



Progress in Promoting ESG Management: Moving from Awareness Building toward Practical Implementation

Continuing Evolution of ESG Management

In April 2020, we established a president-led framework for the promotion of ESG management. Since then, the NYK Group has been strengthening the framework in step with the progress of ESG management and accelerating the enhancement of strategies and the implementation of measures.



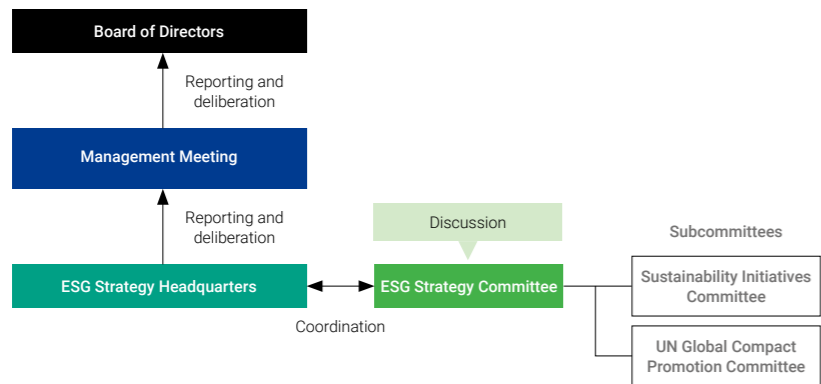
Main Agenda Items of the ESG Management Committee and the ESG Strategy Committee

Fiscal 2021		Fiscal 2022		Fiscal 2023	
ESG Management Committee		ESG Management Committee		ESG Strategy Committee	
Held four times		Held four times		Held nine times	
<ul style="list-style-type: none"> Decision to participate in the Ship Recycling Transparency Initiative* Discussions for setting Groupwide KPIs Content review for the long-term GHG reduction targets of oceangoing businesses Content review for the NYK Group ESG Story 2022 		<ul style="list-style-type: none"> Content review for the TCFD Report Discussions for the establishment of the human rights policy Discussions for GHG emissions reductions Report on the global engagement survey Sharing of KPI-based results and the progress of initiatives 		<ul style="list-style-type: none"> Discussions on material issues Content review for the NYK Group ESG Story 2023 Content review for the NYK Group Decarbonization Story Discussions on renewal of the SDG comparison table Discussions on disclosure of non-financial information in the annual securities report Sharing of KPI-based results and the progress of initiatives 	

* A platform for enhancing the transparency of disclosures on ship recycling

Decision-Making Process in ESG Management

To incorporate the discussions of the ESG Strategy Committee into the decision-making process, the ESG Strategy Headquarters reports the agenda and schedule of ESG Strategy Committee meetings to the chief executives of all headquarters as appropriate. Feedback from these chief executives is then reflected in the agenda. In the ESG Strategy Committee, discussions are conducted from a cross-divisional viewpoint, and conclusions are reached. Conclusions on important issues are submitted via the ESG Strategy Committee to the Management Meeting and the Board of Directors for deliberation.



Roles of the ESG Strategy Headquarters

- Formulating ESG management policy, setting goals, and practicing KPI management
- Leading the practical implementation of ESG management

Roles of the ESG Strategy Committee

- Conducting cross-divisional discussions on Companywide ESG issues and reaching conclusions on overall strategy and specific measures
- Sharing and discussing the latest ESG-related information pertaining to businesses

Roles of Subcommittees

Sustainability Initiatives Committee
Deliberating on the adoption of proposals submitted by employees

UN Global Compact Promotion Committee
Promoting measures and establishing systems at the Company and its Group companies based on the United Nations Global Compact

Activities of ESG Navigators

The NYK Group has introduced an ESG Navigators system to provide foundations for the practical implementation of ESG management. As of August 2024, a total of 107 ESG Navigators were leading ESG management-related discussions and initiatives in respective departments.

Examples of departments' initiatives in fiscal 2023
<ol style="list-style-type: none"> Participation in customer-organized social contribution activities at ports Development and utilization of sustainable novelty goods Implementation of an ESG idea competition by crew members and awarding of prizes Organization of workshops to promote mutual understanding among teams
<ol style="list-style-type: none"> Establishment of a business operations annual MVP system to heighten engagement Creation and enhancement of headquarters-specific ESG booklets and portal websites Organization of events that enable small groups to have informal conversations on ESG-related topics (management with general employees and among general employees)

Key Message



Keito Tachiwa

ESG Navigator
Global Mineral Resources Group

In fiscal 2023, we compiled concerns and requests related to ESG management within the department and established corresponding ESG targets. We viewed reducing group members' workloads and enhancing our understanding of overseas customers' frontline operations as issues and advanced initiatives accordingly. To reduce workloads, we have promoted digital transformation and begun using several new tools. Other initiatives have included switching the language used in meetings and manuals to English, increasing the opportunities for personnel to speak regardless of their nationality, and accelerating the sharing of insight and expertise among personnel. As a result, I feel that personnel, including those working at overseas Group companies, are working together with a greater sense of unity than ever before. As for enhancing our understanding of customers' frontline operations, I believe that it is important to visit the site in person, so I participated in a community contribution event organized by an overseas customer and interacted with more than 650 people. I have realized that our management of ship operations and delivery of cargo to customers support the day-to-day life of local communities, and I have been able to reaffirm the significance and mission of my department's work. This has enabled me to tackle my day-to-day operations with a wider outlook. Also, we are actively collaborating with a start-up that provides a robot-enabled washing service for hulls and verifying the fuel-saving benefits. In fiscal 2024, as well as activities to further enhance communication between onshore and offshore operations, I will actively participate in ESG-related workshops and pass on the knowledge gained to the rest of the department.

Development of the NYK Group ESG Story Overseas

In February 2024, based on the NYK Group ESG Story 2023 and the NYK Group Decarbonization Story, in-person town hall meetings were held for local employees to promote dialogue and mutual understanding within the NYK Group. A total of 850 people participated.

Key Messages



Samantha Dowsett-Browse

Portfolio Manager
NYK Business System Europe

Q. What are the challenges in expanding ESG management globally?

There are challenges around stakeholder engagement, integration of new and existing systems, communication, and cost. To manage these challenges, it is crucial to ensure that new ESG tools are interoperable with existing financial and non-financial reporting systems. Implementing automation tools and AI for ESG data to streamline the process. Whilst there is a cost in making changes to implement ESG technically and operationally, the long-term benefits of improved sustainability, compliance, and stakeholder trust could outweigh the initial expenditures.

Feedback from Participants in Town Hall Meeting

- I agree with the Group's concerted efforts to create the future.
- I thought tackling ESG issues would be difficult for a corporate division. However, I am glad to say that this dialogue has clarified the action we need to take.
- I hope that this type of session will be held in person once or twice a year.



Ken Donnelly

Senior Vice President of NGA RORO
Business Management Group & CIO
NYK Group Americas Inc.

Q. What are your plans for ESG management?

One of our objectives is for each employee to identify and implement at least one ESG activity. Our approach is for each person to think more about ESG. The activity can include engagement across Group companies, across regions, even with our customers and vendors. Even if we start small, we get our employees engaged in an ESG mindset as part of their day-to-day business activities with the hope that things snowball into larger and more beneficial initiatives later.

- I would like NYK to share more and more good examples of ESG management with other regions. I think this will lead to the creation of new ideas in other regions.
- I want to know more about the global projects and new businesses that the NYK Group is implementing in the environmental aspect.
- I would like to know more about GHG emissions reduction methods in land transportation and warehousing.

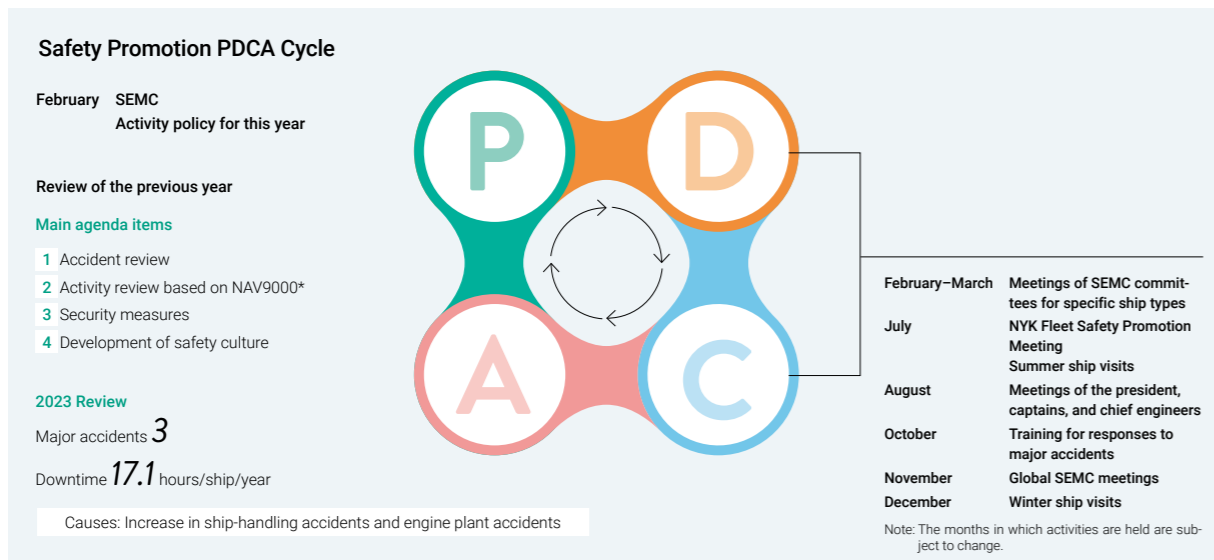


Governance to Ensure Safety

Safety is our top priority in ESG management. We believe that safety underpins trust, and without trust, there is no business. Based on this philosophy, the NYK Group has established a system aimed at the elimination of major accidents. Under this system, we are pursuing multifaceted efforts to ensure safe ship operations. In this section of the report, we not only introduce our safety promotion activities but also explain how we apply governance to ensure safety.

From Planning through to Improvement: Safety Promotion Activities Based on a PDCA Cycle

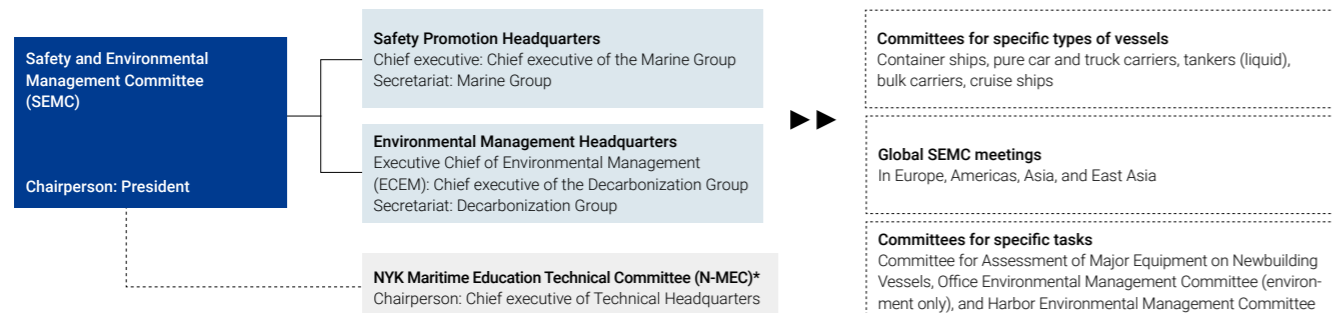
Every February, the NYK Group holds a meeting of the Safety and Environmental Management Committee (SEMC), which is chaired by the president, to review the year's activities. Based on this review, the committee discusses the activities planned for the coming year. In response to the conclusions reached in these discussions, meetings of committees for specific ship types are held. Action plans are formulated according to the characteristics of each ship type. Beginning from July, Companywide ship visits are conducted. In parallel with such activities in frontline operations, dialogues are held with shipowners and ship management companies. In this way, the NYK Group advances a plan-do-check-act (PDCA) cycle throughout the year to reconfirm and enhance safety awareness across the entire Group.



* This original standard is aimed at meeting responsibilities to ensure the safety of human life and safe ship operations and to protect the environment. The standard covers approximately 1,500 items, including international regulations, industry standards, and industry good practices and measures that NYK has accumulated to prevent accidents from recurring and to ensure that customers' requirements are met.

Safety and Environmental Measures Advancement System

We have established a president-led system that ensures safety activities—which are categorized according to ship types, regions, and tasks—are incorporated into operations.



* Committee for education, training, and development of crew members

Never Forgetting Accidents

On July 2, 1997, Diamond Grace* ran aground in Tokyo Bay. To ensure that we always remember the lessons of this accident, since 1998 we have conducted the Remember Naka-no-Se safety campaign every July and August. During this period, the senior management team and other related employees visit ships to further mutual understanding of safe ship operations. In addition, as part of the campaign we hold an annual NYK Fleet Safety Promotion Meeting to reaffirm the importance of safe ship operations with shipowners, ship management companies, and other partner companies in Japan and overseas. Moreover, we hold annual meetings of the president, captains, and chief engineers, enabling all participants to exchange opinions. Further, we foster a culture of safety through activities that promote interactive communication. For example, onshore and offshore personnel take an e-learning program that is based on video reenactments of the accident.



Senior Managing Executive Officer Nobuhiro Kashima (left) receiving an explanation of the J-Marine NeCST ship navigation support tool and the integrated information and bridge system

* The crude oil tanker Diamond Grace, operated by NYK, contacted the west edge of Naka-no-Se shoal in Tokyo Bay, causing approximately 1,550 kiloliters of crude oil to spill into the sea.

Measures to Prevent Anchor-Dragging Accidents in Extreme Weather

Due to frequent extreme weather events worldwide in recent years, the number of accidents in which anchored ships are swept away by gusty winds or strong tides (dragging anchor) and collide with port facilities or other ships is trending upward. In 2023, the NYK Group experienced an accident when gusts swept away a ship that was engaged in cargo-handling operations. The accident occurred despite the implementation of long-standing gust countermeasures.

Given this fact, we are rigorously enhancing safety awareness in onshore and offshore operations. As part of these efforts, we are preparing scenarios for unexpected gusts and using safety campaigns to reaffirm the importance of information sharing between onshore and offshore personnel.

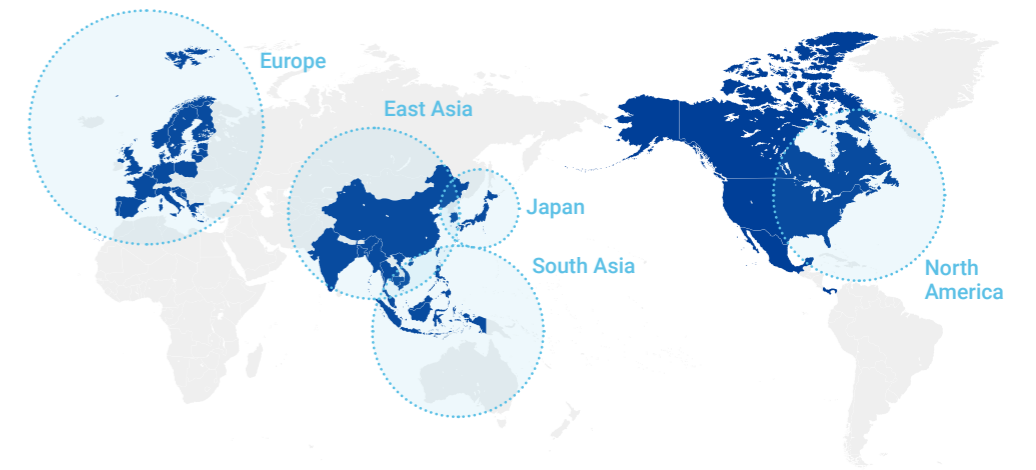
2024 Safety Activity Policy—Focus More on the Front Lines!

Based on the 2023 review, in 2024 we aim to step up ship-visiting activities and reduce ship-handling accidents and engine plant accidents. Specifically, we will extend the scope of ship-visiting activities, which have been focused on Japan until now, to include operations globally. These visits are conducted in summer and winter as part of safety campaigns. We will increase opportunities for face-to-face dialogue and raise safety awareness even further.

2024 Safety Targets

Eliminate major accidents and reduce downtime to at most 10 hours/ship/year

Regions and Countries in Which Ship Visits Are Planned in 2024





Decarbonization Initiatives

The pursuit of decarbonization initiatives is an important mission. We are advancing them not only to protect the environment but also to sustain growth as a company, maintain our competitiveness, and create a better future for society as a whole. Through ambitious decarbonization initiatives, the NYK Group will provide innovative solutions and continue to globally contribute to the realization of a sustainable society.

STRATEGY



Decoupling Business Growth from Environmental Impact

Takuya Koizumi
General Manager
Decarbonization Group

The significance of the NYK Group's decarbonization initiatives stems from an urgent need to address the ongoing problem of global climate change, which is a risk that could profoundly impact the world's economy, society, and environment, and in some cases even its security. There is no time to spare in formulating and implementing climate change countermeasures. The responsibility of the maritime shipping industry is particularly significant as it plays a central role in global trade and is indispensable for the day-to-day lives of people worldwide. As well as contributing to environmental protection, the acceleration of the NYK Group's decarbonization initiatives is an essential step toward the realization of a sustainable society.

Although the transition to a decarbonized society will not be easy, humanity no longer has the time to wait and see. Rather than setting goals that are within reach, we must set ambitious goals that may or may not be attainable. We must then face the necessity of vigorous advancement toward these goals. In other words, making excuses as to why we cannot do something is no longer acceptable. Instead, we must adopt a mindset that focuses on how things can be done, and we must continue considering this question as we work hard and take action. Amid such uncertainty, the courage to set goals and

take on ambitious initiatives will enable us to take large strides toward the future.

Against this backdrop, in November 2023 we announced the NYK Group Decarbonization Story. This story sets the new, extremely ambitious decarbonization target of reducing the NYK Group's Scope 1 and Scope 2 emissions by 45% compared with their fiscal 2021 level. Moreover, our ultimate target is to reach net-zero emissions by fiscal 2050, including Scope 3 emissions. To achieve the aforementioned targets, we will need to take all kinds of measures. These will include maximizing energy efficiency, using such alternative fuels as biofuels and ammonia, and utilizing carbon credits. In addition, we will pursue a multifaceted, all-round approach to decarbonization. As well as investing in R&D and technological innovation, we will build cooperative relationships with industries, governments, nongovernmental organizations, and research institutions and participate in various forms of co-creation with our customers, investors, suppliers, and Group companies.

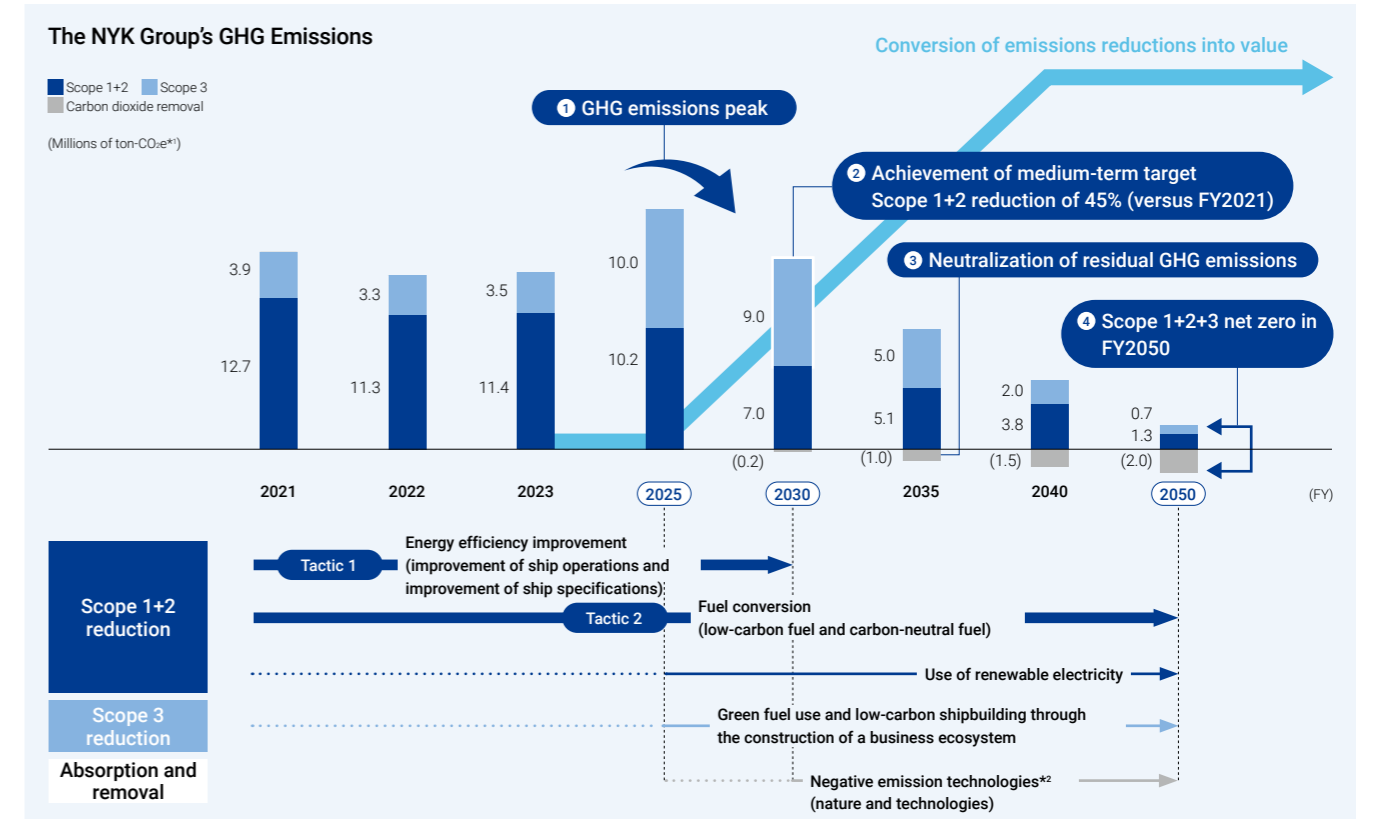
Meanwhile, the transition to a decarbonized society will bring business opportunities by creating new markets and customer demand to which we can cater and by allowing us to strengthen our competitive advantages. For example, the provision of new service menus for customers who require transportation services with low environmental impact will only be realized by the first movers in the advancement of environmental measures. Thus, being in the vanguard will be a source of differentiation from competitors. In addition, the development of carbon-neutral fuels, as well as the improvement of the efficiency of ship operations by using energy-saving technologies and digital technologies, has the potential to spur the creation of new technologies and business models. Such advances could become a growth engine of the NYK Group in the coming generation.

While maintaining and increasing its activities as part of society's infrastructure, the NYK Group will make low-carbon and decarbonized operations a competitive advantage. Aiming to seize the opportunities for growth that accompany social transformation, the Group will position this decoupling of business growth and environmental impact as its core strategy and forge ahead with decarbonization initiatives.

Conversion of emissions reductions into value

GHG emissions reduction initiatives

Scenario for Achieving Net Zero



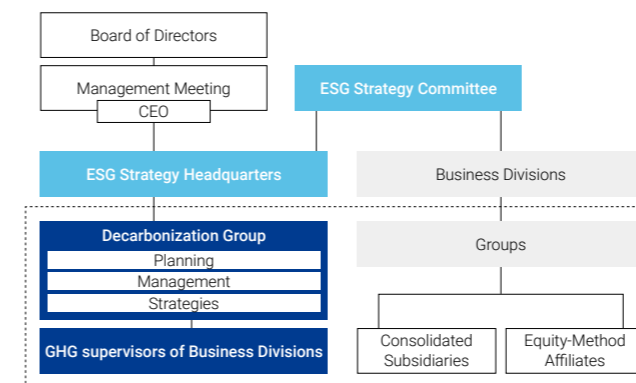
*1 CO₂e: CO₂ equivalent *2 Generic term for technologies that capture and remove CO₂ in the atmosphere or ocean

Promotion System and Process

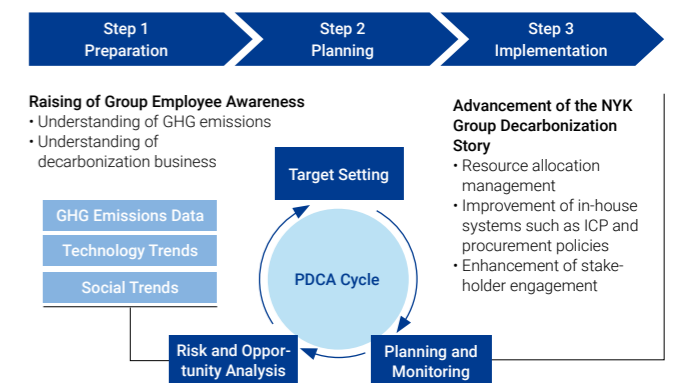
We have adopted a system based on a center of excellence. This approach separates policymaking and business execution. The Decarbonization Group, which belongs to the ESG Strategy Headquarters, is in charge of Companywide strategies, supports implementation by business divisions, monitors the progress of said implementation, and proposes improvements. We also assign GHG supervisors in each business division and manage the initiatives of their respective divisions.

Our strategies are of course advanced based on a plan-do-check-act (PDCA) cycle that entails analyzing risks and opportunities and monitoring the progress of initiatives. Moreover, emphasis is placed on preparatory phases, during which the understanding and awareness of Group employees as well as a healthy sense of urgency are fostered through workshops and in-house training.

Promotion System



Process





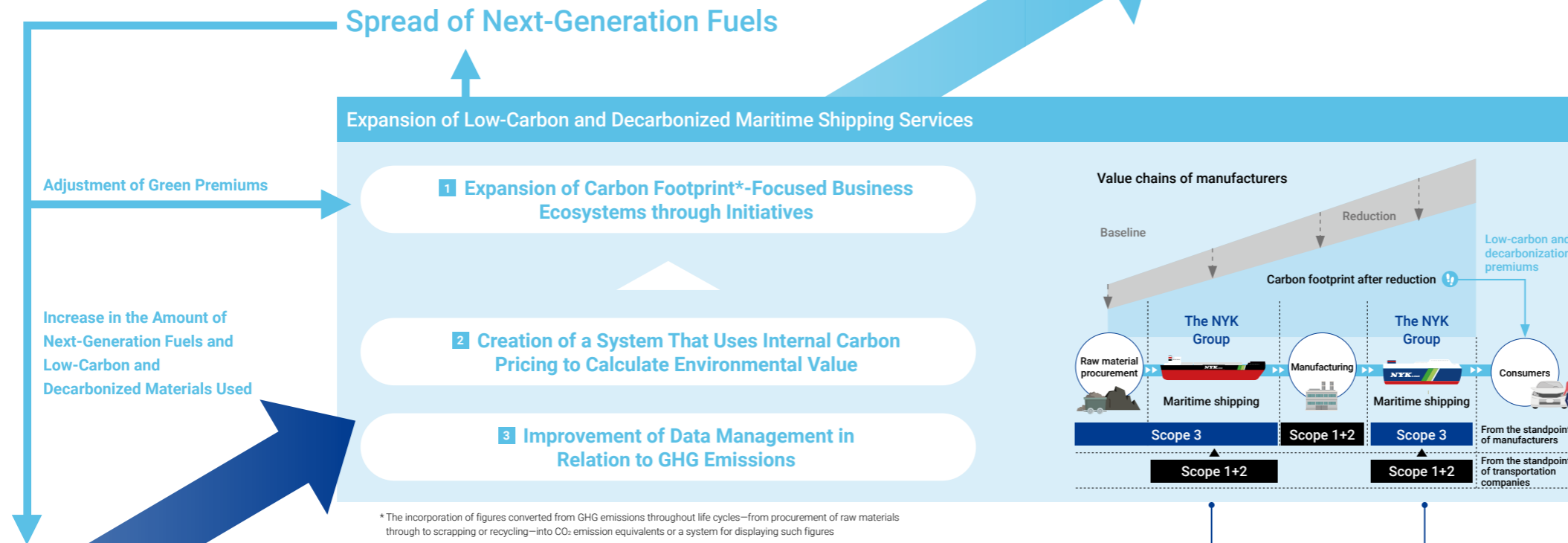
Overview of Our Decarbonization Strategy

We will tackle initiatives aimed at realizing net-zero GHG emissions. By rolling out these initiatives in the form of low-carbon and decarbonized maritime shipping services, the NYK Group will accelerate the decarbonization of society and enable the growth of the Group.

The NYK Group expects that its wide-ranging rollout of low-carbon and decarbonized maritime shipping services will increase the use of next-generation fuels and popularize them in society, leading to a gradual adjustment of green premiums. As a result, a broader range of companies throughout society will gain access to next-generation fuels. This will, in turn, further expand associated business ecosystems. By increasing the scale of rollouts of low-carbon and decarbonized maritime shipping services, the NYK Group aims to accelerate the pace of both its own corporate growth and society's decarbonization.

The spread of next-generation fuels will also increase the Group's ability to procure next-generation fuels as well as low-carbon and decarbonized materials in the course of business operations, thereby bringing the Group closer to the achievement of net-zero emissions.

Acceleration of
Social Decarbonization
Growth of the NYK Group



Creating Systems That Involve External Stakeholders

Jun Kato
Manager,
Decarbonization Promotion Team
Decarbonization Group

Measures to address climate change and other initiatives to transform society and make it sustainable are progressing. As part of these changes, new value is being created in logistics in general, including maritime shipping. In preparing the NYK Group Decarbonization Story, we considered the aforementioned trends as well as the use of indicators and regulations to measure this value and the establishment of free and reliable data distribution to support transformation.

Initiatives for the sustained corporate growth of the NYK Group should focus on three important goals. First, we must seize opportunities to participate in business ecosystems that comprise like-minded partners, as exemplified by the Green Corridors initiative. Our second goal is the creation of environmental value based on carbon footprints. Third, we need to support this value creation by enhancing data management related to GHG emissions.

Life cycle assessments, which evaluate the environmental impact of products throughout their supply chains and over their entire lives—from material procurement, manufacturing, transportation, and sale to use and scrapping—are becoming more widespread as a new yardstick. Therefore, the decarbonization of logistics, which is integrated into a wide variety of supply chains, is an urgent task.

The NYK Group is giving priority to the reduction of direct emissions (Scope 1) from business operations. These efforts center on fuel conversion and energy-efficiency improvements. We also want to promote the decarbonization of society as a whole. To this end, with respect to the upstream and downstream emissions of other companies (Scope 3), we will set organizational boundaries, gradually strengthen engagement, analyze the current status of GHG emissions, establish targets, prepare reduction plans, and realize proactive disclosure. Through a series of initiatives to convert emissions reductions into value, the NYK Group aims to utilize low-carbon and decarbonized operations as a competitive advantage that drives sustainable growth.

Initiatives Aimed at Net-Zero Emissions

GHG Emissions Reductions

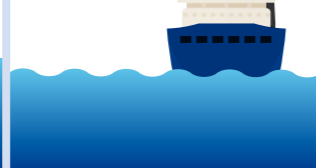
► Use of Low-Carbon and Decarbonized Materials in Shipbuilding



► Fuel Conversion
• Ammonia (P.36)
• LNG
• Biofuels



► Energy-Efficiency Improvement
• Improvement of ship operations
• Improvement of ship specifications

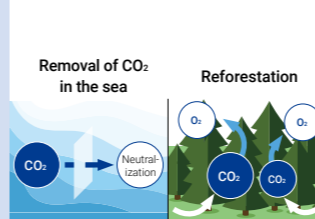


► Clean Scrapping of Ships
• Environmentally friendly ship recycling



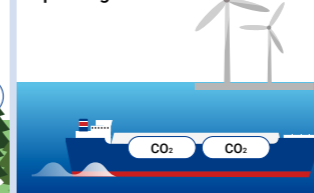
Absorption and Removal

► Negative emission technologies
• CO₂ absorption through reforestation
• Removal of CO₂ in the sea



Reduction Contributions

► CO₂ capture and storage and CO₂ transportation
► Offshore wind power generation





Expanding Low-Carbon and Decarbonized Maritime Shipping Services

To accelerate the transition to a decarbonized society, we are simultaneously pursuing a variety of initiatives. We will build new social infrastructure by co-creating with various stakeholders to implement and test hypotheses and refine them into sustainable systems that are compatible with society.

1 Expansion of Carbon Footprint-Focused Business Ecosystems through Initiatives

In switching to alternative fuels, the construction of business ecosystems that include not only fuel suppliers but also shippers is important. NYK Bulk & Projects Carriers Ltd. (NBP) is currently expanding a co-creation system through the utilization of the Chilean Green Corridors Network Project. In November 2023, NBP and Chilean state-owned copper producer CODELCO began studying the building of up to 15 ammonia-fueled Handymax bulk carriers, beginning from the second half of the 2020s. In February 2024, Chilean ammonium nitrate producer Enaex S.A. and NBP concluded a memorandum of understanding on joint research in relation to the feasibility of supplying green ammonia to ammonia-fueled vessels. This initiative will build a supply chain that makes, uses, and transports ammonia by linking Chile—which is an ammonia producer—with Japan and other countries of the Far East.



Ceremony for the conclusion of a memorandum of understanding with Enaex in Santiago, Chile

Also, in April 2024 NYK became a member of the Smart Freight Centre, an Amsterdam-based nonprofit organization that aims to reduce GHG emissions in the logistics sector. Together with overseas shipping companies and classification societies, we aim to establish a standard model for the calculation of GHG emissions from roll-on, roll-off ships and invigorate a carbon footprint-focused business ecosystem. Further, NYK and the Global Centre for Maritime Decarbonisation (GCMD) have jointly launched Project LOTUS, which is tasked with analyzing the impact of biofuels on engine performance and fuel delivery systems. GCMD has more than 100 participating partners and is based in Singapore, the world's largest bunkering hub. The project's aim is to spread knowledge of biofuel conversion to participating companies and lower the barriers to the adoption of low-carbon technologies. To this end, the project will establish guidelines for safe performance and calculate total costs, including the cost of maintenance during operations.



Joint launch of Project LOTUS with the nonprofit organization GCMD



2 Creation of a System That Uses Internal Carbon Pricing to Calculate Environmental Value

The NYK Group has introduced an internal carbon pricing (ICP) system, which assigns an in-house price to carbon that is used to encourage the advancement of decarbonization, identify profit opportunities and risks, and guide investment decisions. Through the use of ICP to link financial information and GHG emissions, we will visualize the value of emissions reductions, thereby realizing added value. Furthermore, we will standardize evaluation criteria across departments and projects to improve decarbonization governance and promote sound decision-making. ICP is reviewed every six months.

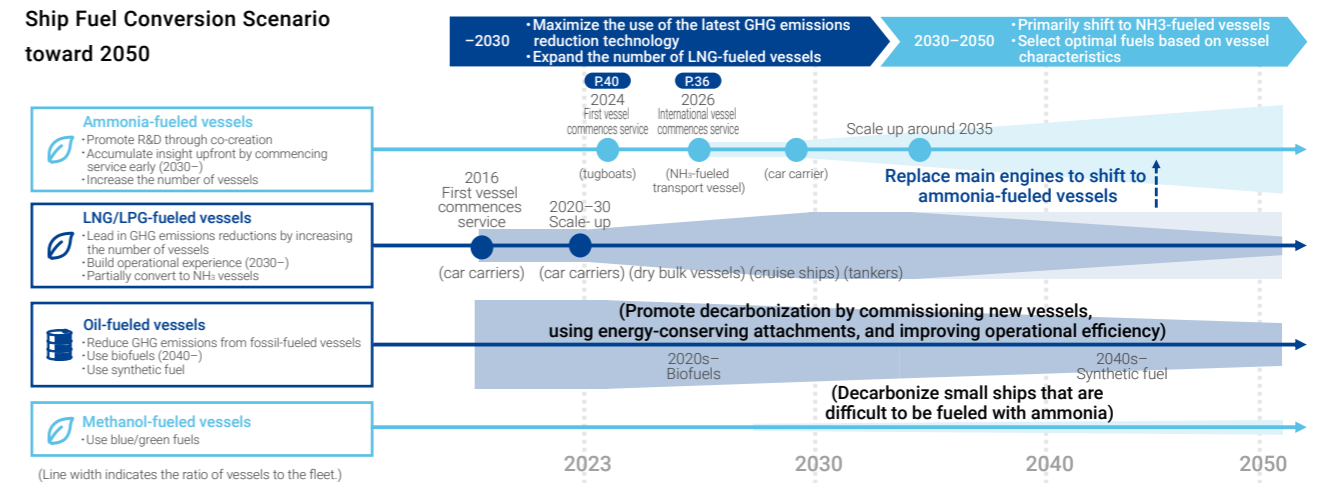
3 Improvement of Data Management in Relation to GHG Emissions

Management that accurately ascertains GHG emissions volumes provides important evidence when using carbon footprints and ICP. The NYK Group currently calculates Scope 1, 2, and 3 emissions and obtains assurance from a third-party verification organization. In 2023, with the support of NTT DATA Japan Corporation we established a system that compiles each category of Scope 3 data on a monthly basis. As a result, we can now quantitatively analyze GHG emissions, including Scope 3 emissions. With the aim of compiling more-accurate primary data on GHG emissions from ships, we are considering the practical application of satellite observation to gather data on emissions volumes.

Advancing Initiatives Aimed at Net-Zero Emissions

To achieve net-zero emissions, fuel conversion is critical. By introducing ammonia-fueled vessels and other next-generation fuel ships beginning from fiscal 2030 onward, we will accelerate GHG emissions reductions. Until then, we will move forward with the conversion to LNG and biofuels as a bridge solution that achieves our medium-term targets.

Ship Fuel Conversion Scenario toward 2050



Introducing LNG-Fueled Vessels and Expanding the Fuel Supply System

As of June 2024, we have placed orders for 35 LNG-fueled vessels, 20 of which have already been completed. As the number of LNG-fueled vessels that we can offer increases, in 2022 we established KEYS Bunkering West Japan Ltd. to strengthen relationships with customers and to augment the LNG fuel supply system. In March 2024, we introduced the first LNG bunkering vessel to operate in Japan's Kyushu and Setouchi regions. Going forward, we will help build a global value chain for LNG-fueled vessels.



LNG bunkering vessel KEYS Azalea

Using Biofuels for Existing Ships

We have confirmed the safety of biofuel use through short-term demonstration tests conducted since 2019. We are currently involved in a range of efforts aimed at resolving such issues as engine failures arising from the long-term use of biofuels, the quality of biofuels during long-term storage, and fuel procurement. In September 2024, we installed test engines to evaluate the safety of biofuels. By verifying the durability of the engines and testing biofuels derived from various raw materials, we will increase the number of usable biofuels and accelerate their practical application.



Long-term biofuel test run on board Tenjun, a very large crude oil tanker

Advancing Onshore Decarbonization Initiatives

We are working on a demonstration test to convert the power for cargo-handling machinery used at ports from diesel engines to hydrogen fuel cells. In May 2023, NYK concluded a five-way agreement with the Tokyo Metropolitan Government's Bureau of Port and Harbor, MITSUI E&S Co., Ltd., Iwatani Corporation, and UNI-X NCT Corporation, and a decision was made to conduct a project at the Oi Container Terminal. Through the conversion of cargo-handling machinery, the implementation of operations, and the establishment of a hydrogen supply system, the project will endeavor to promote the use of hydrogen in ports and harbors. NYK will continue working with stakeholders with the aim of achieving carbon-neutral container terminals in the ports of Tokyo and Kobe by 2040.

