# **Materiality and Sustainability: Important Issues**

Environment

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the Nippon Kayaku Group

## 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."



<sup>\*</sup> 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	<b>∵</b> ∰:	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	<b>②</b>	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)	<u> </u>	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	<u>1</u> 1	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.

<sup>\*</sup> 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

Governance

## **Key Sustainability Issues: Specification Methods**

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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** 

· 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

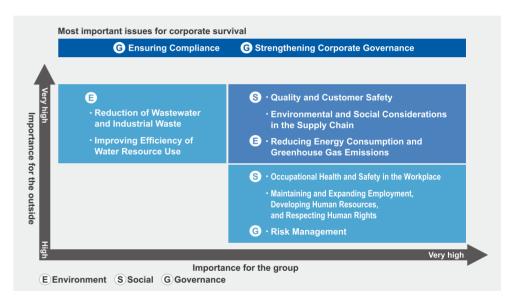
· With intellectual input from our sustainability specialists taken into account, our specifying methods and specification results are reviewed by our company's key decision-making institution, the Sustainable Management Meeting (formerly the CSR Management Committee), and approved after two rounds of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

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	Key sustainability	Corresponding	sponding Action plans	Indicators (KPI) FY2025 Targets	Results		FY2023		
	issues	SDGs	Action plans	indicators (KPI)	FY2025 Targets	FY2022	FY2023	Initiative-related Topics	
			Exercise thorough compliance, which is a basic principle for	Number of serious compliance violations 1	0	0	0	No serious compliance violations.     This financial year's compulsory compliance training on Mental Flexibility delivered to all domestic	
	Ensuring		conducting corporate activities, and engaging in fair	Compliance training rate	100%	97%	96%		
Most important	Compliance		Maintain and     enhance an open     corporate culture     with a high sense of     ethics	Percentage of group companies with compliance / whistleblowing hotlines	100%	83%	83%	Group companies.  • Discussions held and options explored with overseas Group companies yet to install a compliance whistleblowing consultation service.	
issues for corporate survival	Strengthening Corporate Governance	orate entire group and	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.		
al			transparent and	Number of times internal business audits are performed by the Audit Division	60 times in four years	22	17	Female Standing auditor selected.     Human Resources     Development Policy and Inside Environment     Preparation Policy     established.	

	Key sustainability	Corresponding	Action plans		FY2025 Targets	Res	ults	FY2023
	issues	SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022	FY2023	Initiative-related Topics
			Enhance our quality control and quality assurance systems by continuously improving our quality management system and ensuring	0	1	0	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 satisified or satisfied: 78% Degree of understanding: Very easy to understand/ For the most part easy to understand: 90%	
Most important issues	Quality and Customer Safety		related governance  Implement quality management, improve production efficiency and reduce process abnormalities through digitalization	enent quality ement, e production cy and reduce in allities  Number of serious quality process abnormalities in processes *2	1	0		
nt issues	Environmental and Social Considerations	8 minutes.  12 minutes.  12 minutes.	Practice supply chain management with consideration for environmental and	Response rate for confirmation of consent to Sustainable Procurement Guidelines	(Non- consolidated) 90%	(Non- consolidated) 99%	(Non- consolidated) 91%	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
	in the Supply Chain	13 am 16 manus 16 manus 17 manus 18 manus 18 manus 19 manus	social aspects, based on the Sustainable Procurement Guidelines	Formulation and implementation of improvement plans using questionnaires to suppliers	(Non- consolidated) Disclose progress	-	Published in Topics	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.

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	Key	Corresponding	responding			Res	sults	FY2023
	sustainability issues	SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022	FY2023	Initiative-related Topics
			em	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 <sub>2</sub>	Promotion of MFCA and Solar Power Generation PPA Models sequentially introduced.  C. 24% reduction in industrial waste produced compared with FV2022.  Our development status situation for environmentally-conscious products and technologies is as reported below.  [Safety Systems Business] Development of a lighter cylinder-type inflator and green propellant MGG.
				VOC emissions	(Non- consolidated) Disclose results	(Non- consolidated) 38.7 tons	(Non- conslidated) 32.9 tons	[Polatechno Business] Reductions in waste treatment energy and total waste produced stemming from improvements
	Reducing Energy Consumption and	6 minute.  7 minute.  9 minute.  12 minute.  12 minute.  12 minute.	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.	COD emissions	(Non- consolidated) Disclose results	(Non- consolidated) 171.8 tons	(Non- consolidated) 210.9 tons	to production process and product design.  [Functional Materials Business] Pilot experiments performed on aircraft-oriented CFRP/GFRP thermosetting resin prototypes with development potential.  Development of a high-temperature resistant, high-reliability thermosetting resin from biomass materials.  [Color Materials Business] Development of industrial inkjets (for coated paper and soft packaging).  Expanded sales of non-phenol developer for thermal paper.  Market debut and expanded sales for PLA (biodegradable) dye for fiber processing.  [Catalysts Business] 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. Development of catalysts to help manufacture basic chemicals such as propylene from biomass materials.  [Pharmaceuticals Business] Environmentally-conscious wrapping initiatives started.
Most impo	Greenhouse Gas Emissions Reduction of			Total waste output	(Non- consolidated) Disclose results	(Non- consolidated) 27,621 tons	(Non- consolidated) 20,974 tons	
Most important issues	Wastewater and Industrial Waste			Recycling rate	(Non- consolidated) 80% or higher	(Non- consolidated) 85.0%	(Non- consolidated) 83.8%	
es	Improving Efficiency of Water Resource	13 :::::		Zero emission rate	(Non- consolidated) 1% or less	(Non- consolidated) 0.8%	(Non- consolidated) 0.7%	
	Use			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 Corresponding		onding	ladiates (VDI) EV2025 Tarreta	Res	ults	FY2023	
	issues	SDGs	Action plans	Indicators (KPI)	FY2025 Targets	FY2022	FY2023	Initiative-related Topics
				Number of serious accidents <sup>*3</sup>	0	0	0	No accidents requiring time off work at business sites and partner companies across
			Strengthen the foundation for safe operation by thoroughly enforcing basic rules on safety and health and	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	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
Important issues	Occupational Health and Safety in the Workplace	procedures  Implement health and productivity management and provide a workplace environment with a healthy work-life balance where employees can work with enthusiasm  Per employees an work with enthusiasm  As im em said third questions and the said that	equipment and work procedures  Implement health and productivity management and provide a workplace environment with a healthy work-life balance where employees can work	Percentage of paid leave taken	(Non- consolidated) 70% or higher	(Non- consolidated) 63.7%	(Non- consolidated) 72.8%	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
ssues				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	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.	

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	Key sustainability	Corresponding	Action plans	Indicators (VDI)	Action plans Indicators (KPI) FY2025 Targets Results		sults	FY2023
	issues	SDGs	Action plans	muicators (KPI)	F12025 Targets	FY2022	FY2023	Initiative-related Topics
Important issues	Risk Management		Respond to various business-related risks and ensure business continuity by maintaining production systems, ensuring the proper procurement of raw materials, and	Implementation rate of risk control activities for business, etc., and top five risk control activities	100%	100%	100%	"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
		measures against disasters Number of BCP drills conducted	Once or more per year	2	3	Kashima district, and a snow- damage scenario in the Joetsu region.  BCP drills set up at China- based Group companies.		

- \*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**

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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	Ensuring Compliance	<ul> <li>Loss of public trust due to compliance violations</li> <li>Damage to corporate value</li> <li>Slump in business activities</li> </ul>	Gaining stakeholder trust
corporate survival	Strengthening Corporate Governance	Stagnation of business activities	Gaining stakeholder trust     Increased capacity to gain public trust
	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
Most important issues	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   Operational impacts of water shortages   Decreased labor productivity due to temperature rises   Operational impacts of water shortages   Decreased labor productivity due to temperature rises   Operational impacts of water shortages   O	Expanded use of materials for semiconductor-related and low-energy consumption products due to the extension of smart city and Digitial 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