

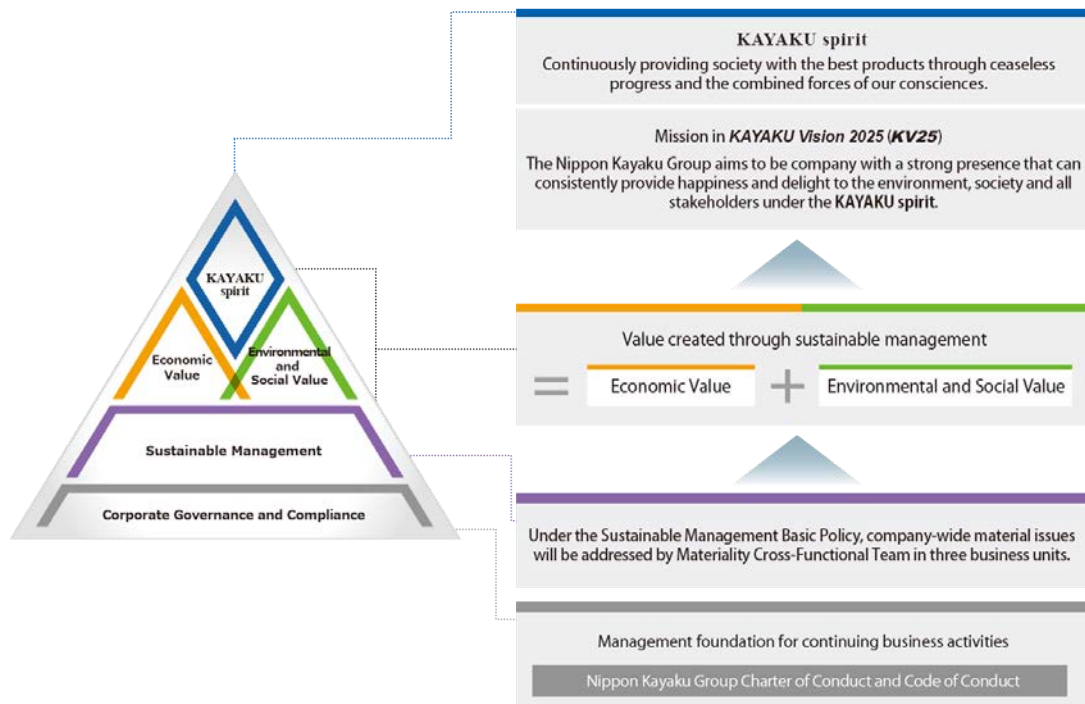
Approach

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.

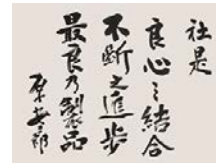


◆ Origins of the KAYAKU spirit

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.



Nippon Kayaku Group Charter of Conduct and Code of Conduct

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.

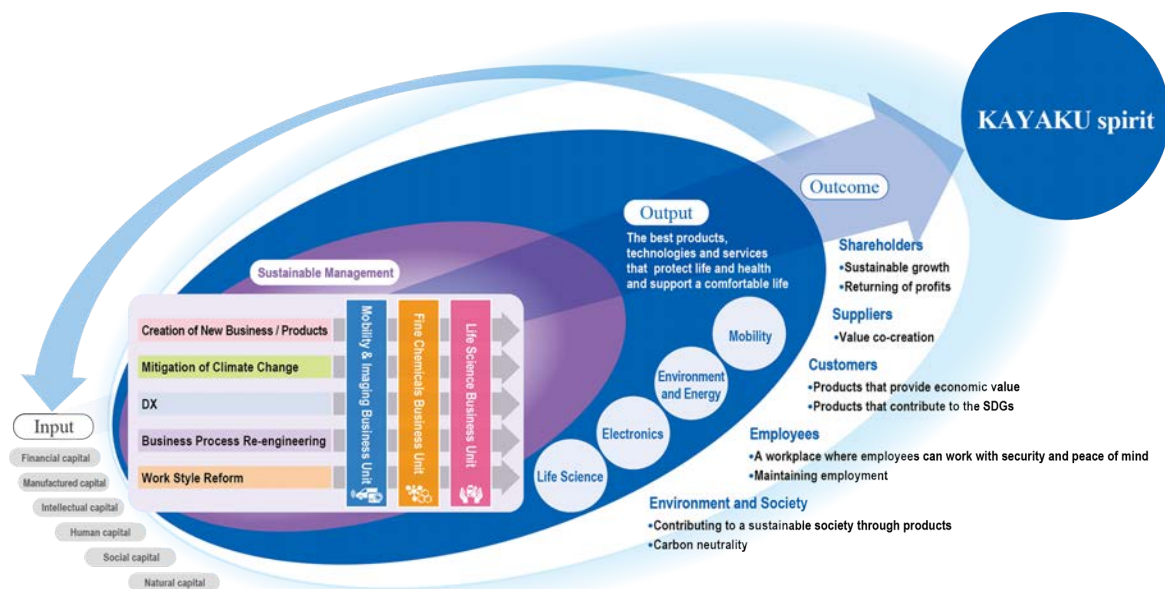
Basic Policy on Sustainable Management

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.



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、
永続的に環境、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

Global "sukima" ideas
NIPPON KAYAKU

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 "sukima" 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。

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

Global "sukima" 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 "sukima" 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 "sukima" ideas
NIPPON KAYAKU

Malay

KAYAKU spirit
Trvale poskytovat společnosti
ty nejlepší výrobky skrze
neustálý pokrok a sdílené
morální 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 "sukima" ideas
NIPPON KAYAKU

Czech

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, Human Rights Policy revised, KV25 Materiality, Medium-term Environmental Targets revised, anti-corruption, ESG rating	Executives, employees, (including contract and part-time employees), temporary employees	2024	E-learning	6	86% (average)
New hire training*	Climate change measures and respect for human rights in relation to Nippon Kayaku Group Sustainable Management	New recruits	2024	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	2024	Group training	2	100%

* Held annually

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 – 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

Medium-term Business Plan and Important Groupwide Issue

Medium-term Business Plan



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.

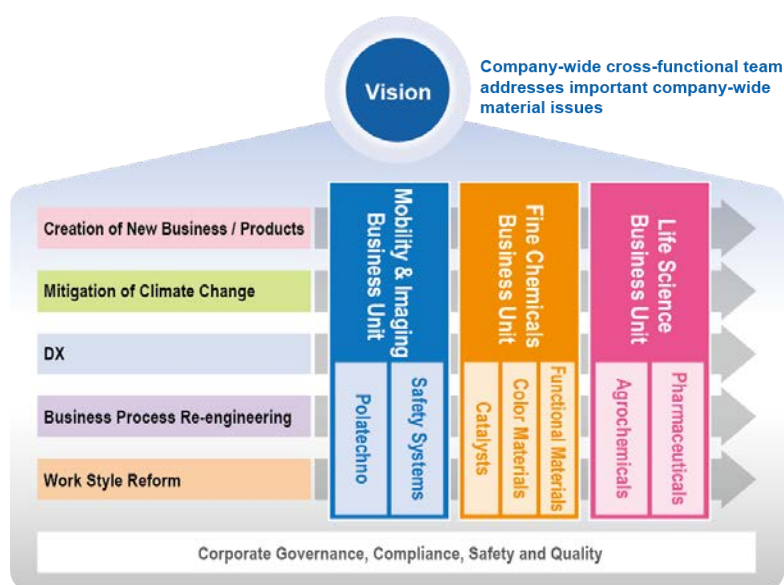
◆ KAYAKU Vision 2025 Basic Strategies

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	- Guaranteed safety - Improved product and service quality - A thorough approach to compliance - Strengthened corporate governance

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

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.



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	- 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			
- Recovery of worldwide automobile production from the impact of COVID-19, and mitigation of the semiconductor shortage - The installation rate of safety components is increasing, primarily in emerging countries - Growing new demand due to EVs, etc. - Expansion of applications such as drone transportation, etc., and demands for safety assurances	- Technology and inherited expertise to handle explosives safely - Industry top-level market share in automotive safety components - Global expansion of locations	Inflators - Expansion of production bases for cylinder-type inflators (Japan, China, Malaysia) - Expand of sales to customers in China and South Korea - Developing next-generation inflators	
		Micro gas generators / squibs / pyrotechnic products - Securing next-generation module projects from customers - Securing increased volume projects, such as for rear seats - Expansion of applications such as pedestrian protection and electric current shut-off - Consideration of new pyro device applications	
		Drone safety components - Expansion of sales of PARASAFE® for 25kg drones - Development and market launch of PARASAFE® for 15kg drones - Development of safety parts for flying cars and large drones	
		Polatechno Business	
		- Evolution and expansion of automotive display functions - Growing demand for recycling rare metals	- Optical and electromagnetic wave control technologies and microfabrication technologies - Proprietary highdurability dye synthesis technologies for polarizers

◆ 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	• Synergies in semiconductor-related products • Design of functional molecules	Providing important and unique materials • 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		
• Expansion of the digital printing market • Expansion of the sensing market • Expansion of the dimming glass market	• 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 • Expansion of industrial inkjet inks, improvement of production systems • Mass production and expansion of imaging sensor materials • Mass production and expansion of dichroic colorants
Catalysts		
• Acrylic acid and methacrylic acid markets continue to grow by 5 to 6% • Expansion of the carbon neutrality-related market	• Optimal customization of catalyst composition and technical services	Providing catalysts with high-yield to contribute to CO ₂ reduction and affluent lives • 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				
- Pharmaceutical industry vision (quality and stable supply, manufacturing and sales, bio-pharmaceuticals, domestic manufacturing and development, encouraging use) - Expansion of the CDMO market - Annual drug price revisions	- Consistent business operation from R&D to manufacturing, sales, quality assurance, pharmacovigilance and post marketing surveillance - Top domestic anti-cancer drugs lineup and specialized MR - Manufacturing technology for highly pharmacologically active substances	New Drugs		
		- Increasing share for ALAGLIO® in TURBT* - Maximizing value through drug fostering and evolution * TURBT: Transurethral Resection of Bladder Tumor (surgery to remove bladder tumors using an endoscope and excision loop)		
		Biosimilars (BS)		
		- Market spread of bevacizumab BS - Measures to promote biosimilars through the revision of medical fees - Expansion of lineup through introduction of new biosimilars		
		Generic anti-cancer drugs		
		- Enhancement of stable supply and quality assurance system - Development and launch of the new generic drugs		
		Working toward the vision for FY2030		
Enhancement of pipeline				
- Development of new drugs in collaboration with external organizations - Introduction of new drugs and medical devices				
Agrochemicals Business				
- Domestic crop protection market remains at the current level, overseas crop protection market is growing due to increased demand for food - Introduction of an agrochemical re-evaluation system has raised the bar for obtaining and maintaining domestic agrochemical business registration - Strategy "MeaDRI" (Sustainable Food Systems) promotes innovation that enables the reduction of agrochemicals (risk conversion)	- Insecticides and soil fumigants in the vegetable and fruit tree domain - Formulation knowhow (innovative formulations) - Operating activities combining technical services and information provision - Manufacturing technologies (from raw ingredients to product formulation)	Japan		
		- Flometoquin formulations (FINESAVE®), expansion of FUMON® - Expansion of sales by expanding the scope of agrochemical registration - Response to the agrochemical re-evaluation system for DIAZINON® and other agrochemicals		
		Overseas		
		- Rebuilding the EVISECT® business by restructuring the supply chain - Registering and expanding sales of Flometoquin preparations		
		Working toward the vision for FY2030		
		- Development of new insecticides and new innovative formulations - Development and introduction of biostimulants		

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 (Materiality)

Important Groupwide Issue and Key Sustainability Issues

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**.”

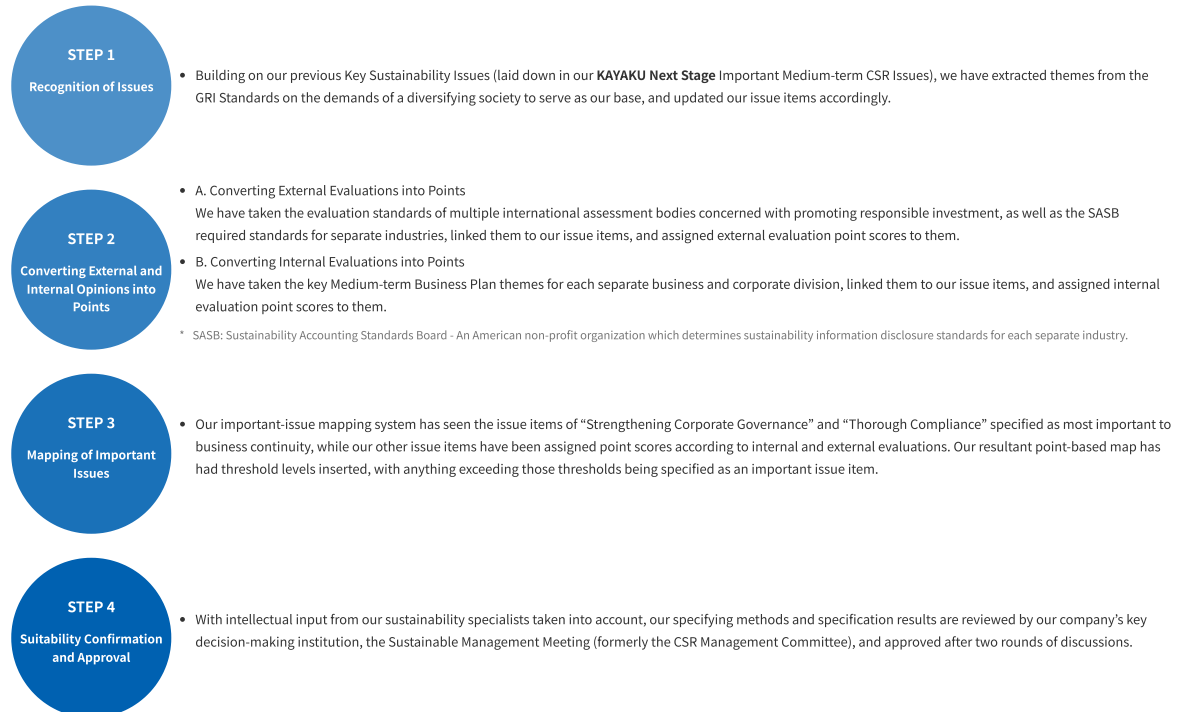


* The colored boxes beside each sustainability issue signify its link(s) to an important groupwide issue.

Key Sustainability Issues

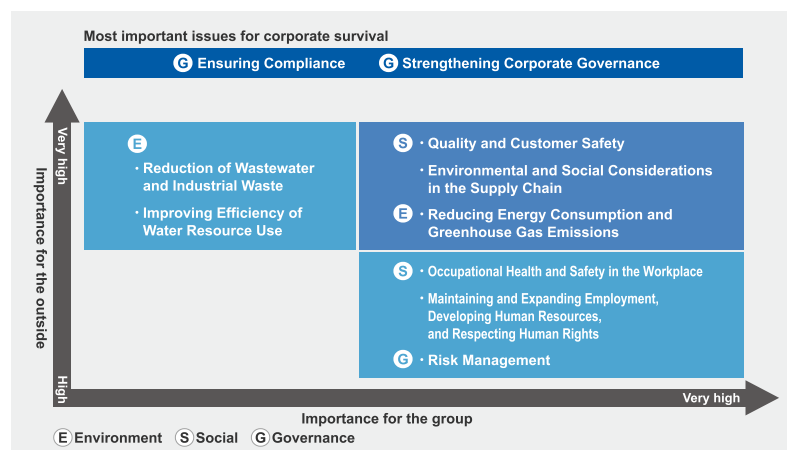
Key Sustainability Issues: Specification Methods

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.



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		FY2024 Initiative-related Topics
						FY2023	FY2024	
Most important issues for corporate survival	Ensuring Compliance		- 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	- Zero serious compliance violations. - FY2024's mandatory compliance training took the theme of "Workplace Communication," and was delivered to all domestic group companies. - We spoke to overseas group companies without a Compliance Whistleblower Hotline and ensured such hotlines were set up. We aim to expand hotline use through increasing awareness and training in FY2025.
				Compliance training take-up rate	100%	96%	97.7%	
				Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	100%	
	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	- A Board of Directors Effectiveness Evaluation was conducted, the present situation grasped, issues extracted, and an action plan fixed. Improvements are currently ongoing. - Action to Implement Management That Is Conscious of Cost of Capital and Stock Price - An Effectiveness Evaluation of the Audit & Supervisory Board was conducted.
				Number of times internal business audits are performed by the Audit Division	60 times in four years	17	12	

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2024 Initiative-related Topics
						FY2023	FY2024	
Most Important Issues	Quality and Customer Safety		- 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 Number of serious quality process abnormalities in processes ²	0 0	0 0	0 1	Our "Quality Month" of November adopted the theme of "The Conversation Technique for Accelerating Team Growth: Unravelling the Psychological Mechanism behind Quality Defects," and saw us stage a seminar on eliminating quality defects
	Environmental and Social Considerations in the Supply Chain		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 Formulation and implementation of improvement plans using questionnaires to suppliers	(Non-consolidated) 90% (Non-consolidated) Progress disclosed	(Non-consolidated) 91% Published in Topics	(Non-consolidated) 91% Published in Topics	- FY2024 saw us survey 530 companies from which we had procured raw materials in FY2023, as well as 23 new suppliers from FY2024 based on Sustainable Procurement Guidebook contents. We received responses from 502 companies - As no Sustainable Procurement Survey responses revealed suppliers to be causing harm to either human rights or the environment, it was deemed unnecessary to submit an Improvement Request form
	Reducing Energy Consumption and Greenhouse Gas Emissions		- 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 FY2024) Under 111,838 tons	102,704 t-CO ₂	111,102 t-CO ₂	- We received our first A-List Rating in the CDP's Climate Change Field - Promotion of MFCA and solar-powered PPA models were sequentially introduced - Emissions increased for every item due to increased production volumes, but recycling rates and zero-emission rates still improved - Environmentally-friendly products and technologies are being developed
	Reduction of Wastewater and Industrial Waste			VOC emissions	(Non-consolidated) Disclose results	(Non-consolidated) 32.9 tons	(Non-consolidated) 60.3 tons	KMY commenced production of a light cylinder inflator (new generation inflator) whose CO ₂ emissions are 30% down on previous generation inflators.
	Improving Efficiency of Water Resource Use			COD emissions	(Non-consolidated) Disclose results	(Non-consolidated) 210.9 tons	(Non-consolidated) 222.2 tons	A green propellant MGG was developed. [Functional Materials Business] A prototype of a CFRP/GFRP-use thermosetting resin targeted for use in aircraft was tested and assessed on a real aircraft.
				Total waste output	(Non-consolidated) Disclose results	(Non-consolidated) 20,974tons	(Non-consolidated) 28,225tons	Development of a biofuel-containing thermosetting resin that is high-temperature resistant and highly reliable.
				Recycling rate	(Non-consolidated) 80% or higher	(Non-consolidated) 83.8%	(Non-consolidated) 86.5%	[Color Materials Business] Development of industrial-use inkjet ink (for coated paper and soft packaging).
				Zero emission rate	(Non-consolidated) 1% or less	(Non-consolidated) 0.68%	(Non-consolidated) 0.6%	Expanded sales of developers for phenol-free thermal paper.
				Goal setting in line with SBT and consideration and implementation of specific measures	Progress disclosed	Medium-term Environmental Targets revised to 1.5°C scenario	Published in Topics	[Catalysts Business] Advancement of joint-development of a hydrogen-producing catalyst.
				Disclosure in line with TCFD recommendations	Progress disclosed	Information disclosed	Information disclosed	Development of a catalyst using materials informatics techniques which contributes to reducing amounts of, and improving yields from, raw materials used.
				Develop products and technologies with consideration for environmental issues	Progress disclosed	Published in Topics	Published in Topics	Development of a catalyst to manufacture basic chemicals such as propylene from biofuel.
								[Pharmaceuticals Business] Promoted the adoption of materials posing lesser environmental burdens in response to moves towards resource conservation in the field of packaging.

	Key sustainability issues	Corresponding SDGs	Action plans	Indicators (KPI)	FY2025 Targets	Results		FY2024 Initiative-related Topics
						FY2023	FY2024	
Important issues	Occupational Health and Safety in the Workplace		- 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	No serious accidents within Nippon Kayaku (non-consolidated), including on the sites of group companies and partner companies
				Acquisition of certifications under the Certified Health & Productivity Management Outstanding Organizations Recognition Program (Large Enterprise category)	(Non-consolidated) Continued certification	(Non-consolidated) Continued renewed	(Non-consolidated) Continued renewed	Continued accreditation as a Health and Productivity enterprise. To keep this up, we continue to encourage employees to maintain and improve personal health
				Percentage of paid leave taken	(Non-consolidated) 70% or higher	(Non-consolidated) 72.8%	(Non-consolidated) 73%	Although overall paid leave take-up targets have been met, take-up rates for management have fallen slightly short. We will continue to spread awareness via our intranet and get HR managers for each business site to proactively call for leave to taken, as well as set up paid leave promotion days. As a new initiative, we have prepared a paid leave plan of 5 days or more (the Yu You Plan) for each employee, and circulated around their workplace
				Percentage of employees who take mental health training	(Non-consolidated) 100%	Year 1 of our 3-year plan has proceeded as intended	The second year of the three-year plan has proceeded as planned	Periodical health check take-up rates remain at 100%
				Percentage of employees receiving regular health checkups	(Non-consolidated) 100%	(Non-consolidated) 100%	(Non-consolidated) 100%	Our second Employee Engagement Survey has been carried out. Our overall score was 48.4, an improvement on last year but still short of the national average. Companywide, while we scored highly for "manager support" and "workplace unity", we tended to score lowly on "appropriate recruitment and placement" and "prospects for business growth and business future." Each workplace has set up an action plan aimed at increasing employee engagement, and is undertaking improvement activities
				Ascertaining and improving employee satisfaction through questionnaire surveys	(Non-consolidated) Progress disclosed	Publishes in Topics	Publishes in Topics	
	Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights		- 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) 8.8%	(Non-consolidated) 8.3%	In each workplace, we are selecting female candidates for managerial positions, confirming their managerial intentions via interview, and delivering systematic development training. In order to change attitudes, we have also held a panel discussion involving female managers and urged women to challenge for management roles. We have also increased the percentage of women recruited. (New female hires are up by 9.2 points on the previous FY, while career female hires are up by 4.3 points)
				Percentage of employees with disabilities	(Non-consolidated) Achieve legal minimum employment rate	(Non-consolidated) 1.93%	(Non-consolidated) 2.11%	With the aid of specialist support and advice, we are preparing better work introductions and working environments for disabled people, and continue to promote disabled hires as well as expanded job opportunities. Our actions going forward will see us fix Key Initiative Business Sites on which to expand recruitment and prepare a suitable working environments. We shall also link up with a specialist support school to further boost recruitment and continually strengthen working environments
				Amount invested in education and training per employee	(Non-consolidated) Disclose results	(Non-consolidated) 76,565 yen/person	(Non-consolidated) 72,015 yen/person	We have conducted e-learning session on the Nippon Kayaku Group's Revised Human Rights Policy. This not only enabled us to republishize the policy, but enhance big-picture understanding of the human rights that businesses should respect, relevant initiatives, and our business activities will be impacted
				Training hours per employee	(Non-consolidated) Disclose results	(Non-consolidated) 17.7 hours	(Non-consolidated) 15 hours	Based on the risks identified as requiring priority measures from Nippon Kayaku employees as identified in our Human Rights Risks Impact Assessment, we are continually implementing corrective measures to reduce and eliminate human rights negatives
				Number of training sessions held on human rights	Once or more per year	2	1	
				Human rights due diligence: human rights impact assessment rate	(Non-consolidated) FY2022: 100% (Consolidated) FY2025: 100%	Human rights risk assessments and risks requiring priority measures identified in sessions laid on for Nippon Kayaku Group employees	We are continuing to implement corrective measures for risks requiring priority measures to reduce and eliminate human rights negatives.	
Risk Management			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%	Top Five Risk Control Activities conducted at seven domestic factories and all group companies. (The lack of outstanding human resources emerged as an increasing risk-trend)
				Number of BCP drills conducted	Once or more per year	3	3	- Certain domestic and overseas business sites picked up for hearings related to their Top Five Risks - BCP drill conducted at several sites within the Fine Chemicals Business Unit, based on a Kanto-region-epicentered earthquake scenario - BCP drills conducted at Chinese group companies

*1 Number of matters judged extremely important by the Ethics Committee

*2 Loss amount of over 10 million yen

*3 Lost-time accidents or fatal accidents involving 3 persons or more

*4 Target values at the end of FY2024

Key Sustainability Issues: Risks and Opportunities

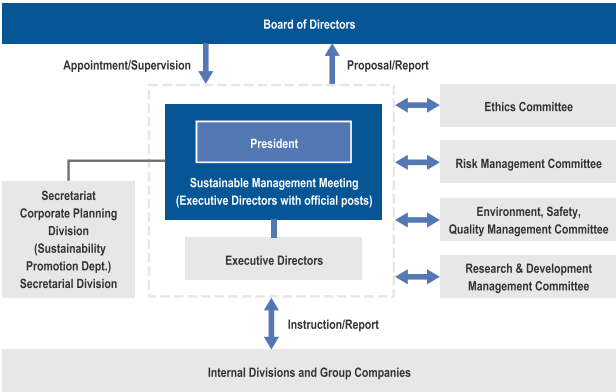
Through recognizing the risks and opportunities associated with our specified Key Sustainable Issues, reducing those risks, and working on those opportunities connected to fresh business growth, the Nippon Kayaku Group will aim to realize a sustainable society and deliver yet further improvements to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

	Important Sustainability Issues	Risks	Opportunities
Most important issues for corporate survival	Ensuring Compliance	- 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	- Gaining stakeholder trust - Increased capacity to gain public trust
Most important issues	Quality and Customer Safety	- 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	- Contributing to the realization of a sustainable society - Increased long-term competitiveness

	Important Sustainability Issues	Risks	Opportunities
	Reducing Energy Consumption and Greenhouse Gas Emissions Reduction of Wastewater and Industrial Waste Improving Water Resource Use Efficiency	[Switchover risks] - 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 [Physical risks] - 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	- 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 - Expanded use of optical materials for lighter EV cars and sensor materials for self-driving cars - 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	- Loss of public trust as a result of accidents or scandals - Decreased labor productivity, exodus of staff	- Fostering of a safety culture - Improved work engagement from employees
	Maintaining and Expanding Employment, Developing Human Resources, and Respecting Human Rights	- 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	- 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

Sustainability Promotion 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.



> [Number of Committee Meetings Held](#)

Promoting Responsible Care

Message from the Executive Director in Charge

Based on the principles of Responsible Care—the chemical industry's voluntary activities concerned with preservation of the environment, health and safety—the Nippon Kayaku Group has established its “Declaration on Environment, Health and Safety, and Quality.” In addition to fulfilling our responsibilities as a chemical manufacturer shall we contribute towards the realization of a sustainable society. Our efforts to achieve carbon neutrality by 2050 have seen us introduce solar power and a high-efficiency large-scale gas co-generation system, and proactively move forward with policies built upon MFCA^{*1} methods. FY2024 saw such climate change mitigation measures well-evaluated along with our highly transparent information disclosures, and Nippon Kayaku receive the highest “A-list company” classification in the CDP's^{*2} climate change field. Furthermore, following on from our TCFD-based^{*3} information disclosures, July 2025 saw us release information concerning natural capital and biodiversity in line with the TNFD^{*4} disclosure framework.

Meanwhile, our efforts to bolster governance have brought, in April 2025, the merger of our Quality Management, Production Technology and Environmental Safety divisions into a new Responsible Care & Technology Division. Under this new structure shall we respond rapidly and efficiently to external demands related to safety and health, quality, and the environment.

Going forward, the Nippon Kayaku Group seeks to develop in tandem with all its employees, customers, suppliers, shareholders, investors and regional communities, and adopt a united approach to promoting Responsible Care activities.

Yasuhito Kato
Managing Director
In charge of Technology Unit



^{*1} MFCA : Material Flow Cost Accounting

An accounting method which seeks to continuously reduce environmental burdens from manufacturing activities by extracting energy and material losses arising from the manufacturing process.

^{*2} CDP : Carbon Disclosure Project

An international NGO which requests disclosures of environment-related information (such as climate change measures, water resource conservation and forest conservation) from businesses and cities, examining and evaluating such disclosures, and operating a global information disclosure system.

^{*3} TCFD : Taskforce on Climate-related Financial Disclosure

^{*4} TNFD : Taskforce on Nature-related Financial Disclosures

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.

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 FY2025 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 104,965t tons (Groupwide) (Total Group CO₂ emissions to fall at least 20% from FY2019 levels)
- Transition plan being steadily implemented
- Domestic zero-emission rates of 1% or less
- Moving forward with 30-second inspections based on determination of key themes

◆ 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

- Promoting prevention of age-related accidents (Risk assessments focused on declining physical functions of older workers conducted and measures introduced)
- 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 30% health check take-ups due to Specific Health Guidance
 - Over 60% participation in health events

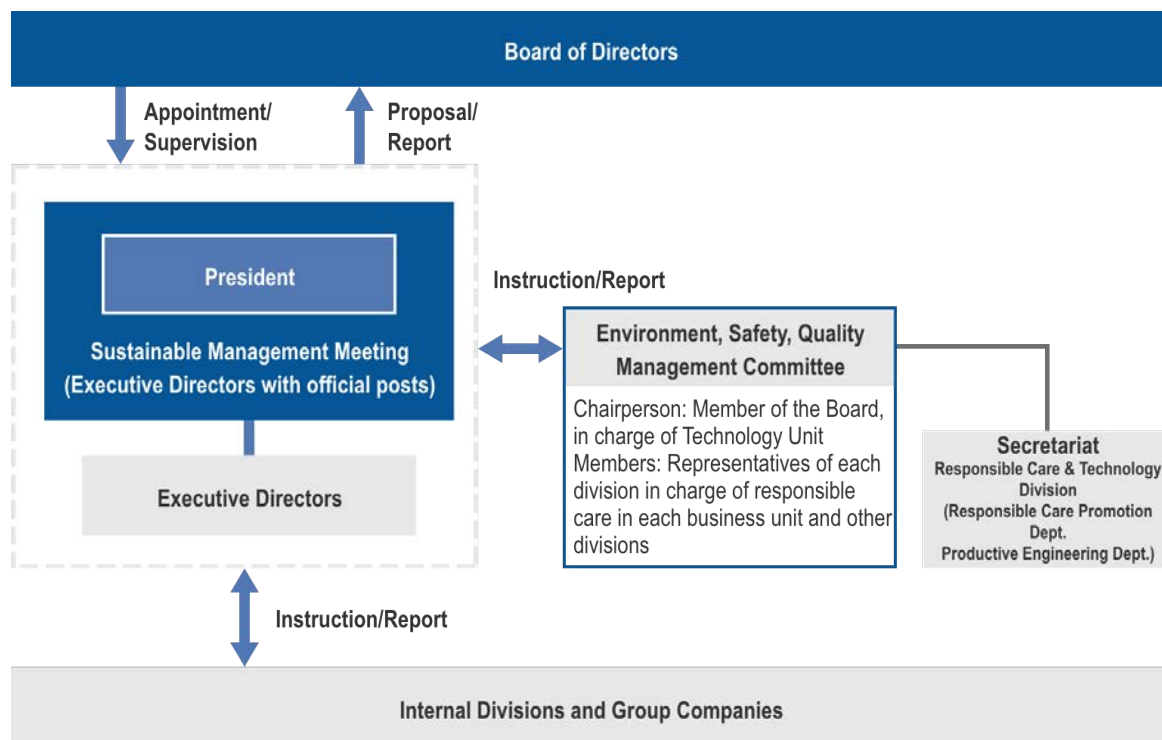
◆ 4. Promoting Activities aimed at Achieving Environmental Goals

- Improved practices for climate-change-related disclosures to external sources
 - CDP climate change and water security evaluations maintained
 - Clarification of, and the fixing of targets for, expanded TNFD boundaries and the effects of risks and opportunities
 - Clarification of issues through gap analysis in line with CSRD disclosure requirements
- Appropriate operation of a cloud-based environmental data aggregation system (groupwide)
- Every business site to aim for a 4.2% 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 Responsible Care & Technology Division managers (Team Leaders), Responsible Care & Technology Division Responsible Care Promotion Dept. 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 FY2024).

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	2024
Plants		7	7	7
Research labs • Offices		4	1	1
Domestic Group companies	Onsite	3	3	3
	Offsite	1	1	1
Overseas Group companies *		3	1	2
Total		16	13	14

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

FY2024 Inspection Results (Number of points raised at the 13 bases inspected)

Areas	Responsible Care Progress Confirmation Chart, Responses to legislation	Base inspections
Good points	17	23
Points raised	2	3
Points noticed	23	64
Suggestions and requests	21	38

Initiatives

- > [Environmental Management](#)
- > [Climate Change](#)
- > [Management of Chemical Substances](#)
- > [Preventing Pollution](#)
- > [Effective Use of Resources](#)
- > [Water Resource Conservation](#)
- > [Natural Capital and Biodiversity](#)
- > [Work Safety & Health ; Health Management](#)
- > [Quality and Customer Safety](#)

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.

Contribution to the SDGs

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.



External Initiatives Joined

Initiative title	Participation period	Scale	Relationship with corporate principles and the path to approval
 UN Global Compact WE SUPPORT	2021	Groupwide	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. 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. 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. 2024 saw us sit on the following 11 subcommittees: • ESG Subcommittee • Environmental Management Sub-committee • Kansai Region Subcommittee • Supply Chain subcommittee • GC Intra-Company Instillation Research Subcommittee • Human Rights Due Diligence Subcommittee • Anti-Corruption Subcommittee • Disaster Risk Reduction Subcommittee • SDGs Subcommittee • Reporting Research Subcommittee • WEPs Subcommittee

Initiative title	Participation period	Scale	Relationship with corporate principles and the path to approval
TCFD (Task Force on Climate-Related Financial Disclosures) 	2022	Groupwide	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. 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.
Responsible Care Global Charter 	2008	Domestic	The Nippon Kayaku Group signed up to the Responsible Care Global Charter in 2008, and also to the revised version in 2014. 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.

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.

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.	- 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: - Automobile module manufacturers, optical material users - Users of resins, dyes and catalyst materials - Medical personnel, patients - Agrochemical manufacturers, pesticide vendors, farmers	- 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).	- 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.	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.	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

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 to 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

- In pursuit of the realization of a more highly convenient society, the pace of industrial drone introduction for distribution, healthcare, construction, farming and urban air mobility (UAM) is rapidly increasing.
- The international drone market is predicted to grow to \$60bn by 2030, with industrial drones comprising some \$10bn of that.
- New drone initiatives such as last-mile deliveries, medical supply distribution to disaster zones, and pilot tests of flying taxis are being expanded in various countries, and progressing towards commercialization in the US, Europe and China.

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](#) 

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](#)

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

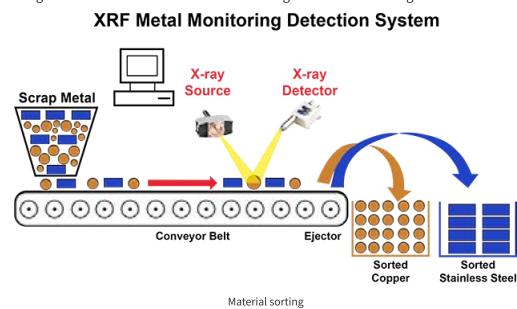
The launching of X-rays at an object causes X-rays with energies peculiar to the object in question to bounce back, thereby allowing the X-ray detector to analyze that object's elemental composition. This method of elemental analysis can be used for all basic states of matter (solids, liquids and gases), 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



◆ 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

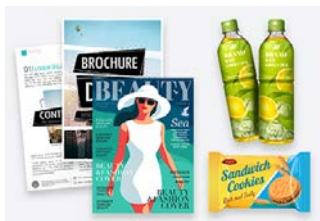
The printing industry is currently facing a diverse array of issues. One is the environmental and safety impacts of the large quantities of organic solvents and chemical substances used in the manufacturing and cleaning of printing plates for analog printing. One solution for this is the transition to 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 as 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](#)

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

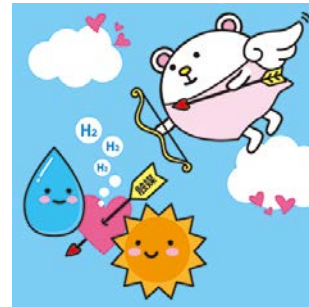
The deadliest forms of extreme-weather-related natural disasters are increasing. One key reason seems to be the progression of global warming stemming from the continual increase in carbon dioxide and other greenhouse gases pumped into the atmosphere through the consumption of fossil fuels such as oil 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. In conjunction with said partner have we used this plant to start actually producing hydrogen, and begun to acquire cost-efficiency data which will serve as the basis for scaling-up operations and pressing forward with examinations of commercial viability. We aim to achieve commercialization post-2029.

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 (EXPROOT)



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 \(Japanese\)](#) 

Agrochemicals Business

Flometoquin formulations: Little effect on useful organisms

Both domestically and overseas, our Agrochemicals Group sells a formulation containing a new molecular entity (NME) named Flometoquin which has minimal effect on pest predators such as cabbage mites, and on pollinators such as honeybees.

◆ External Environmental Factors

For a sizable number of crops, useful organisms such as honeybees serve as essential pollinators and play indispensable roles in the food production process. However, recent years have seen such useful organisms decrease in number across the globe due to the combined effect of extreme weather and pesticides. Ecosystems have hence been majorly affected, potentially, say some observers, leading to global food shortages in years to come.

◆ Novelty and Innovation Details

The Flometoquin formulation represents a rare insecticide option for those wishing to minimize effects on useful organisms such as cabbage mites, used to prey upon spider mites, and honeybees utilized for pollination. It can also be combined with numerous other chemicals and thus easily integrated into insecticide rotation strategies. It should remain effective for two weeks post application, while its rainfastness means it can be used on outdoor crops and fruit trees.



Fine Save: the Flometoquin formulation
we handle

◆ Environmental and Social Value

Flometoquin formulations use novel action mechanisms which should prove effective against even pests with low levels of sensitivity towards existing pesticides. As they also have little effect on useful organisms such as honeybees or natural predators of pests such as cabbage mites, they thereby contribute to ecosystem conservation and stable food supplies.

◆ Contributing to SDGs



◆ Relationship with **KV25** Materiality

- [Important Groupwide Issue: Creation of New Business and Products](#)
- [Our Agrochemicals Business Website \(Japanese\)](#) 