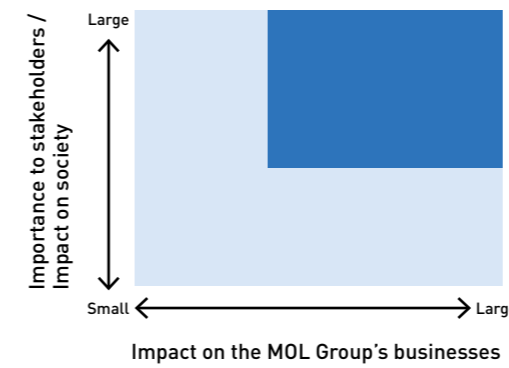


Overview of MOL's Sustainability Issues (Materiality)

The marine transport services provided by the MOL Group play an indispensable role as social infrastructure that supports day-to-day life. In fiscal 2019, upon evaluating the impact of our business activities on society from both positive and negative perspectives, we identified five social issues that need to be given priority as Sustainability Issues (Materiality). We believe that tackling Sustainability Issues will contribute to the achievement of the SDGs as well as the medium- and long-term growth of our business.

Process for Identifying Materiality

The Sustainability Promotion Project Team, which was formed in 2018, took the lead in discussions according to the following procedure, and the results were approved by the Executive Committee in April 2019.



We identify social issues of great importance to both society and the business of the MOL Group and specify them as the Group's five Sustainability Issues.

- Value-Added Transport Services
- Marine and Global Environmental Conservation
- Innovation for Development in Marine Technology
- Human Resource Cultivation and Community Development
- Governance and Compliance to Support Businesses

Initiatives of the Sustainability Promotion Project Team

MOL implements a range of initiatives to raise awareness of Sustainability Issues for each and every employee in our day-to-day operations. In fiscal 2019, the Companywide Sustainability Promotion Project Team focused on four of our businesses, analyzed each one's impact on society along value chains, and examined the additional value that can be provided to our customers in terms of sustainability.

Sustainability Issues (Materiality)	Themes / Targets / Goals	Risks (Negative impact in the event the goal on left is not achieved)	Opportunities (Positive impact in the event the goal on left is achieved)	Key initiatives associated with Sustainability Issues	SDGs to which we contribute via our initiatives (numbers in parentheses are 169 corresponding targets)
Value-Added Transport Services P42	<ul style="list-style-type: none"> Safe and reliable transport Large-volume, bulk transport services High-quality transport services Elimination of maritime accidents Elimination of cargo accidents Prevention of work-related injuries 	<ul style="list-style-type: none"> Slowdown in economic activities and logistics Loss of trust in the Company from society Economic burden and damage to assets due to an accident Risk of casualties as a result of an accident 	<ul style="list-style-type: none"> Contribution to active economic activity and creation of new transport demand Contribution to establishment of energy infrastructure in emerging countries Long utilization of vessels through appropriate ship maintenance, leading to enhancement of competitiveness Cultivation of operational insight 	<ul style="list-style-type: none"> Providing safe and stable transport just as usual even amid the COVID-19 pandemic 	<ul style="list-style-type: none"> Promoting inclusive and sustainable industrialization (9.2) and alleviating poverty (1.1, 1.2) Supplying modern and sustainable energy to developing countries (7.b) Preventing marine pollution (14.1) Environmentally sound management of chemicals and waste (12.4) Promoting partnerships with the public and private sectors (17.17)
Marine and Global Environmental Conservation P46	<ul style="list-style-type: none"> Prevention of marine pollution Promotion of measures to mitigate climate change Reduction of air pollution Response to environmental regulations Realization of transport means with low environmental impact 	<p>Climate Change</p> <ul style="list-style-type: none"> Decline in energy transport volume Delay in response to changing transport demand and trade dynamics Obstruction to safe operation caused by extreme climate conditions <p>Response to Regulations</p> <ul style="list-style-type: none"> Disruption to vessel operation Loss of trust in the Company from society Economic burdens such as fines and sanctions 	<ul style="list-style-type: none"> Incorporation of new transport demand and establishment of new transport model that quickly captures changes in cargo movements Development of new sailing routes (Arctic Ocean) 	<ul style="list-style-type: none"> Implementation of initiatives to achieve the goals set forth in MOL Group Environmental Vision 2.0 	<ul style="list-style-type: none"> Improvement of energy efficiency (7.3), promotion of clean energy use (7.a) Mitigation of climate change (13.3) Preventing marine pollution (14.1) and protecting biodiversity (14.2) Promotion of sustainable forest management (through biomass fuel transport) (15.2) Promoting partnerships with the public and private sectors (17.17)
Innovation for Development in Marine Technology P50	<ul style="list-style-type: none"> Promotion of LNG fuel usage Advancement in the Wind Challenger Project Realization of autonomous sailing 	<ul style="list-style-type: none"> Obsolescence of existing technologies Inability to respond to future shortage of seafarers 	<ul style="list-style-type: none"> Reduction of environmental impact by the widespread use of LNG fuel and the application of natural energy Improved competitiveness of offshore businesses and marine transport Enhanced ability to respond to environmental regulations 	<p>Utilization of digital technologies to deliver:</p> <ul style="list-style-type: none"> The provision of stress-free services Strengthened marketing and vessel management and operation support 	<ul style="list-style-type: none"> Improvement of energy efficiency (7.3), promotion of clean energy use (7.a) Improvement of sustainability through increased resource-use efficiency and greater adoption of clean technology (9.4) Efficient use of natural resources (12.2) Mitigation of climate change (13.3) Prevention of marine pollution (14.1) Promoting partnerships with the public and private sectors (17.17)
Human Resource Cultivation and Community Development P52	<ul style="list-style-type: none"> Employment of high-quality seafarers Development of human resources Pursuit of work-style reforms Promotion of diversity Contribution to regional development 	<ul style="list-style-type: none"> Loss of outstanding human resources Decline in productivity 	<ul style="list-style-type: none"> Improvement of human resource competitiveness through recruitment of outstanding talent and improved work productivity Promotion of innovation and response to business opportunities Incorporation of various ideas by attracting a diverse pool of talent from all over the world Economic development and a higher standard of living in emerging countries 	<ul style="list-style-type: none"> More effective operation of the new personnel systems Cultivating globalized human resources Management of MMMA, a maritime academy in the Philippines 	<ul style="list-style-type: none"> Providing access to high-quality technical and vocational education (4.3) Ensuring women's full participation and equal opportunities for leadership (5.5) Providing productive employment and rewarding, decent work (8.5) Promoting partnerships with the public and private sectors (17.17)
Governance and Compliance to Support Businesses P63	<ul style="list-style-type: none"> Adherence to fair business transactions Prevention of bribery and corruption Establishment of information security structure Prevention of harassment Protection of human rights 	<ul style="list-style-type: none"> Business continuity risks due to insufficient governance and internal controls Corrupted corporate culture 	<ul style="list-style-type: none"> Highly transparent and fair management Decision-making based on appropriate risk management 	<ul style="list-style-type: none"> Timely and appropriate crisis response to COVID-19 Verification of the directors' compensation system 	<ul style="list-style-type: none"> Ensuring equal opportunity (10.3), achieving inclusion regardless of attributes (10.2) Reduction in bribery (16.5) Promoting partnerships with the public and private sectors (17.17)

Value-Added Transport Services

In today's globalized world, people's lives are underpinned by goods shipped from all over the world. In addition, the transport of goods from where supply is to where demand is creates added value and generates economic activity. The MOL Group supports people's lives and industries around the world through the transport of a variety of goods, such as resources, energy, raw materials, and products. As one of the world's main logistics arteries, constantly providing safe and high-quality transport is our greatest responsibility and the very reason for our existence.



The MOL Group—Transport on a Grand Scale

Container units transported annually (by ONE in fiscal 2019)

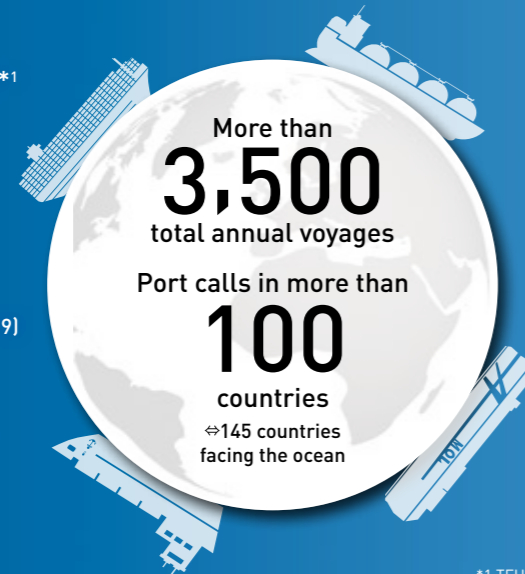
Approx. **12** million TEU*1

⇨ Global container cargo movement**2 (2019)
Approx. 147 million TEU

Annual LNG shipments (2019)

Approx. **70** million MT

⇨ Japan's LNG imports**3 (2019)
Approx. 77 million MT



Annual iron ore shipments (fiscal 2019)

Approx. **72** million MT

⇨ Japan's iron ore imports**4 (2019)
Approx. 120 million MT
China's iron ore imports**5 (2019)
Approx. 1.07 billion MT

Number of vehicles transported annually (fiscal 2019)

Approx. **3.8** million

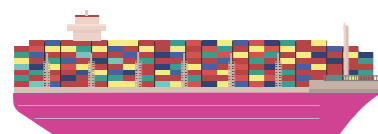
⇨ Japan's vehicle exports**6 (2019)
Approx. 4.5 million

*1 TEU stands for Twenty-foot Equivalent Units
*2 Source: Japan Maritime Center
*3 Source: IHS Markit
*4 Source: Trade Statistics of Japan (World Trade Atlas)
*5 Source: China Customs (World Trade Atlas)
*6 Source: Ministry of Finance

Overwhelming marine transport capacity (for mainstay Asia-North American West Coast routes)

Marine transport: In the case of 14,000 TEU containerships

Air transport: In the case of Boeing 747-8F aircraft



Shipping capacity

Approx. **139,000** MT

Approx. **130** MT

Shipping time

Approx. **10** days

Approx. **9** hours

Percentage of marine transport in Japan's trade volume*7

99.6%

Percentage of marine transport in international logistics*8

Approx. **90%**

*7 Source: SHIPPING NOW 2020-2021, Japan Maritime Public Relations Center
*8 Source: International Chamber of Shipping

Strong Commitment to Safe Operation

When it comes to fulfilling our social mission as a main artery of global logistics, safe operation is one of our most important responsibilities, which we must keep striving for without any compromise. In pursuit of efficiency and economy, cargo ships have gradually grown larger over time. At the same time, however, the magnitude of the risk posed by a single accident has grown correspondingly larger. Regrettably, the Group suffered four serious marine accidents in 2006, which caused a great deal of inconvenience for our stakeholders. We take these accidents very seriously and have conducted rigorous investigations to identify the causes of those accidents and prevent their recurrence. We also

expanded a range of initiatives and measures, such as fostering a culture of safety shared throughout the Group, whether on land or at sea, further strengthening education and training, making organizational structure reforms, and establishing the Safety Operation Supporting Center (SOSC) that provides continuous support to operating vessels 24 hours a day. Regardless of how much effort we exert, however, safe operation is a never-ending theme. Keeping in mind the lessons learned from past accidents, each and every officer and employee of the MOL Group maintains keen awareness and works together to become the world leader in safe operation.

Organizational Structure Supporting Safe Operation

The Operational Safety Committee, chaired by the president, deliberates and determines basic policies and measurements for ensuring and thoroughly enforcing the safe operation of all Group vessels. In addition, the chief safety officer (CSO) is delegated by the president to supervise strategy planning and policy implementation to instill and ensure high levels of

safety in the overall business of the MOL Group and provide necessary advice to sales units' director generals and executive officers. The Safety Operations Headquarters formulates specific measures related to Companywide safe operations, which are implemented by their respective departments.

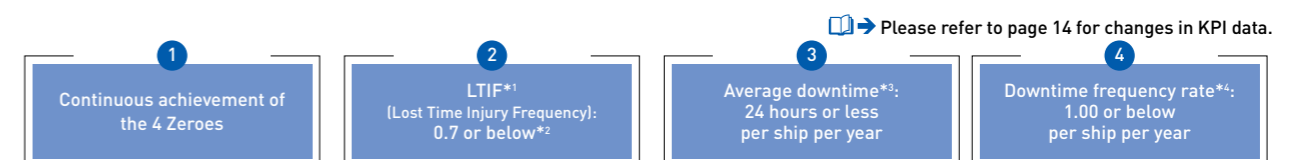
Organizational Structure Supporting Safe Operation

Operational Safety Committee	Safety Operations Headquarters	
Chairman: President Vice-Chairman: Director General of the Safety Operations Headquarters	Marine Safety Division Smart Shipping Division Marine Technical Management Division	LNG Marine Technical & Ship Management Strategy Division Ship management companies (MOL Ship Management Co., Ltd. and MOL LNG Transport Co., Ltd.)

KPIs for Ensuring Thoroughly Safe Operation

To visualize the processes for achieving safe operation, MOL has adopted "4 Zeroes" (zero serious marine incidents, zero oil pollution, zero fatal accidents, and

zero serious cargo damage) as one of its goals. We also have the KPIs listed below and work to reduce numbers for each.



*1 Number of work-related accidents per one million hours worked. In the scope of calculations, we originally included only workplace illnesses and injuries requiring disembarkation from the ship. From fiscal 2015, we tightened the LTIF criteria, which now includes any workplace illness or injury that prevents a worker from resuming even a reduced workload on that day, regardless of whether the illness or injury requires disembarkation.
*2 From fiscal 2020, we have changed the target value for LTIF to 0.5 or below, which is even more stringent.
*3 The amount of downtime due to mechanical malfunction or accident per ship per year
*4 The number of mechanical malfunctions or accidents that result in downtime per ship per year

WAKASHIO Grounding and Oil Spill

The WAKASHIO, a Capesize bulker that MOL chartered from a subsidiary of Nagashiki Shipping Co., Ltd. (the ship owner), ran aground off Mauritius and became unable to navigate under its own power on July 25, 2020. The vessel was en route from China to its next destination in Brazil via the Indian Ocean. Immediately after the accident was reported, MOL provided support to the ship owner in responding to the accident and containing the situation. Despite attempts to refloat the vessel and remove its fuel oil, progress was hampered by severe winter sea conditions as well as COVID-19 countermeasures and geographic constraints. Eventually, on August 6, local time, one of the ship's fuel tanks ruptured, causing about 1,000 MT of oil to spill out. Consequently, the accident ended up having an enormous impact on the local aquatic and shore environment. MOL will continue to coordinate with authorities in Mauritius, the Japanese government, and related organizations and make efforts to contain the situation by providing the personnel and materials necessary for cleaning up the oil spill. In conjunction with these efforts, we will establish preventive measures.

Operation of the Safety Operation Supporting Center (SOSC)

Based on the lessons learned in the accident that occurred in 2006, under the motto “Never let the captain get isolated,” we established the Safety Operation Supporting Center (SOSC) within the Head Office in 2007. The center supports safe operations 24 hours a day, 365 days a year.

Since MOL Group vessels criss-cross the world’s oceans, they need to respond effectively not only to adverse weather conditions such as stormy weather, tropical depressions, and frozen sea routes but also to numerous difficult situations, such as political instability in the Middle East. In recent years, well-coordinated operations between land and sea have become even more important, with climate change leading to larger tropical cyclones, and deteriorating political and economic conditions in some regions bringing greater threats of terrorism and piracy.

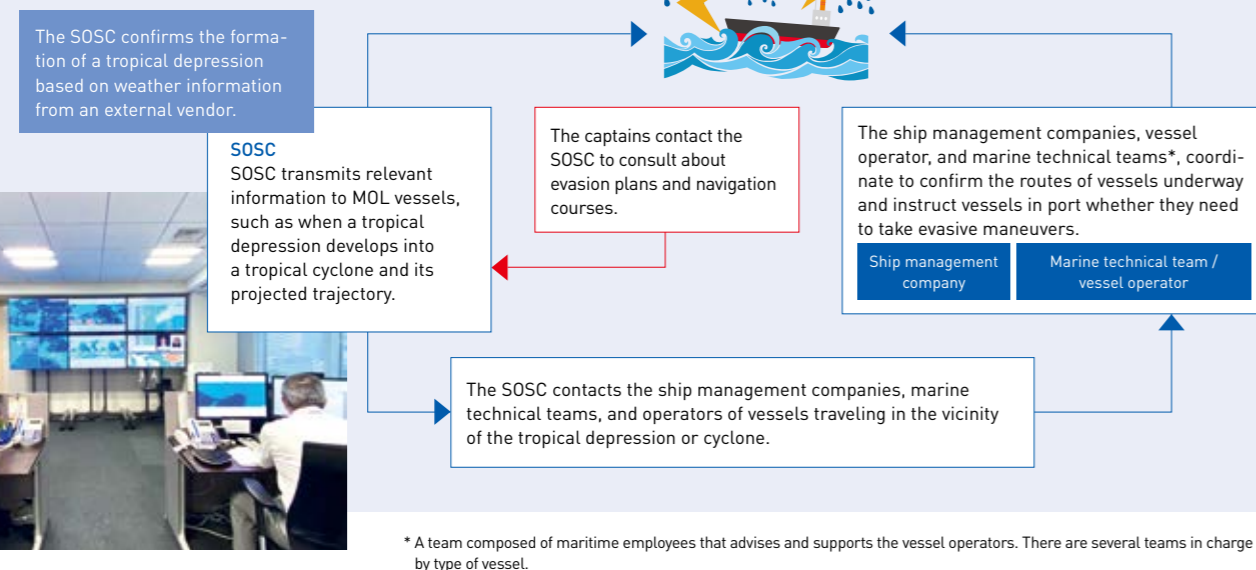
With procedures in place to “never let the captain get isolated,” the SOSC ascertains these risks in real time and keeps in touch with the vessels, vessel management companies, marine technical teams, and

vessel operators. Staffed at all times by two marine technical specialists including an experienced MOL captain, the center gathers all sorts of information relevant to vessels underway, including the itineraries of the approximately 800 vessels operated by the MOL Group, weather information, and domestic and international news media, and is always ready to offer timely information whenever necessary. It also provides individual advice for vessels in high-risk situations and consults with their captains. In the aforementioned ways, the SOSC makes every effort to prevent serious accidents.

Various Risks Surrounding Marine Vessels

Weather-Related Risks	<ul style="list-style-type: none"> • Severe weather • Tropical cyclones • Sea ice and icebergs • Frozen river ports
Geopolitical Risks	<ul style="list-style-type: none"> • Political unrest • Piracy • Experimental missile launches
Other Risks	<ul style="list-style-type: none"> • Infectious diseases • Earthquakes and tsunamis

Example of SOSC Functions: Dealing with a tropical depression



Procedures and Preparations to Deal with Marine Incidents

The MOL Group has compiled its own response manual to deal with emergencies involving serious marine incidents and makes it available to all employees at all times. Moreover, we regularly conduct emergency response training with MOL-operated vessels during sailing, simulating various situations, such as fires, water immersion, piracy, and acts of terrorism. Once a year, we conduct tabletop drills, which involve MOL’s president, relevant corporate officers, and representatives of relevant departments and ship management companies, vessels, and Group companies. The Coast Guard and the media also cooperate with these drills. In November 2018, we conducted a tabletop drill

simulating the collision of an LNG carrier with another vessel near the Akashi Kaikyo Bridge, and in October 2019 we conducted a drill simulating a fire on a containership in Ise Bay. Through these efforts, the Group will strengthen its entire emergency readiness framework.



Message from the Chief Safety Officer (CSO)

Renewing our Dedication to Safety

In August 2020, regrettably, the WAKASHIO, a Capesize bulker chartered by MOL, ran aground and spilled oil off Mauritius. Although the ship was a charter from another owner, in my view all MOL Group officers and employees need to take this incident as seriously as if it had been one of our own and completely re-establish our mindset on safety with a humble attitude. Safety is not something achieved merely by the efforts of a few people directly involved in vessel operations. And a culture of safety is not something that can be created overnight. Safety cannot be achieved unless each and every officer and employee on land or at sea and in both the sales and corporate divisions remains constantly vigilant. With this in mind, we will rigorously tackle safety measures with renewed commitment.

Masanori Kato

Managing Executive Officer
Chief Safety Officer



Initiatives to Foster a Safety-Focused Culture

Partnership between Our Sales Divisions and Our Maritime Employees

At MOL, maritime employees serve in onshore office positions at regular intervals. Some of them are assigned to the Marine Technical Management Division or the LNG Marine Technical & Ship Management Strategy Division, where they communicate daily with our sales divisions and provide safety and other marine technical support.

Onboard Training

Achieving safe operation requires enhanced safety awareness within the entire Company, including land-based employees. By encouraging employees to train on board our vessels for two to three weeks, MOL enables them to gain knowledge and hands-on experience of vessels and frontline operations.

Safety Campaigns

MOL takes a variety of measures to provide opportunities for officers and employees on land and at sea to think about safety together. During our safety campaigns, land-based officers and employees visit the ships and exchange opinions on accident prevention with crew members in charge of on-site safety. Since fiscal 2017, we have been holding discussions under the main theme “Stop and Think More” to encourage crew members to pause and consider the correct action when they have any concerns or doubts while underway at sea. The information and suggestions obtained during our safety campaigns are shared within MOL and between vessels operated by the Company and utilized to further strengthen our operational safety systems.

Safety Conferences

From February to May each year, we hold MOL Safety Conferences at five locations in Japan, the Philippines, Croatia, India, and Russia—the countries that most of our maritime employees come from. We exchange opinions with the crews that work on board our vessels through presentations of our safety measures and reviews of accidents that have previously occurred on our vessels.

Operational Safety Workshops

MOL’s Marine Safety Division regularly holds Operational Safety Workshops for land-based officers and employees as forums aimed at encouraging recognition of the fact that safe operation is not merely something entrusted to onboard crews, but something in which each and every one of our employees is involved. In fiscal 2019, we held these events five times for executives and employees of Group companies in Japan and overseas, and a total of more than 300 people attended. The workshops focused on such topics as the role of safety campaigns, our history of continuing to encourage land-based employees to visit our vessels, and case studies on how to avoid tropical depressions.



MOL Safety Conference at Vladivostok in 2019

Marine and Global Environmental Conservation

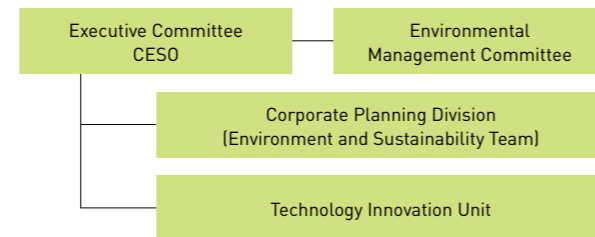
It is the societal mission of the MOL Group to take the lead in resolving common environmental problems of humankind such as climate change, air pollution, and biodiversity disruption as a participant in our world. Not only minimizing the environmental impact of the MOL Group's business activities, we also work on providing solutions to environmental problems as an important business opportunity. Placing "Promotion of environmental strategies and development of the emission-free business into a core business" as one of the core strategies to achieve our management vision, we are actively promoting initiatives in the environmental field.



Environmental Management Structure

The Environmental Management Committee, which is a subordinate organization of the Executive Committee, formulates medium- to long-term environmental goals, and reviews the progress on our goals and how we are pushing forward the environmental and zero emission projects. Furthermore, in April 2020 we established the role of the chief environment and sustainability officer (CESO), who oversees the planning and implementation of environmental strategies, as well as a new specialized team within the Corporate Planning Division to take charge of the hands-on work.

The Technology Innovation Unit conducts environmental initiatives from a technology and ICT perspective.



➡ Please refer to page 38 for details on the chief environment sustainability officer.

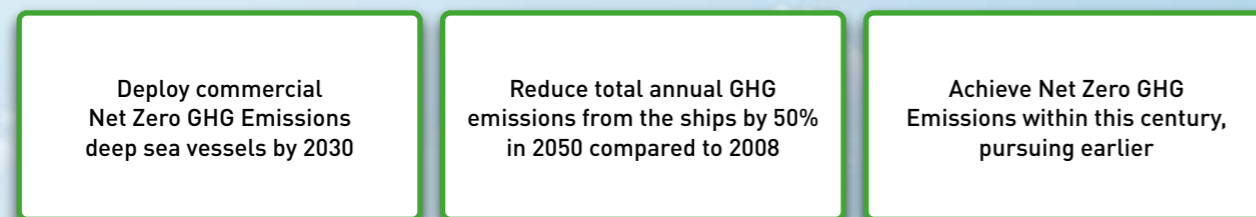
To Curtail Greenhouse Gas (GHG) Emissions: Enactment of MOL Group Environmental Vision 2.0

With the ever-increasing momentum to prevent climate change since the Paris Agreement came into force, in April 2018 the IMO (International Maritime Organization) adopted "IMO strategy on reduction of GHG emissions from ships," which comprehensively set out international shipping GHG reduction targets and measures to achieve them. This strategy is the

first in the world to commit to achieving zero GHG emissions during this century in a single internationally spanning sector. In response, we also reviewed our Environmental Vision 2030, formulated in April 2017, and have newly enacted MOL Group Environmental Vision 2.0, which makes clearer commitments, including the attainment of IMO objectives.

MOL Group Environmental Vision 2.0

The MOL Group is committed to achieve sustainable "Net Zero GHG Emissions" through collective efforts with all capabilities.



Previous reduction targets set out in Environmental Vision 2030 (established in fiscal 2017)

The MOL Group targets reduction of GHG emissions per unit load by 25% by 2030 and by 50% by 2050 compared to fiscal year 2014" (efficiency improvement target).

Initiatives to Achieve the Goals Set Forth in MOL Group Environmental Vision 2.0

Goals	Initiatives
1 Adoption of Clean Alternative Fuels	<ul style="list-style-type: none"> Promoting LNG fuel usage Study and adoption of next-generation zero-emission fuels to succeed LNG fuels <p>MOL is carrying out simultaneous studies on various clean alternative fuels. For example, LNG is a fossil fuel, but it can reduce CO₂ emissions compared to conventional heavy oil, and we therefore consider it an effective alternative fuel that is ready for immediate use. However, since we cannot achieve our goals with LNG fuel alone, we will also consider other next-generation fuels, specifically synthetic methane from methanation, ammonia, and electric ships, among other possibilities. Regarding measures for the use of synthetic methane as vessel fuel, we joined Japan's Carbon Capture & Reuse (CCR) Study Group* in fiscal 2019 and launched a multi-industry-spanning working group.</p> <p>* The CCR Study Group is a body to solicit CCR technologies from multiple industries for feasibility studies. CCR technologies provide alternative energies by combining CO₂ emitted from industry and hydrogen produced using renewable energy.</p>
2 Adoption of Energy-Saving Technologies	<ul style="list-style-type: none"> Actual installation of Wind Challenger systems Adoption of other new technologies <p>➡ Please refer to page 35 for further details on the Wind Challenger Project.</p>
3 Enhancement of Operational Efficiency	<ul style="list-style-type: none"> Reduction of fuel consumption via real-time monitoring of vessel operational status <p>To further promote the measures we have put in place so far to reduce fuel consumption in operating existing vessels, we have established a new Fleet Performance Management Team within the Marine Technical Management Division, which will conduct concentrated monitoring to ascertain the operational status of individual vessels in a timely manner and work to ensure sailings in the most optimal speed.</p>
4 Building Business Models to Enable Net Zero GHG Emissions	<ul style="list-style-type: none"> Active involvement in regulation and rule-making through industry associations and related government agencies <p>Discussions on international rules for global shipping are primarily conducted at the IMO. The direction taken in the introduction of new rules, depending on its content, can heavily impact the business environment for shipping companies, but we see it as an opportunity to build new business models, and we will actively participate in discussions through industry associations and related government agencies.</p>
5 Expanding Low-Carbon Businesses Using Concentrated MOL Group's Strengths	<ul style="list-style-type: none"> Business development in the area of next-generation fuels such as hydrogen, in addition to FSRU, LNG powerships, and renewable energy <p>If we only concern ourselves exclusively with GHG emissions from ships, it will be difficult to reach our goal of Net Zero GHG Emissions by early in the 21st century. By developing new businesses in the abovementioned fields, we intend to promote low carbonization for our entire Group business portfolio. Since supply chains have yet to be developed for many next-generation fuels, we aim to participate in a wide range of fields, from upstream (manufacturing) to downstream (transportation and supply), not just using them as vessel fuels.</p>

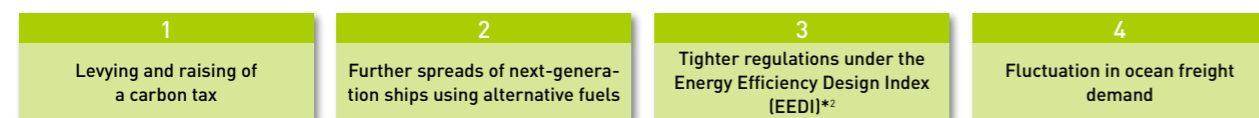
➡ Please refer to page 34 for information on our other endeavors in environmental and emission-free businesses.

➡ Please refer to page 15 for information on our CO₂ emissions volumes.

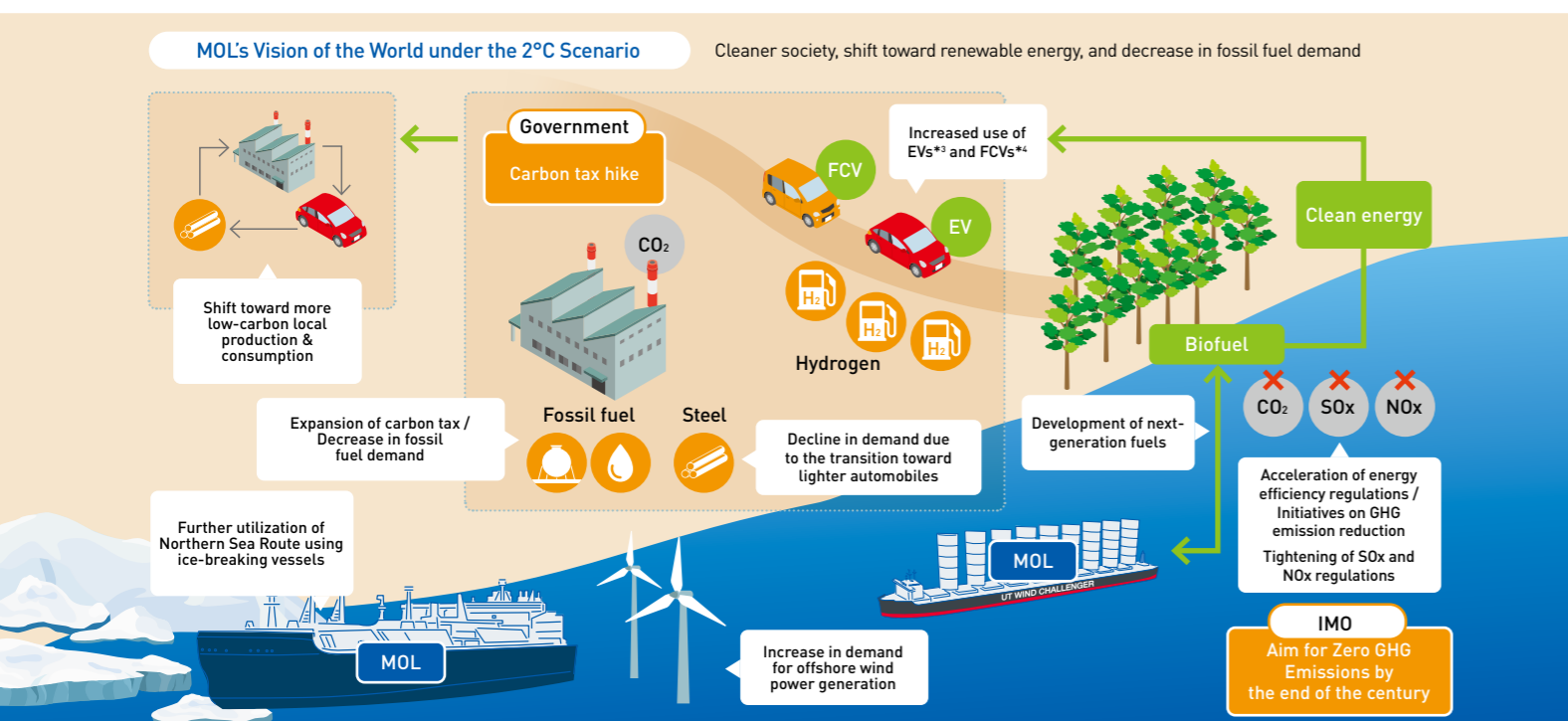
Scenario Analysis

In fiscal 2018, to ascertain the impacts of climate change on our business as well as our business continuity ability given those impacts, with the support of the Ministry of the Environment, we conducted a trial scenario analysis utilizing the framework of TCFD. Furthermore, in fiscal 2019, following in-depth exchange of opinions with our sales divisions, we added our own perspectives to analysis of the long-term outlook for key transportation demand and revised the content of the previous year's analysis in a

way that develops it further. In making these revisions, we picked the following four climate change-related items that we deem both important and likely to impact our business and quantified them in terms of their impact on our profits and losses according to the 2°C and 3°C scenarios*1. We will continue to improve the accuracy of our scenario analyses and use the results to promote individual initiatives to achieve the goals set forth in MOL Group Environmental Vision 2.0.



*1 Ultra-long-term future scenarios of energy demand and climate change. The 2°C Scenario is a scenario in which the necessary measures are implemented to control temperature increases to 2°C or less. The 3°C Scenario is a scenario in which economic initiatives and additional measures to address climate change are not sufficiently implemented. The former is put out by the International Energy Agency (IEA) and the latter is MOL's own scenario based on the IEA's scenario.
*2 The Energy Efficiency Design Index is a measure of a ship's energy efficiency, theoretical CO₂ emission figures calculated when the vessel was designed (g/ton-mile). Under the regulation, rates of EEDI reduction from benchmark values according to individual vessel types are gradually tightened.



*3 Electric Vehicles *4 Fuel Cell Vehicles

Initiatives for Challenges other than Climate Change

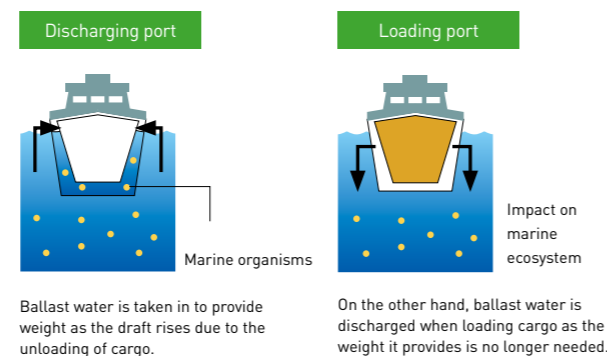
Protection of Biodiversity

Ballast Water Management Convention

Content of the Convention
The Ballast Water Management Convention highlights the negative impact of the cross-border transfer of foreign marine organisms, which occurs when vessels release ballast water, on marine ecosystems. Under the Convention, all vessels are mandated to install ballast water treatment systems by 2024.

In anticipation of the enactment of the Ballast Water Management Convention, adopted by the IMO, we decided to make the installation of ballast water management systems a Companywide policy in fiscal 2014. As of April 2020, we have completed installation of these management systems on 167 vessels. Our policy is to complete installation on all of our owned vessels by the time limit set by the Convention.

Ballast Water Mechanism



Air Pollution Prevention

SOx Regulations

Content of the Regulations
The SOx regulations limit the percentage of sulfur content in fuel in order to curtail the amount of sulfur in gas emissions. In January 2020, the IMO tightened the limit from 3.5% or less to 0.5% or less.

Our management plan for fiscal 2019 set "Strategic actions for compliance with SOx regulations" as a focus area, and under our SOx 2020 Regulation Response

Committee (which reports to the Executive Committee), we have taken Companywide measures to ensure that we are fully prepared for the tightening of regulations in January 2020.

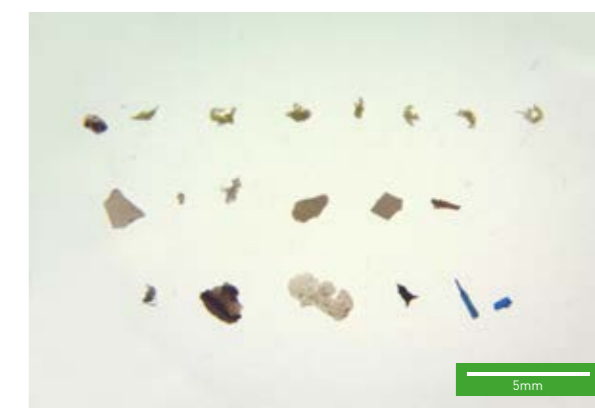
Of the three methods of compliance with the regulations, (compliant fuel, SOx scrubbers, and the use of LNG and other alternative fuels), we take compliant fuel usage as our main measure, and use the other two methods on a ship by ship basis.

Compliant Fuel	Compliant fuel complies with the new standards by limiting sulfur content to 0.5% or less. As a result of our early efforts to test the quality of compliant fuel supplied by various oil companies and secure the necessary quantities, we have completed the smooth transition of our fuel without causing any major engine trouble or downtime for our operating vessels.
SOx Scrubbers	SOx scrubbers use water to filter sulfur out of exhaust smoke. By installing them we are able to continue to use conventional fuel. We have been installing SOx scrubbers primarily in larger vessels such as Very Large Crude Carriers (VLCCs) and Capesize bulkers, and as of May 2020 we had completed installation on 41 vessels, including those at the request of our customers. On a Groupwide basis, we plan to have them installed on 100 vessels by 2022.
LNG and Other Alternative Fuels	LNG fuel can reduce SOx emissions to zero, but since it requires installation of special LNG engines, it is mostly adopted in new ships. In addition, we are making efforts in the areas of electric ships and the Wind Challenger Project (see pages 34 to 37) as well as synthetic methane (see page 47).

Marine Environment Protection

Reduction of Ocean Plastic

Ocean plastic has a profound effect on marine ecosystems. As part of our efforts to reduce ocean plastic, we plan to install a dedicated collection system on new ships scheduled to be delivered in fiscal 2020. When the ship takes in seawater, the system's filters collect microplastics in the ocean that have been finely crushed to 5mm or less under the force of waves and ultraviolet rays, and we expect it to collect several hundred grams per ship (a few hundred thousand pieces of microplastic) annually. Land-based tests conducted in autumn 2019 confirmed the system's ability to collect microplastics. We will consider expanding the system to additional vessels following the verification trial on the first one.



Microplastic collected in land-based tests

Ship Recycling

Please refer to page 69 for MOL's efforts in this regard.

Issuance of Green Bonds and Sustainability Bonds

As initiatives to apply the world's increasing awareness of the environment and the SDGs to our financing measures, in fiscal 2018 we issued ¥10 billion in Green Bonds*5 and in fiscal 2019, we issued ¥20 billion in Sustainability Bonds*6. We became the first company in Japan to have issued both Green Bonds and Sustainability Bonds not only to institutional investors but also to individual investors.

*5 Funds raised with Green Bonds is to exclusively finance our green projects that are effective at improving the environment.
*6 Sustainability Bonds extend the usage of funds from Green Bonds, raised to projects that address issues related to resolving social issues.

For MOL's environmental data, please visit our website.
<https://www.mol.co.jp/en/sustainability/environment/data/index.html>

Fund Allocation

Project Name	[Billions of yen]	
	Green Bonds	Sustainability Bonds
Ballast Water Treatment Systems	5.5	4.0
SOx Scrubbers	2.2	9.2
LNG Bunkering Vessels	1.4	2.0
LNG Powered Vessels	0.7	0.1
New PBCF	0.2	0.1
Others (other than green projects)	—	4.6
Total	10.0	20.0

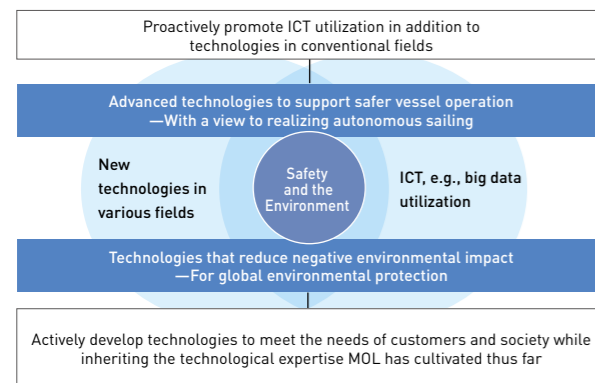
Innovation for Development in Marine Technology

The MOL Group is promoting technological development using ICT to achieve the following objectives: "Provision of 'stress-free services,' which it will offer from the customer's perspective" (one of the three core strategies set to realize the MOL Group's management vision), the further enhancement of tools to support safe operation, and the deeper reductions in environmental impact.



Basic Policy on Technological Innovation

The potential for technological development in the marine industry has expanded due to the rapid development of ICT, such as IoT and big data, in addition to progress on vessels' tangible elements. We aim to anticipate the needs of customers and society by maximizing the potentials of marine transport-related technological development. These efforts are centered on the ISHIN NEXT—MOL SMART SHIP PROJECT, which commenced in 2016.



In fiscal 2020, we established the new position of chief digital officer to align our organizational structures and propel innovation. This officer's role is to formulate digital marketing strategies and oversee implementation of measures. We will accelerate our innovation by continuing to step up alliances with various institutions outside our field of business.

Our Goals

1 Eliminate human error and achieve safer operation by leveraging automated technologies	Autonomous Sailing
2 Develop eco-ships powered by natural energy	Wind Challenger Project
3 Develop vessels powered by lower CO ₂ emission alternative fuels	LNG-Fueled Vessels Vessels Using Other Alternative Fuels
4 Expand the installation of operational data collection equipment in vessels and develop next-generation ship management support systems	FOCUS Project
5 Provide technological solutions for logistics service challenges	

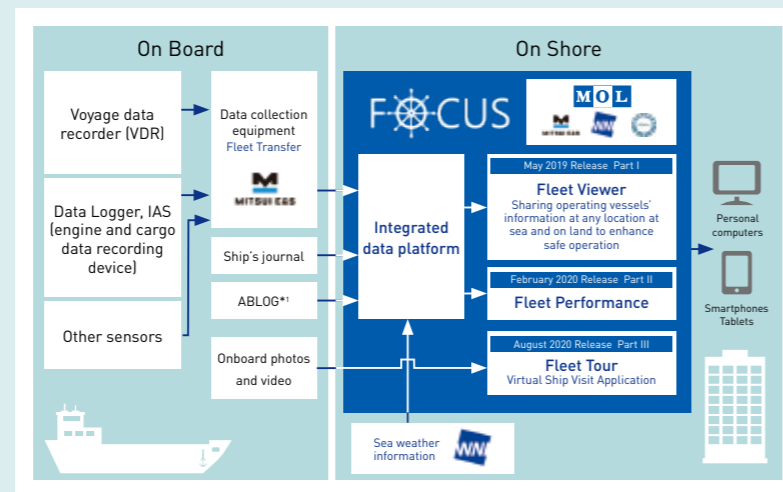
Topic 1 Release of a New FOCUS Project Application: "Fleet Performance"

The FOCUS Project involves collecting data at one-minute intervals from around 10,000 sensors placed on individual ships so that we can visualize the condition of various elements of marine transport (such as hull, engine, cargo, surrounding ships, and ocean weather) and using such data for sophisticated monitoring of vessel operation and analysis of vessels' propulsion capability. In so doing, the project aims to further enhance safe operation, improve operational efficiency, and help reduce environmental impact. The MOL Group is pursuing this project together with three other companies—Mitsui E&S Shipbuilding Co., Ltd.; Weathernews Inc.; and NAPA Ltd.—going beyond the scope of its own industry. As of April 2020, we had installed data collection equipment on 101 ships.

February 2020 marked the release of Part II of this project: Fleet Performance. This application makes it possible to ascertain information about vessel performance that had previously been problematic, such as true ship performance (speed, fuel consumption, etc.) after excluding the effects of waves and wind. We expect such data to prove useful in comparing same-type vessels and verifying the results of energy-saving devices. The application also allows the condition of the hull and various equipment, as well as the extent of propeller fouling, to be examined in real time.

As a result, aberrations can be detected early, and appropriate cleaning occasions can be set.

Going forward, we aim to expand applications that use accumulated operational data in various ways to provide transport services with greater safety and reduced environmental impact.



*1 ABLOG: The summarized version of a ship's journal, providing a register of ports of call, time of arrival at and departure from ports, voyage duration, vessel location, speed, remaining fuel and lubricants, berthing periods, engine operating data, and other voyage-related information. Submitted by each vessel for each voyage.

Topic 2 Progress in Autonomous Vessel Operation Projects

The MOL Group is promoting initiatives aimed at making autonomous vessel operation a reality. Our goals are to increase safety in operation and reduce workloads for crew members. Rather than unmanned operation, currently we are working on systems that will support crew members by

enabling autonomous vessel operation under certain conditions. We are conducting joint development and demonstration on three areas corresponding to navigational steps (recognition, decision, and operation) which are respectively named FOCUS EYE, FOCUS BRAIN, and FOCUS GEAR.

Our Initiatives to Realize Autonomous Vessel Operation

Recognition FOCUS EYE	Decision FOCUS BRAIN	Operation FOCUS GEAR	Future Targets (2025 onward)
Augmented reality (AR) navigation system*2	Collision avoidance algorithm	Automatic avoidance system	<ul style="list-style-type: none"> Automatic detection of other ships and obstacles Automatic adjustment of route plans Automatic avoidance Automatic berthing and unberthing Remote monitoring
Vessel image recognition and recording system*3		Automated berthing and unberthing system	
Bird's-eye-view monitoring system*4			

*2 AR is used to show superimposed visual information on a display, such as information about other vessels obtained by radar and visual information from the bridge.

*3 AI (deep learning) technology is employed to recognize other vessels to a high degree of precision using a graphic recognition engine and ultrahigh-resolution cameras. The data is recorded automatically, and accuracy can be enhanced further by verification.

*4 Multiple fish-eye cameras are installed on a vessel's mast, and the images they record are automatically combined to create an image as if looking down on the ship, which allows ascertainment of surrounding conditions at a glance.

FOCUS EYE

We have developed an AR navigation system and installed it on 19 of our ships, mainly car carriers and VLCCs. We have also installed a vessel image recognition and recording system on the cruise ship NIPPON MARU and a bird's-eye-view monitoring system on the tugboat ASAKA MARU. Demonstration test is underway on both vessels.

FOCUS BRAIN

In December 2019, we launched a joint study on collision avoidance algorithms and autonomous avoidance with MOL Marine Co., Ltd.; the National Maritime Research Institute of National Institute of Maritime, Port and Aviation Technology; and Tokyo University of Marine Science and Technology. The joint study used a system to automatically calculate other vessels' obstruction zones along a ship's course heading. The aim is to establish a collision avoidance algorithm that will provide visualization of collision risks.

FOCUS GEAR

Between December 2018 and February 2019, we conducted demonstrations of the automatic berthing and unberthing system, using the SHIOJI MARU, the training ship of the Tokyo University of Marine Science and Technology, and assessed the safety of the system through simulations. In addition, in February 2020 we began conducting tests using a coastal ferry, thus stepping up our efforts to make the system practical.

Topic 3 Launching "Lighthouse," a Service to Make Information on Marine Transport Visible

In January 2020, the MOL Group launched "Lighthouse," a new information platform for dry bulk customers. In the past, we provided information related to marine transport—ship schedules, weather, and ocean conditions, as well as cargoes and contracts data—separately. This was not always convenient for our customers. We developed Lighthouse after customer feedback uncovered their need to manage information centrally. During the development process, we fielded numerous customer opinions and requests to allow customization for individual users and for data to be obtained in real time. With this platform, MOL aims to help its customers enhance their supply chain management through more efficient ship allocation and more effective management of inventory, including that on ships.

At present, the service is limited to dry bulk customers, but it is already being used by clients from a variety of sectors, such as steel manufacturers and paper producers. We plan to continuously update the system from the user

perspective, improving the service to provide more convenience to our clients.



Human Resource Cultivation and Community Development

Human resources drive growth of the Group and underpin its brand and reliability. Based on MOL CHART, the values shared by all Group members worldwide, we will sustain this growth and establish a new competitive superiority by achieving real diversity management that fosters, promotes, and empowers personnel from many different backgrounds.

Furthermore, by providing training through in-house educational institutes and offering stable employment, we will secure highly competent crew members—who are indispensable for our operations—and contribute to the economic and industrial development of emerging countries.



Basic Policy on Human Resources Development

Challenges

As the structures of the Company's businesses become increasingly complex and employees' career aspirations and work styles diversify, the human resources needed to implement the Company's management and business strategies are changing significantly in terms of both quality and quantity. To realize the profit level we are targeting over the medium term, it is crucial that we reform our organization and human resources to heighten the competitiveness of our organization.

Strategies

- 1 Foster employees who have personal initiative, a sense of responsibility, the competence to play important roles in a global market, and the creativity to bring about change
- 2 Produce leaders who can set and pursue clear visions together with team members
- 3 Foster an organizational culture that encourages diverse personnel to generate creative ideas and take on challenges

Introduction of a New Personnel System

Reflecting the changes in the fields and nature of our businesses as well as changes in the values of workers, we began operating a new personnel system in July 2018. The new system diversifies the range of career choices available to employees with the aim of the early development of management candidates and the fostering of specialists. Simultaneously, the system pushes towards maximizing employees' performance by supporting self-directed career planning. In fiscal 2020, the third fiscal year since the introduction of the personnel system, we will verify its effectiveness with the aim of making it even more practical.

The Aims of the New Personnel System

(1) Early development and production of management personnel

Foster the next generation of management personnel at an early stage, identify potential leaders, and provide these talented personnel with opportunities to take the helm of organizations

(2) Diversification of career choices

Increase competitiveness by developing and securing both generalists and specialists

(3) Support for self-directed career development

Create organizations and systems that encourage each employee to become aware of their value and potential, make full use of their talents and expertise, and forge ahead with creative work



Promotion of Global Personnel Management



Employees of many different nationalities play active roles in our operations worldwide. With this in mind, we are establishing employee-friendly working environments that allow personnel to take maximum advantage of their abilities irrespective of national or regional backgrounds. We are also building a uniform system for the evaluation and assignment of personnel that transcends regional boundaries. In particular, our appointment of crew members to onshore duties is becoming more borderless. In an increasing number

of cases, we are assigning captains, chief engineers, and other senior crew members of various nationalities to onshore office duties, such as vessel management and crew member training. With reference to such cases, we will continue promoting global personnel management Companywide through initiatives that include the One MOL Global Management College, which is explained in more detail below.

One MOL Global Management College

Since 2014, we have been holding One MOL Global Management College annually with the aim of fostering "One MOL global executives" capable of conducting diversity management in the coming generation's cross-cultural working environments. From all over the world, participants visit Japan to deepen their understanding of self-education, organization management, and leadership in globalized business situations. Furthermore, participants are split into teams, which discuss and analyze issues and future directions for the MOL Group and then offer recommendations to the Company's senior management team. Approximately 60 employees have completed the program, which has been held six times to date. Some of those who have completed the program are currently working at our Head Office to establish new businesses based on recommendations submitted during the program. Through such efforts, we are steadily widening the pool of global executive candidates.



Promotion of Diversity and Inclusion



We view diversity as encompassing not only such superficial attributes as gender, nationality, and age but also each individual's inner characteristics, including experience, natural aptitudes, skills, and values. We will establish a new competitive superiority by creating working environments and an organizational culture that motivate employees worldwide to work enthusiastically and energetically and which encourage employees with different personalities and skills to work as a team. From fiscal 2020 onward, we will advance talent management that is even more focused on the quality of human resources. Specifically, we will build a system that increases our ability to assign the right people to the right jobs by identifying employees' skills and experience as well as the requirements of each division in greater detail.

Further Empowerment of Female Employees

We believe that further empowerment of female employees is important for securing talented personnel and for reflecting diverse perspectives in the advancement of business activities, governance, and risk management. Accordingly, we are proactively moving forward with a range of initiatives based on an action plan prepared in March 2016 pursuant to the Act on Promotion of Women's Participation and Advancement in the Workplace. For example, we have enhanced and expanded systems with a focus on child-rearing support, increased career development support, and conducted activities to create networks among female employees.

Please refer to page 15 for information on our number and percentage of women in managerial positions.

For details on our employment of athletes and other specific measures and information related to diversity, please visit our website. <https://www.mol.co.jp/en/sustainability/hr/diversity/index.html>

Introduction of a System for Proposing New Businesses



In fiscal 2019, we introduced a system for proposing new businesses, which encourages employees to take on challenging initiatives and develop their careers in a self-directed manner. Under the new system, depending on the details of the proposal, employees present their ideas for new businesses or services to executives and/or the relevant person in charge within the Company. If a proposal is highly evaluated, the employees can transfer to the most relevant

department and begin working on realizing the proposal. Operating this system will cultivate a bold mindset among employees in accordance with the MOL CHART values as well as help meet our need to find new businesses that are not bound by the limits of conventional marine transport. In fiscal 2019, eight proposals were submitted. After review, four of these have advanced to the phase of being developed for commercialization.

Promotion of Work-Style Reform



We are tackling work-style reform to realize an organizational culture that enables employees to work with vitality, thereby enhancing the competitiveness of our human resources and achieving innovation.

Our initiatives are based on the belief that in realizing our management vision we must establish an organization and culture that not only encourage employees to perform their duties in a highly efficient manner but also motivate employees to give concrete form to innovative ideas.

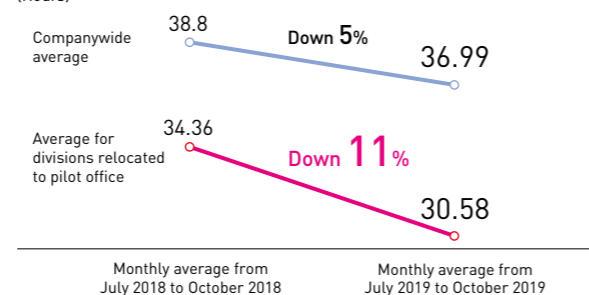
Chaired by the president, the Work-Style Reforms Committee has led the advancement of specific measures focused on reforming four areas: the personnel system, corporate culture, workplaces, and productivity. One particularly successful result of these reforms is a pilot office in which employees freely choose where to sit and work, which we introduced in fiscal 2019. Verification has confirmed that the pilot office is producing benefits across the board, including work-style flexibility, cross-divisional communication, and productivity enhancement. Moreover, thanks to measures we have been promoting to advance working from home and to reform work processes, in response to the

▶ For details on our initiatives related to work-style reform, please visit our website.
<https://www.mol.co.jp/en/sustainability/hr/workstyle/index.html>

COVID-19 pandemic more than 90% of our employees transitioned to working from home at the height of our telecommuting initiatives, and we have been able to continue business activities without hindrance.

We will continue to enhance productivity and establish an employee-friendly working environment by forging ahead with work-style reform without being constrained by existing operational practices.

Monthly Hours of Overtime Work per Employee (Hours)



* "Hours of overtime work" refers to hours worked in excess of the Company's regular working hours (seven hours per day) multiplied by the number of working days in a given month.

Promotion of Health and Productivity Management



Ensuring the health and safety of employees and providing working environments where they can work with peace of mind is a prerequisite for business activities and the base for MOL's sustained growth. Furthermore, maintaining and promoting the physical and mental health of all executives and employees is essential for dynamic, innovative organizations and for realizing vessel operations with the highest levels of safety in the world. Our Diversity and Healthcare Management Team leads the provision of a range of support and the establishment of environments that enable employees to maintain and improve their physical and mental

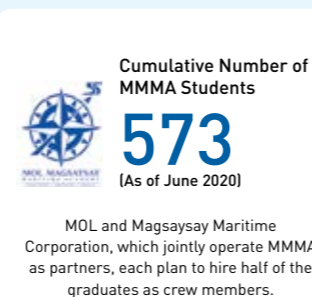
health and work with enthusiasm and vitality. Reflecting high evaluations of these initiatives, for the second consecutive year MOL has received certification as one of the Outstanding Enterprises Engaging in Efforts for Health and Productivity Management in the large enterprise category ("White 500") of the program jointly conducted by Japan's Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi.



▶ For details on our initiatives related to the promotion of health and productivity management, please visit our website.
<https://www.mol.co.jp/en/sustainability/hr/health/index.html>

Our Contribution to the Development of Local Communities Operating a Maritime Academy in the Philippines

Since 2018, we have been operating one of the largest independent maritime academies in the Asia-Pacific region, MOL Magsaysay Maritime Academy Inc. (MMMA), which is located in the Philippines. For many years, we have been actively fostering marine transport professionals in the Philippines under the Academia-Industry Linked Program, which is promoted by the Philippine government. By extending and developing these initiatives, MMMA will help the country's students realize active, rewarding futures. MOL will proactively hire MMMA graduates as crew members with the aim of continuously training quality candidates for senior positions and thereby realizing vessel operations with levels of safety that are among the highest in the world. As of 2020, the third year since the academy's establishment, a cumulative total of 573 students have enrolled at MMMA to study the knowledge and skills of marine transport professionals. MMMA graduates are expected to play important roles in the MOL Group as well as in the global marine transport sector.



A Message from the Executive Officer Responsible for Diversity Promotion and the Human Resources Division

Since April 2019, I have been the executive officer responsible for Diversity Promotion and the Human Resources Division. With respect to diversity promotion, my task is to secure diverse talent and thereby further enhance our corporate value. As for the Human Resources Division, I focus on helping realize management strategy by working in partnership with each business division to maximize employee motivation and to make optimal use of employees' talents. In each of these capacities, my mission is to take concrete measures that will help sustain the growth of the MOL Group.

In order to accomplish this mission, the focus will be on optimizing our talent management and organization based on analysis of the MOL Group from a higher perspective. In doing so, not only will we focus on diversity with respect to such attributes as gender, nationality, and age but also experience, personality, skills, cultural background, and values. At the same time, I want to act as an intermediary between the senior management team and employees. My aim is to communicate the senior management team's views to employees while also providing the team with employee feedback.

Emphasized the Establishment of Forward-Looking Frameworks in Fiscal 2019

At present, we are in the middle of crafting a new business model that reaches beyond conventional marine transport. These efforts are based on a management vision calling on us to "Become a Group of Business Units with No. 1 Competitiveness in Respective Areas." A new personnel system was introduced in fiscal 2018 and a system for proposing new businesses began in fiscal 2019. These are some examples of frameworks set up to match MOL's new business model and to realize the aforementioned management vision.

One reason for creating the new personnel system was to diversify the range of careers we offer. This diversification is essential because the types of personnel that the Group needs are changing as it operates in a greater number of fields and regions and its business formats become more complex. Diversification of our career menu is also important because the attitudes of employees to careers are evolving in step with changes in social conditions and the job market. The new personnel system will help employees to make the most out of their abilities while

respecting the priorities of each individual, thereby enabling them to develop their careers in an effective, self-directed manner. At the same time, the development of a workforce comprising personnel with diverse careers will enable each business division to acquire the human resources it needs.

Further, the system for proposing new businesses is expected to contribute significantly to the construction of a new business model. An emphasis on minimizing the risk associated with employee behavior has become part of our culture due to the nature of our mainstay marine transport business, where ensuring safe operations is the first priority. When a company is creating new businesses and venturing into new business fields, however, it should place greater emphasis on speed and appetite for challenges and permit a certain amount of risk taking. "Challenge" is the first of the MOL CHART values. With this in mind, I want to reawaken and foster the DNA that has helped us to take on ambitious challenges and succeed.

Using Fiscal 2019 Achievements as the Basis for Further Evolution of Initiatives

In fiscal 2019, we introduced a variety of systems. For all of these, high-quality management will be the key to their success. Accordingly, we will take steps to further refine the new systems by amending each of them so that it functions even more effectively. In conjunction with these steps, we will evolve talent management so that it better reflects the attributes of each individual, including their skills and values. In addition, plans call for the establishment of KPIs for diversity and other aspects of operations.

The large number of our employees who display a truly unstinting, committed attitude to their work gives me a sense of pride as the executive officer responsible for the Human Resources Division. In creating conditions more conducive to employees realizing their ideas and potential, there is no silver bullet. Rather, by implementing an array of measures under a cohesive plan, I want to enable growth among our precious employees and enhancement of the MOL Group's corporate value.

Our human resources strategy will support a new MOL that reaches beyond conventional marine transport.

Junko Moro

Executive Officer
Responsible for Diversity
Promotion and the Human
Resources Division