

Global "sukima" ideas



Nippon Kayaku Group Sustainability Report

2024



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The Products and Technologies Creating a Sustainable Future

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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 defined as the **KAYAKU spirit**: Continuously providing society with the best products through ceaseless progress and the combined forces of our conscience." It is this **KAYAKU spirit** which has guided generations of employees ever since our foundation, imbuing us with the belief that we must work towards the greater good of both individuals and society. It is this **KAYAKU spirit** which forges the conviction that sustains our Group's strength. And, though our workplaces and job descriptions may differ, it is this **KAYAKU spirit** which serves as the reference point for the actions and judgment calls of every manager and employee.

Having determined where we want to be based on this **KAYAKU spirit** - "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**" - we have devised a four-year Medium-term Business Plan to form our roadmap for getting there: **KAYAKU Vision 2025 (KV25)**, introduced in April 2022.

FY 2024 sees us enter the second half of **KV25**. With spiraling raw material costs and rising energy prices, our Group's operating environment continues to be tough. Hence, in response to our results and environmental changes over the past two years, we will reassess the profitability improvement efforts and portfolios of every business unit, and, through harnessing the Group's core strengths, steadily develop and establish our pillars of profitability. We will also seek a more accurate grasp of client and societal needs to deliver the necessary products, technologies and services. In that way shall we pursue compatibility between our quest for profitability and our desire to solve social problems, and strive to realize sustainable growth for both company and society.



From now on you will see our continued commitment to strengthening corporate governance and compliance actions, thereby enhancing our management base and raising the company's value via an ethically-grounded approach to sustainable business management. To our stakeholders, my message remains: I would humbly appreciate all the extra support you can spare.

Yours sincerely,

July 2024



Atsuhiro Wakumoto
Member of the Board
President and Representative Director

A Message from our Director In-charge of Sustainability

A backdrop of seismic global change stemming from international affairs has upped the pace of international debate over issues such as climate change responses, biodiversity conservation and respect for human rights, and triggered each country and region to strengthen its laws accordingly. As the Nippon Kayaku Group is also not immune from demands to help achieve a sustainable society through its corporate activities, it is vital we accurately grasp those demands and expectations, and suitably respond.

Thus did FY2023 see Nippon Kayaku Group revise its Human Rights Policy, its Declaration on the Environment, Health, Safety and Product Quality, its Basic Policy on Anti-Bribery, and its Sustainable Procurement Guidelines. These latest revisions allowed us rethink our approach in each area towards meeting skyrocketing public demand for companies to proactively engage in resolving growingly complicated social problems. They are therefore designed to help us appropriately respond to environmental changes surrounding the sustainability of our entire Group's corporate activities, and strengthen our sustainability initiatives yet further. This is not about the mere fixing of policy, but about forging mutual links between each business unit so that issues can be rapidly resolved, measures can be rapidly implemented, and overall effectiveness can thereby be improved.

As a consequence of developing our business in a wide range of areas, the Nippon Kayaku Group is increasingly confronted with area-specific issues which oblige us to take on numerous sustainability challenges. But we also believe that these different areas bring new business chances to help resolve social problems.

Going forward, our revised policies will serve as the base to further promote sustainability initiatives as a component of management activities. We will work to ensure that these activities drive up corporate value, and that our appropriate disclosure of them deepens communication with all stakeholders.

July 2024



Yoshitsugu Ishida
Member of the Board
Representative Executive Vice President



Messages from Group Company Leadership

The Nippon Kayaku Group currently conducts business in 12 countries and regions across the globe. Below are the introductory messages each of our 24 group company leaders.



Czech Republic Mobility & Imaging Business Unit

Kayaku Safety Systems Europe a.s. President: Akinori Kanno

Since 1999, Kayaku Safety Systems Europe has been engaged in the manufacture and sale of automotive safety components from our eastern Czech Republic base of Vsetin. The critical safety components we supply to the market are high-quality, designed with operational safety in mind, and help provide enhanced protection to drivers behind the wheel. We aim to contribute to local communities through sustainable business management, environmental awareness, improved employee quality of life, and philanthropic activities.



China Mobility & Imaging Business Unit

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

A manufacturer and seller of automotive safety parts, Kayaku Safety Systems (Huzhou) (KSH) contributes to reducing automobile accidents with its stable supply of high-quality products to the market. In addition to responding appropriately to China's increasingly tougher safety and environmental demands, we are thorough in our approaches to corporate governance and compliance, and are also striving to boost economic value through continuous cost-reduction efforts. Through realizing Nippon Kayaku Group's core sustainable management policies in line with the **KAYAKU spirit**, KSH will continue striving to repay the trust of all our stakeholders.



Mexico Mobility & Imaging Business Unit

Kayaku Safety Systems de Mexico, S.A. de C.V. President and Representative Director: Kazumasa Kurita

Established in May 2007, Kayaku Safety Systems de Mexico produces automotive safety parts for the North American market and the world at large. With priorities placed on product safety and quality, we are moving forward with A3 Activities (KAIZEN) and working towards a waste-free production line. Through the implementation of sustainable management practices under the **KAYAKU spirit** of "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences," we are aiming to become a company that repays stakeholder trust across the board.



Malaysia Mobility & Imaging Business Unit

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

Kayaku Safety Systems Malaysia was established in 2012 with the aim of manufacturing and selling automotive safety parts. Underpinned by our focus on safety and quality, our products can be found in cars across every ASEAN member state and across the wider world. We also practice sustainable business management in accordance with the **KAYAKU spirit**. Our aim is to earn the trust of every stakeholder through contributing to increased car safety with the parts we provide.



USA Mobility & Imaging Business Unit
NIPPON KAYAKU AMERICA, INC. President: Kenji Yoshida

NIPPON KAYAKU AMERICA concentrates on gathering information and promoting the sale of automotive safety parts in the North American region. As a seller of automotive safety components, we are rigorous in our approach to compliance and quality control as we bring safe and eco-friendly parts to the market. We are promoting products, technologies and services to clients and partners which aid the creation of a sustainable society, including from the standpoints of increasing environmental, social and economic value. With the **KAYAKU spirit** firmly in mind do we hope to contribute even slightly towards the advent of a sustainable society.


Japan Mobility & Imaging Business Unit
POLATECHNO CO., LTD. President and Representative Director: Hirokazu Karino

POLATECHNO has been given a fresh lease of life at Nippon Kayaku's Joetsu Plant. Within plant walls, our mantra is "Safety First", as we constantly strive to maintain favorable working conditions with zero industrial accidents. We also aim to optimize production through creating workplace unity and stronger camaraderie. Our environmentally-conscious measures have seen us boost energy-saving, reduce industrial waste, utilize and fix MFCA standards, reuse water, improve treatment methods for liquid waste, and recycle discarded plastics. In future, just as now, do we wish to see a locally-rooted Joetsu Plant continue its eco-friendly drive while stably supplying unique parts to world markets, thereby contributing to better living standards and a sustainable society.


USA Mobility & Imaging Business Unit
MOXTEK, Inc. President: Michiyuki Yamamoto

MOXTEK contributes to society with its utilization of cutting-edge nano-optical and X-ray technologies for imaging and analysis equipment. The core of our sustainability drive consists of: (1) growing in tandem with the local community; and (2) contributing to society with a technology-rooted approach. We already support local initiatives through proactive participation in a "Homeless Support Program" and delivery of extra-curricular science activities to local schools. And we are even helping to elucidate the beginnings of the universe through our contributions to the NASA Mars Exploration and Space Telescope projects! In short, we are working hard to be a locally-rooted company which aids the wider development of science.


China Mobility & Imaging Business Unit
WUXI POLATECHNO OPTICS CO., LTD. General Manager: Hiroyuki Emori

WUXI POLATECHNO OPTICS (WPLC) produces liquid crystal projector materials, conducts polarized film processing for automotive applications (Wuxi), and undertakes sales activities in China and other Asian countries (Shenzhen). As even China is now taking an increasingly stringent stance on environmental and safety issues, we need to fully grasp these environmental and social changes and respond accordingly. As such, WPLC has already introduced green electricity, and is working to reduce energy consumption, wastewater and industrial waste emissions. We also believe in the importance of all employees working as one to further enhance our response to change, holding every one of them accountable to the Nippon Kayak Group Charter of Conduct and Code of Conduct, and raising awareness of operational safety. We thus aim to continue our pursuit of a sustainable society by bringing the **KAYAKU spirit** into everyday operations.


Netherlands Mobility & Imaging Business Unit
Dejima Optical Films B.V. Managing Director: Jan Willem Venema

As our name might suggest, we design, develop and produce optical films for the display industry and other methods of application, thereby contributing to Nippon Kayaku's Light Control Business. We are currently making every effort to implement Nippon Kayaku Group's sustainable management practices. Since establishment in 1999, we have, to the fullest extent possible, recycled both the Twistar™ packaging shipped to, and the raw materials received from, the Joetsu factory. Furthermore, we ensured that our facility built in 2008 was fitted with energy recovery devices for use at various stages of the production process, thereby keeping energy consumption to a minimum. And on top of that, we have held down environmental pollution stemming from our coating line by catalytically oxidizing organic solvent waste gases in an incinerator. Our production plant electricity comes with a so-called "Green Label" which certifies our wind-generated energy. And, although only able to supply a limited amount of our electricity needs, we are looking into the installation of solar panels on our roof in light of recent energy price hikes. Individual safety and environmental conservation are the themes reflected in every management decision taken at Dejima Optical Films.


UK Mobility & Imaging Business Unit
RaySpec Ltd. Managing Director: Josh Wong

RaySpec management pursues a fair and equitable workplace based on the importance of legal compliance, equal opportunities, zero discrimination, and a healthy working environment. All our new products are developed with environmental considerations in mind, while our capital investments and everyday activities proactively pursue reduced energy use. In the community, we are actively involved in charitable organizations and the promotion of fundraising efforts. We also apply a system to evaluate and limit the use of hazardous substances in RaySpec products, determine failure modes of machines, and conduct product quality checks, thereby contributing to the improved safety and wellbeing of users across the world.



Japan Fine Chemicals Business Unit
NIKKA FINE TECHNO CO., LTD. President and Representative Director: Nagafumi Saito

NIKKA FINE TECHNO operates as a domestic trading company within the Nippon Kayaku Group. We aim to be a company which tackles the customer's wants directly and brings them into reality, through both proposing and selling the optimum materials from myriad commodities. In order to become a company capable of "changing, adapting and developing," we will bind every employee to the Group Charter of Conduct and Code of Conduct, deliver sustainable business management rooted in the **KAYAKU spirit**, and repay the faith of each and every stakeholder.


Korea Fine Chemicals Business Unit
Nippon Kayaku Korea Co., Ltd. President and Representative Director: Naoki Shiraiwa

Nippon Kayaku Korea both imports and sells the products of our Fine Chemicals Business Unit, in addition to various other products and raw materials. On top of undertaking contracts concerning Korean domestic manufacturing projects, we both manufacture and sell automotive safety components, and provide relevant technical support.

The numerous diverse business operations we handle come with an inevitably large number of laws and regulations with which to comply; the three laws on chemical-related products being particularly exacting. We are therefore redoubling our compliance efforts across the board. We are also strengthening governance systems to ensure proper business transparency and fairness. Though our scope for impact is limited, we would like, in just a small way, to increase the value we add to society and the environment, and meet stakeholder expectations with a concerted company effort towards sustainable business management.


Germany Fine Chemicals Business Unit
Euro Nippon Kayaku GmbH Managing Director: Yoshiyuki Dejima

Euro Nippon Kayaku concerns itself with the sale of fine-chemical products to the European region. Europe is currently leading the world with its "Climate Neutrality Declaration," which aims to reduce greenhouse gases to zero by the year 2050. The European Green Deal has accelerated efforts to integrate environmental policies with economic and social ones, raising hopes of a shift away from current societal practices which brings new business opportunities. Against this backdrop does our company seek to provide safe, eco-friendly, and high-quality products to an ever-increasing band of customers, thereby spurring on efforts to achieve a truly sustainable society.


Japan Fine Chemicals Business Unit
Kowa Sangyo Co., Ltd. President and Representative Director: Takuya Sakuramoto

Kowa Sangyo is responsible for manufacturing operations at Nippon Kayaku's Asa Plant, and ancillary logistics and inspections. Guided by the core principle of "Safety trumping everything else," all employees conduct operations in line with the Group Charter of Conduct and Code of Conduct.

Our approach to sustainable management begins with the little things we can do, such as eliminating wasteful energy use and reducing overall waste. Our further hope is that our sustainability workshops and training raise awareness of the key issues and encourage employees to say: "Let's try introducing these new steps." In the future, just as in the present, as both a member of the Nippon Kayaku Group and a company with strong regional bonds will we strive to meet the expectations of our trusted stakeholders.


China Fine Chemicals Business Unit
KAYAKU CHEMICAL (WUXI) CO., LTD. General Manager: Katsuhiko Oshimi

KAYAKU CHEMICAL (WUXI), a wholly-owned Nippon Kayaku subsidiary, has principally manufactured and sold UV-curable resins for electronic components since its establishment in 2002. The year 2020, however, saw us embark upon the sale of LCD and semiconductor cleaners. Since then, we have continued to expand Chinese market operations under the principle of "local production and local consumption." Rapid economic development in China has given rise to various issues – not least environmental ones – which have led to tougher surrounding conditions in which businesses operate. Sustainable management has therefore become yet more important to ensuring business continuity and development. We believe it is of central importance to translate the **KAYAKU spirit** into action through sustainable management practices, and to bind each employee to the Group's Charter of Conduct and Code of Conduct so that it may influence their actions. Looking ahead, we aim to contribute to wider society through the supply of, in the broadest sense, the high-quality products that our customers demand. We will do this through respecting local culture, history and business customs, and through each individual acting in line with a firm moral standpoint rather than simply following the actions of the herd.


USA Fine Chemicals Business Unit
KAYAKU Advanced Materials Inc. President & CEO: Kenichiro Yoshioka

Based in Westboro, Massachusetts, KAYAKU Advanced Materials (KAM) employs around 110 people and, paying heed to operational safety and the environment, furnishes the microelectronics market with innovative specialty materials. The company is deeply committed to responsible business management through sincere and ethical business practices, strengthened governance, exemplary compliance, evident respect for the environment and society, and contributing to local communities via philanthropic activities. Moreover, we are providing our employees with an innovative, safe and diverse environment in which it is both comfortable and rewarding to work, highly valuing and rewarding their individual contributions and efforts to self-improve.

KAM's business value comes from its commitment to the **KAYAKU spirit**, and shaping itself through responsible actions. It is this lodestar which will guide us towards delivering long-term value for our customers, our staff, local communities, and the Nippon Kayaku Group.



Japan Fine Chemicals Business Unit
Teikoku Taping System Co., Ltd. President & CEO: Ichiro Tomonaga

Teikoku Taping System (TTS) tasks itself with the design, development, manufacture, sale and maintenance of semiconductor manufacturing equipment. The “TTS Values” outlined in our corporate philosophy are replete with crystal clear thoughts on the kind of company we should be, the objectives we should be working towards, and our basic management concepts. These TTS Values will form the backbone of an increased awareness of sustainable management and sustainability promotion, which we seek to apply to everything from everyday work to myriad other activities.


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 and environmentally-friendly products which satisfy our customers. In addition to tough Chinese requirements concerning environmental conservation and production safety, we also have to contend with increasingly challenging stipulations on carbon neutrality. As such, we will continue conserving energy, reducing wastewater and cutting waste output from our production processes while devoting maximum attention to improving the workplace environment for all employees. Through providing highly safe Bluesign®-certified dyes and increasing our lineup of products which help customers reduce their environmental impact and conserve energy and resources do we aim to take steps towards a sustainable society.


China Fine Chemicals Business Unit
Shanghai KAYAKU International Trading Co., Ltd. General Manager: Ryo Fujimori

With its sights trained on the China-centered Asian market, Shanghai KAYAKU International Trading engages in the sale of textile dyes, inkjet printing ink, and other pigment-related products such as coloring agents for heat-sensitive applications. In order to support fiber industry efforts, exemplified by ZDHC, on supply chain issues such as protecting water resources and improving working conditions, we must not only deliver safe and reassuring products, but continue to present various solutions for problem-solving and process streamlining. That includes contributing to a reduction in customer wastewater, moving towards energy-saving, improving productivity, and augmenting the working environment.


Thailand Fine Chemicals Business Unit
NIPPON KAYAKU (THAILAND) Co., Ltd. President and Representative Director: Tetsuya Tomita

Established in 2018, NIPPON KAYAKU (THAILAND) mainly sells Fine Chemicals Business Unit products to the ASEAN and South Asian markets, and handles the procurement of raw materials and intermediary purchasing from the same region, as well as surveys of related local markets. All staff will be united in our stance on compliance as we seek to provide yet safer materials with energy-saving potential, and significantly contribute to the ASEAN and South Asian region as a whole.


Japan Life Science Business Unit
NIPPONKAYAKU FOOD TECHNO CO. LTD. President and Representative Director: Tomomasa Tsuchibuchi

NIPPONKAYAKU FOOD TECHNO concerns itself with the manufacture and sale of food-quality preservatives, such as ethanol preparations and oxygen adsorbers, as well as health food ingredients such as chitosan. With sustainable management as our bedrock, we aim to make yet bigger contributions to society through delivering excellent products and high-value service from the mission standpoints of “Food Safety” and “Food and Health.” Our food-quality preservatives aim to reduce food waste, while our health food ingredients aim to deliver “healthy lifestyle proposals through food.” In order to realize the **KAYAKU spirit** as a Nippon Kayaku Group member, we will prioritize safe operations, proper compliance, and environmental considerations. With high ethical standards shall every employee follow the Group’s Charter of Conduct in our quest to repay the trust and expectations of our customers.


Taiwan Life Science Business Unit
Taiwan Nippon Kayaku Co., Ltd. General Manager: Daisuke Komagata

Taiwan Nippon Kayaku is chiefly involved in the manufacture, sale, and conducting of surveys regarding the products of the Pharmaceuticals and Fine Chemicals business units. We bring the **KAYAKU spirit** into reality by: (1) making efforts to improve our daily working environment by accurately grasping customer needs and conveying them to the relevant internal departments; (2) contributing to local cultural and economic exchanges by proactively supporting and participating in the various activities of the Japan Exchange Association and the Taiwan Municipal Industrial and Commercial Association; and (3) promoting constant awareness of the **KAYAKU spirit** by erecting a Corporate Vision Board at the center of the office, and inscribing our vision on reference cards carried by every employee when they carry out their daily business. So as to continue contributing to local communities going forward, we will remain proactive in our sustainability promotion activities.



China Kayaku (Shanghai) Co., Ltd. General Manager: Sumito Suekiyo

Guided by the **KAYAKU spirit**, Kayaku (Shanghai) promotes the twin mottoes of strengthened corporate governance and thorough compliance. The nature of our work involves providing useful information and services that support risk-reduction and resolution of management problems within the Nippon Kayaku Group and China-based group companies. Specifically, we provide information related to laws and taxes that may impact management operations, and engage in several activities to promote better governance and compliance, including legal services, interpretation, translation, public relations and the handling of surveys.



Japan Wako Toshi Kaihatsu Co., Ltd. President and Representative Director: Masatomi Akezuma

Wako Toshi Kaihatsu primarily conducts two types of real estate business: (1) leasing the commercial building facilities in our possession to hypermarket businesses and (2) leasing our three company-dormitory-style buildings in the capital region to Nippon Kayaku. Through this business do we aim to play a part in providing people with food, clothing and shelter, bring smiles to those who live and work under our roofs, and be seen as a necessary presence in the eyes of our customers. We will also work towards aligning our vectors with those of our client business partners in a bid to solve social problems, and promote both thorough compliance and sustainable management under the **KAYAKU spirit**. Specifically, we are taking steps to increase the value of our real estate assets by providing our users with better comfort, health and safety through: (1) upping energy efficiency and resource efficiency through the use of low energy devices and durable materials, and (2) installing and strengthening our facilities' infrastructure and disaster prevention equipment.



Sustainability in the Nippon Kayaku Group

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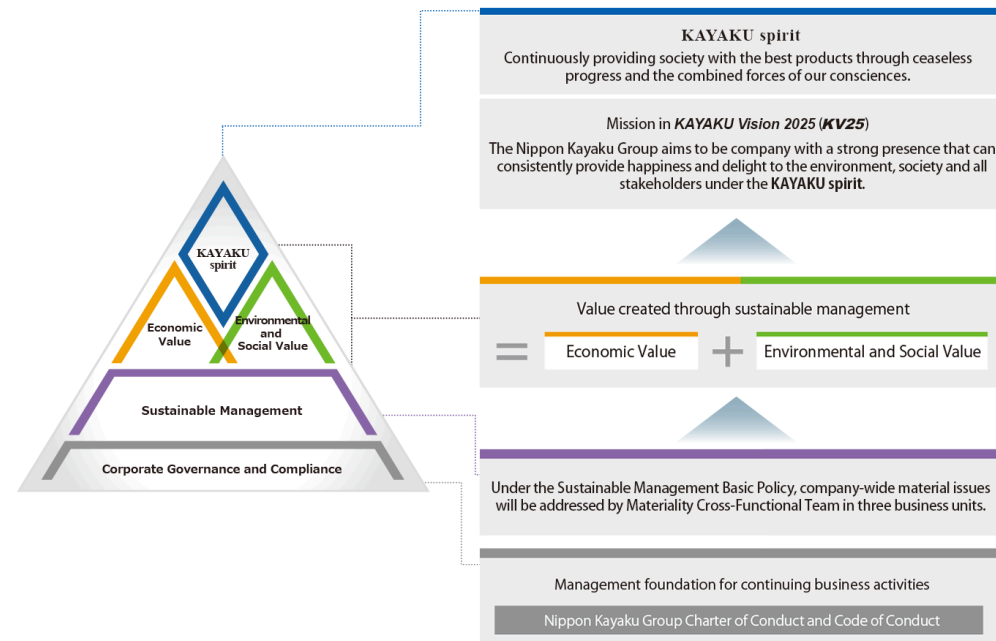
Policies and System

Corporate Vision

KAYAKU spirit

Continuously providing society with the best products through ceaseless progress and the combined forces of our conscience.

Through the implementation of sustainable management guided by our **KAYAKU spirit**, we at the Nippon Kayaku Group are aspiring to create both environmental and social value in our quest to realize a sustainable society and increase corporate value. To make the **KAYAKU spirit** a reality, we have fixed a [Nippon Kayaku Group Code of Conduct and Charter of Conduct](#) to define our scope and boundaries for action. We are thus, through various corporate activities, showing respect for basic human rights, performing proper compliance, conducting business fairly, and repaying the trust of our stakeholders.

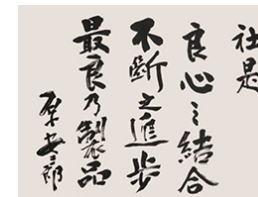


Origins of the KAYAKU spirit

1916: Company established

1962: Company creed determined

1962 saw our company creed decided upon by our third president, the long-serving Yasusaburo Hara, who wished to simply convey to both executives and employees the important ideas they should jointly share.



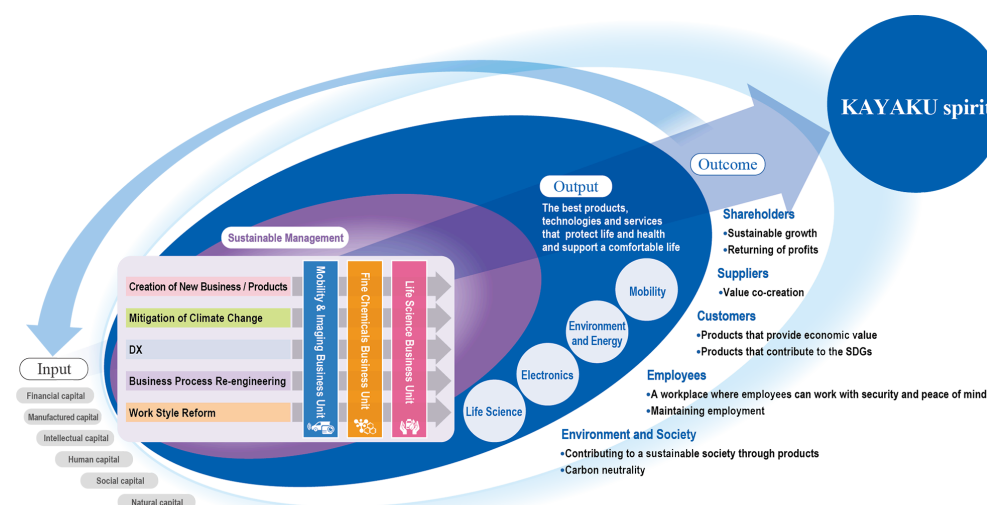
Policy and Basic Approach

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.

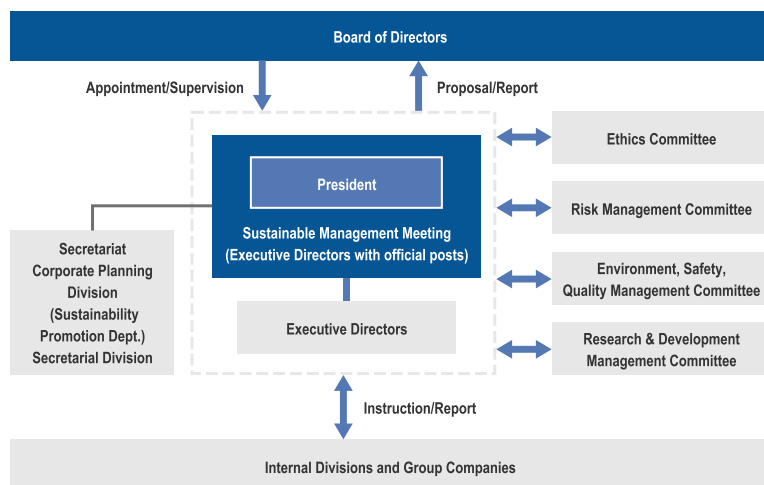
The Nippon Kayaku Group's Value-creation Process

Our **KAYAKU Vision 2025 (KV25)** Medium-term Business Plan seeks to furnish society with the best products, technologies and services in the four fields of Mobility, Environment & Energy, Electronics and Life Sciences through the input of six forms of capital and the united sustainable management practices of our three business units and the M-CFT. (The latter takes a company-wide cross-cutting approach towards the five important issues of Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform). Through creating economic, environmental and social value for all our stakeholders do we aim to raise our sustainable corporate value.



System

Under the direct supervision of our Board of Directors, and via our Sustainable Management Meeting with our president as chair, the Nippon Kayaku Group is promoting sustainability across the entire organization. In principle, the Sustainable Management Meeting agrees to meet once a week to discuss and receive reports upon general matters related to the sustainability of the company, society and the environment. Matters approved by this Meeting are referred to the Board of Directors for further discussion. Operating under this Meeting are four committees on Ethics; Risk Management; Environment, Safety and Quality Management; and Research and Development Management. All committees meet on both a regular and ad hoc basis (when required), and their reports to the Sustainable Management Meeting serve to guarantee transparency and fairness in management.



Company-wide Diffusion

When it comes to our corporate vision and sustainable management policies, the Nippon Kayaku Group utilizes a variety of communication tools to deepen employee understanding and achieve group-wide permeation. Such communication tools include: Business Management meetings, Medium-term Management Strategy meetings, group training sessions such as those for new recruits and new managers, e-learning, and company bulletins.

In conjunction with the 2022 launch of our **KAYAKU Vision 2025 (KV25)** Medium-term Business Plan, we released explanatory pamphlets on our corporate vision, sustainable management, **KV25** itself, and the Nippon Kayaku Group Human Rights Policy. We also created mobile phone cards and notice boards emblazoned with our Group's corporate vision and a statement on the ideal form we are working towards, which can therefore be checked at any time. Thus do our diffusion efforts aim at achieving a situation whereby decisions and actions are fully based on our corporate vision and ideal future form. The contents of our pamphlets, mobile phone cards and notice boards have been translated into the language of every overseas country hosting a Nippon Kayaku manufacturing base (English, Chinese, Spanish, Malaysian and Czech) and distributed to all Group executives and employees.

By diffusing our corporate vision and sustainable management policies to employees with a diverse array of jobs across the world - be they working in manufacturing, development, sales or management - can we aim for a style of Group management with a greater unity of purpose.



Explanatory pamphlet

Notice board

KAYAKU spirit

最良の製品を
 不断の進歩と
 良心の結合により
 社会に提供し続けること

日本化薬グループのありたい姿
 KAYAKU spirit のもと、存在感をもって、
 永續的に環境、社会、すべてのステークホルダーに
 幸せやうれしさを提供できる会社であること

世界的な持続可能性
 日本化薬

Japanese

KAYAKU spirit

Continuously providing society
 with the best products through
 ceaseless progress and
 the combined forces of
 our consciences.

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.

Global "ukuma" Ideas
 NIPPON KAYAKU

English

KAYAKU spirit

通过不断进步与
 良知的结合，
 持续向社会提供
 最优质的产品。

日本化薬集团的应有的面貌
 在 KAYAKU spirit 之下，成为具有存在感，
 并持续向环境、社会和所有利益相关方提供
 幸福和喜悦的公司。

Global "ukuma" Ideas
 NIPPON KAYAKU

Chinese

KAYAKU spirit

Proporcionar continuamente a la
 sociedad los mejores productos
 mediante el progreso
 constante y la
 unión de conciencias.

La forma ideal del Grupo Nippon Kayaku
 Ser una empresa que pueda proporcionar felicidad y
 alegría al medio ambiente, a la sociedad y a todas
 las partes interesadas de forma duradera, con un
 sentido de presencia bajo el KAYAKU spirit.

Global "ukuma" Ideas
 NIPPON KAYAKU

Spanish

KAYAKU spirit

Untuk terus menyediakan
 masyarakat dengan produk
 terbaik melalui gabungan
 kemajuan berterusan dan
 hati nurani kita.

Visi Kumpulan Nippon Kayaku
 Menjadi sebuah syarikat yang dapat memberikan
 kebahagiaan dan kegembiraan kepada alam sekitar,
 sosial, dan semua pihak berkepentingan secara
 berkekalan dengan kehadiran tersendiri di bawah
 KAYAKU spirit.

Global "ukuma" Ideas
 NIPPON KAYAKU

Malay

KAYAKU spirit

Trvale poskytovať spoločnosti
 ty najlepšie výrobky skrze
 neustály pokrok a sdílené
 morálne hodnoty.

Poslání skupiny Nippon Kayaku
 V souladu s KAYAKU spirit chceme být společností,
 která neustále přispívá životnímu prostředí a svou
 existenci přináší štěstí a radost lidské společnosti
 i všem zainteresovaným stranám.

Global "ukuma" Ideas
 NIPPON KAYAKU

Czech

KAYAKU spirit Diffusion Activities with the aid of Kayaku-ma

For the purpose of getting all of our globalizing Nippon Kayaku Group employees to easily familiarize themselves with the **KAYAKU spirit**, we have created a **KAYAKU spirit** Diffusion Mascot: Kayaku-ma. Kayaku-ma now appears in our company bulletins, adding to our reader-friendly visual explanations of model sustainability activities and exemplary implementation of our corporate vision. And our efforts to ensure Kayaku-ma – the embodiment of our corporate vision – is never far away from employee eyes have included putting him on memos, plastic files, meeting room entrances and lockers. Kayaku-ma is already a registered trademark, and, as a Nippon Kayaku Group mascot, appears on company advertising and even on novelty goods at company festivals.

[Kayakuma's Room](#)

Diffusion Mascot Kayaku-ma

Meeting room and locker

Development Activities & Training Chart

Training type	Main contents	Chiefly targeted at	FY	Format	Number of times	Take-up rate
Sustainability training	Corporate Vision and Sustainable Management, KV25 Materiality, respect for human rights, SDGs, anti-corruption, identification of human rights risks	Executives, employees, (including contract and part-time employees), temporary employees	2023	E-learning	6	84% (average)
New hire training*	Climate change measures and respect for human rights in relation to Nippon Kayaku Group Sustainable Management	New recruits	2023	Group training	1	100%
New manager training*	Climate change measures and respect for human rights in relation to Nippon Kayaku Group Sustainable Management	New managers	2023	Group training	2	100%

* Held annually

Nippon Kayaku Group Sustainability Report 2024

SDGs Endorsement and Action Plan

The Sustainable Development Goals (SDGs), unanimously adopted by United Nations Members, represent the 17 social, economic and environmental targets that institutions, organizations and bodies must strive to meet by FY 2030 in order to construct a sustainable world.

The thinking behind these SDGs is practically synonymous with the Nippon Kayaku Group's corporate vision, expressed as:

"Continuously providing society with the best products through ceaseless progress and the combined forces of our conscience." We therefore believe that, although the scale and targets are different, the corporate activities undertaken to realize the **KAYAKU spirit** are very much aligned with the SDGs.

Nippon Kayaku Group's [Sustainability Action Plan](#) makes use of the SDG Compass to tie all our important issues to the 17 SDG targets.

Hence, through creating environmental, social and economic value, and pursuing both a sustainable society and increased corporate value, are we also contributing to the achievement of the 17 SDGs.

SUSTAINABLE DEVELOPMENT GOALS



Sustainable Management

Sustainable Management and the Medium-term Business Plan

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**.

Our **KAYAKU Vision 2025** Medium-term Business Plan (**KV25**) lays in place the strategies we will deploy to put sustainable management into practice. Through the activities of our 3 business units and our [KV25 Materiality](#) initiative will we create both economic and social value that contributes to the realization of a sustainable society.

KAYAKU Vision 2025 Basic Strategies

Promotion of sustainable management	By implementing a value creation process can we deliver economic, environmental and social value, and help resolve social issues.
Prioritized distribution of management resources based on business portfolios	Our 3 business units of Mobility & Imaging, Fine Chemicals and Life Sciences will prioritize the distribution of management resources towards the most promising product lines
A cross-cutting company-wide team to deal with important issues	Our cross-cutting company-wide team (M-CFT) will engage with the issues of Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform, and pave the way for our sustainable growth
Strengthening our management base	<ul style="list-style-type: none"> Guaranteed safety Improved product and service quality A thorough approach to compliance Strengthened corporate governance

➤ [Medium-term Business Plan: *KAYAKU Vision 2025 \(KV25\)*](#)

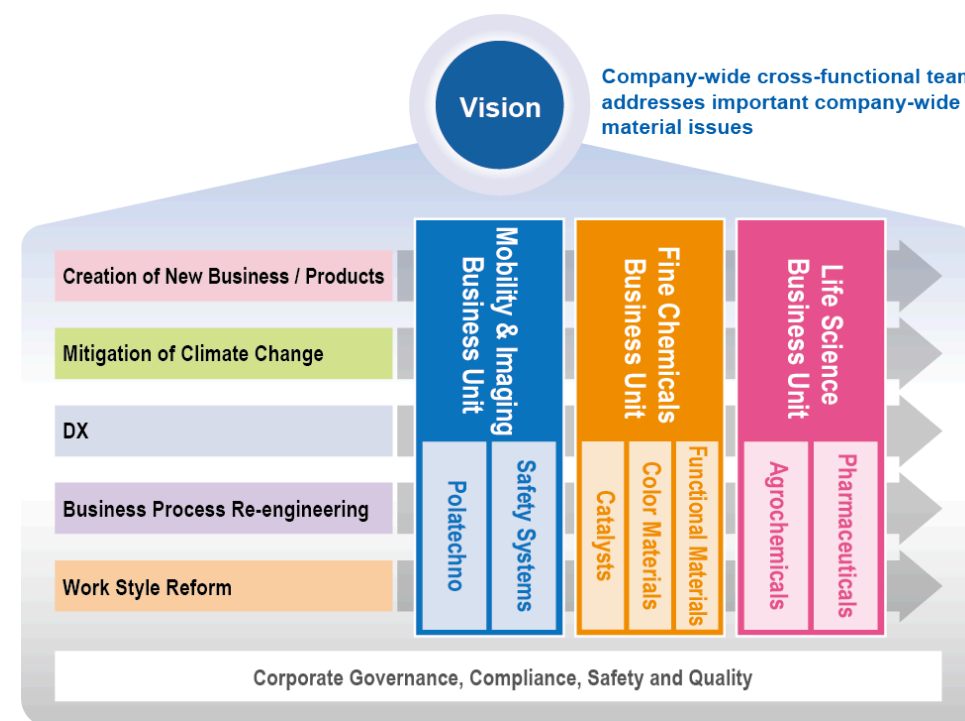
Materiality

With a view to contributing towards a sustainable environment and society, our **KAYAKU Vision 2025** Medium-term Business Plan will also tackle important company-wide issues and key sustainability issues - to be collectively referred to as **KV25 Materiality**." So that we may help realize a sustainable environment and society with our basic policies on sustainable management, **KV25** will prioritize the tackling of important company-wide issues and complement this by addressing key sustainability issues in tandem.

➤ [Materiality](#)

Realizing the Nippon Kayaku we Desire: Important Company-wide Issues

"Corporate governance, compliance, safety and product quality" form the base of Nippon Kayaku Group activities. **KV25's** cross-cutting project will see us tackle the 5 important company-wide issues of Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering, and Work Style Reform. The synergies we derive from the activities of our 3 business units and cross-cutting M-CFT efforts will help bring into being the Nippon Kayaku we want to see.



➤ [Important Groupwide Issue Initiatives](#)

KV25 Vision for the Three Business Units

Business Unit	Group	Vision
Mobility & Imaging Business Unit	Safety Systems	Provide safety solutions to people around the world with products that support changing mobility technologies, and become a global brand that contributes to society
	Polatechno	Contribute to the diversification of displays in the mobility field and to human health, safety and security by providing highly durable polarizers, retardation films and various other highly functional optical components and X-ray components
Fine Chemicals Business Unit	Functional Materials	Continue to supply the best products, technologies and services to make social contributions through the establishment of a super-smart "Society 5.0" and environmental protections
	Color Materials	Contribute to resource conservation by supporting the digitalization of society through the provision of inkjet colorants and functional colorants
	Catalysts	Contribute to the enrichment of people's lives and the reduction of CO ₂ emissions by providing catalysts with higher yields in producing acrylic acid and methacrylic acid
Life Science Business Unit	Pharmaceuticals	<ul style="list-style-type: none"> Develop excellent pharmaceuticals and medical devices that provide new diagnostic and treatment opportunities Stable supply of Biosimilars and generic drugs, contributing to people's health
	Agrochemicals	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

Mobility & Imaging Business Unit

◆ Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality
Safety Systems Business		
<ul style="list-style-type: none">Recovery of worldwide automobile production from the impact of COVID-19, and mitigation of the semiconductor shortageThe installation rate of safety components is increasing, primarily in emerging countriesGrowing 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 safelyIndustry top-level market share in automotive safety componentsGlobal 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 KoreaDeveloping next-generation inflators
		Micro gas generators / squibs / pyrotechnic products <ul style="list-style-type: none">Securing next-generation module projects from customersSecuring increased volume projects, such as for rear seatsExpansion of applications such as pedestrian protection and electric current shut-offConsideration of new pyro device applications
		Drone safety components <ul style="list-style-type: none">Expansion of sales of PARASAFE® for 25kg dronesDevelopment and market launch of PARASAFE® for 15kg dronesDevelopment of safety parts for flying cars and large drones
Polatechno Business		
<ul style="list-style-type: none">Evolution and expansion of automotive display functionsGrowing demand for recycling rare metals	<ul style="list-style-type: none">Optical and electromagnetic wave control technologies and microfabrication technologiesProprietary highdurability 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 polarizersExpansion of new in-car applications of highly durable polarizers such as parts / materials for HUDs

Fine Chemicals Business Unit

◆ 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		
<ul style="list-style-type: none"> Acrylic acid and methacrylic acid markets continue to grow by 5 to 6% Expansion of the carbon neutrality-related market 	<ul style="list-style-type: none"> 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 acrolein, acrylic acid, and methacrylic acid Secure repeat orders and development of new customers Development of catalysts contributing to a carbon-neutral society

Life Science Business Unit

◆ Contribution to the SDGs



External environment	Nippon Kayaku's strengths	Materiality
Pharmaceuticals Business		
<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 marketAnnual drug price revisions	<ul style="list-style-type: none">Consistent business operation from R&D to manufacturing, sales, quality assurance, pharmacovigilance and post marketing surveillanceTop domestic anti-cancer drugs lineup and specialized MRManufacturing technology for highly pharmacologically active substances	New Drugs
		<ul style="list-style-type: none">Increasing share for ALAGLIO® in TURBT*Maximizing value through drug fostering and evolution <p>* TURBT: Transurethral Resection of Bladder Tumor (surgery to remove bladder tumors using an endoscope and excision loop)</p>
		Biosimilars (BS)
		<ul style="list-style-type: none">Market spread of bevacizumab BSMeasures to promote biosimilars through the revision of medical feesExpansion of lineup through introduction of new biosimilars
		Generic anti-cancer drugs
		<ul style="list-style-type: none">Enhancement of stable supply and quality assurance systemDevelopment and launch of the new generic drugs
		Working toward the vision for FY2030
		Enhancement of pipeline <ul style="list-style-type: none">Development of new drugs in collaboration with external organizationsIntroduction of new drugs and medical devices
Agrochemicals Business		
<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 foodIntroduction of an agrochemical re-evaluation system has raised the bar for obtaining and maintaining domestic agrochemical business registrationStrategy "MeaDRI" (Sustainable Food Systems) promotes innovation that enables the reduction of agrochemicals (risk conversion)	<ul style="list-style-type: none">Insecticides and soil fumigants in the vegetable and fruit tree domainFormulation knowhow (innovative formulations)Operating activities combining technical services and information provisionManufacturing 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 registrationResponse to the agrochemical re-evaluation system for DIAZINON® and other agrochemicals
		Overseas
		<ul style="list-style-type: none">Rebuilding the EVISECT® business by restructuring the supply chainRegistering and expanding sales of Flometoquin preparations
		Working toward the vision for FY2030
<ul style="list-style-type: none">Development of new insecticides and new innovative formulationsDevelopment and introduction of biostimulants		

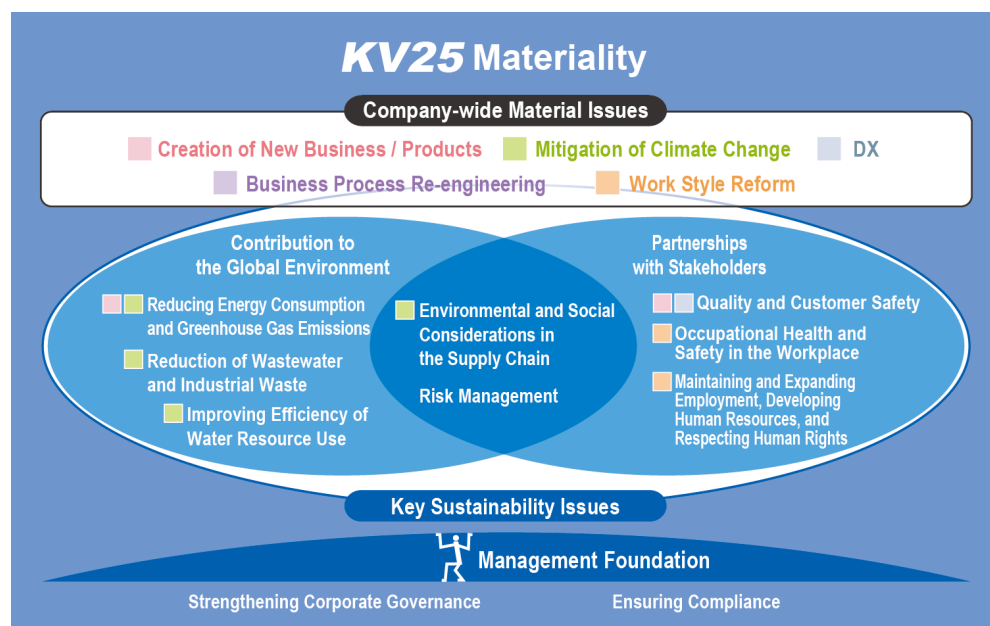
Materiality and Sustainability: Important Issues

Materiality

The quest to achieve our aim 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**,” has seen us analyze the gap between future aspiration and present reality, and prioritize as our Five Important Groupwide Issues needing to be tackled: “Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering and Work Style Reform.”

In addition, through promoting sustainable management have we appropriately grasped the important issues we face from internal and external standpoints, and defined them as our Key Sustainability Issues to be linked to corporate activities under our Sustainability Action Plan.

Our **KAYAKU Vision 2025** Medium-term Business Plan (hereafter: **KV25**) therefore seeks to contribute towards the realization of a sustainable society under our Sustainable Management Basic Policy through prioritizing the Important Groupwide Issues, and complementing those efforts with work on our Key Sustainability Issues. The umbrella term for the two sets of issues is “**KV25 Materiality**.”



* The colored boxes beside each sustainability issue signify its link(s) to an important groupwide issue.

Important Groupwide Issue Initiatives

In order to reach where we wish to be, the Nippon Kayaku Group has analyzed the gap between our aims and our present condition and, as a cross-cutting groupwide project, fixed the five key issues needing to be tackled (Creation of New Business and Products, Mitigation of Climate Change, DX, Business Process Re-engineering and Work Style Reform). The twin tasks of devising ways to instill the Five Important Groupwide Issues in our workforce and speed up the process towards their resolution fall to our Materiality Cross-Functional Team (M-CFT), comprised of members selected from multiple departments.

Important Groupwide Issue	Initiative Details
Creation of New Business and Products	We will contribute to realizing our ideal form by linking the four fields of Mobility, Environment & Energy, Electronics and Life Sciences to our three business units, and cutting across existing boundaries to create new business and products.
Mitigation of Climate Change	We will set our targets for carbon neutrality and global warming prevention (through, for example, reducing greenhouse gas emissions), and unite every factory and research lab behind our climate change risk mitigation measures.
Digital Transformation (DX)	Our current target is to promote DX across the group, expand our sales through process innovation, and expand our business through cost-reductions. Our specific DX measures include: (1) IT education and raising IT consciousness, (2) strengthening our IT base through rebuilding our ERP & IT infrastructure, and (3) bringing DX to each working process in the areas of R&D, production, sales and marketing, and administration.
Business Process Re-engineering	We will reassess our methods for group, business and cost management, and eliminate various forms of waste while improving working methods and reducing costs through A3 Activities (KAIZEN)*, thereby boosting work efficiency and productivity, and upping both asset efficiency and earning power.
Work Style Reform	With our sights set on becoming a “vibrant, strong and good company,” we will reform our working practices and human resources system to increase employee vitality and engagement.

* Our A3 Activities (KAIZEN) are based on cost-reduction consciousness, and designed to make the Nippon Kayaku Group a more vibrant community through strengthening both the individual and the group (through skills and expertise), and through culture-change activities that help cultivate autonomy.

Key Sustainability Issues: Specification Methods

In 2019, having appropriately grasped the issues it faces from an internal and external standpoint, the Nippon Kayaku Group specified its Important Medium-term CSR Issues in order to meet stakeholder expectations and demands. The launch of KV25 in April 2022 coincided with the switchover from CSR Management to Sustainability Management, causing the “Important Medium-term CSR Issues” to be renamed the “Key Sustainability Issues,” which were then reassessed in order to aid our responses to diversifying business environments and changing social issues.

STEP 1

Recognition of Issues

- Building on our previous Key Sustainability Issues (laid down in our **KAYAKU Next Stage** Important Medium-term CSR Issues), we have extracted themes from the GRI Standards on the demands of a diversifying society to serve as our base, and updated our issue items accordingly.

STEP 2

Converting External and Internal Opinions into Points

- A. Converting External Evaluations into Points
We have taken the evaluation standards of multiple international assessment bodies concerned with promoting responsible investment, as well as the SASB required standards for separate industries, linked them to our issue items, and assigned external evaluation point scores to them.
- B. Converting Internal Evaluations into Points
We have taken the key Medium-term Business Plan themes for each separate business and corporate division, linked them to our issue items, and assigned internal evaluation point scores to them.

* SASB: Sustainability Accounting Standards Board - An American non-profit organization which determines sustainability information disclosure standards for each separate industry.

STEP 3

Mapping of Important Issues

- Our important-issue mapping system has seen the issue items of “Strengthening Corporate Governance” and “Thorough Compliance” specified as most important to business continuity, while our other issue items have been assigned point scores according to internal and external evaluations. Our resultant point-based map has had threshold levels inserted, with anything exceeding those thresholds being specified as an important issue item.

STEP 4

Suitability Confirmation and Approval

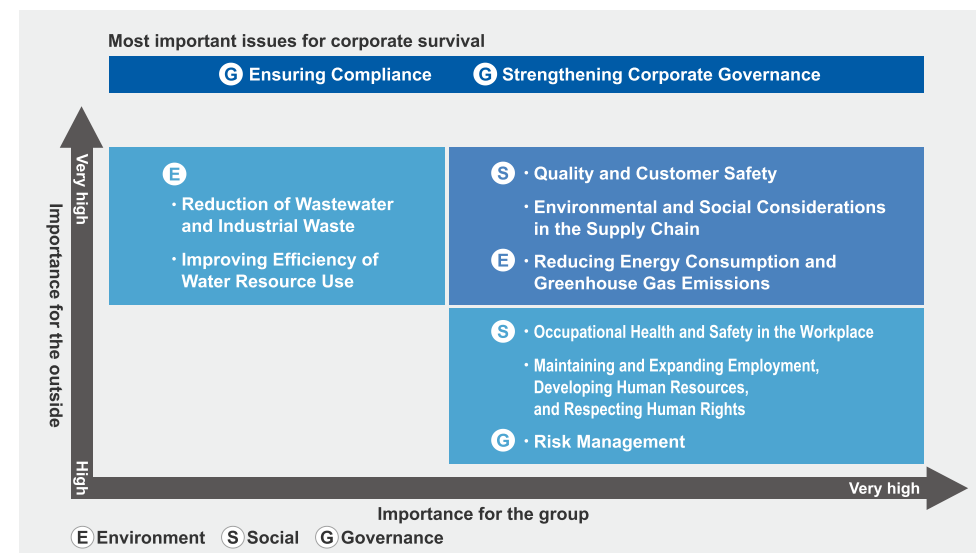
- With intellectual input from our sustainability specialists taken into account, our specifying methods and specification results are reviewed by our company’s key decision-making institution, the Sustainable Management Meeting (formerly the CSR Management Committee), and approved after two rounds of discussions.

Important Sustainability Issues: Initiatives and KPIs

The Nippon Kayaku Group has now linked its specified Key Sustainability Issues to its Corporate Activities under the Sustainability Action Plan. We have additionally made use of the SDG Compass to link this plan to the 17 SDGs. Hence, by working towards achieving the Sustainability Action Plan KPIs will we contribute to a sustainable society as well as delivering on the SDGs.

Key Sustainability Issues

Our Key Sustainability Issues have been split into three groupings: Issues Most Important to Business Continuity, Most Important Issues, and Important Issues, with each being assigned its own action plan.



Sustainability Action Plan

The Nippon Kayaku Group's Sustainability Action Plan makes use of the SDG Compass to tie each important issue to one or more of the 17 SDGs. Through managing and disclosing our KPI progress reports on an annual basis, and promoting sustainability activities in general, does the Nippon Kayaku Group aim to create environmental, social and economic value, achieve the SDGs (hence the realization of a sustainable society) and improve corporate value.

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
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	0	<ul style="list-style-type: none"> No serious compliance violations. This financial year's compulsory compliance training on Mental Flexibility delivered to all domestic Group companies. Discussions held and options explored with overseas Group companies yet to install a compliance whistleblowing consultation service.
				Compliance training rate	100%	97%	96%	
				Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	83%	
	Strengthening Corporate Governance	16	<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	1	1	<ul style="list-style-type: none"> We have set up a Board of Directors Effectiveness Evaluation Survey, grasped the current situation, extracted relevant issues and devised an action plan as part of current improvement efforts. Female independent outside board member selected. Female Standing auditor selected. Human Resources Development Policy and Inside Environment Preparation Policy established.
				Number of times internal business audits are performed by the Audit Division	60 times in four years	22	17	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
Most important issues	Quality and Customer Safety	16	<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	0	<ul style="list-style-type: none"> Quality Fraud Prevention-related seminar on Understanding the Essence of Quality Compliance developed for our Product Quality Month (November). The post-seminar survey (120 respondents) yielded good results. Satisfaction level: Extremely satisfied or satisfied: 78% Degree of understanding: Very easy to understand/ For the most part easy to understand: 90%
				Number of serious quality process abnormalities in processes ^{*2}	0	1	0	
	Environmental and Social Considerations in the Supply Chain	8, 12, 13, 16	<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%	(Non-consolidated) 91%	<ul style="list-style-type: none"> Sustainable Procurement Guidelines-based survey sent out to suppliers making up the top 90% of our purchases in FY2021 and all new suppliers in FY2022 and FY2023 (371 companies in total). 338 companies consented to the Guidelines. As the survey responses revealed no supplier problems with human rights and environmental issues, there was no need to send out Requests for Improvement.
				Formulation and implementation of improvement plans using questionnaires to suppliers	(Non-consolidated) Disclose progress	-	Published in Topics	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
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"> To achieve our FY2030 Environmental Targets by promoting energy-saving and global-warming response initiatives. To extract issues and clarify our strategies in order to achieve carbon neutrality by FY2050. 	Greenhouse gas emissions (Scope 1+2)	(Target achieved in FY2030) Under 70,598 tons (a reduction of over 46% on FY2019) (Target achieved in FY2023) Under 115,715 tons	108,301 tons	102,704 t-CO ₂	<ul style="list-style-type: none"> Promotion of MFCA and Solar Power Generation PPA Models sequentially introduced. c. 24% reduction in industrial waste produced compared with FY2022. Our development status situation for environmentally-conscious products and technologies is as reported below. <p>[Safety Systems Business] Development of a lighter cylinder-type inflator and green propellant MGG.</p> <p>[Polatechno Business] Reductions in waste treatment energy and total waste produced stemming from improvements to production process and product design.</p> <p>[Functional Materials Business] Pilot experiments performed on aircraft-oriented CFRP/GFRP thermosetting resin prototypes with development potential.</p> <p>Development of a high-temperature resistant, high-reliability thermosetting resin from biomass materials.</p> <p>[Color Materials Business] Development of industrial inkjets (for coated paper and soft packaging).</p> <p>Expanded sales of non-phenol developer for thermal paper.</p> <p>Market debut and expanded sales for PLA (biodegradable) dye for fiber processing.</p> <p>[Catalysts Business] Promoting joint-research of catalysts used to manufacture hydrogen.</p> <p>Materials informatics techniques used to develop catalysts which can contribute to lowering amounts of raw materials used and improved yields from target objects.</p> <p>Development of catalysts to help manufacture basic chemicals such as propylene from biomass materials.</p> <p>[Pharmaceuticals Business] Environmentally-conscious wrapping initiatives started.</p>
				VOC emissions	(Non-consolidated) Disclose results	(Non-consolidated) 38.7 tons	(Non-consolidated) 32.9 tons	
				COD emissions	(Non-consolidated) Disclose results	(Non-consolidated) 171.8 tons	(Non-consolidated) 210.9 tons	
				Total waste output	(Non-consolidated) Disclose results	(Non-consolidated) 27,621 tons	(Non-consolidated) 20,974 tons	
				Recycling rate	(Non-consolidated) 80% or higher	(Non-consolidated) 85.0%	(Non-consolidated) 83.8%	
				Zero emission rate	(Non-consolidated) 1% or less	(Non-consolidated) 0.8%	(Non-consolidated) 0.7%	
				Goal setting in line with SBT and consideration and implementation of specific measures	Disclose progress	Gained an A-rating on CDP (Climate Change) Scope 3 Calculations: Implementing improvements to accuracy	Medium-term Environmental Targets revised to 1.5°C scenario	
				Disclosure in line with TCFD recommendations	Disclose progress	Information disclosed	Information disclosed	
				Develop products and technologies with consideration for environmental issues	Disclose progress	Published in Topics	Published in Topics	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
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	0	<ul style="list-style-type: none"> No accidents requiring time off work at business sites and partner companies across Nippon Kayaku alone. Health and Productivity Management certification gained. Although our overall target for annual paid leave was met, the manager take-up rate was slightly below target. We will continue to set up Paid Holiday Promotion Days, and promote them both via our intranet and through having human resource managers on every business site proactively informing employees. From the next financial year, we are also planning to set up a new initiative involving Personalized Paid Annual Leave Take-up Declarations. We are maintaining our 100% take-up rate for periodical health checks. We conducted our first ever engagement survey and provided feedback on the results. We will continue this survey from the next financial year onwards as part of our planned cycle of visualizing organizational conditions, drawing up an action plan and promoting its implementation.
				Acquisition of certifications under the Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category)	(Non-consolidated) Continued certification	(Non-consolidated) Gained FY2023 certification as a Health and Productivity Management Organization (Large Enterprise Category)	(Non-consolidated) Certified status renewed	
				Percentage of paid leave taken	(Non-consolidated) 70% or higher	(Non-consolidated) 63.7%	(Non-consolidated) 72.8%	
				Percentage of employees who take mental health training	(Non-consolidated) 100%	(Non-consolidated) 100%	Year 1 of our 3-year plan has proceeded as intended	
				Percentage of employees receiving regular health checkups	(Non-consolidated) 100%	(Non-consolidated) 100%	(Non-consolidated) 100%	
				Ascertaining and improving employee satisfaction through questionnaire surveys	(Non-consolidated) Disclose progress	-	Published in Topics	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
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%	(Non-consolidated) 8.8%	<ul style="list-style-type: none"> We have encouraged more women to challenge for managerial positions through promoting both training aimed at female managers and participation in career-support sessions. From the first conversations about work contents to the preparation of the workplace environment, we have incorporated specialist support in our quest to promote employment for people with disabilities and widen their job opportunities. Going forward, with one eye on future increases in statutory employment percentage rates, we will further expand work opportunities for the disabled, and establish a fixed support system as we advance our workplace preparations to help disabled employees succeed. Online training delivered on Business and Human Rights, and Risks Requiring Priority Measures as Identified by Nippon Kayaku Group Employees. Nippon Kayaku Group Human Rights Policy revised. The Top 3 Nippon Kayaku Group Risks Requiring Priority Measures have been identified by the Sustainable Management Meeting as: ① Power harassment, ② Excessive overtime and long working hours, and ③ Privacy rights. With respect to these three, we have collectively disclosed our efforts on preventing, reducing and correcting negative impacts on human rights.
				Percentage of employees with disabilities	(Non-consolidated) Achieve legal minimum employment rate	(Non-consolidated) 1.98%	(Non-consolidated) 1.93%	
				Amount invested in education and training per employee	(Non-consolidated) Disclose results	(Non-consolidated) 83,002 yen/person	(Non-consolidated) 76,565 yen/person	
				Training hours per employee	(Non-consolidated) Disclose results	(Non-consolidated) 14.9 hours	(Non-consolidated) 17.7 hours	
				Number of training sessions held on human rights	Once or more per year	1	2	
				Human rights due diligence: human rights impact assessment rate	(Non-consolidated) FY2022: 100% (Consolidated) FY2025: 100%	(Non-consolidated) Incomplete	Human rights risk assessments and risks requiring priority measures identified in sessions laid on for Nippon Kayaku Group employees	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
						FY2022	FY2023	
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 	Implementation rate of risk control activities for business, etc., and top five risk control activities	100%	100%	100%	<ul style="list-style-type: none"> "Risk Controls for the Top 5 Risks" activities conducted at Nippon Kayaku plants and all Group companies (based on trends of soaring raw material prices and increased supply disruption risks) Hearings conducted at domestic and overseas plants on the Top 5 Risks. BCP drills set up based on an earthquake scenario in the Kashima district, and a snow-damage scenario in the Joetsu region. BCP drills set up at China-based Group companies.
				Number of BCP drills conducted	Once or more per year	2	3	

*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

Key Sustainability Issues: Risks and Opportunities

Through recognizing the risks and opportunities associated with our specified Key Sustainable Issues, reducing those risks, and working on those opportunities connected to fresh business growth, the Nippon Kayaku Group will aim to realize a sustainable society and deliver yet further improvements to corporate value.

	Important Sustainability Issues	Risks	Opportunities
Most important issues for corporate survival	Ensuring Compliance	<ul style="list-style-type: none"> Loss of public trust due to compliance violations Damage to corporate value Slump in business activities 	Gaining stakeholder trust
	Strengthening Corporate Governance	Stagnation of business activities	<ul style="list-style-type: none"> Gaining stakeholder trust Increased capacity to gain public trust
Most important issues	Quality and Customer Safety	<ul style="list-style-type: none"> Alienation of customers due to discrepancies in product quality Loss of public trust due to illegalities in quality management and labelling 	Gaining customer trust through supplying high-quality products
	Environmental and Social Supply Chain Considerations	Negative impact on corporate activities from illegal acts or compliance violations on the part of suppliers	<ul style="list-style-type: none"> Contributing to the realization of a sustainable society Increased long-term competitiveness
	Reducing Energy Consumption and Greenhouse Gas Emissions	[Switchover risks] <ul style="list-style-type: none"> Increased operational costs stemming from the effects of a strengthened emissions system Electricity and LPG price-hikes Increased raw material costs stemming from the effects of a strengthened emissions system Increased costs associated with disclosure of environmental information and LCA calculations 	<ul style="list-style-type: none"> Expanded use of materials for semiconductor-related and low-energy consumption products due to the extension of smart city and Digital Transformation (DX) projects Expanded use of materials for next-generation storage batteries Expanded use of resin materials for lighter mobility vehicle bodies
	Reduction of Wastewater and Industrial Waste		<ul style="list-style-type: none"> Expanded use of optical materials for lighter EV cars and sensor materials for self-driving cars
	Improving Water Resource Use Efficiency	[Physical risks] <ul style="list-style-type: none"> Increased costs stemming from flooding caused by typhoons, heavy rain and high tides Operational impacts of water shortages Decreased labor productivity due to temperature rises 	<ul style="list-style-type: none"> Expanded use of biostimulants to maintain and increase agricultural production in the face of expected temperature rises, and wider use of existing agrochemicals to combat new pest threats.
Important issues	Occupational Safety and Health in the Workplace	<ul style="list-style-type: none"> Loss of public trust as a result of accidents or scandals Decreased labor productivity, exodus of staff 	<ul style="list-style-type: none"> Fostering of a safety culture Improved work engagement from employees
	Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	<ul style="list-style-type: none"> Failures to normalize new ideas and lost new business chances owing to skewed human resource attributes and skills Loss of public trust due to human rights violations 	<ul style="list-style-type: none"> Fostering of business climate with diverse values which gives rise to new ideas Contributing to the realization of a sustainable society and increased long-term competitiveness
	Risk Management	Increase in management-related risks	Guaranteed continuation of business during emergencies

Promoting Responsible Care

Message from the Executive Director in Charge

At every stage of the product life cycle, from procurement of raw materials to production, distribution, use and, finally, disposal, the Nippon Kayaku Group considers the environment, safety and product quality in order to supply society with the best products, technologies and services that bring true delight to people's lives.

When it comes to business activities, our motto is: "Safety trumps everything else!" It means that not only is the safety and health of every employee a given, but that we work towards grasping and reducing risks that come our way, and preventing accidents and hazards. To that end do we not only provide periodical education and training to our employees, but anticipate the potential dangers associated with everyday work and the handling of chemical substances, and guarantee workplace safety by devising measures to forestall such dangers.

The unified quality control system we operate, with headquarters and plants working as one, allows us to continually strengthen our everyday quality improvement activities, take preventative steps against product and process abnormalities, and simultaneously improve customer satisfaction.

As part of our response to climate change - a **KV25** Materiality Issue in our **KAYAKU Vision 2025** Medium-term Business Plan - April 2024 saw us fix our Medium-term Environmental Targets towards achieving carbon neutrality by the year 2050. Accepting that the world has become yet more eco-conscious means further accelerating our carbon-neutrality-themed initiatives; 2020 saw us revise our standards from those geared towards achieving a 2°C warming scenario to those aimed at a 1.5°C scenario. In terms of Scope 1 and 2 greenhouse gas emissions from our business activities, we are aiming for a 46% reduction on 2019 levels, and for carbon neutrality by 2050.

Going forward, we will see the Nippon Kayaku Group unite behind Responsible Care Activity promotion as we strive to develop in tandem with our employees, customers, suppliers, shareholders, investors and all our stakeholders.

Yasuhito Kato
Senior Director
In charge of Technology Unit



Policy and Basic Approach

Our Declaration on the Environment, Health, Safety and Quality

Under the twin spirits of KAYAKU and Responsible Care, we have fixed our "Declaration on the Environment, Health, Safety and Quality," which is geared towards guaranteeing environmental protection, safety and health, while maintaining and improving product quality. We shall show a united front in promoting these activities, and this declaration shall apply to every employee working for the Nippon Kayaku Group, including temp staff and subcontractors.

Our Declaration on the Environment, Health, Safety and Quality

Established: 1995-11-07

Revised: 2017-05-22

Revised: 2024-01-31

We, the Nippon Kayaku Group, based on the **KAYAKU spirit** of "Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences," shall conduct business as a company which contributes to the achievement of a sustainable society that "safeguards the life and health of consumers and supports comfortable living."

◆ 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 prevent pollution, protect biodiversity, and conserve the environment by promoting reduction and proper disposal of waste, reduction of resource consumption (of energy, water, and raw materials), and Climate change measures (toward reduction of greenhouse gas emissions).
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.

January 31, 2024
Nippon Kayaku Co., Ltd.
President and Representative Director



* Responsible Care: Refers to companies which either produce or handle chemical substances proactively taking measures which show consideration for the environment, safety and health, in every process extending from development, sale and use to disposal. Since its launch in Canada in 1985, Responsible Care has gained prominence worldwide, not least in Japan.

Responsible Care Policy

With a common recognition of “Safety trumps everything else,” every Nippon Kayaku Group company is working together on preventing accidents and hazards that impact the environment and safety, faithfully observing local laws both inside and outside Japan. Furthermore, in order make the **KAYAKU spirit** a reality, our companies are progressing their Responsible Care Activities with the aid of all Group employees in line with the Declaration on the Environment, Health, Safety and Quality.

The Nippon Kayaku Group's Responsible Care Policy has served as the base for the policies we should continually pursue since FY2019. Such policies include promoting safety and health activities with a focus on rooting out unsafe actions through 30-second patrols and fixed-point inspections; promoting Core Environment, Safety and Health Diagnostic Checks centered upon risk management; and drawing up decarbonization-based targets with an eye on achieving our Medium-term Environmental Targets by FY2030. Progress on the above is confirmed in conjunction with domestic Group companies on an annual basis. A key item added to our policy for FY2024 concerns the establishment of diagnostic checking methods related to the Occupational Safety and Health Act and the partly-revised regulations within.

Going forward, the Nippon Kayaku Group aims to continue advancing its Responsible Care Activities in line with these policies.

This Year's Nippon Kayaku Group Responsible Care Policy

◆ (Targets)

- Serious accidents and hazards: 0
- Serious environmental accidents: 0
- Serious traffic accidents: 0

◆ 1. Key Responsible Care Issues

- Total Group Scope 1+2 CO₂ emissions to exceed no more than 111,838 tons (Groupwide)
(Total Group CO₂ emissions to fall at least 15% from FY2019 levels)
- Conformity with the 1.5°C warming scenario targets (further clarification of our reduction story)
- Domestic zero-emission rates of 1% or less
- Promotion of strengthened 30-second patrols and fixed-point inspections (revitalization of activities through situational visualization)

◆ 2. Promoting Initiatives for Zero Serious Accidents and Hazards

- Promotion of both risk management and the checking methods underscored in the revised Occupational Safety and Health Act
- Horizontal expansion of heatstroke prevention measures
- Examination and selection of an AI-based Hazard Source Estimation System

◆ 3. Improvements to the Workplace Safety and Health Environment

- Appropriate application of the revised Occupational Safety and Health Act
- Promotion of organizational stress-check analysis to grasp high-stress workplaces and take follow-up action
- Appropriate operation of our health check database
- Promotion of health check management
 - Over 20% health check take-ups due to Specific Health Guidance
 - Over 50% participation in health events

◆ 4. Promoting Activities aimed at Achieving Environmental Goals

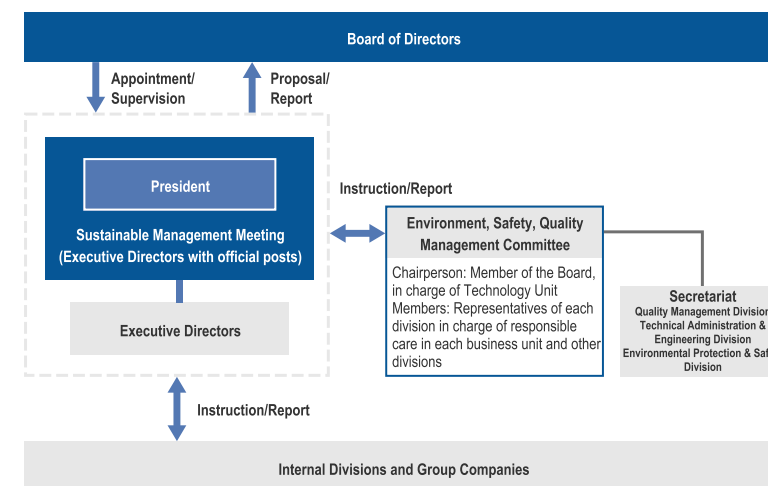
- Improved practices for climate-change-related disclosures to external sources
 - Clarification of risks and impacts, and the setting of targets for TNFD disclosures
 - Quantification of TCFD risks (flooding) and proposals for future measures
- Appropriate operation of a cloud-based environmental data aggregation system (groupwide)
- Every business site to aim for a 3% annual reduction in Scope 1+2 CO₂ emissions (a groupwide challenge, not a binding target)
- Bolstering the system for calculating individual product emissions (exploring potential systems)
- Plastic waste recycling rates of 80% or more; final disposal rates of 1% or less

System

Our Group's Responsible Care Activities are coordinated by the Committee for Environment, Safety and Quality Management, set up as an advisory body to the Sustainable Management Meeting chaired by our President.

This Committee is comprised of persons in charge of Responsible Care Activities from each business unit, as well as managers from each section of our General Administration Department, which is unattached to any business units. The Committee's remit is to discuss the status of Responsible Care-based activities as well as any problems arising from them and how to respond, and to deliberate policy proposals for the next financial year and for the resolution of climate-change related matters. The results of its discussions are reported to the Sustainable Management Meeting.

Our Environmental Protection & Safety Division, meanwhile, conducts Core Environmental, Safety and Health Diagnostic Checks of each business site and group company as an organizational activity, and reports the results to the Committee for Environment, Safety and Health Management.



Responsible Care Audits

◆ Basic Approach

Based on the Annual Responsible Care Plan, the Nippon Kayaku Group conducts internal audits of each business site and a section of Group companies in the form of Core Environment, Safety and Health Diagnostic Checks.

These diagnostic checks represent a structure for ascertaining whether business activities are indeed showing due consideration to the environment, safety and health, and promoting improvements in response to problems detected. Specifically, these Checks involve inspecting items related to Responsible Care, environmental conservation, disaster prevention, distribution safety, biodiversity, occupational safety, compliance, proper health management, and management of chemical substances, and providing relevant improvement advice and suggestions. By enabling us to prevent compliance violations and unjust or erroneous practices, and devise improvements in the fields of the environment, health and safety, these diagnostic checks help to build, maintain and improve the Nippon Kayaku Group's internal control system.

◆ Management System

Core Environment, Safety and Health Diagnostic Check Team

Our Team is comprised of Environmental Protection & Safety Division managers (Team Leaders), Environmental Protection & Safety Division members (inspection team and office staff), and Labor Union Head Office staff.

Items to be checked

- Status of Responsible Care Activities via the Responsible Care Progress Confirmation Chart
- Implementation status of risk management concerning production processes and high-hazard-risk equipment
- The effects of responses and recurrence prevention measures for past accidents and hazards
- Area inspections (30-second patrols and fixed-point inspections)
- The storage and management situation for chemical substances
- The Environment, Safety and Health system and compliance status for related laws and regulations
- Other necessary items related to Responsible Care

Locations to be checked

- All Nippon Kayaku business sites (7 plants, 3 research labs, 2 offices, 3 other bases)
- Domestic Group companies (3 onsite, 1 offsite)
- Overseas (China-based) Group companies (3 companies)

Frequency of checks

We conduct diagnostic checks every 1-2 years based on the size of the business site in question and the previous year's inspection results. Depending on inspection result contents and the subsequent situation, we may also stage follow-up checks. (In the event, none were conducted in FY2023).

Reporting of Inspection Results

We provide inspection result feedback on the following categories.

- Good points: Excellent initiatives which can serve as reference points for other business sites and the rest of the Group
- Points raised: Items carrying risks related to accidents, hazards, environmental incidents, and compliance violations
- Points noticed: Items which demand improvements in initiatives concerned with safety and health, environmental conservation and compliance
- Suggestions: Items which pose no problem at present, but with the implementation of a suggestion or two could deliver even better initiatives in terms of environment, safety and health.

Inspection results are reported to the business site or Group company inspected, related business units, the Environment, Safety and Quality Management Committee, and the Audit Division. In response, the inspected business units and group companies will address any problems discovered by undertaking systematic improvements in the form of PDCA cycles.

◆ Targets and Results

Core Environment, Safety and Health Diagnostic Check Results (Number of bases inspected)

Business Units examined; Group companies		2022	2023
Plants		7	7
Research labs		2	1
Offices		2	0
Domestic Group companies	Onsite	3	3
	Offsite	1	1
Overseas Group companies*		3	1
Total		16	13

* Checks for Overseas Group companies have been conducted via an online meeting system involving a Responsible Care Progress Confirmation Chart only.

FY2023 Inspection Results (Number of points raised at the 13 bases inspected)

Areas in which points were raised	Responsible Care Progress Confirmation Chart	Risk assessments and others
Good points	14	26
Points raised	5	1
Points noticed	15	39
Suggestions	23	57

Initiatives

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

Stakeholder Engagement

Policy and Basic Approach

The Nippon Kayaku Group is aiming to be a company which delivers both happiness and delight to all stakeholders: our employees, customers, suppliers, shareholders, investors and local communities. We value our conversations with stakeholders, taking advantage of various opportunities and communication tools to conduct appropriate information disclosure and two-way exchanges in order to improve our business operations. Through fulfilling stakeholder expectations and demands are we contributing to wider society through our business activities.

➤ [Multi-Stakeholder Basic Policy \(Japanese\)](#)

Stakeholders of the Nippon Kayaku Group



Stakeholders	Outline of Initiatives	Method of Communication
Our employees	We believe that "people" are the nucleus of our corporate activities. Through respecting the human rights of each and every employee, and striving to provide a reassuring working environment, we aim to become a company which allows its "people" to really feel their own personal development amid the rewarding nature of their work.	<ul style="list-style-type: none"> Talent management system Engagement survey set-up Compliance awareness survey, Stress check survey In-house publications Compliance hotline Agreements with labor unions
Our customers	Through pursuing high product quality, and supplying the best socially and environmentally-conscious products, technologies and services, do we strive to gain the satisfaction and trust of our valued customers: <ul style="list-style-type: none"> Automobile module manufacturers, Optical material users Users of resins, dyes and catalyst materials Medical personnel, Patients Agrochemical manufacturers, wholesalers and retailers; agricultural cooperatives 	<ul style="list-style-type: none"> Ascertaining of needs through sales activities Refinement/improvement of products and services Plant field trips Publication of information online Providing safety guidance on agrochemical use and advice on pest control methods
Our suppliers	From R&D right the way through to raw material procurement, manufacturing, sales and distribution, we are working with all our supply chain partners to respect human rights and promote environmental conservation, workplace safety & health, compliance matters and sustainable purchasing (including fair trade considerations).	<ul style="list-style-type: none"> Information exchange through visits, web chats, and everyday business conversations Sustainable Procurement Survey Procurement Seminars
Our shareholders and investors	Having fixed our disclosure policy, we are presenting all shareholders and investors with timely, honest and impartial information so that they may appropriately understand our business situation and various business initiatives.	<ul style="list-style-type: none"> Financial results briefings General Meetings of Shareholders (AGM) Telephone conferences 1-on-1 meetings Presenting information via our website and integrated reports
Local communities	From our various bases across the world do we serve as active members of local communities, not only through CSR work, but through next-generation development support and information exchanges with local authorities. We are hence contributing to sustainable development through enhancing the robustness of the local communities we serve.	<ul style="list-style-type: none"> CSR activities (plant festivals, street cleaning) Welcoming visitors for plant field trips Next-generation training support Information exchange with local authorities

Links with Local Communities

The Nippon Kayaku Group, via its various business locations, has tied up a multitude of agreements with local governments and regions. By respecting various environmental agreements and making efforts to lower our environmental burden are we contributing to the safety and reassurance of the local communities concerned.


Key local agreements signed by Nippon Kayaku



Workplace	Agreement Title	Co-signatory
Safety Head Plant (Himeji)	Memorandum on Wastewater Management	Himeji City
	Local Fire Brigade Partner	Himeji City Fire Department
Fukuyama Plant	Agreement on Pollution Control	Hiroshima Prefecture, Fukuyama City
Asa Plant	Agreement on Water Pollution Control	Yamaguchi Prefecture Fishing Cooperative
	Agreement on Environmental Safety	Sanyo-onoda City
Tokyo Plant	Green Agreement	Adachi Ward
	Joint-Agreement on the Establishment of a Committee to deal with Colored Wastewater Issues	Bureau of Sewerage Tokyo Metropolitan Government 2nd Management Office
	Agreement on Mutual Disaster Support	Adachi Ward Shinden Residents' Association, Shinden 1-chome Estate Residents' Association
	Agreement on Locations of Sheds Housing Small Pumps for Civilian Use	Senju Fire Department
Takasaki Plant	Company Fire Brigade Cooperation Agreement	Takasaki City Fire Department, and fire departments in the wider region
Kashima Plant	Agreement on Pollution Control	Ibaraki Prefecture, Kashima City, Kamisu City
Tokyo R&D Administration Office	Sea Rescue Activity Cooperation Agreement Agreement with the Akabane Ward Council on Mutual Support for Disaster Prevention in Dangerous Buildings	Tokyo Fire Department Akabane Branch

External Initiatives

At the Nippon Kayaku Group, we believe not only in conforming to international standards but in the importance of collaborating with a variety of institutions and businesses. That's why we are proactively participating in initiatives both inside and outside Japan as we work to promote the pathways towards a sustainable society.

External Initiatives Joined

Initiative title	Participation period	Scale	Relationship with corporate principles and the path to approval
<div>UN Global Compact</div> <div>WE SUPPORT</div> <div></div>	2021	Groupwide	<p>Guided by its KAYAKU spirit corporate vision, the Nippon Kayaku Group is seeking to deploy sustainable management to create environmental, social and economic value in its quest to help realize a sustainable society and boost corporate value.</p> <p>The UN Global Compact demands that all companies actively and proactively engage in the promotion of sustainable activities through incorporating its ten principles across four fields (human rights, labor, environment and anti-corruption) into their daily operations and strategies.</p> <p>The Nippon Kayaku Group works towards the above as a member of the Global Compact Network Japan (GCNJ), the Japan-based network for the UN Global Compact. Our seats on GCNJ's themed subcommittees, primarily made up of member companies and organizations, allow us to join discussions and share information on sustainability ideas. 2023 saw us sit on the following 14 subcommittees:</p> <ul style="list-style-type: none">• ESG Subcommittee• Environmental Management Sub-committee• Kansai Region Subcommittee• Supply Chain subcommittee• CSV Subcommittee• GC Intra-Company Instillation Research Subcommittee• Human Rights Education Subcommittee• Human Rights Due Diligence Subcommittee• Anti-Corruption Subcommittee• Disaster Risk Reduction Subcommittee• SDGs Subcommittee• Reporting Research Subcommittee• WEPs Subcommittee• Circular Economy Subcommittee

Initiative title	Participation period	Scale	Relationship with corporate principles and the path to approval
<div>TCFD (Task Force on Climate-Related Financial Disclosures)</div> <div></div>	2022	Groupwide	<p>The KAYAKU Vision 2025 Medium-term Business Plan, commenced in 2022, saw the Nippon Kayaku Group commit to paper its Sustainable Management Basic Policy, which seeks to realize a sustainable society and boost corporate value by pursuing environmental, social and economic value through our response to climate change. As this response significantly impacts society, the Nippon Kayaku Group sees it as an issue of major importance.</p> <p>March 2022 saw us express our agreement with the proposals of the TCFD (Task Force on Climate-Related Financial Disclosures). We will use this TCFD Framework to pursue excellent communication with our wide range of stakeholders through proactively disclosing information related to “governance”, “strategies”, “risk management”, and “metrics and targets”. This way of thinking aligns with the Nippon Kayaku Group's sustainable management policies. Moving forward, in line with TCFD proposals, we will accelerate our efforts to reduce greenhouse gas emissions and work towards the building of a recycling society.</p>
<div>Responsible Care Global Charter</div> <div></div>	2008	Domestic	<p>The Nippon Kayaku Group signed up to the Responsible Care Global Charter in 2008, and also to the revised version in 2014.</p> <p>At Nippon Kayaku, we handle large numbers of chemicals, and engage ourselves in the development, manufacture and sale of many chemical products. In order to realize our KAYAKU spirit corporate vision of “Continuously providing society with the best products through ceaseless progress and the combined forces of our conscience,” we will proactively proceed with responsible care activities going forward.</p>

Principal memberships held

Organization	Joined	Membership type	Activity details
Japan Business Federation	1946	Permanent secretary	We approve of the federation's aims of aiding the autonomous development of the Japanese economy and improving Japanese people's lives, and consequently serve as a member. We currently sit on the Secretariat, and the committees on Administrative Reforms, Social Security, and Diversity and Inclusion. Through widening our multitude of exchanges straddling industrial boundaries, we will utilize our economic knowhow to contribute towards building a sustainable social economy.
Japan Chemical Industry Association	1948	Board member/ General Management Committee	Nippon Kayaku's 3 rd President, Yasusaburo Hara, was also the inaugural Chairman of the Japan Chemical Industry Association upon its foundation in 1948; he would serve in that role for over 14 years. Mr Hara established the base for Japan's postwar chemical industry recovery, paving the way for the introduction and development of the petrochemicals industry which would later play a major role in Japan's years of rapid economic growth. Having inherited Mr Hara's founding aims, present-day Nippon Kayaku seeks to further contribute to the development and improvement of the chemical industry.

Organization	Joined	Membership type	Activity details
Japan Dyestuff and Industrial Chemicals Association	1948	Board member	Nippon Kayaku's 3 rd President, Yasusaburo Hara, also assumed the chairmanship of the Japan Dyestuff and Industrial Chemicals Association upon its foundation in 1948; he would retain the role for another 33 years. Having inherited Mr Hara's founding aims, present-day Nippon Kayaku will contribute to the proposal, promotion, examination and research of business support policies related to safety, the environment and internationalization within the chemical industry domain.
Japan Pharmaceutical Manufacturers Association	1968	Trustee	We have joined this organization having approved of its aims to contribute to people's health inside Japan and across the world, and improve medical care overall, through developing innovative and highly-useful medical products, and boosting the health of the pharmaceuticals industry. As a drug discovery company do we seek to contribute to the healthy development of the pharmaceuticals industry through creating our vision for code compliance, fairer distribution, promotion activities, clinical evaluations, PMS (Postmarketing Surveillance), product quality, pharmaceutical affairs and R&D.
Japan Biosimilar Association	2016	Board member company	We were one of four biosimilar-handling founder members to kickstart this organization in April 2016, with a focus on expanding and promoting biosimilars in general. We continue to serve as a proactive member, using this organization as a vehicle for exchanging information with stakeholders, including government, and making policy proposals. In so doing, we seek to contribute not only to holding down medical fees but to improving access to biopharmaceuticals for patients currently holding back from such treatment for financial reasons.
The Pharmaceutical Manufacturers' Association of Tokyo	1948	Board member	The Pharmaceutical Manufacturers' Association of Tokyo is composed of various pharmaceutical sellers and manufacturers of new drugs, generic drugs, and OTC (Over-the-Counter) medicines. As an eastern-Japan-based pharmaceutical company, we seek to enhance medical care through examining and exchanging information on pharmaceutical affairs, intellectual property, pharmaceutical product safety, and education and training.
Japan Investor Relations Association	1993	Trustee	We participate in this association to further our aims of improving the quality of investor relations activities through information-sharing and network-creation for IR managers from different companies. Through this association do we seek to achieve even better communication with our shareholders and investors, as well as increase trust in finance and capital markets.

Environment

Environmental Management.....

Reducing Energy Consumption and Greenhouse Gas Emissions.....

Air Pollution Prevention

Reduction of Wastewater and Industrial Waste

Management of Chemical Substances.....

Improving Efficiency of Water Resource Use

Biodiversity.....

Environmental Accounting.....

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Environmental Management

Policy and Basic Approach

The Nippon Kayaku Group’s environmental initiatives are aimed at contributing to global environmental conservation, and thus play a role in tackling the Key Sustainability Issues in the **KAYAKU Vision 2025**. They are also promoted in pursuit of targets published in our Responsible Care Policy, which are viewed as priority issues. Taken together, these initiatives constitute a companywide contribution to global environmental conservation. This involves observing both domestic and international laws and regulations related to the environment as well as any agreements we have signed, and, while picturing the environmental risks stemming from our business activities, showing consideration towards reducing environmental burdens, preventing pollution, saving energy and resources, the effects of climate change, and reducing waste.

- > [Our Declaration on the Environment, Health, Safety and Quality](#)
- > [Nippon Kayaku Group Responsible Care Policy](#)

System

- > [Responsible Care Promotion System](#)

Environmental Management System Certification Status

Our current efforts to retain our certification status for ISO14001, the internationally recognized environmental management standard, see us consider the environment during the development and manufacture of products and the provision of services. Having first gained ISO14001 Certification for Environmental Management Systems in 1998, we have now achieved certification for all seven of our domestic plants and seven overseas Group companies. We will continue, going forward, to explore new ISO14001 certification options for Group companies, including for those based overseas.

- > [ISO14001 Certification](#)

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
Reducing Energy Consumption and Greenhouse Gas Emissions	<div><div>6</div><div>CLIMATE ACTION</div></div> <div><div>7</div><div>AFFORDABLE AND CLEAN ENERGY</div></div> <div><div>9</div><div>INDUSTRIAL INNOVATION AND INFRASTRUCTURE</div></div> <div><div>12</div><div>RESPONSIBLE CONSUMPTION AND PRODUCTION</div></div> <div><div>13</div><div>CLIMATE ACTION</div></div>	<ul style="list-style-type: none">To achieve our FY2030 Environmental Targets by promoting energy-saving and global-warming response initiatives.To extract issues and clarify our strategies in order to achieve carbon neutrality by FY2050.	Greenhouse gas emissions (Scope 1+2)	(Target achieved in FY2030) Under 70,598 tons (a reduction of over 46% on FY2019) (Target achieved in FY2023) Under 115,715 tons	108,301 tons	102,704 t-CO ₂	<ul style="list-style-type: none">Promotion of MFCA and Solar Power Generation PPA Models sequentially introduced.c. 24% reduction in industrial waste produced compared with FY2022.Our development status situation for environmentally-conscious products and technologies is as reported below. [Safety Systems Business]
			VOC emissions	(Non-consolidated) Disclose results	(Non-consolidated) 38.7 tons	(Non-consolidated) 32.9 tons	Development of a lighter cylinder-type inflator and green propellant MGG. [Polatechno Business]
			COD emissions	(Non-consolidated) Disclose results	(Non-consolidated) 171.8 tons	(Non-consolidated) 210.9 tons	Reductions in waste treatment energy and total waste produced stemming from improvements to production process and product design. [Functional Materials Business]
			Total waste output	(Non-consolidated) Disclose results	(Non-consolidated) 27,621 tons	(Non-consolidated) 20,974 tons	Pilot experiments performed on aircraft-oriented CFRP/GFRP thermosetting resin prototypes with development potential.
			Recycling rate	(Non-consolidated) 80% or higher	(Non-consolidated) 85.0%	(Non-consolidated) 83.8%	Development of a high-temperature resistant, high-reliability thermosetting resin from biomass materials. [Color Materials Business]
			Zero emission rate	(Non-consolidated) 1% or less	(Non-consolidated) 0.8%	(Non-consolidated) 0.7%	Development of industrial inkjets (for coated paper and soft packaging). Expanded sales of non-phenol developer for thermal paper.
			Goal setting in line with SBT and consideration and implementation of specific measures	Disclose progress	Gained an A-rating on CDP (Climate Change) Scope 3 Calculations: Implementing improvements to accuracy	Medium-term Environmental Targets revised to 1.5°C scenario	Market debut and expanded sales for PLA (biodegradable) dye for fiber processing. [Catalysts Business]
			Disclosure in line with TCFD recommendations	Disclose progress	Information disclosed	Information disclosed	Promoting joint-research of catalysts used to manufacture hydrogen. Materials informatics techniques used to develop catalysts which can contribute to lowering amounts of raw materials used and improved yields from target objects.
			Develop products and technologies with consideration for environmental issues	Disclose progress	Published in Topics	Published in Topics	Development of catalysts to help manufacture basic chemicals such as propylene from biomass materials. [Pharmaceuticals Business]
							Environmentally-conscious wrapping initiatives started.

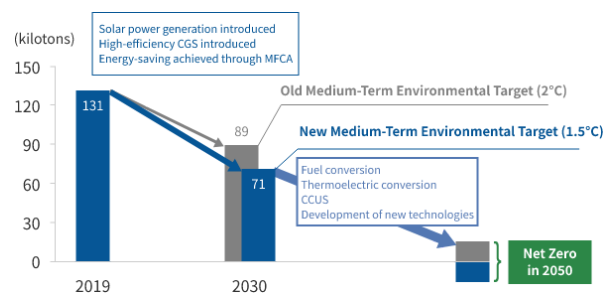
Medium-term Environmental Targets and Results

FY2021 saw the Nippon Kayaku Group kick-start its environmental conservation activities afresh with the fixing of its new Medium-term Environmental Targets.

Our original 2°C warming scenario Medium-term Environmental Targets saw us start out by widening compulsory participation to Group companies (consolidated) as we sought to shave at least 32.5% off FY2019 Scope 1 and 2 greenhouse gas emissions by FY2030 in the area of Holding Down Global Warming. However, with global environmental problems intensifying and moves towards carbon neutrality gaining momentum in recent years, we subsequently revised our standards to fit a 1.5°C warming scenario, committing us to a 46% reduction in FY2019 Scope 1 and 2 emissions by 2030 and an aim of carbon neutrality by FY2050. In relation to these matters, we decided to approve the proposals of the Task Force on Climate-related Disclosures (TCFD) in March 2022, and will continue to follow these proposals as we proactively disclose information on not only greenhouse gas emission status, but climate change risks and opportunities and initiatives related to the building of a Sound Material-Cycle Society.

In the area of Reducing Chemical Substance Emissions, we are yet to fix targets for emissions of Volatile Organic Compounds (VOC) and Chemical Oxygen Demand (COD), and have merely published the current data. VOC emissions are down on the previous financial year, but COD emissions are increasing due to transitions in items produced.

In the area of Reducing Waste, also, we are yet to fix target amounts for industrial waste produced and are merely reporting current figures. We are, however, working towards a fixed recycling rate target of at least 80% (excluding container re-use) and a zero-emission-rate target of less than 1%. As a result of continued waste sorting and reduction practices carried out at each of our plants and business sites, FY2023 saw an even lower volume of waste produced than FY2022. Furthermore, in terms of recycling and zero-emission rates, the continued promotion of moves towards recycling at each business site and sustained commitment to initiatives aimed at reducing environmental burdens have seen us not only meet, but also exceed, our original targets.



◆ Trends in Medium-term Environmental Target Results

Area	Covering	Items	Target Figures	2020 ^{*1}	2021	2022	2023
Climate change prevention ^{*2}	Consolidated	Greenhouse gases, Scope 1+2 ^{*3} emissions	FY 2030 Targets No more than 70.6 kilotons (Over 46% down on FY2019) (Reference: FY2023 standards) No more than 115.7 kilotons	118.2 kilotons (10.0% reduction)	112.5 kilotons (14.2% reduction)	108.3 kilotons (17.5% reduction)	102.7 kilotons (21.7% reduction)
Reductions in amounts of chemical compounds produced	Non-Consolidated	VOC ^{*4} (Quantities of Volatile Organic Compounds produced)	(Results Report)	33.3 tons	52.1 tons	38.7 tons	32.9 tons
		COD ^{*5} emissions	(Results Report)	122.6 tons	124.2 tons	171.8 tons	210.9 tons
Industrial waste reduction	Non-Consolidated	Waste quantities	(Results Report)	25,153 tons	28,424 tons	27,621 tons	20,974 tons
		Recycling rates (excluding container reuse)	No less than 80%	81.6%	82.3%	85.0%	83.8%
		Rate of zero emissions ^{*6}	No more than 1%	1.6%	1.0%	0.8%	0.7%

^{*1} Including our Joetsu Plant. Until FY2020, under our old Medium-term Environmental Targets, the Joetsu Plant was left out of Scope emissions.

^{*2} Medium-term Environmental Target for FY2030: A reduction of at least 46% on FY2019 levels (from 131.2 kilotons to no more than 70.6 kilotons)

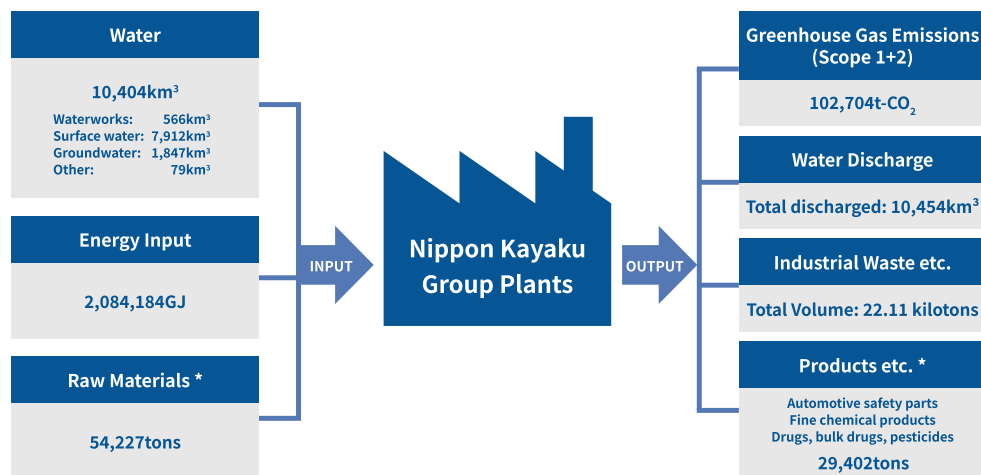
^{*3} Scope 1: Greenhouse gas emissions directly produced by our company itself (through fuel combustion, manufacturing process emissions, etc.)
Scope 2: Emissions our company indirectly produces through the use of electricity, heat and steam supplied by other companies

^{*4} The total of VOCs (Volatile Organic Compounds) includes not only those that must be reported under government ordinances (the PRTR Law) but also those specified by the Japan Chemical Industry Association.

^{*5} COD (Chemical Oxygen Demand): A leading water quality index based on chemical oxygen demand and the amounts of oxygen necessary for oxidizing materials in water.

^{*6} Rates of zero emissions: Defined as the ratio of internal to external Nippon Kayaku waste disposed of at landfill sites.

◆ Material Flow of Business Activities (FY2023)



Items listed below without additional notes represent combined domestic and overseas values.

* Nippon Kayaku alone

Amounts of Raw Materials Used

Indicators	Covering	Unit	2020	2021	2022	2023
Principal raw materials	non-consolidated	tons	36,614	47,583	44,211	40,707
Auxiliary materials	non-consolidated	tons	16,581	18,529	17,026	12,512
Plastic packaging materials	non-consolidated	tons	194	266	389	180
Cardboard packaging materials	non-consolidated	tons	415	529	480	395
Other packaging materials	non-consolidated	tons	461	489	470	434
Total	non-consolidated	tons	54,266	67,396	62,576	54,227

* Products not included (goods stocked at plants)

Energy Input Amounts

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Amount of energy input (heat quantity equivalent)	consolidated	GJ	-	-	-	-	2,084,184
Renewable energy	consolidated	GJ	-	-	-	-	29,060
Non-renewable energy sources	consolidated	GJ	-	-	-	-	2,055,124

* When converting electricity amounts into heat amounts for fuel, heat and electricity consumed in domestic and overseas business activities, electricity purchased from electricity companies is converted at 1MWh to 8.64GJ, while renewable energy such as solar power is converted at 1MWh to 3.6GJ.

Initiatives

Use of LCAs (Life-Cycle Assessments)

We are also working to maintain and improve the environment, health and safety at every step of the product life cycle, from the research and development stage right the way through production, distribution, sale, recycling and disposal. We are trialing the design of a process which allows us to visualize the value of every Group product or service by assessing and analyzing environmental impacts and potential environmental contributions at every stage of the life cycle. Part of these activities involves promoting calculation of the carbon footprint (CFP) of every Nippon Kayaku product, which allows us to not only grasp its environmental impact but improve the accuracy of our LCA calculations for customer products. We are presently proceeding with such calculations for certain product lines, and are looking at how to systematize this process to enable emissions calculations to be made for every company product.

Disclosure of Figures for Legal Violations

We are currently working on preventing violations of environmental regulations and accidents, and are preparing a rapid response system to deal with such incidents. Across the Nippon Kayaku Group in FY2023, there were no accidents, legal violations or regulatory violations which impacted upon the environment, nor any accidents related to water quality or volume, or violations of any related rules. Furthermore, no punishments or fines were issued.

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of violations of environmental laws and regulations	consolidated	cases	0	0	0	0	0
Number of environmental accidents	consolidated	cases	0	0	0	0	0
Violations of laws and regulations; fines issued for environmental accidents; punishment costs	consolidated	yen	0	0	0	0	0

(Key Sustainability Issues)

Reducing Energy Consumption and Greenhouse Gas Emissions

Policy and Basic Approach

Recent years have seen abnormal weather patterns across the globe, damage to the natural environment, and a sense of crisis towards climate change. Against this backdrop did the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) lead to accelerated efforts to decarbonize, while the Japanese government declared a green growth strategy based on the Paris Agreement to make the country carbon neutral by 2050. Endorsing this strategy, the Nippon Kayaku Group, in 2020, revised its FY2030 Medium-Term Environmental Targets from pursuing a 2°C warming scenario to a 1.5°C warming scenario. Looking further into the future, our Group has set as its ultimate goal the achievement of carbon neutrality by FY2050.

Our climate change responses have included energy-saving measures and production process optimization, the introduction of low-emission power sources such as solar panels, and the switchover to low-emission-factor renewable sources of electricity.

Consequently, we will not only be able to devise ways of greatly reducing greenhouse gas emissions but deliver products geared towards a decarbonized society. We will also, through supplier engagement, aim for decarbonization across the entire value chain.

Information Disclosure based on TCFD Proposals

Governance

The Sustainable Management Meeting, chaired by our President, is tasked with discussing Nippon Kayaku Group business plans which incorporate future climate change responses, and summarizing and evaluating the status of environmental activities. Discussion, summary and evaluation results are reported to the Board of Directors, which assumes the supervisory and directorial role in this system.

We have also organized an Environment, Safety and Quality Management Committee to serve as an advisory body to the Sustainable Management Meeting. Its remit is to take a crosscutting organizational approach towards coordinating the advancement of our climate change measures and to hold yet deeper discussions on climate change issues.



Strategies

We are expanding multiple business operations on a global scale, with each business area bringing its own risks and opportunities. To identify the risks to business presented by climate change, we have, in line with TCFD proposals, assessed risks across the entire Group and examined opportunities in each business area. The time periods in which risks will manifest themselves are categorized as below.

	Period	Reason for adoption
Short-term	The 4-year period spanning FY2022 to FY2025	The same period as that covered by our KAYAKU Vision 2025 (KV25) Medium-term Business Plan
Medium-term	Up to FY2030	To align with FY2030 Targets fixed in the Nippon Kayaku Group's Medium-term Environmental Targets
Long-term	Up to FY2050	To align with Japan's NDC (Nationally Determined Contribution) Target Year

◆ Climate-related Risks

Our 2°C and 4°C warming scenarios for climate-related business risks are based on the IPCC's Representative Concentration Pathways (RCP Scenarios 2.6 and 8.5), as well as the IEA's Sustainable Development Scenario (SDS) and Stated Policies Scenario (STEPS).

◆ The risks of switching to a decarbonized economy in a 2°C target scenario

Category	Principal risks	Risks appearing	Financial impact	Principal measures adopted
Policies and legal regulations	Rise in operating costs due to tougher emissions regulations	Short to long-term	Moderate	• Introduction of decentralized power sources at each business site, such as solar power generation and high-efficiency co-generation
	Price hikes for electricity and LNG	Short to long-term	Moderate	• Thorough energy-saving activities and material loss reduction through use of MFCA
	Rises in raw material prices due to tougher emissions regulations	Short to long-term	Moderate	• Engaging with suppliers to promote reductions in their emissions
Market and rumored developments	Increased costs due to environmental information disclosure requirements and LCA calculations etc.	Medium to long-term	Small	• Rationalizing calculation methods and introducing LCA calculations for industrial waste produced by each business site

◆ Physical impact risks of a 4°C target scenario

Category	Principal risks	Risks appearing	Financial impact	Principal measures adopted
Acute and chronic physical risks	Cost increases from flood damage associated with typhoons, heavy rainfall and high tides	Short to long-term	Moderate	<ul style="list-style-type: none"> Factoring in flood risks when establishing new factories, considering site conditions, facility structure and layout
	Water-shortage impacts on business operations	Medium to long-term	Small	<ul style="list-style-type: none"> Strengthening water-saving measures in the production process, and exploring ways to reuse and recycle water
	Reduced productivity due to rising temperatures	Medium to long-term	Small	<ul style="list-style-type: none"> Working condition improvements such as stronger air conditioning; promoting automazation of high-temperature processes

◆ Opportunities for each business field if moving towards a decarbonized economy in a 2°C target scenario

Business field	Business environment	Opportunity	Opportunities appearing	Financial impact*
Safety Systems	Tougher regulations for greenhouse gas emissions in every country and region	<ul style="list-style-type: none"> Advancements in moves towards smaller and lighter automotive safety components with more diversified shapes, in response to more electric vehicles and automobile transformations Expansion of safety components for unmanned aerial vehicles such as drones 	Short to long-term	Large
Polatechno		<ul style="list-style-type: none"> Sales of automotives with internal-combustion engines to be heavily restricted depending on the region Expanded use of safety display device components, such as sensors and HUDs, in response to more electric vehicles and automobile transformations Expanded use of polarizing plates which help reduce power consumption of display devices 	Short to long-term	Moderate
Functional Materials		<ul style="list-style-type: none"> Advancement of social changes such as moves to towards smart cities Increased demand for yet further energy-saving properties in electrical goods Increased demand for storage batteries that can handle large output variations geared towards the ever-expanding field of renewable energy Expanded global demand for relatively low-emission movement and delivery processes 	Short to long-term	Large
Color Materials		<ul style="list-style-type: none"> Expanded use of ink for digital-on-demand printing which renders low-carbon printing possible Expanded use of dyes for dimming glass and film used to control incoming light-rays 	Short to long-term	Large
Catalysts		<ul style="list-style-type: none"> Expanded use of catalysts in the production of green energies such as hydrogen Expanded use of catalysts for the promotion of biomass materials 	Medium to long-term	Large
Pharmaceuticals		<ul style="list-style-type: none"> Opportunities currently being explored within all our business activities 	Short to long-term	Small
Agrochemicals		<ul style="list-style-type: none"> Limited direct impacts Expanded use of biostimulants to maintain and improve agricultural productivity amid the rising temperatures expected even if the 2°C target is met. Application of existing pesticides to newly problematic pests 	Medium to long-term	Small

* Financial impact: Large (2 billion yen or more), Moderate (0.5 to 2 billion yen), Small (0 to 0.5 billion yen)

Risk Management

We have specified Reducing Energy Consumption and Greenhouse Gas Emissions as a Climate-related Key Sustainability Issue. (For more on the methods behind specifying such issues, [please click here](#)).

Our M-CFT Climate Change Response Team has come to play a core role under our [governance system](#) comprised of the Board of Directors, the Sustainable Management Meeting, and the Environment, Safety and Quality Management Committee. Established together with the launch of **KV25**, this team both specifies and assesses climate change risks, and implements specific plans to proactively promote energy-saving and green investments.

Metrics and Targets

As our original climate change risk indicator, we selected the target of shaving at least 32.5% off FY2019 Scope 1+2 greenhouse gas emission levels by FY2030. However, the April 2024 revision of our Medium-Term Environmental Objectives to a 1.5°C warming scenario saw us raise that FY2030 target to a 46% reduction on FY2019 levels. Achieving that goal requires aiming for a 4.2% reduction in emissions each year from FY2025 onwards. Reaching Scope 1+2 carbon neutrality by FY2050, meanwhile, involves conducting preliminary investigations on switching to green energy sources such as hydrogen and ammonia.

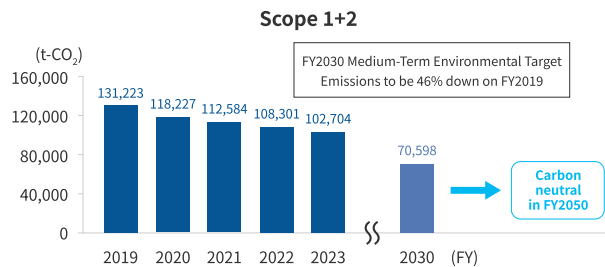
Moreover, in order to set future targets which also include Scope 3, we have implemented improvements to our Scope 3 calculation and aggregation method with a view to calculating the emissions (carbon footprint) of each individual product. Our aggregate calculations for Scope 1+2+3 from FY2022 onwards are currently undergoing third-party verification. We will therefore make concerted efforts to link up with suppliers and reduce the environmental burden across the entire supply chain to ensure Scope 3 reductions are delivered.

◆ Reducing Greenhouse Gas Emissions

The Paris Agreement adopted by COP21 in 2015 called for average global temperatures to rise no more than 2°C above pre-industrial levels, for efforts to be made to hold those rises down to 1.5°C, and for every country to pledge to reduce CO₂ emissions at national level. In line with this Agreement did the Nippon Kayaku Group initially gear its Medium-Term Environmental Objectives towards the 2°C scenario, then revise them in April 2024 towards the 1.5°C scenario. This has caused the entire Group to work on reducing greenhouse gas emissions in order to reach a target of “at least a 46% reduction on FY2019 levels of Scope 1+2 emissions by FY2030.” We are thus implementing energy-saving measures and optimizing our production processes, as well as working towards introducing low-emission power sources, such as solar panels, and switching over to low-emission-factor electricity from renewable energy sources. The trends in our Scope 1+2 indicators for Medium-Term Environmental Targets can be seen below, with year-on-year reductions evident.

Scope 1: Direct greenhouse gas emissions from sources either owned or managed by our own company (e.g. fuel use, production process emissions etc.)

Scope 2: Our company’s indirect emissions stemming from electricity, heat and steam supplied by other companies (the electricity we purchase, etc.)



◆ Disclosure of Scope 3 Data related to Total Supply Chain CO₂ Emissions

Recent years have seen marked movements towards grasping, managing and externally disclosing CO₂ emissions indirectly produced by companies across their entire supply chain. Nippon Kayaku has responded by adding Scope 3 supply chain CO₂-emission calculations to its previous aggregations and management of Scope 1 and Scope 2 data.

We began in FY2017 with Scope 3 calculations for Nippon Kayaku in non-consolidated form, but commenced factoring in domestic and overseas group companies from FY2019 onwards. In future do we plan to continue aggregating and managing Scope 3 data based on the Ministry of the Environment’s Basic Guidelines for the Calculation of Greenhouse Gas Emissions throughout the Supply Chain, and systematically advance initiatives to reduce total supply chain CO₂ emissions.

Scope 3: Indirectly-produced emissions not covered by Scope 2 (through raw material procurement, employee commutes, business trips, waste processing subcontractors, product use and disposal etc.)

Category		Emissions (thousand ton-CO ₂ /year)				
		2019	2020	2021	2022	2023
1	Purchased products and services	243.6	237.3	294.5	275	241.8
2	Capital goods	42.7	42.9	26.8	29.6	33.4
3	Fuel- and energy-related activities not included in Scope 1 or 2	22.4	21.2	22.3	21	20.5
4	Transportation and distribution (upstream)	19.0	17.6	22.3	19.7	16.6
5	Waste generated in operations	26.5	28.8	31.8	16.2	10.8
6	Business travel	0.8	0.8	0.8	0.8	0.8
7	Employee commuting	2.5	2.4	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	1.2
10/11	Processing/usage of sold products	-	-	-	-	-
12	End-of-life treatment of sold products	15.4	23.2	26.4	23	17.6
13	Leased assets (downstream)	0.4	0.4	0.4	0.4	0.4
14/15	Franchise/investments	-	-	-	-	-
Total of Scope 3		374.3	375.6	429.3	389.6	345.5
Scope 1		36.2	35.3	37.5	35.5	30.2
Scope 2		94.7	82.5	74.7	72.6	72.5
Total of Scope 1+2+3		505.2	493.4	541.5	497.7	448.7

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](#)
- [Environment-related Data](#)

◆ Flood Risks

Although flood risks have been highlighted as one of the physical risks of climate change, our calculations for the related financial impact assessments were in qualitative form only. Hence, in order to provide quantitative data for FY2023, we made use of Climate Vision, a highly accurate flood simulation system provided by Gaia Vision Inc. This allowed us to grasp damage scenarios from once-in-100-year and once-in-1000-year floods, and conclude, that of all our domestic and overseas manufacturing sites, five are at risk of flooding. We have calculated the flood risks for each based on methods advocated by the Ministry of Land, Infrastructure, Transport and Tourism, and concluded that in the instance of once-in-100-year floods under a 4°C warming scenario, the manufacturing base with the largest financial risks would suffer damage equating to 13 billion yen. Based on these financial risk assessments, we shall move forward by pursuing further improvements to assessment accuracy and exploring ways of strengthening specific flood prevention measures.

Initiatives

In its drive to shave 46% off FY2019 levels of Scope 1+2 greenhouse gas emissions by FY2030 and achieve carbon neutrality by 2050, the Nippon Kayaku Group is promoting energy-saving and resource-conservation measures at each of its production sites. By way of further initiatives towards meeting these targets, we have introduced Material Flow Cost Accounting (hereafter: MFCA) and solar power generation.

Material Flow Cost Accounting (MFCA)

MFCA is a method which allows firms to devise ways of continually lowering the environmental burden of their production activities by extracting and clarifying energy loss and material loss within the manufacturing process. Nippon Kayaku is also advancing the introduction of MFCA with a view to reducing environmental burdens and manufacturing costs through lowering amounts of waste produced and CO₂ emissions. Our Fukuyama Plant, which serves as our manufacturing base for consumer inkjet printer dyes, introduced MFCA in the latter half of 2018. Based on MFCA results, and having verified the benefits in lab studies and on actual machines, the plant confirmed the benefits of recovering solvents from waste solvents via distillation, and switched to a flow whereby recovered solvent could be reused in future production. The result saw reductions in both externally incinerated waste and amounts of solvent purchased, not only lowering the environmental burden but yielding significant cost benefits as well. We have since expanded MFCA to our Tokyo and Asa Plants (2019), our Kashima Plant (2020), and our Joetsu Plant (2021), and completed our roll-out to all manufacturing bases by FY2023. We will continue to lower environmental burdens and manufacturing costs through use of MFCA processes, and aim to roll out MFCA across the entire Group.



Distillation Recovery Facility

Solar Power Generation

As part of our switchover to low-emission power sources and low-emission-factor renewable energy sources, Nippon Kayaku has introduced solar panels with a view to significantly lowering greenhouse gas emissions.

March 2023 saw the advent of a Solar Power Purchasing Agreement (PPA) Model onsite service at our Fukuyama Plant. The PPA model involves Nippon Kayaku loaning land or roof space to third parties for the installation of solar panels, then purchasing the energy produced over the long term. It is hoped this allows us to not only utilize renewable energy sources but save on electricity costs too. The Fukuyama Plant alone seeks to cut greenhouse gas emissions by 731t-CO₂ through use of the solar energy generated onsite. We are now looking to roll this model out to other manufacturing bases, as well as install solar panels that are in our own possession.



Amounts Contributed to Greenhouse Gas Emission Reductions

Indicators	Covering	Unit	2022	2023
MFCA	Non-Consolidated	t-CO ₂	60.2	40
Solar power	Non-Consolidated	t-CO ₂	-	658

Responding to and Upholding Public Regulations

At all domestic and overseas business sites, Nippon Kayaku can be seen upholding and appropriately responding to laws, regulations and measures pertaining to climate change and reducing energy consumption. In Japan, for example, we follow both the Act on Promotion of Global Warming Countermeasures and the Act on Rationalizing Energy Use (the “Energy-Saving Law”). Listed as a specified business under the latter, Nippon Kayaku is thereby dutybound to pursue a 1% reduction in its energy consumption rate. Through setting annual targets at every business site and rolling out various energy-saving policies, we are currently delivering reduced rates of energy consumption. Under the Energy-Saving Law’s evaluation system, which classes companies in terms of performance, we received an S-class evaluation (signifying targets achieved) for FY2022.

Involvement with Industrial Groups

Nippon Kayaku is a member of The Japan Chemical Industry Association (JCIA), on whose Audit Board our President serves. The JCIA is participating in The Japan Business Federation’s Carbon Neutral Action Plan (formerly the Low-Carbon Society Implementation Plan), which Nippon Kayaku has approved and will itself join from 2030.

So that our company position on climate change policies is consistent with that of the industrial association, we join seminars held by the industry and by government departments such as the Ministry of Economy, Trade and Industry, the Ministry of the Environment, and the Ministry of Health, Labor and Welfare. This allows us to gather information, hold committee posts in each organization which enable us to join climate-change-related discussions, then share any information gleaned internally. We also assess whether our company’s position aligns with the contents of a seminar. In instances where that is not the case, our Environmental Conservation Committee will discuss, and our Environment, Safety and Quality Management Committee, chaired by our Technology Unit In-charge, will make the relevant adjustments. Through such a process can we align our own climate change strategies with industrial association activities.

Air Pollution Prevention

Policy and Basic Approach

When it comes to air pollutants produced by our plants and R&D labs, such as sulfur oxides, nitrogen oxides, particulate matter and volatile organic compounds (VOCs), Nippon Kayaku not only observes both national and regional laws but adopts yet stricter emission standards. We take proper preventative measures against pollution of the air surrounding our manufacturing and research sites.

System

> [System for Promoting Responsible Care](#)

Indicators

Indicator	Covering	Unit	2019	2020	2021	2022	2023
Volatile organic compounds (VOCs)	Non-consolidated	tons	28.6	33.3	52.1	38.7	32.9
Dichloromethane	Non-consolidated	tons	4.9	4.0	3.6	3.2	2.7
Formaldehyde	Non-consolidated	tons	0.04	0.04	0.15	0.13	0.13
NOx*1	Non-consolidated	tons	9.1	7.5	7.7	8.3	6.7
SOx*2	Non-consolidated	tons	1.3	1.0	0.7	0.9	0.8
Dust*3	Non-consolidated	tons	0.9	0.5	0.5	0.4	0.2

*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 VOC and Toxic Air Pollutant Emissions

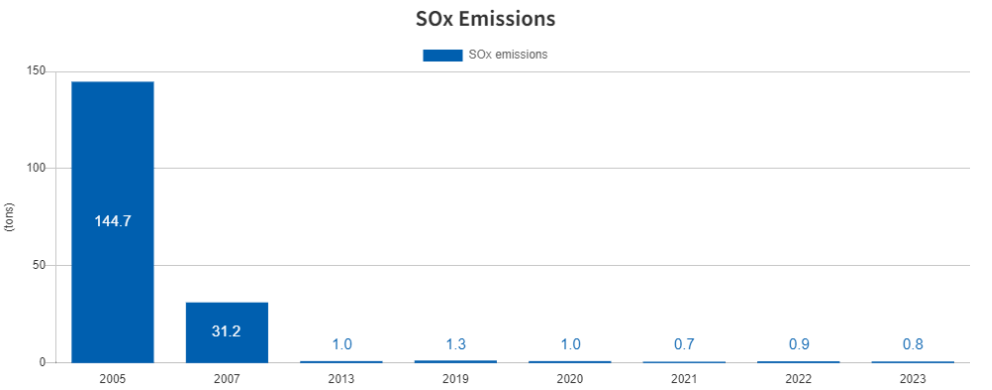
We are not only working to calculate and reduce emissions of VOCs listed in the Air Pollution Control Act, but of VOCs specified by the Japan Chemical Industry Association also. We are also engaged in reducing emissions of toxic air pollutants from 12 substances we have voluntarily agreed to control, including dichloromethane and formaldehyde. Key examples of initiatives we have taken are listed below.

- Exhaust gas processing equipment installed
- Gas absorption equipment installed
- Regenerative combustion equipment installed
- Working practice reform; review of possible substitutes for chemical substances used
- Leakage prevention measures

Reducing Sulfur Oxides (Sox), Nitrogen Oxides (NOx) and Particulate Matter

Below can be found a list of Nippon Kayaku measures taken thus far to keep emission levels of SOx, NOx and particulate matter below even the legal requirements.

- Switchover of combustibles from C-class heavy oil to A-class heavy oil, LPG and natural gas
- Introduction of low NOx boilers and small-sized once-through boilers
- NOx denitrification equipment installed
- Dust collectors installed



(Key Sustainability Issues)

Reduction of Wastewater and Industrial Waste

Policy and Basic Approach

The Nippon Kayaku Group, in the course of its business activities, uses and discharges vast amounts of water resources. We view water resource use as an issue for all of our business sites, and are therefore mindful of using water appropriately and conserving the local environment. With respect to water discharge, we hold ourselves to yet stricter standards than those laid down in law and at regional and local government regulatory level.

When it comes to waste, we must drive forward efficient use and recycling of substances from production through to consumption and disposal, so as to minimize resource usage and advance towards a recycling society with low environmental burdens. That is why our **KAYAKU Vision 2025 (KV25)** lists recycling rates and zero-emission rates among our key performance indicators (KPIs), and why, in addition to working on waste reduction, we are perceiving waste produced in the course of business as a future resource which should be efficiently used.

Furthermore, April 2022 saw the implementation of a Law on Plastic Resource Recycling, underlining the fact that the conditions imposed on plastics are ever-changing and ever-stricter. The backdrop of problems stemming from climate change and plastic refuse has led to yet livelier moves towards plastic waste recycling in Japan as much as anywhere. With respect to the waste discharged from the plastic used by the Nippon Kayaku Group, we are moving forward with 3R initiatives (reduce, reuse and recycle) firmly in our minds.

System

➤ [System for Promoting Responsible Care](#)

Audit

In order to confirm whether wastewater and waste are being appropriately managed at every business site and Group company, the Nippon Kayaku Group conducts audits in the form of Core Environment, Safety and Health Diagnostic Checks. These Checks allow us to confirm any problems or inadequacies regarding compliance with laws and regulations on wastewater and waste treatment, run our eye over wastewater treatment areas and waste disposal areas, and grasp any problems with the management situation.

➤ [Responsible Care Audits](#)

Indicators

➤ [Environmental Management](#)

Initiatives

Wastewater

◆ Protection of the Water Environment

The Nippon Kayaku Group holds itself to yet tougher standards than those laid down by laws or regional and local regulations, and makes sure to comply with them when discharging. We also handle color material products such as dyes and inkjet printing ink, and the plants which manufacture them, Fukuyama and Tokyo, make sure that any colored wastewater produced during manufacturing is given decoloring treatment prior to discharge.

Indicators	Covering	Unit	2019	2020	2021	2022	2023
COD	consolidated	tons	231.9	218.8	223.6	243	274
Total phosphorus	consolidated	tons	10.6	3.2	11.2	7.1	18.5
Total nitrogen	consolidated	tons	74.8	83.2	73.5	114.0	68.5
SS*	consolidated	tons	46.0	48.4	49.9	49.2	44.6

* SS - Suspended solids: Refers to particulate matter of 2mm diameter or less either floating or suspended in water, including fine particles from minerals, plant and animal plankton or the carcasses of such, sewage, organic matter and metal sediments originating from plant wastewater. If present in large amounts, suspended solids can negatively affect water transparency and appearance, and – through impeding light-ray penetration – underwater photosynthesis as well

◆ Business Site Initiatives

Education and Training

Head Office

A Seminar on the Soil Contamination Countermeasures Act

September 2023 saw our Technology Unit's Technical Administration & Engineering Division open a seminar on the Soil Contamination Countermeasures Act for domestic business site in-charges and environmental protection managers, aimed at deepening understanding of environmental laws. The Soil Contamination Countermeasures Act is geared towards grasping soil pollution situations and implementing relevant measures to prevent health hazards. As Nippon Kayaku handles a multitude of chemical substances, we must gather the requisite knowledge on soil contamination prevention measures in order to appropriately apply the law when, for example, decommissioning facilities which handled designated hazardous chemicals or encountering changes in soil characteristics (due to excavations or embankment-building). The seminar saw around 50 employees given the chance to learn about the outline and purpose of the Act and the process for filing applications from a specialist who introduced actual case studies. The future will see us hold such internal seminars periodically to deepen employee understanding as we work on fully observing the law.

Joetsu Plant

Training on Wastewater Issues

The Joetsu Plant manufacturing process for polarizing plates gets through some 20,000m³ of water a month.

Such manufacturing operations cause discharged wastewater to contain various chemical substances. Once put through treatment equipment, though, we can reuse such wastewater as process water and thereby decrease industrial waste volumes. We also use analyzers to monitor wastewater discharged into rivers, and hold ourselves to standards yet higher than those laid down in regulations, discharging only wastewater which meets those standards.

The same plant also hosts training seminars given by Facility Safety Division employees on water treatment equipment and discharge methods, with production employees and managers learning how water used in production is treated prior to discharge into rivers. We will continue holding these training sessions on a regular basis so as to deepen employee understanding and lower environmental burdens.



Waste

◆ Responding to the Law on Plastic Resource Recycling

Amid the ever-changing, ever-stricter environment around plastics did Japan introduce a Law related to the Promotion of Recycling of Plastic-related Materials (Law on Plastic Resource Recycling) in April 2022. Under this Law, Nippon Kayaku can be defined as a “heavy waste producer”. Hence, in order to contribute to a sustainable society, we are mindful of the 3Rs (Reduce, Reuse and Recycle) as we drive forward efforts to systematically fix plastic waste targets and reduce the volumes produced.

Plastic Waste Emission Amounts

Indicators	Covering	Unit	2020	2021	2022	2023
Plastic waste emissions	Non-Consolidated	tons	954	888	885	788
Recycling rate	Non-Consolidated	%	80.2	80.8	81.8	91.0

◆ Business Unit Initiatives

Fukuyama Plant

Pursuing Zero Emissions through Effective Use of Waste

In addition to cutting volumes of waste produced, Nippon Kayaku promotes exploring the reuse of waste as a future resource. Of the many types of waste generated by the Fukuyama Plant, sludge produced during microbial water treatment comes in particularly large amounts. As the moisture component of sludge makes it difficult to treat, we formerly sent it to landfill after the proper management processes. But after we examined its resource potential with the aim of decreasing environmental burdens, an incineration company informed us that sludge could potentially be recycled as a heat-adjustment fuel (a so-called “heat-reducing fuel”), and is currently using our sludge for that purpose. Additionally, the ash from the incineration process is now being effectively repurposed for cement and roadbed materials. The Fukuyama Plant is also looking at ways of utilizing other forms of industrial waste, and continues to achieve rates of 0% landfill and 100% recycling.

Going forward, we will endeavor to maintain the proportion of industrial waste earmarked for incineration (the Zero-Emissions Rate) at 1% or less, and raise recycling rates to 80% or more.

Kayaku Safety Systems de Mexico

Industrial Waste Management

Kayaku Safety Systems de Mexico (KSM) properly sorts its solid waste into wood, cardboard, nonferrous metals, aluminums and plastics, and is constantly on the lookout for external suppliers who can reuse these materials. The materials are stored in a fixed place for 2 to 3 months before being collected by government-certified suppliers.

The recyclable elements of industrial waste are delivered to various recycling companies so that wood being can be repurposed for wooden pallets, cardboard is also reused, and new materials can be generated from plastic, aluminum and steel.

This program also extends into areas outside production. One example would be the setting up of a breakroom which allows users to sort plastic bottles, organic and inorganic waste.

The end of 2021 brought waste management improvements. Prior to that, we had no proper sorting system, meaning that waste was sent for treatment while containing resources that could yet be effectively used. We have now rectified that by fixing reuse and waste standards for each type of waste, and sorting in line with those standards. This has made sorting decisions easier for workers, thereby increasing efficiency, accuracy, and recyclable amounts of metals, wood and plastic. We have also boosted reusable materials by reassessing plastics formerly designated as waste. Our higher recycling amounts have also produced the secondary benefits of less municipal waste and landfill disposal.

FY2023 saw negotiations with customers result in permission being given for the reuse of polyester packaging materials, which we plan to commence during FY2024.



Recycling amounts

Category	Covering	Unit	2021	2022	2023
Metals	KSM	tons	1	3	9
Plastics	KSM	tons	50	73	77
Lumber	KSM	tons	10	4	9
Cardboard	KSM	tons	24	23.3	26
Municipal waste	KSM	tons	160	165	112

◆ Waste Data

The total volume of waste produced by the Nippon Kayaku Group in FY2023 ran to 22,030 tons, which was 24% down on the 28,934 tons produced in FY2022. In our non-consolidated business, we have also been promoting the recycling of waste previously landfilled or incinerated. Our continued efforts at reducing the environmental burden in this way have yielded a 143-ton (39%) year-on-year reduction in landfilled waste, and a further 0.1% year-on-year fall in zero-emission rates from 0.8 to 0.7%.

We will continue promoting waste volume reduction and effective use of waste, easing the heavy environmental burdens posed by landfilled waste, and working towards environmental conservation and a sustainable society.

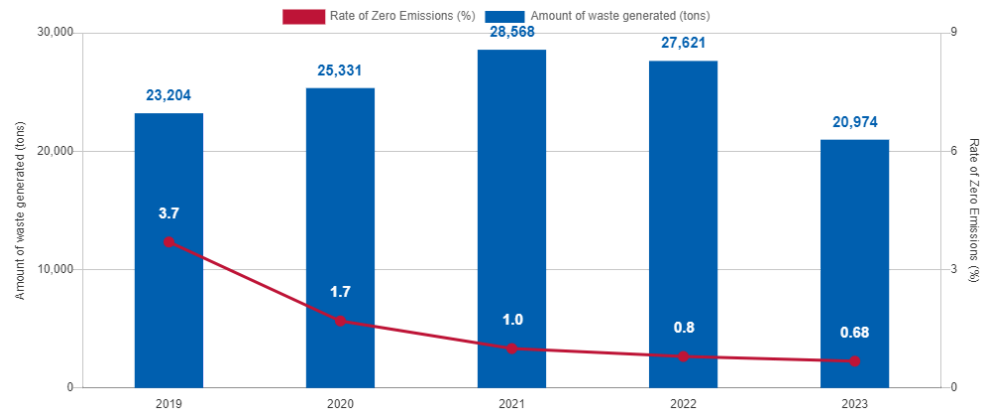
Indicators	Covering	Unit	2019	2020	2021	2022	2023
Non-hazardous waste	non-consolidated	tons	17,971	19,411	22,069	21,154	16,146
	Group companies	tons	4,240	996	1,199	1,242	1,087
	Total	tons	22,211	20,407	23,268	22,396	17,233
	General waste	non-consolidated	714	643	673	648	464
		Group companies	647	504	449	559	513
		Total	1,361	1,147	1,122	1,207	977
	Industrial waste	non-consolidated	17,256	18,768	21,396	20,506	15,682
		Group companies	3,593	493	750	682	574
		Total	20,849	19,261	22,146	21,188	16,256
Hazardous waste	non-consolidated	tons	5,231	5,925	6,503	6,467	4,828
	Group companies	tons	190	92	86	71	59
	Total	tons	5,421	6,017	6,589	6,538	4,887
	Source-specific hazardous industrial waste	non-consolidated	131	221	146	182	182
		Group companies	0	0	0	0	0
		Total	131	221	146	182	182
	Total ^{*1}	tons	27,631	26,426	29,857	28,934	22,119

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Types of waste	Sludge	non-consolidated	tons	2,206	1,979	2,309	2,338	2,291
		Group companies	tons	267	131	336	258	115
		Total	tons	2,473	2,110	2,645	2,596	2,406
	Waste oil	non-consolidated	tons	5,296	5,766	6,386	5,848	4,809
		Group companies	tons	95	94	87	71	59
		Total	tons	5,391	5,860	6,473	5,919	4,868
	Spent acid	non-consolidated	tons	617	2,244	2,185	1,523	1,116
		Group companies	tons	1,916	3	2	8	13
		Total	tons	2,533	2,247	2,187	1,531	1,129
	Waste alkali	non-consolidated	tons	13,399	13,382	15,784	16,064	11,219
		Group companies	tons	631	17	11	11	8
		Total	tons	14,030	13,399	15,795	16,075	11,227
	Plastic waste	non-consolidated	tons	642	954	888	885	788
		Group companies	tons	731	235	277	326	326
		Total	tons	1,373	1,189	1,165	1,211	1,114
	Others	non-consolidated	tons	1,041	1,010	1,021	962	751
		Group companies	tons	790	609	572	640	624
		Total	tons	1,831	1,619	1,593	1,602	1,375
Landfill amount		non-consolidated	tons	844	404	298	233	144
Recycling rates ^{*2}		non-consolidated	%	84	81	82	87	84
Zero-emissions rates		non-consolidated	%	3.7	1.6	1	0.8	0.7

^{*1} As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

^{*2} Includes recovered and reused solvent

Trends in Waste Generation Amounts and Rates of Zero Emissions (Nippon Kayaku alone)



Costs Associated with Pollution, Waste and Resource Reuse

➤ [Environmental Accounting](#)

Responses to Environmental Regulations

At every plant do we prepare treatment equipment to deal with manufacturing process wastewater depending on its composition, and hold ourselves to higher standards than those imposed by law and local authority regulations when keeping tabs on water pollution figures. We are happy to report that FY2023 saw no violations of laws such as the Water Pollution Prevention Law and related regulations, and zero violations of wastewater discharge laws such as the Waste Disposal and Public Cleaning Law.

➤ [Numbers of Environmental Violations](#)

Management of Chemical Substances

Policy and Basic Approach

Nippon Kayaku has mobilized an organizational response to recent changes in the chemical substance management environment, promoting activities based on its [Responsible Care Policy](#) to fulfil its responsibilities as a chemical manufacturer. We have been particularly focused on preparing self-directed chemical substance management systems on every business site in response to the revised Occupational Safety and Health Act of FY2024.

System

> [System for Promoting Responsible Care](#)

Indicators

Substance Reduction based on the Pollutant Release and Transfer Register (PRTR)

FY2023 saw the Nippon Kayaku Group deal with chemical substances listed in the Act of the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement. To limit effects on the external environment, we are promoting measures such as the installation of treatment devices and the conversion of raw materials.

Indicator		Covering	Unit	2019	2020	2021	2022	2023
Emissions of PRTR substances	Atmosphere	Non-consolidated	tons	18.9	16.8	25.2	38.7	32.9
	Water bodies	Non-consolidated	tons	13.3	9.1	14.7	51.4	75.0
	Soil	Non-consolidated	tons	0	0	0	0	0
	Total*	Non-consolidated	tons	32.2	25.9	39.9	90.1	107.9

* 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.

Initiatives

Responses to Laws and the Various Standards

Nippon Kayaku, under its sustainable management system and via its Environment, Safety and Quality Management Committee, is proceeding with desirable initiatives on chemical management matters and the specific action plans based upon them.

◆ Responses to Domestic Chemical Laws and Regulations

Bringing a new product to market requires the filing of numerous application, registration and report documents in line with each country's regulations. Inside Japan, the Chemical Control Act^{*1} and Safety and Health Act^{*2} demand that we file new chemical substance applications and, particularly in the case of the former, numerous other documents. Our responses to the revised Chemical Management Act^{*3} taking effect in 2023, and the revised Industrial Safety and Health Act taking effect in 2024, involve enhancing our systems for appropriate emissions management and self-directed chemical substance management. With the worldwide fixing and revision of chemical laws and regulations progressing apace, we are utilizing a searchable database of all laws and regulations in Japan, Europe and America to gain up-to-date information on regulatory trends and amendments, and thereby mount appropriate responses.

^{*1} Law Concerning the Examination and Regulation of Manufacture etc. of Chemical Substances
^{*2} Occupation Safety and Health Act
^{*3} Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement

◆ Responses to GHS, and SDS for all products

The worldwide introduction of GHS^{*} has spawned demands for Safety Data Sheets (SDS) conforming to local laws and regulations to be issued in the language of the country in question, and for product labels to be attached. Nippon Kayaku initiatives have included appropriately responding to the revised Japanese Industrial Standard (JIS) of 2019 by altering SDS and labels accordingly. The Fine Chemicals Business Unit operates the "3E generate" SDS-creation system equipped with abundant translations, each country's legal and regulatory data, substance properties and toxicity data, to issue SDS compliant with both local laws and regulations and attach relevant GHS product labels.

* GHS: Globally Harmonized System of Classification and Labeling of Chemicals (A globally harmonized system for the classifying and labeling of chemicals)

◆ Responses to Overseas Laws and Regulations on Exported Chemicals

The EU's REACH^{*} regulations were implemented in June 2007. Drawing no distinction between existing and new chemical substances, these regulations made it compulsory to provide safety test data when registering chemicals (including chemical products containing chemical compounds) either manufactured or exported into the European region in annual volumes of one ton or more. Their implementation has led to a toughening of chemical substance registration regulations in numerous countries, causing us to forever confirm the latest regulatory trends and respond without omissions. In our Fine Chemicals Business Unit, our efforts to respond to domestic and international chemical substance registration systems; grasp each country's trends regarding chemical laws, draft relevant proposals, inform relevant departments and offer guidance on relevant responses; and manage product SDS and labels as part of chemical quality control are coordinated and supported by our Chemical Quality Control Division.

* REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

◆ Centralized Management of Chemical Substance Information

With the aim of boosting appropriate use of chemical substances, Nippon Kayaku centrally manages the information for chemical substances contained in all its products and raw materials via its own internal database.

We are making efforts to convey information to customers on compliance, product toxicity and safe product handling through conducting database management of information on the composition of chemicals and products we handle, hazard statements, and the relevant laws and regulations both inside and outside Japan.

We are also working to grasp information related to chemical substances present in raw materials by demanding that our raw material suppliers use the latest safety data sheets and chemSHERPA processes, and present us with due diligence reports.

The future will see us continue responding to tougher chemical substance regulations and move ahead with efforts to build a yet stronger chemical substance information management system.

*chemSHERPA: Chemical information SHaring and Exchange under Reporting PArtnership in supply chain

A scheme for conveying information on chemical substances contained in products across the supply chain.

◆ Risk-reduction Measures for the Manufacture and Handling of Chemical Substances

Against the backdrop of compulsory risk assessments for business sites involved in the manufacture and handling of chemical substances introduced under the revised Occupational Safety and Health Act of 2016, Nippon Kayaku has, through use of its own independently-constructed database, implemented both risk assessments and risk-reduction measures relating to all new work or work changes which involve the handling of chemical and toxic substances specified within the Act. In response to further revisions to this Act which have expanded the list of substances to be risk assessed from 2024, we have improved our database, adjusted our risk assessments to conform to those revisions, centralized controls, and promoted companywide risk management.

We have also put up GHS pictorial guides in each area where chemicals are handled, so that handlers can recognize the hazardous nature of chemicals giving rise to exposure concerns.



As the picture shows, our displays allow workers to recognize the hazardous nature of chemicals that give rise to exposure concerns.

◆ Education

We provide education programs at every plant, and for each workforce layer, aimed at improving safety consciousness. We are currently enriching the education contents on chemical laws and regulations, including the so-called “Three SDS Laws”: The Chemical Management Act, The Safety and Health Act, and the Poisonous Substances Act.

◆ Industrial and International Initiatives

The Nippon Kayaku Group belongs to the Japan Chemical Industry Association and has signed up to Long-range Research Initiatives (LRI) since 1999. In addition to shouldering part of the research funding burden, we also sit on the committee.

The LRI proceeds under the umbrella of the Japanese, American and European chemical industries (The Japan Chemical Industry Association, The American Chemistry Council, and the European Chemistry Industry Council). A voluntary activity conducted by the International Council of Chemical Associations (ICCA), it focuses on increasing the accuracy of risk assessments for internal secretion and endocrine disrupting action, neurotoxicity, chemical carcinogenesis and immunotoxicity, and supports long-term research of the effects of chemical substances on the environment and people's health.

> [LRI](#) 

Initiatives to Reduce Chemicals of Concern

So as to appropriately respond to accelerated movements towards tightening regulations in countries across the globe, Nippon Kayaku has determined the chemicals to be managed under the laws and regulations pertaining to each business, and carries out chemical substance management. Right from the raw materials and parts procurement stage do we work to reduce reliance on Chemicals of Concern to minimize the risks to individual health and the environment.

◆ Mobility & Imaging Business Unit

Our Safety Systems Business Unit makes use of the GADSL* to clarify the chemical substances that must either be banned from products or whose presence must at least be grasped. In addition to strictly managing Substances of Concern, Safety Systems is working to reduce use of such substances at every step of the product process: development, planning, procurement, production and distribution. The GADSL is a global-standard list of Substances of Concern compiled by leading automobile makers, parts makers and chemical manufacturers in Japan, Europe and the USA. It divides Substances of Concern into various categories such as: Prohibited (P), Declarable or Prohibited (D/P) and Declarable (D).

* Global Automotive Declarable Substance List

◆ Fine Chemicals Business Unit

In line with chemical substance management regulations, our Fine Chemicals Business Unit defines substances posing environmental and health hazards to be managed in Nippon Kayaku products as “Environmental Impact Substances.” These are further divided into the categories of “Prohibited Substances” and “Controlled Substances”, and managed accordingly. “Prohibited Substances” constitute those chiefly comprised of chemicals regulated under the RoHS Directive (see below) or constituting Class 1 Specified Chemicals in the Chemical Substances Control Law, whose use, manufacture and sale we have decided, in principle, to ban. “Controlled Substances” refer to those included in the REACH Annex XIV (Authorization List), REACH Annex XVII (Restricted Substances) and REACH SVHC (Candidate List of substances of very high concern for Authorization). Along with minimizing their use, we assess the risks of their appearance in a product and set up appropriate management practices based on domestic and international laws and regulations, and customer demands.

RoHS Directive

The RoHS Directive (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) is an EU law implemented in July 2006 which proscribes the inclusion of hazardous substances in electrical and electronic devices. In order to lighten environmental burdens, Nippon Kayaku is working to reduce use of the following RoHS-designated hazardous substances: cadmium, mercury, lead, hexavalent chromium, PBB (polybrominated biphenyl), PBDE (polybrominated diphenyl ethers), and 4 phthalic acid ester substances: DEHP (Di(2-ethylhexyl) phthalate), BBP (benzyl butyl phthalate), DBP (dibutyl phthalate) and DIBP (diisobutyl phthalate).

(Key Sustainability Issues)

Improving Efficiency of Water Resource Use

Policy and Basic Approach

Water risks can be broadly divided into two categories: the physical risks constituted by the effects of drought, flooding and pollution, and the regulatory risks stemming from tougher water quality standards, revisions to water and sewage rates, and cessation of industrial water supplies necessitating switchovers to potable water. As water is a precious resource in limited supply, its conservation is a key global sustainability issue.

The Nippon Kayaku Group manufactures products in 12 countries and regions across the globe, with water resources especially indispensable to business operations in the making of chemical products. We therefore pay heed to water conservation at all locations of Group activity, and try to make sure that no water we use is wasted.

System

> [System for Promoting Responsible Care](#)

Indicators

> [Environmental Management](#)

Initiatives

Responding to Environmental Regulations

We have tied up various agreements between our business bases and relevant local authorities and regions. While observing our multiple environmental agreements and working on reducing environmental burdens, we also contribute to the safety and security of the local community. FY2023 saw zero violations or fines issued with respect to water quality or excessive use.

> [Number of Environmental Rule Violations](#)

Use of Water Resources

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Amount of water taken	Waterworks	consolidated	1,000m ³	706	763	805	754	566
	Surface water (industrial water)	consolidated	1,000m ³	7,758	7,897	8,138	8,003	7,912
	Groundwater (well water)	consolidated	1,000m ³	2,388	1,918	1,947	1,819	1,847
	Others (reservoirs, rainwater storage)	consolidated	1,000m ³	0	0	68	81	79
	Total* ¹	consolidated	1,000m ³	10,852	10,578	10,958	10,657	10,404
	From water-stressed regions* ²	consolidated	1,000m ³	36	23	33	29	28
Amount of water discharged* ³	Sea areas	consolidated	1,000m ³	7,374	7,014	7,142	6,726	6,966
	Rivers	consolidated	1,000m ³	2,682	2,400	2,410	2,351	2,443
	Sewers	consolidated	1,000m ³	928	974	987	910	1,045
	Total* ¹	consolidated	1,000m ³	10,984	10,388	10,539	9,987	10,454
Amount of water recycled		consolidated	1,000m ³	0	0	0	0	0
Recycling rates		consolidated	%	0	0	0	0	0

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 We have used the Aqueduct Water Risk Atlas with its 5 levels of water stress. Sites at Level 4 or above are considered "water-stressed regions."

*3 Water of equal or higher quality is returned to the intake source

Grasping Locations of Water-stressed Regions

In order to grasp the risks involved with the use of water resources and respond to these risks more effectively, the Nippon Kayaku Group has used the World Resources Institute's Aqueduct Water Risk Atlas to investigate the water stress conditions of its plant locations. As of end-March 2024, we were able to confirm that no plant using water for manufacturing operations is located in a high water-stress area (which, in Aqueduct terms, is the level above medium-high). For Kayaku Safety Systems (Huzhou), located in a comparatively highly-stressed area (medium-high), we have drawn up plans for periodical Core Environment, Safety and Health Checks, and are currently confirming whether water resources are being appropriately managed. From now, we will roll out such confirmatory checks to all plants in high water-stress areas, and proceed with the finalizing of our future water reduction plan.

Water-stress Investigation Results for Nippon Kayaku Group Manufacturing and R&D sites (FY2023)*¹

Region or Country Name		Unit	Water amounts used at each water stress level				
			High	Medium-high	Medium	Low-medium	Low
Asia	Japan	1,000m ³ (Number of bases)	0	0	2,799 (6)	7,216 (4)	0
	China	1,000m ³ (Number of bases)	0	15 (1)	0	0	213 (3)
	Malaysia	1,000m ³ (Number of bases)	0	0	0	0	45 (1)
Europe	Czech Republic	1,000m ³ (Number of bases)	0	0	0	21 (1)	0
	Netherlands	1,000m ³ (Number of bases)	0	0	0	0	3 (1)
	UK	1,000m ³ (Number of bases)	0	1 (1)	0	0	0
North and Central America	America	1,000m ³ (Number of bases)	0	0	5 (1)	74 (1)	0
	Mexico	1,000m ³ (Number of bases)	12 (1)	0	0	0	0
Total* ²		1,000m ³ (Number of bases)	12 (1)	16 (2)	2,804 (7)	7,311 (6)	261 (5)

*1 We are currently using the Aqueduct Water Risk Atlas to investigate these points.

*2 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

◆ Business Unit Initiatives

Fukuyama Plant

Initiatives Aimed at Reducing Water Use

At the Fukuyama Plant, wastewater emanating from the dye production process is treated onsite, then released into the Seto Inland Sea. The plant has been producing inkjet printer dyes since the year 2000, and has consequently invested effort into improving wastewater treatment methods, looking into individual processes tailored to production type and examining numerous ways of altering production processes to lower environmental burdens.

The fruits of such activities can be seen in the form of phased reductions in contracted industrial water amounts, which fell from 24,000m³ to 23,000m³ per day in FY2015, and to 22,000 m³ per day in FY2018. Thanks to further polishing of its wastewater treatment methods, the plant is now able to produce more on the same amounts of industrial water. It is also working on reducing the amounts of regular water used both production and equipment cleaning.

Kayaku Safety Systems Europe

Introduction of Rainwater-utilizing Equipment

Kayaku Safety Systems Europe (KSE)'s capital investment activities aimed at promoting environmental protection include a water storage tank system to make effective use of rainwater. The system was introduced in 2017, and had a tank capacity of 750.5m³ by FY2020. By using both rainwater and the water released by the shop floor air conditioning system for purposes other than drinking, the plant has not only achieved more efficient use of water resources but also lowered its costs.

Water reuse is currently of pivotal importance to the Czech Republic, which has seen rainfall decrease under the impact of climate change. The amount of water that KSE has stored up post-FY2020 exceeds the annual drinking amounts of all KSE employees and their families (around 4000 people). This particular project therefore marks a contribution towards a sustainable society.



Indicators	Covering	Unit	2019	2020	2021	2022	2023
Volume of water store (planned)	KSE	m ³	-	4,877	5,040	5,040	5,040
Volume of water stored (actual)	KSE	m ³	4,433	6,177	7,234	6,802	7,786
Economic benefits	KSE	10,000 yen	282	361	411	335	428

Kayaku Safety Systems Mexico

Initiatives Aimed at Reducing Water Use

As part of its commitment to environmental conservation, Kayaku Safety Systems Mexico (KSM) has embarked upon improving its use of water resources to help resolve issues concerning limited usable water in the surrounding region. KSM mainly uses water for cleaning equipment and containers, and for manufacturing processes.

Improvement activities have involved raising standards for the production process and water treatment, and providing education to make employees more water-resource conscious. KSM's activities throughout FY2023 resulted in a 27% (2970-liter) reduction in use of water resources.

Biodiversity

Policy and Basic Approach

At the Nippon Kayaku Group, we recognize that biodiversity forms an important base for a sustainable society. However, such biodiversity is currently being lost, in large part due to environmental pollution and deforestation. Thanks to the Nippon Kayaku Group's Responsible Care Policy, environmental considerations, efficient use of resources, climate change initiatives, and preventing pollution of water and air are forever in our minds when we conduct our business activities.

System

➤ [System for Promoting Responsible Care](#)

Initiatives

Water-related initiatives

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

◆ Initiatives at every business site

Takasaki Plant

Plant operations in harmony with the natural environment

Following the disposal of the former Tokyo 2nd Army Arsenal Gunpowder Manufacturing Plant into company hands, the site of the current Takasaki Plant restarted operations in April 1946 as a manufacturer of black gunpowder, before subsequently switching to medical manufacturing operations in August 1971. From the off, the plant aimed for “coexistence with nature”, and ultimately secured ISO14001 certification in January 2001.

Surrounded by the natural environments of Gunma-no-Mori Forest Park and the Karasu River, the plant's slogan reads: “The Takasaki Plant: Continuing to Protect Life and the Environment.” Based on this has the plant fixed its environment policy as: “Each and every person here shall be sufficiently conscious of working in an industry connected to human life, and, based on such consciousness, work towards promoting environmental conservation and plant harmony with the abundant natural environment.”

The plant boasts a vast 560,000m² site, of which 110,000m² have been registered as a Green Zone under the Factory Location Act. This Green Zone was once a gunpowder warehouse which fell into disuse after the plant's switchover to medical manufacturing. It has simply been left among the natural flora to become an extremely precious natural habitat within urban Gunma, and is believed to have retained the ecosystem of its active days.

The site's eastern, southern and northern sides are bordered by three Class A rivers in the Tonegawa system: the Karasu; the Ino, of the Karasu tributary; and the Kasu, of the Hirose tributary. The northern side also adjoins the Gunma Prefectural Forest Park named “Gunma-no-Mori.” We will continue to preserve this precious green forest community whose inhabitants include raccoon dogs and kingfishers.

In addition to the Green Zone, our on-premises environmental facilities include a creek. It originally served as part of a hydro-electric power generation facility in the plant's previous incarnation, and we have taken care to preserve and manage the structure of the foreign-made generator used during the postwar years.

The creek exists in a naturally forested area that sits apart from nearby residential districts. Its proximity to the river makes it a safe place for animals, and an annual oasis for migratory birds who feed off the blessings of the forest and river. The annual arrival of migratory birds and their northward departures make for an enjoyable seasonal event for employees.

In addition to carbon neutral efforts aimed at responding to climate change, the Takasaki Plant's environmental conservation initiatives include measures such as the discharge control of the site's treated wastewater as described below.

We have built a dam to divide our on-premises creek into two areas. The first creek temporarily pools plant wastewater which has been detoxified via an activated sludge process. The second creek's water quality is measured daily and, subject to levels being confirmed as normal, has its sluice gate opened to allow for water discharge of into the river. We are thereby taking every possible measure to prevent environmental pollution.



Transitioning to Forest-certified Products

Nippon Kayaku has switched its copy paper over to forest-certified products. This certified paper is now used for all printed company reports, notices, sustainable management pamphlets, and other documents issued company-wide. We are now proceeding with the sequential switchover of our wrapping materials, where possible, to forest-certified products. Moving forwards, we will continue to focus on the initiatives of which employees can be most conscious within their familiar environment, and, to the best of our powers, reduce the Nippon Kayaku Group's overall environmental impact.

Environmental Accounting

Environmental Accounting

For the purpose of effectively driving forward environmental conservation efforts, Nippon Kayaku is publishing the aggregate costs of conserving the environment incurred during business activities. Our environmental accounting covers the period April 2023 to March 2024, and follows the Ministry of the Environment's Environmental Accounting Guidelines (2005) and the Japan Chemical Industry Association's Environmental Accounting Guidelines for Chemical Companies. Investment values are aggregated from capital investments connected to environmental conservation during the accounting period, while total costs are based on those connected to maintaining and administering equipment and facilities, human resources, and depreciation.

◆ Environmental Accounting

Environmental Protection Cost for FY2023

Points		Covering	Unit	Invested amount	Cost	Contents
I. Internal costs per business area		Non-Consolidated	million yen	795	1,324	Environmental protection costs to limiting the environmental burdens emanating from production and service activities within business areas
Breakdown	① Pollution control costs	Non-Consolidated	million yen	(366)	(298)	Air pollution, water pollution control, underseepage prevention, investments and costs associated with soundproofing and vibration-proofing
	② Costs for protecting the Earth's environment	Non-Consolidated	million yen	(426)	(88)	Energy saving, costs associated with installing and maintaining equipment used to combat global warming
	③ Resource recycling costs	Non-Consolidated	million yen	(3)	(579)	Resource conservation, recycling, costs associated with appropriate treatment of industrial waste
	④ Others	Non-Consolidated	million yen	(0)	(360)	Levies imposed on pollution loads
II. Upstream/downstream costs		Non-Consolidated	million yen	0	80	Costs associated with limiting the environmental burdens emanating from upstream and downstream production and service activities
III. Management activity costs		Non-Consolidated	million yen	3	252	Inspection costs for updating and maintaining our ISO14001 certification, environmental burden monitoring, information disclosure, education and training, tree-planting
IV. R&D costs		Non-Consolidated	million yen	0	86	Costs linked to R&D with environmentally-conscious themes and product development
V. Social activity costs		Non-Consolidated	million yen	0	10	Staging site observation visits, financial contributions to regional activities, association membership fees
VI. Costs for responding to environmental damage		Non-Consolidated	million yen	0	0	Costs associated with restoration of natural environments
Total		Non-Consolidated	million yen	798	1,752	

◆ Economic Benefits from Environmental Protection Measures

Economic Benefits from Environmental Protection Measures in FY2023

Tangible benefit points		Covering	Unit	Economic benefits	Main Contents
Internal benefits per business area	Pollution control benefits	Non-Consolidated	million yen	0.3	Renewal of detoxifying towers, waste liquid pit level sensors, dehydrators
	Benefits from protecting the Earth's environment	Non-Consolidated	million yen	109.3	Installation of solar equipment (PPA), renewal of transformers, adoption of energy-saving devices (LED lighting, high-efficiency pumps, electric motors etc.), renewal of boilers, less leakage from steam traps, replacement of air conditioning devices and light fittings with high-efficiency models
	Resource recycling benefits	Non-Consolidated	million yen	90.1	Recovery and reuse of solutions, scrap iron; resale of used drum cans Benefits from recycling junk metal and plastic waste
Upstream/downstream benefits		Non-Consolidated	million yen	38.8	Rinsing and reuse of SUS drums and polydrums etc.
Others		Non-Consolidated	million yen	0.0	Tree-planting
Total		Non-Consolidated	million yen	238.5	

Investments in the Environment, Safety and Health

At Nippon Kayaku, we systematically and continually make capital investments related to the environment, safety and health. FY2023 saw our environmentally-related capital investments reach 794.7 million yen, and our safety and health capital investments rise to 856.1 million yen.

Environment-related Capital Investments

Category	Covering	Unit	2019	2020	2021	2022	2023
Air pollution prevention equipment	Non-consolidated	Million yen	40.2	20.9	37.1	68.1	40.5
Water pollution prevention equipment	Non-consolidated	Million yen	70.5	109.7	266.9	206.7	304.5
Underground seepage prevention equipment	Non-consolidated	Million yen	13.4	5.5	4.9	7.2	5.0
Noise and vibration prevention equipment	Non-consolidated	Million yen	2.4	17.2	6.0	6.0	16.1
Industrial waste processing equipment	Non-consolidated	Million yen	30.9	106.6	111.2	5.1	2.9
Plant greening	Non-consolidated	Million yen	1.0	1.8	0.5	3.3	0.0
Energy conservation and global warming prevention equipment	Non-consolidated	Million yen	40.3	172.6	244.6	236.6	425.6
Total	Non-consolidated	Million yen	198.7	434.3	671.3	533.0	794.7

Safety- & Health-related Capital Investments

Category	Covering	Unit	2019	2020	2021	2022	2023
Equipment aging measures	Non-consolidated	Million yen	469.0	292.9	490.9	245.0	454.9
Safety and work environment measures	Non-consolidated	Million yen	165.3	171.4	171.4	86.6	281.6
Explosion, fire and leakage measures	Non-consolidated	Million yen	39.4	9.2	14.1	60.6	54.4
Earthquake and other natural disasters measures	Non-consolidated	Million yen	2.6	51.4	4.4	6.5	65.2
Other	Non-consolidated	Million yen	4.0	4.5	6.4	32.0	0.0
Total	Non-consolidated	Million yen	680.3	529.4	687.1	430.7	856.1

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Human Resources Management

Message from the Executive Director in Charge

Our **KAYAKU Vision 2025** Medium-term Business Plan section of “KV25 Materiality” lists “Work Style Reform” as an important companywide issue and “Retaining/Expanding Employment, and HR Development” as a key sustainability issue. We therefore recognize our “people” as crucial capital in our quest to improve corporate value and help realize a sustainable society.

With the diversity of human resources and working styles increasing of late, individual employee engagement has never been more important in our drive to increase organizational capacity. As such, December 2023 saw us conduct our first ever engagement survey, which revealed gaps between employee expectations and current levels of satisfaction. While on the one hand, employees rated us highly on work-friendly environments, managerial support and workplace unity, on the other hand, they rated us poorly on satisfaction towards systems and treatment, and future prospects. The survey therefore suggested that we are yet to fully become a strong organization capable of defeating marketing competition, and that there is room to improve organizational culture and systems.

We take these survey results seriously, and will tackle the issues raised by, firstly, getting management to show that things are changing, and by uniting the efforts of our executives, the Human Resources Division (via our M-CFT: M-5 Work Style Reform Team*), and every business site.

Looking ahead, we will continue pouring energy into creating an organizational culture and workplace in which employees with various differing values mutually respect one another, work with real vitality, demonstrate their various abilities, and ultimately succeed. You can look forward to seeing our results!



Makoto Takeda
Member of the Board
Managing Director

* M-CFT (Materiality Cross-sectional Team)

The M-CFT is a cross-cutting team composed of members selected from multiple departments which is tasked with resolving companywide management issues. Through companywide projects does it seek to instill consciousness of initiatives on companywide issues and speed up the resolution of those issues.

Policy and Basic Approach

Human Resources Development Policy

Through implementing sustainable management under our **KAYAKU spirit** corporate vision are we aiming to create environmental, social and economic value, contribute towards a sustainable society, and increase corporate value.

In order to make the **KAYAKU spirit** an everyday reality, we have decided upon the following HR development policies.

- Autonomous HR development that people can pursue at their own initiative, to improve creativity and expertise
- Bold and challenging HR development without fear of failure in response to environmental change
- Globally-oriented HR development allowing for employees to play active roles on the global stage

To achieve our policy aims, we promote stronger HR development through various education programs, including group sessions for each employee level, education for specially selected employees, and E-learning.

Internal Environment Preparation Policy

By providing a comfortable working environment conducive to employee health are we aiming to improve both productivity and employee satisfaction levels. We are placing real importance on upping employee engagement through creating a workplace climate in which employees can empathize with the **KAYAKU spirit**, enter relationships of mutual trust with management, and go about rewarding work with real vitality.

Our human resources system has seen us introduce the concept of “Position Class,” which seeks to remove age, gender, career, academic record, and nationality considerations from the job allocation process. For managerial appointments, meanwhile, we have introduced a system which allows employees to voluntarily stake a claim for such positions, with criteria assigned to the relevant roles and responsibilities.

Our HR Development system also seeks to support employees with a get-up-and-go spirit towards learning and self-improvement, thereby promoting autonomous development and helping individuals pursue myriad career paths which align with their various wishes.

System

Discussions, status report summaries and evaluations on human capital management are conducted by the Group’s Sustainable Management Committee, chaired by the President. The results of such meetings are reported to the Board of Directors, who fulfil the monitoring and supervisory roles within our HR Development System.

Indicators

Initiatives to Promote More Active Roles for All Employees: Action Plan 3

We aim to achieve a sustainable society and increased corporate value by creating a workplace climate as rewarding as it is work-friendly, and by ensuring employee diversity without regard for age, gender, academic record, nationality or disability considerations. To that end, we have fixed the following action plan.

◆ 1. Period Covered

2024-04-01 to 2026-03-31 (2 years)

◆ 2. Our Company Issues (Extracted from items which should be publicly disclosed according to the Act on the Promotion of Women's Active Engagement in Professional Life)

- The proportion of female workers recruited is low
- The proportion of female subsection chiefs is low
- The proportion of women in managerial roles is low
- The proportion of women in executive roles is low
- There are few examples of women switching occupations (their work roles are limited)
- Disparities exist between male and female wages
- Take-up rates for paternity leave are lower than those for maternity leave
- Take-up rates for paid leave among managers and men are low

◆ 3. Targets

- 1) At least 10% of E-Class managerial roles to be filled by women
- 2) To maintain paid leave take-up rates of at least 70%

◆ 4. Initiative Details and Implementation Timings

- 1) The drive towards having at least 10% of E-class managerial roles filled by women
 - ① The E-class managerial appointments system will see women selected from each business site
 - Candidates are to be selected from their business sites in August 2024
 - The run-up to that will see a panel discussion held on the above, featuring female E-class managers, with the period to reform organizational thinking set for June-July 2024
 - ② Conducting systematic development guidance sessions to increase applicant numbers for E-class management positions
 - Conducting careers training sessions for selected participants, confirming their intentions via interview and reviewing job contents
 - Initiative commenced in June 2024 and to be linked to better results for initiative ① in FY2025
 - ③ Working towards improving the proportion of female workers being recruited
 - Initiative commenced in June 2024, ahead of the FY2025 Recruitment Plan
 - ④ Examining possible expansion of the work-from-home system to help employees better balance their home and work activities
 - Possible expansion to new workplaces and job categories
 - Possible expansion to five days per month for childcare, nursing care, or fertility treatment purposes
 - Exploration of the above commenced in June 2024

- 2) Initiatives to maintain the paternity leave take-up rate at 70% or higher
 - ① Getting management and male employee paid leave take-up rates to 70% or higher
 - Drawing up a "Five Days or More" Paid Leave Take-up Plan and sharing that plan within workplaces (The Plan also includes Anniversary Leave and will be released to each department by October 2024)
 - ② Exploring a possible increase of Paid Leave Promotion Days for each business site
 - ③ Systematically adding to annual paid leave
 - ④ Making use of internal company bulletins and the intranet to call for periodical promotions of paid leave
 - Initiatives ② and ④ to run from September 2024

Performance Report (FY 2023)

Action Plan for Next-generation Development Support Measures

Based on the Act for Measures to Support the Development of the Next Generation, Nippon Kayaku is promoting various initiatives under the action plan described below which aim for an employment environment designed to help employees balance work with childcare commitments, and to create a work-friendly environment for employees not engaged in childcare.

The details of the plan have been shared with labor unions, released outside the company, and diffused to all employees via the company intranet.

Next-generation Development Support Measures: Action Plan 4

To create a comfortable workplace environment which allows employees to demonstrate their ability and strike a balance between work, life and childcare, we have drawn up the following action plan.

◆ 1. Period Covered

2022-04-01 to 2025-03-31 (3 years)

◆ 2. Plan Contents

Target 1: Preparation of a workplace environment which helps childcaring employees strike a work-life balance

(Specific details of initiatives)

- Lifting male employee take-up rates of childcare leave to at least 30%
- Lifting male employee combined take-up rates of childcare leave and "leave with a view to childcaring" to at least 50%
- Supporting employees planning to give birth with their pregnancy, childbirth, return to work, and balancing of work and childcare duties through individual interviews, etc.
- Instructing the managers of employees planning to give birth about the types of work they should consider assigning, and equipping them with basic knowledge of such matters
- Setting up a specialist committee comprised of both employee and management representatives to examine the implementation of new measures and action plan contents

Target 2: Preparation of a support system for pregnant and postpartum employees

(Specific details of initiatives)

- Setting up a consultation service
- Adding a section to the Human Resources Department Homepage dedicated to providing necessary information on pregnancy, childbirth and postpartum matters.
- Setting up education and training on childcare matters geared towards management audits
- Exploring the introduction of an awards system for model workplaces
- Publishing and sharing actual employee experiences of childbirth and childcare leave in internal company bulletins

Target 3: Review working practices; prepare more diverse working conditions to contribute to a better work-life balance; create a comfortable working environment

(Specific details of initiatives)

- Working towards a reduction in overtime hours
- Setting up No Overtime Days
- Setting up Paid Leave Promotion Days
- Promoting take-up of Anniversary Leave as part of overall paid leave promotion efforts

Target 4: Next-generation development support measures at a local community level

(Specific details of initiatives)

- Welcoming local children for tours of company facilities
- Setting up a young person's internship program
- Exploring the possibility of Children's Observation Days

Progress Report (FY2023) 

Initiatives

Policies on Human Capital Management

1. [Setting up an engagement survey](#)
2. [Promotion of diversity, equity and inclusion](#)
3. Applying a talent management system (building human resources portfolios, [performance evaluations](#) etc.)
4. Reviewing the human resources wages system (Position Class System)
5. Reviewing the managerial appointments system (injecting speed; organizational culture of challenging and creating value)
6. Employee Retention Policy (exit interviews; lowering employee turnover)
7. Boosting internal company education ([Nippon Kayaku Business Academy](#), eradication of harassment, unconscious bias training etc.)
8. [Promotion of globally-active human resources](#)
9. Implementing various systems and measures ([working hours system](#), creating a workplace with high levels of psychological health)

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

(Key Sustainability Issues)

Maintaining and Expanding Employment, Developing Human Resources

Policy and Basic Approach

> [Human Resources Development Policy](#)

Our Approach to Diversity

In order to become a company which brings happiness and delight to society under the **KAYAKU spirit** corporate vision, we believe it is vital to have a workplace environment that accepts diversity and a diverse range of opinions and ideas. As such, we place importance on the diversity of our organization, based on acceptance of, and mutual respect for, one another regardless of sex, age, nationality, ethnicity, religion, disability, skin color, culture, ideas, convictions, political opinions, and sexual orientation. We are also working to guarantee diversity through a structure which offers equal opportunities to all employees with respect to recruitment, advancement, promotion, treatment and education. Through such initiatives do we aim to guarantee human resource diversity and, through mutual acceptance of that diversity, foster a comfortable and rewarding workplace environment through promotion of free and open discussion, thereby increasing employee engagement.

System

Our employees are the principal force behind our quest to realize the **KAYAKU spirit**, and as such we wish to equip them with both pride and confidence as they fulfil their various roles. We have therefore introduced and firmed up a human resources system that assigns work and treats employees without regard for age, gender or educational background. Furthermore, securing a competitive advantage requires the creation of an environment in which each of our diverse human resources can demonstrate their various abilities to the full, therefore making it extra important for us to ensure diversity among our managers, the core human resources who support our company leaders. We have already introduced a promotion system which enables women and mid-career hires to challenge for managerial posts of their own volition, and will continue to work on diversification and development of core human resources going forward.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	<div><div>5</div><div>Gender Equality</div></div> <div><div>8</div><div>Decent Work and Economic Growth</div></div> <div><div>10</div><div>Reduced Inequalities</div></div> <div><div>16</div><div>Peace, Justice and Strong Institutions</div></div>	<ul style="list-style-type: none">Promoting diversity and inclusion through the recruitment of diverse human resources, effective HR assignment and exchangesPass 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%	(Non-consolidated) 8.8%	<ul style="list-style-type: none">We have encouraged more women to challenge for managerial positions through promoting both training aimed at female managers and participation in career-support sessions.From the first conversations about work contents to the preparation of the workplace environment, we have incorporated specialist support in our quest to promote employment for people with disabilities and widen their job opportunities. Going forward, with one eye on future increases in statutory employment percentage rates, we will further expand work opportunities for the disabled, and establish a fixed support system as we advance our workplace preparations to help disabled employees succeed.
			Percentage of employees with disabilities	(Non-consolidated) Achieve legal minimum employment rate	(Non-consolidated) 1.98%	(Non-consolidated) 1.93%	
			Amount invested in education and training per employee	(Non-consolidated) Disclose results	(Non-consolidated) 83,002 yen/person	(Non-consolidated) 76,565 yen/person	
			Training hours per employee	(Non-consolidated) Disclose results	(Non-consolidated) 14.9 hours	(Non-consolidated) 17.7 hours	

* Targets for the end of FY2024

Initiatives

Training System

People are the nucleus of our organization. Only people can provide the driving force behind the manufacturing of products which bring value to the world's citizens. Having surpassed a century in business, we are now working to develop the human resources to carry Nippon Kayaku through its next 100 years.

◆ Training Program

We have prepared a number of employee training programs tailored towards job-type and company level with a view to developing outstanding human resources who can carry the next generation.



A training session

◆ Compulsory Programs

Our compulsory training programs for employees with different jobs, company levels and abilities include those for: new hires, post-first-year, post-third-year, fifth year and mid-career. The aim is to help employees recognize changes to their roles and abilities, put this increased awareness into practice, and support them in taking that next step forward.

◆ Voluntary Programs

We also have myriad voluntary programs geared towards individual and job characteristics which support employees in their quests to self-improve through acquiring new business skills and boosting problem-solving capacities.

◆ Next-generation Managers Development Program

We are aiming to train up the next generation of company managers through our selection-based programs for next-generation leaders, next-generation management candidates and senior management candidates.

The year 2000 saw us establish the Nippon Kayaku Business Academy to help us unearth and develop our next management generation. In FY2023, the Academy welcomed 23 students selected from each business unit and the General Administration Department. Each month saw them attend lectures by both Executive Directors with Official Posts and External Directors, participate in training workshops, and receive online lectures on a curriculum tailored to their individual levels and requisite skills. In total, the students spent a full year studying management perspectives.

Name	Nippon Kayaku Business Academy (Abbreviated to: NBA)
Objective	To develop the next generation of Nippon Kayaku Group management candidates through fostering a managerial mindset under the KAYAKU spirit and equipping our students with the practical skills to set management policies based on perceiving the future, strategic planning and scenario planning.
Aimed at	Managers in their 30s and 40s
Supervised by	Corporate Planning Division, Human Resources Division

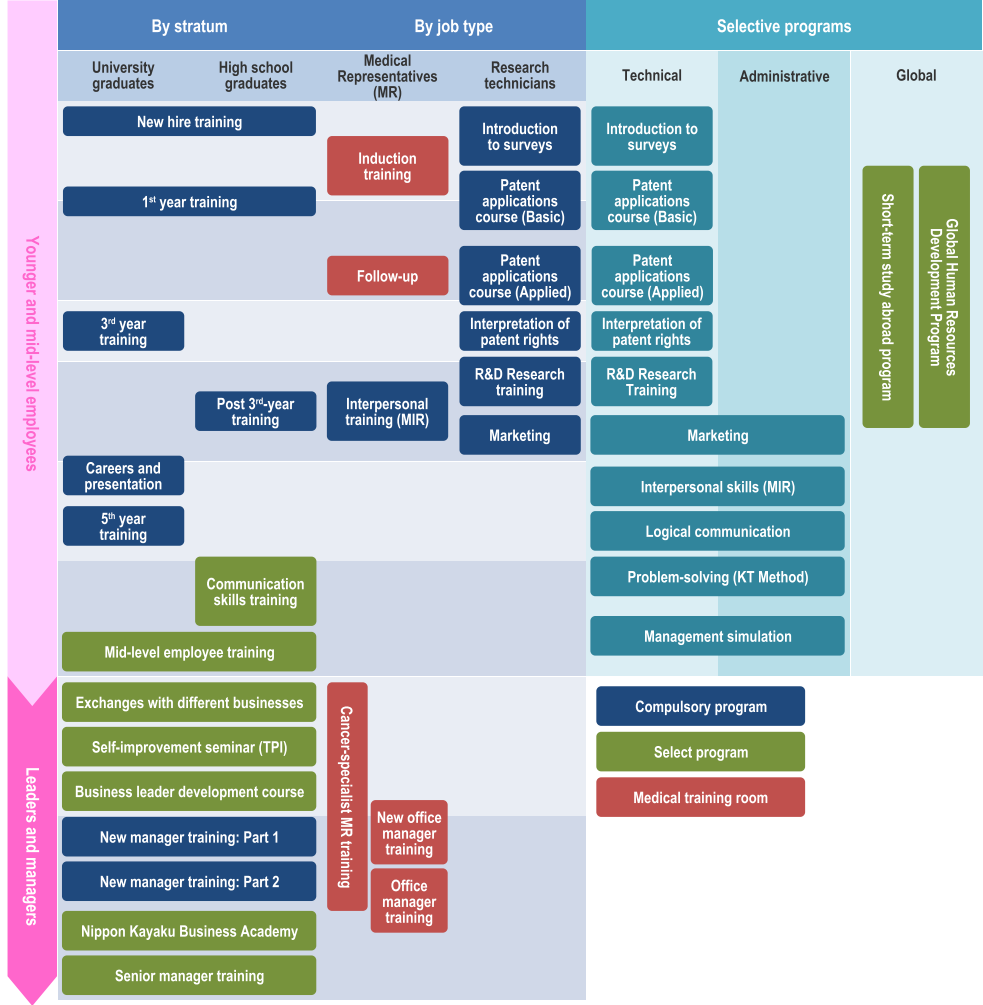


A lecture from President Wakumoto



A lecture from Outside Director Ota

Education and Training Structure Map



◆ HR Department Training Programs for FY2023

Compulsory Program

Title	Contents	Number of days	Attendees
New Hire Training	Induction training for new graduate hires Internal company rules, business outlines, business skill education	13	88
Post-1st year Training	Improving business execution capabilities; confirming relevant issues and fixing action plans for voluntary career progression	10	87
3rd-year Training	Improving business execution capabilities; fixing a career action plan to aid constant delivery of results as a core organizational member	6	61
Careers and Presentations	Introducing one's career progress since joining Nippon Kayaku and engaging in lively discussion with fellow entrance classmates and other company colleagues	2	25
5th-year Training	Learning methods to enhance autonomy and ways of demonstrating influence that can be used to shape one's future career	2	26
Stronger Communication Skills Training	Planning how to improve the communication abilities needed to proactively move one's work along within the organization as a mid-level employee	3	17
Mid-level Employee Training	Recognizing the importance of voluntarily responding to the roles and changing expectations of mid-level employees, and utilizing this to progress one's career	4	66
Year-round Recruit-Oriented HR Training	Induction training for mid-career hires Internal company rules, business outline education	1	20

Voluntary Program

Title	Contents	Number of days	Attendees
Seminar on Improving Interpersonal Skills	Gaining the skill of adapting to other people's communication styles	2	15
Problem-solving Skill Improvement Training	Gaining knowledge of the necessary rational thinking processes behind accurate judgments and problem-solving	3	15
Marketing Training	Gaining knowledge of marketing frameworks and analysis methods	2	19
Logical Communication Training	Improving information-exchange skills based on logical thinking	2	19
Management Simulation Training	Gaining understanding of management indicators and knowledge of business management processes	3	14

Next-generation Manager Development Program

Title	Contents	Number of days	Attendees
Business Leader Training Course	Developing reformist leaders overflowing with entrepreneurial spirit who act while anticipating the future	3	20
New Manager Training: Part 1	Induction training for new managers Gaining the skills and knowledge demanded by the role	2	43
New Manager Training: Part 2	Induction training for new managers Gaining management and communication skills	2	42
Nippon Kayaku Business Academy (Held in alternate years)	Aimed at the next generation of managerial candidates Fixing management strategies based on future insights, strategies and scenario planning; gaining necessary business management skills and fostering a managerial mind	12	23
Senior Management Candidates (Held in alternate years)*	Aimed at future senior management candidates Learning about leadership, business management capabilities and management literacy	4	-

* Not held in FY2023

Human Resources Development

Indicator	Covering	Unit	2019	2020	2021	2022	2023
Training hours per full-time employee	Non-consolidated	Hours	-	14	13	15	17.7
Total training hours	Non-consolidated	Hours	-	29,156	27,092	31,045	37,465
Amount of investment in education and training per full-time employee	Non-consolidated	Yen	76,122	35,706	66,606	83,002	76,565

Human Resources Assessment System

Nippon Kayaku's human resources assessment system is chiefly based on a performance assessment. This assessment, which covers every employee, begins with the assignment of work commensurate with each person's role and responsibility at the start of every financial year. While implementing their tasks, each employee will determine their annual work targets in meetings with their superior, and work towards those targets over the course of the financial year. The employee will then confirm progress with their superior at a Mid-term Results and Target Achievement Status Meeting held once every six months. Finally, with the coming of the new financial year, both employee and superior will review and assess the previous year's performance, and set targets for the year ahead. The results of these reviews will be reflected in employee bonuses.

In addition to a performance assessment, the human resources evaluation system for non-managers is comprised of two further parts: a challenge assessment and a process assessment. The former assesses the targets the employee has voluntarily set, while the latter assesses the process by which they achieve those targets.

Our overall aim is to increase employee work-motivation and engagement through assessing not only targets and degrees of achievement but the processes for getting there, thus linking company growth to the personal growth of the employee, and aligning the former with the self-actualization of the latter.

Career Support

So that we may flexibly respond to the dramatic changes in the business management environment, and with the aim of finding the right people for the right jobs by matching those with the proactive willingness and ability to perform with the workplaces most in demand of them, we have opened up our recruitment process to external applications. By offering challenging opportunities to the employees who desire them, we thereby promote career autonomy, support employee career progression, and connect that to improved work engagement.

Support for Enhanced Roles for Diverse Human Resources

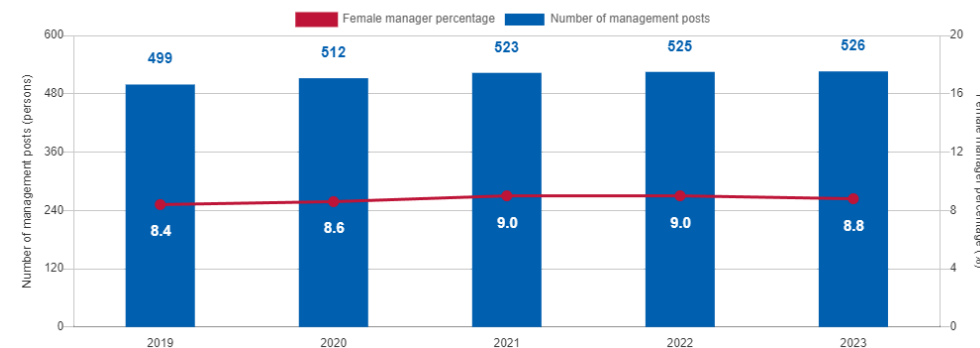
◆ Promotion of Enhanced Roles for Women

We view the appointments of women to managerial roles as a key result of our diversity-promotion initiatives. By laying on training sessions aimed at female managers and offering career support, we are encouraging women to challenge for management positions. As of end-March 2024, the percentage of managerial posts held by women stood at 8.8% (having reached 9% in the previous financial year). We will now step up our efforts to boost this figure to 10% by the end of the current financial year.

Percentage of
female managers
(as of March 31st 2024)

8.8%

Trends in Female Manager Percentages (Nippon Kayaku only; secondees excluded)



Activities to Promote Enhanced Roles for All Employees

> [Action Plan](#)

> [Performance Report](#)

◆ Supporting Enhanced Roles for Employees with Disabilities

We are also engaged in employment initiatives for those with disabilities, and as of end-June 2023, could count 45 employees with disabilities among our workforce (a disability employment rate of 1.93%). With the comprehensive backing of a consulting company, FY2023 saw us provide dedicated support to disabled applicants throughout the recruitment and post-recruitment process at both our Asa Plant and Tokyo R&D Administration Office. This marked the start of our drive to boost numbers of disabled employees. Society demands that we take proactive steps to recruit people with disabilities. As part of our response, we have forged links with a specialist support school in order to continually recruit people with intellectual disabilities. In addition to meeting the statutory requirements as a matter of course, we are continually working on preparing environments in which disabled employees can feel rewarded and empowered to energetically demonstrate their skills, and have access to expanded career options.

Percentage of Employees with Disabilities

Indicator	Covering	Unit	2019	2020	2021	2022	2023
Percentage of employees with disabilities*	Non-consolidated	%	1.97	1.90	1.99	1.98	1.93
(Legal minimum employment rate)		%	2.2	2.2	2.3	2.3	2.3

* Data is as June 1 in each year.

◆ Supporting Enhanced Roles for Employees over the Statutory Retirement Age (Senior Partners)

Our current system for reemployment of employees who have reached the company retirement age (Nippon Kayaku Senior Partner System) was introduced in April 2006. The purpose is to give post-retirement-age employees of sound mind and body and with the desire to work a chance to continue fulfilling company roles by making ample use of the knowhow and experience they have cultivated over their long careers. We ask each individual to name their preferences as to work location, work contents and working style, and are pleased to report that since the system came in, almost 100% of applicants were employed on the terms they desired. Most of these applicants then went on to serve us until 65.

Rehiring of Retired Employees

Indicator	Covering	Unit	2019	2020	2021	2022	2023
Rehiring of retired employees	Non-consolidated	Persons	61	42	22	29	30
Rehiring rate of retired employees	Non-consolidated	%	89.7	95.4	84.6	85.2	85.7

◆ Global Human Resources Exchanges

One of our diversity promotion initiatives is to ensure that not only Japanese employees but local staff in our overseas Group companies can play bigger roles in a global environment. Through our Global Human Resources Development Program are we offering “bottom-up” foreign language training to younger employees and equipping our mid-level employees with better ability to drive their work forward on a global stage. By thus raising language skills and adaptability to foreign cultures are we working on developing human resources with global perspectives who can take on international roles. We are also vigorously promoting personnel exchanges between overseas Group companies and Japanese business bases as part of our solid system for helping employees experience all kinds of foreign cultures and business environments.

Topics: Safety Systems Business Unit Initiatives

As over 70% of our Safety Systems Business Unit's sales come from overseas, we can well predict that the future will bring further overseas interactions. From FY2023, we have welcomed personnel from overseas Group companies into our Japan set-up in order to develop human resources who can play active roles in the global market. The aim is for these personnel to systematically gain experience of strategic thinking, organizational operation and principal project tasks in a global business setting, boost their foreign language communication skills, and acquire adaptability to foreign cultures. While the Japanese side can hear directly from voices on the ground in overseas business locations, visiting overseas personnel can gain insights into head office values and working processes, and bolster their people networks before returning home and serving as bridges between Japan and overseas Group companies. Our policy going forward is to deliver yet more complete and effective domestic and overseas training programs that can be used by a wide range of employees.



◆ Business Unit Initiatives

Mobility & Imaging Business Unit
KMY Research Students Visit our Premises

Our Safety Systems Head Plant is currently welcoming research students from Kayaku Safety Systems Malaysia (KMY) for training on equipment and production techniques. Although cylindrical inflators are made at the Safety Systems Head Plant at present, we are planning to make capital investments and transfer technology over to Malaysian manufacturing bases as part of efforts to establish a global supply system and target promising markets.



DOJO Classroom Installed

Since FY2018, education and training sessions for employees have been held in the Safety Systems Head Plant's training hall (DOJO). The DOJO sees instructors make use of printed materials with simple and easy explanations of safety and quality rules (what to do) and prohibited items and actions (what not to do). It also has machines at the ready to offer trainees practical learning opportunities, such as experiencing static electricity and the pointing and calling method. Furthermore, to help trainees level up from machine operators to site supervisors (mid-level employees), veteran employees serve as trainers to pass on their knowledge of products and production processes, and throw in elements of hands-on training too. This DOJO has also forged links with the dojos of overseas subsidiaries as it aims to up levels of skill and knowledge across the entire business unit.



Data

> [Employee Situation](#)

A Comfortable Working Environment

Policy and Basic Approach

➤ [Internal Environment Preparation Policy](#)

System

Thorough Instillation of Labor Standards

At Nippon Kayaku, it is compulsory for all new hires to undergo training in working condition matters related to wages, bonuses, working hours, occupational safety and health, welfare and benefit programs, and regulations. These standards are also published on our company intranet, where employees may check them at any time.

Our Human Resources Management Meeting also convenes periodically, equipping the human resources managers of each business site with information to share with and educate employees. Such initiatives help us advance the thorough instillation of labor standards throughout the workforce.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
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%	(Non-consolidated) 72.8%	<ul style="list-style-type: none"> Although our overall target for annual paid leave was met, the manager take-up rate was slightly below target. We will continue to set up Paid Holiday Promotion Days, and promote them both via our intranet and through having human resource managers on every business site proactively informing employees. From the next financial year, we are also planning to set up a new initiative involving Personalized Paid Annual Leave Take-up Declarations. We conducted our first ever engagement survey and provided feedback on the results. We will continue this survey from the next financial year onwards as part of our planned cycle of visualizing organizational conditions, drawing up an action plan and promoting its implementation.
			Ascertaining and improving employee satisfaction through questionnaire surveys	(Non-consolidated) Disclose progress	-	Published in Topics	

Initiatives

Improving Employee Engagement

With products being increasingly difficult to differentiate these days, the “people” who provide products and services are becoming a major element of business competitive advantage. Therefore, the extent to which we can utilize our human resources has become a major Nippon Kayaku theme too, giving rise to our belief that more rewarding work and greater purpose in life for each individual employee will feed into yet greater corporate value.

FY2023 saw us conduct our first ever Engagement Survey of 2204 employees (regular, junior and part-time employees, and senior partners).

The average score for the Nippon Kayaku Group was 47.1, slightly lower than the corporate world average. Companywide, we score highly on a comfortable working environment, support from supervisors, and workplace unity, but score less well on satisfaction with company systems and employee treatment (including pay), and future prospects. These results suggest we are yet to fully become a strong organization capable of conquering market competition, and that our organizational culture and systems have room for improvement. From this financial year, we will therefore continue our efforts to resolve such issues, drawing together the focus and schedules of senior management, the human resources division (the M-CFT M-5 Work Style Reform Team*) and each business site to push forward improvement activities.

* M-CFT (Materiality Cross-functional Team)

Our M-CFT is a companywide cross-cutting team comprised of members selected from multiple departments and tasked with resolving companywide management issues. Through engaging itself in organization-wide projects, this team seeks to better instill companywide material issues and speed up issue resolution. Going forward, we will continue using engagement surveys to visualize employee overall satisfaction and job satisfaction, and aim to develop further advantages.

Employee Engagement Survey Results

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Response rate	non-consolidated	%	-	-	-	-	85.9
Employee engagement	non-consolidated	score	-	-	-	-	47.1

◆ Upcoming Initiatives

The future will see us continue to visualize levels of employee satisfaction and job fulfilment through the engagement survey, and seek to make these our assets.

Promoting a Work-life Balance

With the aim of achieving compatibility between work, childcaring and nursing, and delivering a rewarding workplace in which each individual increases their productivity and displays their unique abilities to the fullest, we are working to introduce a variety of systems and policies which promote next-generation development and more advanced roles for women.

We are also making all efforts to provide a more complete work-life balance by creating a workplace in which leave can be easily taken. Our recently introduced Anniversary Leave System, for example, is just one initiative which aims to achieve yet higher take-up rates of annual leave.

◆ Next-generation Development Support Measures Action Plan (2022-04-01 to 2025-03-31)

➤ [4th Action Plan \(FY2022 to FY2024\)](#)

➤ [Progress Report \(FY2023\)](#) 

◆ The Various Systems in Place for Promoting a Work-Life Balance

System Title	Details
Flextime	Introduced at headquarters and in some of our research labs.
Childcare Leave	Can be taken until a child reaches two years old, subject to meeting the fixed requirements.
Childcare Support Leave	10 days of special leave can be obtained by either men or women for childcare purposes.
Child Nursing Care Leave	10 days of (paid) leave (5 days for health checks and vaccinations) can be obtained by employees for looking after their children of preschool age. This leave can also be taken in half-day units.
Anniversary Leave	3 days of annual paid leave can be obtained by employees for celebrating their own, or a household relative's, birthday, attending a child's school entrance ceremony or graduation ceremony, and observing their child's school lessons.
Nursing Care Leave	Up to 1 year of paid leave can be acquired for looking after a specified relative.
Reduced Working Hours System	Fixed working hours can be shortened by up to 2 hours of 30-minute units for the purpose of caring for children below middle-school age, and by up to 3 hours of 30-minute units for the purpose of looking after relatives.
Work-from-Home System	Introduced at headquarters, research labs, and for medical reps.
Staggered Working Hours	With starting times, finishing times, and fixed daily working hours set by business sites serving as the standard, employees can either move back or bring forward their start times by up to 2 hours in 30-minute units.
Annual Paid Leave	We have several days per year on which the taking of leave is encouraged. We also encourage the taking of 3 consecutive days during the summer season.
Paid Half-day Leave	Up to 30 half-day units per year can be acquired.
Planned Annual Paid Leave	1-3 days of leave can be acquired at headquarters and business sites during the May "Golden Week" Period under a particular labor agreement.
Time-Unit Annual Paid Leave	We are currently implementing a system by which up to 3 days per year (24 working hours) can be acquired in 1-hour units of annual paid leave.
Special Paid Leave	Up to 60 days of lapsed annual paid leave can be stored up for use in times of personal sickness or injury, family sickness or injury, child-caring, nursing of relatives, nursing of children, volunteering, donating bone marrow, and using up Active Life Leave for 10, 20 and 30 years of company service.

Paid Leave

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Average number of days of annual paid leave taken	non-consolidated	days	11.1	12.2	11.1	12.0	13.3
Annual Paid Leave take-up rate	non-consolidated	%	60.1	65.8	59.8	63.7	72.8

Childcare

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Commencement of Maternity Leave* ¹		non-consolidated	persons	13	13	11	22	21
Commencement of Childcare Leave* ¹	Male	non-consolidated	persons	5	11	9	62	50
	Female	non-consolidated	persons	13	13	11	22	16
Childcare Leave System take-up rate* ²	Male	non-consolidated	%	11.9	31.4	27.2	69.6	78.5
	Female	non-consolidated	%	100	100	100	100	100
Post-childbirth and post-Childcare Leave return-to-work rate	Male	non-consolidated	%	100	100	100	100	100
	Female	non-consolidated	%	100	100	100	100	100
Post-childbirth and post-Childcare Leave retention rate	Male	non-consolidated	%	100	100	100	100	100
	Female	non-consolidated	%	100	100	100	100	100
Reduced Working Hours for Childcare take-up rate	Male	non-consolidated	persons	2	0	1	2	3
	Female	non-consolidated	persons	31	43	42	48	52

*¹ Not including leave taken during the last financial year which crosses over into this financial year

*² FY2022 calculations for the rates of Childcare Leave and Leave for the Purpose of Childcaring have been made using the methods in Article 71.4.2.

Nursing Care

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Employees taking Nursing Care Leave	non-consolidated	persons	1	0	0	0	1
Nursing Care Leave System users	non-consolidated	persons	1	1	0	2	3

◆ Optimizing Working Hours and Reducing Long Working Hours

Nippon Kayaku is working on optimizing working hours and reducing instances of long working hours. Specifically, we have set up a Working Hours Management Advisory Committee, comprised of both management and labor representatives, which demands and reviews twice-yearly reports from each business site on working hours management surveys, related measures and initiatives. We also provide training for supervisors, managers and human resources managers, and set up study group sessions cosponsored by both the management and labor sides.

While respecting laws related to working hours and Article 36 Agreements (which stipulate overtime limits agreed upon by the company and labor unions), we have fixed a policy of “no more than 45 overtime hours per month in principle, and an upper limit of 80 overtime hours per month.”

We are even going beyond the mere observation of laws with various initiatives including management of workplace entry and exit, objective register management, and appropriate management of overtime for supervisors and managers.

Working hours

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Average number of annual hours worked per worker	non-consolidated	hours	1,911	1,885	1,911	1,896	1,876
Average monthly overtime hours	non-consolidated	hours	12.7	11.3	12.7	11.9	11.2

Wage Administration

The Nippon Kayaku Group's Human Rights Policy expresses zero toleration of discrimination based on differences in gender, age, nationality, race, religion, disability, place of origin, ancestry, creed, political views, sexual orientation, marital status, employment status, or other characteristics. Our Personnel Wage System is also based on a remuneration structure unified across genders. Furthermore, when it comes to minimum wage and overtime pay, we respect laws on equal work for equal pay, and pay above the minimum.

Pay

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Average annual pay	Male	non-consolidated	1000 yen	7,526	7,423	7,683	8,003	7,704
	Female	non-consolidated	1000 yen	6,119	6,133	6,366	6,707	6,336
	Overall	non-consolidated	1000 yen	7,307	7,224	7,477	7,801	7,488

Industrial Relations

Since renewing our labor agreement in 1998, Nippon Kayaku Co. Ltd, and the Nippon Kayaku Labor Union have maintained healthy relations based on mutual labor-management trust. Under the Union Shop System, with the exception of managers and a section of contracted workers, union membership rates stand at 100%.

With respect to the union, the company endeavors to disclose as much information as possible, earnestly respond to matters in line with its negotiation policy and have management directly convey its policies on business management, safety and health by convening the Central Joint Labor Management Council three times a year. We also hold a Central Management Round-table Conference once a month, sharing information pertaining to the company's situation, deepening mutual understanding of issues, and discussing ways of resolving issues. We also make efforts to promptly convey the details and results of such meetings to employees.

Issues concerning individual business units are discussed at each unit's annual Joint Labor Council and monthly Management Round-table Conference. Through the shared awareness of issues, relevant discussion and opinion exchanges allowed by these meetings are we aiming to deliver a more comfortable workplace.

Joint-Labor Management Council Reports

Meeting Name	Contents	No. of times held in FY2023	Attendees
Central Joint-Labor Management Council	Company executives provided explanations to labor union executives on company management strategy and calculations, business strategy, and environmental safety & health policy, and discussions were held on how to resolve issues.	3	From the company: Executives, managers from relevant departments, HR Division From the labor union: Head Office executives, all branch managers
Business Site Joint-Labor Management Council	The company provided explanations to the labor union on business site policies and business planning, and discussions were held on how to resolve issues.	1	From the company: Business site managers (plant managers and administrators, production managers, technical managers etc.) From the labor Union: Branch executive committee members
Central Management Round-table Conference	The company provided explanations to labor union executives on matters related to its business plan; new businesses; management situation; production, sales and research situations; improvements to production technology; and human-resources planning.	12	From the company: The Executive Officer in charge of Human Resources, HR Division From the labor union: Head Office executives
Business Site Managers' Round-table Conference	The company provided explanations to labor union executives on matters related to business sites' business plans; new businesses; management situations; production, sales and research situations; improvements to production technology; and human-resources planning.	12	From the company: Business site managers (plant managers and administrators, production managers, technical managers etc.) From the labor union: Branch executive committee members
Specialist Committee on Working Style	Opinions were exchanged on matters related to management of working hours; next-generation development support; promotion of women's roles; employment of older workers; the welfare and benefits system; the various leave systems; the human resources system; human resource training; and childcare and the nursing of relatives, and discussions were held on how to resolve issues.	5	3 company members, 3 labor union members

Freedom of Association

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of union members*1	non-consolidated*3	persons	1,871	1,753	1,695	1,687	1,697
Union membership rate*2	non-consolidated*3	%	100	100	100	100	100

*1 The number of persons for each financial year is accurate as of March 31st

*2 Number of union members/number of qualified persons (excluding managers and persons specified in agreements)

*3 Includes some related companies

◆ Joint Initiatives with the Labor Union on Occupational Safety and Health

In the form of an internal audit based on the annual plan, Nippon Kayaku conducts Environment, Safety and Health Diagnostic Checks for each business site and a section of Group companies. In principle, these Diagnostic Checks are conducted with the participation of either the Labor Union Head Office or the relevant union branch of the inspected business site or Group company.

The Environment, Health and Safety Diagnostic Check team, comprised of the Environmental Safety Division, environment safety managers and labor union members, confirms progress reports and activities related to Responsible Care policies through discussion, document reviews and onsite inspection patrols. By assessing problematic points including from union perspectives are we able to devise improvements to safety and health standards with a united labor-management stance.

FY2023 saw us conduct these Diagnostic Checks onsite. With the use of a Responsible Care Progress Confirmation Chart did we prioritize the checking of progress on Responsible Care Activities, the unearthing of potential risks based on root-cause investigations of past accident cases with a view to taking recurrence prevention measures, and the extent of risk management in the production process.

The future will see us continue to value labor-management conversations as we seek to prepare a workplace environment in which employees healthy in mind and body can work while feeling at ease.

Welfare and Benefits

Nippon Kayaku has introduced the following Welfare and Benefits System to support the lives of its employees.

Welfare and Benefits Systems	Details
Social Insurance	Health Insurance, Employee Pension, Nursing Care Insurance, Employment Insurance, Industrial Accident Compensation Insurance
Asset Formation	Nest-egg savings, Employee stock ownership, Restricted Stock Transfer Incentive System
Human Resource Development	Study Abroad Program
Self-development	Providing assistance for acquiring qualifications
Pension	Defined-Benefit Corporate Pension System
Accommodation	Dormitories, Leased company housing
Childcare and Nursing	Leave System; Providing assistance with childcare items and nursing-related expenses
Other	Cafeteria Plan

Labor Standards Violations Report

Nippon Kayaku, at non-consolidated level, did not produce any cases of labor standards violations in FY2023.

Number of Labor Standards Law Violations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of labor standard violations	non-consolidated	cases	-	-	-	1	0

(Key Sustainability Issues)

Occupational Health and Safety in the Workplace, Health and Productivity Management

Policy and Basic Approach

Under its [Responsible Care Policy](#), the Nippon Kayaku Group is undertaking various initiatives related to health promotion and occupational safety and health, so that every employee may work safely and healthily and output their abilities to the fullest. We are aiming for zero serious accidents and hazards, and, with the objective of eliminating unsafe actions, are treating the strengthening of 30-second patrols and promotion of fixed-point inspections as key Responsible Care issues. We believe it a company's responsibility to work towards accident-free and hazard-free workplaces, and guarantee the safety and security of employees. We also believe the physical and mental health of employees to be linked to organizational vitality and improved productivity, and thereby indispensable in the quest to raise stakeholder satisfaction. That is why we not only develop explosion-prevention measures for the handling of chemicals at work, but mental health care and lifestyle improvement activities also. With a view to achieving our **KAYAKU Vision 2025 (KV25)** Medium-term Business Plan Targets, the entire Group will continue uniting under the motto of "Safety trumps everything else!" as it provides further activities pertaining to health improvement and occupational safety and health.

- > [Our Declaration on the Environment, Health, Safety and Quality](#)
- > [The Nippon Kayaku Group's Annual Responsible Care Policy](#)

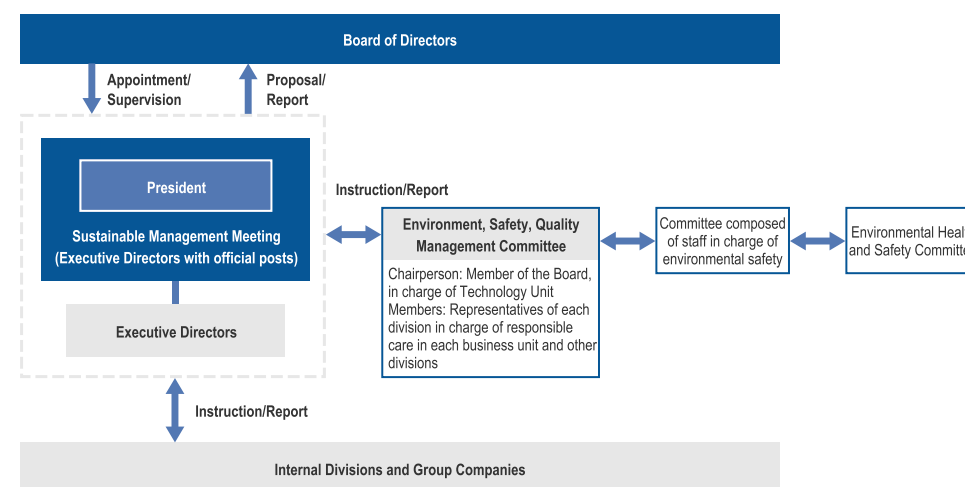
System

Under its [Declaration on the Environment, Health, Safety and Quality](#), the Nippon Kayaku Group has set up an Environment, Safety and Quality Management Committee. This Committee is responsible for the entire Group's health and safety, with ultimate responsibility lying with our Executive Director In-charge of Technology. System structure is based around the Quality Management Division, Technical Administration & Engineering Division and Environmental Protection & Safety Division serving as the Committee's office and forging links with other relevant departments. The Committee's items for discussion include: the planning and fixing of Responsible Care policies; improvements to workplace safety and health; health improvement activities; fire and hazard prevention; and the creation of a comfortable workplace. Subject to Sustainable Management Meeting approval, the important matters on occupational safety and health and health management discussed by the Committee will be reported to the Board of Directors.

As a link to the Environment, Safety and Quality Management Committee, we have also set up the Environmental Protection & Safety Managers' Committee. This Committee is chaired by the manager of the Environmental Protection & Safety Division, which serves as the Committee's office. It forges links with the Environmental Protection & Safety Divisions of business sites and Group companies, or managers dispatched thereof; shares information and points of issue regarding occupational safety and health management and health improvement activities at groupwide, business site and Group company level; and works towards improving policy based on discussions on key groupwide issues and problems.

It is also the case that individual business sites and Group companies hold Joint Environment, Safety and Health Committee meetings once every month, which should allow for both management and labor representatives to discuss problems and points of issue specific to each business base, and agree upon proposals to resolve such problems.

Nippon Kayaku has also formed cooperative links with the Nippon Kayaku Health Insurance Association and formed the Health Collaboration Liaison Committee with the aim of providing effective and efficient support to employees and their families in their quests to maintain and improve their health. This Liaison Committee exchanges information, reviews reports, and holds discussions on matters related to health improvement.



Group Companies with ISO45001 Certification

One of our consolidated subsidiaries, Kayaku Safety Systems (Huzhou), has gained ISO450001 Certification – the international standard for occupational safety and health management systems. As of FY2023, only 5% of eligible organizations had gained this certification. However, our business sites which are yet to be certified still have ISO45001-equivalent occupational safety and health risk management systems in place.

Occupational Safety and Health Management System (ISO45001) Certified Business Sites

Business Site	Certification secured	Certifying Institution	Certification Number
Kayaku Safety Systems (Huzhou)	January 2023	NQA	132021
Cover Rate*			5%

* The proportion of production facilities with ISO14001 certification owned by either Nippon Kayaku or its consolidated subsidiaries
Even business sites without ISO45001 certification have Occupational Safety and Health Management Systems of equivalent standard.

Audits

➤ [Responsible Care Audit](#)

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
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	0	<ul style="list-style-type: none"> No accidents requiring time off work at business sites and partner companies across Nippon Kayaku alone. Health and Productivity Management certification gained. We are maintaining our 100% take-up rate for periodical health checks.
			Acquisition of certifications under the Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category)	(Non-consolidated) Continued certification	(Non-consolidated) Gained FY2023 certification as a Health and Productivity Management Organization (Large Enterprise Category)	(Non-consolidated) Certified status renewed	
			Percentage of employees who take mental health training	(Non-consolidated) 100%	(Non-consolidated) 100%	Year 1 of our 3-year plan has proceeded as intended	
			Percentage of employees receiving regular health checkups	(Non-consolidated) 100%	(Non-consolidated) 100%	(Non-consolidated) 100%	

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

Initiatives

Workplace Safety and Health

◆ Workplace Accidents

We are pleased to report that FY2023 gave rise to no work-related deaths or serious accidents at Nippon Kayaku or any of its domestic and overseas Group companies, or indeed at any of its partner companies. In addition, both the frequency rate and severity rate of accidents resulting in time off work were recorded at 0. It was also the case that FY2023 saw no violations of occupational safety and health laws, regulations or standards.

Occupational Hazards

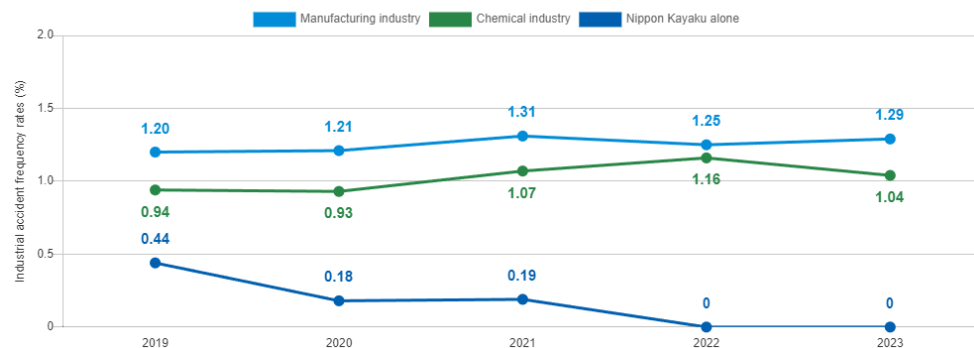
Indicators		Covering	Unit	2019	2020	2021	2022	2023
Number of work-related accidents resulting in death and other serious accidents		non-consolidated	cases	0	0	0	0	0
Number of work-related employee deaths	Regular employees	consolidated	persons	0	0	1	0	0
	Contracted employees/ part-time employees	consolidated	persons	0	0	0	0	0
	Partner company employees*1	consolidated	persons	0	0	0	0	0
Rate of Lost Time Injuries	Regular employees	non-consolidated	*2 (2 cases)	0.4 (1 cases)	0.18 (1 cases)	0.19 (1 cases)	0 (0 cases)	0 (0 cases)
	Contracted employees/ part-time employees	non-consolidated	*2	0	0	0	0	0
	Partner company employees*1	non-consolidated	*2	0	0	0	0	0
	Employees	Group companies	*2	-	-	-	-	1.5 (9 people)
Lost Time Injury Intensity Rate		non-consolidated	*3	0.031	0	0	0	0
Number of violations of Occupational Safety and Health-related regulations and standards		non-consolidated	cases	0	0	0	0	0

*1 Partner company employees: contractor (company) employees, temp (company) staff

*2 Occupational hazard-related deaths and injuries per every 1 million actual working hours

*3 Number of working days lost per every 1000 actual working hours

Trends in Industrial Accident Frequency Rates



◆ Responsible Care-related Targets for Industrial Safety & Health

The results of our FY2023 occupational health and safety initiatives connected to Responsible Care targets are as follows.

Item	Target	Results	Evaluation
• Serious Accidents and Hazards	Zero	Zero	○
• Serious Traffic Accidents	Zero	Zero	○
1. Key Responsible Care Issues	Promotion of strengthened 30-second inspections and point observations	Conditions checked via Environment Safety & Health diagnoses (Issues found with grasping daily activities)	○~△
2. Promotion of "Zero Accidents and Hazards" initiatives	Promotion of important diagnostic methods in risk assessment	Set up via Environment Safety & Health Diagnostic Checks	○
	Setting up point observations in line with the characteristics of each workplace	Established appropriate operation of Irregular Work Notifications and point observation flows	○
	Inspection and optimization of heatstroke prevention measures	Horizontal expansion and sharing of measures from the Heatstroke Prevention Committee etc.	○
3. Improvements to Workplace Safety & Health Environments	Appropriate responses to the revised Industrial Safety and Health Act	Conditions confirmed against a new checklist and through diagnostic checks (Incomplete areas confirmed within items already enacted)	△

Evaluation Standards: ○Achieved / ○~△Broadly achieved

Risk Assessment Safety Inspections Conducted

When we commence new operations, introduce new equipment, or change existing operations or equipment, we conduct Risk Assessment Safety Inspections and carry out safety policies based on their results. We also conduct HAZOP* Safety Assessments on our chemical processes and reaction equipment to analyze the primary factors behind hazards.

* HAZOP: Hazard and Operability Study: A method of safety assessment for chemical plants which allows for extraction and assessment of the potential hazards associated with chemical reactions

◆ Education and Training

In line with the law and our Annual Responsible Care Plan, we deliver Safety and Health education tailored to employee jobs and job levels. Such education is focused on new hires and newly transferred employees at each business site. Among the vast range of programs we offer are: induction education at the time of transfer, pre-work-commencement safety education to transferred employees, safety education for new managers, education for foremen and supervisors at every plant, education on chemical substance risk management and the handling of such chemicals, and even education on the basics of the relevant science and laws. Our delivery methods constitute an efficient and effective mix of online (E-learning and external lectures) and offline formats (group sessions and on-the-job training) aimed at raising safety and health consciousness among employees.

Principal Safety Education Conducted in FY2023

Training Title	Main Contents	Mainly aimed at	FY	Delivery style	Number of times	Attendees
New Hire Training*	Basic rules of safety management	New hires	2023	Group session	1	60
New Manager Training*	<ul style="list-style-type: none"> Safety management centred on workplace safety consideration duties What Nippon Kayaku's Responsible Care Activity Managers should know Nippon Kayaku Group initiatives on the environment and climate change 	New managers	2023	Group session	2	42

* Held every year

◆ Occupational Safety and Health Initiatives Conducted Jointly with the Labor Union

> [A Comfortable Working Environment \(Industrial Relations\)](#)

Health Management

◆ Health Initiatives Related to Responsible Care Targets

The results of Nippon Kayaku Group health initiatives connected to Responsible Care Targets for FY2023 are as follows.

Item	Target	Results	Evaluation
3. Improvements to the Workplace Safety and Health Environment	Promotion of organizational stress-check analysis to grasp high-stress workplaces and take follow-up action	Business site briefing sessions for analysis results set up	○
	Appropriate management of the Medical Examination Results Database	System operation commenced but there are issues concerning data loading	△
	Continued accreditation as a Health and Productivity Enterprise	Continued accreditation achieved	○

Evaluation standard: ○Achieved △Partly unachieved

◆ Physical Health

Every Nippon Kayaku Group employee must undergo that most basic form of health management known as the “Periodical Health Check”. An occupational health physician will then decide on the employees in need of a health interview, and provide advice and instructions on health management.

We also lay on special health checks for employees who handle designated chemicals. The toxicity data on the chemicals they handle has been input into a database which forms the kernel of our risk assessments designed to prevent accidents and health hazards. Another initiative sees us promote THPs* for “building a healthy body and mind” at every business site in order to maintain and improve employee health. By reassessing the individual lifestyle habits of employees and promoting continual and systematic commitment to health, we are aiming for a situation in which everyone can live more healthily. Physical strength tests, health management competitions, group walks and hiking are also part of our health agenda.

* THP (Total Health Promotion Plan): An initiative based on the five-step PDCA cycle of Health-building Plan, Health Measurement, Health Instruction, Health Activities, and Lifestyle Habit Improvement and Workplace Revitalization

Regular health check take-up rate

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Regular health check take-up rate*	non-consolidated	%	100	100	100	100	100

* Excluding employees on administrative leave

◆ Mental Health

If improved work productivity is to be compatible with successful creation of added value, then a workplace which allows employees to work energetically is just as indispensable as physical and mental health.

2005 saw Nippon Kayaku's then-president release the Declaration on the Introduction of a Mental Health Care System and give thorough instruction to company management. Of importance to mental health care is for every employee to continually gather proper knowledge and recognition of the issues at hand so that they may swiftly detect mentally-suffering colleagues and work on preventative measures. At that point was emphasis placed on the initiative of "thinking of ways to prevent mental suffering as a top priority."

Enlisting the help of guest lecturers from the EAP*, we commenced our Mental Health Training in FY2005, and in FY2006 devised a 3-year plan which made such training available to every employee. FY2020 and FY2021 saw group sessions make way for online sessions as part of Covid restrictions. Through the online medium were all employees trained on how to self-care in response to working environment changes stemming from Covid-19. Since FY2022, we have delivered these sessions in-person again.

For those obliged to take time off work due to mental health issues, we have set up a Return-to-Work Program. Links are forged between the employee's supervisor, an occupational health physician and a counselor as part of a smooth Return-to-Work Support System that places priority on relapse prevention.

In line with revisions to Occupational Health and Safety Law, we began conducting stress checks on an annual basis in FY2015, with an employee take-up rate of over 97% in every year since. (Indeed, the take-up rate for FY2023 reached 98%). Stress check results not only allow us to ascertain an individual's stress situation, but to analyze each organization, grasp high-stress workplaces and take follow-up actions.

* EAP: Employee Assistance Program

Mental health-related

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Stress-check take-up rate*	non-consolidated	%	97.3	97.2	98.1	97.9	98.0
Proportion of "highly-stressed" persons	non-consolidated	%	9.6	9.5	10.6	10.0	10.1
Mental health-related investments	non-consolidated	million yen	10.8	11.0	13.0	12.6	12.6

* Excluding employees on administrative leave

◆ Support for Workplaces without a Statutory Occupational Health Physician

Originally, with respect to offices not required to appoint an occupational health physician*, Nippon Kayaku was regrettably unable to set up occupational health physician interviews post-statutory health check or post-Nippon Kayaku Health Insurance Association Adult Disease Health Check. However, FY2013 saw us review this situation and dispatch our head office occupational health physician to the business sites in question to conduct the relevant interviews.

Since FY2014, this physician has toured every Nippon Kayaku office in the country. In addition to fixing an annual schedule for onsite visits, we also make use of a web meeting system to conduct further health interviews online.



* Offices not required to appoint an occupational health physician: Under Article 13 of the Occupational Safety and Health Law, and Article 5 of the Occupational Health and Safety Enforcement Ordinance, offices with fewer than 50 employees have no need to appoint an occupational health physician.

◆ Health Management Competition

Since FY2018, Nippon Kayaku and a section of its Group companies have been working on health improvement initiatives by holding a companywide health management competition. A total of 2444 employees from across the Group got involved in FY2023, making for a participation rate of 70%.

The Companywide Health Management Competition is held in the March of each year. Every employee must log their health activities over the period of one month and convert them into points. The scores for each business site and Group company are then compiled by the Environmental Safety Division, before being aggregated and analyzed by the Environmental Protection & Safety Division. Among the various matters to be logged are: morning and lunchtime exercise, daily diet, brushing of teeth, sleep, number of paces walked, leisure and sports activities. Employees can choose to participate individually or in a team.

We will keep going with Companywide Health Management Competitions in order to help employees maintain and improve their health.

Health Management Competition: Participants and Participation Rates

		Unit	2019	2020	2021	2022	2023
Nippon Kayaku	Participants	Persons	1,349	1,566	1,976	2,105	2,096
	Participation rate	%	49.5	51.4	65.1	69.2	70.1
Group companies	Participants	Persons	280	263	82	317	348
	Participation rate	%	32.5	57.0	32.4	65.0	69.6
Nippon Kayaku Group overall	Participants	Persons	1,629	1,829	2,058	2,422	2,444
	Participation rate	%	45.4	52.1	62.6	68.6	70.0

◆ External Evaluations

Nippon Kayaku has been evaluated by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi Organization as "an enterprise that thinks about employee health management from a managerial perspective and tackles the issue strategically." We have therefore been approved as a 2024 Health and Productivity Enterprise in the Large-scale Enterprise Category.*

This is testament to our vast number of initiatives on maintaining and improving employee health, including preserving a 100% take-up rate of periodical health checks, the introduction of stress checks and our mental health training. We also owe the award to our series of policies including: the extraction of health improvement issues to be tackled, coming up with relevant initiatives to improve health check results, introducing passive smoking measures, and setting up health-themed events for all employees. Nippon Kayaku views employee health improvement as essential to increasing corporate prosperity and stakeholder satisfaction, and will therefore continue proactively engaging in health management activities.

* Health and Productivity Enterprise in the Large Enterprise Category: A company gaining accreditation in the category for large-scale enterprises and medical corporations within the Health and Productivity Accreditation System created in 2016 by the Ministry of Economy, Trade and Industry.



(Key Sustainability Issues)

Respect for Human Rights

Message from the Executive Director in Charge

Human rights are essential to the pursuit of happiness and plentiful lives for everyone, hence protecting basic human rights must be absolutely prioritized.

As we develop our activities on a global scale, we view respect for human rights, in line with the International Bill of Human Rights, as the foundation of sustainable management. We have therefore explicitly stated this respect for human rights in our Charter of Conduct and Code of Conduct, as well as in our Nippon Kayaku Group Human Rights Policy, and are promoting relevant initiatives.

February 2024 saw us rethink our Human Rights Policy initially fixed in 2022, and enact revisions following Board approval, including additional items on appropriate working hours and fair and impartial remuneration. With human rights being internationally spotlighted as a major social issue, the importance of respecting them continues to rise. In response to such changing human rights environments around all our corporate activities, we have altered our Policy so it reflects the need to further strengthen our human rights initiatives.

In addition, FY2023 saw us conduct an internal survey which enabled us to grasp both the evident and latent human rights-related risks as perceived by employees, and thereby identify the priority themes for stemming related negative impacts. We thus plan to strengthen our measures through reflecting stakeholder opinions while periodically reviewing our human rights risk assessments and the risks requiring priority measures.

Looking ahead, as a signatory of the UN Global Compact, we will uphold the Compact's 10 Principles, and promote initiatives aimed at everyone involved in our Group's corporate activities.

Makoto Takeda
Member of the Board
Managing Director



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 the Nippon Kayaku Group Charter of Conduct and Code of Conduct. In all of its corporate activities, the Group respects fundamental human rights, complies with laws and regulations, engages in fair business activities, and seeks to repay the trust placed in by its stakeholders by 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 supports and respects international norms relating to human rights, including the United Nations' International Bill of Human Rights (made up of the Universal Declaration of Human Rights [UDHR], the International Covenant on Civil and Political Rights [ICCPR], and the International Covenant on Economic, Social and Cultural Rights [ICESCR]), the United Nations Declaration on the Rights of Indigenous Peoples, the OECD Guidelines for Multinational Enterprises, and the ILO Declaration on Fundamental Principles and Rights at Work, as well as the Children's Rights and Business Principles developed by the United Nations Children's Fund (UNICEF), the United Nations Global Compact, and Save the Children. As a signatory to the UN Global Compact, the Nippon Kayaku Group also supports and respects the Ten Principles of the Compact.

◆ 2. Respect for human rights through business activities

2.1 Prohibition of discrimination and harassment

The Nippon Kayaku Group does not tolerate discrimination or harassment based on gender, age, nationality, race, religion, disability, place of origin, ancestry, creed, political views, sexual orientation, marital status, employment status, or other characteristics.

2.2 Appropriate working hours

The Nippon Kayaku Group manages its employees' working hours, days off, and leave entitlements appropriately and in accordance with applicable laws and regulations.

2.3 Fair and equitable remuneration

The Nippon Kayaku Group provides its employees with fair and equitable remuneration. It complies with applicable laws and regulations on minimum wages, out-of-hours work, and statutory welfare and well-being programs and pays its employees an amount higher than the minimum wage so that they are able to maintain or exceed a certain standard of living.

2.4 Freedom of association and collective bargaining rights

Pursuant to laws, regulations, and labor practices of countries and regions where it operates, the Nippon Kayaku Group respects its employees' freedom of association and the right to collective bargaining in their labor-management relations.

2.5 Prohibition of forced labor

The Nippon Kayaku Group does not tolerate forced labor. It also has no tolerance for modern slavery in any form, including debt bondage or human trafficking.

2.6 Prohibition of child labor

The Nippon Kayaku Group does not tolerate child labor and observes the statutory minimum working age. It does not engage any person under the age of 18 years in dangerous operations that may harm that person's health or safety, such as night work or out-of-hours work.

2.7 Occupational health and safety

In accordance with applicable laws and regulations, the Nippon Kayaku Group establishes a work environment where each and every employee can continue to work in good health and safety and without undue stress.

2.8 Impact on community residents

In order to avoid adverse effects on the safety and health of local community residents, the Nippon Kayaku Group conducts human rights impact assessments (such as those relating to contamination and water stress) and takes necessary measures in accordance with international norms to avoid risks and mitigate impacts.

◆ 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

The Nippon Kayaku Group recognizes that in order to appropriately address any impacts of its business activities on human rights, it is important to adopt the perspective of stakeholders whose human rights are, or are likely to be, affected by its business activities.

◆ 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
Revised February 27, 2024
Nippon Kayaku Co., Ltd.
President and Representative Director



Nippon Kayaku Group Human Rights Policy Translations

- [> Japanese \[534.4KB\]](#) 
- [> English \[111.3KB\]](#) 
- [> Chinese \[325.2KB\]](#) 
- [> Spanish \[113.1KB\]](#) 
- [> Malay \[192.2KB\]](#) 
- [> Czech \[176.9KB\]](#) 

System

In order to ensure respect for human rights and thorough compliance groupwide, we have established the Ethics Committee to serve as an advisory body to the Sustainable Management Meeting. This Committee meets twice a year, and on a further ad hoc basis when necessary. It is chaired by an Executive Director with an Official Post nominated by the President, and comprised of representatives from every business unit's planning department and every section of our General Administration Department, which is unattached to any business unit. Its remit is to decide upon policies and specific measures for complying with our Group's Charter of Conduct and Code of Conduct, as well as explore and determine responses and recurrence prevention measures for human rights consultations and matters of concern. The most important matters discussed by the Ethics Committee are forwarded to the Sustainable Management Meeting, and even the Board of Directors, so that feedback may be provided.

We are currently building links with the relevant departments to develop our human rights due diligence system based on the Group's Human Rights Policy, with our Ethics Committee Chair serving as the person in charge, and our Corporate Planning Division's Sustainability Promotion Department fulfilling our office functions. We have ensured resources are in place for our Human Resources Department to deal with human rights risks to employees, and for our Purchasing Division and business unit Purchasing Departments to deal with equivalent risks concerning suppliers. The human rights agenda for discussion is approved by the Sustainable Management Meeting, which reports and sends proposals to our Board of Directors.

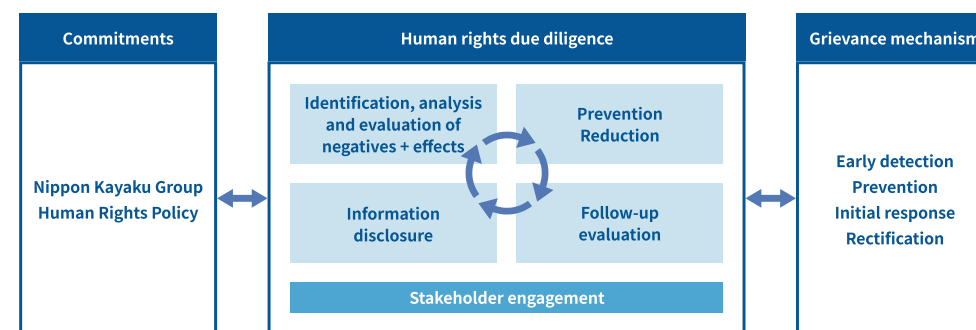
Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
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	Once or more per year	1	2	<ul style="list-style-type: none"> Online training delivered on Business and Human Rights, and Risks Requiring Priority Measures as Identified by Nippon Kayaku Group Employees.
			Human rights due diligence: human rights impact assessment rate	(Non-consolidated) FY2022: 100% (Consolidated) FY2025: 100%	(Non-consolidated) Incomplete	Human rights risk assessments and risks requiring priority measures identified in sessions laid on for Nippon Kayaku Group employees	<ul style="list-style-type: none"> Nippon Kayaku Group Human Rights Policy revised. The Top 3 Nippon Kayaku Group Risks Requiring Priority Measures have been identified by the Sustainable Management Meeting as: ① Power harassment, ② Excessive overtime and long working hours, and ③ Privacy rights. With respect to these three, we have collectively disclosed our efforts on preventing, reducing and correcting negative impacts on human rights.

Initiatives

Human Rights Due Diligence

In line with its Human Rights Policy, the Nippon Kayaku Group perceives respect for human rights as a Key Sustainability Issue and has set up a related Action Plan. By administering and disclosing progress reports on an annual basis are we taking a groupwide approach towards constructing and promoting a due diligence process. FY2021 saw us conduct human rights assessment surveys of our primary and secondary suppliers. FY2022, meanwhile, brought the launch of two workshops for all executives and managers of relevant departments aimed at developing understanding of "Business and Human Rights." And FY2023 saw us conduct an internal survey which enabled us to grasp both the evident and latent human rights-related risks as perceived by employees, and thereby identify the priority themes for stemming related negative effects. We thus plan to strengthen our measures through reflecting stakeholder opinions while periodically reviewing our human rights risk assessments and the risks requiring priority measures.



◆ Extracting the Human Rights Risks

Based on the Ministry of Justice Human Rights Bureau's "Survey Research on Business and Human Rights," we conducted an internal survey of our Complaints Board, which includes both company and union members. The survey saw us quiz Nippon Kayaku Group employees on both the evident and latent human rights-related risks as perceived by employees, then assign levels relating to "likelihood of occurrence" and "degree of seriousness" - the higher the levels assigned, the higher the levels of risk. Our survey results were then used by our Corporate Planning Department's Sustainability Promotion Department, who serves as our Human Rights Due Diligence Office, to compile a Human Rights Risk Map, and confirm likelihoods of occurrence, degrees of seriousness, and low-to-moderate risks. Among all those, the human rights risks requiring priority measures were identified by the Sustainable Management Meeting as: ① Power harassment, ② Excessive overtime and long working hours, and ③ Right to privacy.

Human Rights Indicators Considered for our Risk Assessments

Insufficient wages; unpaid wages; living wages; excessive overtime and long working hours; worker safety and health; the right to social insurance; power harassment; sexual harassment; maternity harassment; paternity harassment; harassment due to caring for relatives; forced labor; freedom of movement; freedom of association; foreign worker rights; child labor; human rights issues in technology and AI; right to privacy; discriminatory recruitment; discriminatory employment conditions and treatment; discriminatory assessments and unequal access to opportunities; gender-based (including gender-based materiality) human rights issues; freedom of expression; bribery and corruption; access rights to help.

◆ Enactment of Measures to Prevent, Reduce and Correct

Based on our assessment of the effects of human rights-related risks, and the top policy risks identified by Group employees, we have implemented the following preventive, reduction and corrective measures to forestall any negative impacts on human rights.

Human Rights Risks Requiring Priority Measures Identified by Nippon Kayaku Group Employees	Preventive, Reduction and Corrective Measures to Forestall Negative Impacts
Power harassment	<ul style="list-style-type: none"> • Instillation of the “Nippon Kayaku Group Charter of Conduct and Code of Conduct” and “Nippon Kayaku Group Human Rights Policy” • Compliance Consciousness Survey • Education and training
Excessive overtime and long working hours	<ul style="list-style-type: none"> • Optimization of working hours and reduction of long hours
Right to privacy	<ul style="list-style-type: none"> • Information security initiatives • Instillation of the “Nippon Kayaku Group Privacy Policy” and “Personal Information Protection Policy” • Education and training

Compliance Consciousness Survey

Inside Japan, every October is “Compliance Month” for the Nippon Kayaku Group. We mark the occasion with a Compliance Consciousness Survey, conducted with the aid of a contracted consultancy firm every year since FY2015. From the aggregated survey results do we extract compliance promotion issues from each company workplace and provide the relevant feedback, including suggestions for improvement. That feedback is then referenced by each workplace when compiling its action plan for the following year, and PDCA cycles are followed to increase compliance awareness. We are pleased to report that the Compliance Consciousness Survey for FY2023 revealed no serious issues with respect to human rights.

➤ [Key Sustainable Issues: Ensuring Compliance \(Internal Instillation\)](#)

Wage Management

➤ [A Comfortable Working Environment \(Wage Management\)](#)

Freedom of Association and Collective Bargaining Rights

➤ [A Comfortable Working Environment \(Labor Relations\)](#)

Abolition of Forced Labor

The Nippon Kayaku Group, within its Human Rights Policy, clearly states that it does not tolerate any form of modern slavery such as forced labor, debt bondage or human trafficking. Recruitment is always predicated on the receipt of a job application from an applicant who must go through a screening process comprised of at least one stage. Furthermore, our successful applicants are always presented with labor terms and conditions to which they must consent before commencing their work with us.

Religion

As a Group conducting corporate activities across the global stage, Nippon Kayaku is comprised of employees from diverse nationalities, religions and cultures. Thus, when holding groupwide meetings or inviting overseas employees to Japan for education or training sessions, we make sure to confirm their needs and provide the relevant prayer rooms, and meals sensitive to religious dietary requirements. Our Safety Head Plant in Himeji sometimes welcomes employees of the Muslim faith for technical training sessions, and accordingly prepares a prayer room, a space to purify the body, and a Halal food menu in its canteen.

Abolition of Child Labor

The Nippon Kayaku Group, within its Human Rights Policy, clearly states its zero-tolerance approach to child labor and its respect for minimum employment age requirements laid down in law. When recruiting employees, we observe the laws of the countries concerned, and demand that recruiting agencies and suppliers do likewise. We do not demand night shifts or overtime from minors under 18, nor do we assign them risk-laden work which may threaten their safety or health.

Human Rights Considerations in Sustainable Purchasing

In order to promote human rights initiatives across the entire supply chain, Nippon Kayaku has determined its Sustainable Procurement Guidelines based on its Charter of Conduct and Code of Conduct, Purchasing Principles, Basic Purchasing Policy and Responsible Mineral Procurement Policy. We have made these Guidelines known to our suppliers, and use them as the base for our Sustainable Purchasing Surveys. We are pleased to report that our survey for FY2023 revealed no serious human rights issues which would require us to issue suppliers with a Demand for Improvement Notice. We will continue to enlist our suppliers in promoting sustainable procurement going forward.

➤ [\(Key Sustainability Issues\) Environmental and Social Considerations in the Supply Chain](#)

Education and Training

The Nippon Kayaku Group offers yearly human rights issue training to all executives, employees (including contracted and part-time employees) and temp staff, in order to achieve shared awareness of the importance of respecting the human rights of all corporate activity stakeholders. The contents of such sessions are based on human rights policies, harassment prevention, revisions to the law, and Compliance Consciousness Survey results.

Our training program for FY2022 marked the establishment of our Nippon Kayaku Group Human Rights Policy, and consisted of e-learning modules on the context to the Policy, explanations of Policy specifics, and human rights due diligence.

Furthermore, to coincide with the launch of our **KAYAKU Vision 2025** Medium-term Business Plan did we compile a brochure which included explanations of our Group Human Rights Policy, and translate it into the languages of the six countries in which we have production bases (Japanese, English, China, Spanish, Malay and Czech). We are currently distributing the brochure to all Group executives and employees as part of efforts to raise policy awareness.

Training Title	Main contents	Mainly aimed at	FY	Delivery style	Number of sessions	Take-up rate
<ul style="list-style-type: none"> Business and Human rights Human Rights Risks Requiring Priority Measures as Selected by Nippon Kayaku Employees 	<ul style="list-style-type: none"> Human rights issues, human rights initiatives demanded of companies, the Nippon Kayaku Group Human Rights Policy, human rights due diligence, remedial actions Human rights risk identification methods; prevention, reduction and correction 	Executives, employees (including contracted and part-time employees), temp staff	2023	E-learning	2	86%

Participation in Initiatives

Since 2022, the Nippon Kayaku Group has sat on the Human Rights Due Diligence Subcommittee of the UN Global Compact Network Japan. By deepening our knowledge of human rights issues through the subcommittee's expert seminars, and sharing information with other companies during theme-based and industry-based groupwork, we gain much to apply to our own initiatives on respect for human rights.

Establishment of a Whistleblowing Consultation Service

So as to uncover legal and human rights violations at early stages, take preventative measures, and increase management transparency and fairness, the Nippon Kayaku Group has established both a Compliance Hotline and a Compliance Hotline for Suppliers.

The former hotline is available to all our executives, employees and retirees (up to one year after they have left). Whistleblowers can report to, or consult with, either our Ethics Committee Staff Office (our Internal Control Management Division Compliance Chief) or an external law firm.

The latter hotline is available to executives and employees of suppliers conducting business with the Nippon Kayaku Group inside Japan. Whistleblowers can report to, or consult with, our Ethics Committee Staff Office (our Internal Control Management Division Compliance Chief).

Both forms of consultation service guarantee confidentiality and anonymity, meaning that no report or consultation will result in blowback against the whistleblower.

> [Our Internal Whistleblowing System](#)

> [Our Compliance Hotline for Suppliers](#)

(Key Sustainability Issues)

Quality and Customer Safety

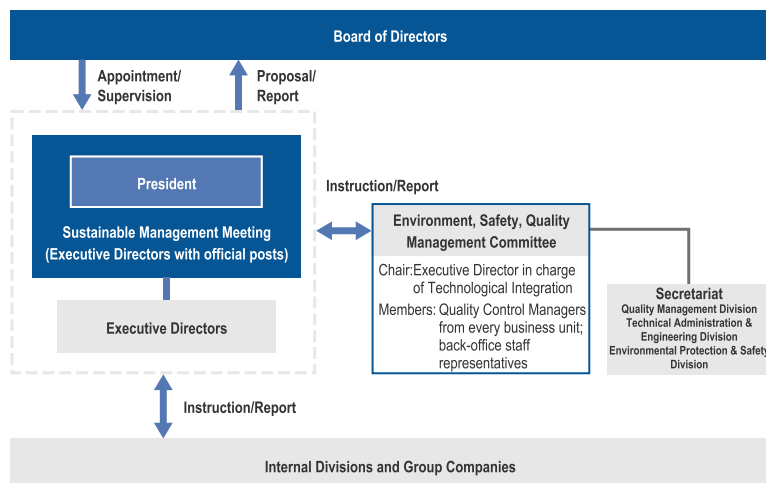
Policy and Basic Approach

So as to deliver high-quality, safe and secure products to society at large, we have fixed as our basic policy, under the **KAYAKU spirit**, our Declaration on the Environment, Health, Safety and Quality, and built up our Quality Assurance System. Using these as the base for appropriate operation of our Quality Management System, we are working towards thorough quality governance which includes indicators laid down in our Key Sustainability Issues. We also recognize the importance of being responsible throughout every product's life cycle, from planning, development and production to disposal and recycling, as well as with respect to resources, energy and the handling of information. As such, we are focused on raising the quality awareness levels of our employees.

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

System

The Nippon Kayaku Group has integrated its quality management practices by setting up an Environment, Safety and Quality Management Committee to serve as an advisory body to the Sustainable Management Meeting chaired by our President. This Committee is comprised of Quality Assurance Managers from each business unit and representatives from back-office headquarters departments. It engages itself in strengthening the entire Group's Quality Assurance System through discussing quality assurance policies and the status of quality improvement activities, then reporting to the Sustainable Management Meeting.



Overseas Certification Gained

The Nippon Kayaku Group is developing its presence through its three business units of Mobility & Imaging, Fine Chemicals and Life Science. We have constructed appropriate quality management systems for our various forms of business, with each business unit acquiring certification for international quality assurance standards in order to develop and provide high-quality products and services.

In the Mobility & Imaging Business Unit, the Safety Systems Group, the Safety Head Plant (Himeji) and the Research and Development Division have all acquired IATF16949 certification, an international quality management system standard for the automotive industry devised by the International Automotive Task Force (IATF). Our overseas Group companies engaged in the manufacture of automotive parts have also acquired this certification as they work on providing yet higher-quality products.

In the Fine Chemicals Business Unit, October 2022 saw the commencement of our unified quality management system for the Fukuyama Plant, Asa Plant, Tokyo Plant, headquarters and research labs, and Taiwan Nippon Kayaku. This system gained integrated certification for ISO9001 in July 2021.

Meanwhile, in the Life Science Business Unit's Pharmaceutical Group, our Takasaki Plant and Medical Research Laboratories have integrated certification for ISO9001 and integrated certification for ISO13485 - the quality management system standard for medical device and IVD (In Vitro Diagnostics). Furthermore, October 2022 saw our NIPPONKAYAKU FOOD TECHNO Group company acquire ISO22000 certification pertaining to food safety management system standards. Meanwhile, in our Agrochemicals Group, the Kashima Plant and Agrochemicals Laboratories commenced their unified quality management system in March 2021, and gained ISO9001 certification five months later.


➤ [Business Sites with Certified Quality Management Systems](#)

Quality Audits

We have put together a team of members from the Quality Management Division to periodically conduct Core Quality Diagnostic Checks*. These Checks are carried out on each domestic business site in order to confirm whether quality management systems are functioning effectively and efficiently, and to offer suggestions on raising quality assurance levels. They thereby serve to support the entire Group's quality management and a strengthening of governance.

* Our Group sets up quality audits in the form of Quality Diagnostic Checks.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
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	0	<ul style="list-style-type: none"> Quality Fraud Prevention-related seminar on Understanding the Essence of Quality Compliance developed for our Product Quality Month (November). The post-seminar survey (120 respondents) yielded good results. Satisfaction level: Extremely satisfied or satisfied: 78% Degree of understanding: Very easy to understand/ For the most part easy to understand: 90%
			Number of serious quality process abnormalities in processes*	0	1	0	

* Losses of 10 million yen or more

Initiatives

Promoting Quality Assurance and Quality Improvement Activities

Our Technology Unit and Quality Management Division are playing the central roles in our promotion of quality assurance and improvement activities. We are working on strengthening the requisite technical skills for quality management and aiming to decrease customer complaints and production process abnormalities through conducting Core Quality Diagnostic Checks, quality-themed education and training, and quality improvement activities.

Nippon Kayaku's quality management story begins in 1948, when a plant technician voluntarily began looking into quality control statistical methods. Their continued lively activity were eventually rewarded with a Deming Prize in 1963. This quality improvement spirit has been handed down to present-day employees in the form of our A3 (KAIZEN) Activities Competition, which sees both domestic and overseas Group companies engage in technician-driven quality improvement activities and delivering fruitful outcomes. We have also updated our textbook "Quality Management for Everyone" from the time of the Deming Award to fit the present day, and continue to use it for education and training.

◆ Business Unit Initiatives

In addition to joining the education programs provided by the Quality Management Division, each of our business units is engaged in a host of quality improvement activities tailored to industry type.

Mobility & Imaging Business Unit Global Quality Management

For our Safety Systems Business, which supplies automotive safety parts across the globe, managing and guaranteeing the same quality levels across the board is a must. With our manufacturing bases also expanding globally, our Quality & Safety Division takes the overall lead, forging links with each manufacturing base and providing the relevant technical support. In its bid to achieve unified global quality is the Quality & Safety Division both strengthening global governance and promoting quality improvement activities.



Trainees from Malaysia posing with members of our Quality Assurance Department

Quality Improvement Activities Conducted with Suppliers

The need to rapidly deliver high-quality products to market makes continuous quality improvement activities based on relationships of mutual trust with suppliers essential.

In the Safety Systems business, our Quality & Safety Division gets involved from the initial supplier selection stage, conducting process audits, confirming quality situations, and offering education sessions to provide advice on quality improvement. Nippon Kayaku Group Quality Manuals are also distributed to all suppliers, who must sign a form confirming their acceptance of manual stipulations. The Purchasing Division conduct regular audits of suppliers according to the type and importance of materials purchased. These audits involve reinforcing the Nippon Kayaku Group's basic approach to quality assurance, confirming quality management standards and the supplier's quality situation, and offering advice on quality improvement.

FY2023 saw a total of 9 such supplier audits conducted (5 onsite and 4 by document submissions only), with the emergence of zero cases connected to serious quality issues. Where points of issue arose, the suppliers in question were made to submit a Process and Product Audit Improvement Plan with Relevant Measures Form, and we are currently confirming whether those remedial measures are in fact being enacted.

Continual communication with suppliers is vital to maintaining and improving quality. Going forward, we shall keep exchanging opinions as we strive to maintain and drive up quality through working in tandem with our suppliers.

Fine Chemicals Business Unit

Initiatives to Prevent Quality Fraud and Data Falsification

Our Fine Chemicals Business Unit has set up an independent Quality Assurance Division to carry out quality management and quality assurance work on each product produced by the three domestic plants (Fukuyama, Asa and Tokyo) which support the three business areas of Functional Materials, Color Materials and Catalysts. The Quality Assurance Division also links up with the quality coordinating body for all business units, the Quality Management Division, to work on strengthening divisional quality assurance systems.

As an initiative to tackle quality fraud and data falsification, we dispatch permanent Quality Assurance Division bodies to each plant to help deliver reinforced governance on the ground and link up with plant Quality Management Divisions to promote quality patrols and the fostering of quality cultures. At our Fukuyama and Asa plants, we have introduced the LIMS (the Laboratory Information Management System which helps prevent quality falsification through automatic recording of inspection results etc.) to reduce human interventions in the processing of product inspection data wherever possible and aim for improving data integrity.

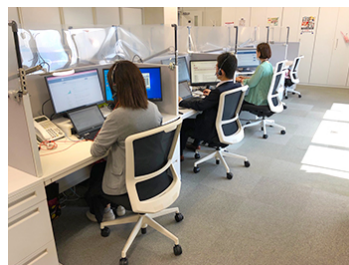
Moving forward, we will continue to pursue the relevant improvements as we aim for Quality Assurance System that is trusted by customers and wider society.

Life Science Business Unit

Responses to Enquiries from Patients and Medical Professionals

Our Medical Information Service Center has a toll free number for fielding all kinds of enquiries from patients and medical professionals on Nippon Kayaku pharmaceutical drugs and medical devices, including anti-cancer drugs, autoimmune disorder drugs and endovascular embolization materials. The Center handled 18,153 enquiries in FY2023. With the aim of ensuring that all our products come to serve customers even better, the Center's staff endeavor to handle each enquiry with speed, accuracy and politeness. We also strive for daily service improvements through surveying our customers on whether our Center's answers have met their expectations.

In addition to linking up with our medical representatives tasked with visiting medical institutions so that patients can be presented with the most helpful information possible, the Center also relays the requests and opinions of customers to relevant internal departments along with its own suggestions. Under its slogan of: "Doing everything to promote appropriate use and improve customer satisfaction" is the Medical Information Service Center contributing towards yet better medical care.



Our Pharmaceutical Products Information Center

Information for Patients and their Families

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



[Rheumatism La-la-la \(Japanese\)](#)



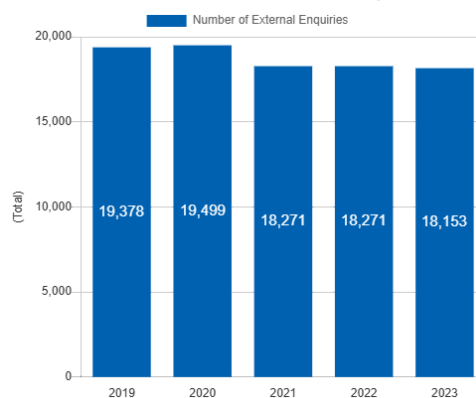
[Breast cancer info navigator \(Japanese\)](#)



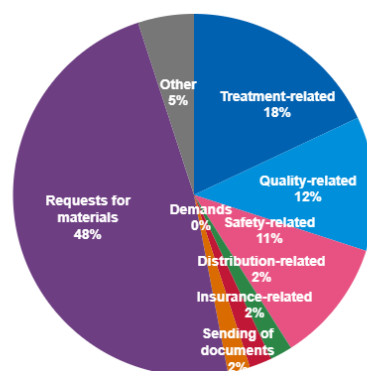
Quality Education for Suppliers

Our Agrochemicals Group outsources product manufacturing to locations both inside and outside Japan. It therefore drives forward quality maintenance and improvement of products manufactured by contractors through conducting periodical audits of, and detailed information exchanges with, the contractors in question. Audits are jointly conducted by the Quality Assurance Department and Technical Department, and with the help of the Research and Development Department should the situation demand. Questionnaires on conformity with laws and regulations, quality assurance systems, quality management and production processes are sent to manufacturing contractors, with those submitting low self-evaluations subject to Nippon Kayaku onsite checks inasmuch as is possible. Furthermore, where there have been past instances of abnormality or non-conformity at manufacturing contractors, we confirm whether recurrence prevention measures have been sufficiently devised and roll out success stories across other contractors so as to avoid repeats of similar issues. In cases where audits reveal insufficient efforts in certain areas, we issue the contractor in question with a Request for Improvement Form and demand speedy remedial measures. Thus, while working on improving both quality and customer satisfaction are we also supporting food supply and contributing to the development of sustainable agriculture.

Trends in Numbers of External Enquiries



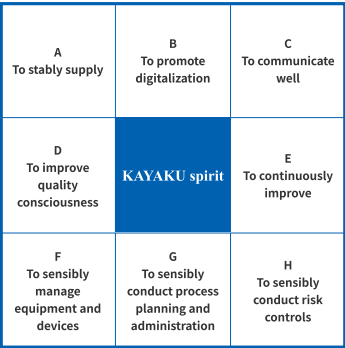
Enquiry Type Breakdown (FY2023)



◆ Quality Education and Training Initiatives

So as to clarify the key quality assurance and improvement issues to be tackled, our Quality Management Division has prepared a so-called “Quality Mandalart” box-form chart with our **KAYAKU spirit** corporate vision at its core, in line with which it regularly delivers quality-themed education.

In a further subdivision of the mandalart chart, the necessary knowledge and skills required to resolve issues A to H and realize the company we wish to be are also defined. The resultant quality education programs are delivered in both group-session and online-meeting formats so that every business unit’s R&D and plant employees can efficiently and effectively join regardless of where they move. Through, for example, dispatching instructors to every business site and delivering the contents to multiple locations simultaneously in a hybrid format, we are also devising training methods which make adept use of both online and offline formats. Moreover, by handing out post-session questionnaires, we are able to receive feedback on education and training quality and quantity, and link that to further improvements.



Quality Mandalart

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

Training Contents include...

- Field Data Analysis: Learning School
- Internal quality auditor training
- “Why? Why?” Analysis Training
- Training on Measures against Human Error

We are also conducting E-learning activities for all executives and employees based on our internal quality education textbook entitled: “Quality Management for Everyone,” which draws together all the basic knowledge required while implementing quality management. Average take-up rates have remained high, hitting 97% in every year from FY2019 to FY2022. It can safely be said that our employees are individually devoting themselves to improving their quality awareness. FY2023 saw us deliver E-learning sessions on Quality Management for Everyone to new hires (including mid-career recruits and repeat sessions for those who missed the initial ones). The average take-up rate was 99%.

Seminar Attendance Results (Domestic)

Training Title	Main Contents	Mainly aimed at	Period	Delivery style	Number of times	Average attendance rate
Quality Control for Everyone	The Basics of Quality Control; Quality Standard and spec for Inspection; responding to issues etc.	New hires (but also offered to mid-career hires and repeated for those absent from initial seminars)	July 2023 to March 2024	E-learning	20	99%
Quality Control for Everyone	The Basics of Quality Control; Quality Control and Inspection Regulations; responding to issues etc.	All executives and employees	2019-2022	E-learning	20	97%

◆ Quality Improvement Activities

With a view to investigating the reasons for quality process abnormalities and customer complaints, and taking effective recurrence prevention measures, the Nippon Kayaku Group has incorporated the “Why? Why? Analysis” method with the aim of rallying all workplace employees together to think about, and propose appropriate solutions to, these issues. FY2014 saw us step up our Why? Why? Analysis efforts by forming promotional teams in each plant, creating a Why? Why? Analysis Manual, and diffusing it across company workplaces. We continue to update the manual, and are now translating the latest versions into foreign languages for a roll-out to overseas Group companies (including seminars on-location) to help accelerate improvement activities in both domestic and overseas workplaces.



(Key Sustainability Issues)

Environmental and Social Considerations in the Supply Chain

Policy and Basic Approach

To ensure that our purchasing activities conform to sustainable management practices, the Nippon Kayaku Group has fixed its Purchasing Principles and Basic Purchasing Policy. By utilizing these can we join forces with our suppliers to work towards realizing a sustainable society.

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.

◆ 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).

Policy on Responsible Mineral Procurement

There is a concern that profits from the mining and trade of gold, tin, tantalum, tungsten, and cobalt, natural mica (hereinafter, the "minerals") in CAHRAs* (hereinafter, the "target areas") provide a major source of funding for organizations involved in armed conflict, human rights violations including child labor and forced labor, environmental destruction, corruption, etc. In light of this concern, we take measures to avoid the use of minerals from the target areas (hereinafter, "conflict minerals") and any raw materials that contain conflict minerals so as to avoid providing support for armed conflicts and/or inhumane activities. In the event that any use by us of conflict minerals is identified, we will take corrective measures without delay. We ask our suppliers to abide by our policy and cooperate with us by avoiding the use of conflict minerals in raw materials used for our products.

* CAHRAs (Conflict-Affected and High-Risk Areas) stipulated by the EU Conflict Minerals Regulation

See the list: <https://www.cahraslist.net/cahras> 

System

On the instructions of its Sustainable Management Meeting, Nippon Kayaku is accelerating its sustainable purchasing activities in line with its Purchasing Principles, Basic Purchasing Policy, and Responsible Mineral Procurement Policy. Our Purchasing Division has the lead role in promoting sustainable procurement, and is forming links with every factor and business unit purchasing department in order to strengthen initiatives.

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
Environmental and Social Considerations in the Supply Chain	<div> <div>9</div> <div>Industry, structure and innovation</div> </div> <div> <div>12</div> <div>Responsible consumption and production</div> </div> <div> <div>13</div> <div>Climate action</div> </div> <div> <div>16</div> <div>Peace, justice and strong institutions</div> </div>	<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%	(Non-consolidated) 91%	<ul style="list-style-type: none"> Sustainable Procurement Guidelines-based survey sent out to suppliers making up the top 90% of our purchases in FY2021 and all new suppliers in FY2022 and FY2023 (371 companies in total). 338 companies consented to the Guidelines. As the survey responses revealed no supplier problems with human rights and environmental issues, there was no need to send out Requests for Improvement.
			Formulation and implementation of improvement plans using questionnaires to suppliers	(Non-consolidated) Disclose progress	-	Published in Topics	

Initiatives

Promoting Sustainable Purchasing

Our efforts towards realizing a sustainable society have seen us weave together our Nippon Kayaku Charter of Conduct and Code of Conduct, our Purchasing Principles, our Basic Purchasing Policy and our Responsible Mineral Procurement Policy into a Sustainable Purchasing Guidebook, and promote affirmation of such guidelines from a large number of suppliers.

With consideration given to respect for human rights, environmental conservation, worker safety and health, legal compliance, and fair trading, we are teaming up with our suppliers to promote sustainable procurement across the entire supply chain, spanning R&D, raw material procurement, manufacturing, selling and distribution.

We use briefing sessions, everyday communication and regular business conversations to enhance supplier understanding of our sustainable procurement drives, and periodically ask suppliers to sign pledges to comply with the terms and conditions of our Sustainable Procurement Guidebook. FY2024 has seen us issue every new supplier (raw materials manufacturer) with a copy of our Sustainable Procurement Guidebook, along with a relevant survey, whose results we have now collated in order to confirm the situation on the ground. From now on, we will continue working towards achieving a sustainable society with a supply chain that fulfils its social responsibilities, and towards becoming a familiar, much-loved presence in the eyes of our customers.

[▶ Sustainable Procurement Guidebook](#)


Initiatives Chart

Principal Activities	Activity Details	Assessment Frequency
Sustainable Procurement Survey	Sending Sustainable Procurement Questionnaires to domestic suppliers (specifically, suppliers in the top 90% of our raw materials purchases and new suppliers) to confirm how they are faring against the Nippon Kayaku Group Sustainable Procurement Guidebook.	<ul style="list-style-type: none"> As appropriate, for existing suppliers inside Japan Whenever a new domestic supplier registers
Supplier Audit	Conducting paper or field audits of supplier manufacturing bases (quality-centred supplier audits)	Yearly
BCP Procurement	<ul style="list-style-type: none"> Working towards gathering information on supply chain hazards and accidents, and sharing such information on internal company databases Strengthening moves towards multiple procurement 	<ul style="list-style-type: none"> As appropriate, whenever hazards or accidents occur Quarterly status confirmations
Responsible Mineral Procurement	Conducting surveys on applicable minerals (gold, tantalum, tungsten, tin, cobalt, natural mica) using CMRT and EMRT provided by RMI	Whenever a new supplier registers Also set up according to need
Financial Evaluation	Assessing new suppliers' finances based on information provided by external credit agencies	Whenever a new supplier registers

◆ Conducting Sustainable Procurement Questionnaire Surveys

Nippon Kayaku has conducted a Sustainable Procurement Survey of all new and existing suppliers to confirm the status of socially and environmentally-focused initiatives. FY2023 saw us survey the suppliers who made up the top 90% of our raw materials purchases in 2021, as well as new suppliers who registered in FY2022 and FY2023, a total of 371 companies. The survey was based on the contents of the Sustainable Procurement Guidebook, and saw us gain the consenting agreement of 338 companies (91%) over the two years spanning FY2022 and FY2023. The survey also enabled us to confirm that 353 company respondents (95%) were not causing negative environmental or social impacts with respect to human rights and worker safety and health. The future will see us continue our joint efforts with suppliers to aim for a sustainable society across the entire supply chain.

Number of Suppliers Evaluated over the Past Two Years, Response Rate and Consenting Rate

	Number of Suppliers	Response Rate	Consenting Rate
FY2022-2023	371 companies	95%	91%

Main Items on the Sustainable Procurement Survey

Assessment Points	Details
Human Rights & Labor	Banning of forced labor and child labor, appropriate management of working hours, appropriate payment of wages, humane treatment of employees, eradication of discrimination and harrassment, freedom of association
Safety and Health	Workplace safety, emergency preparedness, prevention of industrial hazards and sicknesses, industrial hygiene, due consideration given to physically-challenging labor, machine safety measures, provision of sanitation facilities/ food/dwellings, health and safety communication
Environment	Environmental permissions and reports, efficient use of resources and waste management, anti-pollution and resource reduction, management of hazardous materials, solid waste management and reduction, exhaust gas pre-processing, restrictions on materials, water management, reduced energy consumption and greenhouse gas emissions, biodiversity conservation
Ethics	Business integrity, eradication of unjustifiable profits, appropriate information disclosure, respect for intellectual property rights, fair business/fair advertising/fair competition, ID protection and prevention of retaliation, responsible mineral procurement, animal welfare, privacy protection
Management System	Corporate commitments, managerial accountability and responsibility, legal and customer requirements, appropriate import and export management, risk evaluation and management, improvement objectives, training, communication, worker feedback/participation/complaints responses, audits and assessments, processes for corrective measures, creation and maintenance of a documenting and registration system, supplier responsibility
Product Quality and Safety	Guaranteeing product safety, product quality management, provision of accurate product and service information
Information Security	Defense against cyber attacks, protection of personal information, prevention of confidential information leaks
BCP	Fixing a Business Continuity Plan

◆ Audits of our Suppliers

The Nippon Kayaku Group conducts annual audits of suppliers with the aim of promoting and properly achieving sustainable procurement. These audits see the manager of every Nippon Kayaku plant check and assess their suppliers against various management criteria with respect to plant facilities, processes, health and safety, production and more. We conducted 101 supplier audits in FY2023 (and, as of June 2024, are still awaiting document responses from four of them). Having confirmed information and points of concern in relation to these audits, we provided feedback and demanded improvements from the suppliers in question, but found no instances of serious violations.

Our Fine Chemicals Business Unit is referring to the RBA Code of Conduct when confirming the status of supplier initiatives in the five key areas of: Labor (Human Rights), Safety & Health, Environment, Ethics and Management Systems. FY2023 saw 71 supplier companies undergo such an audit (16 onsite, 1 online, and 54 via document submission as of June 30th 2024 – with 4 companies yet to respond).

◆ Business Continuity Planning (BCP): Procurement Initiatives

Nippon Kayaku regularly works to gather information on supply chain hazards and accidents, and immediately share such information through internal company databases. It also seeks to promptly pick up the charts of the raw materials procured from the relevant country of origin or manufacturer, and thereby confirm the impact on stocks, procurement, factory operation restarts and manufacturing. Although one BCP measure has seen us switch to purchasing many items from multiple suppliers, we still need to strengthen initiatives in order to respond to all manner of situations.

◆ Each Business Unit's Initiatives

Mobility & Imaging Business Unit
Purchasing Briefing Sessions

The Safety Systems Group holds a yearly Purchasing Briefing Session for its regular suppliers.

Within the automotive industry supply chain, Nippon Kayaku must, in tandem with its suppliers, rapidly respond to an external environment filled with dizzying changes in domestic and international affairs, and exchange rate fluctuations, all while ensuring that customers suffer no delays and that high-quality low-cost products continue to be supplied. Our Purchasing Briefing Sessions see us cover the Group's expected results, the business plan for the next financial year, production system status, development plans, medium-to-long-term visions, product quality policies and purchasing policies, with the aim of providing information which suppliers can feed into their own business plans. These sessions also allow us to hand out Outstanding Partner Company Awards to suppliers who are model examples in quality, cost and respecting of deadlines. We will work to ensure that future briefing sessions continue to serve as valuable information-sharing outlets for our Group and its suppliers, and that beneficial information continues to be presented.



Fine Chemicals Business Unit
Response to an RBA Audit

The Responsible Business Alliance (RBA) is a corporate alliance which promotes social responsibility within the global supply chain. The RBA Code of Conduct lays down the necessary standards for certifying that companies are providing safe supply chain working conditions, treating workers with dignity and respect, and showing consideration for the environment in their business activities. January 2022 saw our Fukuyama Factory undergo a Third-Party RBA Audit. Happily, the factory was recognized for its appropriate management in the five survey areas of Labor, Safety & Health, Environment, Ethics and Management Systems, and duly gained a Silver Certification. Points to improve have been earnestly tackled in line with Corrective Action Plans (CAP), all of which were approved in January 2023.

Going forward, we will ensure that RBA audit standards are maintained by performing yearly internal audits, the most recent of which in October 2023 confirmed these standards are indeed being met.

Purchasing Division Members Education

Nippon Kayaku provides all members newly transferred to the Purchasing Division with induction training designed to give them a sufficient grounding in our Purchasing Principles, Basic Purchasing Policy, Responsible Mineral Procurement Policy, and Sustainable Procurement Guidelines. Furthermore, in order to guarantee robust supply chain management are we ploughing efforts into education and training sessions for Purchasing Division Members themed around Sustainable Procurement and Responsible Mineral Procurement. We are also promoting further knowledge-acquisition efforts from purchasing managers by buying them procurement qualification textbooks and supporting their efforts to study for CPP (Certified Procurement Professional) or CPSM (Certified Professional in Supply Management).

Participation in Initiatives

◆ UN Global Compact: Supply Chain Subcommittee

Since 2022, the Nippon Kayaku Group has sat on the Supply Chain Subcommittee of the UN Global Compact. The knowledge and information gained from such meetings has been shared with our internal purchasing managers and used to update the survey questions we ask of suppliers.

◆ Partnership-building Declaration

Nippon Kayaku has signed up to the Paving Our Future Partnership-Building Promotion Meeting, which counts among its members: the Chair of the Japan Federation of Economic Organizations, the Head of the Japan Chamber of Commerce and Industry, the Chair of the Pension Fund Association, and related ministers from the Cabinet Office, the Ministry of Economy, Trade and Industry, the Ministry of Labor, the Ministry of Agriculture, Forestry and Fisheries, and the Ministry of Land, Infrastructure, Transport and Tourism. We released our own Partnership-building Declaration in 2023.

This Declaration constitutes a vow to build fresh partnerships through links and prosperous coexistence with all suppliers and value-creation-seeking businesspersons within our supply chain. Participation in this Declaration will help us build the sustainable relations which allow us to prosperously coexist with suppliers.

➤ [The Nippon Kayaku Partnership-building Declaration \(Japanese\)](#) 📄

Compliance Hotline for Suppliers

The Nippon Kayaku Group has also set up a Compliance Hotline for Suppliers for the reporting of law violations, available to every executive and employee working for our Group's domestic suppliers. The Ethics Committee Staff Office (specifically, the Person in-charge of the Internal Control Management Division) serves as the reception desk for whistleblower reports and consultations. The system guarantees both confidentiality and anonymity, meaning that no report or consultation will result in blowback against the whistleblower.

➤ [Compliance Hotline for Suppliers](#)

Contributing to Local Communities

Policy and Basic Approach

With business sites positioned all over the world, the Nippon Kayaku Group plays an active role as a member of multiple local communities. As a good citizen-company wherever we are, we aim to coexist with surrounding regions by effectively utilizing our resources and valuing communication with local people. We are also deploying our technologies and products on CSR activities such as Next-Generation Development Support and Disaster Recovery Support, thereby contributing to healthy and sustainable local community development.

Indicators

Action Plan for Next-generation Development Support Measures

Next-generation Development Support Measures: Action Plan 4 (Only community-related themes selected)

◆ Target 4: Next-generation development support measures at a local community level (Specific details of initiatives)

[Details of specific initiatives]

- Welcoming local children for tours of company facilities
- Setting up a young person's internship program
- Exploring the possibility of Children's Observation Days

> [4th Action Plan \(FY2022 to FY2024\)](#)

> [Progress Report \(FY2023\)](#) 

Initiatives

Creating a Society Where People Can Lead Healthy and Affluent Lives

◆ Asunaro House: A facility for terminally-ill children and their families

Under the motto of “Helping Terminally-ill Children and their Families,” 1998 saw Nippon Kayaku mark the 80th anniversary of its foundation with the opening of Asunaro House, an accommodation facility for children undergoing hospital treatment and the family members who accompany them. The facility, which we operate ourselves, lies close to the Saitama Shintoshin area. Asunaro House aims to be a reassuring place to stay for children undergoing either outpatient or inpatient treatment for cancer and other incurable diseases, and their accompanying family members. It welcomed 203 families and a total of 2522 people in 2023 alone. The facility boasts ten private rooms of just over 18 square meters in size for children accompanied by two adults, a wide dining area and kitchen, a playroom, a laundry, and all the necessary equipment for long-stay guests, who we hope can come to view it as “a home from home.” 2023 also saw us renovate two of the rooms, much to the delight of their occupants. To further enhance the pleasant guest experience, Nippon Kayaku and related companies periodically send volunteers from among staff and retired staff to clean the premises and cut the grass. While protecting the privacy of guests, we are working to make Asunaro a place where families can interact, and which helps even a little with alleviating the mental and financial burdens of sick children and their families.



Our volunteer army of staff and ex-staff gets to work on cleaning and hedge-trimming.

> [Asunaro House: An Outline \(Japanese\)](#)

Message

2023 saw Asunaro House celebrate its 25th anniversary. Until that point, it had welcomed some 4,115 family groups and 74,421 individuals.

With Saitama Prefectural Children's Medical Center, Saitama City Hospital, and the Yamato Acupuncture Clinic among the several neighborhood institutions pouring their utmost into child medical care, we are seeing an increase in families coming from all over Japan to have their children receive yet more specialist and high-level treatment.

The Covid-19 pandemic rather dented visitor numbers, but applications from would-be guests are now gradually rising again. We will therefore continue our infection control measures going forward and welcome yet higher numbers of guests.

Since my appointment as House Manager in 2017, we have tried to make families feel more at home by introducing extra seasonal decorations and other initiatives based on information-sharing with similar facilities across the country.

From now on we will strive each and every day to provide terminally-ill children and their families with a safer, more reassuring and more pleasant experience, and make Asunaro House their "home from home."

Let us hold in our hearts the "thankyous" we receive when children discharged from hospital return to their real home with their families.

Mr Yamaji, House Manager



◆ Promotion of Sport

Nippon Kayaku provides support to sports and also sets up internal healthy-living initiatives. We will keep promoting these various CSR activities to realize our corporate principle of "Supporting affluent living through safeguarding life and health."

V League: Wolfdogs Nagoya (Gold Partner)

Volleyball is a sport in which the ball connects people. We therefore approve of and support the activities of Wolfdogs Nagoya which center upon the principle of bringing people together.

➤ [Wolfdogs Nagoya Official Site \(Japanese\)](#) 



Supporting the Scrum Japan Program

We are participating in the Scrum Japan Program, a series of activities initiated by the Japan Rugby Football Union aimed at educating and developing the children and young people who will lead our future through rugby.

We fully subscribe to the aims of the program, and have signed up as a supporting member as part of our CSR activities.

➤ [Scrum Japan Program Official Website \(Japanese\)](#) 



Business Site Initiatives

Headquarters Recognition as a Tokyo Sports Promotion Company for 2023

Tokyo Metropolitan Government's Bureau of Citizens, Culture and Sports recognized Nippon Kayaku as a "Tokyo Sports Promotion Company for 2023." This award system allows the Tokyo Government to recognize companies that set up outstanding initiatives to promote sport among employees and conduct sports-based CSR activities. Going forward, Nippon Kayaku will continually set up healthy-living initiatives and proactively work on promoting health improvements to employees.

➤ [Tokyo Sports Promotion Company Accreditation System](#) 



Next-generation Development Support

◆ Next-generation Development Initiatives

We are currently engaged in next-generation development support initiatives which aim to make the children who will lead our future understand the fun of science.

Business Site Initiatives

Headquarters Helping out with Lessons at Kudan Secondary School

As our headquarters used to be based in Tokyo's Kudanshita district, we have been helping Kudan Secondary School out with their General Studies lessons on the topic of "Understanding Local Area." We have continued this aspect of our local community contributions even since relocating our head office to Marunouchi in 2014. A typical year sees us invite students to our offices to provide them with an introduction to our company, lessons on how to make advertisements, and an explanation of their tasks. We then have them report back at a later date on the results of those tasks.

One task we set the students was: "Think about a Nippon Kayaku-style advertisement which gets lots of people interested." Our PR Department members taught a lesson on advertising and looked at the effectiveness of advertisements conveying messages of: "Who, What and How." Discussion groups deepened the debate by generating various ideas, and the students gave us an interim report one month later. Then, one month further on from that, we had the students use PowerPoint to make their final advertisement. We will continue these initiatives in the hope they prove of even just a little help to the students.



Research Lab Exhibiting at the "Summer Holiday Science Experiments for Kids 2023" staged by the Yume Kagaku 21 Committee (Chemistry Makes Our Dreams Come True).

August 5th and 6th 2023 saw Nippon Kayaku head to the Science Museum at Takeshiba, Tokyo, to exhibit at the Yume Kagaku 21* Committee-sponsored science experiment event for elementary school kids: "Summer Holiday Science Experiments for Kids 2023." Over 200 children took part in our event. Under the theme of "Let's Make a New Galaxy Ball!" did we conduct a handicraft activity using the photosetting resin known as acrylic resin. The completion of our totally one-off key ring was marked by cheers of delight from the children present.



* A campaign jointly set-up by The Chemical Society of Japan, The Society of Chemical Engineers, Japan, and the Japan Association for Chemical Innovation, aimed at promoting understanding of scientific enlightenment and the science industry's contribution to society.

Our experiment videos featured on the Yume Kagaku 21 Children's Science Channel

Our science experiment video entitled "The Marvels of Colors: Color experiments to try out at home!" appeared on the Yume Kagaku 21 Committee's Children's Science (YouTube) Channel. We both approve of and support the channel's aims of stimulating scientific curiosity and interest in the children who will lead our future. The video, designed to simplify the appeal of science, was put together by trial and error, based on plans thought up mainly by the younger members of our Research Section.



(Science Experiment Video Outline)

Title: The Marvels of Colors: Color experiments to try out at home!"

Experiment details: Neutralization reaction of bath bombs (bath salts); Felt-tip pen chromatography: the three primary colors

➤ [Science Experiment 07: The Marvels of Colors: Color experiments to try out at home! \(Made with the cooperation of Nippon Kayaku Co., Ltd.\) - YouTube](#)

Joetsu Factory Joetsu Science Museum's Youth Science Festival: Making a Kaleidoscope from Polarizing Plates

The Joetsu Plant is engaged in several initiatives chiefly aimed at elementary schoolers that use handicraft as a means to familiarize children with science. Two such initiatives involved setting up booths at Joetsu City's Youth Science Festival and the Myoko City Science Festival (both in Niigata Prefecture). Our exhibition booth saw us give demonstrations on how to make a kaleidoscope from polarizing film produced at our Joetsu Factory. Child visitors, sometimes with helping hands from their parents, were able to make their own kaleidoscopes decorated to their own tastes. And when looking into the finished versions, the delighted children exclaimed: "How pretty!" "How marvelous!" and "I want to make one at home!" The staff on hand gave dozens of explanations over the course of the day, but any fatigue they had was swept away by the joy of seeing how children reacted. We will continue to offer such practical science events as we further develop our locally-rooted CSR activities.



Asa Plant Activities for the Local Community: A University Open Day

September 24th 2023 saw Sanyo Onoda City University hold an Open Day event.

For the purpose of introducing our local business and getting children more interested in science, we elected to set up a booth.

The experiment we staged was entitled: “Does a red cabbage really cause this? Science’s marvelous Dance of the Seven Outfits!” and consisted of placing the anthocyanin found in red cabbages into various solutions to see how its color changed. We understandably chose this experience for its capacity to make science visually enjoyable for children. With the help of numerous people on the day, we could get through the experiments without a hitch, and achieve a rousing response from the observing children.



Asa Plant Pre-Job Application Workplace Tour

August 2nd 2023 saw the Asa Plant welcome seven students from three local schools for a Pre-Job Application Workplace Tour. After providing an outline explanation of the facility, we took them on a tour of the plant. The students took copious notes of our explanations throughout and asked plenty of questions as well. We would be delighted if this tour helped them get a feel for the workplace atmosphere.



Initiatives in the Local Community

Through plant open days, education activities, donations and co-sponsorships, blood donations, cleaning activities and informal get-togethers, the Nippon Kayaku Group is working to give everyone in the immediate local community an insight into what our business is about. The future will see us continue to set up these opportunities to interact and actively communicate with local people as we work on local community regeneration and development.

➤ [Principal Agreements Nippon Kayaku has Signed with Local Communities](#)

◆ Our Commitment to Local Employment

Wherever we are, we recognize the local community as one of our key stakeholders, not only through CSR, but through employing local people and actively exchanging information with local authorities. This underscores our belief in helping achieve sustainable development through healthy local communities. Both domestically and globally, we are proactive in our local recruitment wherever we set up base, making sure to follow relevant local laws and exceed the local minimum wage.

◆ Business Site Initiatives

Asa Plant Fireworks of Hope

July 21st 2023 saw us launch over 300 fireworks in deep appreciation of the local community who always look after us well. It was the fourth straight year we had put on this display since 2020 at the Kaji Fishing Port, located a short distance from our Asa Plant. For 2023, we even opened the event with a session of Ryuo taiko drumming, which combined with the fireworks to tremendous effect.

As the event fell on the first day of summer holidays, it was very well attended, with the crowd giving lots of vocal support to the large multicolored firework rings and pulsating taiko performance. The event finished a roaring success as we successfully used the power of fireworks to energize local people and put smiles on faces.

The future will see more such efforts to bring delight to local residents.



Takasaki Plant Digging for Sweet Potatoes

October 2023 saw us dig for sweet potatoes just outside our company dorm on a fine autumn day with children from Iwahana Nursery and Konan Kindergarten. A succession of hot summer days ensured our Beni Haruka sweet potato yield was high.

The preschoolers dug into the earth with their own bare hands and, when uncovering potatoes the size of their own faces, smilingly exclaimed: "I got a big one!" The smile-filled activity was also a source of pleasure for our staff members present. Once digging had finished, we enlisted the help of Gunma Sangyo to remove the roots and dirt from the potatoes, load them onto a truck, and deliver them to the nursery and kindergarten.



Kayaku Safety Systems Europe Charity Activities

Every year sees Kayaku Systems Europe (hereafter: KSE) throw its energy into charity activities as it offers support to local non-profit organizations, premises fire brigades, children's sports teams, the elderly and underprivileged persons. 2023 saw KSE lend support to the construction of a foodbank warehouse facility in the environs of its head office. Foodbanks, for the uninitiated, are institutions which gather large volumes of discarded food approaching its expiry date and redistribute them, along with sanitary items, to people in need (for example, the homeless, single mothers, and refugees, etc.)

The past nine years have also seen KSE engaged in Pink Ribbon Activities, training its focus on breast cancer prevention, gradually raising awareness of the issue and increasing people's interest in preventative measures. In addition to our long-term links with a non-profit organization that brings together local medical students and Vsetin-area cancer patients, we have also forged links with the Czech Republic's biggest public health insurance provider.

KSE is also involved in charity activities related to donations of blood and plasma. It was specially commended by the Mayor of Vsetin for its charitable donations and support for non-profit groups in 2023.



Kayaku Advanced Materials
Charity Activities

Each year sees Kayaku Advanced Materials (hereafter: KAM) join the US Marines' "Toys for Tots" initiative, which sends new toys and books to underprivileged American children to give them a happier Christmas and a message of hope. Over the years, Toys for Tots has distributed some 652 million toys to some 291 million children, not only bringing hope in Christmas season, but beyond Christmas too.

KAM's own Toys for Tots efforts have been led for the past six years by employee Russ Burdick, who draws together all the toys we have donated and delivers them to the US Marines. The initiative is of immense personal importance to Russ, who spent many years lobbying for the company's involvement. Having grasped the initiative's significance thanks to Russ's efforts, our employees look forward to their annual participation.



Russ posing with all the toys donated by KAM employees.

Data

◆ CSR

Indicators	Covering	Unit	2019	2020	2021	2022	2023
CSR expenditure	non-consolidated	million yen	254	146	154	149	158
Total donations	non-consolidated	million yen	222	114	123	120	126
Other CSR expenditures	non-consolidated	million yen	31	32	31	29	32

Governance

Strengthening Corporate Governance.....

Ensuring Compliance

Risk Management.....

94

99

107

(Key Sustainability Issues)

Strengthening Corporate Governance

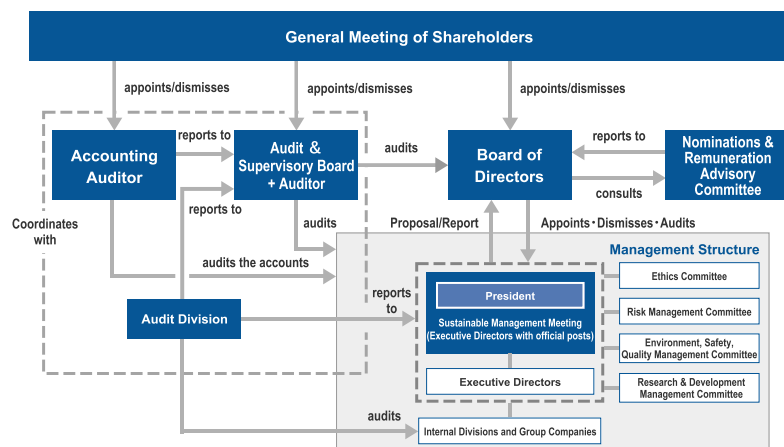
Policy and Basic Approach

The Nippon Kayaku Group recognizes that delivering its corporate vision under the **KAYAKU spirit** requires focus on two important issues: timely and impartial information disclosure to all shareholders and investors, and guaranteed transparent management based on strengthened checking functions. Having judged that management functions can be most effectively demonstrated through decision-making via a Board of Director council system, and corporate governance via an Audit & Supervisory Board system, we will continue to tackle the expansion and reinforcement of corporate governance as a key managerial issue.

➤ [Corporate Governance Basic Policy \[494.9KB\]](#)

➤ [Corporate Governance Report \[1.2MB\]](#)

System



Business Execution System

Nippon Kayaku is a company which has adopted an Audit & Supervisory Board System. Furthermore, in order to rapidly respond to changes in the business environment and achieve flexible business execution, we have introduced an Executive Director System to clarify the separate managerial roles of “decision-making and supervisory functions” and “business execution functions.” By strengthening each of these functions are we carrying out appropriate decision-making and rapid execution of business.

◆ Governance System Chart

Overall system format	A company with a Board of Directors and Auditors (Audit & Supervisory Board)
Number of Board Members (Inside and Outside)	10 (4 of whom are Outside) * 1 female Outside Director
Number of Auditors (Inside and Outside)	5 (3 of whom are Outside)
Chairman of the Board	Chairman*
Board Member terms	1 year
Executive Director System in place?	Yes
Advisory Committee on Board Member appointments	Nomination & Remuneration Advisory Committee
Accounting Auditor	Ernst & Young ShinNihon LLC

* If the Chairman of the Board is absent, the meeting will be chaired according to board member seniority rankings determined beforehand.

➤ [Skills Matrix](#)

◆ Strengthening Corporate Governance: A History

Year	Main Initiatives
2001	1 non-Japanese Board Member appointed (Until Aug 2003)
2005	Executive Director System introduced following business integration reforms Director Retirement Bonus System abolished Performance-related Pay System introduced for Directors
2013	1 Outside Director appointed
2016	2 Outside Directors appointed
2017	Board of Directors' Effectiveness Evaluation Conducted
2020	Nominations & Remuneration Advisory Committee established 1/3 of the Board of Directors comprised of Outside Directors (3 Outside Directors appointed) Corporate Governance Basic Policy established
2021	Director Remuneration System altered Director-centered Restricted Stock Remuneration System introduced 1 female Audit & Supervisory Board Member appointed
2023	1 female Executive Director appointed 4 Outside Directors and 1 female Outside Director 1 Standing female Audit & Supervisory Board Member appointed Introduction of a Restricted Stock Incentive System for employee shareholders
2024	Audit & Supervisory Board' Effectiveness Evaluation Conducted 2 female Executive Directors appointed

Board of Directors

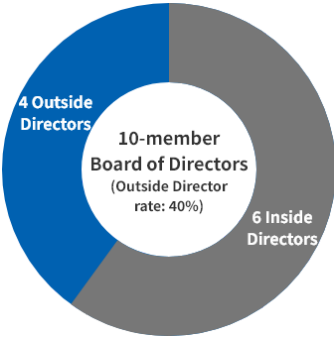
To ensure rapid implementation of management decision-making, we have set the maximum number of Directors at 10, and are working to further strengthen our supervisory functions so that all decisions regarding important operational issues are made based on the rules and policies of the Board of Directors, in accordance with the law and the Articles of Incorporation.

◆ Board of Directors Outline (14 meetings in FY2023)

Meeting Chair	The President	
Number of Board Members	10	Outside Directors now comprise over 1/3 of the Board of Directors.
Meeting frequency	In principle, once a month	We also convene ad hoc Board of Directors meetings according to need.
Term of Board Members	1 year	We limit terms to 1 year in order to clarify the management responsibilities and roles of each Board Member.

◆ Board Member breakdown (As of 2024-06-27)

	Males	Females	Total
Inside	6	0	6
Outside	3	1	4
Total	9	1	10



◆ Top Matters Discussed by the Board in FY2023

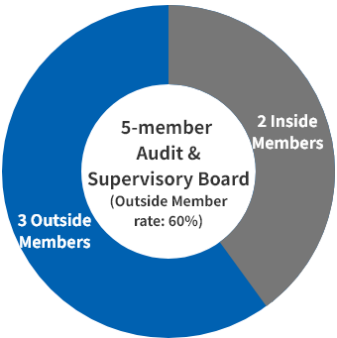
Management strategy, business plan, financial strategy, closing-related matters, HR-centered discussions, business unit strategies, strategies and progress checks on key groupwide issues

Audit & Supervisory Board

Our Audit & Supervisory Board consists of five members, three of whom are outside and two of whom are full-time inside, with one of the latter serving as chair. In line with the audit policies, methods, plans, and division of roles determined by this board at the start of every new period does each member join key meetings, including those of the Board of Directors, review important documents, and, through assessing business execution conditions, audit and supervise the performance of Director duties from an independent standpoint. The two full-time members join management meetings and other such meetings of importance, and audit the overall management situation, Board Member performance and Executive Director performance, through conducting site visits, hearings, and reviews of meeting minutes and other key documents for all main divisions, workplaces and group subsidiaries. The non-full-time members sit in on Audit & Supervisory Board meetings to receive the aforementioned audit status reports, accompany full-time members on site visits, and participate, as appropriate, in information-exchange sessions with the Audit Team of the Inside Audit Division and the Inside Control Management Division (in charge of compliance and risk management). In such meetings will these members offer advice and voice necessary opinions.

◆ Audit & Supervisory Board Member breakdown (As of 2024-06-27)

Inside (Full-time)	2
Outside	3



Nominations & Remuneration Advisory Committee

The Nominations & Remuneration Advisory Committee is comprised of at least three Directors (the majority being those who are independent and from outside of the company) selected by the Board. The aim is to further enhance corporate governance by enhancing the fairness, transparency and objectivity of the procedures relating to the nomination and remuneration of Directors. This committee deliberates the selection, dismissal and remuneration (e.g. remuneration structure) of Directors and Audit & Supervisory Board Members, the selection and dismissal of Representative Directors, and other matters deemed necessary by the Board in response to Board inquiries. Committee findings are reported to the Board.

◆ Nominations & Remuneration Advisory Committee Outline (6 meetings in FY2023)

Committee Chair	The President	Committee chairman selected based on a vote of the Board of Directors
Number of members	6	4 Outside Directors, 2 Inside Directors

◆ Top Matters Discussed by the Nominations & Remuneration Advisory Committee in FY2023

HR-related regulations, director remuneration, director personnel affairs, human capital management

Executive Directors Meeting

This meeting is chaired by the company president, and is composed of the (up to 30) Executive Directors in charge of operational execution who are appointed by the Board. The meeting sees Executive Directors report on the status of operational execution entrusted to them by the Board and company president, as well as on other necessary items. These meetings are additionally attended, in an observer capacity, by four (4) Outside Directors and five (5) Audit & Supervisory Board Members.

◆ Breakdown of the 26 Executive Directors (as of June 27, 2024)

Male	Female	Total
24	2	26

Sustainable Management Meeting

> [System](#)

List of Committees


> [Ethics Committee](#)

> [Risk Management Committee](#)

◆ Number of Meetings Held by Each Committee

> [Number of Meeting Held by Each Committee](#)

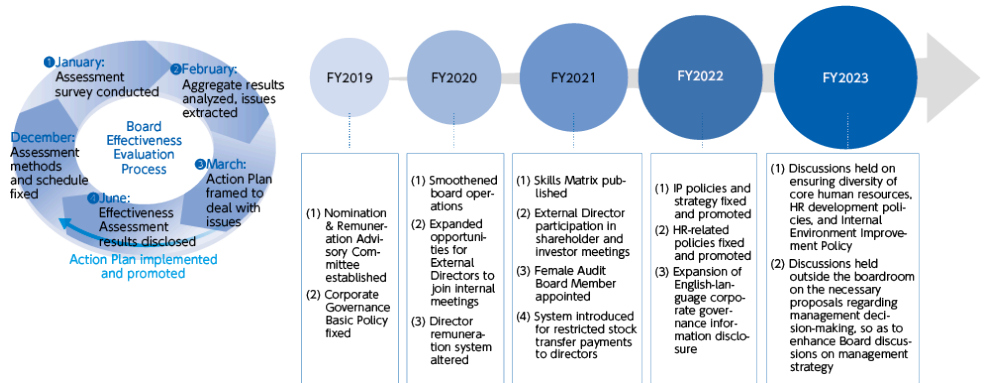
Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
Strengthening Corporate Governance		• 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	1	1	• We have set up a Board of Directors Effectiveness Evaluation Survey, grasped the current situation, extracted relevant issues and devised an action plan as part of current improvement efforts. • Female independent outside board member selected. • Female Standing auditor selected. • Human Resources Development Policy and Inside Environment Preparation Policy established.
			Number of times inside business audits are performed by the Audit Division	60 times in four years	22	17	


Initiatives

Board of Directors Effectiveness Evaluation

Our improvement cycle involves conducting an annual Board of Directors Effectiveness Evaluation to grasp the current state of affairs, extract key issues, and devise a relevant Action Plan.



Initiatives set up in FY2023
(1) Discussions on ensuring diversity in core human resources, HR Development Policy, and Inside Environment Improvement Policy Fixing of HR Development Policy and Inside Environment Improvement Policy
(2) Actions to further improve Board of Directors discussions on management strategy Making proactive use of IT tools to present every Board Member with explanatory materials on proposals in a rapid and appropriate manner
Evaluation Results and Initiatives Going Forward
Our FY2023 analysis and evaluation revealed relative improvements in evaluation scores for the areas targeted in existing Action Plans. Overall, the Board of Directors was confirmed to be effectively fulfilling its roles and responsibilities. However, despite the March 2023 release of the HR Development Policy and Inside Environment Improvement Policy, the evaluation concluded that discussions over human capital management needed to continue, and in greater depth than before.
Action Plan for FY2024
(1) Enhancing discussions and monitoring of human capital policies, including those ensuring the diversity of core human resources, the HR Development Policy, and the Inside Environment Improvement Policy.
(2) Enhancing discussions on measures and monitoring focused on business portfolio strategy and PBR improvement.

Outside Directors Discussion Forum 

Director Remuneration

The 149th Ordinary General Meeting of Shareholders on August 30th 2006 saw Nippon Kayaku determine annual upper limits of director (board member) remuneration at 360 million yen for fixed remuneration and 200 million yen for bonuses. As of the end of that AGM, the Board was comprised of eight members, with zero Outside Directors. The 164th Ordinary AGM of June 25th 2021, meanwhile, saw a 100-million-yen annual limit voted through on Restricted Stock Transfer Monetary Remuneration, applying to the relevant directors and running separately to existing director remuneration arrangements. As of the end of that AGM, the Board was comprised of 9 members, of which three were Outside Directors.

The 149th Ordinary AGM also set annual limits on Audit & Supervisory Board Member remuneration at 90 million yen. There were five Audit & Supervisory Board Members as of the end of that meeting.

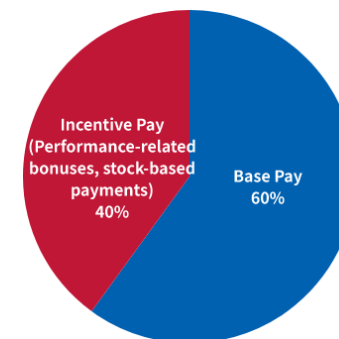
To ensure the appropriateness of matters discussed and transparency in the decision-making process, the Nomination & Remuneration Advisory Committee - the majority of whose members is comprised of independent Outside Directors - deliberates matters relating to the Director remuneration in response to inquiries from the Board of Directors, and reports back to the Board. Such a process enabled the Board Meeting of June 25, 2021 to finalize Nippon Kayaku's policy regarding the individual Director remuneration.

With a view to achieving our **KAYAKU spirit** corporate vision, in addition to sufficiently functioning as an incentive to sustainably improve corporate value and share that value with shareholders, Director remuneration shall also be structured at a competitive level to help us secure excellent personnel. Specifically, Director remuneration pertaining to the execution of business activities shall consist of basic remuneration and incentive remuneration (performance-linked bonuses and stock remuneration). The remuneration of Outside Directors, with their standpoints independent from business execution, shall be limited to basic remuneration in view of their responsibility.

The amount of basic remuneration for Directors involved in executing business activities shall be determined according to the total standard amount for each objective element, such as their duties and rights to act. This amount shall be paid in the form of monetary remuneration on a monthly basis.

◆ Remuneration Structure

The ratio of remuneration by type for Directors involved in executing business shall be roughly 60% for basic remuneration and 40% for incentive remuneration, and shall be determined based on the Director's position, responsibilities and other factors. Regarding decisions on the content of individual remuneration for Directors, the Nominations & Remuneration Advisory Committee will consider a draft from various perspectives, such as consistency with overall policy direction, and report back to the Board. The Board then deliberates the Committee's report and decides the content of individual Director remuneration. Audit & Supervisory Board Member remuneration shall be limited to fixed remuneration in view of their responsibility to monitor the execution Director duties, with the amount to be determined through discussions with those Members within the yearly remuneration limit range.



◆ Performance-related Remuneration

The performance-linked bonuses of individual Directors involved in executing business activities shall be based on the degree of achievement with regards to current financial year targets, the average rate of change of consolidated operating profit over the past three fiscal years, the degree of achievement of Medium-term Business Plan ROE targets, business results of the departments for which they are responsible, and the degree of achievement of mid-to long-term key-issue targets. These bonuses shall be paid in cash at a fixed time following the end of every fiscal year.

The reasons for selecting these business results indicators are: to heighten awareness of both the need for short-term result improvements with respect to consolidated operating profit, and the need for Medium-term Business Plan targets and sustainable business results to be achieved through our focus on an ROE of 8% of above. Directors involved in executing business activities shall be awarded transfer-restricted stock, with a fixed transfer-restriction period attached, at a certain time every year. The aim is to motivate Directors to contribute to improving mid-to long-term corporate and shareholder value under the wider aim of sharing value with shareholders. Monetary remuneration credits equivalent to the stock remuneration and the number of shares to be awarded shall be determined based on the Director's position and responsibilities, as well as our stock price and other factors.

➤ [Director Remuneration](#)

Cross-shareholdings Policy

◆ Policy on Cross-shareholdings

Nippon Kayaku's shareholding purposes can be divided into two categories: stock investments for net investment purposes, and stocks held for purposes other than net investment. The former refers to investments made in order to derive gains from changes in share value or dividends, while the latter refers to stocks held for other purposes.

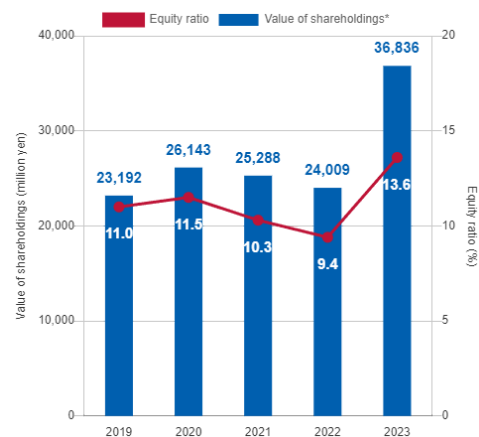
◆ Examination of Shareholding Suitability

Nippon Kayaku invests in cross-shareholdings from the standpoints of improving medium-to-long-term corporate value, and maintaining and strengthening relationships with our customers. Each year sees individual cross-shareholdings examined by the Board of Directors from medium-to-long-term corporate value perspectives. Cross-shareholdings deemed no longer necessary are, with due consideration given to market impact, consequently sold off.

➤ [Securities Report \(The Shareholding Situation\) \(Japanese\)](#) 

◆ Shift in Cross-Shareholdings Policy

As mentioned above, Nippon Kayaku invests in cross-shareholdings from the standpoints of improving medium-to-long-term corporate value, and maintaining and strengthening relationships with our customers. Each year sees individual cross-shareholdings examined by the Board of Directors from medium-to-long-term corporate value perspectives. Cross-shareholdings deemed no longer necessary are, with due consideration given to market impact, consequently sold off. The equity ratio of cross-shareholdings for FY2023 was 13.6%, some 4.2 percentage points up on FY2022.



* Total value of unlisted and not-unlisted stock

(Key Sustainability Issues)

Ensuring Compliance

Policy and Basic Approach

The Nippon Kayaku Group naturally views compliance as a matter of observing laws, internal regulations and industry rules, as is the social norm and as society demands. However, we broaden our interpretation of compliance to include viewing it as a means of continually repaying the trust of our various stakeholders.

Furthermore, by way of a Group code of behavior, we have fixed our Charter of Conduct and Code of Conduct to provide the spirit with which our business activities can help fulfil our social role of contributing to wider society.

We are also working on achieving thorough compliance across our business activities, and further promoting compliance activities under strong top management leadership.

Nippon Kayaku Group Charter of Conduct and Code of Conduct

After underlining compliance as our “top priority for business activities”, we fixed our [Nippon Kayaku Group Charter of Conduct](#) and Code of Conduct in the year 2000. We revised the contents in 2011 in line with ISO26000 (Guidance Regulations on the Social Responsibilities of Organizations), and again in 2020 when resolving to voluntarily implement measures towards achieving 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

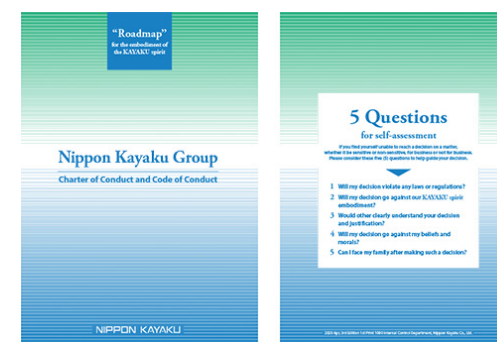
9. The Nippon Kayaku Group will appropriately protect the information it possesses through its business activities and take all possible measures for information management. In addition, we recognize the value of information assets and respect the intellectual property rights of others.

◆ 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.



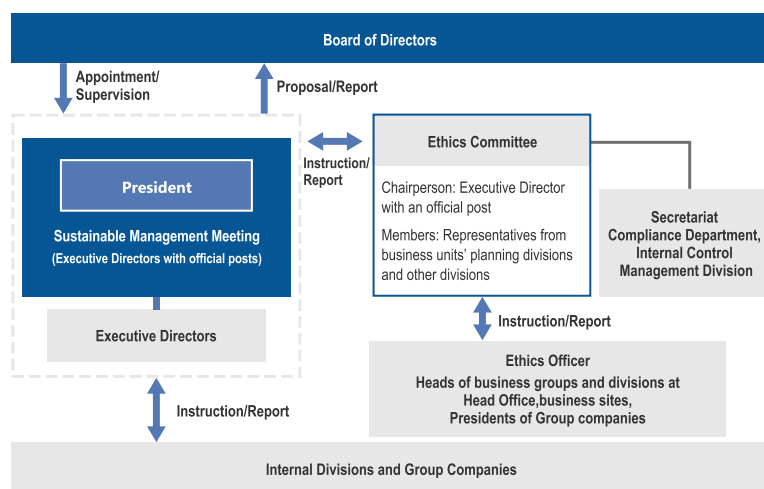
The Nippon Kayaku Group Charter of Conduct and Code of Conduct

System

In order to ensure thorough compliance across the entire Group, we have set up an Ethics Committee as an advisory body to our Sustainable Management Meeting under the guidance and supervision of our Board of Directors. This Committee meets twice a year, and on a further ad hoc basis when necessary.

Led by an Executive Director with an Official Post nominated by our President, the Ethics Committee is comprised of representatives from every business unit's planning department, and from every section of our General Administration Department which is unattached to any business unit. Its remit is to decide on policies and specifics related to ensuring compliance with our Charter of Conduct, Code of Conduct and Basic Anti-Bribery Policy, thereby preventing conflicts of interest and corruption emanating from unreasonably approaching government employees.

It must also examine and decide upon responses to matters either arising in consultation or actually occurring, and the relevant recurrence prevention measures. The most important matters discussed by this Committee, including anti-corruption matters, are forwarded to the Sustainable Management Meeting and even the Board of Directors, who provide related feedback.



Initiatives

Policy and Specifics regarding Observance of The Nippon Kayaku Group Charter of Conduct and Code of Conduct

◆ Internal Instillation

So that the entire Group is instilled with awareness of the need for thorough compliance and secure implementation, and that the contents of our Charter of Conduct and Code of Conduct can be checked at any time, we have produced some portable cards imprinted with both the aforementioned as well as our corporate vision. We have also produced a brochure in the six languages spoken by the countries in which we have set up base (Japanese, English, Chinese, Spanish, Malay and Czech). Both the cards and brochures have been distributed to every Group executive and employee.

It is also the case that every October is Nippon Kayaku's "Compliance Month," which sees our Ethics Committee Chairman pen a message aimed at every domestic Group company employee in our internal bulletin. It also sees us conduct a Compliance Consciousness Survey so we can continually monitor the degree of compliance instillation and link to subsequent improvements. Our Compliance Consciousness Survey has been conducted in conjunction with a contracted consultancy firm since FY2015. From the aggregated results and subsequent analysis do we extract the key compliance promotion issues for each company workplace and provide the relevant feedback, including improvement suggestions. That feedback is then referenced by each workplace when it draws up and fixes its Compliance Action Plan for the following financial year, thereby building PDCAs to improve compliance consciousness. Compliance activities for our overseas group companies are implemented in accordance with the relevant country's laws and business customs. In China, for example, all our group company chief executives and persons in-charge of ethics gather each year for an Ethics Managers Meeting. This meeting provides a chance to discuss compliance initiatives, reports of issues, the extraction of problems and issues, and relevant measures to be taken. In addition, legal representatives from our Internal Management Control Division and KSC* provide onsite compliance training to the employees of each group company. Going forward, based on each country's situation, we will deepen the links between each group company and section as we aim for yet more effective and efficient global compliance activities.

* KSC is the abbreviation for Kayaku (Shanghai), our administrative company in China

Indicators

Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
					FY2022	FY2023	
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	0	<ul style="list-style-type: none"> No serious compliance violations. This financial year's compulsory compliance training on Mental Flexibility delivered to all domestic Group companies. Discussions held and options explored with overseas Group companies yet to install a compliance whistleblowing consultation service.
			Compliance training rate	100%	97%	96%	
			Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	83%	

* Number of serious accidents as judged by the Ethics Committee

◆ Education and Training

The Nippon Kayaku Group delivers education and training on compliance issues to all executives, employees (including contracted and part-time employees) and temp staff. In addition to deciding upon themes for each year, such as the Group Charter of Conduct and Code of Conduct, how to use our internal whistleblowing system, bribery and anti-corruption issues, basic human rights, and harassment, we turn regular meetings at each workplace into workshops and case-study training sessions. FY2023 saw us deliver compliance training on Mental Flexibility, and sustainability training on Bribery and Anti-Corruption Issues.

We also set up harassment prevention training for every executive and employee on an annual basis. The contents are the same for managers and non-managers alike, and involve sharing awareness of harassment definitions, case studies, preventative measures and responses to actual situations, as part of broader initiatives to increase awareness and prevent before the event.

In addition, to boost thorough compliance across the entire group, we provide compliance training for all group company directors to promote the acquisition of necessary knowledge from a managerial perspective.

So that training opportunities and programs can be provided to every employee, we mainly rely on E-learning methods and large group sessions at Group companies.

Training type	Main contents	Mainly aimed at	FY	Training format	No. of times	Take-up rate
Compliance Training (Yearly, Compulsory)	Regarding mental flexibility	Executives, employees, (including contracted and part-time employees), temp staff	2023	E-learning, group session	1	95.9%
Compliance Training (Monthly, Compulsory)	Basic Anti-Bribery Policy, Conflicts of Interest, Insider trading	Executives, employees, (including contracted and part-time employees), temp staff	2023	E-learning	1	81.7%
Compliance Training (Monthly)	<ul style="list-style-type: none"> Harassment Basic human rights A good workplace environment How to use consultation services etc. 	Executives, employees, (including contracted and part-time employees), temp staff	2023	E-learning	6	Average of 71.7%
Risk Management Training	Risk perception and sensitivity	Executives, employees, (including contracted and part-time employees), temp staff	2023	E-learning	1	76.7%
Legal Affairs Training	<ul style="list-style-type: none"> Cookie regulations under the Telecommunications Business Act Third-party submissions; how to make receipt records Personal Information and Personal Identification Information Regarding contracts (2 sessions) 	Executives, employees, (including contracted and part-time employees), temp staff	2023	E-learning	5	Average of 84%
New Hire Training*1	Compliance basics, Charter of Conduct & Code of Conduct, Compliance Hotline etc.	New hires	2023	Group session	2	100%
New Manager Training*1	Charter of Conduct & Code of Conduct, harassment, Compliance Hotline etc.	New managers	2023	Group session	2	100%
Overseas Transfer Training*2	Charter of Conduct & Code of Conduct, Basic Anti-Bribery Policy etc.	Employees transferring overseas	2023	Interview, online	5	100%

*1 Held every year

*2 Pre-departure training set up for employees transferring overseas

◆ Initiatives to Prevent Corruption and Anti-Competitive Practices

The Nippon Kayaku Charter of Conduct and Code of Conduct call for competition law, related laws, the spirit of those laws, and internal company regulations to be observed in all business activities; for competition to be conducted fairly, transparently and freely; and for improper trading practices such as bribes to be banned. Furthermore, so as to clarify our basic approach towards the prevention of bribery, the rules to be observed and their sphere of applicability, we have fixed our Nippon Kayaku Group Basic Anti-Bribery Policy, which is now being diffused and rolled out to all executives and employees.

Nippon Kayaku Group Basic Policy on Anti-Bribery

Established: June 21, 2021
Revised: January 31, 2024

◆ 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.

Internal Audits

In line with our basic policy on internal system structure, the Nippon Kayaku Group has set up an Audit Division, under the direct supervision of the President, to contribute towards strengthened corporate governance in the form of anti-corruption stances, prevention of unfair or erroneous practices, business operational reform, and asset safeguarding. Based on the annual audit plan approved by the Sustainable Management Meeting does this Audit Division internally audit every division and section of both domestic and overseas Group companies once every three years. Such internal audits involve assessing the systems for business, operational, financial and legal management, as well as observation of ethical standards and anti-corruption measures. Audit results are not only promptly shared with the President, auditors, and the Audit & Supervisory Board, but periodically reported to the Board of Directors via our internal database.

High Ethical Standards and Transparency in our Medical Business

Pharmaceutical companies are demanded to constantly ensure high ethical standards and transparency; build relationships of mutual trust with external stakeholders such as medical, dental and pharmaceutical researchers, medical professionals, wholesalers and patient groups; and work towards optimal and ethical medical care from the patient's standpoint.

As the standard by which to judge whether our actions align with the aims of the JPMa Code, we have fixed a Nippon Kayaku Code of Practice. Thus are we further clarifying the corporate ethics and compliance awareness campaigns which form the bedrock of our business activities, and promoting respect for those key areas in the conduct of business and from a high ethical standpoint.

➤ [Conducting Compliance Duties based on Nippon Kayaku's Code of Practice](#)

Initiatives in Overseas Group Companies

The Nippon Kayaku Group's risk management approach involves identifying risks in each workplace, including overseas companies, on an annual basis, exploring response measures and conducting periodical reviews. For details, please see: "[\(Key Sustainability Issues\) Risk Management – Preventative Measures.](#)"

For Group companies located in countries with high risks of corruption, we have prepared some Anti-Bribery Regulations to aid our comprehensive anti-corruption approach. These regulations serve as a set of standards and rules for gift-giving and hospitality, and are based on each relevant country's laws and business customs. We periodically confirm the state of compliance through conducting internal audits. Our anti-corruption education and training programs include explanations of the Nippon Kayaku Charter of Conduct and Code of Conduct, and the prohibition of conflicts of interest and insider trading.

Based on each country's situation, the future will see us deepen links between each group company and section, and strive to deliver global compliance activities which are yet more effective and efficient.

Rooting out Supplier Corruption

All newly-registered suppliers, and those with the biggest trading amounts for the current year, are subjected to the Nippon Kayaku Sustainable Procurement Survey. The Survey contains questions related to preventing corruption and forms part of our effort to combat corrupt practices by getting our suppliers to demonstrate proper compliance.

Furthermore, in order to ensure thorough compliance across the supply chain, we request that any subcontractor, agent, consultant, wholesaler, and any other intermediary who may come into contact with government employees, receives, upon their first commissioned job or whenever their contract is renewed, an explanation of the Nippon Kayaku Group's Basic Anti-Bribery Policy, and signs a contract pledging to honor it as well as related anti-corruption laws and regulations.

➤ [\(Key Sustainability Issues\) Environmental and Social Considerations in the Supply Chain](#)

Whistleblowing Consultations and Actual Matters Arising: Reponses and Recurrence Prevention

◆ Internal Whistleblowing System

With the installation of its Internal Whistleblowing System and the setting up of its Compliance Hotline, Nippon Kayaku is working on prevention and early detection of unfair practices, and relevant corrective measures.

Our Compliance Hotline is available to all domestic Nippon Kayaku Group executives, employees (including contracted and part-time employees), temp staff and retired employees (up to a year after they have left). Overseas Group companies, meanwhile, have set up their own internal whistleblowing systems.

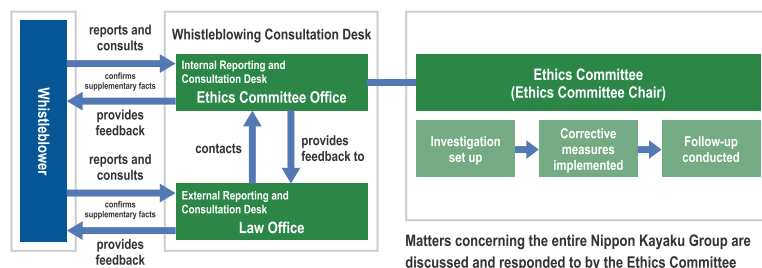
Whistleblowing reports may pertain to malpractice, such as law violations, unjust practices, violations of internal regulations such as the Group Charter of Conduct and Code of Conduct, and actions contravening corporate morals. They may also pertain to human rights violations, harassment, bribery, unfair trading, and more generic corrupt practices. When it comes to malpractice, or the risk of malpractice occurring in Nippon Kayaku Business, we are ready to accept a whistleblowing report or consultation at any time.

Our Compliance Hotline, meanwhile, runs to both our Ethics Committee Office (the Internal Control Management Division's Compliance Manager) and an external law firm, and allows whistleblowers to choose anonymity or otherwise when reporting or consulting. Reports may be made via telephone, email, document or interview, with email and document submissions accepted 24/7. Any report or consultation accepted by the Compliance Hotline reception desk will be examined by the Ethics Committee Office, which will then decide on whether to investigate the facts. If, during any investigation, evidence of malpractice becomes clear, the Ethics Committee Office will promptly devise measures for corrective response and recurrence prevention, and subsequently notify the whistleblower of the investigation results.

Our Internal Whistleblowing System guarantees both confidentiality and anonymity, and our Regulations on Handling Internal Whistleblowing Reports specifically state that the whistleblower shall not receive any kind of negative treatment as a consequence of reporting or consulting.

We are raising awareness of our whistleblowing system and Compliance Hotline through group sessions, E-learning, internal portal site announcements, workplace posters, and the distribution of portable cards.

Flow of Reporting and Consulting



Contents of Reports and Consultations made over the Last Five Years

FY2023 saw a total of 27 reports and consultations made, with the facts of every one investigated and corrective measures deployed where necessary. Of those 27, none were of sufficiently critical nature to impact business operations. Through internal company training will we continue to promote awareness of our Internal Whistleblowing System, and encourage employees to use it as we strive towards prevention, early detection and containment of malpractice and misconduct.

Contents of Complaints and Consultations	Covering	Unit	2019	2020	2021	2022	2023
Harrasment (power harrasment, sexual harrasment, etc.)	non-consolidated	cases	8	6	2	7	16
Violations of company rules or manners	non-consolidated	cases	2	0	0	2	3
Work or labor-related	non-consolidated	cases	1	1	1	3	5
Others	non-consolidated	cases	0	0	1	4	3
Total	non-consolidated	cases	11	7	4	16	27

◆ Our Compliance Hotline for Suppliers

The Nippon Kayaku Group has set up a Compliance Hotline for Suppliers for matters related to law violations. We ask that suppliers confirm Points 1 to 5 below before reporting or consulting via Point Number 6.

- Available to
Executives and employees who, in the course of business, are involved in trading with domestic Nippon Kayaku Group companies
- Focusing on
Law violations or unethical acts committed by executives and staff of domestic Nippon Kayaku Group companies, or the discovery of readiness to commit such acts
- Reports and consultations accepted by
The Ethics Committee Office (Internal Control Management Division), Nippon Kayaku Co., Ltd.
- Requests regarding reports and consultations
All whistleblowers should state their name, workplace and department. Whistleblowers unable to give their name can make reports and consultation requests anonymously, but this may impede the establishment of facts and the wider investigation, as well as render it impossible to report back on investigation results and recurrence prevention measures taken.
- Protection of whistleblowers and consultation-seekers
All users of our Compliance Hotline for Suppliers will have their personal information strictly handled in line with our [Policy for Protection of Personal Information](#). Such information will only be used as necessary in the conduct of the investigation. Furthermore, whistleblowers will not receive any blowback for the act of having made a report or requested a consultation.
- To contact us
Reports and consultation requests should be made to the [Compliance Hotline for Suppliers](#).

Numbers of Reports and Consultations

Our Compliance Hotline for Suppliers has been in place since FY2021, during which it received no enquiries. That was also the case in FY2023, while FY2022 saw just the one enquiry, which was duly investigated and had the necessary corrective measures deployed. The case was not of sufficiently critical nature to impact business operations. We will continue to earnestly take on board the comments of our suppliers, and seek to improve the fairness and transparency of our trading activities.

Number of Whistleblowing Complaints and Consultations from Suppliers

Whistleblowing	Covering	Unit	2019	2020	2021	2022	2023
Whistleblowing complaints and consultations from suppliers	non-consolidated	cases	-	-	0	1	0

Data

Employees punished, fined or dismissed for causing Anti-Corruption Policy violations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of violations of anti-corruption-related policies	non-consolidated	cases	0	0	0	0	0
Employee punishments and dismissals	non-consolidated	cases	0	0	0	0	0
Corruption-related fines issued	non-consolidated	yen	0	0	0	0	0
Applications of corruption-related penalties	non-consolidated	cases	0	0	0	0	0

Political Donations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Political donations	non-consolidated	10,000 yen	118	113	104	106	89

Conducting Compliance Duties based on Nippon Kayaku’s Code of Practice

Fixing the Nippon Kayaku Code of Practice

The demands placed on pharmaceutical companies include guaranteeing constantly high ethical standards and transparency in the conduct of business; building two-way relationships of trust with external stakeholders such as researchers and medical professionals in the fields of medicine, dentistry and pharmacology, wholesalers and vendors, and patient groups; and working towards delivering optimal medical care through taking decisions ethically and from the standpoint of the patient.

2013 saw the Japan Pharmaceutical Manufacturers Association (hereafter: JPMA) fix its own Code of Practice in line with the aims of the IFPMA Code of Practice, covering all interactions held by member company executives and employees with researchers, medical professionals and patient groups.

As a standard against which to judge whether our own actions comply with the aims of this JPMA Code, we have fixed our [Nippon Kayaku Code of Practice](#) 📄. We will duly respect this Code from a high ethical standpoint while promoting our corporate activities, ensuring greater transparency on the dissemination of compliance information and the corporate ethics which form the backbone of our business activities.

Enforcing responsible provision of drug information and responsible marketing

◆ Our basic approach to ethical marketing activities

We voluntarily observe the Regulations for Enforcement of the Act on Securing Quality, Efficacy and Safety of Products including Pharmaceuticals and Medical Devices, antitrust laws and related legislation, Presentation Activity Guidelines on Marketing Information for Prescription Drugs, the JPMA Code of Practice, and the Fair Competition Code for the Manufacture and Sale of Prescription Drugs. We have also fixed our [Nippon Kayaku Pharmaceuticals Group Promotion Code for Prescription Drugs](#) 📄 to ensure we present, gather and convey medical information via appropriate processes and in an accurate and prompt manner, and also promote the appropriate use of pharmaceutical drugs.

Nippon Kayaku’s Promotion Code has been drawn up as a set of internal company regulations which derive from the JPMA Code of Practice (in turn based on the IFPMA Code of Practice) and the Fair Marketing Activity Guidelines fixed to aid compliance with related laws and regulations.

◆ System and Initiatives

We have also set up a Medical Information Supervision Department which has gained independence from both our Marketing & Sales and Medical Affairs divisions. This particular department is tasked with integrating all the ethical standards and information presentation guidelines pertinent to the medical work conducted across the entire company and group companies. It also conducts audit coaching, monitoring, and education and training activities related to the presentation of marketing information, so as to enable smoother management and administration overall.

In charge of training	Targeted at	Frequency	Covering
Medical Information Supervision Department	Pharmaceuticals Marketing Division	12 times a year	Nippon Kayaku Code of Compliance; Marketing Information Presentation Activity Guidelines; Fair Competition Code
Medical Information Supervision Department	Pharmaceuticals Marketing Division	Once a year	Types of internal company regulations (Self-checks and voluntary inspections)
Medical Information Supervision Department	Pharmaceuticals Group	Once a year	Nippon Kayaku Code of Compliance

Furthermore, our Marketing & Sales and Medical Affairs divisions and Medical Information Supervision Department are all audited annually by our Audit & Supervisory Board. The latter has been placed under the direct charge of the President, and, in line with internal auditing regulations, accepts no orders or directions from the various bodies it is tasked with auditing. It is therefore free to focus on scrutinizing and evaluating its subjects from the perspectives of legality and rationality, and uses the results to advise and make suggestions on information presentation, relevant improvements and increased rationality.

Specific Compliance-related Initiatives

Drug Information Presentation Activities and the Ensuring of Transparency

Progress in the fields of medicine, pharmaceuticals and medical technology, and improvements in public health, are built upon our interactions with researchers and medical professionals, and our collaborations with bodies such as patient groups. That being the case, we must fulfil our duty of accountability when it comes to showing that these interactions and collaborations are indeed ethical and sincere. To that end have we fixed our Transparency Guidelines for Corporate Activities and Relations with Medical Institutions, as well as our Transparency Guidelines for Corporate Activities and Relations with Patient Groups. These serve as our own internal guidelines, based on which we upload annual information on corporate activity transparency to our company website.

Activities Related to the Production, Proofing and Presentation of Drug Information Materials

As information materials are an extremely important method of conveying information on the appropriate use of prescription drugs, we must ensure their contents are scientifically-grounded and produced accurately, impartially and objectively. To achieve that end has Nippon Kayaku fixed its material examination procedures based on the Regulations for the Enforcement of the Act on Securing Quality, Efficacy and Safety of Products including Pharmaceuticals and Medical Devices (hereafter: laws on pharmaceuticals and medical devices etc.); the Presentation Activity Guidelines on Marketing Information for Prescription Drugs; the JPMA Code of Practice; and the Key Points on the Production of Outline Information on Prescription Drug Products. These are used by our screening committee comprised of various academics, including our internal medical doctors, to appropriately judge our materials. So that our presentations of marketing information do not deviate from the above-mentioned Presentation Activity Guidelines, we have set up an internal monitoring system to audit and offer appropriate guidance.

Offering Continuous Education and Training to Employees

An understanding of the Nippon Kayaku Code of Practice is necessary for us to continue our corporate activities from a high ethical standpoint. We therefore support activities aimed at promoting understanding of the JPMA Code, establishing specific items of focus pertaining to the corporate activities of each division and workplace targeted for optimization, and periodically offering workplace-based education and training to all executives and staff.

Nippon Kayaku Code of Practice: The Role of the Code Compliance Committee

Our Medical Division's Code Compliance Committee (hereafter: this committee) has been set up to devise ways of promoting Medical Division compliance, and to establish Nippon Kayaku's internal systems for observing the industry's voluntary standards as laid down in: the laws on pharmaceuticals and medical devices; antitrust laws and related regulations; guidelines such as those pertaining to Presentation Activities on Marketing Information for Prescription Drugs; the Fair Competition Code for the Manufacture and Sale of Prescription Drugs; and the JPMA Code of Practice.

In order to promote Medical Division compliance does this committee aim to use the Nippon Kayaku Code of Practice to fix, revise, disseminate and instill knowledge of the necessary internal operating regulations and manuals pertaining to observation of related laws, regulations and voluntary standards during interactions with stakeholders.

In cases where serious code violations occur in matters related to medical laws and regulations, or presentation activities for prescription drug marketing information, this committee will respond to the circumstances, then explore and decide upon recurrence prevention measures. This committee will also fulfil the above functions in cases where a violation of either transparency guidelines or compliance guidelines is confirmed.

Handling Activities Outside Japan

In instances where we present information to healthcare professionals overseas, invite Japan-based healthcare professionals to a lecture or conference overseas, or have an overseas subsidiary operating in a given country via a licensing or agency agreement, we continue to respect the Nippon Kayaku Code of Conduct and, in addition to local laws and regulations, observe any code that country's pharmaceutical federation may have. In cases where no such code exists, we revert to following the IFPMA Code of Practice.

Expanding Access to Medical Care

Our Approach to Improving Access to Drugs

Nippon Kayaku's medical business is aiming to "develop excellent pharmaceuticals and medical devices that provide new diagnostic and treatment opportunities, and stable supply of Biosimilars and generic drugs, contributing to people's health." Our quest to widen access to pharmaceutical drugs involves the following initiatives:

- Appropriately providing medical institutions with data on product quality, efficacy and safety
- Reducing the drug cost burden on patients and improving access to biopharmaceutical treatments through stably supplying high-quality and economically-efficient drugs
- Promoting appropriate use of generics and biosimilars brought to market through initiatives to eradicate discrepancies with previous products concerning "efficacy and effects" and "uses and dosages", and using their preparation form to obtain afresh "efficacy and effects" and "uses and dosages."

(Key Sustainability Issues)

Risk Management

Policy and Basic Approach

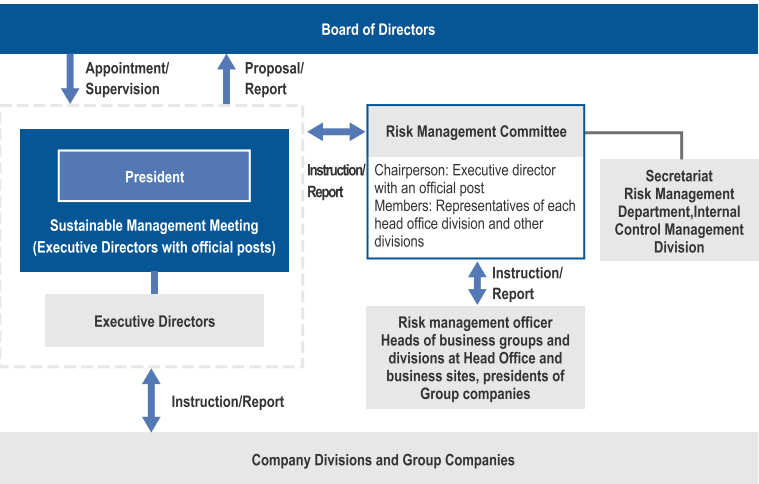
In a time when the surrounding business environment changes from day to day, leading to increased complications and uncertainty, we are facing a multitude of risks. By maintaining its production system, ensuring suitable access to natural resources, and strengthening disaster prevention measures in order to secure business continuity, the Nippon Kayaku Group is taking preventative measures against risks before they surface, and putting plans in place to mitigate their effects.

In order to “restore business operations within a specified timeframe” in times of disaster or emergency, we are not only promoting the establishment of a BCP Manual for our head office and all business units, but also the preparation of BCP Manuals for every overseas workplace.

System

In order to take preventative measures against risks before they appear, thereby minimizing their effects, we have set up a Crisis Management Committee to serve as an advisory body to the Sustainable Management Meeting. This committee convenes twice a year, and on an ad hoc basis when required.

The committee, chaired by an Executive Director with an official post nominated by the President, consists of representatives from each business unit’s planning department and every section of our General Administration Department, which is unattached to any particular business unit. It is tasked with constructing and administering a crisis management system designed to take preventative measures against the most damaging risks to corporate management and business activities, and to respond to emergencies and conduct damage recovery activities once normal service has been resumed. The most important matters discussed by this committee are reported to the Sustainable Management Meeting and even the Board of Directors, who then provide relevant feedback.



Indicators

Key sustainability issues	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2023 Initiative-related Topics
				FY2022	FY2023	
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 	Implementation rate of risk control activities for business, etc., and top five risk control activities	100%	100%	100%	<ul style="list-style-type: none"> “Risk Controls for the Top 5 Risks” activities conducted at Nippon Kayaku plants and all Group companies (based on trends of soaring raw material prices and increased supply disruption risks) Hearings conducted at domestic and overseas plants on the Top 5 Risks. BCP drills set up based on an earthquake scenario in the Kashima district, and a snow-damage scenario in the Joetsu region. BCP drills set up at China-based Group companies.
		Number of BCP drills conducted	Once or more per year	2	3	

Initiatives

Risk Prevention

◆ “Business Unit Risk Control Activities” and “Top Five Risk Control Activities”

In order to identify significant risks and enact the requisite controls, the Nippon Kayaku Group undertakes the following “Business Unit Risk Control Activities” and “Top Five Risk Control Activities” on an annual basis.

Business Unit Risk Control Activities cover our three business units, our R&D Department, and our Head Office Administration Department. They involve extracting the risks most impactful to each business unit and department from a managerial perspective, and examining ways to deal with them.

The Top Five Risk Control Activities, meanwhile, cover our factories and research labs, medical branches, business offices, and group companies including overseas subsidiaries. They involve extracting the particularly impactful risks from an on-the-ground perspective within each business site, and exploring ways to respond.

Risks and response measures identified for each business unit and site are reported to the Internal Control Management Division, which serves as the office for the Crisis Management Committee. The Internal Control Management Division comprehensively grasps and analyzes risk trends, passes on its findings to the Crisis Management Committee for discussion and final decision on the major risks and responses, then makes twice-yearly reports on initiatives and progress updates to the Sustainable Management Meeting and Board of Directors.

◆ Responses to ESG Risks

The Nippon Kayaku Group believes in the necessity of appropriately grasping the risks and opportunities associated with sustainable management, and linking the acts of reducing those risks and gaining new business opportunities to further business growth.

FY2022 saw us disclose the risks and opportunities related to our Key Sustainability Issues as well as information based on the TCFD proposals. By working towards resolving environmental and social issues through our business activities we are aiming to achieve a sustainable society and additional corporate value.

In order to continue our appropriate responses to the diversification of business activities and changing social and environmental issues, we will periodically review these risks and opportunities, and work towards disclosing information of substantial quantity and quality.

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

➤ [Information Disclosure based on TCFD Proposals](#)

◆ Education and Training

As part of our PDCA Cycle activities designed to plan for greater risk awareness and minimization, we provide risk management training to all our executives, employees (including contracted and part-time employees), and temp staff. We also implement separate risk management education and training for new hires, new managers, and employees transferring overseas.

➤ [Education and Training](#)

Responses to Emergencies, and the Structure and Administration of our Crisis Management System

◆ Crisis Management System Preparation

In preparation for risks with the potential to significantly damage business activities, we have drawn up Crisis Management Regulations and a BCP Manual as part of our overall Crisis Management System.

The Crisis Management Regulations fixed in 2022 are an update on our Crisis Management Manual of 2000, and are designed to help precisely manage and respond to the various risks surrounding Nippon Kayaku Group business.

◆ Business Continuity Plan (BCP)

Preparation of BCP Manuals

To help achieve our policy of “restoring business operations within a specified period” following disasters or emergencies, we launched a companywide BCP Project which involved establishing a BCP Manual for every domestic business division and factory. We are also moving ahead with preparations for a BCP Manual for our overseas group companies to help the overall Nippon Kayaku Group respond to global-level risks.

BCP Drills

We believe it is crucial for us to continuously undergo BCP drills so we can swiftly get organization functioning again once a business continuity risk occurs. Our President, Executives and Audit Board members undergo such drills on an annual basis. FY2023 saw us launch a BCP drill built around a Great North Eastern Earthquake-style scenario and focusing on a coordinated initial response between Headquarters and the Kashima region. Such a drill allowed the President, Crisis Management Committee and participants from our Agrochemicals Business the chance to gather, aggregate and share information to take immediate and appropriate decisions, and thereby confirm the effectiveness of our Business Continuity Plan. Any observations or matters that arise during such drills are confirmed in detail and consequently fed into the next BCP drill.

Kayaku Safety Systems (Huzhou), meanwhile, underwent a drill based on a typhoon approaching and then passing through the area, causing damage along the way. Issues and points of concern confirmed during this drill will be fed into future drills, and have also triggered improvement actions such as rewrites of BCP Manual text. Furthermore, WUXI POLATECHNO OPTICS, KAYAKU CHEMICAL (WUXI) and WUXI ADVANCED KAYAKU CHEMICAL all held BCP Seminars with the aim of raising employee awareness of business continuity issues.

Going forward, we will continue to stage BCP drills based on a number of different scenarios.

Information Security

◆ Policy and Basic Approach

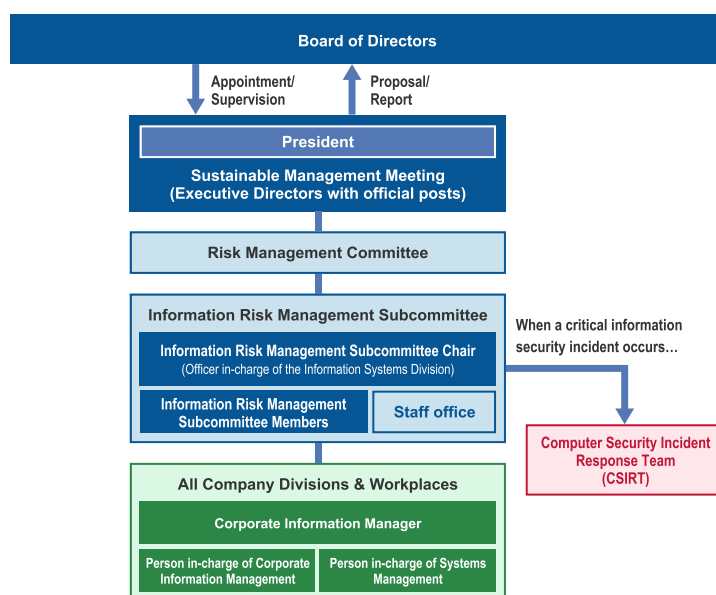
We are promoting Digital Transformation (DX) in order to make working practices more efficient, improve productivity and diversify working styles. However, we are doing this against a backdrop of heightening cybersecurity risks, with cyberattacks and unauthorized access incidents growing by the year and with increasing levels of skill and sophistication. The Nippon Kayaku Group perceives information leaks and computer system shutdown as risks related to business continuity, and in order to repay the trust of customers, suppliers, investors, employees and various other stakeholders, protects business information daily, and sets up information security initiatives continually, based on its [Charter of Conduct and Code of Conduct](#).

◆ System

In order to minimize information security risks (a key element of crisis management), we have set up an Information Risk Management Subcommittee with the aim of constantly maintaining risk-proof conditions, continually reviewing responses based on changing situations, and diffusing and integrating best practice throughout company operations. This subcommittee meets, in principle, twice a year, but on a further ad hoc basis if necessary. It is chaired by the Officer in-charge of Information Systems, and comprises representatives of every business unit's planning department plus representatives from general administrative departments unattached to any particular business unit. It also coordinates with the Corporate Information Officer, Person in-charge of Corporate Information, and System Administrator assigned to every business site.

The most important matters discussed by this subcommittee are forwarded to the Sustainable Management Meeting and even the Board of Directors, who provide relevant feedback.

Furthermore, to deal with security incidents that could either heavily damage management and business operations or lose us the trust of our business partners and suppliers, such as cyberattacks and unauthorized access to confidential information, we have set up a Computer Security Incident Response Team (CSIRT) as our core policy unit under the leadership of the Information Risk Management Subcommittee Chair. Depending on the assumed extent of damage, the President may also step in to lead CSIRT. CSIRT works on limiting the spread of damage, and once containment activities are over, on restoration of operations and recurrence prevention measures.



International Certificates Gained

- [Business Sites Certified by the Trusted Information Security Assessment Exchange \(TISAX\), \(concerned with the global automotive industry supply chain\)](#)

◆ Initiatives

Information security measures

Classification of measures	Details
(1) Organizational measures	<ul style="list-style-type: none"> Information security system maintenance Periodic reviews of information system-related regulations Implementing mail audits
(2) Personal & legal measures	<ul style="list-style-type: none"> Information system security and IT literacy education, incident response drills, setting up educational activities Concluding confidentiality contracts with external service providers Duty of confidentiality enforcement for hires and retirees
(3) Physical measures	<ul style="list-style-type: none"> Access management for facilities, buildings and areas etc. Management of PCs and external storage devices taken outside of company premises Taking key confidential information outside of company premises; locking management, access management
(4) Technical measures	<ul style="list-style-type: none"> Measures against information device malware; hard disk encryption Unauthorized outside access; detection structure for data alteration attacks

Education and Training

At the Nippon Kayaku Group, all executives, employees (including contracted and part-time employees) and temp staff are made fully aware of information security rules, and receive regular information security training as well as drills on dealing with malicious emails.

Training title	Main contents	Mainly aimed at	FY	Training format	No. of times	Take-up rate
Information System Security Training	<ul style="list-style-type: none"> Information System Security: basic knowledge, response methods, preparedness Incident response 	<ul style="list-style-type: none"> Executives, employees (including contracted and part-time employees), temp staff Persons outside the company involved in loaning PCs connected to the Nippon Kayaku network 	2023	E-learning Distribution of materials, group session	2	Average of 89%

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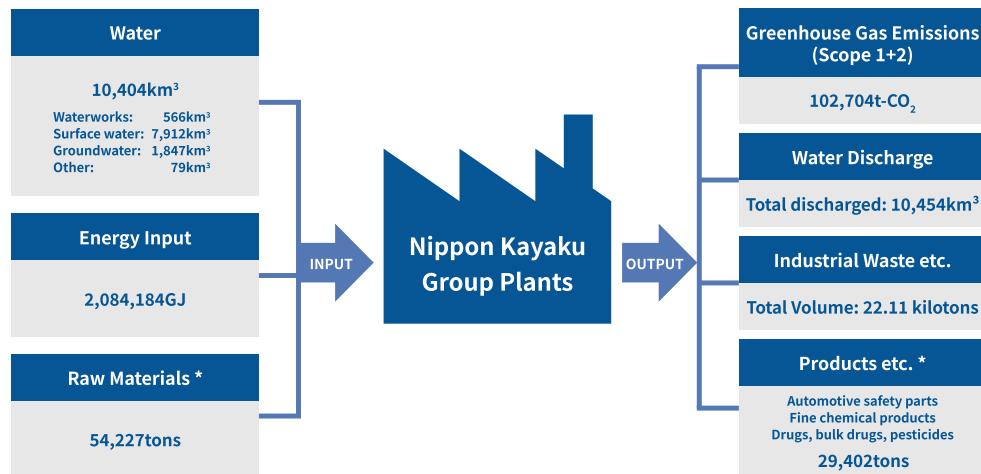
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Environment

Material Flow

◆ Material Flow of Business Activities (FY2023)



Items listed below without additional notes represent combined domestic and overseas values.

* Nippon Kayaku alone

◆ Amounts of Raw Materials Used

Indicators	Covering	Unit	2020	2021	2022	2023
Principal raw materials	non-consolidated	tons	36,614	47,583	44,211	40,707
Auxiliary materials	non-consolidated	tons	16,581	18,529	17,026	12,512
Plastic packaging materials	non-consolidated	tons	194	266	389	180
Cardboard packaging materials	non-consolidated	tons	415	529	480	395
Other packaging materials	non-consolidated	tons	461	489	470	434
Total	non-consolidated	tons	54,266	67,396	62,576	54,227

* Products not included (goods stocked at plants)

◆ Energy Input Amounts

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Amount of energy input (heat quantity equivalent)	consolidated	GJ	-	-	-	-	2,084,184
Renewable energy	consolidated	GJ	-	-	-	-	29,060
Non-renewable energy sources	consolidated	GJ	-	-	-	-	2,055,124

* When converting electricity amounts into heat amounts for fuel, heat and electricity consumed in domestic and overseas business activities, electricity purchased from electricity companies is converted at 1MWh to 8.64GJ, while renewable energy such as solar power is converted at 1MWh to 3.6GJ.

Greenhouse Gas Emissions

◆ Scope 1 and Scope 2 (Non-consolidated)

Indicators	Covering	Unit	2019	2020 ^{*2}	2021 ^{*2}	2022 ^{*2}	2023 ^{*2}
Energy-derived CO ₂	non-consolidated	t-CO ₂ e	79,476	71,632	63,168	62,267	57,760
Non-energy-derived CO ₂	non-consolidated	t-CO ₂ e	2,980	2,733	3,189	2,719	2,406
N ₂ O	non-consolidated	t-CO ₂ e	113	123	112	169	339
CH ₄	non-consolidated	t-CO ₂ e	24	26	29	30	34
HFCs	non-consolidated	t-CO ₂ e	0	12	3	110	49
Other CFCs	non-consolidated	t-CO ₂ e	405	34	336	622	70
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	82,999	74,559	66,839	65,916	60,659

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 Joetsu Plant emissions are included in the non-consolidated figures from FY2020 onwards

◆ Scope 1 and Scope 2 (Consolidated)

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Energy-derived CO ₂	consolidated	t-CO ₂ e	127,323	114,281	108,410	103,811	99,124
Non-energy-derived CO ₂	consolidated	t-CO ₂ e	2,989	2,771	3,230	2,745	2,463
N ₂ O	consolidated	t-CO ₂ e	113	123	112	169	339
CH ₄	consolidated	t-CO ₂ e	24	26	29	30	34
HFCs	consolidated	t-CO ₂ e	26	16	7	138	113
Other CFCs	consolidated	t-CO ₂ e	748	1,011	794	1,409	632
PFCs	consolidated	t-CO ₂ e	0	0	0	0	0
SF ₆	consolidated	t-CO ₂ e	0	0	0	0	0
NF ₃	consolidated	t-CO ₂ e	0	0	0	0	0
Total^{*1}	consolidated	t-CO₂e	131,223	118,227	112,584	108,301	102,705
Scope 1	consolidated	t-CO ₂ e	36,326	35,613	37,819	35,581	30,158
Scope 2 (Market base)	consolidated	t-CO ₂ e	94,897	82,615	74,765	72,720	72,546
Emission volume per unit of sales ^{*2}	consolidated		0.75	0.68	0.61	0.55	0.51

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 2 Emissions amounts (t-CO₂e) / consolidated sales figures (million yen)

◆ Scope3

Category	Covering	Unit	2019	2020	2021	2022	2023
Products and services purchased	consolidated	t-CO ₂ e	243,600	237,300	294,500	275,000	241,800
Capital goods	consolidated	t-CO ₂ e	42,700	42,900	26,800	29,600	33,400
Fuels and energy-related activities not included in Scope 1 and 2	consolidated	t-CO ₂ e	22,400	21,200	22,300	21,000	20,500
Exports and distribution (upstream)	consolidated	t-CO ₂ e	19,000	17,600	22,300	19,700	16,600
Business waste produced	consolidated	t-CO ₂ e	26,500	28,800	31,800	16,200	10,800
Business trips	consolidated	t-CO ₂ e	800	800	800	800	800
Employee commutes	consolidated	t-CO ₂ e	2,500	2,400	2,400	2,400	2,400
Leased assets (upstream)	consolidated	t-CO ₂ e	Included in Scope 1 and 2, and therefore not calculated here				
Exports and deliveries (downstream)	consolidated	t-CO ₂ e	1,000	1,000	1,600	1,500	1,200
Processing of sold goods	consolidated	t-CO ₂ e	-	-	-	-	-
Use of sold goods	consolidated	t-CO ₂ e	-	-	-	-	-
Disposal of sold goods	consolidated	t-CO ₂ e	15,400	23,200	26,400	23,000	17,600
Leased assets (downstream)	consolidated	t-CO ₂ e	400	400	400	400	400
Franchise	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	345,500

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

Energy Consumption

◆ Energy Consumed (Crude oil equivalent)

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Production, R&D and office departments	non-consolidated	1,000kL	34,939	38,700	40,325	38,583	32,634

◆ Energy Consumed

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Non-renewable fuels purchased and consumed (A) (Nuclear energy, coal, oil, natural gas etc.)	non-consolidated	MWh	138,083	155,201	165,494	153,390	137,447
Non-renewable electricity purchased (B)	non-consolidated	MWh	78,491	95,819	98,505	95,837	85,946
Non-renewable energy purchased (steam, heat, cooling, and others) (C)	non-consolidated	MWh	3,070	3,452	3,433	4,073	5,685
Renewable energy purchased and created (D) (Wind power, solar power, biomass, hydro-power, geothermal energy etc.)	non-consolidated	MWh	58	59	57	162	2,028
Non-renewable energy sold (E) (electricity, thermal, cooling)	non-consolidated	MWh	0	0	0	0	0
Total non-renewable energy used (A+B+C-E)*	non-consolidated	MWh	219,644	254,472	267,432	253,300	229,078

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

Air

◆ Air Emissions

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Volatile Organic Compounds (VOC)	non-consolidated	tons	28.6	33.3	52.1	38.7	32.9
Dichloromethane	non-consolidated	tons	4.9	4.0	3.6	3.2	2.7
Formaldehyde	non-consolidated	tons	0.04	0.04	0.15	0.13	0.13
NOx	non-consolidated	tons	9.1	7.5	7.7	8.3	6.7
SOx	non-consolidated	tons	1.3	1.0	0.7	0.9	0.8
Particulate matter	non-consolidated	tons	0.9	0.5	0.5	0.4	0.2

Wastewater and Waste

◆ Wastewater Management

Indicators	Covering	Unit	2019	2020	2021	2022	2023
COD	consolidated	tons	231.9	218.8	223.6	243	274
Total phosphorus	consolidated	tons	10.6	3.2	11.2	7.1	18.5
Total nitrogen	consolidated	tons	74.8	83.2	73.5	114.0	68.5
SS*	consolidated	tons	46.0	48.4	49.9	49.2	44.6

* SS - Suspended solids: Refers to particulate matter of 2mm diameter or less either floating or suspended in water, including fine particles from minerals, plant and animal plankton or the carcasses of such, sewage, organic matter and metal sediments originating from plant wastewater. If present in large amounts, suspended solids can negatively affect water transparency and appearance, and – through impeding light-ray penetration – underwater photosynthesis as well

◆ Waste

Indicators		Covering	Unit	2019	2020	2021	2022	2023		
Non-hazardous waste		non-consolidated	tons	17,971	19,411	22,069	21,154	16,146		
		Group companies	tons	4,240	996	1,199	1,242	1,087		
		Total	tons	22,211	20,407	23,268	22,396	17,233		
		General waste		non-consolidated	tons	714	643	673	648	464
				Group companies	tons	647	504	449	559	513
				Total	tons	1,361	1,147	1,122	1,207	977
		Industrial waste		non-consolidated	tons	17,256	18,768	21,396	20,506	15,682
				Group companies	tons	3,593	493	750	682	574
				Total	tons	20,849	19,261	22,146	21,188	16,256
		Hazardous waste		non-consolidated	tons	5,231	5,925	6,503	6,467	4,828
Group companies	tons			190	92	86	71	59		
Total	tons			5,421	6,017	6,589	6,538	4,887		
Source-specific hazardous industrial waste				non-consolidated	tons	131	221	146	182	182
				Group companies	tons	0	0	0	0	0
				Total	tons	131	221	146	182	182
Total* ¹				tons	27,631	26,426	29,857	28,934	22,119	

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Types of waste	Sludge	non-consolidated	tons	2,206	1,979	2,309	2,338	2,291
		Group companies	tons	267	131	336	258	115
		Total	tons	2,473	2,110	2,645	2,596	2,406
	Waste oil	non-consolidated	tons	5,296	5,766	6,386	5,848	4,809
		Group companies	tons	95	94	87	71	59
		Total	tons	5,391	5,860	6,473	5,919	4,868
	Spent acid	non-consolidated	tons	617	2,244	2,185	1,523	1,116
		Group companies	tons	1,916	3	2	8	13
		Total	tons	2,533	2,247	2,187	1,531	1,129
	Waste alkali	non-consolidated	tons	13,399	13,382	15,784	16,064	11,219
		Group companies	tons	631	17	11	11	8
		Total	tons	14,030	13,399	15,795	16,075	11,227
	Plastic waste	non-consolidated	tons	642	954	888	885	788
		Group companies	tons	731	235	277	326	326
		Total	tons	1,373	1,189	1,165	1,211	1,114
	Others	non-consolidated	tons	1,041	1,010	1,021	962	751
		Group companies	tons	790	609	572	640	624
		Total	tons	1,831	1,619	1,593	1,602	1,375
Landfill amount		non-consolidated	tons	844	404	298	233	144
Recycling rates ⁺²		non-consolidated	%	84	81	82	87	84
Zero-emissions rates		non-consolidated	%	3.7	1.6	1	0.8	0.7

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 Includes recovered and reused solvent

◆ PRTR substances

Indicators	Covering	Unit	2019	2020	2021	2022	2023
PRTR substance emission amounts	Air	non-consolidated	18.9	16.8	25.2	38.7	32.9
	Water regions	non-consolidated	13.3	9.1	14.7	51.4	75.0
	Soil	non-consolidated	0	0	0	0	0
	Total*	non-consolidated	32.2	25.9	39.9	90.1	107.9

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

Water

◆ Water Resource Use (non-consolidated)

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Amount of water taken	Waterworks	non-consolidated 1,000m ³	356	390	381	377	320
	Surface water (industrial water)	non-consolidated 1,000m ³	7,521	7,874	8,098	7,953	7,863
	Groundwater (well water)	non-consolidated 1,000m ³	2,283	1,828	1,848	1,769	1,804
	Others (reservoirs, rainwater storage)	non-consolidated 1,000m ³	0	0	0	17	28
	Total*¹	non-consolidated 1,000m³	10,160	10,092	10,327	10,116	10,015
	From water-stressed regions* ²	non-consolidated 1,000m ³	0	0	0	0	0
Amount of water discharged* ³	Sea areas	non-consolidated 1,000m ³	7,374	7,014	7,142	6,726	6,966
	Rivers	non-consolidated 1,000m ³	2,677	2,395	2,408	2,350	2,441
	Sewers	non-consolidated 1,000m ³	526	511	460	531	679
	Total*¹	non-consolidated 1,000m³	10,577	9,919	10,011	9,607	10,086
Amount of water recycled		non-consolidated 1,000m ³	0	0	0	0	0
Recycling rates		non-consolidated %	0	0	0	0	0

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 Using the Aqueduct Water Risk Atlas of water-stress levels, we have confirmed that all our business bases are located in areas of Level 3 water stress or below.

*3 Water of equal or higher quality is returned to the intake source

◆ Use of Water Resources (Consolidated)

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Amount of water taken	Waterworks	consolidated 1,000m ³	706	763	805	754	566
	Surface water (industrial water)	consolidated 1,000m ³	7,758	7,897	8,138	8,003	7,912
	Groundwater (well water)	consolidated 1,000m ³	2,388	1,918	1,947	1,819	1,847
	Others (reservoirs, rainwater storage)	consolidated 1,000m ³	0	0	68	81	79
	Total*¹	consolidated 1,000m³	10,852	10,578	10,958	10,657	10,404
	From water-stressed regions* ²	consolidated 1,000m ³	36	23	33	29	28
Amount of water discharged* ³	Sea areas	consolidated 1,000m ³	7,374	7,014	7,142	6,726	6,966
	Rivers	consolidated 1,000m ³	2,682	2,400	2,410	2,351	2,443
	Sewers	consolidated 1,000m ³	928	974	987	910	1,045
	Total*¹	consolidated 1,000m³	10,984	10,388	10,539	9,987	10,454
Amount of water recycled		consolidated 1,000m ³	0	0	0	0	0
Recycling rates		consolidated %	0	0	0	0	0

*1 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

*2 We have used the Aqueduct Water Risk Atlas with its 5 levels of water stress. Sites at Level 4 or above are considered "water-stressed regions."

*3 Water of equal or higher quality is returned to the intake source

◆ Water-stress Investigation Results for Nippon Kayaku Group Manufacturing and R&D sites (FY2023)*¹

Region or Country Name		Unit	Water amounts used at each water stress level				
			High	Medium-high	Medium	Low-medium	Low
Asia	Japan	1,000m³(Number of bases)	0	0	2,799 (6)	7,216 (4)	
	China	1,000m³(Number of bases)	0	15 (1)	0	0	213 (3)
	Malaysia	1,000m³(Number of bases)	0	0	0	0	45 (1)
Europe	Czech Republic	1,000m³(Number of bases)	0	0	0	21 (1)	
	Netherlands	1,000m³(Number of bases)	0	0	0	0	3 (1)
	UK	1,000m³(Number of bases)	0	1 (1)	0	0	
North and Central America	America	1,000m³(Number of bases)	0	0	5 (1)	74 (1)	
	Mexico	1,000m³(Number of bases)	12 (1)	0	0	0	
Total*2		1,000m³(Number of bases)	12 (1)	16 (2)	2,804 (7)	7,311 (6)	261 (5)

*1 We are currently using the Aqueduct Water Risk Atlas to investigate these points.

*2 As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

Environmental Accounting

◆ Environmental Conservation Costs

Breakdown			Covering	2019			2020		2021		2022		2023	
				Unit	Invested amount	Costs	Invested amount	Costs	Invested amount	Costs	Invested amount	Costs	Invested amount	Costs
Inside business areas	Environmental pollution prevention	Air pollution prevention	non-consolidated	million yen	40.2	83.9	20.9	97.0	37.1	124.2	68.1	141.9	40.5	103.4
		Water pollution prevention	non-consolidated	million yen	70.5	148.0	109.7	174.8	266.9	178.9	206.7	186.0	0.0	186.3
		Underseepage prevention	non-consolidated	million yen	13.4	10.0	5.5	3.7	4.9	5.6	7.2	5.1	5.0	8.3
		Prevention of noise pollution and vibrations	non-consolidated	million yen	2.4	1.8	17.2	6.2	6.0	0.0	6.0	0.0	16.1	0.1
		Others	non-consolidated	million yen	-	386.0	-	435.0	-	394.7	-	7.0	-	6.4
	Global environmental conservation	non-consolidated	million yen	40.3	20.1	172.6	100.4	244.6	92.3	236.6	63.5	425.6	87.7	
	Resource recycling	non-consolidated	million yen	30.9	576.7	106.6	709.8	111.2	772.2	5.1	805.9	2.9	578.6	
Upstream and downstream	Commissioning of container and package recycling	non-consolidated	million yen	-	1.0	-	0.4	-	0.3	-	0.3	-	0.4	
	Sewage treatment expenses	non-consolidated	million yen	-	90.3	-	78.7	-	75.2	-	66.9	-	80.0	
	System preparation and operation	non-consolidated	million yen	-	87.4	-	105.3	-	174.9	-	93.3	-	85.9	
	Environmental burden monitoring	non-consolidated	million yen	-	38.5	-	42.5	-	38.3	-	38.4	-	39.9	
Management activities	Information disclosure	non-consolidated	million yen	-	5.6	-	6.3	-	6.3	-	6.3	-	6.3	
	Education, training and others	non-consolidated	million yen	-	80.1	-	59.4	-	59.3	-	59.6	-	60.2	
R&D	Greening up (tree planting, etc.)	non-consolidated	million yen	1.0	58.0	-	70.0	0.5	43.9	0.0	70.0	0.0	59.4	
		non-consolidated	million yen	-	81.7	-	57.2	-	39.2	-	158.3	-	85.5	
	Community activities	non-consolidated	million yen	-	9.7	-	8.9	-	9.0	-	9.8	-	9.8	
Environmental damage		non-consolidated	million yen	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	
Total *			non-consolidated	million yen	198.7	1,678.9	432.5	1,955.5	670.8	2,014.5	529.7	2,054.0	490.2	1,751.4

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

◆ Economic Benefits of Environmental Protection Measures

Items for which we seek to derive benefits	Main economic benefit details		Covering	Unit	2019	2020	2021	2022	2023
Inside business area benefits	Environmental pollution prevention benefits	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	3.5	0.0	0.0
		Reduction of contamination load charges	non-consolidated	million yen	0.4	0.4	0.6	0.4	0.3
	Global environmental benefits	Prevention of noise pollution and vibrations	non-consolidated	million yen	0.0	0.0	0.0	0.0	0.0
		Prevention of global warming; energy-saving measures	non-consolidated	million yen	55.9	112.8	80.4	97.4	109.3
		Waste reduction	non-consolidated	million yen	9.5	9.5	4.1	2.6	2.2
	Waste and recycling	Outside sales of renewable resources	non-consolidated	million yen	12.9	10.5	17.3	25.9	38.2
Upstream and downstream benefits		Others	non-consolidated	million yen	0.0	0.0	7.0	40.9	49.7
Upstream and downstream benefits	Container recycling		non-consolidated	million yen	62.6	73.6	54.2	38.3	38.8
	Others		non-consolidated	million yen	0.0	0.0	0.0	0.0	0.0
Total*		non-consolidated	million yen	141.3	206.8	167.1	205.5	238.5	

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

◆ Environmentally-related capital investments

Category	Covering	Unit	2019	2020	2021	2022	2023
Air pollution prevention equipment	non-consolidated	million yen	40.2	20.9	37.1	68.1	40.5
Water pollution prevention equipment	non-consolidated	million yen	70.5	109.7	266.9	206.7	304.5
Underseepage prevention equipment	non-consolidated	million yen	13.4	5.5	4.9	7.2	5.0
Equipment to prevent noise pollution and vibrations	non-consolidated	million yen	2.4	17.2	6.0	6.0	16.1
Industrial waste processing equipment	non-consolidated	million yen	30.9	106.6	111.2	5.1	2.9
Greening up plants (through tree-planting, etc.)	non-consolidated	million yen	1.0	1.8	0.5	3.3	0.0
Energy saving; Global warming prevention	non-consolidated	million yen	40.3	172.6	244.6	236.6	425.6
Total*	non-consolidated	million yen	198.7	434.3	671.3	533.0	794.7

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

◆ Safety and Health-related Equipment Certification

Category	Covering	Unit	2019	2020	2021	2022	2023
Measures against equipment deterioration	non-consolidated	million yen	469.0	292.9	490.9	245.0	454.9
Safety and work environment measures	non-consolidated	million yen	165.3	171.4	171.4	86.6	281.6
Measures against fires caused by explosion and leaks	non-consolidated	million yen	39.4	9.2	14.1	60.6	54.4
Measures regarding natural disasters such as earthquakes	non-consolidated	million yen	2.6	51.4	4.4	6.5	65.2
Others	non-consolidated	million yen	4.0	4.5	6.4	32.0	0.0
Total*	non-consolidated	million yen	680.3	529.4	687.1	430.7	856.1

* As figures have been rounded off, the totals in some columns do not exactly match the sum of each item above.

ISO Certification Status

◆ ISO14001 Certification

Area	Certification secured	Certifying Institution	Certification Number
Himeji Plant	March 1999	JIA-QA	JE0054H
Joetsu Plant (including the distribution 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 CHEMICALS	July 2007	CQC	00121E33375R4M/3200
Cover rate*			70%

* The proportion of production facilities with ISO14001 certification owned by either Nippon Kayaku or its consolidated subsidiaries.

* The Nippon Kayaku Co., Ltd. Cover Rate (the proportion of production facilities with ISO14001 certification) stands at 100%

Violations and accidents

◆ Cases of Environmentally-related Violations and Accidents

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of violations of environmental laws and regulations	consolidated	cases	0	0	0	0	0
Number of environmental accidents	consolidated	cases	0	0	0	0	0
Violations of laws and regulations; fines issued for environmental accidents; punishment costs	consolidated	yen	0	0	0	0	0

Social

Employee Situation

◆ Employee Composition

Indicators	Category	Covering	Unit	2019	2020	2021	2022	2023
Regular employees	Male	consolidated	persons	-	-	-	3,883	3,991
	Female	consolidated	persons	-	-	-	1,797	1,832
	Neither/ Don't know	consolidated	persons	-	-	-	-	2
	Total	consolidated	persons	-	-	-	5,680	5,825
	Female rate	consolidated	%	-	-	-	31.6	31.5
	Male	non-consolidated	persons	1,730	1,751	1,754	1,748	1,770
	Female	non-consolidated	persons	323	326	330	333	343
	Neither/ Don't know	non-consolidated	persons	-	-	-	-	0
	Total	non-consolidated	persons	2,053	2,077	2,084	2,081	2,113
	Female rate	non-consolidated	%	15.7	15.6	15.8	16.0	16.2
Contracted/ part-time employees*	Male	consolidated	persons	-	-	-	-	444
	Female	consolidated	persons	-	-	-	-	246
	Neither/ Don't know	consolidated	persons	-	-	-	-	0
	Total	consolidated	persons	-	-	-	726	690
	Male	non-consolidated	persons	-	-	412	419	382
	Female	non-consolidated	persons	-	-	194	194	182
	Neither/ Don't know	non-consolidated	persons	-	-	0	0	0
	Total	non-consolidated	persons	613	614	606	613	564
	Male	consolidated	persons	-	-	-	89	90
	Female	consolidated	persons	-	-	-	132	103
Temp staff and others	Neither/ Don't know	consolidated	persons	-	-	-	-	0
	Total	consolidated	persons	-	-	-	221	193
	Male	non-consolidated	persons	-	5	19	24	26
	Female	non-consolidated	persons	-	14	28	44	37
	Neither/ Don't know	non-consolidated	persons	-	-	-	-	0
	Total	non-consolidated	persons	-	19	47	68	63

* Average number of persons per year

◆ Management Composition

Indicators	Category	Covering	Unit	2019	2020	2021	2022	2023
Below Section Chief	Male	non-consolidated	persons	315	359	321	412	418
	Female	non-consolidated	persons	36	24	38	42	43
	Total	non-consolidated	persons	351	383	359	454	461
	Female rate	non-consolidated	%	10.2	6.2	10.5	9.3	10.3
Section Chief and above	Male	non-consolidated	persons	142	74	68	66	62
	Female	non-consolidated	persons	6	4	4	5	3
	Total	non-consolidated	persons	148	78	72	71	65
	Female rate	non-consolidated	%	4.0	5.1	5.5	7.0	4.6
Overall	Male	non-consolidated	persons	457	468	476	478	480
	Female	non-consolidated	persons	42	44	47	47	46
	Total	non-consolidated	persons	499	512	523	525	526
	Female rate	non-consolidated	%	8.4	8.6	9.0	9.0	8.8

◆ Age

Indicators	Category	Covering	Unit	2019	2020	2021	2022	2023
Age groups	29 and under	non-consolidated	persons	402	394	376	362	359
	30-39	non-consolidated	persons	580	579	575	578	610
	40-49	non-consolidated	persons	582	576	585	589	559
	50-59	non-consolidated	persons	497	523	547	498	580
	Over 60	non-consolidated	persons	8	5	1	1	5
Average age	Male	non-consolidated	age	39.7	39.8	40.2	40.4	40.6
	Female	non-consolidated	age	42.3	42.6	42.8	42.9	42.9
	Total	non-consolidated	age	41.0	40.3	40.6	40.8	41.0

◆ Continuous Service

Indicators	Category	Covering	Unit	2019	2020	2021	2022	2023
Average number of years of continuous service	Male	non-consolidated	years	14.1	14.2	14.5	14.4	14.9
	Female	non-consolidated	years	16.2	16.5	16.6	16.6	16.4
	Total	non-consolidated	years	15.2	14.6	14.9	15.1	15.1

◆ Freedom of Association

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of union members ^{*1}	non-consolidated ^{*3}	persons	1,871	1,753	1,695	1,687	1,697
Union membership rate ^{*2}	non-consolidated ^{*3}	%	100	100	100	100	100

^{*1} The number of persons for each financial year is accurate as of March 31st

^{*2} Number of union members/number of qualified persons (excluding managers and persons specified in agreements)

^{*3} Includes some related companies

Diversity

◆ Recruitment

Indicators	Category	Covering	Unit	2019	2020	2021	2022	2023
New employees (graduates) ^{*1}	Male	non-consolidated	persons	60	49	41	37	45
	Female	non-consolidated	persons	4	8	7	6	13
	Total	non-consolidated	persons	64	57	48	43	58
	Female rate	non-consolidated	%	6.2	14.0	14.5	14.0	22.4
New employees (mid-career) ^{*2}	Male	non-consolidated	persons	35	28	32	45	44
	Female	non-consolidated	persons	3	6	7	10	15
	Total	non-consolidated	persons	38	34	39	55	59
	Female rate	non-consolidated	%	7.8	17.6	17.9	18.2	25.4

^{*1} Numbers entering the company in the April of the following financial year

^{*2} Numbers entering the company between the April of one financial year and the March of the following financial year

◆ Rates of disabled employees

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Disabled employees	consolidated	persons	-	-	-	92	68
Disabled employment rate ^{*1}	consolidated	%	-	-	-	1.44	1.04
Disabled employment rate ^{*2}	non-consolidated	%	2.04	2.01	2.00	1.98	1.93
(Statutory employment rate)	non-consolidated	%	2.20	2.20	2.30	2.30	2.30

^{*1} Disabled employee numbers have been removed from the total of regular employees, contracted employees and part-time employees, hence calculation methods differ from those used for statutory employment rates.

^{*2} Each year's data is accurate as of Jun 1st

◆ Employment of retired employees

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Employment of retired employees	non-consolidated	persons	61	42	22	29	30
Employment rate of retired employees	non-consolidated	%	89.7	95.4	84.6	85.2	85.7

Work-life Balance

◆ Working hours

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Average number of annual hours worked per worker	non-consolidated	hours	1,911	1,885	1,911	1,896	1,876
Average monthly overtime hours	non-consolidated	hours	12.7	11.3	12.7	11.9	11.2

◆ Paid Leave

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Average number of days of annual paid leave taken	non-consolidated	days	11.1	12.2	11.1	12.0	13.3
Annual Paid Leave take-up rate	non-consolidated	%	60.1	65.8	59.8	63.7	72.8

◆ Childcare

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Commencement of Maternity Leave*1	non-consolidated	persons	13	13	11	22	21
Commencement of Childcare Leave*1	Male	non-consolidated	5	11	9	62	50
	Female	non-consolidated	13	13	11	22	16
Childcare Leave System take-up rate*2	Male	non-consolidated	11.9	31.4	27.2	69.6	78.5
	Female	non-consolidated	100	100	100	100	100
Post-childbirth and post-Childcare Leave return-to-work rate	Male	non-consolidated	100	100	100	100	100
	Female	non-consolidated	100	100	100	100	100
Post-childbirth and post-Childcare Leave retention rate	Male	non-consolidated	100	100	100	100	100
	Female	non-consolidated	100	100	100	100	100
Reduced Working Hours for Childcare take-up rate	Male	non-consolidated	2	0	1	2	3
	Female	non-consolidated	31	43	42	48	52

*1 Not including leave taken during the last financial year which crosses over into this financial year

*2 FY2022 calculations for the rates of Childcare Leave and Leave for the Purpose of Childcaring have been made using the methods in Article 71.4.2.

◆ Nursing Care

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Employees taking Nursing Care Leave	non-consolidated	persons	1	0	0	0	1
Nursing Care Leave System users	non-consolidated	persons	1	1	0	2	3

◆ Pay

Indicators		Covering	Unit	2019	2020	2021	2022	2023
Average annual pay	Male	non-consolidated	1,000 yen	7,526	7,423	7,683	8,003	7,704
	Female	non-consolidated	1,000 yen	6,119	6,133	6,366	6,707	6,336
	Overall	non-consolidated	1,000 yen	7,307	7,224	7,477	7,801	7,488

◆ Employees leaving the company

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Regular employees leaving the company for personal reasons	consolidated	persons	-	-	-	535	282
Rate of regular employees leaving the company for personal reasons	consolidated	%	-	-	-	9.4	4.8
Regular employees leaving the company for personal reasons	non-consolidated	persons	37	41	48	50	51
Turnover rate	non-consolidated	%	2.2	2.2	2.3	2.3	2.9
Rate of employees leaving the company for personal reasons	non-consolidated	%	1.7	1.8	2.1	2.4	2.4
Employees leaving the company within 3 years of joining*	non-consolidated	persons	5	7	7	4	5
Rate of employees leaving the company within 3 years of joining	non-consolidated	%	3.0	4.0	4.0	2.0	3.0

* The number of new graduate hires in each financial year quitting within the first 3 years

◆ Transfers

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Transfers	non-consolidated	persons	2	1	2	3	3

◆ Employee Engagement Survey Results

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Response rate	non-consolidated	%	-	-	-	-	85.9
Employee engagement	non-consolidated	score	-	-	-	-	47.1

◆ Number of Labor Standards Law Violations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of labor standard violations	non-consolidated	cases	-	-	-	1	0

Human Resources Development

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Training hours per regular employee	non-consolidated	hours	-	14	13	15	17.7
Total training hours	non-consolidated	hours	-	29,156	27,092	31,045	37,465
Amount invested in education and training per employee	non-consolidated	yen	76,122	35,706	66,606	83,002	76,565

Occupational Safety and Health

◆ Occupational Safety and Health Management System (ISO45001) Certified Business Sites

Business Site	Certification secured	Certifying Institution	Certification Number
Kayaku Safety Systems (Huzhou)	January 2023	NQA	132021
Cover Rate *	5%		

* The proportion of production facilities with ISO14001 certification owned by either Nippon Kayaku or its consolidated subsidiaries
Even business sites without ISO45001 certification have Occupational Safety and Health Management Systems of equivalent standard.

◆ Occupational Hazards

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of work-related accidents resulting in death and other serious accidents	non-consolidated	cases	0	0	0	0	0
Number of work-related employee deaths	Regular employees	consolidated	persons	0	0	1	0
	Contracted employees/ part-time employees	consolidated	persons	0	0	0	0
	Partner company employees* ¹	consolidated	persons	0	0	0	0
Rate of Lost Time Injuries	Regular employees	non-consolidated	*2	0.4 (2 cases)	0.18 (1 cases)	0.19 (1 cases)	0 (0 cases)
	Contracted employees/ part-time employees	non-consolidated	*2	0	0	0	0
	Partner company employees* ¹	non-consolidated	*2	0	0	0	0
	Employees	Group companies	*2	-	-	-	1.5 (9 people)
Lost Time Injury Intensity Rate	non-consolidated	*3	0.031	0	0	0	0
Number of violations of Occupational Safety and Health-related regulations and standards	non-consolidated	cases	0	0	0	0	0

*1 Partner company employees: contractor (company) employees, temp (company) staff

*2 Occupational hazard-related deaths and injuries per every 1 million actual working hours

*3 Number of working days lost per every 1000 actual working hours

◆ Employee Health

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Regular health check take-up rate	non-consolidated	%	100	100	100	100	100
Stress-check take-up rate*	non-consolidated	%	97.3	97.2	98.1	97.9	98.0
Proportion of "highly-stressed" persons	non-consolidated	%	9.6	9.5	10.6	10.0	10.1
Mental health-related investments	non-consolidated	million yen	10.8	11.0	13.0	12.6	12.6

* Excluding employees on administrative leave

Quality

◆ Business Sites with Quality Management System Certification

Business Site Name	ISO9001	ISO13485	IATF16949	ISO22000
Safety Head Plant (Himeji)			●	
Safety Systems Group				
Research & Development Head Office				
Polatechno Group				
Joetsu Plant	●			
WUXI POLATECHNO OPTICS				
Fukuyama Plant				
Asa Plant				
Tokyo Plant	●			
Fine Chemicals Business Unit				
Fine Chemicals Research Lab				
Taiwan Nippon Kayaku (Fine Chemicals Business Unit)				
Takasaki Plant				
Pharmaceuticals Group	●	●		
Pharmaceuticals Research Laboratories				
Kashima Plant				
Agrochemicals Group	●			
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 CHEMICALS	●			
NIPPONKAYAKU FOOD TECHNO	●			●

◆ Certification Status for GMP Approval

Business site name	Principal certifying countries
Takasaki Plant	Japan, America, Europe

R&D

Indicators	Covering	Unit	2019	2020	2021	2022	2023
R&D costs	consolidated	billion yen	11.0	12.4	13.0	13.3	19.8
R&D costs as a percentage of sales	consolidated	%	6.3	7.2	7	6.7	9.8

CSR

Indicators	Covering	Unit	2019	2020	2021	2022	2023
CSR expenditure	non-consolidated	million yen	254	146	154	149	158
Total donations	non-consolidated	million yen	222	114	123	120	126
Other CSR expenditures	non-consolidated	million yen	31	32	31	29	32

Governance

Corporate Governance

◆ Board Member Composition *

Indicators	Covering		Unit	2019	2020	2021	2022	2023
Directors	Inside	Male	persons	7	7	6	6	6
		Female	persons	0	0	0	0	0
		Total	persons	7	7	6	6	6
	Outside (Independent)	Male	persons	2 (2)	3 (3)	3 (3)	3 (3)	3 (3)
		Female	persons	0	0	0	0	1 (1)
		Total	persons	2 (2)	3 (3)	3 (3)	3 (3)	4 (4)
	Overall Total (Independent)		persons	9 (2)	10 (3)	9 (3)	9 (3)	10 (4)
Average term		years	2.0	2.7	3.0	4.0	4.6	
Independent Outside Director Percentage (Results)		%	22	30	33	33	40	
Female Director Percentage		%	0	0	0	0	10	
Executive Directors		persons	7	7	6	6	6	

* Each year's data is accurate as of the Shareholders Meeting yearly held on June

◆ Audit & Supervisory Board Member Composition *

Indicators	Covering		Unit	2019	2020	2021	2022	2023
Auditors	Inside	Male	persons	2	2	1	1	1
		Female	persons	0	0	1	1	1
		Total	persons	2	2	2	2	2
	Outside (Independent)	Male	persons	3 (2)	3 (2)	3 (2)	3 (3)	3 (3)
		Female	persons	0	0	0	0	0
		Total	persons	3 (2)	3 (2)	3 (2)	3 (3)	3 (3)
	Overall Total (Independent)		persons	5 (2)	5 (2)	5 (2)	5 (3)	5 (3)
Average term		years	1.8	2.8	3.0	4.0	4.4	
Independent Outside Auditor Percentage (Results)		%	20	40	40	60	60	
Female Auditor Percentage		%	0	0	20	20	20	

* Each year's data is accurate as of the Shareholders Meeting yearly held on June

◆ Number of Committee Meetings Held

	Meeting Frequency	Meetings Held				
		2019	2020	2021	2022	2023
Board of Directors	Monthly	14	14	14	14	14
Nominations & Remuneration Advisory Committee	Whenever necessary	-	3	5	6	6
Sustainable Management Meeting	Weekly	50	51	48	50	48
Executive Directors Meeting	Quarterly	4	4	4	4	4
Management Strategy Meeting	Twice a year	2	2	2	2	2
Audit & Supervisory Board	Monthly	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	4
Environment, Safety and Quality Management Committee	Twice a year	2	2	2	2	2
Research & Development Management Committee	Twice a year plus convened ad hoc by the chairman when required	1	1	3	2	2

* Each financial year's data is taken from April to March

◆ Board Member Attendance at Committee Meetings (FY2023) *

Executive Title	Name	Board Meeting attendance	Nominations & Remuneration Advisory Committee attendance
President and Representative Director	Atsuhiko Wakumoto	14/14	6/6
Representative Director	Tomoo Shibuya	14/14	5/5
Member of the Board	Yoshimi Inoue	11/11	-
Member of the Board	Yoshitsugu Ishida	14/14	-
Member of the Board	Masatomi Akezuma	14/14	-
Member of the Board	Shigeyuki Kawamura	11/11	-
Outside Director (Independent)	Yo Ota	13/14	5/6
Outside Director (Independent)	Yasuyuki Fujishima	14/14	6/6
Outside Director (Independent)	Seiichi Fusamura	12/14	4/6
Outside Director (Independent)	Ikuko Akamatsu	11/11	4/4
Average rate of attendance		97.9%	91.7%

* Data taken from April 2023 to March 2024

◆ Audit & Supervisory Board Members Attendance at Committee Meetings (FY2023) *

Position	Name	Board Meetings attended	Auditor attendance
Standing Auditor	Megumi Machida	14/14	12/12
Standing Auditor	Yoichiro Wada	11/11	10/10
Outside Auditor (Independent)	Katsuji Higashi	14/14	12/12
Outside Auditor (Independent)	Yasuhiro Osaki	14/14	12/12
Outside Auditor (Independent)	Ichiro Wakasa	14/14	12/12
Average rate of attendance		100%	100%

* Data from April 2023 to March 2024

◆ Executive Remuneration*

Category		Unit	2019	2020	2021	2022	2023
Directors	Total remuneration amount	million yen	443	449	410	382	349
(Outside Directors excepted)	Number of directors concerned	persons	9	7	8	6	8
Auditors	Total remuneration amount	million yen	44	44	45	45	45
(Outside Directors excepted)	Number of directors concerned	persons	3	2	3	2	3
Outside Directors	Total remuneration amount	million yen	40	47	55	57	71
	Number of directors concerned	persons	5	6	6	7	7
Total		million yen	527	540	510	484	465

* The above figures and remuneration amounts for directors and auditors include those of directors retiring at the time of the Shareholders Meeting yearly held on June.

Furthermore, our outside directors have not received any remuneration from Nippon Kayaku Group companies.

◆ Remuneration for CPA Auditors (consolidated)

Indicators	Unit	2019	2020	2021	2022	2023
Remuneration based on audit and certification work	million yen	102	89	80	73	79
Remuneration not based on audit work	million yen	1	0	0	0	0
Total	million yen	103	89	80	73	79

Compliance

◆ Inside Whistleblowing Cases

Contents of Complaints and Consultations	Covering	Unit	2019	2020	2021	2022	2023
Harrassment (power harrassment, sexual harrassment, etc.)	non-consolidated	cases	8	6	2	7	16
Violations of company rules or manners	non-consolidated	cases	2	0	0	2	3
Work or labor-related	non-consolidated	cases	1	1	1	3	5
Others	non-consolidated	cases	0	0	1	4	3
Total	non-consolidated	cases	11	7	4	16	27

◆ Number of Whistleblowing Complaints and Consultations from Suppliers

Whistleblowing	Covering	Unit	2019	2020	2021	2022	2023
Whistleblowing complaints and consultations from suppliers	non-consolidated	cases	-	-	0	1	0

◆ Employees punished, fined or dismissed for causing Anti-Corruption Policy violations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Number of violations of anti-corruption-related policies	non-consolidated	cases	0	0	0	0	0
Employee punishments and dismissals	non-consolidated	cases	0	0	0	0	0
Corruption-related fines issued	non-consolidated	yen	0	0	0	0	0
Applications of corruption-related penalties	non-consolidated	cases	0	0	0	0	0

◆ Political Donations

Indicators	Covering	Unit	2019	2020	2021	2022	2023
Political donations	non-consolidated	10,000 yen	118	113	104	106	89

Risk Management

◆ Business Sites Certified by the Trusted Information Security Assessment Exchange (TISAX), (concerned with the global automotive industry supply chain)

Business Site	Certification secured	Registered for inspection with	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 2024-03-31)

Category	Number of shares	Number of voting shares	Details
Non-voting shares	-	-	-
Restricted voting shares (treasury stocks etc.)	-	-	-
Restricted voting shares (other)	-	-	-
Full voting shares (treasury stocks etc.)	(treasury stocks) Common shares 4,632,700 (Mutually-held shares) Common shares 28,000	-	-
Full voting shares (other)	Common shares 165,649,900	1,656,499	-
Shares of less than one unit*	Common shares 192,970	-	-
Total number of shares issued	170,503,570	-	-
General shareholder voting shares	-	1,656,499	-

* Shares of less than one unit include 85 of our own company's treasury stocks.

Independent Third-Party Inspection Reports



Independent Assurance Statement

September 18, 2024

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 Company's following data of domestic and overseas Group companies during the fiscal year 2023, 2.08 million GJ of energy consumption, 30.2 kt-CO₂ for Scope 1, 72.5 kt-CO₂ for Scope 2 (market-based) and 346 kt-CO₂ for Scope 3 (categories 1, 2, 3, 4, 5, 6, 7, 9, 12, 13), 10.4 million m³ of water intake, and 22.1 kt of waste generated (collectively, "the Environmental performance data"). The purpose of this process is to express our conclusion on whether the Environmental performance data were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the Environmental performance data. 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 Environmental performance data 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 the Environmental performance data 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

ESG Index Inclusions and Ratings (as of July 2024)

FTSE Blossom Japan Sector Relative Index



FTSE Blossom Japan Sector Relative Index

The FTSE Blossom Japan Sector Relative Index, devised by FTSE Russell, is a sector-neutral index which reflects the performance of the Japanese companies with outstanding Environmental, Social and Governance (hereafter: ESG) practices relative to others in their sector. The index has been adopted by the Government Pension Investment Fund (hereafter: GPIF) as one of its benchmark stock indexes.

> [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.

2022	2023	2024
○	○	○

MSCI Nihonkabu ESG Select Leaders Index

2024 CONSTITUENT MSCI NIHONKABU ESG SELECT LEADERS INDEX

The MSCI Nihonkabu Select Leaders Index is comprised of MSCI parent index (MSCI Nihonkabu IMI Index) companies that are demonstrating outstanding ESG performance in each industry sector. This index is also among those adopted as a benchmark by the GPIF.

> [MSCI Nihonkabu ESG Select Leaders Index](#)

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.

2022	2023	2024
	○	○

MSCI Japan Empowering Women Index (WIN)

2024 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)

The MSCI Japan Empowering Women Index is derived from its MSCI Japan IMI Top 700 parent index, and comprises the companies with outstanding records of promoting women's empowerment. This index is also among those adopted as a benchmark by the GPIF.

> [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.

2022	2023	2024
○	○	○

MSCI ESG Ratings



MSCI ESG Ratings are derived from MSCI surveys and analysis of the extent to which companies are appropriately managing ESG risks. This seven-grade rating system from AAA to CCC serves as the global index for ESG investment. The Nippon Kayaku Group's rating for 2024 was AA.

> [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.

2022	2023	2024
BBB	A	AA

S&P/JPX Carbon Efficient Index



The S&P JPX Carbon Efficient Index is an environmental stock index jointly developed by S&P Dow Jones Indices. It weights and ranks TOPIX companies based on how well they disclose environmental information and carbon efficiency (carbon emissions per unit of sales), and is also among the indexes adopted as a benchmark by the GPIF.

➤ [S&P/JPX Carbon Efficient Index](#) 

2022	2023	2024
○	○	○

Morningstar Japan ex-REIT Gender Diversity Tilt Index

The Morningstar ex-REIT Gender Diversity Tilt Index (hereafter: GenDi J) makes use of the data and evaluation methods supplied by Equileap to rank companies based on the extent to which their gender diversity policies have been instilled throughout the organization, and on how they promote equal opportunities regardless of gender. Companies are placed into one of five groups depending on their score, with the Nippon Kayaku Group currently featuring in GenDi J Group 2. This index is also among those adopted as a benchmark by the GPIF.

➤ [Morningstar Japan ex-REIT Gender Diversity Tilt Index](#) 

2022	2023	2024
	○	○

Certification

RBA (Responsible Business Alliance) Audit sees Kayaku Advanced Materials Certified Silver

The RBA (Responsible Business Alliance) is a corporate alliance which promotes social responsibility with respect to the global supply chain. Its remit involves fixing the necessary regulations to guarantee that the global supply chain sees safe working conditions, workers treated with respect and dignity, and due consideration given to the environment in the conduct of corporate activities.

Kayaku Advanced Materials (KAM) underwent an RBA Third-Party Audit (VAP Audit) in both 2021 and 2023. Its appropriate management in the audit areas of Labor, Safety & Health, Environment, Ethics and Management Systems was duly recognized, and deemed worthy of Silver Certification.

2021	2023
Silver Certification	Silver Certification

Recognition and Awards

CDP



CDP is an international NGO that operates a global disclosure system based on examination and evaluation of information demanded from companies and cities on climate change measures, water resource protection and forest conservation. FY2023 saw the Nippon Kayaku Group earn an A- for its Climate Change Report and a B for its Water Security Report.

	2022	2023
Climate Change	A-	A-
Water Security	C	B

EcoVadis

EcoVadis SS (headquartered in France) hosts an ESG rating platform that assesses over 85,000 companies and organizations from 160 countries and 200 sectors. Comprehensive evaluations are made in the four fields of environment, labor and human rights, ethics, and sustainable resource procurement. June 2023 saw the Nippon Kayaku Group earn a bronze medal for its achievements in the sustainability field.

BroadBand Security (Gomez ESG Site Ranking)



The Gomes ESG Site Ranking 2024 was compiled by BroadBand Security, Inc., which rated companies from the five perspectives of: website user-friendliness, ESG sharing, E (environment), S (social) and G (governance), factoring in not only principal users such as shareholders and investors but also a wide range of stakeholders. 2024 saw the Nippon Kayaku Group selected as an "Outstanding Company."

➤ [Gomez ESG Site Ranking \(Japanese\)](#) 

Editorial Policy

The aim of this Sustainability Website is to ensure that all our stakeholders (employees, customers, suppliers, shareholders, investors and local communities) have a thorough understanding of the Nippon Kayaku Group's ESG (Environment, Social and Governance) initiatives. The information published here chiefly pertains to the Important Sustainability Issues we identified in FY 2022. We are making the most of the website's features to publish comprehensive information on our policies, organizational structure, performance indicators, initiatives and numerical data. We also report on various guidelines (such as GRI and ISO26000 standards) depending on how important we deem them to be with respect to our group and society at large.

Reporting Period

FY 2023 (Apr 1st 2023 to Mar 31st 2024)
A section of the data within pertains to the period Jan 1st 2023 to Dec 31st 2023.
Certain reports on activities and initiatives may also include information from before and/or after the above periods (when providing the latest information).

Report Focus

Nippon Kayaku Co., Ltd.

Consolidated Subsidiary Companies

- Kayaku Safety Systems Europe
 - Kayaku Safety Systems (Huzhou) Co., Ltd
 - Kayaku Safety Systems de Mexico S.A. de C.V.
 - Kayaku Safety Systems Malaysia Sdn.Bhd.
 - NIPPON KAYAKU AMERICA, INC.
 - POLATECHNO CO., LTD
 - MOXTEK, Inc.
 - WUXI POLATECHNO OPTICS CO., LTD
 - Dejima Tech B.V.
 - Dejima Optical Films B.V.
 - RaySpec Ltd.
 - NIKKA FINE TECHNO CO., LTD
 - Nippon Kayaku Korea Co., Ltd
- Euro Nippon Kayaku GmbH
 - Kowa Sangyo Co., Ltd
 - KAYAKU CHEMICAL (WUXI) CO., LTD
 - KAYAKU Advanced Materials Inc.
 - 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
 - NIPPON KAYAKU FOOD TECHNO CO., LTD
 - Taiwan Nippon Kayaku Co., Ltd
 - Kayaku (Shanghai) Co., Ltd
 - Wako Toshi Kaihatsu Co., Ltd.

* Consolidated subsidiaries with manufacturing facilities have been listed with a ○ beside their name. Including 7 Nippon Kayaku plants, we have 20 manufacturing facilities in total (as of July 26th 2024).

Publication date

Jul 26th 2024

Reporting Cycle

1 year (Previous issue: Jul 2023; Next issue: Jul 2025)

Guidelines consulted

GRI (Global Reporting Initiatives) Standards
SASB (Sustainability Accounting Standards Board) Standards
ISO26000
Ministry of the Environment, Japan (Environmental Accounting Guidelines: 2005 Edition)
TCFD (Task Force on Climate-Related Financial Disclosures) recommendations

Third-Party Inspections

Since 2021, the Nippon Kayaku Group has sought to increase the reliability of its environmental performance data on greenhouse gas emission levels (Scope 1, Scope 2 and Scope 3). To that end, it has commissioned third-party inspection reports from Sustainability Accounting Co., Ltd. and subsequently published the results. From 2023, the inspection report covers levels of energy consumption, water use, and waste alongside greenhouse gas emissions.
For further details, please see the section on [Independent Third-Party Inspection Reports](#).

Media for Information Disclosure

In addition to via this website, sustainability information is disclosed through the following publications.

Publication	Format	Released
Sustainability Report	PDF	October
Integrated Report	PDF	December
Corporate Governance Report	PDF	June
Securities Report	PDF (Japanese Only)	June

Enquiries

Office Hours

Weekdays: 0900 to 1730 (closed on Saturdays, Sundays, public holidays and company holidays)

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ZIP code: 100-0005
03-6731-5227

[Email enquiries](#)



Forward-Looking Statements

This website not only contains facts about the past and present, but also predictions, forecasts, targets and plans related to the future. All such references to the future are based on the information available at the time of publication. Naturally, due to a variety of factors, our forecasts may differ substantially from actual future business results. We therefore kindly remind website users to exercise their own judgment when utilizing the information within.

The Products and Technologies Creating a Sustainable Future



The Products and Technologies Creating a Sustainable Future

The Nippon Kayaku Group, through its “Global SUKIMA Ideas” initiative, aims to produce products offering high additional value and the potential to stand out even in niche markets in its quest become indispensable to the world. Through providing the best products, technologies and services for the creation of a sustainable society, we will contribute to resolving social issues.

Mobility & Imaging Business Unit Safety Systems Business PARASAFE

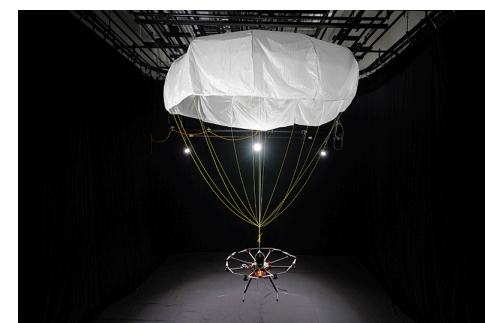
Outline of Products and Services

PARASAFE® (“PARASAFE”) is an emergency parachute system for industrial-use drones. When a drone seems set to fall due to unforeseen circumstances, the PARASAFE system launches a parachute to slow the drone’s descent and reduce the shock when it impacts the ground. The Nippon Kayaku Group is a global supplier of explosives and gas generators for automotive airbags, and PARASAFE makes use of the same technology for its highly-reliable automotive safety components. In short, use of PARASAFE makes it possible to fly drones more safely and securely.

Novelty and Innovation Details

PARASAFE and its applications combine specialist new technologies with Nippon Kayaku knowhow from the pyrotechnics safety and automotive safety components business cultivated since the time of our foundation.

1. **Pyrotechnic Safety:** Industrial explosives are truly excellent materials for the generation of constant energy in an instantaneous and reliable fashion. However, only one wrong step in the handling of these explosives can trigger a major accident or disaster. Nippon Kayaku’s thorough knowledge of explosive properties and safe handling methods, developed over many decades of involvement with explosives since our foundation, represents a major company advantage.
2. **Development Capability for High-performance Parts:** Our strengths not only lie in our materials, but in our ability to develop safety components combining high performance with reliability and durability. We make all of our parts in-house through leveraging our knowhow cultivated through developing automotive safety parts, concerning material component shape design, simulations of movement during operation, and prototype construction and evaluation.
3. **Sensing Programming Technology:** In order to detect dangerous drops in altitude and activate the relevant safety components, a so-called “Autonomous Triggering System (ATS) Device” is required. We are thus working on delivering the optimal ATS for PARASAFE through selecting the necessary sensors from drone flight data and simulations, and developing safety component operating programs.



External Environmental Factors

- Looking ahead to the advent of a yet more convenient society, industrial drones are expected to play an active role via their application to logistics, inspections, measurements and surveying, and disaster relief operations. December 2022 saw Japan introduce a new system for Level 4 Flights (unassisted flights Beyond the Visual Line of Sight in populated areas). The country's first Level 4 flight delivery was successfully completed by a PARASAFE-installed industrial drone in March 2023.
- The market for industrial drones is expected to easily outstrip that for general-use drones and be worth over 50 billion dollars by the year 2030.
- In terms of new initiatives, we can see plenty of moves to deploy drones over expanses of water, for example for inspections of floating solar panels and offshore windfarms, and the distribution of items over rivers and seas.

As described above, the scope of business for aerial drones is rapidly growing. At the same time, the most important element is safety, and we must respond appropriately.

Environmental Value

- Drones that crash and sink into the sea are connected to marine pollution. This can be prevented, however, in the form of a PARASAFE Floating Parachute System, which integrates floating functions with reduced crash-impact functions.
- There are cases in which drones that crash into mountains may cause forest fires due to batteries or devices igniting. The use of PARASAFE, however, can prevent even those situations from occurring.
- Deployment of PARASAFE on a crashing drone can reduce damage to the drone body and, consequently, waste.
- Accelerating the popularization of PARASAFE-installed drones across society will lead to improved green energy usage rates, as energy-saving flying objects gradually replace the CO₂-emitting vehicles currently used for logistics and transportation.

Social Value


The practical application of drones will render it possible to finish all kinds of tasks in short periods of time, triggering hopes of a yet more convenient society. But however reliable drone flights may become, the risks in the unlikely event of a fall cannot be overlooked.

- When an accident occurs during drone-related business, the installation of PARASAFE will reduce the impact of collision damage not only on the drone itself but on people, buildings and automobiles positioned on the ground, thereby reducing the credit risks associated with compensation and criminal punishments.
- Popularizing PARASAFE-installed drones throughout society will aid efforts to deliver stable supplies of daily necessities and pharmaceutical drugs to depopulated areas.
- Popularizing PARASAFE-installed drones throughout society will increase the possibilities for inspections in areas difficult for humans to enter, thereby helping to improve safety and reduce costs.

Contributing to SDGs



Relationship with *KV25* Materiality

- [Important Groupwide Issue: Creation of New Business and Products](#)
- [Important Groupwide Issue: 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 and 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 particularly used in the security market for operations pertaining to border and airport security.

External Environmental Factors

Demand for security screening equipment is increasing due to recent upsurges in terrorist attacks and illegal immigration, expanded use for border and airport security solutions, and increased incidences of drug smuggling.

Novelty and Innovation Details

One demand placed on the security market is the ability to see through all manner of objects, including backpacks, car seats, tires and exterior metal panels. The act of using X-ray backscattering to see through thick or heavy-element-made (e.g. iron) objects requires an X-ray source capable of emitting higher energy X-rays. That kind of X-ray source must operate at a high voltage, which tends to entail enlargement of the overall device. On the other hand, a small, lightweight, portable X-ray source can greatly loosen physical restrictions within areas to be inspected. The Mox140G holds a major advantage in the security market due to its ability to operate at high voltages while remaining portable in size and weight.



Portable X-ray backscatter imaging
*Photograph courtesy of Viken detection.

Environmental and Social Value

The use of the Mox140G significantly reduces illegal financing, and the trafficking of drugs and weapons, thereby helping eradicate all forms of organized crime, including terrorism.

Contributing to SDGs



Relationship with **KV25** Materiality

➤ [Important Groupwide Issue: Creation of New Business and Products](#)

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

MOXTEK provides “high-performance and durability” X-ray sources, highly durable window materials with high X-ray transmittance, and competitively priced detectors, which are all key components of XRF analysis devices.

External Environmental Factors

Interest is currently growing in the safety of everyday community, including matters such as the regulation of environmental pollutants (heavy metals, etc.) Devices to be used at scrap sites for scrap sorting (for the purpose of mineral recycling) and soil testing must have good portability (lightness) and enable rapid completion of inspections.

Uses

XRF is commonly applied in 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. It is further used in the monitoring of contaminated solid waste, wastewater, cleaning fluids, pools and filters, and can also be used for sorting materials such as minerals with high speed and accuracy. From benchtop to hand-held types, a different detector can be selected according to the environment. XRF is widely used at various facilities, both indoors and outdoors, including research labs.

How XRF (X-ray Fluorescence) Works

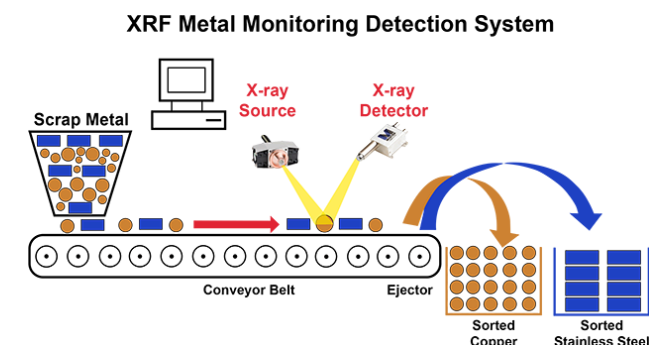
The launching of X-rays at an object causes X-rays with energies peculiar to the object in question to bounce back, thereby allowing the X-ray detector to analyze that object’s elemental composition. This method of elemental analysis can be used for all basic states of matter (solids, liquids and gases), and is one of the techniques used in everyday analysis.

Novelty and Innovation Details

MOXTEK provides “high-performance and durability” X-ray sources, highly durable window materials with high X-ray transmittance, and competitively priced detectors, which are all key components of XRF analytical devices. Our handheld Magnum (a lightweight, compact X-ray source), window coverings which boast DuraCoat technology offering superior performance even in harsher environments, and customer-friendly XPIN detectors have numerous applications, including in the fields of environmental monitoring and material sorting.



Soil testing



Material sorting

Environmental and Social Value

Through rapid elemental analysis can we analyze the environment in which we live and contribute to a more livable global environment. XRF will fulfil the function of sorting greater numbers of materials in lesser amounts of time. For the sake of securing an environment which is kind to Planet Earth, MOXTEK will strive for yet higher-performance parts.

Contributing to SDGs



Relationship with **KV25** Materiality

➤ [Important Groupwide Issue: Creation of New Business and Products](#)

Fine Chemicals Business Unit: Color Materials Business

Developing water-based inkjet inks for package printing, for safe and environmentally-friendly printing solutions

Our Color Materials Business is developing high-quality water-based pigment inkjet inks for the package printing market, that are safe and environmentally friendly.

External Environmental Factors

The printing industry is currently facing a diverse array of issues. One is the environmental and safety impacts of the large quantities of organic solvents and chemical substances used in the manufacturing and cleaning of printing plates for analog printing. One solution for this is the transition to digital printing which is easier to operate and does not require printing plates. This transition also allows users to reduce their production lead time, which can lead to lower stocks, reduced generation of waste, and improvements to the working environment.

Novelty and Innovation Details

Our Color Materials Business is developing a revolutionary primer-less (without the need of pretreatment agent) water-based pigment ink which can be printed directly on non-absorbent media. While conventional water-based pigment inks tend to run when directly applied to non-absorbent media (such films), resulting in blurry, unclear images. Solving this problem usually requires the use of a primer (pretreatment agent) to create an ink-receptive layer on the printing surface. However, our newly developed ink can be printed directly on non-absorbent substrates without the use of primers, making for shorter printing processes while contributing towards reduced energy use.

An additional advantage of using water-based inks is being able to significantly reduce the generation of volatile organic compounds (VOCs) while drying. As many inks currently used on non-absorbent media (such as films) are solvent-based, the impact of the high levels of VOCs contained in such inks has become a real issue for user safety and for the environment. By decreasing those VOCs by switching to printing with water-based inks, we can present a solution beneficial to both user safety and environmental protection.

In general, water-based inkjet printing has been thought to fall short of current printing methods, such as flexographic printing, in terms of coloring capacity and picture quality. However, the inks we have developed through our partnership with a printing device manufacturer has rendered possible the technically difficult feat of clean dot formation on non-absorbent media without using a primer, thereby elevating inkjet printing's coloring capacity and picture qualities to levels equal to or better than those of flexographic printing.



Environmental and Social Value

The waterbased design of our inks allows for a higher level of user safety and environmental protection. Additionally, the benefits that inkjet printing can provide, such as lower stocks and reduced generation of waste, can help the package-printing market realize Just-in-Time operations (making only what is needed, only when needed, only in the amount that is needed what is necessary, when necessary.).

Contributing to the SDGs



Relationship with **KV25** Materiality

- > [Important Groupwide Issue: Mitigation of Climate Change](#)
- > [\(Key Sustainability Issues\) Reducing Energy Consumption and Greenhouse Gas Emissions](#)
- > [\(Key Sustainability Issues\) Reduction of Wastewater and Industrial Waste](#)

Fine Chemicals Business Unit: Catalysts Business

Developing Catalysts that Help Realize a Hydrogen-powered Society

Our Catalysts Business is working to develop catalysts that contribute towards realizing a hydrogen-powered society.

External Environmental Factors

The deadliest forms of extreme-weather-related natural disasters are increasing. One key reason seems to be the progression of global warming stemming from the continual increase in carbon dioxide and other greenhouse gases pumped into the atmosphere through the consumption of fossil fuels such as oil and coal. Against this backdrop are we required to develop new energy sources which do not emit greenhouse gases. Hydrogen, which emits no carbon dioxide even when burned, has been gathering attention as a clean energy source, and expectations abound that it can be stably supplied for use in automobile fuel cells and power generators.

Novelty and Innovation Details

Our catalyst method for producing hydrogen involves focusing on an environmentally-friendly process which thermochemically decomposes water through collecting 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 generate cost advantages by employing a three-dimensional reaction field. October 2021 saw us utilize our expertise and technology to develop a catalyst for hydrogen production and forward its prototype to our business partner's pilot plant. Our plan is to actually make hydrogen at the plant together with our partner and acquire initial data on economic efficiency during FY2024. We will use the initial data gained as our base for exploring production scale-ups and commercialization as we aim for practical application sometime post-2025.

In addition to hydrogen production, we are also exploring the development of catalysts for hydrogen carriers which enable efficient storage, transportation and hydrogen extraction through dramatic reductions in volume. We are also searching for ways to deploy the core technologies of our catalyst business across the entire hydrogen energy system.



Environmental and Social Value

As a clean energy source with zero carbon dioxide emissions during combustion, hydrogen can contribute significantly to the fight against global warming. It can also be produced and procured from a variety of resources, thereby contributing to diversified energy supply lines and overall energy security.

Contributing to SDGs



Relationship with **KV25** Materiality

- > [Important Groupwide Issue: Mitigation of Climate Change](#)
- > [\(Key Sustainability Issues\) Reducing Energy Consumption and Greenhouse Gas Emissions](#)

Life Sciences Business Unit: Agrochemicals Business Introduction of Biostimulant Materials

Our Agrochemicals Business began handling biostimulants to help achieve sustainable agricultural production.

External Environmental Factors

The world's population continues on an upward trend yet arable land remains limited, meaning that as things stand, per capita food production is predicted to certainly decline. Moreover, with agricultural production efficiency dropping due to climate change effects caused by global warming, and with ingredient prices sharply rising on top, there are real concerns that food security will be increasingly threatened. Biostimulants are therefore being spotlighted as part of the solution to these problems.

Novelty and Innovation Details

Biostimulants act upon plant physiology via a different path to nutrients. As agricultural materials that enhance plant resistance to so-called "abiotic stresses" such as drought, cold weather, salinization and physical damage (from hail and wind), they can consequently improve crop yields and quality. Specific biostimulant examples include seaweed extract, amino acid materials and humic acid, and the hope is that they deliver effects to the tune of accelerating nutrient absorption, activating photosynthesis and speeding up flowering and fruiting. In the Agrochemicals Business we believe that our expertise in evaluation and formulation technologies will maximize biostimulant efficiency and aid further advancements and popularization of biostimulant materials.



A biostimulant item we handle



The plants left of the entrance have been treated with biostimulants. The plants on the right have not.

Environmental and Social Value

It is hoped that biostimulants will draw out the inherent qualities of crops and soil environments, and lead to a reduction in overuse of agrochemicals and fertilizers, thereby decreasing the environmental burden and preserving ecosystems at crop production sites.

Contributing to SDGs



Relationship with *KV25* Materiality

- > [Important Groupwide Issue: Creation of New Business and Products](#)
- > [Our Agrochemicals Business Website \(Japanese\)](#) 

Global "sukima" ideas



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[URL https://www.nipponkayaku.co.jp/english/](https://www.nipponkayaku.co.jp/english/)

Contact

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[Inquiry form](#)