	497.7

Calculation method: As a rule, the amount of CO₂ emitted is calculated based on the General Guidelines on Supply Chain GHG Emission Accounting issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, and the emission coefficient listed by the IDEA Research Laboratory at the National Institute of Advanced Industrial Science and Technology's Research Institute of Science for Safety and Sustainability.

[> Environmental Management](#)

[> Environmental data](#)

Initiatives

The Nippon Kayaku Group is actively pursuing energy and resource efficiency measures in the manufacturing processes at each of our production facilities, in order to achieve our medium-term environmental targets of reducing greenhouse gas emissions (Scope 1+2) for the FY2030 by 32.5% compared to the FY2019 levels and carbon neutrality by FY2050. To accomplish this goal, we are implementing Material Flow Cost Accounting (MFCA) and solar power generation initiatives.

Material Flow Cost Accounting (MFCA)

MFCA is a methodology aimed at continuously reducing environmental impact resulting from production activities by identifying and clarifying energy and material losses during the manufacturing process. Nippon Kayaku is working to cost savings and reduce environmental impact, including waste generation and CO₂ emissions in the manufacturing processes, through the implementation of MFCA.

At our Fukuyama factory, which specializes in the production of pigments for consumer inkjet printers, the effectiveness of recovering solvents from waste solvents through distillation was confirmed as a result of laboratory studies and practical testing based on MFCA results since the latter half of 2018, and it led to a shift in our processes to reuse recovered solvents in manufacturing. As a result, we not only reduced the amount of waste sent for external incineration and solvent purchases but also achieved significant environmental impact reductions and cost savings.

We have expanded the use of MFCA to other manufacturing facilities, introducing it at the Tokyo factory and Atsusa factory in 2019, the Kashima factory in 2020, and the Joetsu factory in 2021, in order to commit to further promoting environmental impact reduction and manufacturing cost reduction. Our ultimate goal is to extend MFCA implementation to the entire group.



Distillation Recovery Facility

Solar Power Generation

Nippon Kayaku is working to significantly reduce greenhouse gas emissions by introducing solar power generation as a means of introducing power sources with low CO₂ emissions and switching to electricity with a low emission coefficient derived from renewable energy sources.

In March 2023, we introduced the on-site service of the solar power generation PPA model to the Fukushima Plant.

The solar power generation PPA model is a model in which Nippon Kayaku leases its premises and roof to a third party to install solar power generation equipment and purchases the generated power for a long period of time, and it enable us to use power generated from renewable energy sources and to reduce electricity costs. We expect to reduce greenhouse gas emissions by 731 t-CO₂ per year by using electricity generated by the solar power generation system installed at the Fukuyama Plant.

Nippon Kayaku will promote the installation of company-owned solar power generation equipment at our manufacturing sites other than the Fukuyama Plant, in addition to the solar PPA model.



Contribution to Greenhouse Gas Emission Reduction

Initiatives	Unit	FY2022
MFCA	t-CO ₂	60.2
Solar power generation	t-CO ₂	-

Prevention of Air Pollution

Policy and Basic Approach

The Nippon Kayaku Group complies with the laws and regulations of each country and region with regard to air pollutants such as NOx, SOx, soot and dust, and volatile organic compounds (VOCs) emitted from its plants and development bases. We take measures against pollution by managing emissions, setting stricter standards than those required by laws and regulations to prevent air pollution in the areas around our plants and development bases.

System

> [System for implementing Responsible Care](#)

Indicators

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Volatile organic compounds (VOCs)	Non-consolidated	tons	25.6	28.6	33.3	52.1	38.7
Dichloromethane	Non-consolidated	tons	3.9	4.9	4.0	3.6	3.2
Formaldehyde	Non-consolidated	tons	0.16	0.04	0.04	0.15	0.13
NOx*1	Non-consolidated	tons	8.2	9.1	7.5	7.7	8.3
SOx*2	Non-consolidated	tons	1.4	1.3	1.0	0.7	0.9
Dust*3	Non-consolidated	tons	0.6	0.9	0.5	0.5	0.4

*1 NOx (nitrogen oxide): NOx is produced when burned chemical substances react to nitrogen in the air and when fuels and chemical substances that contain nitrogen compounds such as coal are burned. Not only is it a major cause of air pollution including photochemical smog and acid rain, but NOx also has a harmful effect on the human respiratory system.

*2 SOx (sulfur oxide): SOx is emitted when fossil fuels that contain sulfur are burned. SOx reacts with moisture in the atmosphere to form sulfuric acid and sulfurous acid, which are causes of air pollution and acid rain.

*3 Dust: Dust mainly refers to fine particles (soot) found in dust smoke produced when burning fossil fuels. In addition to being a major cause of air pollution, dust can cause humans to contract pneumoconiosis or other harmful health conditions when breathed in in high concentrations.

> [Environmental Management](#)

Initiatives

Reducing Emissions of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants

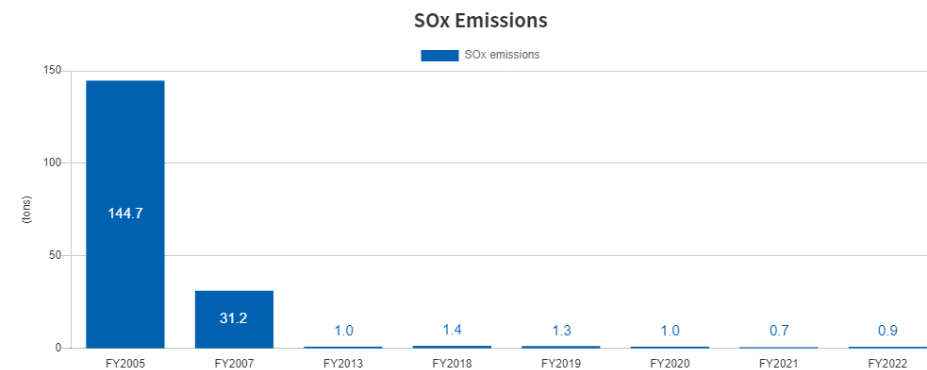
Nippon Kayaku is working to reduce VOC emissions in a wide range of areas by aggregating data not only on VOCs stipulated under Japan's Air Pollution Control Act, but also chemical substances designated by the Japan Chemical Industry Association. We are also working to reduce emissions of harmful air pollutants such as dichloromethane and formaldehyde, which are two of the 12 substances that we manage voluntarily. The following are examples of our main initiatives.

- Installing exhaust gas treatment equipment
- Installing gas absorption equipment
- Installing regenerative (thermal storage) combustion equipment
- Improving work methods and reviewing alternatives to chemical substances used
- Leakage prevention measures

Reducing Emissions of SOx (Sulfur Oxides), NOx (Nitrogen Oxides), Soot and Dust

To date, Nippon Kayaku has engaged in the following kinds of measures, and manages SOx, NOx, and soot and dust emissions at lower levels than regulatory values.

- Fuel conversion from C heavy oil to A heavy oil, LPG, and natural gas
- Introducing low-NOx boilers and compact once-through boilers
- Installing NOx denitration equipment
- Installing dust collectors



[Important Issues] Reduction of Wastewater and Industrial Waste

Policy and Basic Approach

The Nippon Kayaku Group uses and discharges large amounts of water in its business activities. Recognizing water as a key issue at all of its sites, the Nippon Kayaku Group pays attention to appropriate use of water and environmental conservation in surrounding areas, and manages wastewater by setting voluntary management standards that are stricter than the values stipulated by laws and regulations, and by prefectural and municipal ordinances.

With regard to waste, we must work toward achieving a recycling-oriented society with a low environmental impact by pushing forward with our efforts to make efficient use of and recycle different materials throughout the various life cycle stages, from production to consumption and up to final disposal. In view of this, Nippon Kayaku Group has set recycling rate and zero emission rate as key performance indicators (KPIs) in **KAYAKU Vision 2025 (KV25)**. In addition to reducing waste, we are also working to effectively use waste generated in business activities as further resources. Furthermore, in April 2022, the Act on Promotion of Resource Circulation for Plastics came into effect. The situation regarding plastics waste reduction is changing, and becoming increasingly severe. Against the backdrop of problems such as climate change and plastic waste, the movement to promote plastic resource recycling is becoming more active in Japan. The Nippon Kayaku Group also uses plastic and disposes of it as waste, but works with the 3Rs in mind: reducing the plastic we emit (Reduce), reusing it (Reuse), and recycling it as a resource (Recycle).

System

> [System for implementing Responsible Care](#)

Audits

The Nippon Kayaku Group conducts audits at each business site and Group company through central environmental safety and health audit, to ensure that wastewater and waste are being managed appropriately. In our central environmental safety and health audit, we check wastewater and waste management for deficiencies and problems under laws, regulations, and ordinances, and check wastewater treatment plants and waste storage sites to identify any problems with the state of management.

> [Responsible Care Audits](#)

Indicators

> [Environmental Management](#)

Initiatives

Compliance with Environmental Regulations

The Nippon Kayaku Group installs wastewater treatment facilities at each plant according to the composition of wastewater discharged in manufacturing processes, and sets voluntary management values that are stricter than the emission standards of laws and local government ordinances, to ensure that standard values are not exceeded. In FY2022, there were no violations of laws or ordinances relating to wastewater, such as the Water Pollution Prevention Act, and laws and regulations relating to waste discharge, such as the Act on Waste Management and Public Cleansing.

> [Number of environmental violations](#)

Wastewater

◆ Reduction of PRTR Substances

In FY2022, Nippon Kayaku announced that it handles 75 types of chemical substances requiring submission of notices under the PRTR Act (the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement). To reduce our impact on the external environment, we are implementing various measures such as installing processing equipment and converting raw materials.

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Emissions of PRTR substances	Atmosphere	Non-consolidated tons	17.1	18.9	16.8	25.2	38.7
	Water bodies	Non-consolidated tons	11.4	13.3	9.1	14.7	51.4
	Soil	Non-consolidated tons	0	0	0	0	0
	Total*	Non-consolidated tons	28.5	32.2	25.9	39.9	90.1

* The total sum may be incongruent due to rounding.

◆ Water Environment Protection

The Nippon Kayaku Group sets voluntary management standards that are stricter than the values stipulated by laws and regulations, and by prefectural and municipal ordinances where each production base is located, and confirms that standard values are met when discharging wastewater. Nippon Kayaku also handles colorant-related products such as dyes and inkjet inks. Fukuyama Plant and Tokyo Plant—which manufacture these colorant material products—decolorize colored wastewater generated in the manufacturing process before discharge.

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
COD	Non-consolidated	tons	155.3	168.7	150.6	153.6	171.8
Total phosphorus emissions	Non-consolidated	tons	1.6	10.6	3.2	11.2	7.1
Total nitrogen emissions	Non-consolidated	tons	93.2	74.8	83.2	73.5	114.0
SS*	Non-consolidated	tons	45.3	46.0	48.4	49.9	47.5

* SS: Suspended solids (SS refers to particulate-like substances of 2 mm or less in diameter found floating or suspended in water. These include metal particles, animal and plant plankton and their carcasses, and organic and metal sediments originating from sewage and factory effluents, among others. The increase in SS causes a decline in water transparency, and affects underwater photosynthesis by preventing light penetration.)

◆ Initiatives at Each Business Site

Joetsu Plant

Training on Wastewater

Joetsu Plant, which produces polarizers, uses around 20,000m³ of water every month in production processes.

The wastewater discharged as part of production contains various chemical substances, and the amount of industrial waste is reduced by processing wastewater using water treatment equipment and reusing it as process water. After monitoring the quality of wastewater discharged into rivers using analyzers, the plant set even stricter voluntary management standard values than those stipulated by ordinances, and only wastewater meeting those standards is discharged into rivers.

At the plant, employees of the Facilities, Environment and Safety Department serve as instructors, providing training to employees who work on and supervise how wastewater used for production is treated and discharged into rivers, as well as on wastewater treatment facilities and drainage methods. Going forward, we will continue to conduct regular training to deepen employee understanding and reduce environmental impact.



Industrial Waste

◆ Response to the Act on Promotion of Resource Circulation for Plastics

As the situation surrounding plastics continues to change and grow increasingly severe, the Act on Promotion of Resource Circulation for Plastics was enforced in Japan in April 2022.

Nippon Kayaku falls under the category of a large-volume emitter under the Act. In order to contribute to the realization of a sustainable society, Nippon Kayaku keeps in mind the 3Rs (Reduce, Reuse, and Recycle), and will continue to systematically set targets and reduce waste plastic.

Waste Plastic Output

Indicator	Scope	Unit	FY2020	FY2021	FY2022
Waste plastic output	Non-consolidated	tons	954	888	886
Recycling rate	Non-consolidated	%	80.2	80.8	81.8

◆ Initiatives at Each Business Site

Fukuyama Plant

Zero Emissions through Effective Use of Waste

Nippon Kayaku is reducing the amount of waste it generates, and is engaged in consideration for utilizing generated waste as resources. Many types of waste are generated in the production activities of Fukuyama Plant, but sludge generated in wastewater treatment by microorganisms accounts for a large percentage of them. This sludge is difficult to dispose of because it contains moisture. In the past, it was disposed of in landfills under appropriate management. As a result of considering whether this sludge can be used as a resource with the aim of reducing environmental impact, it was found that it can be recycled as a fuel (so-called reduced fuel) used by waste incineration companies to adjust calorific value, and it is now being used by such waste incineration companies for this purpose. The ash generated when used for incineration is further effectively used as a raw material for cement and roadbed materials. Fukuyama Plant is also considering the use of industrial waste, and has not only achieved a zero landfill disposal rate but also a recycling rate of 100%.

Going forward, we will continue working to maintain a zero emission rate (the ratio of landfill disposal to total waste produced) of 1% or less, as set forth in our Sustainability Action Plan, and a recycling rate of at least 80% or higher.

Kayaku Safety Systems de Mexico

Industrial Waste Management

Kayaku Safety Systems de Mexico has been making untiring efforts to recycle solid waste, such as wood, cardboard, non-ferrous metals, aluminum and plastics, by separating them into appropriate categories and finding external suppliers that can re-use them. These different types of waste are stored for a period of two to three months at designated sites and are picked up by government-certified suppliers on a regular basis. Of the waste that is collected, those types that can be recycled are transported to recycling companies. There, wood is made into wood pallets, cardboard is recycled into new cardboard, and plastics, aluminum and ferrous metals are used to produce new raw materials.

This program extends to non-production areas such as break areas, where organic and non-organic waste such as plastic bottles are separated to undergo proper treatment for recycling.

Since the end of 2021, we have improved our waste separation management. In the past, there was no established separation method, and resources that could otherwise be used effectively were included in waste and disposed of. In view of this, we established reuse and disposal standards for each type of waste, and separated waste based on these standards. This not only makes sorting decisions easier for workers, increasing efficiency and accuracy, but also increases the amount of metal, wood, and plastic we recycle. Plastic materials that were previously considered waste have also been reviewed, and as a result, more materials can now be reused. The specific results for last fiscal year are shown below.

- Metal reused increased from 1 ton to 3 tons
- Wood waste reduced from 10 tons to 4 tons
- Plastic reuse increased from 50 tons to 73 tons

As part of our plan for this fiscal year, we aim to reuse packaging materials.



◆ Waste Data

Total waste produced in FY2022 was 27,621 tons, down approximately 3.3% from 28,568 tons in the previous year. Additionally, as a result of continuing to promote the recycling of waste that had been disposed of by landfill or incineration at each business site and continuing to implement initiatives to reduce environmental impact, the amount of landfill disposal was reduced to 233 tons, a decrease of about 22% from the previous fiscal year, and the zero emission rate fell by 0.2 percentage points to 0.8% from 1.0% in the previous year.

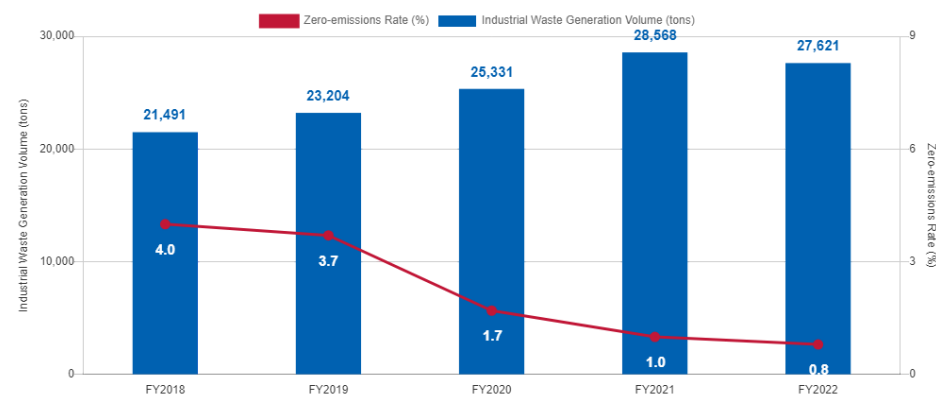
Going forward, we will continue to reduce waste generated by business activities and make effective use of generated waste, reduce waste sent to landfill, which has a major impact on the global environment, and continue efforts throughout the Group to protect the global environment and create a sustainable society.

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Volume of non-hazardous waste generated	Non-consolidated	tons	16,626	17,973	19,406	22,065	21,190
	Volume of general waste generated	Non-consolidated	768	717	648	679	647
	Volume of industrial waste generated	Non-consolidated	15,858	17,256	18,758	21,387	20,543
Volume of hazardous waste generated (designated industrial waste subject to specific management)	Non-consolidated	tons	4,865	5,231	5,925	6,503	6,431
	Designated industrial waste	Non-consolidated	733	131	221	146	182
Total*1	Non-consolidated	tons	21,491	23,204	25,331	28,568	27,621
Types of waste	Sludge	Non-consolidated	2,171	2,206	1,979	2,307	2,338
	Waste oil	Non-consolidated	5,176	5,296	5,762	6,386	5,848
	Waste acid	Non-consolidated	425	617	2,243	2,185	1,524
	Waste alkali	Non-consolidated	12,105	13,399	13,377	15,784	16,064
	Waste plastic	Non-consolidated	557	642	954	888	886
	Other	Non-consolidated	1,057	1,044	1,015	1,019	961
Amount recycled	Non-consolidated	tons	17,493	19,584	20,449	23,290	23,963
Landfill amount	Non-consolidated	tons	870	847	404	298	233
Recycling rate*2	Non-consolidated	%	81.4	84.4	81.3	82.3	85.0
Zero-emissions rate	Non-consolidated	%	4.0	3.7	1.7	1.0	0.8

*1 The total sum may be incongruent due to rounding.

*2 Includes solvent recovery and reuse.

Trend in the Volume of Industrial Waste Generated and in the Zero-emissions Rate



Costs Relating to Pollution, Waste or Resource Use

> [Environmental Accounting](#)

[Important Issues] Improving Efficiency of Water Resource Use

Policy and Basic Approach

Water risks can be largely divided into physical risks caused by drought, flooding and water contamination, and regulatory risks resulting from toughened water quality standards, changes in water and sewer prices, and switching to clean water due to the suspension of industrial water supply, among others. Water is a limited and precious resource, and its conservation is considered an important theme throughout the world.

The Nippon Kayaku Group produces a variety of chemical products, and water is essential for the continuation of its business activities. We are constantly aware of the importance of our water resources, and are mindful of using water carefully without being wasteful.

System

> [System for implementing Responsible Care](#)

Indicators

> [Environmental Management](#)

Initiatives

Compliance with Environmental Regulations

The Group has concluded various agreements with the local governments and local communities where its business sites are located. We comply with various agreements concerning the environment, pursue initiatives to reduce our environmental impact, and contribute to safety and security in local communities. There were no violations of laws and regulations relating to water quality or water volume in FY2022.

> [Number of environmental violations](#)

Usage of Water Resources

Water Usage by Water Intake Source

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Municipal water	Consolidated	1,000 m ³	813	706	763	805	754
Industrial water	Consolidated	1,000 m ³	6,815	7,758	7,897	8,138	8,003
Groundwater (well water)	Consolidated	1,000 m ³	1,733	2,388	1,918	1,947	1,819
Other (reservoirs, rainwater storage)	Consolidated	1,000 m ³	0	0	0	68	81
Total water usage	Consolidated	1,000 m³	9,361	10,852	10,578	10,958	10,657

Wastewater Discharge by Outlet

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Sea area	Consolidated	1,000 m ³	7,081	7,374	7,014	7,142	6,726
River	Consolidated	1,000 m ³	1,985	2,682	2,400	2,410	2,351
Sewerage networks	Consolidated	1,000 m ³	995	928	974	987	910
Total wastewater discharge	Consolidated	1,000 m³	10,061	10,984	10,388	10,539	9,987

Identifying Water-stressed Areas

The Nippon Kayaku Group is working to identify and understand risks relating to water use and link them to more effective initiatives in response to water risks. Using the water risk evaluation tool Aqeduct developed by the World Resources Institute (WRI), we have conducted a survey on the state of water stress in the countries where Nippon Kayaku's plants are located.

Results of Survey on Water Stress at Nippon Kayaku's Manufacturing and, Research and Development Bases (FY2022)^{*1}

Region / country	Unit	Water usage by water stress level					
		High	High to medium	Medium	Medium to low	Low	
Asia	Japan	1,000 m ³ (number of sites)	0	0	2,715 (6)	7,403 (4)	0
	China	1,000 m ³ (number of sites)	0	13 (1)	0	0	320 (3)
	Malaysia	1,000 m ³ (number of sites)	0	0	0	0	56 (1)
Europe	Czech Republic	1,000 m ³ (number of sites)	0	0	0	13 (1)	0
	Netherlands	1,000 m ³ (number of sites)	0	0	0	0	3 (1)
	UK	1,000 m ³ (number of sites)	0	1 (1)	0	0	0
North and Central America	USA	1,000 m ³ (number of sites)	0	0	7 (1)	111 (1)	0
	Mexico	1,000 m ³ (number of sites)	15 (1)	0	0	0	0
Total^{*2}	1,000 m³ (number of sites)	15 (1)	14 (2)	2,722 (7)	7,527 (6)	379 (5)	

*1 We conduct surveys using Aqeduct Water Risk Atlas.

*2 Totals may not match due to rounding.

◆ Initiatives at Each Business Site

Fukuyama Plant

Initiatives to Reduce Water Usage

The Fukuyama Plant treats wastewater resulting from the colorant manufacturing process within the plant, and then releases the treated water into the Seto Inland Sea. The Fukuyama Plant has been manufacturing colorants for inkjet printers since 2000, and has been working on improving the method for treating wastewater resulting from the manufacturing process. As part of such efforts, numerous studies have been performed on implementing individualized treatment in accordance with the brand and revising the manufacturing process to reduce the environmental impact.

Through these efforts, the plant managed to reduce the contracted volume of industrial water from 24,000 m³ per day to 23,000 m³ per day in 2015, and further down to 22,000 m³ per day in FY2018. At present, the plant is implementing even better wastewater treatment techniques, and is succeeding in continuing operations while maintaining the same contracted volume of industrial water, despite the increase in production volume. Moreover, in addition to industrial water, the plant is also working to reduce the use of public water, which is also used during the manufacturing and equipment cleaning processes.

Kayaku Safety Systems Europe

Implementation of Equipment for the Effective Use of Rainwater

Kayaku Safety Systems Europe (KSE) introduced a water storage tank system in 2017 to utilize rainwater more effectively as part of its capital investment activities to promote environmental protection. By FY2020, an equivalent of 750.5 m³ of tanks had been installed. Rainwater, in addition to water discharged from air-conditioning that is used to control the humidity within the plant, is used for non-drinking purposes, which helps to not only increase the efficiency of water usage but also contributes toward reducing costs.



Due to the impact of climate change, the current drop in the amount of precipitation in the Czech Republic poses a significant concern, making the recycling of water extremely important. Since FY2020, the annual water storage at KSE amounts to more than the amount of drinking water used by all of KSE's employees and their families (approximately 4,000 people) for the year. KSE is continuing to promote this project in order to contribute toward the realization of a sustainable society.

Indicator	Unit	FY2019	FY2020	FY2021	FY2022
Water storage capacity (scheduled)	m ³	-	4,877	5,040	5,040
Water storage capacity (actual)	m ³	4,433	6,177	7,234	6,802
Economic effects	Ten thousand yen	282	361	411	335

Biodiversity

Policy and Basic Approach

We at the Nippon Kayaku Group recognize that biodiversity is an essential foundation for achieving a sustainable society. Environmental pollution and deforestation are major factors in the loss of biodiversity. Therefore, under the Responsible Care Policy, the Nippon Kayaku Group engages in its business activities with constant consideration for environmental impact and reducing environmental risks, including effective use of resources, climate change initiatives, prevention of water pollution and air pollution, etc.

System

> [System for implementing Responsible Care](#)

Initiatives

Water-related Initiatives

- > [\[Important Issues\] Reduction of Wastewater and Industrial Waste](#)
- > [\[Important Issues\] Improving Efficiency of Water Resource Use](#)

◆ Initiatives at Each Business Site

Takasaki Plant

Plant Operations in Harmony with the Natural Environment

The Takasaki Plant was formerly an army gunpowder manufacturing plant for the Tokyo Second Army Arsenal in Iwahana. The plant was purchased in April 1946 and used to manufacture black-colored gunpowder. It later switched to manufacturing pharmaceuticals in August 1971. The plant has been aiming to be in “harmony with nature” from the time it began operations, and was certified under ISO 14001 in January 2001.

Surrounded by a rich natural environment that includes the Gunma-no-Mori forest and Karasu river, the plant operates under the slogan of “Takasaki Plant continues to protect life and the environment.” Under this banner, the plant’s environmental policy states that each and every person shall act with full awareness of the fact that they are working in an industry that is vital to human life, promote environmental protection activities and strive to operate the plant in a way that is in harmony with its rich natural environment.

The factory is located on an expansive site that extends over an area of 560,000 m². Of this, 110,000 m² that is registered as a green zone under the Factory Location Act was formerly used for gunpowder storage. But as it has not been used since the factory switched to making pharmaceuticals, the area has been left in a virtually natural state. Believed to have reverted to its earlier ecosystem, it now serves as one of the Takasaki city district’s most valuable natural habitats.

The site is surrounded by Class A rivers on three sides: to the east, south and north. They are the Karasu river (a Class A river that is part of the Tone river system), the Ino river (a Class A river that branches off from the Karasu river) and the Kasu river (a Class A river that branches off from the Hirose river, which is also part the Tone river system). The northern side of the site adjoins the Gunma-no-Mori prefectural city park. We will continue to protect this valuable naturally forested area that is home to various wildlife including raccoon dogs and kingfishers.

As an environmental facility, we have both the green zone and a “creek” within the plant site. This creek is a part of a facility that was used for hydraulic power generation during the time when the plant was used to manufacture gunpowder. Relics from the foreign-made hydraulic power generator that was used during the war are also being carefully preserved and managed.

The creek exists in a naturally forested area that is removed from the nearby residential districts. Close to the rivers and a safe place for animals, it serves as an oasis for migrating birds that stop by every year to gain nourishment from the surrounding forests and rivers. The annual arrival and northerly departure of these migrating birds is a seasonal event that is greatly looked forward to by our employees.

To protect the environment at the Takasaki Plant, in addition to our efforts toward achieving carbon neutrality we are also implementing measures to protect the surrounding area by managing emissions of our treated industrial wastewater. These emissions are being managed in the following manner.

The creek that flows through has a dam built on it that divides it into two sections. The first section temporarily pools industrial wastewater that has been detoxified by the activated sludge process. In the second section, the water quality is measured on a daily basis, and the dam is opened to release the water from the creek into the river after it has been confirmed by means of actual measurements that there are no abnormalities. In this way, we are taking every precaution to prevent environmental pollution.



Transitioning to Forest-certified Products

Nippon Kayaku has switched to forest-certified paper for all of its copy paper. We also continue to use forest-certified paper for all groupwide media such as internal newsletters, company brochures, and explanatory leaflets on sustainable management published by head office. We are also gradually shifting to forest-certified products for packaging materials where possible.

Going forward, we will continue working to minimize the impact of the Nippon Kayaku Group's business activities on the environment as much as possible, focusing primarily on environmental initiatives that employees can be aware of as familiar to them.

Environmental Accounting

Environmental Accounting

Nippon Kayaku calculates and discloses costs relating to environmental conservation in its business activities to effectively implement environmental conservation initiatives. Environmental accounting is calculated for the period from April 2022 through March 2023, and investment amounts are based on actual investment results for equipment relating to environmental conservation during the target period, with reference to the Environmental Accounting Guidelines (2005 version) issued by the Japanese Ministry of the Environment, and the Environmental Accounting Guidelines for Chemical Companies published by the Japan Chemical Industry Association (JCIA). Expenses are calculated based on the results of equipment maintenance costs, personnel costs, and depreciation costs, etc., relating to environmental conservation.

◆ Environmental Accounting

FY2022 Environmental Conservation Costs

Category	Scope	Unit	Investments	Expenses	Details
I. Business area costs	Non-consolidated	Million yen	530	1,551	Environmental conservation costs to limit environmental impact in the businesses area due to production and service activities
Breakdown	① Pollution prevention costs	Non-consolidated	(288)	(333)	Investments and expenses relating to the prevention of air pollution, water pollution, underground seepage into groundwater, noise, and vibration
	② Global environmental conservation costs	Non-consolidated	(237)	(64)	Capital investments and maintenance / management costs relating to energy conservation and measures to combat global warming
	③ Resource recycling costs	Non-consolidated	(5)	(806)	Expenses relating to resource conservation, recycling, and appropriate treatment and disposal of industrial waste, etc.
	④ Other	Non-consolidated	(0)	(349)	Pollution load levies, etc.
II. Upstream and downstream costs	Non-consolidated	Million yen	0	67	Costs of suppressing environmental impacts upstream or downstream from production and service activities
III. Administration costs	Non-consolidated	Million yen	3	268	ISO14001 renewal and maintenance audit costs, environmental impact monitoring, information disclosure, education and training, greening, etc.
IV. R&D costs	Non-consolidated	Million yen	0	158	Expenses relating to R&D and product development for environmentally friendly themes
V. Social activity costs	Non-consolidated	Million yen	0	10	Factory tours, community activity subsidies, organization membership fees, etc.
VI. Environmental damage handling costs	Non-consolidated	Million yen	0	0	Natural restoration costs, etc.
Total	Non-consolidated	Million yen	533	2,054	

◆ Economic Effects from Environmental Protection Measures

Economic Effects of Environmental Conservation Measures FY2022

Targets of evaluation of effects		Scope	Unit	Effective amount	Main contents
Inside business areas effects	Pollution control effect	Non-consolidated	Million yen	0.4	Installation of sludge level interface sensors, collection of scattered dust by dust collectors, etc.
	Global environmental conservation effects	Non-consolidated	Million yen	97.4	Adoption of energy-saving equipment (LED lighting, high-efficiency pumps, etc.), replacement of steam piping, replacement of substation equipment, replacement of compressors, optimization of air conditioner operating conditions, utilization of exhaust heat, outdoor unit sprinkling, roof sprinkling, heat shield films, etc.
	Resource recycling effects	Non-consolidated	Million yen	69.5	Recovery and reuse of solvents, in-house treatment of waste solvents, external sales of waste such as scrap metal and waste plastics as recycled resources
Upstream / downstream effects		Non-consolidated	Million yen	38.3	Cleaning and reuse of SUS drums and poly drums, etc.
Other		Non-consolidated	Million yen	0.0	Tree-planting activities
Total		Non-consolidated	Million yen	205.5	

Investments Related to the Environment and to Health and Safety

Nippon Kayaku makes well-planned and continual investments in projects related to the environment and safety and health. In FY2022, the total of environment related capital investments was 533.0 million yen, and the total of health and safety-related capital investments was 430.7 million yen.

Environment-related Capital Investments

Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Air pollution prevention equipment	Non-consolidated	Million yen	85.9	40.2	20.9	37.1	68.1
Water pollution prevention equipment	Non-consolidated	Million yen	40.6	70.5	109.7	266.9	206.7
Underground seepage prevention equipment	Non-consolidated	Million yen	52.0	13.4	5.5	4.9	7.2
Noise and vibration prevention equipment	Non-consolidated	Million yen	4.3	2.4	17.2	6.0	6.0
Industrial waste processing equipment	Non-consolidated	Million yen	3.9	30.9	106.6	111.2	5.1
Plant greening	Non-consolidated	Million yen	0.0	1.0	1.8	0.5	3.3
Energy conservation and global warming prevention equipment	Non-consolidated	Million yen	102.9	40.3	172.6	244.6	236.6
Total	Non-consolidated	Million yen	289.6	198.7	434.3	671.3	533.0

Safety- & Health-related Capital Investments

Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Equipment aging measures	Non-consolidated	Million yen	327.9	469.0	292.9	490.9	245.0
Safety and work environment measures	Non-consolidated	Million yen	164.8	165.3	171.4	171.4	86.6
Explosion, fire and leakage measures	Non-consolidated	Million yen	12.8	39.4	9.2	14.1	60.6
Earthquake and other natural disasters measures	Non-consolidated	Million yen	11.0	2.6	51.4	4.4	6.5
Other	Non-consolidated	Million yen	34.9	4.0	4.5	6.4	32.0
Total	Non-consolidated	Million yen	551.4	680.3	529.4	687.1	430.7

Social

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[Important Issues] Quality and Customer Safety

Policy and Basic Approach

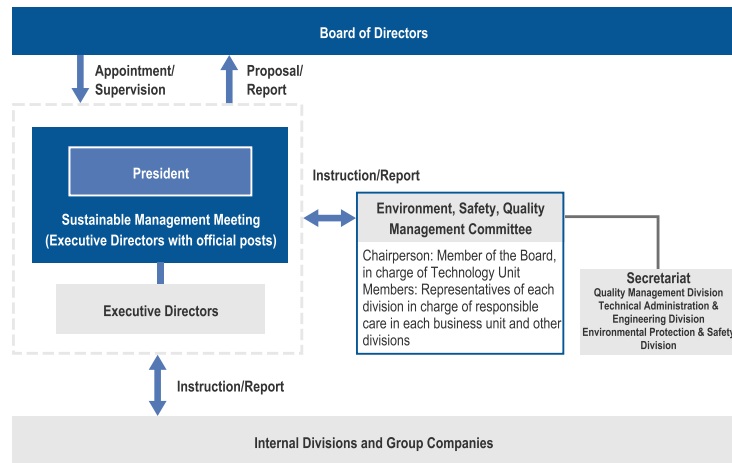
In order to provide safe, secure, high-quality products to society, the Nippon Kayaku Group has established the Declaration on Environment, Health and Safety, and Quality as a fundamental policy based on its corporate vision-the **KAYAKU spirit**-and established a quality assurance management system. Through these, we are working to properly operate our quality management system and rigorously implement quality governance, including the indicator set for key sustainability issues. We also recognize that responsibility for the entire life cycle of all products-from planning, development, and production to disposal and recycling-as well as for resources, energy, and information, etc., is also a key element. Based on this recognition, we are also focusing on raising the quality awareness of our employees.

> [The Declaration on Environment, Health and Safety, and Quality](#)

System

The Nippon Kayaku Group has established an Environment, Safety, Quality Management Committee as an exclusive committee of the Sustainable Management Meeting, chaired by the President, under the direct supervision of the Board of Directors, to oversee quality management.

The committee consists of the quality assurance supervisors of each business division and indirect divisions at the head office. It formulates quality assurance policies, discusses issues and response measures relating to the state of quality activities, and works to strengthen the quality assurance management system of the entire Group through proposals and reporting to the Sustainable Management Meeting.



Acquisition of International Certification

The Nippon Kayaku Group operates businesses through its Mobility & Imaging Business Unit, Fine Chemicals Business Unit, and Life Science Business Unit. To build an appropriate quality management system for various business formats and develop and provide high-quality products and services, we have acquired international standard certifications for quality assurance for each business.

In the Mobility & Imaging Business Unit, the Safety Systems Group, Himeji Plant, and Research & Development Division have obtained the IATF16949 automobile industry international quality management system standard certification, formulated by the International Automotive Task Force (IATF). Overseas Group companies that manufacture automotive safety components have also acquired IATF16949 certification, and are working to provide higher quality products.

In the Fine Chemicals Business Unit, Fukuyama Plant, Asa Plant, Tokyo Plant, head office and R&D Laboratories, and Taiwan Nippon Kayaku began integrated operation of a quality management system in October 2020, and obtained ISO9001 integrated certification in July 2021.

The Life Science Business Unit's Pharmaceuticals Group's Takasaki Plant and Pharmaceutical Research Laboratories have acquired ISO9001 certification and ISO13485 integrated certification, which is a quality management system standard for medical devices and in vitro diagnosis pharmaceuticals. NIPPON KAYAKU FOOD TECHNO, a Group company, obtained the ISO22000 certification for food safety management systems in October 2022. The Agrochemicals Group's Kashima Plant and Agrochemicals Laboratories began integrated operation of a quality management system in March 2021, and obtained ISO9001 integrated certification in August 2021.

> [Business Sites with Quality Management System Certification](#)

Quality Audits

The Nippon Kayaku Group has formed an audit team consisting of Quality Management Division members, who regularly conduct quality audits.

Quality audits is used to confirm that proposals for improving the level of quality assurance and quality management systems are functioning effectively and efficiently at domestic business sites and overseas Group companies. It supports the implementation of quality management and the enhancement of governance for the whole Nippon Kayaku Group.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Quality and Customer Safety		<ul style="list-style-type: none"> Enhance our quality control and quality assurance systems by continuously improving our quality management system and ensuring thorough quality-related governance Implement quality management, improve production efficiency and reduce process abnormalities through digitalization 	Number of serious complaints by customers*	0	1	<ul style="list-style-type: none"> In FY2020 and FY2021 web conferencing systems and similar solutions were used for most activities including quality audits, quality education and training, and quality improvement activities due to the COVID-19 pandemic, but practical activities have now resumed In terms of educational activities to improve quality assurance and quality, to coincide with the start of KV25, we created a Quality Mandalat that forms the basis for the systematic implementation of various quality-related education
			Number of serious quality process abnormalities in processes*	0	1	

* Losses of 10 million yen or more

Initiatives

Promotion of Quality Assurance and Quality Improvement Activities

In the Nippon Kayaku Group, the Technology Unit, Quality Management Division play a central role in quality assurance and quality improvement activities. To guarantee stable quality, we work to strengthen our technical capabilities for quality management, and are engaged in quality audits, quality education and training, and quality improvement activities with the aim of reducing customer complaints and quality process abnormalities.

In 1948, factory engineers at Nippon Kayaku began to voluntarily consider statistical methods as quality control activities. It was as a result of the active continuation of those activities that they were able to win the Deming Prize in 1963. This spirit of quality improvement has been passed down to this day. Not only in Japan, but also at overseas Group companies, efforts in quality improvement activities led by on-site engineers as the A3 Activities (KAIZEN) Presentation Conference have led to the achievement of various results. The in-house quality education textbook "Quality Management for Everyone"-from around the time of receiving the Deming Prize-has also been brushed up into a modern version, and is being used as one of the Group's education and training materials.

◆ Initiatives in Each Business Unit

In addition to the educational programs provided by the Quality Management Division, each of the Nippon Kayaku Group's business units are implementing various quality assurance activities tailored to each industry and business type.

Mobility & Imaging Business Unit Global Quality Control

The Safety Systems Group supplies automotive safety components to customers around the world, for which it needs to provide and guarantee a consistent standard of quality. The Safety Systems Group has global manufacturing bases, and the Quality Control Department at Himeji Plant-its mother plant-works together with each site as a leader to provide technical support and other support.

The Production Division, Global Quality Assurance Department works to enhance global governance and engages in quality improvement activities toward achieving globally unified quality.



Trainees from Malaysia and members of Himeji Plant's Quality Control Department

Quality Improvement Activities with Suppliers

Continuous quality improvement based on trusting relationships with suppliers is indispensable to promptly provide high-quality products to the market.

In the Safety Systems Business, the Quality Control Department conducts process audits, quality status checks, and quality education such as advice for quality improvement at the stage of selecting new suppliers.

The Nippon Kayaku Group Quality Manual is also sent to all suppliers, and all suppliers submit receipts for their consent to the manual's contents.

The Planning & Purchasing Department conducts regular audits of suppliers depending on the type and importance of procured products. Through regular audits, they check the Nippon Kayaku Group's basic approach to quality assurance and quality management standards, check the quality status of suppliers, and provide advice on quality improvement.

In FY2022, the department conducted regular audits of seven major suppliers (two on-site audits and five document-based audits using check sheets). As a result of these regular audits, there were no cases that led to serious quality problems. With regard to audit findings, we have asked our suppliers to submit a document detailing their process and product audit improvement plan and response measures, and confirm that issues had been rectified.

Continuous communication with suppliers is important in order to maintain and improve quality. We will continue to exchange opinions regularly and work together with our suppliers to maintain and improve quality.

Fine Chemicals Business Unit

Initiatives to Prevent Quality Fraud and Data Falsification

The Fine Chemicals Business Unit has established a Quality Assurance Division that is independent from the business unit itself, and has three domestic plants (Fukuyama Plant, Asa Plant, and Tokyo Plant) that support its three businesses (Functional Materials, Color Materials, and Catalysts) and carry out quality control and quality assurance for each product. We are also working to strengthen the business unit's quality assurance system in cooperation with the Quality Management Division, which oversees quality control in each of the Group's business units. As an initiative to prevent quality fraud and data falsification, we have assigned a representative on-site organization of the Quality Assurance Division to each plant to play a role in enhancing governance on site. At the same time, we are working to implement quality patrols and foster a quality-oriented work culture in cooperation with the plant quality control departments. At Fukuyama Plant and Asa Plant, as of 2021, we have already introduced a system that reduces human intervention in product inspection data processing as much as possible, aiming to improve data integrity (LIMS: Laboratory Information Management System = contributing to the prevention of quality fraud such as automatic recording of inspections).

We will continue to pursue improvements and aim for a quality assurance system that is trusted by both customers and society.

Life Science Business Unit

Medical Information Service Center and Securing Customer Trust

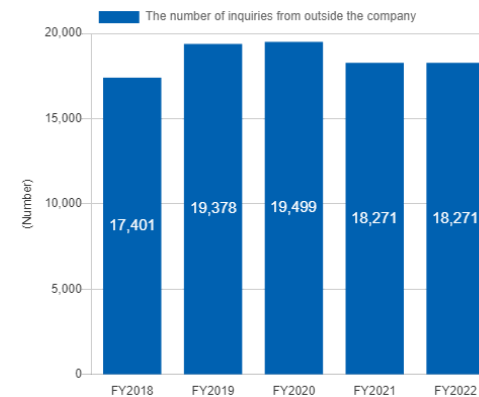
The Medical Information Service Center accepts toll-free calls from patients and medical professionals with various questions relating to our pharmaceuticals and medical devices, such as anti-cancer drugs, treatments for autoimmune diseases and intravascular embolic materials. The number of telephone inquiries received in FY2022 was 18,271. Staff at the Medical Information Service Center work diligently to provide accurate responses to each inquiry to ensure that all of the products supplied by Nippon Kayaku will perform at highest possible level. We also conduct surveys to check whether our responses meet the expectations of customers as part of our continual improvement initiatives.



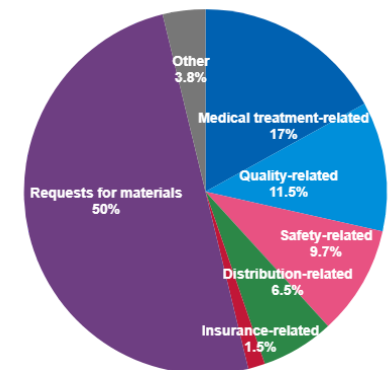
Medical Information Service Center

Additionally, staff work with medical representatives (MRs) that visit medical facilities to ensure they can provide information that is beneficial to patients, while customer requests and opinions are communicated and reported to each relevant department in charge within the Company. The Medical Information Service Center is committed to improving medical care under the slogan, "Provide proper usage information and improve customer satisfaction in all situations."

Change in the Number of Inquiries from Outside the Company



Inquiry Content Type Classification



Information for Patients and their Families

[IBD-INFO \(Japanese\)](#)



[RHEUMATISM RA-RA-RA \(Japanese\)](#)



[Breast Cancer Info Navi \(Japanese\)](#)



TOPICS: Introduction of RPA

In the manufacture and sale of pharmaceuticals, etc., the Pharmaceuticals Business, is required to report information such as drug side effects to the Ministry of Health, Labour and Welfare (MHLW) in accordance with the Pharmaceuticals and Medical Devices Act (the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices.) In recent years, the amount of information has increased significantly, partly due to a remarkable increase in information from overseas. At the same time, information on side effects is required to be reported within a statutory deadline period, and there is a risk that even a single mistake can lead to a delay in reporting. Persons in charge of these business processes, who manually received the collected information, were therefore required to put in a lot of effort to process and confirm the information, because it was not possible to make any mistakes, along with increase in the amount of information to be processed. In order to improve this situation, we have automated the receipt of overseas information by email by introducing RPA*. By entrusting RPA with the processes of determining the date on which information was obtained and actually receiving information, it has become possible to complete this work accurately, in a short period of time. This improvement has also led to improvements in work quality, such as improved work efficiency and acquisition of new skills. Currently, we are considering and implementing automation for various business processes, driving further improvements in quality.



* RPA (Robotic Process Automation): Automation of business processes by robots.

Quality Education for Suppliers

The Agrochemicals Group maintains and improves the quality of its contract manufactured products by conducting regular audits and close dialog with domestic and overseas manufacturing contractors. Audits are conducted in collaboration with our Quality Assurance and Technical Departments, as well as the Research Department as needed. We conduct surveys based on manufacturing contractor questionnaires regarding compliance with laws and regulations, quality assurance systems, quality control and manufacturing processes, etc. After identifying items with low self-evaluation scores in advance, we then attempt to confirm them on-site wherever possible. In the case of manufacturing contractors that have had abnormalities or nonconformities in the past, we confirm that sufficient measures have been taken to prevent the recurrence of such abnormalities, and take steps to prevent similar abnormalities from occurring in the future by applying the same measures with regard to other manufacturing contractors. If an audit finds that the efforts for improvement are insufficient, a request for improvement is issued, requesting that corrective measures are taken promptly. We will continue striving to improve the quality of our products and customer satisfaction, support the supply of food to consumers, and contribute to the development of sustainable agriculture.

◆ Quality Education and Training Activities

In order to clarify the issues required for quality assurance and quality improvement activities, the Quality Management Division organizes quality education focused around the **KAYAKU spirit**-our corporate vision-as the center of our Quality Mandalat, and systematically implements quality education in line with this concept.

The Quality Mandalat is further subdivided into eight other sections, and the knowledge and skills necessary to solve the issues of A through H in the table and realize the ideal vision are defined accordingly. In quality education in accordance with this, in order to enable R&D and factory personnel in each business field to take classes efficiently and effectively, we have devised various training methods using both online and offline approaches in addition to group training, training utilizing a web conferencing system which does not involve the movement of participants, and a hybrid method in which instructors are dispatched to each business site and lectures are streamed simultaneously to multiple business sites. After education and training, we conduct questionnaire-based surveys and gain feedback on the quality and quantity of course content, which also leads to further improvement.

(KAYAKU spirit: Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences.)

A Stable supply	B Driving digitalization	C Good communication
D Increasing quality awareness	KAYAKU spirit	E Continuous improvement
F Rational management of facilities and equipment / components	G Rational implementation of process design and process control	H Rational risk control

Quality Mandalat

Sample of the Training Content

- Field Data Analysis -Fun Hands-On Learning School-
- Internal quality auditor training
- "Why? Why? Analysis" training
- Human error response measure training

We also provide quality education for all executives and employees through e-learning based on the in-house quality education textbook, Quality Control for Everyone. The attendance rate has remained high, with an average attendance rate of 97% for FY2019 through FY2022. Each and every Group employee is working hard every day to improve quality awareness.

Attendance of Common Education for All Executives and Employees (in Japan)

Name of training program	Main themes covered	Main target	Training period	Training format	Number of sessions	Average attendance rate
Quality control for everyone	Basic knowledge of quality control, quality standards and inspection standards, response measures when problems occur, etc.	All executives and employees	2019-2022	e-Learning	20 times	97%

◆ Quality Improvement Activities

The Nippon Kayaku Group has adopted a method called "Why? Why? Analysis," with the aim of investigating the causes of quality process abnormalities and customer complaints, effectively preventing repeat occurrences by working together as a united workplace, and formulating appropriate response measures. In 2014, in order to make more active use of Why? Why? Analysis, we formed promotion teams from each plant and created a Why? Why? Analysis Manual, which we are prevailing to each workplace. So far, we have repeatedly revised the manual and created foreign language versions so that it can be distributed to overseas Group companies, and are conducting training sessions which are useful in revitalizing improvement activities in workplaces both in Japan and overseas.



[Important Issues] Occupational Health and Safety in the Workplace, Health and Productivity Management

Policy and Basic Approach

The Nippon Kayaku Group is promoting a range of health and safety activities to allow employees to work healthfully and safely and maximum their capabilities based on the Group's Responsible Care Policy.

Under the vision of zero serious accidents/casualties, we are implementing activities, bolstering 30-second patrols and promoting fixed-point observation which were chosen as key issues of Responsible Care. As its corporate responsibility, the Nippon Kayaku Group is working for zero accidents and injuries and securing the safety and security of its employees.

In addition, the physical and mental health of employees leads to the vitality and improved productivity of the organization. They are indispensable in the improvement of the satisfaction of stakeholders. We are implementing not only measures to prevent exposure to the chemical substances that we handle at work but also mental healthcare and lifestyle modification activities, etc.

Giving first priority to safety, the Nippon Kayaku Group will continue to conduct occupational health and health enhancement activities toward the achievement of our Medium-term Business Plan, **KAYAKU Vision 2025 (KV25)**.

➤ [The Declaration on Environment, Health and Safety, and Quality](#)

Responsible Care in the Nippon Kayaku Group

Nippon Kayaku Group Annual Responsible Care Policy

(Items related to Occupational Health and Safety and Health and Productivity Management)

◆ Targets

- Serious accidents / disasters: zero
- Serious environmental accidents / disasters: zero
- Serious traffic accidents: zero

◆ 1. Key issues in Responsible Care

- Bolstering 30-second patrols and implementing fixed-point observation

◆ 2. Initiatives aimed at achieving zero accidents and disasters

- Diagnostic methods with an emphasis on risk assessments
- Fixed-point observations tailored to the characteristics of each business location
- Strengthening measures to prevent heat stroke

◆ 3. Improvement of occupational health and safety in the workplace

- Appropriate response to the revised Industrial Safety and Health Act
- Identifying and following up on high-stress workplaces through stress checks and organizational analysis
- Appropriate operation of a health checkup results database
- Maintaining Health & Productivity Management Outstanding Organization Recognition Program

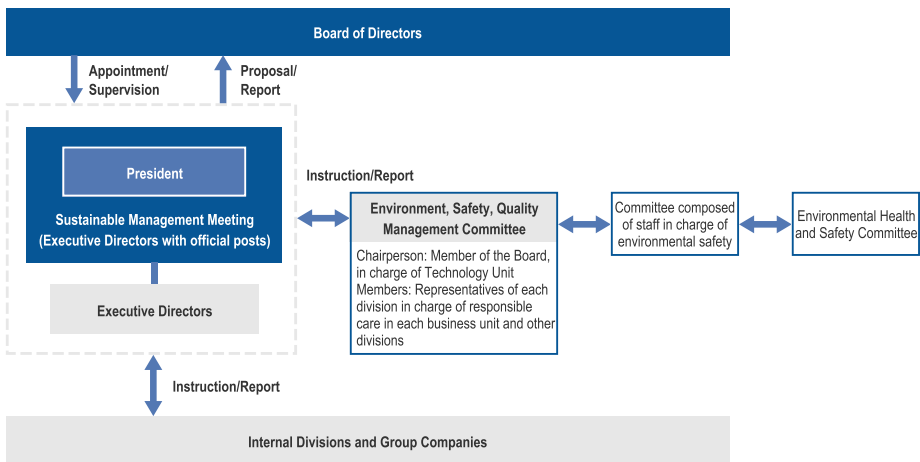
System

Based on "The Declaration on Environment, Health and Safety, and Quality", the Nippon Kayaku Group has established the "Environment, Safety, and Quality Management Committee," chaired by the executive director in charge of technology unit. Representatives of groups and related divisions also participate in the Environment, Safety, Quality Management Committee to discuss the formulation of the Responsible Care Policy and plan, the improvement of the occupational health and safety environment in the workplace, health enhancement activities, fire and disaster control, the creation of a comfortable workplace, etc. Key issues related to the occupational health and safety and the health and productivity management discussed by the Environment, Safety, Quality Management Committee are proposed and reported to the Board of Directors after approval at a Sustainable Management Meeting.

In association with the Environment, Safety, Quality Management Committee, we have a "Environment and Safety staff member committee". The committee is chaired by the Director of Environmental Protection & Safety Division. It is managed by the Environmental Protection & Safety Division. It is an administrative body which shares information and problems regarding the occupational health and safety management and health enhancement activities of the Nippon Kayaku Group and its sites and group companies and discusses key issues and problems of the entire Nippon Kayaku Group to achieve improvements for the Group, in cooperation with the Environment and Safety Department and the staff in charge of environmental safety at Nippon Kayaku's sites and Group companies.

The Environment, Health and Safety Committee of each site/group company meets once a month. They are joint labor and management organizations. At meetings of the Environment, Health and Safety Committees, both labor and management discuss the issues and problems at each site and the planning of solutions for the formation of a consensus.

In addition, Nippon Kayaku and the Nippon Kayaku Health Insurance Society have established the Collaborative Health Association, aiming to effectively and efficiently support the health maintenance and development of the employees and their families while collaborating and cooperating with each other, and the association exchange, reports, reviews, etc. information regarding health enhancement.



Group Companies that Have Acquired ISO45001 Certification

The Nippon Kayaku Group's consolidated subsidiary, Kayaku Safety Systems (Huzhou) Co., Ltd. has acquired ISO45001 certification, an international standard for occupational health and safety management systems. The certified rate in the applicable organizations in FY2022 is 5%. Please note that sites that have not acquired the certification also have an occupational health and safety management system on the same level as the ISO45001 standard.

Sites that Have Acquired the ISO45001 Occupational Health and Safety Management System Certification

Site	Acquisition date	Registered auditor	Certification No.
Kayaku Safety Systems (Huzhou)	January 2023	NQA	132021
Coverage*			5%

* Percentage of manufacturing facilities possessed by us and our consolidated subsidiaries that have acquired ISO45001 certification

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Occupational Health and Safety in the Workplace	 	<ul style="list-style-type: none"> Strengthen the foundation for safe operation by thoroughly enforcing basic rules on safety and health and improving equipment and work procedures Implement health and productivity management and provide a workplace environment with a healthy work-life balance where employees can work with enthusiasm 	Number of serious accidents*	0	0	<ul style="list-style-type: none"> No accidents requiring time off work occurred on a non-consolidated basis at Nippon Kayaku, including Group companies and affiliates within Nippon Kayaku business premises Continuously obtaining Health & Productivity Management Outstanding Organizations certification Promoted activities to maintain and advance employee health to maintain certification Mental health training ended in the third year of the three-year plan The percentage of employees undergoing health checks was maintained at 100%
			Acquisition of certifications under the Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category)	(Non-consolidated) Acquired certification for 2023 Certified Health & Productivity Management Organization Recognition Program (Large Enterprise category)		
			Percentage of employees who take mental health training	(Non-consolidated) 100%	(Non-consolidated) 100%	
			Percentage of employees receiving regular health checkups	(Non-consolidated) 100%	(Non-consolidated) 100%	

* Accidents involving three or more people requiring time off work, or resulting in fatalities

Initiatives

Occupational Health and Safety

◆ Occupational Accidents

In FY2022, there were no serious accidents, including fatal occupational accidents, at Nippon Kayaku or its domestic or overseas group companies or subcontracting companies. The frequency and severity of the accidents requiring time off work at Nippon Kayaku (non-consolidated) and the subcontracting companies of Nippon Kayaku (non-consolidated) are both 0. In FY2022, there were no violations of laws, rules, norms, etc. related to occupational health and safety.

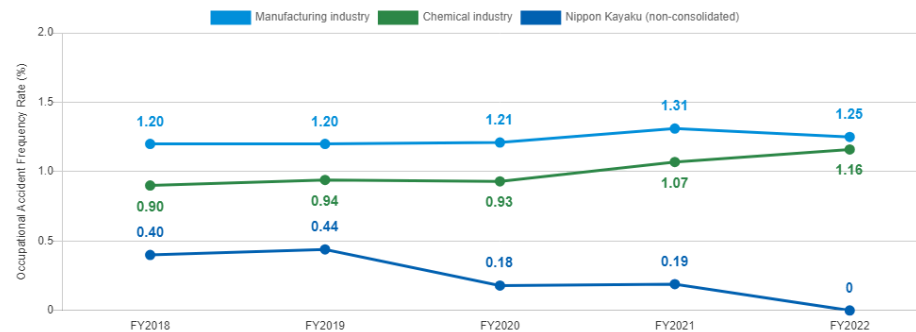
Number of Occupational Accidents

Indicators	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of fatal industrial accidents and serious accidents	Non-consolidated	Cases	0	0	0	0	0
	Non-consolidated, subcontracting companies	Persons	0	0	0	0	0
Number of industrial fatalities	Non-consolidated, subcontracting companies	Persons	0	0	0	0	0
	Domestic Group companies	Persons	0	0	0	1	0
	Domestic group companies and subcontracting companies	Persons	0	0	0	0	0
	Overseas group companies	Persons	1	0	0	0	0
	Overseas group companies and subcontracting companies	Persons	0	0	0	0	0
	Frequency rate of accidents requiring time off work	Non-consolidated	*1	0.43 (2 cases)	0.4 (2 cases)	0.18 (1 case)	0.19 (1 case)
	Non-consolidated, subcontracting companies	*1	4.47 (1 case)	0	0	0	0
Severity rate of accidents requiring time off work	Non-consolidated	*2	0.012	0.031	0	0	0
Number of violations of regulations and norms regarding occupational health and safety	Non-consolidated	Cases	0	0	0	0	0

*1 Number of industrial injuries per million cumulative actual working hours

*2 Cumulative number of lost working days for reasons of industrial injuries per thousand cumulative actual working hours

Occupational Accident Frequency Rates



◆ Audits

➤ [Responsible Care Audits](#)

◆ Occupational Health and Safety Initiatives for Achieving the Goals of Responsible Care

The results of the occupational health and safety initiatives for the FY2022 Responsible Care vision of the Nippon Kayaku Group are as follows.

Items	Target	Result	Evaluation
- Serious accidents / casualties	Zero	Zero	○
- Serious traffic accidents	Zero	Zero	○
1. Key issues in Responsible Care	Bolstering 30-second patrols and implementing fixed-point observation	We checked the situation of each site by Internal Audit (environmental health and safety diagnosis) and confirmed that, overall, they are promoting the initiatives.	○~△
2. Initiatives aimed at achieving zero accidents and disasters	Diagnostic methods with an emphasis on risk assessments	Implemented at Joetsu Plant, Kashima Plant, Himeji Plant, Fukuyama Plant, Asa Plant, Takasaki Plant and NIPPONKAYAKU FOOD TECHNO CO., LTD.	○
	Fixed-point observations tailored to the characteristics of each business location	A problem was found in the flow of the fixed-point observations according to some non-standard operation reports.	△
	Inspections and optimization of measures against heat stroke	The heat stroke countermeasure meetings, etc. were held in June to share and laterally share measures. *There was one heat-related illness accident that occurred.	○~△
3. Improvement of occupational health and safety in the workplace	Optimization of Responsible Care progress tables and visualization of activity status	We reviewed the Responsible Care progress tables at the beginning of the fiscal year and used them for the Internal Audit (environmental health and safety diagnosis).	○
	Compliance with changes in national chemical substance management policies (voluntary management through the RA of chemical substances)	We obtained information from the Japan Chemical Industry Association, etc. as required and organized issues and measures.	○
	Training and enhancement of disaster information communication systems	We implemented training using a safety confirmation system and emergency IP wireless devices	○

Evaluation criteria: ○ Achieved, ○~△ Mostly achieved

◆ Education and Training

The Nippon Kayaku Group provides health and safety training by position and rank based on the laws and regulations and the Responsible Care yearly plan. The health and safety training of the Nippon Kayaku Group covers a wide range of subjects, including acceptance training at move-in for new employees and employees who have been transferred at each site, pre-work safety training for employees who have been transferred between workplaces, safety training for new managers, training for forepeople implemented at each plant, training on chemical substances and their handling using chemical substance risk assessments, etc., and training on the basics of chemicals and laws and regulations.

Training is provided either online (e-learning or external lectures) or offline (group training and on-site on the job training). By efficiently and effectively implementing training, we aim to improve employees' awareness of health and safety.

Main Safety Training in FY2022

Name of training program	Main themes covered	Main target	FY	Training format	Frequency (times)	Number of attendees
New employee training*	Basic safety management rules	New employee	2022	Group training	1	46
Newly appointed manager training*	<ul style="list-style-type: none"> Safety management focusing on the obligation to protect safety at the workplace What the managers should know in the Nippon Kayaku Responsible Care activities The Nippon Kayaku Group's environment and climate change initiatives 	Newly appointed managers	2022	Group training	2	57

* Held annually

◆ Initiatives for Occupational Health and Safety in Cooperation with the Labor Union

> [Comfortable Workplace Environment \(Labor-Management Relations\)](#)

Health and Productivity Management

◆ Health Initiatives for the Responsible Care Vision

The results of the health initiatives for the FY2022 Responsible Care vision within the Nippon Kayaku Group are as follows.

Item	Target	Result	Evaluation
3. Improvement of occupational health and safety in the workplace	Compliance with changes in national chemical substance management policies (voluntary management through the RA of chemical substances)	Compliance with changes in national chemical substance management policies (voluntary management through the RA of chemical substances)	○
	Identifying and following up on high-stress workplaces through stress checks and organizational analysis	Implementing stress check and organization analysis according to the yearly plan	○
	Establishing a management system by creating a database of health check results (due to commence operation this fiscal year)	System construction is completed	△
	Continuously obtaining Health & Productivity Management Outstanding Organizations certification	2023 Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category) A future task is to implement a PDCA cycle using analyses of the health checkup results	○

* Evaluation criteria: ○ Achieved, △ Partially not achieved

◆ Physical Health

The Nippon Kayaku Group requires all employees to undergo regular health checkups as the basis for its health and productivity management. Employees receive advice and instructions from the industrial physician depending upon the results. Moreover, for employees who work with specified chemical substances, we offer opportunities for special health checkups. We also have a database of information about the hazardousness of chemical substances handled by us, based on which we carry out risk assessments to prevent incidents and avoid damage to employees' health. In addition, at each business site, we are promoting THP* for employees' mental and physical health, aiming to help employees review their lifestyle habits and promote their health in a continuous and planned manner in order to lead even healthier lives. We also hold events such as a physical fitness test, a health management competition, a walking rally and hiking events for employees.

* THP stands for Total Health promotion Plan for the execution of a PDCA cycle that includes the formulation of a health promotion plan, health testing, health instructions, health promotion based on the instructions, and the improvement of lifestyle habits and revitalization of the workplace.

Percentage of Employees Receiving Regular Health Checkups

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Percentage of employees receiving regular health checkups*	Non-consolidated	%	100	100	100	100	100

* Excluding employees on temporary leave

◆ Mental Health

To both improve operational productivity and create added value, it is absolutely necessary to have a working environment where employees can work actively and maintain their physical and mental health.

In 2005, Nippon Kayaku announced its Declaration to Introduce a Mental Healthcare System under the name of the president, and has thoroughly instructed its managers on the declaration. For mental healthcare, it is important for all employees to continue to acquire accurate information and for the Company to be able to identify those who may be struggling with mental illness at work in order to help them at an early stage. We are therefore focusing on implementing health promotion measures by giving priority to the prevention of mental illness.

We started to provide mental health training in FY2005 by inviting speakers from an EAP* provider to give lectures. Since FY2006, we have been implementing a three-year plan for all employees to receive the training. Although we canceled group training due to COVID-19 and instead provided an e-learning seminar on self-care to all employees to help them deal with the changes in their environment caused by the COVID-19 pandemic and other factors in FY2020 and FY2021, we provided group training in a face-to-face lecture paying careful attention to prevent the spread of the infection.

For those who take leave due to mental illness, we offer a reinstatement program to support their smooth return to work and prevent a relapse based on collaboration between their managers and the industrial physician and counsellor in charge.

We launched the mandatory stress check program to be implemented on an annual basis in FY2015 in line with the Industrial Safety and Health Act, and over 97% of the employees participate in the check program every year (97.9% of employees took the stress check in FY2022). The results of the stress check are used to understand the stress conditions of individuals and understand and follow-up on high-stress workplaces by analyzing each organization as well.

* EAP: Employee Assistance Program

Mental Health-related Data

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Percentage of employees undergoing a stress check*	Non-consolidated	%	97.5	97.3	97.2	98.1	97.9
Percentage of employees with high stress levels	Non-consolidated	%	10.0	9.6	9.5	10.6	10.0
Amount invested in mental health-related initiatives	Non-consolidated	Million yen	10.0	10.8	11.0	13.0	12.6

* Excluding employees on temporary leave

◆ Measures for Sites without Statutory Industrial Physicians

For health management at our business sites where the appointment of an industrial physician was not required by law*, employees at these sites were unable to be interviewed by industrial physicians after undergoing their statutory health checkups or the screening for adult-onset diseases provided by Nippon Kayaku's health insurance association. In FY2013, we began to conduct examinations for these business sites and decided to send industrial physicians from the Head Office to interview employees at the sites as required.

In FY2014, industrial physicians from the Head Office began to visit these sites across Japan once a year according to a predefined schedule. We also make use of an online conference system for the interviews.

* Business sites where the appointment of an industrial physician is not required by law: As provided for in Article 13 of the Industrial Safety and Health Act and in Article 5 of the Order for Enforcement of Industrial Safety and Health Act, sites with less than 50 employees are not required to appoint an industrial physician.



◆ Health Management Competition Held

Nippon Kayaku and some group companies have held a companywide health management competition since FY2018 to implement health enhancement promotion activities for employees. In FY2022, 2,422 people participated in it across the entire Nippon Kayaku Group (participation rate: 68.6%).

The companywide health management competition is implemented in March every year. The employees record their daily health activities for a month, which are then scored and summarized by the Environment and Safety Department of each site and group company. After that, the results are tallied and analyzed at Environmental Protection & Safety Division. The initiative's themes cover a wide range of activities, including exercise in the morning and at noon, a regular diet, tooth brushing, sleeping, number of steps taken as well as leisure and sports. Not only individuals but also teams are recruited to participate in the initiative.

We will continue to support the employees to maintain and improve their health through the companywide health management competition.

Health Management Competition Participants and Participation Rate

		Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Nippon Kayaku	Participants	Persons	937	1,349	1,566	1,976	2,105
	Participation rate	%	34.8	49.5	51.4	65.1	69.2
Group companies	Participants	Persons	9	280	263	82	317
	Participation rate	%	6.6	32.5	57.0	32.4	65.0
Entire Nippon Kayaku group	Participants	Persons	946	1,629	1,829	2,058	2,422
	Participation rate	%	33.4	45.4	52.1	62.6	68.6

◆ External Recognition

Nippon Kayaku has been recognized by the Ministry of Economy, Trade and Industry (METI) and Nippon Kenko Kaigi as a company that views employee health management from a business perspective and strategically works to improve it and acquired certifications under the 2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category).*

To maintain and enhance employees' health, Nippon Kayaku has been pursuing a number of initiatives. For example, we are keeping the percentage of employees who undergo regular health check-ups at 100% and providing stress check and mental health training. We received the certification in recognition of our having extracted issues from the initiatives for health enhancement and taken many measures to address them within a wide range, such as initiatives for improving health checkup results, countermeasures against exposure to environmental tobacco smoke, and health development events for all employees, while considering COVID-19 pandemic countermeasures.

Nippon Kayaku considers the enhancement of employee health as necessary for the prosperity for the company and the improvement of stakeholders' satisfaction and it will continue to actively work on health and productivity management.



* Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category): Certified organizations in the large enterprise category targeting on large-scale enterprises and medical corporations in the certification program "Certified Health & Productivity Management Outstanding Organizations Recognition Program" established by the Ministry of Economy, Trade and Industry in 2016.

Comfortable Workplace Environment

Policy and Basic Approach

> [Internal Environment Improvement Policy](#)

System

Ensuring Compliance to Labor Standards

Nippon Kayaku includes items related to labor conditions such as wages/bonus remuneration, working hours and holidays, occupational health and safety, welfare facilities and systems and service in the required training when new employees are hired by the company. These items related to labor conditions are always available on the internal intranet, etc., allowing employees to view them at any time. In addition, the people in charge of personnel labor, etc. meet regularly to share information and enable the training of employees conducted via a person in charge of personnel at each site. Through these initiatives, we are thoroughly increasing employees' awareness of labor standards.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Occupational Health and Safety in the Workplace	 	<ul style="list-style-type: none"> Strengthen the foundation for safe operation by thoroughly enforcing basic rules on safety and health and improving equipment and work procedures Implement health and productivity management and provide a workplace environment with a healthy work-life balance where employees can work with enthusiasm 	Percentage of paid leave taken	(Non-consolidated) 70% or higher	(Non-consolidated) 63.7%	<ul style="list-style-type: none"> We failed to reach the target percentage of employees taking paid leave, but as previously, we continued to implement awareness raising activities via the Company intranet, had human resources and labor personnel call on employees to take paid leave at each workplace, set days on which employees are recommended to take paid leave, and implemented other measures We started conducting engagement surveys and conducting interviews with companies that conduct surveys to determine the level of health & productivity management. Full-scale adoption is planned for the following fiscal year.
			Ascertaining and improving employee satisfaction through questionnaire surveys	(Non-consolidated) Disclose progress	-	

Initiatives

Promoting a Healthy Work-life Balance

Nippon Kayaku is working to promote next-generation workers and further women's empowerment and the introduction of various systems and measures with the goals of enabling employees to balance their job with childcare and nursing care, improving the productivity of individuals, maximizing their capabilities, and realizing workplaces filled with motivated employees.

We have also established the Anniversary Leave System with a vision for continuing to improve paid leave with the goal of enriching employees' work-life balance and we are committed to the creation of a work environment that makes it easy to take paid leave.

◆ Action Plan on Measures to Support Raising Next-generation Children (plan period: April 1, 2022 to March 31, 2025)

> [Action plan \(4th: FY2022 to FY2024\) \(Japanese\)](#)

> [Status of progress \(FY2022\) \(Japanese\)](#)

◆ Various Systems for Promoting a Healthy Work-life Balance

Name of system	Details
Flextime	Introduced at the head office and some research laboratories.
Childcare leave	Can be taken until the child is two years old when certain requirements are satisfied.
Childcare support leave	Both men and women can take a special paid 10-day childcare leave.
Child nursing care leave	Employees can take a 10-day (five days for medical checkups and immunization) paid leave to care for their children who are preschool age and younger. It is possible to take this leave in half-day leaves.
Anniversary leave	A maximum of three days of paid leave can be taken annually for the birthdays of the employees and their relatives living together and their children's entrance ceremonies, commencement ceremonies and class observation days.
Caregiving leave	Up to a year of leave can be taken for each family member.
Short working hour system	When caring for children in the sixth grade of elementary school or younger, the predefined working hours can be shortened by up to two hours in increments of 30 minutes. When providing nursing care to family members, the work hours can be shortened up to three hours in increments of 30 minutes.
Working from home	Introduced at the head office, research laboratories and pharmaceutical sales positions.
Staggered work hours	With the start and closing times are predefined at a site and the predefined working hours for a day considered as standards, employees can move their start time forward or backward up to two hours in increments of 30 minutes.
Annual paid leave	It is also recommended to take incentive leave several times a year and three continuous days of leave in summer.
Half-day paid leave	Up to 30 half-days of leave can be taken annually.
Planned annual paid leave	Leave during the consecutive holidays in May that is set at the headquarters offices according to the labor-management agreement (about one to three days).
Annual paid leave in hourly increments	Up to three days (24 hours) of annual paid leave annually usable in hourly increments is currently in trial operation.
Special paid leave	Up to 60 days of annual paid leave that will expire can be saved and taken for specified reasons including non-workplace injuries or diseases affecting employees or their families, childcare and nursing care, child nursing care, volunteer activities, marrow donor activities and active-life-leave at an employee's 10th, 20th and 30th year at the company.

Paid Leave

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Average number of days of annual paid leave taken in a year	Non-consolidated	Days	11.3	11.1	12.2	11.1	12.0
Annual paid leave acquisition rate	Non-consolidated	%	61.1	60.1	65.8	59.8	63.7

Childcare

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Started maternity leave*1	Non-consolidated	Persons	8	13	13	11	22
Started childcare leave*1	Male	Persons	3	5	11	9	27
	Female	Persons	8	13	13	11	22
Percentage of employees taking childcare leave*2	Male	%	7.0	11.9	31.4	27.2	69.6
	Female	%	100	100	100	100	100
Percentage of employees who returned to work after maternity and childcare leave	Male	%	100	100	100	100	100
	Female	%	100	100	100	100	100
Retention rate after maternity and childcare leave	Male	%	100	100	100	100	100
	Female	%	100	100	100	100	100
Number of employees with shortened working hours to care for children	Male	Persons	2	2	0	1	2
	Female	Persons	26	31	43	42	48

*1 Excluding the employees who took leave spanning multiple fiscal years

*2 The percentage in 2022 was calculated using the method in Percentage of employees taking childcare leave or leave for childcare purposes (Paragraph 4, Item 2, Article 71)

Nursing Care

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of employees taking caregiving leave	Non-consolidated	Persons	1	1	0	0	0
Number of users of the caregiving leave system	Non-consolidated	Persons	1	1	1	0	2

◆ Appropriate Working Hours

Nippon Kayaku is working on establishing an appropriate understanding of working hours and preventing long working hours. More specifically, we have established a Working Hours Management Committee consisting of labor and management to investigate the actual working hours management situation and ask each site to submit a report on the related measures and their implementation status twice a year to check the details of the management of working hours.

In addition, the committee provides training to management supervisors and people in charge of personnel labor and holds study meetings hosted by both labor and management.

Furthermore, it is implementing a range of initiatives that go beyond compliance with laws and regulations such as the appropriate implementation of entrance/exit management, objective record management and overtime work management that also targets management supervisors.

Work Hours

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Annual work hours per employee	Non-consolidated	Hours	1,919	1,911	1,885	1,911	1,875
Monthly average overtime hours	Non-consolidated	Hours	13.3	12.7	11.3	12.7	13.6

Wage Management

Nippon Kayaku established a rule clearly stating its intolerance of discrimination based on differences in gender, age, nationality, race, religion, disability, place of origin, ancestry, creed, political views, marital status, employment status or other differences in the Nippon Kayaku Group Human Rights Policy. Also through our personnel wage system, we apply a uniform remuneration system that does not discriminate based on gender. We are also paying appropriate wages in compliance with laws and regulations regarding floor wages, overtime wages and equal pay for equal work.

Salary

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Average annual salary	Male	Non-consolidated Thousand yen	7,862	7,526	7,423	7,683	8,003
	Female	Non-consolidated Thousand yen	6,155	6,119	6,133	6,366	6,707
	Overall	Non-consolidated Thousand yen	7,577	7,307	7,224	7,477	7,801

Labor-management Relations

Nippon Kayaku Co., Ltd. and Nippon Kayaku labor union have been maintaining sound relations based on mutual trust between management and labor since the conclusion of a new labor agreement in 1998. Because Nippon Kayaku has a union shop system, with the exception of certain managerial and contract employees, all employees are members of the labor union.

The company's policy regarding their discussions is to be candid while disclosing as much information as possible and sincerely respond to them. Also, the Central-Management-Labor Liaison Committee meets three times a year, at which time the executive team directly communicates the company's management policies and health and safety policies, etc. with the labor union. A central management roundtable is held monthly to deepen mutual understanding, share information about the status of the company and discuss how to solve problems.

Also, we are making efforts to promptly communicate the details and outcome of these labor-management discussions to employees at each division.

At the same time, with respect to issues faced by individual sites, we hold yearly Site-Management-Labor Liaison Committee and monthly business site management roundtables to obtain a shared recognition through discussions and opinion exchanges and to bring about a labor environment where employees can work in comfort.

Record of the Management-Labor Liaison Committee Meetings Held

Conference name	Details	Number of meetings held in FY2022	Attendees
Central-management-labor Liaison Committee	The company's officers explain the company's business policies, business strategies, and environment, health and safety policies, etc. to the members of the labor union and discuss issues to solve problems.	3	Company: executives, managers of related divisions, Human Resources Division Labor union: Group executives, all heads of branch offices
Site-management-labor Liaison Committee	The company explains the policies and business plan, etc. of the sites to the labor union and discusses issues to solve problems.	Once	Company: Executive teams of the sites (Plant Manager, General Manager of Corporate Controlling Department, General Manager of Manufacturing Department, General Manager of Engineering Department, etc.) Labor union: Executive committee members of branch offices
Central Management Roundtable	The company explains items related to its business plan, new businesses, management status, and statuses of production, sales, and research, and improvement of production technologies, staff plan, etc. to the executives of the labor union.	12	Company: Officer in charge of Human Resources Division, Human Resources Division Labor union: Executives of the sectors
Business Site Management Roundtable	The company explains items related to its business plan, new businesses, management status, and statuses of production, sales, and research, and improvement of production technologies, staff plan, etc. to the executives of the labor union.	12	Company: Executive teams of the sites (Plant Manager, General Manager of Corporate Controlling Department, General Manager of Manufacturing Department, General Manager of Engineering Department, etc.) Labor union: Executive committee members of branch offices
Workstyle Advisory Committee	We exchange opinions about the management of working hours, support for raising next-generation children, women's empowerment, employment of older people, welfare facilities and systems, various leave systems, personnel system, human resource education, childcare and nursing care and discuss issues to solve problems	7	Three people from the company, three people from the labor union

◆ Initiatives for Occupational Health and Safety in Cooperation with the Labor Union

As part of our internal audits, we conduct environmental, safety and health audits of each Nippon Kayaku business site and some group companies based on an annual plan. In principle, the headquarters of the labor union and the labor union branches of the sites and group companies that participate in the audits participate in the environment, safety and health audits.

In the environment, health and safety audits, an audit team mainly consisting of the Environmental Protection & Safety Division people in charge of environmental safety, and the labor union check the progress against the Responsible Care Policy and Plan and activity results through meetings, documents or on-site patrols. The labor union also points out problems from their perspective, and labor and management work together to improve health and safety.

In FY2022, we implemented the environment, health and safety audits on site while paying careful attention to measures to prevent COVID-19 infections. We focused on checking the progress of Responsible Care activities using the Responsible Care progress checklist, potential dangers/risks to prevent the recurrence of past accidents based on investigations into their causes, and the status of the implementation of risk assessments in production processes.

We will continue to work on them with a high regard for the dialogue between labor and management, aiming to establish a working environment where employees can work in comfort in a good mental and physical health.

Welfare and Benefits Systems

Nippon Kayaku has introduced the following welfare and benefits systems to support lives of its employees.

Welfare and benefits systems	Details
Social insurance	Health insurance, employee pension schemes, care insurance, employment insurance and worker's accident insurance
Asset formation	Employees' savings scheme, employee shareholding association, restricted stocks incentive system
Human resources development	Overseas study program
Self-development	Assistance for obtaining qualifications
Pension	Defined-benefit corporate pension scheme
Housing	Dormitories and rented company housing
Childcare and nursing care	Leave systems, aid for buying nursery items and caregiving-related costs
Other	Cafeteria plan

Freedom of Association

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of employees who have joined the union^{*1}	Non-consolidated ^{*3}	Persons	1,762	1,871	1,753	1,695	1,687
Percentage of employees that are union members^{*2}	Non-consolidated ^{*3}	%	100	100	100	100	100

*1 Number of people as of March 31 of each fiscal year

*2 Number of union members/qualified people (except managerial employees and people specified in the agreement)

*3 Including some affiliated companies

[Important Issues] Maintaining and Expanding Employment, Developing Human Resources

Policy and Basic Approach

> [Human Resource Development Policy](#)

Our Approach on Diversity

In our approach, having a work climate that embraces diversity and different opinions and ideas is important for us to become a company capable of providing happiness and delight, under our **KAYAKU spirit** corporate vision. The Company accepts and respects everyone for their gender, age, nationality, race, religion, disability, ethnicity, skin color, culture, philosophy, creed, political views, sexual orientation and other attributes and places importance on the diversity of organizations. Also, the Company seeks to ensure diversity by giving all employees equal opportunities in terms of recruitment, promotion, treatment, education and other matters. Through these efforts, the Company secures human resources from many different backgrounds, encourages the acceptance of people's differences and facilitates uninhibited discussion to create a good and rewarding work climate and to enable employees to be more engaged.

System

In pursuit of the **KAYAKU spirit**, Nippon Kayaku has introduced and institutionalized a personnel system to ensure employees are assigned and treated without regard to differences in age, gender or academic background so that all employees, agents of the Company's activities, can be proud to fulfill their roles and responsibilities. Creating opportunities for diverse human resources to maximize their capabilities is necessary for a company to retain its competitive advantage. To this end, it is very important to ensure the diversity of the managerial-level people who are a company's core human resources supporting the executives. We have introduced a system to allow anyone, including women and employees hired mid-career, to voluntarily seek promotion to a managerial-level position. We will keep up the efforts to ensure that our core human resources are diverse.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for Initiatives
Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights		<ul style="list-style-type: none"> Promoting diversity and inclusion through the recruitment of diverse human resources, effective HR assignment and exchanges Pass down and strengthen technical capabilities in monozukuri (manufacturing) and achieve globalization in human resources through ongoing human resource development. 	Percentage of female employees in management posts*	(Non-consolidated) 10% or higher	(Non-consolidated) 9.0%	<ul style="list-style-type: none"> Lectures on self-directed career development delivered by female managers for human resources and labor personnel. Lectures delivered by female industrial physicians regarding the advancement of health specific for women. Considered holding training sessions for female employees Continued collaboration with special support schools as an initiative to employ people with disabilities Collected information about companies engaged in advanced initiatives to expand the job areas and increase employment of people with disabilities through tours and sessions to exchange opinions
			Percentage of employees with disabilities	(Non-consolidated) Achieve legal minimum employment rate	(Non-consolidated) 1.98%	
			Amount invested in education and training per employee	(Non-consolidated) Disclose results	(Non-consolidated) ¥83,002 / person	
			Training hours per employee	(Non-consolidated) Disclose results	(Non-consolidated) 14.9 hours	

* Targets for the end of FY2024

Initiatives

Training System

People make a company. The driving force of our manufacturing, through which we provide people around the world with value, is therefore our people. Having celebrated our 100th anniversary, we are working to develop human resources who will lead Nippon Kayaku in the next 100 years.

◆ Training Programs

Various training programs are provided to employees according to their job positions. These comprehensive training programs are conducted so as to develop the next generation of skilled workers who will lead Nippon Kayaku in the future.



Training

◆ Mandatory Programs

We offer mandatory training programs for new hires, employees who have completed their first and third years at the Company, those in their fifth year of service, and for mid-rank employees in accordance with their job types and positions. Through these programs we help employees take new steps forward by developing practical skills based on a recognition of the changes in their roles and competencies.

◆ Optional Programs

A wide array of voluntary training programs are also available. These voluntary programs are tailored to specific jobs and personal characteristics. The programs are intended to help trainees work on self-improvement by improving their business skills and troubleshooting abilities.

◆ Next-generation Manager Development Programs

With the goal of developing managers for the next generation, the program selects manager and senior executive candidates to lead future generations.

Education System Chart



◆ List of Training Programs Organized by the Human Resources Division (FY2022)

Mandatory Programs

Name	Details	Days	Number of attendees
New employee orientation	Introductory training for new graduate recruits Learn about internal rules, an outline of the business and business skills	10	46
Post-first-year training	Review problems and formulate an action plan for the employees to improve their business execution skills and autonomously pursue their careers	3	65
Third-year training	Formulate a career development plan for employees to improve their business execution skills and, as the core of an organization, continue to produce good results	3	64
Career presentation	Employees make a presentation about their career after joining the Company and engage in a lively discussion with colleagues including people who joined the Company the same year that they did	2	25
Fifth-year training	Employees learn how to become more independent and influential and make it work in their development of their careers in the future	2	27
Training to strengthen communication skills	Enhance communication skills which are necessary for mid-level employees to proactively proceed with work within an organization	3	14
Mid-rank employee training	Employees recognize the importance of independently working on their roles and changing as a mid-level employee and make it work in their career development in the future	4	53
Personnel training for employees who joined through year-round recruitment	Introductory training for mid-career recruits Learn about our internal rules and business outline	1	57

Optional Programs

Name	Details	Days	Number of attendees
Interpersonal skill seminar	Acquire skills to adapt your communication to the person you are talking with	2	15
Problem solving training	Learn the reasonable thinking process necessary for making proper judgment and solving problems	3	20
Marketing training	Learn the framework of marketing and analysis methods	2	18
Logical communication training	Improve information communication skills through logical thinking	2	17
Management simulations training	Understand management indices and learn the process of company management	3	10

Next-generation Manager Development Programs

Name	Details	Days	Number of attendees
Business leader development course	Cultivating entrepreneurial and innovative leaders who act while looking toward the near future	3	15
Newly appointed manager training: Part 1	Introduction training for newly appointed managers Learning their roles and required abilities and knowledge	2	35
Newly appointed manager training: Part 2	Introduction training for newly appointed managers Learning management communications	2	46
Nippon Kayaku Business Academy (implemented biennially)*	For next-generation management employee candidates Formulating management strategies with insight into the future through strategy and scenario planning, learning the skills required for corporate management, and fostering the minds of corporate managers	10	-
Senior manager candidates (implemented biennially)*	For future high-level manager candidates Learning leadership and business management skills, increasing management literacy, etc.	4	-

* Not held in FY2022

Human Resources Development

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Training hours per full-time employee	Non-consolidated	Hours	-	-	14	13	15
Total training hours	Non-consolidated	Hours	-	-	29,156	27,092	31,045
Amount of investment in education and training per full-time employee	Non-consolidated	Yen	87,195	76,122	35,706	66,606	83,002

Personnel Evaluation System

The basis of Nippon Kayaku's personnel evaluation system is the performance evaluation. For performance evaluations, all employees are assigned to a specific job in the beginning of a fiscal year in accordance with their roles and responsibilities. As they perform the job, they talk with superiors to decide their goals for the fiscal year and work to achieve the goals within a one-year period. Biannually, employees talk with their superiors about the degree of achievement of their goals during the fiscal year. Every time we enter a new fiscal year, employees meet with their supervisor to review their performance in the previous one-year period, determine their evaluation and set their vision for the coming fiscal year. The evaluation of an employee is reflected in their bonus remuneration.

Employee evaluations, excluding managerial-level employees, are divided into three categories: performance evaluation, challenge evaluation and process evaluation. Challenge evaluation involves the evaluation of the achievement of independently set goals while process evaluation evaluates the process of achieving the goals.

Enable the Company's growth to lead to individual growth, thereby aligning the Company's growth with each employee's self-fulfillment and evaluate processes as well as the achievement of goals. By doing so, the Company aims to increase employees' motivation to work and to enhance employee engagement.

Career Support

To facilitate the flexible adaptation to the dramatic changes in the business environment, Nippon Kayaku has introduced an in-house recruiting system with the goal of improving employee performance by putting the right people in the right positions through the matching of workplaces in need of more people with employees who are willing and skilled enough to work there.

Creating opportunities for motivated employees to take on challenges makes the employees more autonomous in their career pursuit and leads to the support of employees' careers and their greater engagement with work.

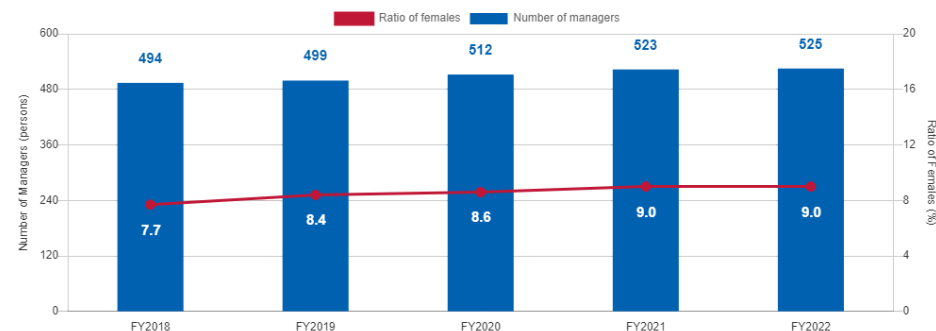
Supporting the Empowerment of Diverse Human Resources

◆ Promoting the Empowerment of Women

Proactive appointment of women to managerial positions is one aspect of the results of our initiatives to encourage diversity in the workplace. The ratio of our female managers increased to 9.0% as of the end of March 2023 (9.0% in previous year). The following target is to achieve 10% by the end of FY 2024. We will continue with our efforts to encourage the greater involvement of women in the workplace.



Percentage of Female Managers (*Nippon Kayaku non-consolidated basis; excluding seconded employees)



◆ Supporting Employees with Disabilities

Nippon Kayaku employs people with disabilities. As of the end of March 2023, 45 people with disabilities are working with us (1.98% of total employees). Since our society calls for the active employment of people with disabilities, the Company will continue to be committed to developing an environment that enables employees with disabilities to have job satisfaction, energetically demonstrate their capabilities and become involved in a greater scope of work, beyond the Company retaining a high employment rate above the legal minimum through efforts such as continuing the employment of people with intellectual impairments in cooperation with special support schools.

Percentage of Employees with Disabilities

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Percentage of employees with disabilities	Non-consolidated	%	1.82	1.97	1.90	1.99	1.98
(Legal minimum employment rate)		%	2.2	2.2	2.2	2.3	2.3

◆ Supporting Post-retirement Re-employed Workers (Senior Partners)

Since April 2006, we have been implementing the Nippon Kayaku Senior Partner System to provide retirees who are physically and mentally healthy and eager to continue working with an opportunity to demonstrate the expertise and know-how that they have accumulated over the course of their career after reaching the age of retirement. We ask applicants to the system about where they want to work, in what jobs and in what employment format, and almost 100% of applicants are reemployed in accordance with their preferences, with most of them continuing to work for the Company until they reach the age of 65.

Rehiring of Retired Employees

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Rehiring of retired employees	Non-consolidated	Persons	42	61	42	22	29
Rehiring rate of retired employees	Non-consolidated	%	82.3	89.7	95.4	84.6	85.2

◆ Exchange of Global Human Resources

As one of the policy to promote diversity, we are working to build the environment all of staff belong to Nippon Kayaku Group be able to lead an active career in globalizing world. As a part of its global human resource development program, the Company seeks to develop human resources with global perspectives by helping them improve their linguistic skills and increase their adaptability to different cultures. Example initiatives in this program include training programs, overseas language learning programs and others opportunities designed to improve young employees' linguistic skills and strengthen mid-level employees' skills in global business development. In addition to the training programs, we will keep making efforts to develop global talent by means of promoting personal interactions between our bases in Japan and overseas Group companies and enhancing our support to allow employees to experience various cultures and business environments.

◆ Initiatives at Each Business Site

Mobility & Imaging Business Unit

Visit by KMY Trainees

On January 9, 2023, four trainees from Kayaku Safety Systems Malaysia Sdn. Bhd. (KMY) visited our Himeji Plant. They spent two weeks at the Facility Department and five weeks at the Manufacturing Department acquiring skills. Currently, our cylinder-type inflators are manufactured at the Himeji Plant. We will make a capital investment in, and technological transfer to, a manufacturing hub in Malaysia and will establish a global supply system to include markets with potential demand in our targets. We put a lot of effort into human resource development and the trainees' visit was meaningful.



Establishment of "DOJO" Education

Since FY2018, the Safety Systems Group has educated and trained employees at the training hall inside the Himeji Plant.

At the DOJO facilities, safety and quality rules (Do's) and prohibited actions (Don'ts) are indicated in an easy-to-understand manner. Moreover, the facilities are equipped with necessary devices to provide employees with hands-on education on static electricity and others.

Also, experienced employees serve as instructors to help on-site supervisors (mid-rank employees) in the Members of the Group improve their skills by learning about the products, processes and past problems. The plant also collaborates with the DOJO of the overseas subsidiaries belonging to the Safety Systems Group to improve the level of the entire Group.



Third Round of the COE Program

"Change from Operator to Employee (COE)" Program

Following the launch of the COE education program at Kayaku Safety Systems de Mexico, four employees completed the first round of the program implemented from 2014 to 2017 and another four finished the second round carried out from 2017 to 2019.

COE is a program for educating and training operators (daily paid employees) and developing them into full-time (monthly paid) employees and is aimed at motivating operators, decrease the turnover rate and develop employees who will contribute to the Company for many years.



Having started in 2020, the third round was initially scheduled to be completed in September 2021. Despite a schedule change due to the COVID-19 pandemic, the eleven participants are learning about leaderships skills, teamwork and troubleshooting and will complete the education program in August 2023.



Data

> [Employees](#)

[Important Issues] Respect for Human Rights

Message from the Executive Director in charge

Human rights are essential for the pursuit of happiness and prosperity of life for all, and we believe that fundamental human rights should be protected with the highest priority. The Nippon Kayaku Group aims to bring happiness and delight to everyone involved with it. In conducting its business activities around the globe, the Group believes that consideration for human rights in accordance with international standards is the foundation of sustainable management. The Group has clearly listed respect for human rights in its Charter of Conduct and Code of Conduct, and engages in initiatives to ensure respect for human rights. In 2021 we signed the United Nations Global Compact (UNGC) and declared our participation in it. In 2022 we established the Nippon Kayaku Group Human Rights Policy with the aim of further promoting initiatives to ensure respect human rights throughout the Group. Going forward, we will continue to fulfill our responsibilities to respect human rights in all of our corporate activities.



Tomoo Shibuya
Member of the Board
Representative Executive Vice President

Policy and Basic Approach

Nippon Kayaku Group Human Rights Policy

The Nippon Kayaku Group recognizes its responsibility to protect the human rights of all people affected by its business activities.

To that end, the Nippon Kayaku Group hereby establishes the Nippon Kayaku Group Human Rights Policy (the "Policy") based on the United Nations Guiding Principles on Business and Human Rights, with the purpose of promoting initiatives to ensure respect for human rights throughout the Group.

The Nippon Kayaku Group aims to meet the expectations of its stakeholders and contribute to society through its business operations as part of its corporate vision, the **KAYAKU spirit**. As a standard of conduct to realize the **KAYAKU spirit**, the Nippon Kayaku Group has established a Nippon Kayaku Group Charter of Conduct, Code of Conduct, and Group Action Guidelines. In all of its corporate activities, the Group respects fundamental human rights, complies with laws and regulations, engages in fair business activities and responds to the trust of all stakeholders with the aim of providing happiness and delight.

◆ 1. Basic policy on human rights

This Policy is a promise that the Nippon Kayaku Group will respect human rights, in order to earn the trust of all stakeholders based on its corporate vision, the **KAYAKU spirit**. The Nippon Kayaku Group will support and respect international norms relating to human rights, including the United Nations International Bill of Human Rights (Universal Declaration of Human Rights (UDHR), International Covenant on Civil and Political Rights (ICCPR), and International Covenant on Economic, Social and Cultural Rights (ICESCR)) which provides for the fundamental human rights of all people, and the International Labour Organization (ILO) Fundamental Principles and Rights at Work, which provides for fundamental rights at work. As a signatory to the United Nations Global Compact (UNGC), the Nippon Kayaku Group also supports and respect the ten principles of the UNGC.

◆ 2. Respect for human rights through business activities

The Nippon Kayaku Group will not tolerate discrimination or harassment based on differences in gender, age, nationality, race, religion, disability, place of origin, ancestry, creed, political views, marital status, employment status or other differences. The Nippon Kayaku Group will not tolerate child labor, forced labor or unfair low-wage labor.

◆ 3. Scope of application

This Policy applies to all officers and employees of the Nippon Kayaku Group. The Nippon Kayaku Group requires all business partners involved with its business activities, products and services to comply with this Policy.

◆ 4. Responsibility to respect human rights

The Nippon Kayaku Group recognizes that it cannot completely eliminate the possibility of adverse impacts on human rights in its business activities. The Nippon Kayaku Group will fulfill its responsibility to respect human rights and build a responsible supply chain by not infringing on the human rights of those affected by its business activities and by taking appropriate measures to correct any adverse impact on human rights in its business activities.

◆ 5. Human rights due diligence

The Nippon Kayaku Group will establish a system to ensure human rights due diligence, identify adverse impacts of the Group on human rights in society, and strive to prevent and mitigate such impacts.

◆ 6. Dialogue and consultation

In implementing this Policy, the Nippon Kayaku Group will utilize independent expertise on human rights from external experts and engage in sincere dialogue and consultation with stakeholders.

◆ 7. Education and training

The Nippon Kayaku Group will provide appropriate education and training to ensure that this policy is incorporated and effectively implemented in all of its business activities.

◆ 8. Access to remedy

If it is found that the Nippon Kayaku Group's business activities have caused an adverse impact on human rights, or if involvement through business partners is discovered or suspected, the Company will conduct an appropriate investigation and, if necessary, work to remedy the situation through dialogue based on international standards and appropriate procedures.

◆ 9. Person responsible

The Nippon Kayaku Group shall clearly specify an officer in charge of the implementation of this policy and supervise the state of its implementation.

◆ 10. Information disclosure

The Nippon Kayaku Group will disclose the progress and results of its efforts to respect human rights on its website, and by other means.

◆ 11. Applicable laws and regulations

The Nippon Kayaku Group will comply with the laws and regulations of each country or region in which it conducts its business activities. In the event of any conflict between the laws and regulations of individual countries and internationally recognized human rights, the Group will pursue ways to respect international human rights policies to the fullest possible extent.

This policy is adopted by the Company's Board of Directors and signed by its President and Representative Director.

Established April 1, 2022
Nippon Kayaku Co., Ltd.
President and Representative Director

System

The Nippon Kayaku Group established the Ethics Committee as a specialized committee under the Sustainable Management Meeting with the goal of ensuring human rights and compliance throughout the Group. The Committee meets twice a year and as necessary. The Ethics Committee is chaired by an Executive Director with an official post nominated by the President, and consists of representatives from the business units' planning divisions and general administrative divisions that do not belong to a business unit. In addition to determining policies and measures relating to compliance with the Nippon Kayaku Group Charter of Conduct and Code of Conduct, the Committee also consults with people, handles incidents, discusses and makes decisions regarding recurrence prevention measures. Important topics discussed by the Ethics Committee are reported to the Sustainable Management Meeting and the Board of Directors for feedback.

A human rights due diligence system is being established based on the Nippon Kayaku Group Human Rights Policy, by coordination with relevant departments under the responsibility of the chair of the Ethics Committee, and with the Sustainability Promotion Department of the Corporate Planning Division as the administrative office. Agenda items relating to human rights are approved by the Sustainable Management Meeting before submission for discussion and reporting at Board of Directors meetings.

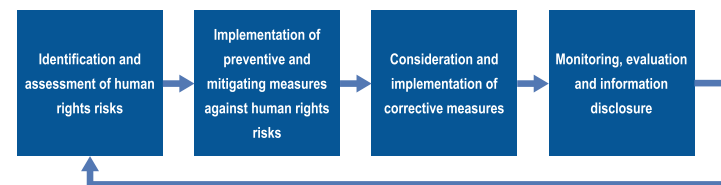
Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	 	<ul style="list-style-type: none"> Engage in business operations that pay care and consideration to the human rights of employees and all other people involved in the supply chain 	Number of training sessions held on human rights	One or more per year	Once	<ul style="list-style-type: none"> Conducted e-learning-based training regarding the Nippon Kayaku Group Human Rights Policy and Human Rights Due Diligence System Senior management conducted workshop to identify and evaluate human rights risks. Decided to reconsider methods for risk identification and evaluation.
			Human rights due diligence Human rights impact assessment rate	(Non-consolidated) Conducted by FY2022 (Consolidated) 100% by FY2025	(Non-consolidated) Incomplete	

Initiatives

Human Rights Due Diligence

In accordance with the Nippon Kayaku Group Human Rights Policy, the Group has formulated an action plan for human rights as one of its key sustainability issues. By managing and disclosing progress every year, we will establish a human rights due diligence process and implement activities throughout the Group. Since FY2021, we have been conducting human rights impact assessment surveys of primary and secondary suppliers. In FY2022, we held two workshops for all executives and heads of related divisions to deepen their understanding of business and human rights. From FY2023 onward, we will gradually expand the scope of these surveys to each domestic business site and Group company both in Japan and overseas, and evaluate risks, make improvements and take corrective measures.



Compliance Awareness Survey

The Nippon Kayaku Group (in Japan) has designated October as Compliance Promotion Month and conducts compliance awareness surveys in October every year. We concluded an agreement with a consulting firm in FY2015 to conduct compliance awareness surveys. Problems in different workplaces related to the encouragement of compliance are identified from the aggregated data and the analysis of the results of the compliance awareness surveys. Improvement proposals and other feedback are then provided to the workplaces. Referring to this feedback, our colleagues in different workplaces formulate compliance action plans for the following year and implement the PDCA cycle to raise awareness. The results of compliance awareness surveys in FY2022 did not identify any serious human rights problems.

> [\[Important Issues\] Ensuring Compliance \(Instilling within the Company\)](#)

Freedom of Association and Collective Bargaining Rights

> [Comfortable Workplace Environment \(Labor-Management Relations\)](#)

Religion

The Nippon Kayaku Group operates globally and has employees who are of different nationalities and diverse religious and cultural backgrounds. When employees come from overseas to participate in group-wide meetings or educational and training sessions, we ask them about their requests and prepare prayer rooms and meals in consideration of their religions.

The Himeji Plant is visited by employees from an Islamic cultural background who come to Japan to participate in skills training. The Himeji Plant has a prayer room and a space for Muslims to purify themselves before saying prayers. The cafeteria has a halal menu.

Consideration for Human Rights in Sustainable Procurement

In order to encourage initiatives to respect human rights throughout the supply chain, the Nippon Kayaku Group has established Sustainable Procurement Guidebook based on the Nippon Kayaku Group Charter of Conduct and Code of Conduct, Basic Procurement Principles and Basic Procurement Policies, and is distributing them to its suppliers. The Group collects letters confirming suppliers' consent to the Sustainable Procurement Guidelines and conducts sustainable procurement surveys. The results of the sustainable procurement surveys conducted in and before FY2022 did not identify any serious human rights problems. The Group will continue working with suppliers to promote sustainable procurement.

> [\[Important Issues\] Environmental and Social Considerations in the Supply Chain](#)

Education and Training

The Nippon Kayaku Group conducts annual training on human rights, to share its awareness of the importance of respecting the human rights of all stakeholders involved in business activities with all executives and employees (including contract employees and part-time employees) and temporary employees. In determining the content of training, we refer to the Human Rights Policy, harassment prevention guidelines, revisions to laws and regulations, and the results of compliance awareness surveys.

As a part of training in FY2022, the Group conducted e-learning-based training regarding the background behind the establishment of the Nippon Kayaku Group Human Rights Policy, explanations for each part of the human rights policy and the human rights due diligence process.

To coincide with the start of the new Medium-term Business Plan **KAYAKU Vision 2025**, we also prepared a booklet that includes an explanation of the Nippon Kayaku Group Human Rights Policy and distributed it in six languages (Japanese, English, Chinese, Spanish, Malay and Czech) that are spoken in countries where we have production bases to all executives and employees of the Nippon Kayaku Group to make the human rights policy known to them.

Name of training program	Main themes covered	Main target	FY	Training format	Number of sessions	Attendance rate
Business and human rights	Human rights issues, specific human rights that companies should respect, the scope of the specific human rights that companies should respect and the human rights initiatives required of companies	Executives and employees (including contract employees and part-time employees), temporary employees	2021	e-Learning	Once	83%
Nippon Kayaku group human rights policy	The background behind the establishment of the human rights policy, explanations for each part of the human rights policy and the human rights due diligence process	Executives and employees (including contract employees and part-time employees), temporary employees	2022	e-Learning	Once	84%

Involvement in Initiatives

Since 2022, the Nippon Kayaku Group has been participating in the Human Rights Due Diligence Subcommittee and the Human Rights Education Subcommittee of Global Compact Network Japan. The Group will increase its knowledge of human rights by going to lectures taught by experts and exchange information with other companies by participating in group work sessions about different topics and industries. The Group will use this knowledge in its initiatives to enhance respect for human rights.

Establishment of a Whistleblowing and Consultation Hotline

The Nippon Kayaku Group has established a Compliance Hotline and a Compliance Hotline for Suppliers, with the aims of detecting and preventing legal violations and ethical violations at an early stage (including responses to human rights issues) and enhancing the transparency and fairness of management.

The Compliance Hotline is open to all domestic Nippon Kayaku Group officers, employees and retirees (within one year after retirement). When making a report or consultation, users can choose to contact either the Ethics Committee administration office (Compliance Department, Internal Control Management Division) or an external law firm.

The Compliance Hotline for Suppliers is open to all executives and employees of suppliers who have dealings with the domestic Nippon Kayaku Group. The point of contact for reports and consultations is the Ethics Committee administration office (Compliance Department, Internal Control Management Division).

Both of these hotlines function as systems that ensure confidentiality and anonymity, and whistleblowers will not suffer disadvantageous treatment as a result of reporting or consulting.

> [Whistleblower System](#)

> [Compliance Hotline for Suppliers](#)

[Important Issues]

Environmental and Social Considerations in the Supply Chain

Policy and Basic Approach

The Nippon Kayaku Group has formulated its Basic Procurement Principles and Basic Procurement Policies so that its purchasing activities will be consistent with sustainable management. We will work for the creation of a sustainable society in cooperation with all our suppliers.

Basic Procurement Principles

In order to realize the **KAYAKU spirit**, Nippon Kayaku Group will pursue mutual and sustainable growth with suppliers based on the understanding they are important suppliers who help us produce products of the best quality. We will strive to conduct procurement transactions that are fair, honest, impartial, and in accordance with relevant laws, social norms, and our Basic Procurement Policies.

Basic Procurement Policies

◆ Compliance with relevant laws, social norms, and the Nippon Kayaku Group Charter of Conduct

1. We will comply with all relevant laws and regulations when conducting procurement operations.
2. We will judge the propriety of procurement activities based on Nippon Kayaku Group Charter of Conduct and the Nippon Kayaku Group Code of Conduct and Group Action Guidelines.

◆ Open-door policy, fairness, impartiality, and transparency in business transactions

3. We will conduct procurement-related business transactions in a fair, impartial, and transparent manner, and follow an open-door policy with respect to businesses at home and abroad.
4. In order to ensure transparency in all our procurement activities, we will undertake due procedures based on written documentation or electronic purchasing systems in accordance with the procurement operations standards.

◆ Partnerships with our business partners

5. We will build partnerships with suppliers based on mutual understanding and trust, and pursue mutual sustainable growth.

◆ Protection of information

6. We will protect supplier-related information obtained in the course of our operations, and strive to prevent any information leakage.

◆ Concern for the environment

7. We will promote the procurement of eco-friendly goods and materials.

◆ Basic criteria for selecting suppliers

8. When selecting goods and materials, we will give due consideration to economic factors such as quality, price, and date of delivery. We will also consider other factors such as the supplier's operating foundations, technological competitiveness, and stability of supply.
9. When selecting suppliers, we will give due consideration to their commitment to realization of a sustainable society, including their observance of relevant laws and regulations, respect for human rights, concern for the working environment, disaster preparedness and safety measures, efforts toward environmental conservation, and other efforts designed to fulfill their Sustainable.
10. In addition to the above, we will give due consideration to whether or not the potential supplier has a risk management system such as BCP (Business Continuity Plan).

System

Following the instructions of the Sustainable Management Meeting, Nippon Kayaku promotes sustainable purchasing activities in accordance with the Basic Procurement Policies. As the driving force behind Nippon Kayaku's sustainable procurement, the head office's Purchasing Division works with the procurement divisions of plants and sites and strengthens initiatives.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Environmental and Social Considerations in the Supply Chain		<ul style="list-style-type: none"> Practice supply chain management with consideration for environmental and social aspects, based on the Sustainable Procurement Guidelines 	Response rate for confirmation of consent to Sustainable Procurement Guidelines	(Non-consolidated) 90% or higher	(Non-consolidated) 99%	<ul style="list-style-type: none"> Sent questionnaires based on the details of sustainable procurement guidelines to roughly 300 companies ranked the highest in terms of purchase amounts, collected responses from 229 of them and statements confirming agreement from 226
			Formulation and implementation of improvement plans using questionnaires to suppliers	(Non-consolidated) Disclose progress	-	<ul style="list-style-type: none"> As no suppliers with human rights or environmental issues were identified based on the details of the sustainable procurement questionnaires that were retrieved, no requests to formulate improvement plans were issued. The details of responses will be checked at the suppliers we plan to audit in FY2023.

Initiatives

Promotion of Sustainable Procurement

The Nippon Kayaku Group published the Sustainable Procurement Guidebook, which includes Nippon Kayaku Group Charter of Conduct and Code of Conduct, Basic Procurement Principles and Basic Procurement Policy, and is working to obtain the support of all our suppliers for sustainable procurement toward the creation of a sustainable society.

In line with the Guidebook, we are promoting sustainable procurement activities with all our suppliers across the supply chain, including those that we work with for R&D, the procurement of raw materials, manufacturing, sales, and logistics, while respecting human rights and giving consideration to environmental protection, occupational health and safety, legal compliance and fair business practices.

Our efforts to obtain our suppliers' understanding of our Sustainable Procurement Policy include briefings, daily communications and business meetings, and we also request each of them to sign an agreement stating that they will comply with the Sustainable Procurement Guidebook.

We will continue to fulfill our social responsibilities across the entire supply chain for the realization of a sustainable society, thereby gaining the confidence and admiration of our customers.

[Sustainable Procurement Guidebook](#)

List of Activities

Main activities	Activities	Frequency of evaluation
Sustainable procurement questionnaire	Self-evaluate compliance with the Nippon Kayaku Group's Sustainable Procurement Guidebook	Once per year
Audit of suppliers	Visit suppliers' manufacturing hubs and audit the suppliers with a focus on quality.	Once per year
BCP procurement	<ul style="list-style-type: none"> Seek to obtain information about the occurrence of injuries and accidents in supply chains. Use an internal database to share the information obtained. Strengthen initiatives for purchasing from multiple suppliers. 	<ul style="list-style-type: none"> Conducted whenever necessary, for example, in the event of an injury or accident. Review procurement activities on a quarterly basis.
Responsible procurement of minerals	Use the CMRT and EMRT provided by RMI to conduct research into relevant minerals (gold, tantalum, tungsten, tin, cobalt, natural mica).	Conducted when a new supplier is registered or on an as-needed basis.
Financial evaluation	Evaluate new suppliers' financial situation based on information from outside credit research institutions.	When a new supplier is registered

◆ Conducting Sustainable Procurement Questionnaire Surveys

Nippon Kayaku conducts sustainable procurement questionnaire surveys of new and existing suppliers to keep up to date on their efforts from environmental and social perspectives. In FY2022, we conducted a questionnaire survey with 300 suppliers with which we had a certain amount of or greater transaction for raw materials in line with Sustainable Procurement Guidebook. As a result, we confirmed that none of the 231 respondents had a socially negative impact on the environment, human rights, occupational safety and health or other matters.

From FY2022, a consent box has been added to the questionnaire so that suppliers can express their consent by checking the box. Working with suppliers, we will continue to pursue a sustainable society throughout the supply chain.

Major Items in Sustainable Procurement Questionnaires

Evaluation items	Details
Human rights and labor	Prohibition of forced labor, prohibition of child labor, proper management of work hours, proper payment of wages, humane treatment, non-discrimination and non-harassment, freedom of association
Health and safety	Occupational safety, emergency preparedness, prevention of occupational injury and illness, industrial hygiene, consideration for physically demanding work, machine safeguarding, provision of sanitation equipment, food, and housing, health and safety communication
Environment	Environmental permits and reporting, efficient use of resources and waste management, prevention of contamination and reduction of resources, management of hazardous substances, management and reduction of solid waste, pre-emission air treatment, materials restrictions, water management, reduction of energy consumption and greenhouse gas emissions
Ethics	Business integrity, no improper advantage, disclosure of accurate information, respect for intellectual property rights, fair business, advertising and competition, protection of identity and non-retaliation, responsible sourcing of minerals, privacy protection
Management system	Company commitment, management accountability and responsibility, legal and customer requirements, proper import and export control, risk assessment and risk management, improvement objectives, training, communication, worker feedback and participation, handling of worker complaints, audits and assessments, collective action process, documentation, creation and maintenance of records, supplier responsibility
Quality and product safety	Ensuring product safety, quality management, provision of accurate information on products and services
Information security	Defense against cyberattack, protection of personal information, prevention of leakage of confidential information
BCP	Formulating a business continuity plan

◆ Audit of Suppliers

Nippon Kayaku audits suppliers every year with the goal of promoting and ensuring the thorough implementation of sustainable procurement practices. Representatives from Nippon Kayaku's plants check a wide range of items such as facility management, process management, hygiene management and production management of suppliers' plants and conduct evaluations. In FY2022, 152 suppliers were audited. We reviewed findings from the audits and, in some cases, provided feedback to suppliers and requested improvements. However, no serious violations by any of the suppliers were identified.

The Fine Chemicals Business Unit checks suppliers' efforts in terms of labor (human rights), health and safety, environment, ethics and management system in compliance with RBA Code of Conduct. In FY2022, 81 suppliers were audited. (18 suppliers audited on site, four were audited via the Internet and 59 underwent document-based auditing)

◆ Initiatives for Procurement Based on Business Continuity Planning (BCP)

Nippon Kayaku is constantly working to obtain up-to-date information on disasters and accidents that have taken place in its supply chain. When we receive such information, we share it across the board by immediately entering it into our in-house database. We also promptly compile a list of the raw materials produced by the affected countries of origin and manufacturers and check the impact on our procurement and inventories, the status regarding resumption of operations at the afflicted manufacturing facilities, and the impact of the incident on our production. We have diversified our procurement sources for many items in line with our BCP and are working to further strengthen these efforts so that we will be able to deal with any contingencies.

◆ Initiatives in Each Business Unit

Mobility & Imaging Business Unit Annual Purchasing Conference

The Safety Systems Group annually organizes a purchasing briefing session for the suppliers we usually work with.

In cooperation with its suppliers, the Nippon Kayaku Group must continue to provide high-quality, low-cost products without causing deliveries to customers to be delayed throughout the supply chains of the automotive industry while quickly adapting to the rapidly changing domestic and international environment, the market prices of raw materials, the fluctuation of exchange rates and other external environmental conditions. The goals of the purchasing briefing session are to explain the Nippon Kayaku Group's performance forecasts, business plan for the next year and following years, the status of our production structure at the time of the briefing, our development plan, medium and long-term vision, quality policy and purchasing policy to aid suppliers in their formulation of their business plans.

Furthermore, the suppliers that are good examples in terms of quality, cost and meeting deadlines are recognized as "excellent partners."

To fulfill the demand generated by society for the achievement of a sustainable society in cooperation with our suppliers, the purchasing briefing session shares the Group's understanding of environmental and social issues and explains its policies and initiatives regarding sustainability issues.

We will continue to strive to provide beneficial information so that the purchasing briefing sessions are valuable opportunities for the Nippon Kayaku Group and its suppliers to exchange information.



Fine Chemicals Business Unit RBA Audit Actions

The RBA (Responsible Business Alliance) is a coalition of businesses that promote corporate social responsibility throughout global supply chains. The RBA Code of Conduct specifies the standards necessary for guaranteeing that labor conditions in the supply chains are safe, that workers are treated with respect and dignity and that our business activities are environmentally friendly.

The Fukuyama Plant received an RBA third-party audit (VAP auditing) in January 2022. The plant was shown to be properly managing itself in terms of the audit items including labor, safety and health, environment, ethics and management systems, and it acquired silver certification. As a result of the implementation of initiatives for sincere improvement in accordance with corrective action plans (CAPs), all of them were approved in January 2023.

An internal audit will be held once a year to maintain the RBA audit standards. The internal audit conducted in January 2023 showed that the plant continues to satisfy the RBA audit criteria.

Educating Procurement Representatives

Nippon Kayaku provides representatives who have been newly assigned to a Purchasing Division with introductory training to enable them to sufficiently understand the Basic Procurement Principles, Basic Procurement Policies and Sustainable Procurement Guidelines in relation to our procurement activities.

To ensure healthy supply chain management practices, we have focused on the education and training of Purchasing Division representatives on the issues of sustainable procurement, our efforts regarding conflict minerals and other issues.

We also provide support in other forms such as the buying of books to acquire purchasing-related qualifications at the Company's own expense to encourage representatives to acquire more knowledge. We encourage the acquisition of Certified Procurement Professional (CPP) and Certified Professional in Supply Management (CPSM) qualifications.

Involvement in Initiatives

◆ UN Global Compact Supply Chain Subcommittee

Since 2022, the Nippon Kayaku Group has been involved in the supply chain subcommittee of UN Global Compact Network Japan. The knowledge obtained by the supply chain subcommittee is shared by the people in the Company involved in procurement and is utilized in purposes such as review of questionnaire items for use in supplier surveys.

◆ Declaration of Partnership Building

Nippon Kayaku announced the Declaration of Partnership Building based on its support for the goals of the Council on Promoting Partnership Building which consists of the chairperson of the Keidanren, the chairperson of the Japan Chamber of Commerce and Industry, the president of Japanese Trade Union Confederation and the ministers of the Cabinet Office, Ministry of Economy, Trade and Industry, Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries and Ministry of Land, Infrastructure, Transport and Tourism.

The goal of the Declaration of Partnership Building is to express our determination to build new partnerships through cooperation and the pursuit of co-existence and co-prosperity with our suppliers in supply chains and business operators in pursuit of value creation.

We will build sustainable relationships to facilitate co-existence and co-prosperity with suppliers through our participation in the Declaration of Partnership Building.

> [Nippon Kayaku's Declaration of Partnership Building \(Japanese\)](#)

Compliance Hotline for Suppliers

The Nippon Kayaku Group has established a Compliance Hotline for Suppliers to collect information about actions such as the violation of laws.

The Compliance Hotline for Suppliers is available to all executives and employees of the suppliers of the companies of the Nippon Kayaku Group in Japan. The point of contact for reports and consultations is the Ethics Committee administration office (Compliance Department, Internal Control Management Division).

It functions as a system that ensures confidentiality and anonymity, and whistleblowers will not be treated disadvantageously due to their reporting to or consulting the hotline.

> [Compliance Hotline for Suppliers](#)

Contribution to Local Communities

The Nippon Kayaku Group has established business locations around the world and act as a member of each local community. In addition to social contribution activities, we contribute to the sound, sustainable development of local communities such as by actively supporting the development of the next generation and exchanging information with local governments.

Action Plan on Measures to Support Raising Next-Generation Children

Action Plan on Measures to Support Raising Next-Generation Children (Part 4) (Only community-related themes selected)

◆ Target 4: Initiatives for local communities regarding measures to support raising next-generation children

[Details of specific initiatives]

- Accept children from the local community for company tours
- Run internships for young people
- Consider holding bring-your-child-to-work days

> [Action plan \(4th: FY2022 to FY2024\) \(Japanese\)](#)

> [Status of progress \(FY2022\) \(Japanese\)](#)

Creating a Society Where People Can Lead Healthy and Affluent Lives

Asunaro House for Children with Intractable Diseases and Their Families

The Nippon Kayaku Group, as part of commemorative projects marking its 80th anniversary and under the motto of “Let’s assist children with intractable diseases and their families,” owns and operates Asunaro House. Located near central Saitama City, Saitama Prefecture, this extended-stay facility accommodates children undergoing hospitalization and treatment of illnesses and their accompanying family members.

With 10 private rooms of about 18 square meters that are able to accommodate two adults and a child, along with a large dining room and kitchen, the facility serves as a comfortable “home away from home.” We renovated and reopened two rooms in January 2023, which pleased many users.

Current and former employees of Nippon Kayaku and its affiliates regularly perform volunteer cleaning and yard work at Asunaro House so that families can enjoy a pleasant stay.

Our goal is to offer a facility that provides opportunities for the families of sick children to find comfort in one another and helps alleviate the mental and financial burden on these families while safeguarding their privacy.



Current and former employees volunteering to perform cleaning, yard work and others

Message

Since its founding 25 years ago, Asunaro House has hosted a total of 74,829 people and 3,912 families.

From all across Japan, more and more families are coming to us to receive expert and advanced treatments at nearby medical institutions offering pediatric care, including Saitama Children’s Medical Center, Saitama City Hospital and Yamato Acupuncture Clinic.

Although the number of family users decreased due to the COVID-19 pandemic, it has been gradually recovering since this spring. We will continue to take infection control measures to accept more families.

Since accepting the position of House Manager in 2017, I’ve sought to give the premises a sense of seasonality through decorations and to incorporate new things I have learned through information exchanges with similar facilities nationwide, to make Asunaro House a home for those who stay here.

We will continue to make efforts every day to make this a “home away from home” where children battling intractable illness and their families can stay in safety, ease and comfort.

We cherish every “thank you” that we hear from children who leave the hospital and head back to their real homes with their families.

Yamaji, House Manager



Sports Promotion

The Nippon Kayaku Group works to support sports activities and holds in-house health promotion events.

We will continue to advance a variety of social contribution activities to realize our Corporate Philosophy of safeguarding life and health and supporting comfortable lives.

◆ T.League Official Partner

We endorse and support the T.League philosophy of enriching lives through the world of table tennis. Along with our support for the league, we will work to fulfill Nippon Kayaku’s Corporate Philosophy of safeguarding life and health and supporting comfortable lives.

> [T.League official website](#)



◆ V League: Gold Partner, Wolfdogs Nagoya

Volleyball is a sport that connects players through play. We endorse and support the activities of Wolfdogs Nagoya, a team that upholds the idea of bringing people together.

➤ [Wolfdogs Nagoya official website \(Japanese\)](#) 



◆ Participation in the Scrum Japan Program as a supporter

We serve as a supporter of Scrum Japan, a program launched by the Japan Rugby Football Union to carry out rugby-based activities to nurture and educate the children and adolescents who will one day shape our future.

Endorsing the program's aims, we will participate as a supporting member and provide support as a part of our social contribution activities.

➤ [Scrum Japan Program official website \(Japanese\)](#) 



◆ Initiatives at Each Business Site

Nippon Kayaku Head Office

Certified as a 2022 Tokyo Metropolitan Government Sports Promotion Company

Nippon Kayaku was certified by the Bureau of Olympic and Paralympic Games Tokyo 2020 Preparation as a 2022 Tokyo Metropolitan Government Sports Promotion Company. Under the certification system for this program, the Tokyo Metropolitan Government recognizes companies that demonstrate outstanding efforts in promoting employees' sports activities and social contribution activities in the field of sports.

Nippon Kayaku will continue to engage in health promotion events and actively work to improve our employees' health.

➤ [Tokyo Metropolitan Government Sports Promotion Company certification system](#) 



Supporting the Development of the Next Generation

Initiatives to Develop the Next Generation of Leaders

To encourage children to see the fun of chemistry, the Nippon Kayaku Group supports the nurturing of the next generation of society's leaders. In FY2020 and FY2021, events were cancelled, postponed or only held online in consideration of the COVID-19 pandemic. In FY2022, we held the following events while taking infection control measures.

◆ Initiatives at Each Business Site

Nippon Kayaku Head Office

Collaborating on Learning with KUDAN Secondary School

Nippon Kayaku collaborates with Kudan Secondary School, located in the Company's previous head office area in Chiyoda City, Tokyo, to help children learn about the local area in the school's comprehensive learning classes. We have continued to do this as a local contribution activity even after relocating our headquarters to the Marunouchi area in 2014. Every year, we invite students to Nippon Kayaku for an introduction to the Company, a lesson on advertisement production, an explanation of an assignment, a company tour and other activities, with students presenting us with their completed assignment at a later date.

Assignment: Create an advertisement that interests many people and communicates characteristics of Nippon Kayaku!

In FY2022, it was held as an in-person event for the first time in a long time because it had been held online for a couple of years to control infection during the COVID-19 pandemic. One of our employees who has created advertisements as a member of the public relations team gave a class on ads, discussing "what, how and to whom" an ad should communicate to be effective. Students put forth ideas and deepened their discussion in groups. They delivered an interim report one month later, then a final report using PowerPoint a month after that.

We will continue this effort as an aid to students' learning.



R&D Laboratories

Video of Our Experiment Released on the Yume Kagaku-21 Committee's Kodomo Kagaku Channel

Nippon Kayaku released the "The Wonder of Colors! Let's Experiment at Home!" video of an experiment on the Kodomo Kagaku Channel, a YouTube channel operated by the Yume Kagaku-21* Committee. We cooperate with Kodomo Kagaku Channel, identifying with the goal of the Kodomo Kagaku Channel project: release chemistry-related videos to inspire the curiosity and interest of the children who are the future.

Young employees from the research divisions played a major role in the production of the experiment video, which was created through experimentation to conveying the fascination of chemistry more clearly.



[Overview of the experiment video]

Title: The Wonder of Colors! Let's Experiment at Home!

Experiment details: Neutralization reaction using bath bombs, and chromatography using the three primary colors and felt-tip markers

➤ [\[Chemical experiment No. 07\] The wonder of colors! Let's experiment at home. \(Courtesy of: Nippon Kayaku Co., Ltd.\) — YouTube](#) 

* Campaign implemented by the Chemical Society of Japan, the Society of Chemical Engineers, Japan, the Japan Association for Chemical Innovation, and the Japan Chemical Industry Association to advocate for chemistry and promote people's understanding of the chemical industry's contribution to society.

Joetsu Plant

Joetsu Science Museum Holds the Young People's Science Festival and a Workshop Making Kaleidoscopes Using Polarizers

Joetsu Plant opened a booth at the Young People's Science Festival in Joetsu, Niigata and the Science Festival in Myoko, Niigata so that elementary school children and other young people can increase their familiarity with science through crafts.

At their booth, they conducted an experiment making kaleidoscopes using the polarizing films manufactured at Joetsu Plant. The young participants made kaleidoscopes by decorating them as they liked with the help of their parents.

Completing their kaleidoscopes, the children were very happy, saying "Beautiful!" "Wonderful!" and, "I want to make it again at home!" This made the staff forget their fatigue due to repeating the explanation of the experiment dozens of times during the day. The staff looked forward to see how the children would react when looking through their kaleidoscope.

We will continue to develop many experiments to carry out community-based social contribution activities.



Asa Plant

Science Expo Hosted by the City of Sanyo-Onoda

As a representative of local businesses, the Asa Plant set up a booth to enable people to experience a scientific experiment during Sanyo-Onoda City University's open house. They conducted an experiment together with many children to learn the secrets of artificial salmon roe that burst open.

The event was held successfully with the help of volunteers, having resumed after a three-year suspension due to the COVID-19 pandemic. We will be happy if the event increases children's interest in chemistry.



Asa Plant

Workplace Visit before Job Application

On August 2, 2022, the Asa Plant invited ten high school students on summer vacation to visit the Asa Plant before applying for jobs.

The staff provided an outline of the plant and explained the products manufactured there using the corporate introduction brochure. The students saw how products were actually manufactured at the plant. The students seem to be surprised by the production equipment and interested in the kinds of products that are made. They enjoyed visiting the administrative area, too, possibly because of the August heat. The students imagined what it would be like for them to work there, experiencing the atmosphere of the workplace. They proactively asked questions and wrote down answers, which was impressive.



Initiatives in Local Communities

The Nippon Kayaku Group is working to enable local communities to gain an understanding of the details of the Group's businesses by holding plant festivals, opening facilities to the public, carrying out educational activities, support people and organizations through donations and sponsorships, donating blood, conducting cleaning activities and holding convivial gatherings.

We will provide many different exchange opportunities, actively communicate with local communities and engage in the energization and development of communities through business.

[> Nippon Kayaku's Agreements with Local Entities](#)

◆ Initiatives at Each Business Site

Asa Plant

Nippon Kayaku Presents Fireworks of Hope

On July 22, 2022, the Asa Plant put on a fireworks display with 300 fireworks at the Kaji Fishing Port in Sanyo-Onoda to express its gratitude to locals for their continuing support. This year, they live-streamed the firework display on YouTube, using a drone to video the display. Both the fireworks display and its live-streaming were successful, as the weather was good. The spectators shouted for joy every time a large colorful firework exploded. Through the fireworks, we energized the community members and made them smile. The YouTube viewers must have enjoyed the powerful video of the fireworks shot using a drone. Watch the video on YouTube if you haven't seen it yet. The event was an opportunity to let many people know about us as a video promoting the Asa Plant was played before the fireworks display.

We would like to continue activities that make local communities happy as local contribution activities.



Takasaki Plant
Harvesting Sweet Potatoes

Takasaki Plant invited students from Iwahana Nursery to the sweet potato fields in front of the company housing facility to harvest sweet potatoes on November 4, 2022, a cool and sunny autumn day. The children got very excited about sweet potatoes that had grown large. They fully enjoyed picking the sweet potatoes. "I got a big sweet potato!" said one student, and other students applauded loudly and smiled. They really lifted our spirits. After picking the sweet potatoes, Gunnan Sangyo helped us remove the roots and soil from the sweet potatoes and deliver the harvested sweet potatoes to the nursery by truck.



Kayaku Safety Systems Europe a.s.
Reaching Peaks for Charity

In Vsetin, where Kayaku Safety Systems Europe a.s. (hereinafter "KSE") is based, the local cycling association has run a cycling project for ten years envisioning the summiting of at least 20 mountains by bicycle. KSE encourages employees to participate in the project so that the association can achieve its vision. Participants tried to summit mountains of differing in degree of difficulty in the eight months from April to November 2022. KSE participates in this cycling project and plans its own charity activities. In the planned activity in 2022, KSE's employees donated CZK 100 every time they summited a mountain by bicycle or on foot, and KSE purchased electric bicycles specially designed for children with disabilities.



KAYAKU Advanced Materials, Inc.
Volunteering at the Giving Factory

KAYAKU Advanced Materials, Inc. (hereinafter referred to as "KAM") joined volunteering at the Cradle to Crayons Giving Factory. Cradle to Crayons engages in the volunteer activities to provide essentials for living, including essentials for the home, for schools and for play, to homeless or deprived children up to 12 years of age free of charge by participating in and involvement in local communities.

In November 2022, 20 KAM employees participated in volunteer activities, breaking into teams and inspecting, sorting and packing donations. Cradle to Crayons takes charge of the delivery of donations to children.



Data

Social Contribution Activities

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Social contribution activity expenditures	Non-consolidated	Million yen	179	254	146	154	149
Proportion of total donation money	Non-consolidated	Million yen	144	222	114	123	120
Proportion of other social contribution expenditures	Non-consolidated	Million yen	34	31	32	31	29

Governance

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[Important Issues] Risk Management	92



[Important Issues] Strengthening Corporate Governance

Policy and Basic Approach

> [Basic Concept of Corporate Governance](#)

System

> [Corporate Governance System](#)

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Strengthening Corporate Governance		<ul style="list-style-type: none"> Strengthen corporate governance of the entire group and manage in a highly transparent and sound manner. 	Number of times that the assessment on the effectiveness of the Board of Directors meetings is evaluated	Once per year	Once	<ul style="list-style-type: none"> Conducted a questionnaire about assessment on the effectiveness of the Board of Directors, ascertained the current situation, identified issues, and formulated measures under an action plan. Improvements underway. Enhanced timely disclosure information, Corporate Governance Report and disclosure of Company's Articles of Incorporation in English Promoted adoption of DX in management of the Board of Directors
			Number of times internal business audits are performed by the Audit Division	60 times in four years	22 times	<ul style="list-style-type: none"> Appointed one Independent Outside Audit & Supervisory Board Member Promoted formulation of intellectual property policy and strategy for intellectual properties (responding to the revised Corporate Governance Code) Promoted disclosure policies for human resource development and enhancing the internal work environment (responding to the revised Corporate Governance Code)

Initiatives

- > [Audits](#)
- > [Outside Directors and Outside Audit & Supervisory Board Members](#)
- > [Remuneration to Directors and Audit & Supervisory Board Members](#)
- > [Assessment on the effectiveness of the Board of Directors](#)
- > [Internal Control System](#)
- > [Ensure the Reliability of Financial Reporting](#)
- > [Basic Concept of Information Disclosure](#)

[Important Issues] Ensuring Compliance

Policy and Basic Approach

The Nippon Kayaku Group views compliance in a broad sense, considering it to mean not only abiding by laws and regulations, internal rules and rules of the industry, but also responding to social norms and the demands of society and continuing to earn the trust of diverse stakeholders.

As our group-wide standards of conduct, we established the Nippon Kayaku Group Charter of Conduct and Code of Conduct. We conduct business activities based on the spirit of these standards to fulfill our social responsibilities and contribute to society.

The Nippon Kayaku Group firmly ensures compliance in its business activities, and will further promote its compliance activities under the strong leadership of its top management.

Nippon Kayaku Group Charter of Conduct and Code of Conduct

The Nippon Kayaku Group established [the Nippon Kayaku Group Charter of Conduct and Code of Conduct](#) in 2000, recognizing compliance to be a matter of highest priority in its corporate activities. Subsequently, in 2011, these were revised in view of ISO 26000 (Guidance on social responsibility for organizations), and in 2020 they were revised with the aim of spontaneously putting them into practice to help achieve a sustainable society.

The Nippon Kayaku Group Charter of Conduct

◆ Business activities

1. The Nippon Kayaku Group will provide products and services that satisfy customers through Communication with customers and the provision of appropriate information, giving due consideration to the safety and reliability of its products and services.
2. In all its business activities, the Nippon Kayaku Group will comply with all relevant laws and regulations, including competition law, the spirit of these laws, and internal regulations, and will engage in fair, transparent, and free competition. We will also maintain sound relationships with the governing authorities in all regions.
3. The Nippon Kayaku Group respects human rights in all its business activities, and will not discriminate or tolerate any inappropriately behavior for reasons based on gender, age, nationality, race, religion, or disability.
4. The Nippon Kayaku Group will appropriately manage and utilize the company's assets to improve the efficiency of its business activities and strive for continuous development.
5. The Nippon Kayaku Group implements systematic crisis management in preparation for the actions of anti-social forces that threaten the lives of citizens and corporate activities, as well as for terrorism, cyber attacks, natural disasters, and other events.

◆ Relationship with society

6. The Nippon Kayaku Group respects the cultures, religions and traditions of each country and region, works in harmony with society, and contributes to the development of society as a good corporate citizen.
7. The Nippon Kayaku Group will disclose information on its business activities to stakeholders in a timely and appropriate manner based on objective facts. We will also strive to increase corporate value through constructive dialogue with stakeholders.
8. In order to contribute to a sustainable society and the environment, the Nippon Kayaku Group strives to conduct its business activities in harmony with the natural environment by constantly taking into account the impact on the global environment, not only complying with relevant laws and regulations, but also establishing its own voluntary standards.

◆ Information handling

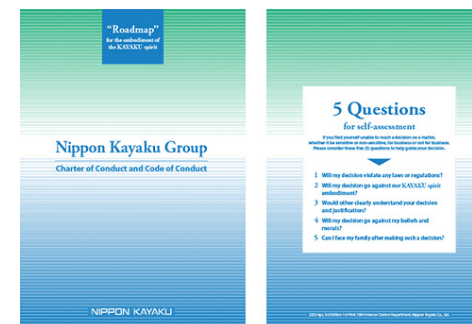
9. The Nippon Kayaku Group will appropriately protect the information it possesses through its business activities and take all possible measures for information management. In addition, we recognize the value of information assets and respect the intellectual property rights of others.

◆ Relationships between the company and individuals

10. The Nippon Kayaku Group complies with labor-related laws and regulations, ensures a safe and comfortable working environment, and respects the basic human rights, diversity, character, and individuality of individuals.

◆ Roles of top management and thorough adherence to this charter

11. Those involved in the management of the Nippon Kayaku Group recognize that realizing the spirit of this charter is their own role and responsibility, and will thoroughly disseminate it to all employees. In addition, we will listen to the opinions of people inside and outside the group, establish effective systems within the group, and ensure thorough implementation of corporate ethics. In the event of a situation that contravenes the spirit of this charter, we will clarify both inside and outside the company our stance of solving the problem, investigate the cause, and work to prevent any recurrence.

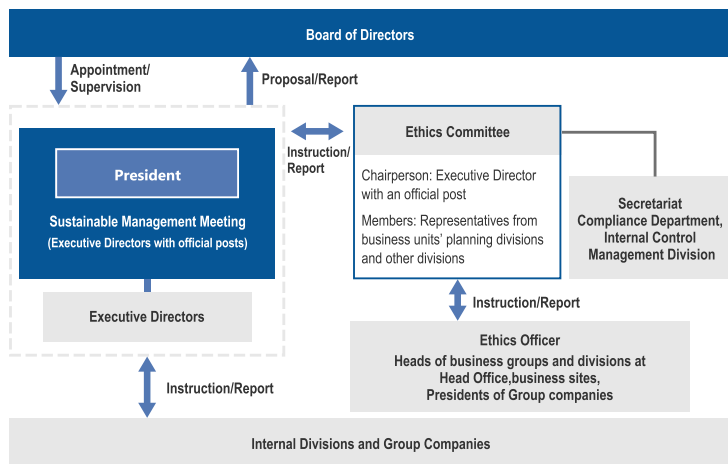


The Nippon Kayaku Group Charter of Conduct and Code of Conduct

System

The Nippon Kayaku Group established the Ethics Committee as a specialized committee under the Sustainable Management Meeting with the goal of ensuring compliance throughout the Group. The Committee meets twice a year and as necessary.

The Ethics Committee is chaired by an Executive Director with an official post nominated by the President, and consists of representatives from the business units' planning divisions and general administrative divisions that do not belong to a business unit. In addition to determining policies and measures relating to compliance with the Nippon Kayaku Group Charter of Conduct and Code of Conduct, the Committee also consults with people, handles incidents, discusses and makes decisions regarding recurrence prevention measures. Important topics discussed by the Ethics Committee are reported to the Sustainable Management Meeting and the Board of Directors for feedback.



Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Ensuring Compliance		<ul style="list-style-type: none"> Exercise thorough compliance, which is a basic principle for conducting corporate activities, and engaging in fair business operations. Maintain and enhance an open corporate culture with a high sense of ethics 	Number of serious compliance violations*	0	0	<ul style="list-style-type: none"> No significant compliance violations Compliance training incorporates the theme of psychological safety in the workplace and was conducted at all Group companies in Japan As a result of checking all Group companies for the presence of internal reporting services, external reporting services and the establishment of regulations, we determined that reporting services had not been established at three overseas Group companies
			Compliance training rate	100%	97%	
			Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	

* Number of serious accidents as judged by the Ethics Committee

Initiatives

Policies and Measures Relating to Compliance with the Nippon Kayaku Group Charter of Conduct and Code of Conduct

◆ Instilling within the Company

To raise awareness about thorough compliance and ensure it is practiced throughout the corporate group, the Nippon Kayaku Group has created a portable card displaying its corporate vision, Charter of Conduct and Code of Conduct in six different languages (Japanese, English, Chinese, Spanish, Malay and Czech) spoken by all of the countries where we have manufacturing hubs. The card is distributed to all executives and employees of the Nippon Kayaku Group so that they can refer to Nippon Kayaku Group Charter of Conduct and Code of Conduct whenever necessary. Also, a pamphlet with easy-to-understand explanation of the Charter of Conduct and the Code of Conduct is distributed to all employees of domestic companies of the Nippon Kayaku Group.

Further, we have determined that every October will be compliance promotion month. During October, the chairperson of the Ethics Committee shares a message with all of the employees of the domestic companies of the Nippon Kayaku Group via the company newsletter. We also conduct compliance awareness surveys to continually monitor the compliance awareness of our colleagues and enable this awareness to lead to improvement.

We concluded an agreement with a consulting firm in FY2015 to conduct compliance awareness surveys. Problems in different workplaces related to the encouragement of compliance are identified from the aggregated data and the analysis of the results of the compliance awareness surveys. Improvement proposals and other feedback are then provided to the workplaces. Referring to this feedback, our colleagues in different workplaces formulate compliance action plans for the following year and implement the PDCA cycle to raise awareness.

The compliance activities of the overseas companies of the Nippon Kayaku Group are in line with laws and business practices of the respective countries in which they operate. In China, general managers and ethics representatives of the Nippon Kayaku Group's companies gather and hold a meeting each year to report on the companies' compliance-related efforts and problems, identify problems and discuss measures to address them. Nippon Kayaku's Internal Control Management Division and the Legal Department of KSC* cooperate with each other to provide local employees with compliance training in their offices. In consideration of the situations in the different countries, we will deepen cooperation between the companies and divisions of the Group so that their global compliance activities become more effective and efficient.

* KSC: Kayaku (Shanghai) Co., Ltd., a management company in China

◆ Education and Training

The Nippon Kayaku Group holds domestic compliance education and training on different themes every year, and uses regular meetings at business sites to conduct study groups and training based on case studies. The FY2022 compliance training was themed on psychological safety at workplaces. Nippon Kayaku provided training, mainly e-learning programs, and the companies of the Nippon Kayaku Group mostly conducted group training with the goal of providing all employees with training opportunities and programs.

Name of training program	Main themes covered	Main target	FY	Training format	Number of sessions	Attendance rate
Compliance training (Yearly and mandatory)	Psychological safety at workplaces	Executives and employees (including contract employees and part-time employees), temporary employees	2022	e-learning/ group training	1	97.3%
Compliance training (Yearly and mandatory)	Guidelines for Handling Whistleblower Complaints / Nippon Kayaku Group Basic Policy on Anti-Bribery	Executives and employees (including contract employees and part-time employees), temporary employees	2021	e-learning/ group training	1	98.2%
Compliance training (Monthly)	<ul style="list-style-type: none"> Harassment (difference between instruction/request and harassment) Fundamental human rights (LGBT, unconscious bias) Sincere activities (integrity, action taken in the event of a mistake) Good workplace environment (problems of negative and passive words and behaviors) 	Executives and employees (including contract employees and part-time employees), temporary employees	2022	e-learning	6	Average of 79.2%
Compliance training (Monthly)	<ul style="list-style-type: none"> Insider trading Good workplace environment (how to interact with people who are hard to talk to) Fundamental human rights (portrait rights) Sincere activities (compliance risk, prohibition of conflicts of interest) Harassment (Power harassment) 	Executives and employees (including contract employees and part-time employees), temporary employees	2021	e-learning	6	Average of 77.7%
Risk management training	Nippon Kayaku's crisis management system	Executives and employees (including contract employees and part-time employees), temporary employees	2022	e-learning	1	77.8%
Risk management training	Risk of infection	Executives and employees (including contract employees and part-time employees), temporary employees	2021	e-learning	1	76.0%
New employee training ^{*1}	Compliance basics, Charter of Conduct and Code of Conduct, Compliance Hotline, etc.	New employees	2022	group training	1	100%
Newly appointed manager training ^{*1}	Compliance basics, Charter of Conduct and Code of Conduct, Compliance Hotline, etc.	Newly appointed managers	2022	group training	2	100%
Expatriate training ^{*2}	Charter of Conduct and Code of Conduct, Nippon Kayaku Group Basic Policy on Anti-Bribery, etc.	Expatriates	2022	In-person/ online	10	100%

*1 Held annually

*2 Provided to expatriates before they are assigned to a new post

◆ Initiatives to Prevent Corruption and Anti-competitive Behavior

The Nippon Kayaku Group Charter of Conduct and Code of Conduct uphold that fair, transparent and free competition should be conducted in all business activities in compliance with both the letter and spirit of relevant laws and regulations, including competition laws, as well as internal rules. In addition, they prohibit bribery and other misconduct in relation to our business transactions.

Furthermore, to clarify our basic approach to the prevention of bribery, the scope of application, and rules to abide by, we have established the Nippon Kayaku Group Basic Policy on Anti-Bribery, which is widely embraced and practiced by our officers and employees, including Group companies in Japan and overseas.

Nippon Kayaku Group Basic Policy on Anti-Bribery

Established: June 21, 2021

◆ I . Preamble

Nippon Kayaku established the Nippon Kayaku Group Basic Policy on Anti-Bribery (hereinafter referred to as the Basic Policy) to clarify the basic concept, scope, and rules to be followed regarding the prevention of bribery, for declaration to both inside and outside the company. This basic policy applies to all officers and employees of the Nippon Kayaku Group (employees, junior employees, contract employees, advisors, contract workers, parttime workers, etc.).

◆ II . Overview

The Nippon Kayaku Group established the Nippon Kayaku Group Charter of Conduct and Code of Conduct to implement sustainable management that is integrated with management strategy while maintaining a high level of ethical standards. This is aimed at realizing the corporate vision **KAYAKU spirit** of "continuing to provide society with the best products through constant progress and the combination of conscience." The Charter of Conduct and Code of Conduct stipulates that; we will "comply with competition laws and other relevant laws and regulations, as well as their spirit and internal regulations, and engage in fair, transparent and free competition in all our business activities; that we will maintain sound relations with politics and the government;" and that we will "comply with relevant laws and regulations in each country and region, and respect international norms, cultures, religions and traditions." Furthermore, the Nippon Kayaku Group considers the establishment and strengthening of anti-bribery systems both domestically and overseas to be an important issue to be addressed by the Group as a whole as we continue to expand our business globally year by year.

◆ III. Declaration

The Nippon Kayaku Group will comply with laws and regulations that prevent bribery in each country and region in which the Nippon Kayaku Group operates, including the Japan Anti-Unfair Competition Act, the U.S. International Anti-Corruption Act (Foreign Corrupt Practices Act:FCPA),the Bribery Act (Bribery Act:UKBA), and the Chinese Commercial Bribery Regulation. In addition, we will not act in a way that violates the Ethical Code for Public Employees of Japan, the Code of Ethics for National Public Employees, the ethical rules stipulated by special public corporations, local governments, etc., and the laws and regulations concerning the public employees^{*1}, etc. of each country.

◆ IV. Compliance items

1. Prohibition of Bribery of Public Officials, etc.

The Nippon Kayaku Group will not provide, offer or promise any illegal entertainment, gifts, benefits or other economic benefits*², whether directly or indirectly, to domestic and overseas public employees or persons in similar positions ("public employees, etc.") with the aim of influencing their conduct of duties.

In the event public officials, etc. request the provision of illegal entertainment, gifts, benefits, or other economic benefits domestically or overseas, the Company shall refuse such request and notify the relevant organizations as appropriate.

2. Payment to agents, etc.

The Nippon Kayaku Group shall not make any payments to agents or consultants (hereinafter referred to as "Agents") in cases where any part of such payments are or may be diverted to illegal approaches to public officials, etc.

3. Entertainment and gifts to business partners other than public officials, etc.

In compliance with national laws, industry codes and internal regulations, we will not provide entertainment, gifts, or other economic benefits that exceed a reasonable range of social conventions to our domestic and overseas business partners, including their officers and employees.

4. Entertainment and gift-giving

We do not receive excessive entertainment from business partners or gifts of money that exceed the scope of social conventions.

5. Donation activity

Donations, such as grants and political contributions, will not be made for the purpose of fraudulently obtaining or securing business benefits.

6. Control of Records

We will prepare and maintain accounting records of all transactions and dispositions of assets, as appropriate and accurately as possible, to demonstrate that bribery has not occurred.

◆ Requests to business partners

This basic policy summarizes the Nippon Kayaku Group's approach to anti-bribery, and we believe that the understanding and cooperation of our business partners is essential to the implementation of this basic policy. If you encounter or suspect any violations to this basic policy or related laws or regulations, please notify your contact person at the Nippon Kayaku Group.

We also request that you cooperate in investigations by Nippon Kayaku Group companies or relevant authorities regarding alleged violations or violations.

*1 "Public officers, etc." refers to those who are in charge of legislative, administrative, judicial, and other public affairs in each country or region, candidates for such services, officials of government agencies, employees of companies and other organizations owned and operated by the government, officers and employees of political parties, and officers and employees of public international organizations composed of countries, regions, and their governments.

*2 "Gifts, benefits, and other economic benefits" include all items that are equivalent to cash, such as gifts, services, employment, loans, travel expenses, food and beverage, invitations (sports tours, theatrical tours), donations, daily grants, and rewards, all of which are in profit, whether in their nominal terms. Provided, however, that this shall not apply to acts where the scope of the Anti-Corruption and Anti-Bribery Laws and Regulations applicable to each country or region is moderate in light of lawful and sound business practices and socially accepted norms.

High Standards of Ethics and Transparency in Pharmaceuticals Business

It is incumbent upon pharmaceutical companies to consistently ensure high standards of ethics and transparency in their business activities, to establish relationships of trust with external stakeholders including medical, dental and pharmaceutical researchers and healthcare professionals, wholesalers, patient groups, etc., and to make efforts to ensure that optimal and ethical medical care is provided from the standpoint of patients.

Nippon Kayaku established the Nippon Kayaku Code of Practice as a standard against which its directors and employees can determine whether their own acts are in keeping with the Japan Pharmaceutical Manufacturers Association (JPMA) Code of Practice. By thus underscoring and firmly sharing our commitment to corporate ethics and compliance, which are the foundation of our business activities, we proceed with our business with a highly ethical mindset in adherence to the code.

➤ [Commitment to Compliance Based on Nippon Kayaku Code of Practice](#)

Initiatives at Overseas Companies of the Nippon Kayaku Group

The Nippon Kayaku Group annually discusses risk management measures after identifying risks in the offices including the offices of the overseas companies of the Nippon Kayaku Group and it regularly conducts reviews. (For details, see [\[Important Issues\] Risk Management > Preventing Risks](#))

We identified compliance risks relating to corruption in China in 2022. As a measure to address these risks, general managers and ethics representatives of the Nippon Kayaku Group's companies in China gathered and held a meeting to establish the Anti-Bribery Regulations for the companies of the Group in line with Chinese laws and business customs.

Considering the situations in the different countries we operate within, we will increase the cooperation between the companies and divisions of the Group so that global compliance activities become more effective and efficient.

Preventing the Bribery of Suppliers

Nippon Kayaku conducts a sustainable procurement questionnaire with new clients and existing clients with large annual transactions. The questionnaire includes questions about preventing corruption in an effort to encourage suppliers to not be involved in corrupt acts.

➤ [Environmental and Social Considerations in the Supply Chain](#)

Consulting, Handling Incidents and Preventing Recurrence

◆ Whistleblower System

Nippon Kayaku has a Whistleblower System and, by establishing the Compliance Hotline, endeavors to prevent, detect at an early stage and correct wrongful acts.

The Compliance Hotline is available to all executives, employees (including contract employees and part-time employees), temporary employees and retirees (within one year of retirement) of the domestic companies of the Nippon Kayaku Group. The overseas companies of the Group use their own whistleblower systems.

Subjects for the report include violations of laws, wrongful acts, violations of the Nippon Kayaku Group's internal regulations such as the Charter of Conduct and the Code of Conduct, violations of corporate ethics rules and other matters. Human rights infringement, harassment, bribery, illegal transactions and comprehensive acts of corruption are also included. Whenever appropriate, the Compliance Hotline accepts reports and consultations on wrongful acts that occurred in the Nippon Kayaku Group's operations and matters that may result in wrongful acts.

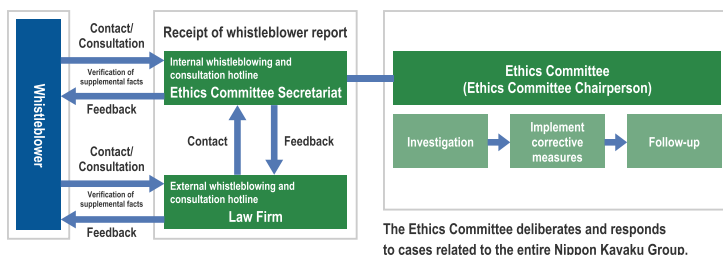
The Compliance Hotline set up offices within the Ethics Committee's administrative office (Compliance Department, Internal Control Management Division) and at an outside law firm so that whistleblowers can choose which office they would like to report and consult on problems to either anonymously or disclosing their name. Employees may submit whistleblowing reports by phone, e-mail, letter or in person (round the clock with the exception of whistleblowing over the phone or in person).

When a Compliance Hotline office receives a report or consultation, the Ethics Committee's administrative office discusses the need for an investigation and conducts an investigation if deemed necessary. If an investigation confirms a wrongful act, corrective actions and recurrence prevention measures will be swiftly taken. Subsequently, the Ethics Committee's administrative office informs results of the investigation and corrective actions to the whistleblower.

Our Whistleblower System ensures confidentiality and anonymity. The Guidelines for Handling Whistleblower Complaints explicitly ban any disadvantageous treatment of a whistleblower.

To make the Whistleblower System and Compliance Hotline offices better known throughout the Group, information is communicated via group training, e-learning programs, our internal portal site, posters at workplaces, the distribution of portable cards and other means.

Flow of Reporting and Consulting



Number of Reported Matters for the Past Five Years

In FY2022, sixteen reports and requests for consultation were received. The reports and requests for consultation received were addressed through fact checking, investigation and corrective action where necessary. None of these cases were found to be serious enough to affect our business operations. Through internal training and other opportunities, we will continue to work to make the Whistleblower System more widely known throughout the Group and encourage its use in an effort to prevent and detect wrongful acts at an early stage and ensure the prevention of their spread.

Nature of reports	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Workplace harassment (power harassment, sexual harassment, etc.)	Cases	4	8	6	2	7
Violation of company rules and etiquette	Cases	3	2	0	0	2
Labor/management relations	Cases	2	1	1	1	3
Others	Cases	0	0	0	1	4
Total	Cases	9	11	7	4	16

◆ Compliance Hotline for Suppliers

The Nippon Kayaku Group has established a Compliance Hotline for Suppliers to report acts in violation of laws and regulations. Please read items 1 through 5 and report an incident or seek advice via “6. Compliance Hotline for Suppliers” if you wish to do so.

- 1. Eligible hotline users**
All officers and employees of suppliers engaged in business transactions with the domestic Nippon Kayaku Group.
- 2. Subjects for a report or a consultation**
When any officer or employee of a Nippon Kayaku Group company in Japan is identified as engaging in, or having the intention to engage in, an illegal or unethical act.
- 3. Contact for reporting**
Ethics Committee administration office, Nippon Kayaku Co., Ltd. (Internal Control Management Division)
- 4. Requests for hotline users**
Hotline users should specify their full name and the name of their company/affiliation. We do accept Reports and consultations if the hotline user wishes to remain anonymous, but please be advised that this may hinder fact-checking and other investigations and prevent us from offering the hotline user a response, including regarding investigation findings and measures to prevent recurrence.
- 5. Protection of hotline users**
The personal information of hotline users will be used exclusively for matters related to an investigation and other steps necessary to look into the reported incident, and will be handled with the utmost care based on the Company’s [Personal Information Protection Policy](#). Hotline users will not be disadvantaged because of their submitting a report.
- 6. Reporting method**
Reports and consultations should be submitted via the [“Compliance hotline for suppliers.”](#)

Number of Reports and Consultations

The Compliance Hotline for Suppliers was set up in FY2021. The number of reports and requests for consultation was zero in FY2021 and one in FY2022. The reports and requests for consultation received were addressed through fact checking, investigation and corrective action where necessary. None of these cases were found to be serious enough to affect our business operations. We will sincerely listen to the opinions of our suppliers and work to increase the fairness and transparency of transactions.

Data

Disciplinary Action, Dismissal, Fines and Penalties Resulting from an Employee’s Violation of Our Anti-corruption Policy

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of violations of our anti-corruption policy	Non-consolidated	Cases	0	0	0	0	0
Disciplinary action and dismissal	Non-consolidated	Cases	0	0	0	0	0
Fines relating to acts of corruption	Non-consolidated	Yen	0	0	0	0	0
Application of penalties related to acts of corruption	Non-consolidated	Cases	0	0	0	0	0

Political Contributions

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Political contributions	Non-consolidated	Ten thousand yen	115	118	113	104	106

Commitment to Compliance Based on Nippon Kayaku Code of Practice

Establishment of Nippon Kayaku Code of Practice

It is incumbent upon pharmaceutical companies to consistently ensure high standards of ethics and transparency in their business activities, to establish relationships of trust with external stakeholders including medical, dental and pharmaceutical researchers and healthcare professionals, wholesalers, patient groups, etc., and to make efforts to ensure that optimal and ethical medical care is provided from the standpoint of patients.

In 2013, the Japan Pharmaceutical Manufacturers Association (JPMA) established the JPMA Code of Practice for all officers and employees of its member companies to follow in interacting with researchers, healthcare professionals, patient groups, etc., in line with the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) Code of Practice.

Nippon Kayaku established the Nippon Kayaku Code of Practice as a standard against which its officers and employees can determine whether their own acts are in keeping with the JPMA Code of Practice. By thus underscoring and firmly sharing our commitment to corporate ethics and compliance, which are the foundation of our business activities, we proceed with our business with a highly ethical mindset in adherence to the code.

Concrete Initiatives for Ensuring Compliance

Providing Information on Pharmaceuticals and Securing Transparency

The progress of medicine, pharmacy and medical engineering and enhancement of public health are built on our interactions with researchers and healthcare professionals and collaborations with patient groups and other bodies. We need to be accountable for such interactions and collaborations, ensuring that they are conducted ethically and in good faith. To this end, we annually disclose any funding we provide in relation to these acts on our website to ensure transparency of corporate activity information based on our own guidelines created in line with JPMA's "Guidelines for Transparency of Relationship between Pharmaceutical Companies and Medical Institutions, etc." and "Guidelines for Transparency of Relationship between Corporate Activities and Patient Organizations."

Creating, Verifying and Providing Information Materials for Pharmaceuticals, etc.

Information materials play an extremely important role in providing pharmaceutical information to ensure the appropriate use of prescription drugs. Their contents must therefore be based on scientific evidence and created and used in an accurate, fair and objective manner. For this reason, Nippon Kayaku has set forth a Review Procedure in compliance with such laws and regulations as the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices (hereinafter, "Pharmaceuticals and Medical Devices Act"), Guidelines for Provision of Sales Information on Prescription Drugs, JPMA Code of Practice and Guideline for Preparation of Product Overview for Prescription Drug, and tasks the Review Committee, which is comprised of expert committee members including in-house medical doctors, with conducting appropriate reviews. In addition, our internal monitoring system keeps activities for the provision of sales information in check and provides instructions to make sure that they do not deviate from the Guidelines for Provision of Sales Information on Prescription Drugs.

Providing Ongoing Education and Training to Employees

To execute ongoing corporate activities with a highly ethical mindset, it is imperative that all our officers and employees become versed in the Nippon Kayaku Code of Practice. In support of JPMA's initiative to promote understanding of its code, we set concrete goals to be pursued by each group and workplace with the aim of optimizing our corporate activities, and regularly implement education and training tailored for each business site.

Roles of Code Compliance Committee in Ensuring Adherence to Nippon Kayaku Code of Practice

Nippon Kayaku has in place Code & Compliance Committee, Pharmaceuticals Group (hereinafter, "the Committee") as a body for promoting compliance within Pharmaceuticals Group, and for building an internal system to ensure our compliance with related laws including the Pharmaceuticals and Medical Devices Act and Antimonopoly Act, government guidelines including the Guidelines for Provision of Sales Information on Prescription Drugs and voluntary industry standards including the Fair Competition Code concerning Restriction on Premium Offers in Ethical Pharmaceutical Drugs Marketing Industry and JPMA Code of Practice.

While striving to promote compliance within the, the Committee, pursuant to the Nippon Kayaku Code of Practice, aims to establish and revise the internal operating rules and procedures required for ensuring that our officers and employees comply with related laws and voluntary standards in their interactions with stakeholders, and to make sure that the rules and procedures are widely embraced by all and embedded in the corporate culture.

In the event that a serious violation of any law related to pharmaceuticals, the Guidelines for Provision of Sales Information on Prescription Drugs or any important code occurs, the Committee responds to the incident and discusses and determines measures to prevent recurrence. Moreover, when a violation of any code including the Guidelines for Transparency or noncompliance is identified, the Committee holds a meeting to discuss and determine measures to prevent recurrence.

Ensuring Compliance in Overseas Activities

When providing pharmaceutical information to healthcare professionals overseas or inviting healthcare professionals in Japan to attend lectures and conferences held overseas, or when a subsidiary in an overseas country assigns its non-Japanese licensees or agents to engage in activities in the applicable country based on a licensing or agency agreement, all individuals involved are expected to respect the Nippon Kayaku Code of Practice, and comply with the relevant laws of the applicable country and its pharmaceutical industry association code if there is one, or the IFPMA Code of Practice if there is not.

[Important Issues] Risk Management

Policy and Basic Approach

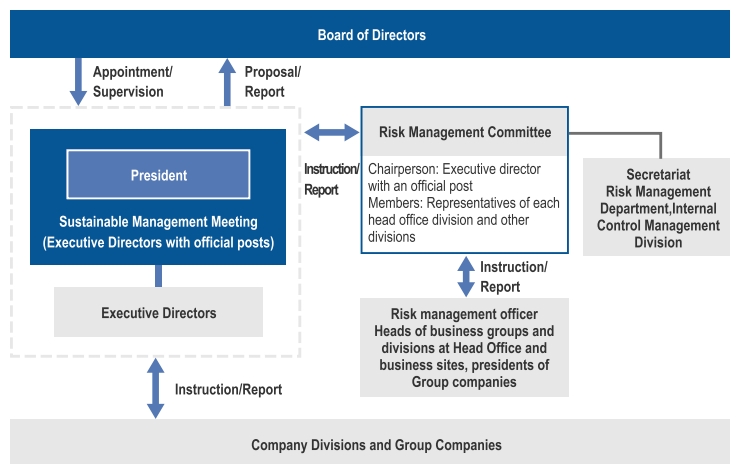
We are facing many different risks amid the continuously changing business environment and the growing complexity and uncertainty. The Nippon Kayaku Group works to prevent the manifestation of many different operational risks and seeks to minimize impact of risks by maintaining its production structure, properly securing raw materials and strengthening anti-disaster measures to ensure the continuity of business.

To ensure the restoration of operations within the targeted period after a disaster or large emergency occurs, our head office, divisions and plants have created BCP manuals and pushed forward with the development of BCP manuals for overseas offices.

System

The Nippon Kayaku Group established the Risk Management Committee to be a specialized committee under the Sustainable Management Meeting with the goals of preventing the manifestation of risks and minimizing the impact of risks. The Committee meets twice a year and as necessary.

Chaired by an Executive Director with an official post nominated by the President, the Risk Management Committee consists of representatives from business units' planning divisions and from departments of general administration divisions that do not belong to a business unit. The committee builds and manages a crisis management structure to prevent risks that may cause the Nippon Kayaku Group's corporate management and business activities to incur enormous damages, respond to emergencies and recover from damage after an emergency occurs. Important topics discussed by the Risk Management Committee are reported to the Sustainable Management Meeting and the Board of Directors for feedback.



Indicators

Key sustainability issues	Action plans	Indicators (KPI)	FY2025 Targets	FY2022 Results	FY2022 Topics for initiatives
Risk Management	<ul style="list-style-type: none"> Respond to various business-related risks and ensure business continuity by maintaining production systems, ensuring the appropriateness of raw materials, and strengthening measures against disasters 	Implementation rate for business, etc., risk control activities and top five risk control activities	100%	100%	<ul style="list-style-type: none"> Implemented Top 5 risk control activities at each factory of Nippon Kayaku (non-consolidated) and all Group companies (trends include increasing risks such as rising geopolitical risks, sharply rising raw material prices, and disruptions to the supply of raw materials) Conducted interviews regarding points considered to be important for the top 5 risks at two domestic factories and four overseas Group companies
		Number of BCP drills conducted	One or more per year	2 times	<ul style="list-style-type: none"> Domestic Group companies continued to use an emergency communication system introduced in FY2021 as a BCP drill in preparation for the occurrence of earthquakes BCP drills were conducted under local consulting and guidance of Chinese Group companies

Initiatives

Preventing Risks

◆ Risk Control Activities by Business Groups and Top Five Risk Control Activities

To identify and control important risks, the Nippon Kayaku Group implements division risk control and the top five risk control activities throughout the year as follows.

The division risk control activities encompass seven groups. From the perspective of the operation of business, these groups identify risks that may significantly affect business activities and discuss measures to address these risks.

The top five risk control activities cover the companies of the Nippon Kayaku Group, including plants, laboratories, pharmaceuticals branches and offices and overseas affiliates. For the activities, five risks that are especially important from the perspectives of the offices and business sites are selected and measures are discussed.

The risks identified by the groups and sites and measures to address them are reported to the Internal Control Management Division, the administrative office of the Risk Management Committee. The Internal Control Management Division comprehensively understands and analyzes risk trends. Decisions regarding important risks and measures to address them are made after discussion by the Risk Management Committee. Progress and activities are reported biannually to the Sustainable Management Meeting and the Board of Directors.

◆ Handling ESG Risks

The Nippon Kayaku Group sees a need to accurately understand the risks and opportunities involved in its sustainable management to mitigate risks, seize new business opportunities and leverage these opportunities for the growth of the business.

In 2022, the Nippon Kayaku Group disclosed information based on risks and opportunities relating to key sustainability issues and TCFD recommendations. We will seek to resolve environmental and social problems through our business operations in pursuit of the realization of a sustainable society and the continued improvement of corporate value.

We will continue to review risks and opportunities on a regular basis and seek to improve our information disclosure both qualitatively and quantitatively in an effort to properly keep up with the diversification of business activities and the changes in environmental and social issues.

➤ [Risks and Opportunities for Key Sustainability Issues](#)

➤ [Information Disclosure Based on the TCFD Recommendations](#)

◆ Information Security Initiatives

Nippon Kayaku usually protects corporate information and continues to implement information security initiatives in compliance with the Code of Conduct for information handling in the Nippon Kayaku Group Charter of Conduct and Code of Conduct. We strengthen information security throughout the Company by controlling and monitoring information security across the board on an ongoing basis and devising programs to prevent data leaks and illegal data acquisition by third parties. Based on the company-wide Corporate Information Management Regulations, all employees are periodically provided with information security training and each of our offices designates a corporate information manager to establish its own rules and regulations. In this way, we strive to increase every employee's awareness of information security.

As a measure against cyberattacks, all employees participated in two drills for defending against quasi-targeted e-mail attacks in FY2022. Subsequently, feedback about the results was provided to employees who also received tips for how to identify targeted e-mail attacks and to avoid risky behaviors like opening attached files to increase their awareness of information security. There were no cases falling under specific complaints concerning customer privacy violation or the loss of customer data in FY2022.

◆ Education and Training

As part of the activities to increase risk awareness and implement the PDCA cycle to mitigate risk, the Nippon Kayaku Group provides risk management education to all of its executives and employees (including contract employees and part-time employees) and temporary employees. Also, a separate risk management training session is organized for new hires, newly appointed managers and Japanese expatriate employees being assigned overseas.

› [Education and Training](#)

Actions to Take in the Event of an Emergency and Developing and Managing a Crisis Management System

◆ Risk Management System

We have established our Risk Management Regulations and BCP Manuals, among others, in preparation for risks that could have a serious impact on corporate activities in an effort to enhance our risk management system.

The Risk Management Regulations were set forth in FY2022 by modifying the Risk Management Manual, which was formulated in FY2000 with the aim of appropriately managing and addressing all kinds of risks surrounding the Nippon Kayaku Group.

◆ Business Continuity Plan (BCP)

Preparing BCP Manuals

As part of its policy, the Nippon Kayaku Group will work to restore the operations of its businesses within the target period after a disaster occurs. The Group instituted a cross-sectoral BCP project and all of its divisions and plants in Japan established BCP manuals. The overseas companies of the Nippon Kayaku Group are developing and improving their BCP manuals with the goal of facilitating the Nippon Kayaku Group's efforts to handle global risks.

BCP Training

Enabling an organization to quickly function as written in its BCP manual in the event of the materialization of a business continuity risk requires continuous training. In Japan, we conduct annual BCP drills and all executives and Audit & Supervisory Board members including the President participate in them. In FY2022, the Himeji Plant implemented a BCP drill mainly consisting of actions to address equipment damage and save lives in the event of an earthquake. The president, the chairperson of the Risk Management Committee, the manager and the employees of the Himeji Plant and the members of the Safety Systems Group participated in the BCP drill. They properly gathered information and made quick decisions, verifying the effectiveness of the business continuity plan. We will examine the findings and problems identified by the BCP drill and work to address them ahead of the next BCP drill.

A Group company in Wuxi, China conducted a BCP drill assuming the approach and passing of a typhoon that caused damage to the area. The BCP drill was guided by an outside consultant. The problems identified by the outside consultant have been provided via feedback for future training and improvements have been made accordingly, such as the correction of the BCP manual.

We will be holding more BCP drills based on various scenarios.

Others

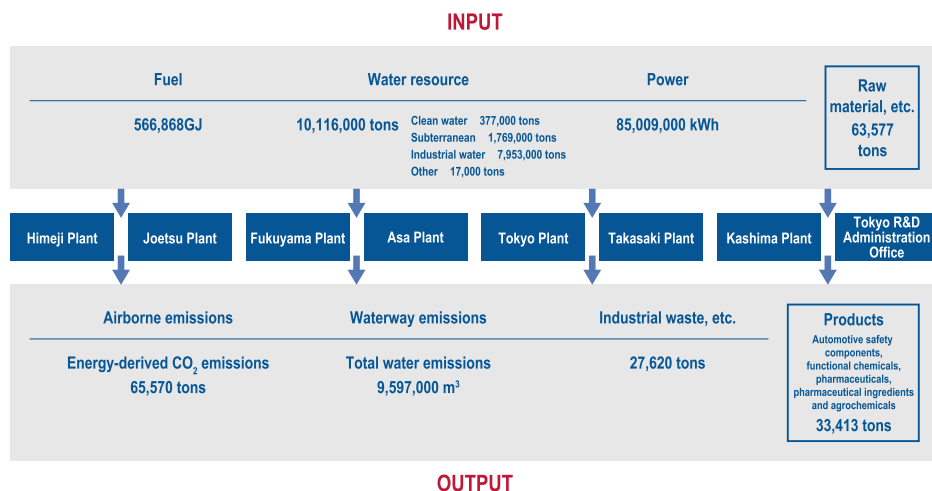
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ESG Data

Environment

FY2022 Material Flow in Business Activities (Relevant Organization: Nippon Kayaku Non-consolidated)



Greenhouse Gas Emissions (Scope1 and 2) (Non-consolidated)

Indicator	Scope	Unit	FY2018	FY2019	FY2020 ^{*2}	FY2021 ^{*2}	FY2022 ^{*2}
Energy-derived CO ₂ emissions	Non-consolidated	t-CO ₂ e	69,731	69,946	71,759	63,205	62,336
Non-energy derived CO ₂ emissions	Non-consolidated	t-CO ₂ e	2,202	2,409	2,301	2,617	2,243
N ₂ O	Non-consolidated	t-CO ₂ e	182	133	122	112	168
CH ₄	Non-consolidated	t-CO ₂ e	29	24	26	29	30
HFCs	Non-consolidated	t-CO ₂ e	5	0	12	3	109.5
Other fluorocarbons	Non-consolidated	t-CO ₂ e	756	405	34	336	622
PFCs	Non-consolidated	t-CO ₂ e	0	0	0	0	0
SF ₆	Non-consolidated	t-CO ₂ e	0	0	0	0	0
NF ₃	Non-consolidated	t-CO ₂ e	0	0	0	0	0
Total^{*1}	Non-consolidated	t-CO₂e	72,905	72,918	74,253	66,302	65,509

*1 Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

*2 Non-consolidated data for FY2020 onward include that for the Joetsu Plant.

Greenhouse Gas Emissions (Scope 1 and 2) (Consolidated)

Indicator	Scope	Unit	FY2018 ^{*3}	FY2019	FY2020	FY2021	FY2022
Energy-derived CO ₂ emissions	Consolidated	t-CO ₂ e	-	127,660	114,303	108,637	104,093
Non-energy derived CO ₂ emissions	Consolidated	t-CO ₂ e	-	2,421	2,339	2,658	2,269
N ₂ O	Consolidated	t-CO ₂ e	-	133	122	112	168
CH ₄	Consolidated	t-CO ₂ e	-	24	26	29	30
HFCs	Consolidated	t-CO ₂ e	-	0	16	7	138
Other fluorocarbons	Consolidated	t-CO ₂ e	-	611	1,011	794	1,409
PFCs	Consolidated	t-CO ₂ e	-	0	0	0	0
SF ₆	Consolidated	t-CO ₂ e	-	0	0	0	0
NF ₃	Consolidated	t-CO ₂ e	-	0	0	0	0
Total^{*1}	Consolidated	t-CO₂e	-	130,850	117,818	112,237	108,107
Scope1	Consolidated	t-CO ₂ e	-	36,170	35,319	37,560	35,490
Scope2 (market based)	Consolidated	t-CO ₂ e	-	94,680	82,499	74,679	72,617
Emissions per sales unit^{*2}	Consolidated		-	0.75	0.68	0.61	0.54

*1 Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

*2 Emissions (t-CO₂e) / Consolidated sales (million yen)

*3 Data collection on a consolidated basis started in FY2019.

Scope 3

Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Purchased goods and services	Consolidated	t-CO ₂ e	-	243,600	237,300	294,500	275,000
Capital goods	Consolidated	t-CO ₂ e	-	42,700	42,900	26,800	29,600
Fuel- and energy-related activities not included in scope 1 or scope 2	Consolidated	t-CO ₂ e	-	22,400	21,200	22,300	21,000
Transportation and distribution (upstream)	Consolidated	t-CO ₂ e	-	19,000	17,600	22,300	19,700
Waste generated in operations	Consolidated	t-CO ₂ e	-	26,500	28,800	31,800	16,200
Business travel	Consolidated	t-CO ₂ e	-	800	800	800	800
Employee commuting	Consolidated	t-CO ₂ e	-	2,500	2,400	2,400	2,400
Leased assets (upstream)	Consolidated	t-CO ₂ e	-	Included in scope 1 or scope 2			
Transportation and distribution (downstream)	Consolidated	t-CO ₂ e	-	1,000	1,000	1,600	1,500
Processing of sold products	Consolidated	t-CO ₂ e	-	-	-	-	-
Use of sold products	Consolidated	t-CO ₂ e	-	-	-	-	-
End-of-life treatment of sold products	Consolidated	t-CO ₂ e	-	15,400	23,200	26,400	23,000
Leased assets (downstream)	Consolidated	t-CO ₂ e	-	400	400	400	400
Franchises	Consolidated	t-CO ₂ e	N/A	N/A	N/A	N/A	N/A
Investments	Consolidated	t-CO ₂ e	N/A	N/A	N/A	N/A	N/A
Total[*]	Consolidated	t-CO₂e	-	374,300	375,600	429,300	389,600

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Energy Usage (Oil Equivalent)

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Manufacturing, R&D, and administrative divisions	Non-consolidated	1,000 kL	33,669	34,939	38,700	40,325	38,583

Energy Usage

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Non-renewable fuels purchased and consumed (A) (nuclear power, coal, oil, natural gas, etc.)	Non-consolidated	MWh	136,585	138,083	155,201	165,494	153,390
Non-renewable electricity purchased (B)	Non-consolidated	MWh	80,049	78,491	95,819	98,505	85,009
Steam, heat, cooling and other non-renewable energy purchased (C)	Non-consolidated	MWh	3,055	3,070	3,452	3,433	4,073
Renewable energy purchased or generated (D) (wind, photovoltaic, biomass, hydroelectric, geothermal, etc.)	Non-consolidated	MWh	60	58	59	57	162
Non-renewable energy sold (E) (electricity, heating, cooling)	Non-consolidated	MWh	0	0	0	0	0
Total non-renewable energy consumed (A+B+C-E)*	Non-consolidated	MWh	219,689	219,644	254,472	267,432	242,472

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Air Emissions

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Volatile organic compounds (VOCs)	Non-consolidated	tons	25.6	28.6	33.3	52.1	38.7
Dichloromethane	Non-consolidated	tons	3.9	4.9	4.0	3.6	3.2
Formaldehyde	Non-consolidated	tons	0.16	0.04	0.04	0.15	0.13
NOx	Non-consolidated	tons	8.2	9.1	7.5	7.7	8.3
SOx	Non-consolidated	tons	1.4	1.3	1.0	0.7	0.9
Dust	Non-consolidated	tons	0.6	0.9	0.5	0.5	0.4

Industrial Waste

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022	
Non-hazardous waste generated	Non-consolidated	tons	16,626	17,973	19,406	22,065	21,190	
Amount of general waste generated	Non-consolidated	tons	768	717	648	679	647	
Amount of industrial waste generated	Non-consolidated	tons	15,858	17,256	18,758	21,387	20,543	
Hazardous waste (= industrial waste under special control) generated	Non-consolidated	tons	4,865	5,231	5,925	6,503	6,431	
Specific hazardous industrial waste	Non-consolidated	tons	733	131	221	146	182	
Total*	Non-consolidated	tons	21,491	23,204	25,331	28,568	27,621	
Waste types	Sludge	Non-consolidated	tons	2,171	2,206	1,979	2,307	2,338
	Waste oil	Non-consolidated	tons	5,176	5,296	5,762	6,386	5,848
	Waste acid	Non-consolidated	tons	425	617	2,243	2,185	1,524
	Waste alkali	Non-consolidated	tons	12,105	13,399	13,377	15,784	16,064
	Waste plastic	Non-consolidated	tons	557	642	954	888	886
	Other	Non-consolidated	tons	1,057	1,044	1,015	1,019	961
Amount of resources recovered	Non-consolidated	tons	17,493	19,584	20,449	23,290	23,963	
Amount of landfill waste	Non-consolidated	tons	870	847	404	298	233	
Recycling rate	Non-consolidated	%	81.4	84.4	81.3	82.3	85.0	

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Control of Wastewater

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
COD	Non-consolidated	tons	155.3	168.7	150.6	153.6	171.8
Total phosphorus emissions	Non-consolidated	tons	1.6	10.6	3.2	11.2	7.1
Total nitrogen emissions	Non-consolidated	tons	93.2	74.8	83.2	73.5	114.0
SS*	Non-consolidated	tons	45.3	46.0	48.4	49.9	47.5

* SS: Suspended solids. SS is a water quality indicator generally referring to insoluble substances of 2 mm or less in diameter suspended in water. Made up of organic and inorganic matter and originating from decayed animal and plant sources such as plankton and algae, sediment and silt, sewage, factory effluent, etc. The increase in SS worsens transparency, and influences underwater photosynthesis by preventing light penetration.

PRTR Substances

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Emissions of PRTR substances	Atmosphere	Non-consolidated tons	17.1	18.9	16.8	25.2	38.7
	Water bodies	Non-consolidated tons	11.4	13.3	9.1	14.7	51.4
	Soil	Non-consolidated tons	0	0	0	0	0
	Total*	Non-consolidated tons	28.5	32.2	25.9	39.9	90.1

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Usage of Water Resources (Non-consolidated)

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Amount of water intake	Clean water	Non-consolidated 1,000 m ³	348	356	390	381	377
	Surface water (Industrial water)	Non-consolidated 1,000 m ³	6,534	7,521	7,874	8,098	7,953
	Groundwater (Well water)	Non-consolidated 1,000 m ³	1,624	2,283	1,828	1,848	1,769
	Other (reservoirs, rainwater storage)	Non-consolidated 1,000 m ³	0	0	0	0	17
	Total*¹	Non-consolidated 1,000 m³	8,505	10,160	10,092	10,327	10,116
	Water withdrawals in water stressed areas ²	Non-consolidated 1,000 m ³	0	0	0	0	0
Amount of water discharged ³	Sea area	Non-consolidated 1,000 m ³	7,081	7,374	7,014	7,142	6,726
	River	Non-consolidated 1,000 m ³	1,980	2,677	2,395	2,408	2,350
	Sewerage networks	Non-consolidated 1,000 m ³	524	526	511	460	531
	Total*¹	Non-consolidated 1,000 m³	9,585	10,577	9,919	10,011	9,607
Amount of water recycled for use	Non-consolidated 1,000 m ³	0	0	0	0	0	
Rate of water recycled	Non-consolidated %	0	0	0	0	0	

*1 Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

*2 The Aqueduct Water Risk Atlas is used to verify that all bases have a "water stress" rating of 3 or less on a 5-point scale.

*3 Water returned to the source with the same or better quality than before withdrawal

Usage of Water Resources (Consolidated)

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Amount of water intake	Clean water	Consolidated 1,000 m ³	813	706	763	805	754
	Surface water (Industrial water)	Consolidated 1,000 m ³	6,815	7,758	7,897	8,138	8,003
	Groundwater (Well water)	Consolidated 1,000 m ³	1,733	2,388	1,918	1,947	1,819
	Other (reservoirs, rainwater storage)	Consolidated 1,000 m ³	0	0	0	68	81
	Total*¹	Consolidated 1,000 m³	9,361	10,852	10,578	10,958	10,657
	Water withdrawals in water stressed areas ²	Consolidated 1,000 m ³	30	36	23	33	29
Amount of water discharged ³	Sea area	Consolidated 1,000 m ³	7,081	7,374	7,014	7,142	6,726
	River	Consolidated 1,000 m ³	1,985	2,682	2,400	2,410	2,351
	Sewerage networks	Consolidated 1,000 m ³	995	928	974	987	910
	Total*¹	Consolidated 1,000 m³	10,061	10,984	10,388	10,539	9,987
Amount of water recycled for use	Consolidated 1,000 m ³	0	0	0	0	0	
Rate of water recycled	Consolidated %	0	0	0	0	0	

*1 Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

*2 Locations with a "water stress" rating of 4 or higher on a 5-point scale using the Aqueduct Water Risk Atlas are considered water-stressed areas.

*3 Water returned to the source with the same or better quality than before withdrawal

Results of Survey on Water Stress at Nippon Kayaku's Manufacturing and, Research and Development Bases (FY2022)*¹

Region / country	Unit	Water usage by water stress level				
		High	High to medium	Medium	High	Low
Asia	Japan 1,000 m ³ (number of locations)	0	0	2,715 (6)	7,403 (4)	0
	China 1,000 m ³ (number of locations)	0	13 (1)	0	0	320 (3)
	Malaysia 1,000 m ³ (number of locations)	0	0	0	0	56 (1)
Europe	Czech Republic 1,000 m ³ (number of locations)	0	0	0	13 (1)	0
	Netherlands 1,000 m ³ (number of locations)	0	0	0	0	3 (1)
	UK 1,000 m ³ (number of locations)	0	1 (1)	0	0	0
North and Central America	USA 1,000 m ³ (number of locations)	0	0	7 (1)	111 (1)	0
	Mexico 1,000 m ³ (number of locations)	15 (1)	0	0	0	0
Total*²	1,000 m³ (number of locations)	15 (1)	14 (2)	2,722 (7)	7,527 (6)	379 (5)

*1 We conduct surveys using Aqueduct Water Risk Atlas.

*2 Totals may not match due to rounding.

Environmental Accounting

Category	Scope	Unit	FY2018		FY2019		FY2020		FY2021		FY2022			
			Amount invested	Expenses	Amount invested	Expenses	Amount invested	Expenses	Amount invested	Expenses	Amount invested	Expenses		
Inside business areas	Pollution prevention	Air pollution prevention	Non-consolidated	Million yen	85.9	98.3	40.2	83.9	20.9	97.0	37.1	124.2	68.1	141.9
		Water pollution prevention	Non-consolidated	Million yen	40.6	223.9	70.5	148.0	109.7	174.8	266.9	178.9	206.7	186.0
		Underground seepage prevention	Non-consolidated	Million yen	52.0	6.0	13.4	10.0	5.5	3.7	4.9	5.6	7.2	5.1
		Noise and vibration prevention	Non-consolidated	Million yen	4.3	6.1	2.4	1.8	17.2	6.2	6.0	0.0	6.0	0.0
		Other	Non-consolidated	Million yen	-	190.6	-	386.0	-	435.0	-	394.7	-	7.0
	Global environmental protection	Non-consolidated	Million yen	102.9	8.1	40.3	20.1	172.6	100.4	244.6	92.3	236.6	63.5	
Resource recycling	Non-consolidated	Million yen	3.9	565.3	30.9	576.7	106.6	709.8	111.2	772.2	5.1	805.9		
Upstream / downstream	Containers and packaging recycling outsourcing	Non-consolidated	Million yen	-	1.0	-	1.0	-	0.4	-	0.3	-	0.3	
	Sewage processing	Non-consolidated	Million yen	-	90.9	-	90.3	-	78.7	-	75.2	-	66.9	
Management activity	System development and operation	Non-consolidated	Million yen	-	100.4	-	87.4	-	105.3	-	174.9	-	93.3	
	Environmental impact monitoring	Non-consolidated	Million yen	-	41.8	-	38.5	-	42.5	-	38.3	-	38.4	
	Information disclosure	Non-consolidated	Million yen	-	8.7	-	5.6	-	6.3	-	6.3	-	6.3	
	Education, training, and other	Non-consolidated	Million yen	-	88.6	-	80.1	-	59.4	-	59.3	-	59.6	
	Greening	Non-consolidated	Million yen	-	97.5	1.0	58.0	-	70.0	0.5	43.9	0.0	70.0	
R&D	Non-consolidated	Million yen	-	178.1	-	81.7	-	57.2	-	39.2	-	158.3		
Social activity	Non-consolidated	Million yen	-	8.7	-	9.7	-	8.9	-	9.0	-	9.8		
Environmental damage	Non-consolidated	Million yen	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0		
Total*	Non-consolidated	Million yen	289.6	1,712.0	198.7	1,678.9	432.5	1,955.5	670.8	2,014.5	529.7	2,054.0		

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Economic Effects from Environmental Protection Measures

Targets of evaluation of effects	Major economic effects	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022		
Inside business areas effects	Pollution control effect	Air pollution prevention	Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0	
		Water pollution prevention	Non-consolidated	Million yen	0.0	0.0	0.0	3.5	0.0	
		Reduction of the amount of imposition on pollution load	Non-consolidated	Million yen	0.1	0.4	0.4	0.6	0.4	
	Global environment protection effect	Noise and vibration prevention		Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0
			Global warming prevention and energy conservation	Non-consolidated	Million yen	53.5	55.9	112.8	80.4	97.4
		Waste and recycling	Waste reduction	Non-consolidated	Million yen	2.1	9.5	9.5	4.1	2.6
Sale of recycled resources	Non-consolidated		Million yen	12.8	12.9	10.5	17.3	25.9		
Upstream / downstream effects	Containers recycling		Non-consolidated	Million yen	6.3	0.0	0.0	7.0	40.9	
			Non-consolidated	Million yen	69.6	62.6	73.6	54.2	38.3	
Other		Non-consolidated	Million yen	0.0	0.0	0.0	0.0	0.0		
Total*		Non-consolidated	Million yen	144.4	141.3	206.8	167.1	205.5		

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Environment-related Capital Investments

Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Air pollution prevention equipment	Non-consolidated	Million yen	85.9	40.2	20.9	37.1	68.1
Water pollution prevention equipment	Non-consolidated	Million yen	40.6	70.5	109.7	266.9	206.7
Underground seepage prevention equipment	Non-consolidated	Million yen	52.0	13.4	5.5	4.9	7.2
Noise and vibration prevention equipment	Non-consolidated	Million yen	4.3	2.4	17.2	6.0	6.0
Industrial waste processing equipment	Non-consolidated	Million yen	3.9	30.9	106.6	111.2	5.1
Plant greening	Non-consolidated	Million yen	0.0	1.0	1.8	0.5	3.3
Energy conservation and global warming prevention	Non-consolidated	Million yen	102.9	40.3	172.6	244.6	236.6
Total*	Non-consolidated	Million yen	289.6	198.7	434.3	671.3	533.0

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

Safety- & Health-related Capital Investments

Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Equipment aging measures	Non-consolidated	Million yen	327.9	469.0	292.9	490.9	245.0
Safety and work environment measures	Non-consolidated	Million yen	164.8	165.3	171.4	171.4	86.6
Explosion, fire and leakage measures	Non-consolidated	Million yen	12.8	39.4	9.2	14.1	60.6
Earthquake and other natural disasters measures	Non-consolidated	Million yen	11.0	2.6	51.4	4.4	6.5
Other	Non-consolidated	Million yen	34.9	4.0	4.5	6.4	32.0
Total*	Non-consolidated	Million yen	551.4	680.3	529.4	687.1	430.7

* Value for each item is rounded off, which often results in an inconsistency between the total value indicated and the aggregate of all the relevant items.

ISO14001 Certification

Business site	Certification date	Certification body	Certification number
Himeji Plant	March 1999	JIA-QA	JE0054H
Joetsu Plant (including logistics center)	August 2002	SGS	JP15/071413
Fukuyama Plant	April 1999	JCQA	JCQA-E-0062
Asa Plant	September 1998	JCQA	JCQA-E-0987
Tokyo Plant	December 1998	JCQA	JCQA-E-0036
Takasaki Plant	January 2001	JCQA	JCQA-E-0101
Kashima Plant	March 1999	JCQA	JCQA-E-0046
Kayaku Safety Systems Europe	December 2002	BVCZ	250302-2017-AE-CZS-RvA
Kayaku Safety Systems (Huzhou)	June 2016	SNQA	42144
Kayaku Safety Systems de Mexico	June 2023	LRQA	00041092
Kayaku Safety Systems Malaysia	April 2017	SGS	MY17/02395
WUXI POLATECHNO OPTICS	April 2006	UCC	02420E31011518R2M
KAYAKU CHEMICAL (WUXI)	August 2006	UCC	02421E32060755R0M
WUXI ADVANCED KAYAKU CHEMICAL	July 2007	CQC	00121E33375R4M/3200
Coverage ratio*			70%

* Rate of ISO 14001-certified manufacturing facilities owned by Nippon Kayaku and its consolidated subsidiaries.

* The coverage of ISO 14001-certified manufacturing facilities of Nippon Kayaku on a non-consolidated bases is 100%.

Number of Violations of Environmental Laws and Regulations / Environment-related Accidents

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of violations of environmental laws and regulations	Consolidated	Cases	0	0	0	0	0
Of which, violation of standards/regulations related to water quality and quantity	Consolidated	Cases	0	0	0	0	0
Number of serious environment-related accidents	Consolidated	Cases	0	0	0	0	0
Amount of fines and penalties for violations of laws and regulations and serious environment-related accidents	Consolidated	Yen	0	0	0	0	0

Social

Quality

◆ Business Sites with Quality Management System Certification

Business site	ISO9001	ISO13485	IATF16949	ISO22000
Himeji Plant				
Safety Systems Group			●	
Development Division				
Polatechno Division				
Joetsu Plant	●			
WUXI POLATECHNO OPTICS				
Fukuyama Plant				
Asa Plant				
Tokyo Plant	●			
Fine Chemicals Business Unit				
Fine Chemicals R & D Laboratories				
Taiwan Nippon Kayaku Co., Ltd. (Fine Chemicals Business Unit)				
Takasaki Plant				
Pharmaceuticals Group	●	●		
Pharmaceutical Research Laboratories				
Kashima Plant				
Agrochemicals Division	●			
Agrochemicals Laboratories				
Kayaku Safety Systems Europe			●	
Kayaku Safety Systems (Huzhou)			●	
Kayaku Safety Systems de Mexico			●	
Kayaku Safety Systems Malaysia			●	
MOXTEK	●			
Dejima Optical Films	●			
RaySpec	●			
KAYAKU CHEMICAL (WUXI)	●			
KAYAKU Advanced Materials	●	●		
WUXI ADVANCED KAYAKU CHEMICAL	●			
NIPPONKAYAKU FOOD TECHNO	●			●

◆ GMP-related Certification

Business site	Major countries
Takasaki Plant	Japan, The United States, Europe

Occupational Health and Safety

◆ Sites That Have Acquired the ISO45001 Occupational Health and Safety Management System Certification

Business site	Certification date	Certification body	Certification number
Kayaku Safety Systems (Huzhou) Co., Ltd.	January 2023	NQA	132021
Coverage ratio*			5%

* Rate of manufacturing facilities possessed by us and our consolidated subsidiaries that have acquired ISO45001 certification

Non-certified sites also have an occupational health and safety management system of the same level as ISO45001.

◆ Occupational Accidents

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Serious accidents, including work-related deaths	Non-consolidated	Cases	0	0	0	0	0
	Non-consolidated, subcontracting companies	Persons	0	0	0	0	0
Work-related fatalities	Domestic group companies	Persons	0	0	0	1	0
	Domestic group companies and subcontracting companies	Persons	0	0	0	0	0
	Overseas group companies	Persons	1	0	0	0	0
	Overseas group companies and subcontracting companies	Persons	0	0	0	0	0
	Occupational accident frequency rate	Non-consolidated	*1	0.43 (2cases)	0.4 (2cases)	0.18 (1case)	0.19 (1case)
	Non-consolidated, subcontracting companies	*1	4.47 (1case)	0	0	0	0
Occupational accident severity rate	Non-consolidated	*2	0.012	0.031	0	0	0
Violations of occupational health and safety-related regulations and codes	Non-consolidated	Cases	0	0	0	0	0

*1 Number of industrial injuries per million cumulative actual working hours

*2 Cumulative number of lost working days for reasons of industrial injuries per thousand cumulative actual working hours

◆ Employee Health

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Rate of employees receiving regular health checkups*	Non-consolidated	%	100	100	100	100	100
Rate of employees receiving stress checks*	Non-consolidated	%	97.5	97.3	97.2	98.1	97.9
Rate of employees with high stress levels	Non-consolidated	%	10.0	9.6	9.5	10.6	10.0
Amount invested in mental health-related initiatives	Non-consolidated	Million yen	10.0	10.8	11.0	13.0	12.6

* Excluding employees on temporary leave

Employees

◆ Employee Composition (consolidated)

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Full-time employees	Total	Consolidated	Persons	5,814	5,769	5,664	5,703	5,782

◆ Employee Composition

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Full-time employees	Male	Non-consolidated	Persons	1,749	1,730	1,751	1,754	1,748
	Female	Non-consolidated	Persons	330	323	326	330	333
	Total	Non-consolidated	Persons	2,079	2,053	2,077	2,084	2,081
	Rate of females	Non-consolidated	%	15.8	15.7	15.6	15.8	16.0
Number of temporary employees*		Non-consolidated	Persons	554	613	614	606	613
Contract employees	Male	Non-consolidated	Persons	-	-	5	19	24
	Female	Non-consolidated	Persons	-	-	14	28	44
	Total	Non-consolidated	Persons	-	-	19	47	68

* Average number of temporary employees per year

◆ Manager Composition

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Under general manager	Male	Non-consolidated	Persons	318	315	359	321	412
	Female	Non-consolidated	Persons	35	36	24	38	42
	Total	Non-consolidated	Persons	353	351	383	359	454
	Rate of females	Non-consolidated	%	9.9	10.2	6.2	10.5	9.3
General manager and above	Male	Non-consolidated	Persons	138	142	74	68	66
	Female	Non-consolidated	Persons	3	6	4	4	5
	Total	Non-consolidated	Persons	141	148	78	72	71
Overall	Male	Non-consolidated	Persons	456	457	468	476	478
	Female	Non-consolidated	Persons	38	42	44	47	47
	Total	Non-consolidated	Persons	494	499	512	523	525
	Rate of females	Non-consolidated	%	7.7	8.4	8.6	9.0	9.0

◆ Age

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
By age group	20s and under	Non-consolidated	Persons	422	402	394	376	362
	30s	Non-consolidated	Persons	569	580	579	575	578
	40s	Non-consolidated	Persons	576	582	576	585	589
	50s	Non-consolidated	Persons	505	497	523	547	498
	60s and over	Non-consolidated	Persons	7	8	5	1	1
Average age	Male	Non-consolidated	Age	40.0	39.7	39.8	40.2	40.4
	Female	Non-consolidated	Age	41.6	42.3	42.6	42.8	42.9
	Total	Non-consolidated	Age	40.2	41.0	40.3	40.6	40.8

◆ Continuous Service

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Average length of service	Male	Non-consolidated	Years	14.4	14.1	14.2	14.5	14.4
	Female	Non-consolidated	Years	15.6	16.2	16.5	16.6	16.6
	Total	Non-consolidated	Years	14.6	15.2	14.6	14.9	15.1

◆ Freedom of Association

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Union members ^{*1}	Non-consolidated ^{*3}	Persons	1,762	1,871	1,753	1,695	1,687
Rate of union members ^{*2}	Non-consolidated ^{*3}	%	100	100	100	100	100

*1 Data as of March 31 of each fiscal year.

*2 Number of union members / number of eligible people (excluding those in managerial positions and specified by agreement)

*3 Includes some affiliates.

Diversity

◆ Recruitment

Indicator	Category	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
New employees (new graduates) ¹	Male	Non-consolidated	Persons	59	60	49	41	37
	Female	Non-consolidated	Persons	5	4	8	7	6
	Total	Non-consolidated	Persons	64	64	57	48	43
	Rate of females	Non-consolidated	%	7.8	6.2	14.0	14.5	14.0
New employees (mid-career hires) ²	Male	Non-consolidated	Persons	27	35	28	32	45
	Female	Non-consolidated	Persons	3	3	6	7	10
	Total	Non-consolidated	Persons	30	38	34	39	55
	Rate of females	Non-consolidated	%	10.0	7.8	17.6	17.9	18.2

¹ Number of people who joined the company in April of the following year

² Number of people who joined the company between April and March of the following year

◆ Rate of Employees with Disabilities

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Rate of employees with disabilities	Non-consolidated	%	1.82	1.97	1.90	1.99	1.98
(Statutory minimum rate)		%	2.20	2.20	2.20	2.30	2.30

◆ Rehiring of Retired Employees

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Rehiring of retired employees	Non-consolidated	Persons	42	61	42	22	29
Rehiring rate of retired employees	Non-consolidated	%	82.3	89.7	95.4	84.6	85.2

Work-life Balance

◆ Work Hours

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Total annual working hours per employee	Non-consolidated	Hours	1,919	1,911	1,885	1,911	1,875
Average overtime per month	Non-consolidated	Hours	13.3	12.7	11.3	12.7	13.6

◆ Paid Leave

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Average number of days of annual paid leave taken in a year	Non-consolidated	Days	11.3	11.1	12.2	11.1	12.0
Rate of annual paid leave days taken	Non-consolidated	%	61.1	60.1	65.8	59.8	63.7

◆ Childcare

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Employees who started maternity leave*1	Non-consolidated	Persons	8	13	13	11	22
Employees who started parental leave*1	Male	Non-consolidated Persons	3	5	11	9	62
	Female	Non-consolidated Persons	8	13	13	11	22
Rate of employees taking childcare leave*2	Male	Non-consolidated %	7	11.9	31.4	27.2	69.6
	Female	Non-consolidated %	100	100	100	100	100
Return to work rate after taking maternity/parental leave	Male	Non-consolidated %	100	100	100	100	100
	Female	Non-consolidated %	100	100	100	100	100
Retention rate of employees after taking maternity/parental leave	Male	Non-consolidated %	100	100	100	100	100
	Female	Non-consolidated %	100	100	100	100	100
Employees working shorter hours for childcare	Male	Non-consolidated Persons	2	2	0	1	2
	Female	Non-consolidated Persons	26	31	43	42	48

*1 Excluding the employees who took leave spanning multiple fiscal years

*2 The rate in 2022 was calculated using the method in Rate of employees taking childcare leave or leave for childcare purposes (Paragraph 4, Item 2, Article 71)

◆ Nursing Care

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Days of nursing leave taken	Non-consolidated	Persons	1	1	0	0	0
Employees using nursing leave system	Non-consolidated	Persons	1	1	1	0	2

◆ Salary

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Average annual salary	Male	Non-consolidated Thousand yen	7,862	7,526	7,423	7,683	8,003
	Female	Non-consolidated Thousand yen	6,155	6,119	6,133	6,366	6,707
	Total	Non-consolidated Thousand yen	7,577	7,307	7,224	7,477	7,801

◆ Employee Turnover

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Voluntary retirement	Non-consolidated	Persons	47	37	41	48	50
Employee turnover rate	Non-consolidated	%	2.1	1.7	1.8	2.1	2.4
Rate of employee turnover due to voluntary retirement	Non-consolidated	%	2.1	1.7	1.8	2.1	2.4
Employee turnover within three years*	Non-consolidated	Persons	6	5	7	7	4
Rate of employee turnover within three years	Non-consolidated	%	4	3	4	4	2

* Number of employees leaving the company within their first three years, among new graduates hired in each fiscal year

◆ Transfers

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Transfers	Non-consolidated	Persons	0	2	1	2	3

Human Resources Development

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Training hours per full-time employee	Non-consolidated	Hours	-	-	14	13	15
Total training hours	Non-consolidated	Hours	-	-	29,156	27,092	31,045
Amount invested in education and training per full-time employee	Non-consolidated	Yen	87,195	76,122	35,706	66,606	83,002

Research and Development

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
R&D expenses	Consolidated	Billion yen	12.5	11.0	12.4	13.0	13.3
Rate of R&D expenses to net sales	Consolidated	%	7.2	7.3	6.3	7.2	7.0

Social Contribution Activities

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Spending on social contribution activities	Non-consolidated	Million yen	179	254	146	154	149
Of which, total amount of donations	Non-consolidated	Million yen	144	222	114	123	120
Of which, other than the above	Non-consolidated	Million yen	34	31	32	31	29

Governance

Directors Composition *

Indicator	Scope		Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Directors	Inside directors	Male	Persons	7	7	7	6	6
		Female	Persons	0	0	0	0	0
		Total	Persons	7	7	7	6	6
	Outside (independent) directors	Male	Persons	2 (2)	2 (2)	3 (3)	3 (3)	3 (3)
		Female	Persons	0	0	0	0	0
		Total	Persons	2 (2)	2 (2)	3 (3)	3 (3)	3 (3)
Altogether (independent)		Persons	9 (2)	9 (2)	10 (3)	9 (3)	9 (3)	
Average tenure			Years	2.4	2.0	2.7	3.0	4.0
Rate of independent outside directors (actual)			%	22	22	30	33	33
Rate of female directors			%	0	0	0	0	0
Executive directors			Persons	7	7	7	6	6

* Data as of the closing of the general meeting of shareholders held in June of each fiscal year

Audit & Supervisory Board Composition *

Indicator	Scope		Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Audit & supervisory board members	Inside audit & supervisory board members	Male	Persons	2	2	2	1	1
		Female	Persons	0	0	0	1	1
		Total	Persons	2	2	2	2	2
	Outside (independent) audit & supervisory board members	Male	Persons	3 (2)	3 (2)	3 (2)	3 (2)	3 (3)
		Female	Persons	0	0	0	0	0
		Total	Persons	3 (2)	3 (2)	3 (2)	3 (2)	3 (3)
Altogether (independent)		Persons	5 (2)	5 (2)	5 (2)	5 (2)	5 (3)	
Average tenure			Years	1.6	1.8	2.8	3.0	4.0
Rate of independent outside audit & supervisory board members (actual)			%	40	20	40	40	60
Rate of female audit & supervisory board members			%	0	0	0	20	20

* Data as of the closing of the general meeting of shareholders held in June of each fiscal year

Number of Committee Meetings

	Frequency	Number of times held				
		FY2018	FY2019	FY2020	FY2021	FY2022
Board of Directors Meeting	Once a month	14	14	14	14	14
Nomination and Remuneration Advisory Committee	As needed	-	-	3	5	6
Sustainable Management Meeting	Once a week	48	50	51	48	50
Executive Directors Meeting	Once per quarter	4	4	4	4	4
Management Strategy Meeting	Twice a year	2	2	2	2	2
Audit & Supervisory Board	Once a month	12	12	12	12	12
Ethics Committee	Twice a year	2	2	2	2	2
Risk Management Committee	Twice a year	2	2	2	2	2
Environment, Safety, Quality Management Committee	Twice a year	2	2	2	2	2
Research & Development Management Committee	Twice a year and convened by the chairperson as needed	1	1	1	3	2

* Data from April to March of each FY

Board of Directors' Attendance at Committee Meetings (FY2022)*

Position	Name	Attendance at the Board of Directors meeting	Attendance at the Nomination and Remuneration Advisory Committee
Member of the Board President and Representative Director	Atsuhiko Wakumoto	14/14 times	6/6 times
Member of the Board Representative Executive Vice President	Tomoo Shibuya	14/14 times	-
Member of the Board	Hiroshi Mikami	14/14 times	6/6 times
Member of the Board	Yoshitsugu Ishida	14/14 times	-
Member of the Board	Kazuhito Koizumi	14/14 times	-
Member of the Board	Masatomi Akezuma	14/14 times	-
Member of the Board Outside Director (Independent)	Yo Ota	12/14 times	4/6 times
Member of the Board Outside Director (Independent)	Yasuyuki Fujishima	14/14 times	6/6 times
Member of the Board Outside Director (Independent)	Seiichi Fusamura	14/14 times	6/6 times
Average attendance		98.4%	93.3%

* Data from April 2022 to March 2023

Audit & Supervisory Board Members' Attendance at Committee Meetings (FY2022)*

Position	Name	Attendance at the Board of Directors meeting	Attendance at the Audit & Supervisory Board meeting
Standing Audit & Supervisory Board Member	Akihiro Kojima	14/14 times	12/12 times
Full-time Audit & Supervisory Board Member	Megumi Machida	14/14 times	12/12 times
Outside Audit & Supervisory Board Member	Katsuji Higashi	14/14 times	12/12 times
Outside Audit & Supervisory Board Member	Yasuhiro Osaki	10/14 times	9/12 times
Outside Audit & Supervisory Board Member	Ichiro Wakasa	11/11 times	10/10 times
Average attendance		94.0%	94.8%

* Data from April 2022 to March 2023

Officers' Remuneration *

Category	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Directors (excluding outside directors)	Total remuneration	443	443	449	410	382
	Number of officers	9	9	7	8	6
Audit & supervisory board members (excluding outside audit & supervisory board members)	Total remuneration	44	44	44	45	45
	Number of officers	2	3	2	3	2
Outside officers	Total remuneration	40	40	47	55	57
	Number of officers	6	5	6	6	7
Total	Million yen	527	527	540	510	484

* The above data for the number and remuneration of directors and audit & supervisory board members include that for those who resigned at the time of closing of the ordinary general meeting of shareholders. No outside officers receive officers' remuneration from Nippon Kayaku's subsidiaries.

Remuneration to Financial Auditors (Consolidated)

Indicator	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Remuneration for audit certification	Million yen	96	102	89	80	73
Remuneration for other than the above	Million yen	0	1	0	0	0
Total	Million yen	96	103	89	80	73

Number of Whistleblowing Reports

Nature of reports	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Workplace harassment (power harassment, sexual harassment, etc.)	Cases	4	8	6	2	7
Violations of company rules and etiquette	Cases	3	2	0	0	2
Labor/management relations	Cases	2	1	1	1	3
Other	Cases	0	0	0	1	4
Total	Cases	9	11	7	4	16

Disciplinary Action, Dismissal, Fines and Penalties Resulting from an Employee's Violation of our Anti-corruption Policy

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Number of violations of our anti-corruption policy	Non-consolidated	Cases	0	0	0	0	0
Disciplinary action and dismissal	Non-consolidated	Cases	0	0	0	0	0
Fines relating to acts of corruption	Non-consolidated	Yen	0	0	0	0	0
Application of penalties related to acts of corruption	Non-consolidated	Cases	0	0	0	0	0

Political Contributions

Indicator	Scope	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Political contributions	Non-consolidated	Ten thousand yen	115	118	113	104	106

Information Security (TISAX) Certified Business Site for the Automotive Industry Supply Chain

Business site	Certification date	Certification body	Certification number
Kayaku Safety Systems Europe	January 2023	DNV	SW215F
Kayaku Safety Systems de Mexico	January 2023	TUV NORD DE MEXICO	S6485M

Categories of Shares Issued (as of March 31, 2023)

Category	Number of shares	Number of voting rights	Notes
Non-voting shares	-	-	-
Shares with restricted voting rights (treasury shares, etc.)	-	-	-
Shares with restricted voting rights (other)	-	-	-
Voting shares (treasury shares, etc.)	Ordinary shares: 4,727,000 (treasury shares)	-	-
	Ordinary shares: 28,000 (cross-held shares)	-	-
Voting shares (other)	Ordinary shares: 165,559,700	1,655,597	-
Shares less than one unit*	Ordinary shares: 188,870	-	-
Total number of shares issued	170,503,570	-	-
Total number of voting rights	-	1,655,597	-

* Shares less than one unit include 39 treasury shares held by Nippon Kayaku.

Independent Third-party Assurance Report

SUSA

Sustainability Accounting Co., Ltd.

Independent Assurance Statement

August 24, 2023

Mr. Atsuhiko Wakumoto
President
Nippon Kayaku Co., Ltd.

1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by Nippon Kayaku Co., Ltd., (“the Company”) to provide limited assurance on the Greenhouse Gas (GHG) emissions during the fiscal year 2022, that were 35.5 thousand t-CO₂ for Scope1, 72.6 thousand t-CO₂ for Scope2 (market-based) and 390 thousand t-CO₂e for Scope3 (categories 1, 2, 3, 4, 5, 6, 7, 9, 12, 13). The purpose of this process is to express our conclusion on whether the GHG emissions were calculated in accordance with the Company’s standards. The Company’s management is responsible for calculating the GHG emissions. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

2. Procedures Performed

We conducted our assurance engagement in accordance with International Standard on Assurance Engagement 3000 (ISAE 3000) and International Standard on Assurance Engagement 3410 (ISAE 3410). The key procedures we carried out included:

- Interviewing the Company’s responsible personnel to understand the Company’s standards
- Reviewing the Company’s standards
- Performing cross-checks on a sample basis and performing a recalculation to determine whether the GHG emissions were calculated in accordance with the Company’s standards.

3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that GHG emissions have not been calculated in all material respects in accordance with the Company’s standards.

We have no conflict of interest relationships with the Company.



Takashi Fukushima
Representative Director
Sustainability Accounting Co., Ltd.

External Evaluations and Awards

Inclusion in ESG Indexes and Rating (as of July, 2023)

FTSE Blossom Japan Sector Relative Index



FTSE Blossom Japan Sector Relative Index, created by FTSE Russell, reflects the performance of Japanese companies that demonstrate strong Environmental, Social and Governance (ESG) practices relative to their respective sectors and is designed to be sector neutral. It is one of the benchmark stock indices for ESG investments adopted by the Government Pension Investment Fund (GPIF) of Japan.

[> FTSE Blossom Japan Sector Relative Index](#)

FTSE Blossom Japan Sector Relative Index

FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Nippon Kayaku Co., Ltd. has been independently assessed according to the FTSE Blossom Japan Sector Relative Index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Sector Relative Index. Created by the global index provider FTSE Russell, the FTSE Blossom Japan Sector Relative Index is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. FTSE Blossom Japan Sector Relative Index indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

MSCI Japan Empowering Women Index (WIN)

2023 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)

The MSCI Japan Empowering Women Index (WIN) has the MSCI Japan IMI Top 700 Index as its parent index, and it is calculated by selecting companies that excel in the promotion of women's participation and advancement in the workplace. It is one of the benchmark stock indices for ESG investments adopted by the Government Pension Investment Fund (GPIF) of Japan.

[> MSCI Japan Empowering Women Index \(WIN\)](#)

The inclusion of Nippon Kayaku Co., Ltd. in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of Nippon Kayaku Co., Ltd. by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.

MSCI ESG Rating



The MSCI ESG Rating is regarded as the global index for ESG investments. MSCI investigates and analyzes how appropriately corporations manage risks and opportunities related to the environment, society and governance (ESG) and rates companies on a seven-point scale from the highest, AAA, to the lowest, CCC.

In 2023, Nippon Kayaku Group was awarded an MSCI ESG Rating of A.

[> MSCI ESG Ratings](#)

The inclusion of Nippon Kayaku Co., Ltd. in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of Nippon Kayaku Co., Ltd. by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.

S&P/JPX Carbon Efficient Index



S&P/JPX Carbon Efficient Index is an environmental stock index developed jointly by S&P Dow Jones Indices and Japan Exchange Group. This index targets TOPIX constituent companies that have a high carbon efficiency (carbon emissions per unit of sales) and disclose environmental information, factors for increasing the investment weight of companies.

It is one of the benchmark stock indices for ESG investments adopted by the Government Pension Investment Fund (GPIF) of Japan.

[> S&P/JPX Carbon Efficient Index](#)

Morningstar Japan ex-REIT Gender Diversity Tilt Index

Built using the data and rating methods provided by Equileap, the Morningstar Japan ex-REIT Gender Diversity Tilt Index ("GenDi J") is designed to emphasize companies that have strong gender diversity policies embedded in their corporate culture and that ensure equal opportunities to employees, irrespective of their gender. Nippon Kayaku Group is classified in Group 4 of GenDi J which classifies companies into one of five groups according to the company's score.

It is one of the benchmark stock indices for ESG investments adopted by the Government Pension Investment Fund (GPIF) of Japan.

[> Morningstar Japan ex-REIT Gender Diversity Tilt Index](#)

Certification

Fukuyama Plant Obtained Silver Certification in RBA Audit

The Responsible Business Alliance (RBA) is an industrial coalition dedicated to corporate social responsibility in global supply chains. The RBA Code of Conduct sets out standards for proper supply chain operations, specifically occupational safety, workers treated with dignity and respect, and environmentally friendly business activities.

In January 2022, the Fukuyama Plant underwent a third-party RBA audit (VAP audit), and received a Silver certification, in acknowledgement of proper management for all the audit criteria: labor; health & safety; environment; ethics; and management systems.

As a result of the implementation of initiatives for sincere improvement in accordance with corrective action plans (CAPs), all of them were approved in January 2023.

Recognition and Awards

CDP



CDP is an international NGO that runs a global disclosure system, in which companies and cities are encouraged to report on their environmental impacts and actions related to climate change, water resource protection, and forest conservation, and relevant surveys and evaluations are conducted. In FY2022, the Nippon Kayaku Group was rated "A-" for the Climate Change Report and "C" for the Water Security Report.

EcoVadis

EcoVadis SAS (headquartered in France) hosts an ESG rating platform that assesses more than 85,000 companies and organizations from 160 countries and across 200 sectors. The entity provides comprehensive third-party evaluation in four areas concerning the environment, labor and human rights, ethics, and sustainable procurement.

In June 2023, the Nippon Kayaku Group was awarded the Bronze Medal by EcoVadis in recognition of its performance of sustainability initiatives.

BroadBand Security "Gomez ESG Site Ranking"



The Gomez ESG Website Ranking 2022, selected by BroadBand Security, Inc. was established from the five perspectives of website usability, ESG common, E (environment), S (society), and G (governance), incorporating the perspectives of a wide range of stakeholders as well as shareholders and investors, the primary users.

In 2023, the Nippon Kayaku Group was selected as an "Excellent Company".

➤ [Gomez ESG Site Ranking \(Japanese\)](#) 

Editorial Policy

The Sustainability site of Nippon Kayaku Group aims to encourage all stakeholders (employees, customers, suppliers, shareholders/investors, and local communities) to have a deep understanding of the Group's initiatives for Environmental, Social and Governance (ESG).

The website focuses on the key sustainability issues identified in FY2022. Making the best use of the characteristics of the website, the Group is working to communicate information comprehensively, including policies, systems, indicators, initiatives and quantifiable data. Topics have been chosen in view of both their importance to society with reference to various guidelines (GRI standards, ISO 26000, etc.) and their importance to the Nippon Kayaku Group.

* Note: The information in this report includes not only past and current data but also future plans and expectations as of the time of the report's issuance. These include assumptions and judgements based on information available at the time of writing the report. Future activities and performance may differ from the descriptions presented in this report.

Reporting Period

FY2022 (April 1, 2022 through March 31, 2023)

Some of the data is for the period from January 1, 2022 through December 31, 2022.

However, the website includes information about and details of initiatives that are older, in addition to the latest initiatives and activities.

Scope of Reporting

Nippon Kayaku Co., Ltd.

Consolidated Subsidiaries

- NIKKA FINE TECHNO CO., LTD.
- Nippon Kayaku Korea Co., Ltd.
- NIPPON KAYAKU AMERICA, INC.
- Euro Nippon Kayaku GmbH
- Kouwa Sangyo Co., Ltd.
- ○KAYAKU CHEMICAL (WUXI) CO., LTD.
- ○KAYAKU Advanced Materials, Inc.
- THE GILMORE ROAD PROPERTY, LLC
- ○Teikoku Taping System Co., Ltd.
- ○WUXI ADVANCED KAYAKU CHEMICAL CO., LTD.
- Shanghai KAYAKU International Trading Co., Ltd.
- NIPPON KAYAKU (THAILAND) CO., LTD.
- POLATECHNO CO., LTD.
- ○Moxtek, INC.
- ○WUXI POLATECHNO OPTICS CO., LTD.
- Dejima Tech B.V.
- ○Dejima Optical Films B.V.
- ○RaySpec Ltd.
- ○NIPPONKAYAKU FOOD TECHNO CO., LTD.
- Taiwan Nippon Kayaku Co., Ltd.
- ○Kayaku Safety Systems Europe a.s.
- ○Kayaku Safety Systems (Huzhou) Co., Ltd.
- ○Kayaku Safety Systems de Mexico, S.A. de C.V.
- ○Kayaku Safety Systems Malaysia Sdn. Bhd.
- Kayaku (Shanghai) Co., Ltd.
- Wako Toshi Kaihatsu Co., Ltd.

Equity-method Affiliate

- Cultivecs Inc.
- Kayaku Japan Co., Ltd.
- Nouryon Japan K.K.
- Sanko Chemical Industry Co., Ltd.

* Note: A ○ mark is put before the business name of the consolidated subsidiaries with manufacturing equipment. There are 20 manufacturing sites including seven Nippon Kayaku Group plants. (As of July 28, 2023)

Release Date

July 28, 2023

Reporting Cycle

Annual (last release: July 2022; next release: July 2024 [plan])

Reference Guidelines

GRI (Global Reporting Initiative) Standards

Sustainability Accounting Standards Board (SASB) Standards

ISO26000

Environmental Accounting Guidelines 2005, Ministry of the Environment, Japan

TCFD Recommendations

External Certification

In order to improve the credibility of its environmental performance data for greenhouse gas emissions (Scope 1, 2, and 3), the Nippon Kayaku Group entrusts third-party verification of the data to Sustainability Accounting Co., Ltd. and discloses the verification results. This started from FY2021. For details, please refer to [Independent Third-party Assurance Report](#).

Inquiries

Office Hours

9:00 - 17:30 (JST) on weekdays (excluding the company's special holidays)

Contact

Sustainability Promotion Department

Corporate Planning Division

Tel: +81-3-6731-5227

Nippon Kayaku Co., Ltd.

1-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-0005, Japan

[Inquiry form](#) 

Related Information

For other stakeholder communication tools, we publish the integrated report.

The Integrated Report 2023 is scheduled to be issued in the fall of 2023.



[> Integrated reports](#)

Global "sukima" ideas



Nippon Kayaku Co., Ltd.

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[URL https://www.nipponkayaku.co.jp/english/](https://www.nipponkayaku.co.jp/english/)

Contact

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[Inquiry form](#)