

## Environment

Preservation of Marine Environment and Biodiversity

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- Relationship between the NYK Group and Biodiversity
- Risk Management

### Initiatives

- Dealing with Effluents and Waste from Ships
- Preventing the cross-border movement of living organisms
- Prevention of adverse effects from underwater noise and collisions with whales
- Forest maintenance and preservation activities
- Collaboration with External Organizations

# Preservation of Marine Environment and Biodiversity

## Governance

### Policy

As a company that operates mainly in the international shipping industry, the NYK Group recognizes its responsibility to protect the oceans and their inhabitants, and has identified "Preservation of Marine Environment and Biodiversity" as one of the environmental issues to be addressed in particular in the "NYK Group Environmental Vision," and is conducting marine environment and biodiversity preservation activities in line with the "NYK Group Environmental Policy."

In addition, in December 2023, we participated in the TNFD (Task Force on Nature-related Financial Disclosures) Forum,\* and in January 2024, we participated in the TNFD Early Adopters Declaration. With regard to the impact of our group's activities on the natural environment and biodiversity, we will disclose information in line with the recommendations of the TNFD by 2024, and aim for sustainable corporate growth by balancing corporate growth and biodiversity protection.

\* TNFD: The Task Force on Nature-related Financial Disclosures is an international initiative that aims to create a framework for companies and organizations to assess and disclose the impact of their economic activities on the natural environment and biodiversity. The TNFD Forum comprises companies, financial institutions, research institutions, etc. that participate to support discussions at TNFD and provide assistance in the construction of frameworks.

### Organization

Please see "Environmental Management" for the governance structure of environment-related issues, including marine environment and biodiversity conservation.

For more information, click on the link below.

[P.029 Environmental Management](#)

## Strategies and Risk Management

### Relationship between the NYK Group and Biodiversity

The NYK Group is aware that all processes, such as procuring, operating, and disposing of ships, and we are working to prevent marine pollution and preserve risk affecting biodiversity, by implementing various measures such as adopting environmentally friendly technologies and implementing environmentally friendly ship scrapping.

### Risk Management

Our group is aware that through our main business of marine transport, there is a possibility of causing marine pollution due to accidents or the discharge of pollutants, and that oil pollution or the discharge of pollutants resulting from maritime accidents can be a risk to business continuity, not only resulting from the burden of environmental restoration costs but also a loss of trust from stakeholders.

To deal with these risks, our group strictly complies with environmental laws and regulations and strives to prevent environmental pollution. We also have a system in place to deal with acute and urgent major accidents.

For more information, click on the link below.

[P.018 No Growth Without Safety](#)

We also manage the environmental impact of pollutants and waste generated by ship operations, as well as the cross-border movement of marine organisms, in accordance with international rules.

## Initiatives

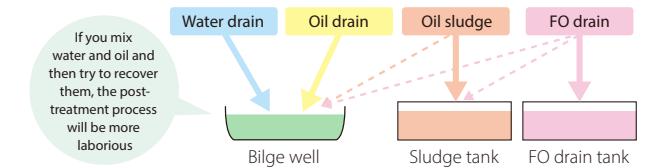
### Dealing with Effluents and Waste from Ships

#### • Lobbying for the establishment of international guidelines for bilge systems

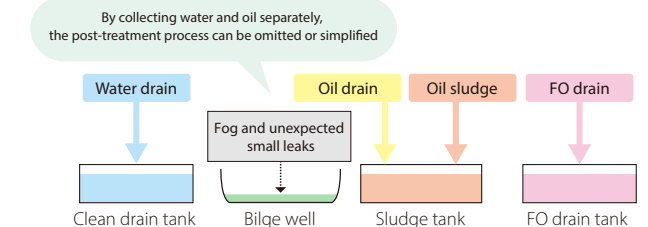
As a result of ship operations, oily water mixtures (bilge) containing a mixture of water, oil, and other substances accumulate at the bottom of engine rooms, etc. In 1996, we devised a unique system that greatly reduces the amount of bilge generated, and we have been using it on ships managed by us.

As a company that promotes environmental initiatives in the shipping industry, we proposed this concept to the International Maritime Organization (IMO) as a Japanese government proposal, and it was adopted as an international guideline in March 2006.

#### ■ Conventional bilge treatment



#### ■ NYK Standard Bilge System: IBTS (Integrated Bilge Treatment System)



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### ● Prevention of marine pollution caused by human waste

Ships engaged in international voyages are required to install sewage treatment equipment as stipulated in the International Convention for the Prevention of Pollution from Ships (MARPOL Convention) Annex IV, and the waters in which discharging untreated sewage is prohibited are also stipulated. However, it was reported to the IMO that the sewage treatment equipment installed on ships was not performing to the level stipulated in the convention, and there was a possibility that it was having a negative impact on the marine environment, so discussions are currently underway to revise the convention and guidelines.

We are a member of the working group of the Japan Ship Technology Research Association, and we cooperate in collecting data on effluent from sewage treatment equipment on the ships we operate. We also express our opinions at working group meetings. In addition, as a representative of the members of the Japanese Shipowners' Association, we participate in the Marine Environment Protection Committee (MEPC), which is an IMO committee.

### Preventing the cross-border movement of living organisms

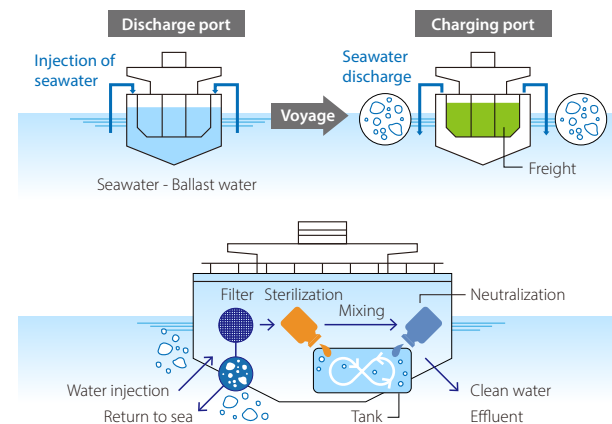
#### ● Preventing the cross-border movement of organisms through ballast water

In the international shipping industry, the IMO is taking the lead in creating a framework for addressing biodiversity preservation, just as it has for GHG reduction, and the most focused effort has been on preventing the cross-border movement of aquatic organisms associated with the uptake and discharge of ballast water into and from ships. Since the adoption of the "International Convention for the Control and Management of Ships' Ballast Water and Sediments" in February 2004, our group has been working on the issue of

ballast water in anticipation of the convention coming into force.

In September 2017, the Ballast Water Management Convention officially came into force, aiming to prevent the cross-border transfer of aquatic organisms that affect the marine environment, for all ships engaged in international shipping around the world. Under this treaty, all ships are required to install a "ballast water treatment system,"\* which is a device that sterilizes aquatic organisms that have entered the ballast water. The NYK Group will continue to systematically install ballast water treatment equipment and is planned to complete installation on all ships by 2024.

#### ■ Ballast water image



At present, the Ballast Water Management Convention is being revised, and as a member of the Japan Ship Technology Research Association, we are cooperating in the collection of data on ballast water discharge from the ships we operate.

\* Ballast water treatment system: Seawater (ballast water) is used in ships to maintain ship strength and stability, but oceangoing vessels transport not only the ballast water but also the marine organisms within. When the cargo is unloaded, seawater is injected as ballast water and then discharged when the cargo is loaded. Sterilizing ballast water prevents disruption of the ecosystem.

#### ● Preventing organisms from crossing the border due to adherence to the ship's bottom

To prevent the impact on ecosystems caused by the cross-border movement of organisms attached to ship hulls, the Guidelines for the Management of Ship Biofouling was approved for the first time at the 62nd Marine Environment Protection Committee (MEPC 62) held by the IMO in 2011. Since then, reviews have been carried out to improve practicality and effectiveness, and we have expressed our opinions as a member of the working group of the Japan Ship Technology Research Association, and have participated in the MEPC as a representative of the members of the Japanese Shipowners' Association. At MEPC 80, held in July 2023, the Guidelines for the Management of Ship Biofouling were revised to include the frequency of underwater inspections of each part of the hull in accordance with the application of an anti-fouling system (AFS), and the implementation of underwater cleaning\* based on the results of these inspections.

At MEPC 80, it was agreed to create guidance for underwater hull cleaning, and discussions are currently underway. Our company is also expressing its opinions as a member of the working group of the Japan Ship Technology Research Association.

\* By cleaning and removing organisms that have attached to the underwater parts of the hull while the ship is docked at the port, we prevent the cross-border movement of these organisms.

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### Prevention of adverse effects from underwater noise and collisions with whales

At MEPC 66 in 2014, the IMO approved the "2014 Guidelines for the Reduction of Underwater Noise from Commercial Ships to Address the Adverse Effects on Marine Life" for the first time to reduce underwater noise and address the adverse effects on marine life. Since then, reviews have been carried out to improve practicality and effectiveness, and we have expressed our opinions as a member of the working group of the Japan Ship Technology Research Association, and cooperated with the collection of data on underwater noise. At MEPC 80, held in July 2023, revised guidelines were adopted, including a recommendation to prepare a plan for management of underwater noise.

In addition, in waters off the coasts of the United States and Canada, ships are required to slow down to avoid collisions with whales, and our group collects information on the period and areas of the regulations, which change every year, and takes measures such as communicating this information to the ships we operate.

### Forest maintenance and preservation activities

Based on the "Cooperative Agreement on Regional Revitalization through Forest Management" concluded with the city of Gotemba in Shizuoka Prefecture in April 2022, we began maintenance and preservation activities to restore biodiversity to the forest, and in May 2024, we opened "Yuunomori." Based on the idea that "a rich forest nurtures a rich sea," our group aims to create a forest with rich biodiversity through mixed forestation and other methods to contribute to the restoration of forest functions.

For more information, click on the link below.

**P.104** The Challenge to Solve Social Issues

### Collaboration with External Organizations

#### • Endorsement of "Keidanren Initiative for Biodiversity Conservation"

The NYK Group endorsed the "Keidanren Declaration on Biodiversity" and participated as a "Promotion Partner" in December 2009 and has also been taking part in the "Japan Business and Biodiversity Partnership" since October 2010. In line with the declaration and guidelines, we will conduct our business activities.

**Link** For more information, click on the link below.

▶ **Keidanren Action Guidelines for Biodiversity Conservation**  
<https://www.keidanren.or.jp/en/policy/2023/082.html>

#### • Endorsed the United Nations Global Compact's (UNGC) "Sustainable Ocean Principles"

We became the first Japanese company to endorse the United Nations Global Compact's "Sustainable Ocean Principles," and we have expressed our commitment to promoting initiatives for a sustainable ocean. These principles represent a framework of responsible corporate groups that transcend business domains and regions, announced by the UN Global Compact in September 2019, based on the recognition that it is urgent to protect and restore the oceans, which are deteriorating rapidly due to rising temperatures, acidification, the depletion of natural resources, and pollution from land and sea. A total of 150 companies worldwide have signed the principles, and the total market capitalization of the companies that have signed is 1 trillion euros.