

MOL Group

Environmental and Social Report 2012

The 13th edition April 2011–March 2012



**Bluer Oceans, Cleaner Environment
and Sustainable Future**

Environmental and Social Report 2012 (Editorial Policy)

- The MOL Group has reported on its Group-wide environmental protection activities since October 2000, when we published the first Environmental Report. In 2003, we renamed the publication the Environmental and Social Report to encompass the Group's overall social contribution as well as environmental protection initiatives.
- This Environmental and Social Report introduces the company's approach to CSR and the environment, and our latest initiatives, to all stakeholders connected with the MOL Group. In producing this report, we used illustrations, tables and graphs and reflected the voices of our frontline staff where possible. We believe that by reading this report you will gain a greater understanding of how we view our social responsibility as a company, what measures we are taking to reduce environmental impact and ensure safe operation in our business activities, how we are contributing to local communities, and what kind of efforts we are making to meet the expectations of shareholders and other investors and customers, as well as how we are considering land-based staff and seafarers.

■ Period

FY2011 (April 1, 2011 to March 31, 2012)

In addition, some activities prior to FY2011 and activities during FY2012 (April 1, 2012 to March 31, 2013) are reported with notes.

■ Scope

In principle, all MOL Group companies that do business in Japan and overseas. Activities and data that are limited in scope are reported with notes.

* The MOL Group

Mitsui O.S.K. Lines, Ltd., 335 consolidated subsidiaries, 63 equity-method affiliates, and other affiliated companies.

* "The company" in this report refers to Mitsui O.S.K. Lines, Ltd. (MOL).

■ Reference Guidelines

- Environmental Report Guidelines 2012, Japanese Ministry of the Environment
- Environmental Accounting Guidelines 2005, Japanese Ministry of the Environment
- GRI (Global Reporting Initiative) (GRI Guidelines Version 3.0)
Please visit our website to view comparison charts with the GRI Guidelines and UN Global Compact.

<http://www.mol.co.jp/csr-e/report/download/index.html>

■ Issue Date

Issued September 2012 (Previous issue: September 2011; next issue: September 2013 (scheduled))

- Besides this report, information concerning the MOL Group's CSR activities can be found in the "CSR/Environment" section of our website.



<http://www.mol.co.jp/csr-e/index.html>

- MOL also produces the following publications as a means of promoting communication with stakeholders:

[Annual Report*](#)

A detailed explanation of investor relations information such as management strategy, business environment, operating results and financial data. Primarily for shareholders and other investors.

[MOL Investor Guidebook*](#)

Easy-to-understand analysis using tables and charts of the MOL Group's management plans, key financial indicators, business activities, market position and operating environment in each business. Primarily for shareholders and other investors.

[Corporate Brochure](#)

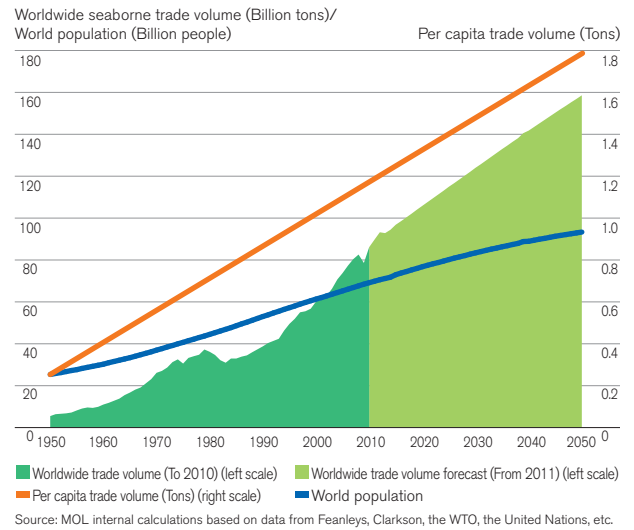
Easy-to-understand discussion of the company's business activities. Mainly for customers, business partners, local communities, and job-hunting students and professionals, as well as the general public.

*The latest versions of all reports can be found on our website.

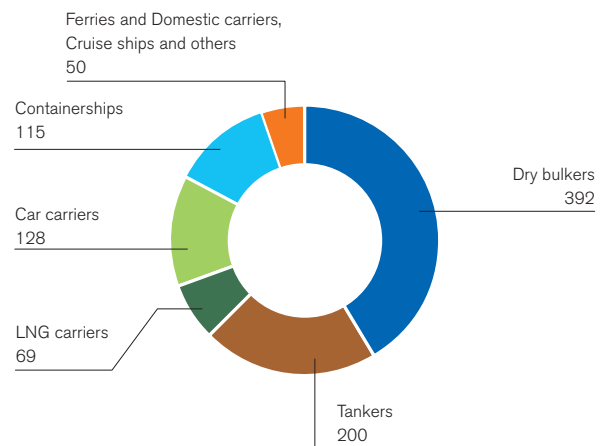
<http://www.mol.co.jp/ir-e/index.html>

Key Indicators

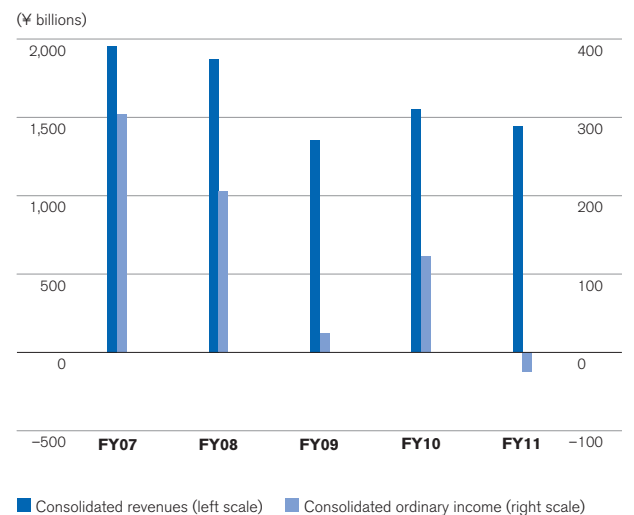
Worldwide Seaborne Trade Volume



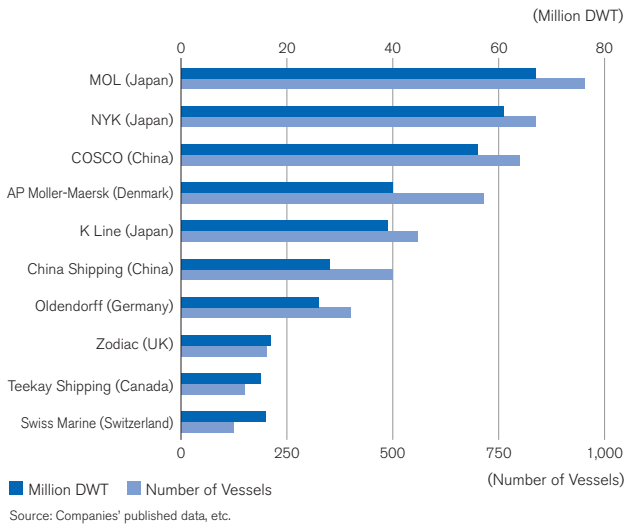
Fleet Composition by Number of Vessels (As of March 31, 2012)



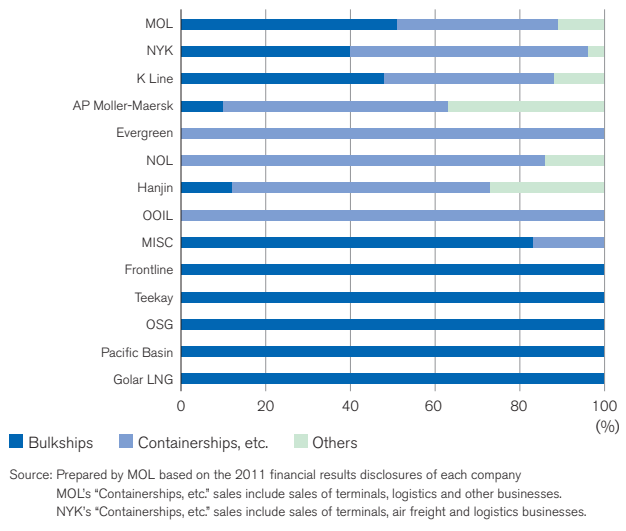
Consolidated Revenues and Ordinary Income



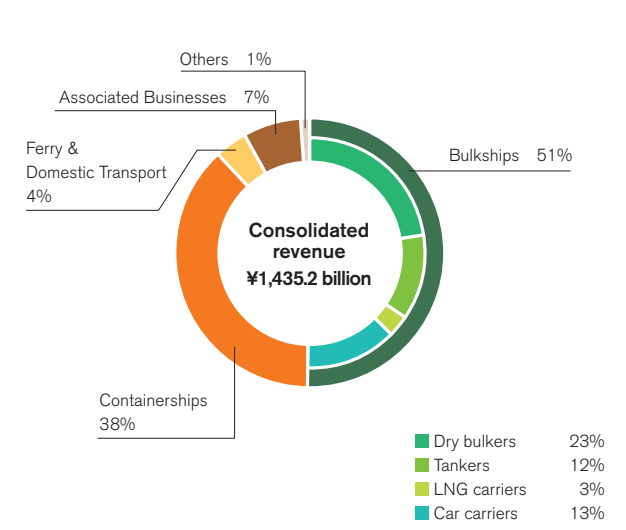
World Major Carriers' Fleets (As of March 2012)



Major Carriers: Sales Composition



Fiscal 2011 Consolidated Revenues by Segment



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On the Cover Hybrid Car Carrier Emerald Ace Is Delivered!

The world's first new hybrid car carrier, the *Emerald Ace*, was delivered in June 2012. It represents a major step for MOL in realizing its *Senpaku ISHIN* project, which aims to develop next-generation concept vessels. (Please refer to pages 10 and 11 for details.)

MOL Group Businesses

The MOL Group, with a core business of shipping, engages in the transport of a broad range of cargoes, including natural resources, energy, raw materials, and manufactured products, that contribute to industrial growth and better lives for people around the world. We run and develop our businesses, taking sufficiently into consideration environmental and social issues as a player in an industry that is indispensable to the sustainable development of the world economy.

Bulkships

Dry Bulk

Transporting the World's Natural Resources with One of the World's Biggest Fleets



Dry bulkers transport massive quantities of dry cargo that is not individually packaged. Dry bulkers include very large iron ore carriers (VLOCs); specialized coal carriers matched to the size of loading/discharging ports; wood chip carriers, which transport wood chips; and bulkers that transport general cargo including grain. The cargoes transported by dry bulkers are used as various raw materials and fuel as well as food and animal feed. In addition, MOL's fleet includes heavy lifters, which transport heavy, large cargoes that cannot be carried by conventional cargo ships, such as large machinery and plants vital for industrial growth.

Main cargoes



Tankers

Experts in Energy Transport



Safe, efficient transport is crucial for ensuring stable supplies of crude oil, one of the world's main energy sources. The MOL Group has a varied fleet of oil tankers from VLCCs (tankers of more than 200,000 DWT) to small and medium-sized vessels called Suezmax and Aframax. With this varied fleet, MOL contributes to the stable supply of oil for the world.

MOL also has product tankers that carry refined petroleum products, including naphtha and gasoline; chemical tankers for transporting liquefied chemical products; and LPG tankers for transporting liquefied petroleum gas. MOL supports the world's lifelines with one of the world's largest fleets for energy transport, and its extensive transportation expertise.

Main cargoes



LNG Carriers

Aiming to Stably Transport Clean Energy



Liquefied natural gas (LNG) is attracting considerable attention as an environmentally-friendly clean energy resource and demand for this fuel is rising around the world.

The transportation of LNG, which is used as a feedstock for city gas and gas-fired thermal power plants, supports our daily lives and the growth of businesses.

Since participating in its first LNG transportation project in 1983, MOL has amassed a wealth of expertise and experience in LNG transportation. As one of the world's leading LNG ocean transport companies, MOL will continue meeting world LNG demand by upgrading and expanding its fleet and rigorously practicing safe operation based on its advanced technologies and expertise.

Main cargoes



Car Carriers

Transporting Cars in a Safe, Reliable and Eco-Friendly Manner



The auto industry is one of the cornerstones of Japan's growth. MOL was the first shipping company in Japan to launch a car carrier service in 1965. Since then, as the pioneer of car transportation, MOL has worked to provide safe and reliable transport services to meet the needs of automakers, who are increasingly producing vehicles around the world.

MOL has established a solid position among the world's car carrier fleets not only through quality car transport services and fleet size, but also environmental consciousness. Our new environmental technologies include vessels with lower wind and water pressure resistance.

By transporting cargo that can be driven on and off vessels, from passenger cars to construction machinery, MOL supports comfortable lives for all.

Main cargoes



Containerships

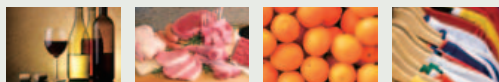
A Balanced Network That Covers the Entire Globe



The containership business provides transportation services for electrical products, auto parts, household furniture, food products and other products in containers.

MOL's containership business provides a balanced network that covers the entire globe, from the key east-west routes linking Asia to North America and Asia to Europe, to the north-south or Intra-Asia routes. Furthermore, with our worldwide network and an integrated state-of-the-art IT system, we provide logistics services matching customers' needs. Moreover, we have established service indicators common all over the world for on time arrival performance, environmental impact reduction and safe operation, as well as set standards for these indicators. By also periodically disclosing the results, we are working to raise customer satisfaction.

Main cargoes



Ferry & Domestic Transport Business

One of Japan's Largest Networks Promoting the Flow of People and Goods



The MOL Group offers one of Japan's largest ferry and domestic transport service lineups.

Ferries offer various amenities for an enjoyable voyage such as restaurants, spas and entertainment. They provide a comfortable and relaxing travel experience that cannot be experienced with other modes of transportation and also carry cargo.

Domestic coastal vessels transport food, daily necessities, industrial materials, oil and other cargo, supporting the lives of people and industry in Japan.

Furthermore, by actively responding to needs driven by a modal shift for the use of means of transport with a low environmental impact, these transportation services are contributing to the reduction of CO₂ emissions in Japan's distribution sector.

Main cargoes



Associated Businesses

Various Peripheral Businesses Support Comprehensive Capabilities Centered on the Shipping Business



The MOL Group has accumulated management knowhow through its core business of shipping over around 130 years. We have worked to enhance shipping-related business services such as the cruise business that operates the *Nippon Maru*, one of Japan's largest tugboat operations, land transportation, warehousing and marine consulting. In addition, we also conduct travel, marine/civil engineering, building leasing and real estate management, finance, trading, insurance, IT and communications, temporary staffing and other businesses as well as support a national program to build an emergency oil reserve. Through these businesses related directly and indirectly to the shipping business, we are contributing to various corporate activities and improving people's lives.

Main Businesses



Top Message

An Excellent and Resilient Organization that Grows Sustainably and Harmoniously with Society

A series of natural disasters occurring around the world, including the Great East Japan Earthquake and flooding in Thailand. A global economic slowdown triggered by the European debt crisis. The public losing faith in institutions due to dysfunctional corporate governance, cruise ship accidents and other failures. 2011 was marked by a multitude of events that have prompted a reexamination of corporate social responsibility.

The events have reaffirmed the societal mission of the MOL Group as a shipping company, which is to support people's lives and industry around the world.

In order to achieve this, it is essential that the MOL Group continues to earn trust and be the company selected by customers, shareholders and other stakeholders. The MOL Group will therefore proactively fulfill its social responsibilities as a shipping company by accommodating global increases in transport demand, conducting safe operations at world-leading levels, and implementing the *Senpaku ISHIN* project to contribute to global environmental protection.

Ensuring Safe Operation Is MOL's Imperative

Safe operation is our imperative, as it is for other shipping companies. It is also the MOL Group's starting point for earning the trust and support of stakeholders. We have made substantial investments and implemented many measures to achieve safe operations at world-leading levels. Efforts have also been made to make the process for realizing safe operation visible and objective indicators for quantifying safety levels have been instituted. We are now working to meet the numerical targets we have set. The various factors that lead up to an accident are connected like a chain, so we also continually make improvements in both seafarer training and ship facilities in order to break this chain of errors and prevent major incidents. In addition, we are promoting the use of information

technology for ship management and strengthening anti-piracy and anti-terrorism measures.

MOL employs approximately 7,200 seafarers from over 20 countries, including the Philippines and India. An important issue for a shipping company therefore is securing and training exceptional seafarers to facilitate safe operation in the field. An officer candidate program for students of affiliated maritime colleges in the Philippines is utilized along with our eight MOL training centers for seafarers, which are located in six countries. MOL's unique seafarer education and training program instituted since 2007 was certified by an international body in April 2012.

In addition, MOL Safety Conferences are held to create a shared awareness of safe operation among MOL seafarers. In 2012, the conferences were held in February and March in four locations around the world, the Philippines, India, Croatia and Japan. We also regularly honor exceptional seafarers, hold local family gatherings, and maintain safe and pleasant working conditions, as we strive to strengthen bonds with the families of seafarers, who are often away from home.

Through such ongoing initiatives, accident rates and other monitored indicators have improved appreciably. However, regrettably, in December 2011, though it involved an outside contractor, an accident occurred during elevator maintenance that caused the death of a crew member. As a result, we did not achieve the "Four Zeroes"—an unblemished record in terms of serious marine incidents, oil pollution, fatal accidents, and cargo damage. For serious incidents like this, we make every effort to prevent recurrence by thoroughly investigating and elucidating not only direct causes but also indirect factors. Monitoring is conducted with clear assessment indicators even after countermeasures are implemented, and relevant information is continuously disclosed externally.

***Senpaku ISHIN* Project Helps Protect the Global Environment**

Protecting the global environment is a global challenge that must be overcome to create sustainable societies. MOL's environmental strategy calls for further strengthening and promoting the high environmental efficiency of ocean transport services and providing transport services that meet customer needs while protecting the global environment, with the aim of contributing to the sustainable development of the global economy. We are committed to pursuing optimal solutions to two seemingly conflicting challenges: addressing worsening environmental problems while meeting growing transport demand. The *Senpaku ISHIN* project, our concept for next-generation vessels, is a major step in this direction.

The *Emerald Ace* hybrid car carrier, which was delivered in June 2012, stands as one of the results of the *Senpaku ISHIN* project, which seeks to reduce CO₂ emissions through application of feasible technologies. Equipped with lithium-ion batteries that are charged by solar power generation systems while at sea, the ship then uses this power while at berth, which allows the diesel power generators to be completely shut off. The result is "zero emissions" of exhaust gases while at berth.

Environmental impact will also be reduced in actual ship operations. For example, travelling at slower speeds lowers CO₂ emissions and helps prevent global warming. This is a part of MOL's ECO SAILING program, which seeks to make ship operations more environmentally-friendly. We are working to increase and deepen opportunities for properly reducing navigation speeds through technical development and other innovations that render previously impossible low-impact continuous operations possible.

With the strong yen, high fuel prices, and extensive building of new ships, MOL's operating environment is more challenging than ever. However, even in this environment, our commitment to the



MOL Group's long-term vision of becoming an excellent and resilient organization that leads the world shipping industry remains unyielding.

In the immortal words of Confucius, "One must not quarrel with providence or blame others, but improve through learning." Seeing in hardship an opportunity for growth, we will continue to earn the trust of stakeholders by reinforcing safe operation and environmental protection initiatives, and strive to grow sustainably and harmoniously with society.

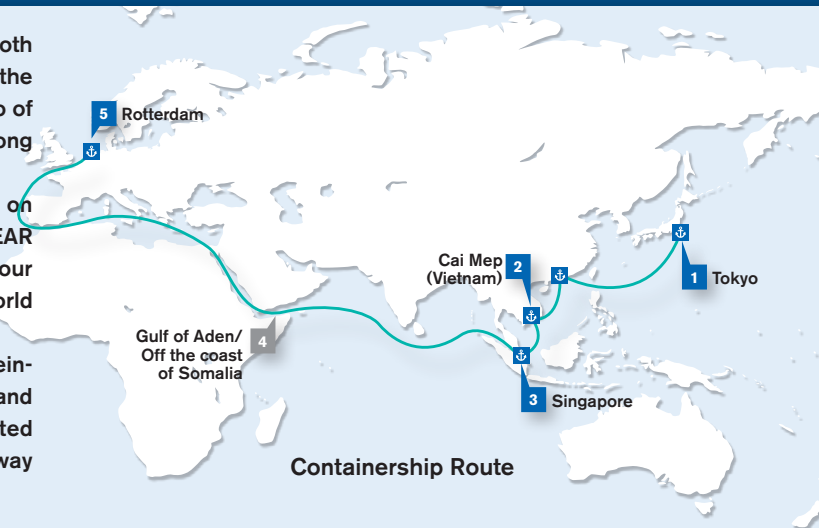
Koichi Muto
President

Forging Ahead to Become the World

As a shipping company, safe operation is our social mission, both in terms of the safety of human life, cargo and ships and from the standpoint of protecting the environment. Safe operation is also of the utmost importance for becoming the company of choice among customers and all other stakeholders.

Our previous midterm management plan saw us put priority on refining our safe operation system. Under our current plan, "GEAR UP! MOL," we are building from this base with the aim of making our safe operation processes more visible, and becoming the world leader in safe operation.

In this section, we report on MOL's distinctive measures for reinforcing safe operations, which include both on-board initiatives and onshore support, by following the voyage of an MOL-operated containership from Tokyo to Rotterdam in the Netherlands by way of Singapore.



ONBOARD

Safety Campaigns

MOL executives and employees visit vessels as a part of operational safety campaigns. During these visits in fiscal 2011, the MOL executives and employees explained the company's measures for preventing collisions, groundings, accidents causing injury or death, and engine trouble that results in the ship being unable to move under its own power. Seafarers also offered their views based on their own practical experience.

Safety campaigns are conducted twice a year for around six weeks for all MOL-operated vessels. Face-to-face discussions are held between seafarers and land-based management and staff for the purpose of preventing marine incidents and workplace injuries. In addition to explanations of concrete response measures based on examples of recent incidents, MOL executives and employees listen actively to improvement ideas from the ships. Information is also shared with other operating vessels. Insights gained from the campaigns are reincorporated into measures for reinforcing safe operations.



President Muto talks about safe operation on a visit to an MOL-operated vessel

1 Departure from Oi Container Terminal, Tokyo Port



2 Cai Mep (Vietnam)



ONSHORE

Drills Simulating Serious Marine Incidents

Accident response drills are held to further solidify MOL's emergency response system. The drills are held twice a year at the head office and simulate a large-scale marine incident.

The drill conducted in April 2012 involved approximately 60 people, including MOL's president, other corporate officers, and representatives from relevant departments and ship management companies. It simulated the unlikely event of a grounding on a coast after a fire in the engine room of an MOL-operated LNG carrier in Tsugaru Strait caused the vessel to drift. The drill included a mock press conference to make it as real as possible. Participants responded to various issues and problems in a charged atmosphere.



A scene from the April 2012 drill simulating a large-scale marine incident

Voices from the Forefront

Alexander Voyloshnikov

Captain of the containership *MOL Courage*

MOL has the largest fleet of operating vessels in the world, and I am proud to be able to work as a member of the team.

The various safe operation measures are effective, and in particular the information provided by the Safety Operation Supporting Center on weather and sea conditions for oceans and ports is extremely valuable. I refer to the information in making decisions as a captain.

I share MOL's goal of becoming the world leader in safe operation. I believe it is my job to work on a daily basis to educate and train younger crew members on the ship to achieve this goal. I think that it is necessary to faithfully conduct what is truly necessary to achieve safe operation and not to become consumed in paperwork or other on-board administrative procedures and lose sight of its essence.



ONBOARD

On-the-job Training (OJT) Instructor System

OJT Instructors Board Vessels From Singapore

The system involves experienced captains and chief engineers who understand MOL standards of safe operations travelling onboard ships to identify unsafe practices and latent risks only discoverable on the ships in service and order immediate improvements. Information on near misses, best practices and the like is also disseminated on each ship to help raise safety awareness and prevent human error.



Employees are instructed on handling mooring ropes

3 Singapore



ONSHORE

BRM (Bridge Resource Management) Training

Training is conducted using a bridge simulator that can create conditions equivalent to an actual ship's bridge, including recreations of sample incidents. The captain and officers work together as a team and effectively utilize information provided by each team member. The ultimate purpose is to prevent errors and achieve safe operations. In June 2012, we became Japan's first private-sector company to install a high-performance bridge simulator capable of 360-degree horizontal views and vertical views.

MOL also regularly conducts this training at training centers in six countries around the world for seafarers on leave.



This high-performance bridge simulator is capable of 360-degree views.

ONBOARD

Enhancing Countermeasures Against Piracy and Terrorism

The ship is now approaching the Gulf of Aden and surrounding waters (off the coast of Somalia), where there has been a spate of piracy and terrorism incidents. These waters continue to see frequent pirate attacks (in 2011, there were 237 piracy incidents and 28 ships were hijacked). Sometimes crew members are kidnapped or murdered, so tension is mounting for the crew. The following introduces the various measures taken by the ship for safe operation.

■ The best solution is avoiding navigating in dangerous waters to the fullest extent possible. In pirate-infested waters, we increase the number of watchkeepers for 24-hour visual monitoring and strengthen radar-based monitoring activities.



■ In the internationally recommended transit corridor (IRTC) in the Gulf of Aden, ships susceptible to pirate attacks travel in convoys escorted by the Japan Maritime Self-Defense Force or naval ships from other countries. The pirates are extending the range of their activities, so via industry associations and other bodies we are requesting the Japanese government to widen the escort area and institute legal measures that allow armed security guards to travel aboard Japanese-flagged vessels.



Photo provided by the Ministry of Defense

■ To ward off pirate attacks, the ship we are following is equipped with water cannons and razor wire and crew members wear bulletproof vests and helmets. There is also an evacuation compartment onboard called a citadel where the crew can take refuge if the pirates board the vessel, which prevents a hijacking. The citadel is built for strength, equipped with several days' supply of water and food, and wired for communication with the outside. It allows crew members to evacuate to safety until a naval ship or other form of help arrives.



Razor wire is installed around the periphery of the bridge

4 Gulf of Aden/ Off the coast of Somalia



A monitor used in the Safety Operation Supporting Center

5 Arrival at Rotterdam Port



ONSHORE

Safety Operation Supporting Center

The Safety Operation Supporting Center (SOSC) provides instant support for the ship's safe operation from onshore, including anti-piracy and anti-terrorism measures.

Established in February 2007 and committed to ensuring that captains at sea never feel alone, the center supports decision-making by ship captains to ensure safety. It is staffed 24 hours a day, 365 days a year by a team of seven seasoned MOL captains and other MOL-affiliated personnel. Specifically, the center monitors the position and movement of roughly 950 MOL-affiliated vessels, providing assistance from the captain's perspective by promptly providing information on abnormal weather and tsunamis and on piracy and terrorism incidents to relevant personnel on the ship and on land.



Other Activities

Safety Conferences

MOL has held Safety Conferences for MOL seafarers at our four main supply locations (the Philippines, India, Croatia and Japan) since 2007 for the purpose of discussing how to strengthen safety measures. Executive officers and staff members from the head office also attend, making the conferences an opportunity to directly hear the views of seafarers from various countries.



A Safety Conference in Croatia

Education and Training for Seafarers

MOL develops human resources to support safe operation through various education and training programs. They include an officer candidate program for aspiring students; the "MOL Rank Skill Training and Evaluation Program," which focuses on skills needed for each rank; and practical training provided by MOL Training Centers.

(Please refer to page 42 for further details.)



Training onboard the training ship *Spirit of MOL*

Family Gatherings

Family gatherings for seafarers and their families are held on a regular basis around the world. Executives from the head office attend and hold briefings on the state of the company and question-and-answer sessions. Social meetings are also held. MOL works in this way to strengthen bonds with the families of seafarers who are away from home for long periods of time.

(Please refer to page 43 for further details.)



A family gathering in the Philippines

Comment from the Officer in Charge

Enhancing MOL Seamanship

In 2006, we experienced a series of serious marine incidents. We used these bitter experiences to revisit our existing safe management system and rebuilt it. For this, we implemented various measures, some concerning ship facilities and others concerning seafarers, ship management and the safety culture. As a result of these actions, we have seen a steady decline in vessel incidents and seafarer injuries.

The most important point for the realization of safe operation is the development and retention of highly skilled seafarers. That's why we provide adequate education and training before our seafarers, who come from more than 20 countries and different backgrounds, even step foot onto a vessel. Even experienced seafarers need to be reminded about safety, so dedicated, experienced captains and chief engineers will travel aboard vessels for a certain period of time to provide onsite instruction and advice.

We are also deepening bonds with the families of seafarers, who are often away from home, through family gatherings. And via Safety Conferences held every year around the world we facilitate candid exchanges of opinion between the company's top management team and seafarers, which promotes mutual understanding.

Various measures such as strengthening the safe operation management structure are essential for maintaining safe operation. That said, ships operate in an unpredictable natural environment that calls for self-reliance. No manual or technology can perfectly predict sudden changes in marine weather conditions or unlikely events. "Seamanship" comes into its own in these sorts of dangerous situations. Seafarers have long drawn on the five senses of human beings, wisdom, and instinct to navigate at sea without placing excessive trust in technology. Seafarers must have the ability to sense danger and surmount it. Judgment, inner strength, stamina and teamwork are the fundamentals of seamanship. We are therefore also revisiting these fundamentals as we step up measures to cultivate seamanship at MOL among our multinational team of seafarers with different backgrounds.



Captain Masaaki Nemoto

Executive Officer

Senpaku ISHIN

With business activities spread across the globe, protecting the global environment is included as one of MOL's top priorities, alongside safe operation, in the MOL Group Corporate Principles. The *Senpaku ISHIN* project, our concept for next-generation vessels, is a ground breaking initiative that helps protect the environment in a substantive way by reducing CO₂ emissions using feasible technologies. This report profiles one of the results of the *ISHIN-I* project, a hybrid car carrier that was delivered in June 2012, as well as progress on core component technologies for the *Senpaku ISHIN* series.

Hybrid Car Carrier *Emerald Ace* Is Delivered



ISHIN-II



Ferry that Uses LNG as Fuel

Features

- Use of LNG as fuel: By using liquefied natural gas (LNG) as fuel, the vessel has cleaner exhaust gases and greatly reduces CO₂ emissions.
- Use of shore power supply system: While in port and at berth, the ship uses electricity supplied from shore and rechargeable batteries to achieve zero emissions
- Emphasis on comfort
- CO₂ reduction: 50%

To make practical use of LNG fuel a reality at an early date, MOL has decided to conduct a gas injection demonstration using an electronically controlled slow-speed diesel engine for new ships in partnership with Mitsui Engineering & Shipbuilding Co., Ltd. This demonstration will help us assess the maritime application of LNG fuel-related technologies.

Gas-injection Electronically Controlled Slow-Speed Diesel Engine

This engine combines the latest electronic control technology with gas-injection slow-speed diesel engine technology that can burn heavy fuel oil, which has been used in ocean-going vessels, and environmentally-friendly natural gas.



Innovations in Sustainability backed by Historically proven, INtegrated technologies

Details of the component technologies can be found on the Senpaku ISHIN section of MOL's website

Web <http://www.mol.co.jp/ishin/en/index.html>



Hybrid Power Supply System for Realizing Zero Emissions While at Berth

The *Emerald Ace* hybrid car carrier is equipped with a hybrid power supply system that combines a solar power generation system with lithium-ion batteries. Conventional power generation systems use diesel power generators to supply power to the ship while at berth, but the *Emerald Ace* is equipped with lithium-ion batteries that are charged by solar power generation systems while at sea. The ship then uses this power while at berth, which allows the diesel power generators to be completely shut off. The result is "zero emissions while at berth."



Solar Panels

The solar panels installed on the deck of the vessel are double-sided glass panels that boast outstanding durability in terms of resistance to salt damage and wind pressure, for example. The solar panels generate 160 kW of electricity (there are 768 panels (210 W) covering an area of 1,079 m²), the most of any vessel in the world.

Lithium-ion Batteries

The system employs lithium-ion batteries with outstanding energy density for storing electricity generated by the solar panels in a restricted space aboard the vessel. The vessel uses 320,000 batteries, which are also used in PCs and other applications, to store some 2.2 MWh of electricity (which is the equivalent of the electricity consumed by 200 ordinary homes). What's more, the high-performance power management system efficiently controls the power with top priority afforded to safety.

Voices from the Forefront

Takahiro Hayakawa

Ship Design Group, Technical Division

The fact that we actually built the world's first hybrid car carrier is a testament to the MOL Group's environmental consciousness and technical capabilities. Applying technologies at sea (on ships) that were originally developed onshore was challenging given the differences in operating conditions. The project faced a number of hurdles like this, but the manufacturer, the shipbuilder and MOL worked together to successfully deliver the vessel right on schedule. With everyone's support, we will continue to report on the tangible applications of ISHIN component technologies moving forward.



Mr. Hayakawa is second from the right

ISHIN-III

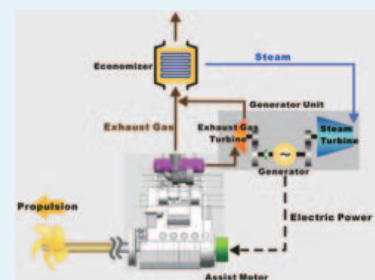


Very Large Ore Carrier with High-efficiency Waste Heat Energy Recovery System

Features

- Waste heat energy recovery to assist propulsion
- Employs technologies to reduce CO₂ emissions even at low speeds, as well as during normal operation
- CO₂ reduction: 30%

The main feature is use of waste heat energy to assist propulsion via auxiliary motors. The waste heat energy is recovered from the main engine and used to generate electricity at high rates of efficiency and power auxiliary motors. These technologies are scheduled to be integrated into actual vessels, a very large iron ore carrier scheduled for delivery in 2013 and a Cape-size bulker slated for delivery in 2014.



Global Social Contribution Activities

MOL aims to be a company that grows sustainably and harmoniously with society. We therefore carefully consider social issues to tackle, and work to help solve them based on the three principles below. Guided by these principles, we proactively undertake social contribution activities that only a shipping company with a global network can.

In this section, we introduce several examples of the various social contribution activities that the MOL Group is engaged in around the world.

Principles of MOL's Social Contribution Activities

MOL engages in social contribution activities on the basis of the following principles.

- I** Contribute to the United Nations Millennium Development Goals* as a company growing in step with the global economy and social development.
- II** Contribute to protecting biodiversity and preserving nature as a company that impacts the environment to an extent, and as a company that does business on the ocean, a rich repository of living organisms.
- III** Contribute to local communities as a good corporate citizen.


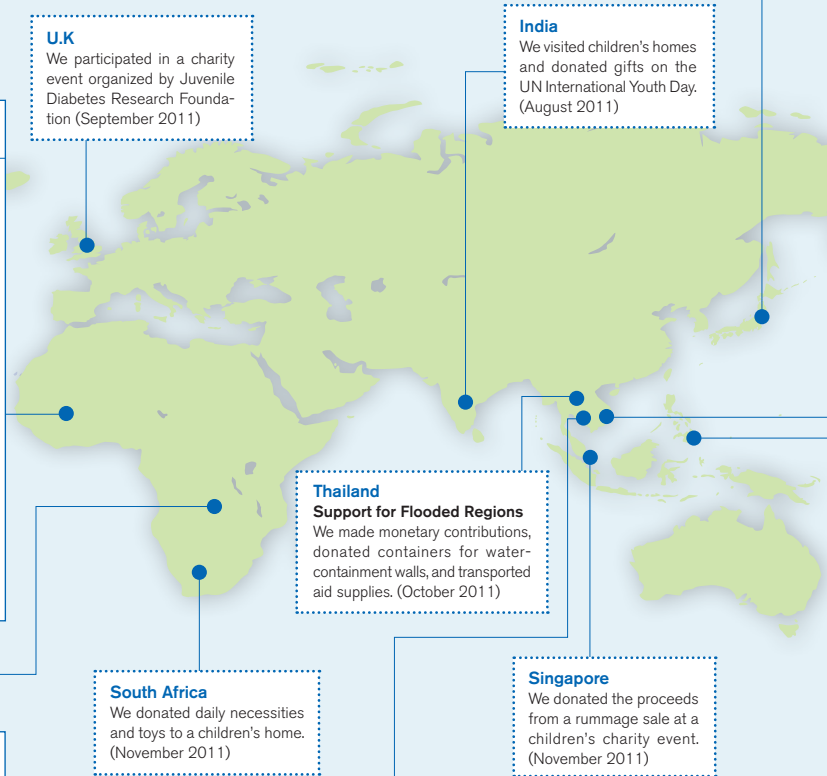
* One of the common frameworks that integrates the Millennium Declaration adopted at the United Nations Millennium Summit held in September 2000, and the International Development Goals that were adopted at major international conferences and summits in the 1990s. The Millennium Development Goals consist of specific numerical targets to be achieved by 2015 in eight fields, including "achieve universal primary education" and "reduce child mortality."

Principle I

Burkina Faso

Transportation of Desks and Chairs by Sea

We provided marine transport for school desks and chairs used with care for many years before they were donated by elementary schools in Nagoya City, Aichi Prefecture, to children in Burkina Faso. In June 2011, the desks and chairs filled with the aspirations of children were donated to elementary schools in Burkina Faso, where they are now proving useful in a new location.





Principle I

Zambia

Transporting Shoes for Children

In 2010, MOL began helping in the transport of shoes donated to children in Zambia as the cosponsor of a project with the Japanese Organization for International Cooperation in Family Planning (JOICFP), an international NGO. Along with providing containers for shipment from Japan free of charge, MOL cooperates in ocean transport to the South African port of Durban, which also serves as the gateway port to Zambia. Besides motivating residents to come in for health checks, this program serves as a useful health education measure that helps to prevent parasitic diseases, tetanus and other ailments.



Principle I

Cambodia

Transporting Medical Vehicles

Since 2010, MOL has been helping transport medical vehicles and other cargo to Phnom Penh in support of the certified NPO Side By Side International (SBSI). To date, we have shipped a total of 42 vehicles, including ambulances. These vehicles, which were handed over to medical institutions, including national hospitals in Cambodia, are serving at the frontline of emergency medical treatment.



Principle III

Japan

Support for Disaster-hit Regions of the Great East Japan Earthquake

(Please refer to pages 14 and 15 for details.)

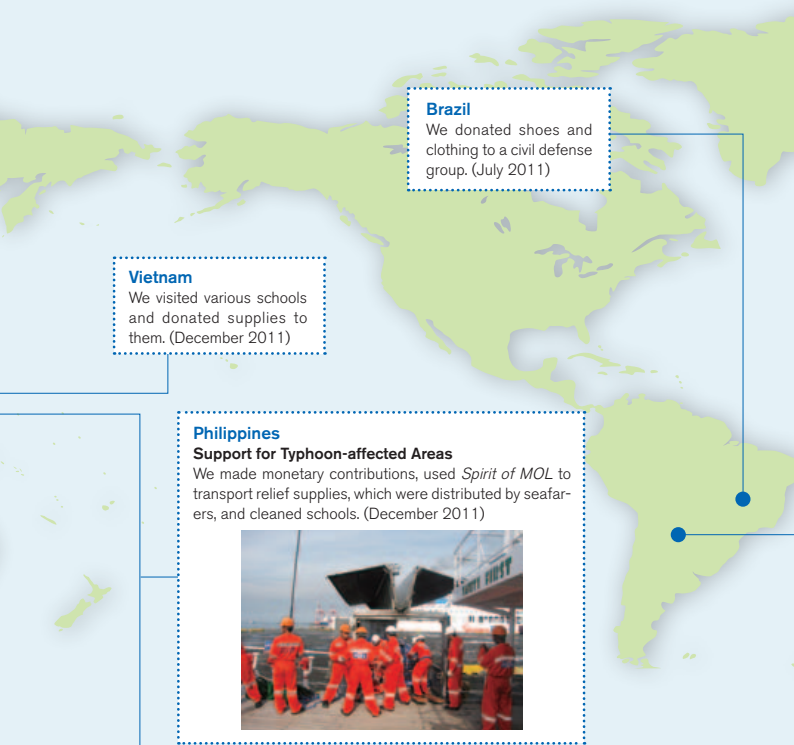
Principle II

Malaysia, Hong Kong, India and the U.S.

Biodiversity and Natural Environment Protection

Malaysia: Planted 100 mangrove seedlings.
Hong Kong: Cleaned up the sea shore.
India: Participated in a "Say NO to Plastic Bags" campaign on World Environment Day* and tree-planting activities.
U.S. (Chicago): Took part in forest protection activities.

* Established by the UN General Assembly in 1972, this annual event (June 5 every year) is designated as a day for conducting activities that promote awareness of environmental protection.

Principle I

Paraguay

Transporting Fire Trucks

In August 2011, we transported five second-hand fire trucks from Yokohama to Paraguay. After arriving at the port of Puerto Fenix, the vehicles were delivered to the Volunteer Fire Department of Paraguay.




Principle III

Philippines

Construction of Daycare Center

We donated some of the funds for constructing a daycare center (a multipurpose facility that will provide education for pre-school children, health checkups and meals for underprivileged people, and so on) to the Philippines international NGO Habitat for Humanity Philippines. Furthermore, MOL Filipino seafarers, their families and land-based staff of the MOL Group seafarer manning company Magsaysay MOL Marine, Inc. (MMM) are volunteering their time to help with construction work.




Voices from the Forefront

Kongera A. Ponnappa
 Captain, *Spirit of MOL* training ship

Thanks to fast decision-making by MOL's Tokyo Head Office and meticulous arrangements, many organizations lent their support to relief efforts in typhoon-affected areas, including relief organizations, port authorities, the coastguard, the government of the Philippines, MOL Training Center Philippines (MOLTCP) and MOL Career Support, Ltd. (MOLCS).

At disaster-hit sites, cadets and seafarers from the *Spirit of MOL* threw themselves into various support activities.

I'm glad if we were able to be of help to the people affected by the typhoon in Cagayan de Oro.



Other activities are introduced on page 44, "Social Contribution Activities."

Response to the Great East Japan Earthquake

We would like to express our heartfelt sympathies to those who lost loved ones in the Great East Japan Earthquake, and extend our best wishes to other affected people.

In this section, we introduce how we have responded since the disaster to ensure business continuity, how we have supported the disaster-hit regions, and what we are doing to strengthen our risk management system for future disasters.

MOL's Response After the Earthquake

Business Continuity

Earthquake Task Force and Support Headquarters

The day after the earthquake occurred, we established the Tohoku-Pacific Ocean Earthquake (Great East Japan Earthquake) Task Force and Support Headquarters, chaired by the president. We ensured business continuity by minimizing the damage to the MOL Group, while simultaneously establishing a system for providing rapid support for the disaster-hit region.

Confirming Safety of Operated Vessels

Immediately following the earthquake, all relevant personnel were assembled at MOL's Safety Operation Supporting Center (SOSC). The center, which is engaged in year-round, 24-hour monitoring of the position and movement of operated vessels, quickly went about confirming the safety of operated vessels and providing tsunami information. All vessels operated by MOL were not involved in any serious marine



incidents resulting from the earthquake or the subsequent tsunami.

March 11, 2011
The SOSC confirmed the damage status of each vessel immediately after the earthquake.

Verifying the Safety of Employees

We immediately verified the safety and well-being of all employees of MOL and their families, as well as all employees of Group companies.

Support for Disaster-hit Regions

Transporting JSDF Vehicles and Troops by Ferry

Group company MOL Ferry Co., Ltd. transported some 3,700 Japanese Self-Defense Forces (JSDF) troops and about 1,260 emergency vehicles for providing relief to the disaster-hit regions. Four ferries made a total of 10 trips from the port of Tomakomai to the port of Aomori from March 13 to March 22, 2011.



March 17, 2011
Sunflower Sapporo loading JSDF vehicles at the port of Tomakomai

Free Emergency Support for Relief Supplies

Immediately after the earthquake, there were severe shortages of food and daily necessities in the disaster-hit regions. Drawing on our MOL Group network and transport capabilities, MOL procured (19 10-ton truck loads of) relief supplies and delivered them free of charge to customers and municipalities in the disaster-hit regions.



Free Transport of Relief Supplies from Abroad

Responding to requests for transport of relief supplies from overseas, MOL provided free transport services for supplies sent from other countries. We transported the equivalent of 36 20-foot containers filled with drinking water, bedding, masks and other supplies to the disaster-hit regions free of charge, as well as large quantities of building materials for temporary housing at special rates.

Donations for Disaster Relief

1. MOL donated a total of ¥50 million for immediate disaster relief to Iwate Prefecture, Miyagi Prefecture, Fukushima Prefecture and the Japanese Red Cross Society.
2. Donations were solicited from executives, employees and seafarers in the MOL Group, and a total of approximately ¥63 million was raised and donated for relief and recovery efforts to the Japanese Red Cross Society, the Central Community Chest of Japan and other organizations.

Cruise Ship *Fuji Maru* Supports Relief Efforts

From April 11 to April 17, 2011, MOL arranged for the ocean-going cruise ship *Fuji Maru* to call in at several ports in Iwate Prefecture that were severely damaged by the tsunami: Ofunato, Kamaishi and Miyako. The *Fuji Maru* provided nutritionally-balanced meals for afflicted people, a large public bath and cabins as private space free of charge. A total of 4,451 people used these amenities. Messages of support from MOL executives and employees and 13 overseas bases were displayed inside the vessel.



We received many messages of appreciation from people who used the *Fuji Maru* during the port visits.

Donation of Refrigerated Containers

The tsunami triggered by the massive earthquake destroyed many cold-storage facilities in fishing ports, so we received requests from affected ports to supply refrigerated containers as substitute facilities. To help support the fishing industry's recovery, we donated a total of 27 refrigerated containers (as of May 31, 2012) to the disaster-hit areas.



Refrigerated containers donated to the fishing cooperative in Soma City, Fukushima Prefecture.

MOL's Risk Management System

The company has formulated a business continuity plan (BCP*) documenting specific procedures to enable it to continue providing its core ocean transport services without interruption, or quickly restore operations to pre-disaster levels in preparation for an unexpected event. In the event of an earthquake or other natural disaster, or outbreak of an infectious disease, MOL's highest priority is ensuring the safety of MOL-operated vessels and company executives and employees. The company has prepared a "Disaster and Earthquake Response Manual" outlining procedures for implementing this BCP in readiness for an emergency.

As a result of these daily efforts, the company's risk management functioned well when the earthquake struck, enabling us to continue business and quickly provide support to the disaster-hit areas.

We introduce below some of our key measures for ensuring business continuity.

* Business Continuity Plan: A plan that establishes response measures necessary for ensuring the continuity of core operations when a disaster occurs.

Satellite Offices

We designated MOL Nakamurabashi employee housing (Nerima Ward, Tokyo), Tsurumi employee housing (Yokohama City), Minami-Kashiwa company housing (Kashiwa City) and Kakio Institute (Kawasaki City) as satellite offices to back up Head Office functions. These offices are equipped with IT systems to continue pre-determined priority tasks. They also have satellite phones for maintaining communications.

Drills at Satellite Offices

We checked the operation of e-mail and the company's main systems at the satellite offices, and confirmed operations were functioning normally. Furthermore, we established a backup system outside the Kanto region in the company's Kansai branch in Osaka for safe operation of company-operated vessels, which is our core task.

Employee Awareness-Raising

We have prepared the MOL BCP Summary, an abridged version of the "Disaster and Earthquake Response Manual." This summary contains information on the initial steps MOL executives and employees should take in a disaster. Furthermore, to ensure that correct knowledge and information is shared among executives and employees in a disaster, we publish an e-mail magazine containing information related to disaster prevention in general, including the need to make regular preparations during ordinary times. This magazine is available on our internal portal site.

Drills Simulating Serious Marine Incidents

(Please refer to page 6 for details.)

Ongoing Initiatives Through Our Main Business

The Great East Japan Earthquake had a major impact on business activities and daily living in the form of energy shortages, causing increased demand for petroleum products and alternative energy sources like liquefied natural gas (LNG) and coal. Moreover, drinking water, housing materials and other supplies were imported in large quantities. As one of the largest shipping companies in the world with a diverse fleet of LNG carriers, crude oil and petrochemical product tankers, dry bulkers, containerhips and more, MOL has worked since the earthquake to meet this transport demand.

We will continue contributing to the recovery and reconstruction of the disaster-hit regions and to the stability and growth of the world economy through our main business, transporting resources, energy sources and products for Japan and other countries around the world.



MOL's Approach to CSR

MOL's basic approach to corporate social responsibility is expressed in the MOL Group Corporate Principles. To put these principles into practice, the MOL Group meets global transport demand through daily business activities and has also created a framework for CSR initiatives and strengthened those initiatives by setting annual targets. MOL is stepping up its activities in order to pursue CSR for growth with society.

MOL Group Corporate Principles

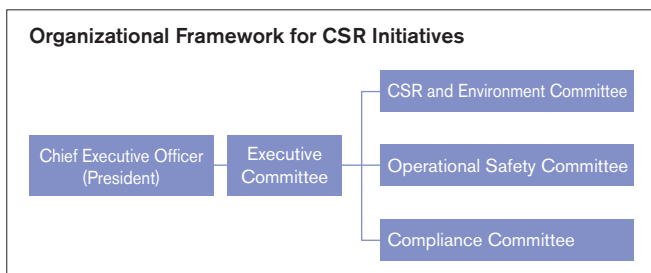
1. As a multi-modal transport group, we will actively seize opportunities that contribute to global economic growth and development by meeting and responding to our customers' needs and to this new era.
2. We will strive to maximize corporate value by always being creative, continually pursuing higher operating efficiency, and promoting an open and visible management style that is guided by the highest ethical and social standards.
3. We will promote and protect our environment by maintaining strict, safe operation and navigation standards

CSR Initiatives

In our view, CSR means conducting business management that adequately takes into account laws and regulations, social norms, safety and environmental issues, human rights and other considerations, and developing together with society sustainably and harmoniously while earning the support and trust of stakeholders, including shareholders, customers, business partners, employees and local communities.



In order to fulfill these responsibilities, MOL deliberates on CSR-related policies and measures, primarily through the three committees under the Executive Committee.



The CSR and Environment Committee is chaired by the executive vice president and works to promote CSR throughout the MOL Group by setting and reviewing annual targets for initiatives related to compliance, corporate governance, accountability, risk management, safe operation, human rights, care for employees and seafarers, social contributions and the environment. The CSR and Environment Office in the Corporate Planning Division administers the committee and promotes CSR.

In fiscal 2011, the committee was convened twice and deliberated on progress with CSR targets and environmental targets set in the "GEAR UP! MOL" midterm management plan, as well as the status of environmental management, initiatives to reduce environmental impact, accommodation of environmental laws and regulations, the policy for social contribution activities, and other matters.

Participating in the UN Global Compact

MOL has participated in the United Nations Global Compact since March 2005. The Global Compact was first proposed by then UN Secretary-General Kofi Annan in 1999 and formally initiated the following year. Member companies are required to support and practice 10 principles in four areas: human rights, labor, the environment and anti-corruption. The compact shares the same values as our Rules of Conduct, which was established as a set of guidelines for executives and employees, and MOL's participation in it signals internally and publicly our commitment to these principles.

In the past, many companies, particularly in Japan, have adopted an approach towards CSR that has focused on measures to protect



The MOL Group Basic Procurement Policy

As a company that handles part of the supply chain of customers and in order to fulfill the social responsibility of the MOL Group itself, we formulated a basic policy for MOL Group procurement activities in March 2012. We are striving to embed this policy in the MOL Group as we aim to contribute towards the realization of sustainable societies together.

CSR Activities Policy During the Midterm Management Plan, "GEAR UP! MOL"

1. Stepping up "CSR that protects MOL" and "CSR that fulfills MOL's responsibility"
2. Pursuing "CSR activities that benefit both the company and society"
3. Expanding CSR activities worldwide and throughout the MOL Group

them from accidents, impropriety, and other risks. Based on this, they have proceeded to practice CSR that fulfills their responsibilities. Namely, to advance CSR, companies, as members of society, have tried to strike an effective balance in allocating the profits and utilizing the assets they generate, by protecting the environment, contributing to the local community, and paying a reasonable return to stakeholders. These two categories represent the foundation level of CSR. In MOL's case, CSR activities are founded first and foremost on the establishment of good corporate governance and compliance, the creation of Rules of Conduct and measures to eliminate serious maritime accidents, development of environmental management systems and so on. The company also strives to use its resources effectively to make a contribution to society. In this way, MOL has addressed the immediate tasks of effective CSR.

In the years ahead, MOL has decided to take the next step forward in CSR by instilling an even stronger awareness of and pursuing "CSR activities that benefit both the company and society," while identifying and supplementing any areas where the fundamental level of CSR has been inadequate.

The midterm management plan, "GEAR UP! MOL," incorporates safe operation and environmental protection policies in a strategy for becoming the company selected by customers and achieving sustainable growth. In that sense, CSR policies are closely related to the company's business strategies. By establishing a CSR policy that is clearly understood and embraced by customers, land-based employees, seafarers, and society as a whole, and also is recognized and evaluated favorably by shareholders and investors, MOL will be the company of choice. This in turn will allow the company to make even greater contributions to society, generating a positive cycle for CSR initiatives that builds synergy, supports sustainable growth and benefits both the company and society.

Furthermore, MOL will work to ensure that CSR activities and policies are disseminated throughout the MOL Group both in Japan and overseas through dissemination and enforcement of the Global Compact, the MOL Group Environmental Target System, and in other ways.

Current CSR Activities in the MOL Group

Activities in Fiscal 2011

Fiscal 2011 was the second year of our current three-year midterm management plan, "GEAR UP! MOL," which adopts "enhance safe operation" and "environmental strategy" as strategy goals. During the year, we worked to achieve the single-year targets based on the medium-term environmental targets and vision in this plan.

As a result of these efforts, we achieved almost all of our targets, apart from the "Four Zeroes" (an unblemished record in terms of serious marine incidents, oil pollution, fatal accidents, and cargo damage), employees using all their special summer vacation days, and certain other targets. In particular, I think we did well in terms of risk management by achieving our goals for corporate governance and compliance at a time when the failure of corporate governance has become a problem in society.

In terms of safe operation, we are aiming to "become the world leader." Here, we worked to increase the visibility of safe operation processes and generally achieved our objective numerical indicator targets for measuring safety levels. However, it is extremely regrettable that despite these safety enhancement measures we were unable to achieve our "Four Zeroes" because of a fatal accident inside an elevator on a vessel not operated by MOL. We have implemented measures to ensure that this sort of accident doesn't happen again, as we aim to achieve the "Four Zeroes" in fiscal 2012.

We achieved most of our targets in the area of environmental protection. For example, we practiced ECO SAILING wherever possible, reduced CO₂ emissions per ton-mile, implemented initiatives for preventing atmospheric pollution, offered low environmental impact solutions as a whole group, and contributed to the conservation of biodiversity.

In the *Senpaku ISHIN* project, which aims to develop next-generation concept vessels and is a pillar of our "Environmental Strategy," we successfully developed and introduced various component technologies. And in June 2012, in one of the major achievements thus far under this project, we took delivery of a hybrid car carrier. This vessel aims to achieve "zero emissions" by emitting no exhaust gases while in port by using solar energy. Moving forward, we will continue to develop and introduce component technologies in line with our roadmap.

Activities Planned for Fiscal 2012

Based on the achievement status of goals in fiscal 2011, we have set new goals for fiscal 2012, the final year of our midterm management plan. In addition to refining environmental activities, we are determined to achieve the "Four Zeroes" in terms of safe operation. Through this ongoing target management, we will fulfill our corporate social responsibility by achieving our medium-term targets. By earning recognition from our various stakeholders as a result, we are convinced that this will enable us to grow sustainably with society.



Toshitaka Shishido, Chairman of the CSR and Environment Committee, Representative Director, Executive Vice President

CSR Program Targets and Results

In order to put our CSR Activities Policy during the midterm management plan, “GEAR UP! MOL” into practice, we have established midterm CSR program targets (FY2010–12) as well as targets for each fiscal year, and are currently working to achieve them. New targets were established for fiscal 2012 based on relative achievement of fiscal 2011 targets. The MOL Group is striving to grow sustainably and harmoniously with society through achievement of these midterm CSR program targets.

	Objectives of Midterm Management Plan (FY2010–12)	FY2011 Targets
Overall Strategy	1. Stepping up “CSR that protects MOL” and “CSR that fulfills MOL’s responsibility” 2. Pursuing “CSR activities that benefit both the company and society” 3. Expanding CSR activities worldwide and throughout the MOL Group	
Compliance	Ensure strict compliance world-wide/ Group-wide and strengthen systems that support this Strengthen systems for early detection and rectification of non-compliance	1) Run E-Learning programs in high compliance risk fields (antitrust law and insider trading) 2) Hold legal insurance courses at the head office at least once a year 3) Administer legal courses for MOL Group companies in Japan (2 times) and overseas 4) Raise awareness of best practices, with a focus on MOL Group companies 5) Revise Compliance Rules and strengthen recurrence prevention system 6) Communicate Rules of Conduct at new employee training 7) Establish external compliance report desk and raise awareness of it
Corporate Governance, Risk Management	Effectively administer MOL’s distinctive system of corporate governance Strengthen systems for risk management and business intelligence (BI) that support sustainable growth Establish and enhance business continuity planning (BCP) Develop balanced relations with stakeholders	1) Hold discussions on strategies and long-term vision at board meetings with attendance of outside directors 9 times a year, in principle 2) Enhance advance briefings on board meeting agenda items for outside officers to further enhance deliberations by the board 3) Enhance and rigorously implement fleet data management and foreign currency flow management 4) Foster a corporate culture that works to acquire beneficial information (hold BI training sessions twice, hold theme-based seminars 3 times, extend the MIP ¹ platform to mobile devices, and establish new BI page on the MIP) 5) Implement backup measures for BCP (develop information systems, etc.) 6) Conduct drills using satellite offices 7) Begin considerations for supplier CSR guidelines
Accountability	Continually practice accurate, timely disclosure for shareholders and investors Promote stakeholder understanding of the midterm management plan, which is focused on growth, safe operation and the environment Develop the trust of shareholders and investors regarding the sustainability of our business performance Strengthen world-wide/Group-wide responsiveness regarding disclosure in emergencies Establish a reputation as the leading company in the shipping industry among business professionals in Japan and overseas	1) Strive to eliminate corrections to disclosures 2) Hold president roundtables and seminars. Plan and hold tours of the SOSOC ² and other MOL facilities 3) Increase the number of IR events for Asian investors to appeal to investors in the emerging markets in Asia that are experiencing rapid growth 4) Make revisions to fleet expansion plans, etc., during midterm plan period depending on changes in business environment and progress levels, and disclose revisions to the public 5) Include features on growing markets and safe operation—pillars of the midterm plan—in Annual Report based on progress levels 6) Qualitatively improve disclosure of information promoting the growth potential of ocean transport and MOL’s distinctive ocean transport portfolio management 7) Dispel concerns of investors through disclosures in line with changes in business trends and the business climate (including information related to International Financial Reporting Standards (IFRS) and other accounting standards) 8) Conduct IR activities in Japan and overseas based on the above and increase the number of events 9) Hold drills at least twice a year on handling the media in emergencies (run by Public Relations Office) 10) Increase exposure in mass media as well as business journals by 5% from the previous fiscal year
Safe Operation, Service Quality	Realize world’s best level of safe operation and transport quality	1) Of the “Four Zeroes,” achieve zero serious marine incidents, zero oil pollution, and zero serious cargo damage 2) Achieve target operational down time per vessel of 24 hours/year or less while aiming for further reduction 3) Achieve targets for Phase IV (started October 2010) of Safe Operation Management Structure through the following measures: –Hold Safety Conferences 4 times worldwide. Hold operational safety workshops for office staff 4 times –Visit at least 300 vessels for operational safety campaigns (280 in FY2010), and have corporate officers visit at least 50 vessels (37 in FY2010) –Conduct BRM drills ³ and SHS drills ⁴ based on established drill scenarios and new simulator –Prevent accident recurrence through timely reporting and dissemination of information on near-misses and accidents –Formulate policies for improving vessel equipment based on the fail-safe concept –Accelerate and promote increased efficiency of vessel-land operations through introduction of an advanced IT system and share information effectively –Implement FMS ⁵ at the SOSOC ² for domestic carrier and ferry movements

Legend: ○Achieved ○Generally achieved △Partially achieved ●Did not achieve (target period/content changes)

FY2011 Results

FY2012 Targets

FY2011 Results		FY2012 Targets
○	Conducted E-Learning programs on insider trading (February to April 2011), and antitrust law (January to March 2012)	1) Run E-Learning programs in high compliance risk fields (antitrust law and insider trading)
○	Conducted legal insurance course in January 2012	2) Hold legal insurance courses at the Head Office at least once a year
○	Created a DVD of courses conducted by attorney Kyoichi Sato in 2010 and distributed to MOL Group companies in Japan. Conducted antitrust law test for overseas Group companies between March and May 2011 using MIP ¹ (taken by approx. 3,400 people)	3) Administer legal courses or tests for MOL Group companies
○	Selected best practices at a Group Executive Committee meeting in October 2011	4) Raise awareness of best practices in the MOL Group through Group Executive Committee meetings
○	Revised Compliance Rules in June 2011 and notified revisions internally and to MOL Group companies in Japan and overseas	5) Consider revising the CSR Handbook
○	Communicated at new employee training in April	6) Communicate Rules of Conduct at new employee training
○	Established external compliance advisory service desk in August 2011 and communicated this internally	7) Ensure the internal and external compliance advisory service desks are operating properly
○	Held discussions at 6 of the 10 board meetings in FY2011 (May, July, September, November, December and February).	1) Hold discussions on strategies and long-term vision at board meetings with attendance of outside directors 9 times a year, in principle
○	Continued to conduct advance briefings on board meeting agenda items to aid the understanding of outside directors and corporate auditors. Received audit certification for the company's Management's Report on Internal Controls over Financial Reporting from the external auditors confirming the details to be appropriate	2) Enhance advance briefings on board meeting agenda items for outside officers to further enhance deliberations by the board
○	Continued to widen and enhance data in fleet data management based on management using Excel spreadsheets. Raised the accuracy of foreign currency flow management by implementing improved measures	3) Analyze and manage the risk to company management of the compositional ratio of free vessels, which do not have long-term contracts with shippers, in the MOL Group's fleet with respect to market conditions
○	Held BI training sessions in March, April and July 2011 and invited outside people as guest speakers. Held theme-based seminars twice, in June and September 2011: China Energy Information and Understanding Economic Indicators, respectively. Established a new BI page on the MIP ¹ platform. Established a platform for mobile devices in February 2012	4) Foster a corporate culture that works to acquire beneficial information (aim to raise awareness internally through the BI platform now that the initial work to build the platform for supporting BI has been finished)
○	Secured and upgraded communications means with preferential mobile phones and satellite phones. Created an MOL BCP Summary, which is an abridged version of the Earthquake Response Manual, and distributed it to all employees	5) Introduce satellite office facilities at dormitories for new employees and examine a backup system for the company's core systems
○	Conducted practical drills at two satellite offices	6) Provide information for ensuring employee safety using the in-house e-mail magazine and MIP ¹
○	Formulated the MOL Group Basic Procurement Policy in March 2012	7) Disseminate and enforce the MOL Group Basic Procurement Policy
●	There was 1 correction in a total of 46 disclosure documents; part of the financial results disclosure (segment information in the notes to the consolidated financial statements) was corrected and disclosed by the Accounting Division on May 17, 2011	1) Strive to eliminate corrections to disclosures
○	Held multiple president roundtables during the fiscal year. Planned tours (which will be held in FY2012 and thereafter)	2) Communicate information in an easy-to-understand manner about the company's overall performance in FY2011 and outlook for business performance in FY2012, the final year of the midterm management plan, through the company's Annual Report and website
○	Continued to conduct IR activities in Asia	
△	Revised profit plan. Now revising fleet expansion plans	
○	Included features on "For Acceleration of Business Development in Growing Markets" and "Enhancing Safe Operation" in the 2011 Annual Report	3) Disseminate information about the direction of the company's business development from FY2013, when MOL's next midterm management plan will commence
○	Continued to promote the characteristics of MOL's fleet portfolio through meetings with investors	4) Maintain and expand direct and ongoing communication between investors and MOL management
○	Explained changes in business trends and the business climate and the company's response through meetings with investors	5) Revamp the company's website for investors with the aim of raising the quality of information disclosure to promote the sustainable growth potential of marine transport
○	Enhanced the detail explained qualitatively	6) Hold drills at least twice a year on handling the media in emergencies (run by Public Relations Office)
○	Held in May and October 2011	7) Increase postings in mass media as well as business journals from the previous fiscal year
○	Achieved a 10% increase in postings year on year	
○	Serious marine incidents: 0; oil pollution: 0; serious cargo damage: 1 (hold explosion and fire on a chartered containership)	1) Of the "Four Zeros," achieve zero serious marine incidents, zero oil pollution, and zero serious cargo damage
○	Operational down time per vessel of 20.72 hours/year; achieved target	2) Achieve target operational down time per vessel of 24 hours/year or less while aiming for further reduction
	Set targets in containership operations for worldwide common service indicators—"On Time Arrival Performance" and "Safe Operation"—and regularly disclosed achievement status on a new dedicated website	3) Achieve target operational stoppage accident rate of 1 incident per vessel/year or less while aiming for further reduction
○	—Held the MOL Safety Conference in Manila, Mumbai and Dubrovnik (Croatia) in February 2012 and Tokyo in March 2012. Held operational safety workshops in July 2011 (twice) and October 2011 (twice)	4) As the final year for Phase IV of Safe Operation Management Structure, FY2012 will be a year for deepening ongoing measures, as well as undertaking the following measures focused on the "Human Factor" with the aim of "eradicating collisions, groundings, and accidents causing injury or death" as well as "eradicating equipment incidents that lead to a dead ship condition": —Hold Safety Conferences 4 times worldwide. Hold operational safety workshops for office staff 4 times —Conduct ship visits twice a year under the safety campaign
○	—Visited 170 vessels in April and May 2011, and another 172 vessels in September and October 2011, for a total of 342 vessel visits. Corporate officers visited 40 vessels	
○	—Conducted drills 38 times at 6 training centers between August 2011 and March 2012. Installed an advanced bridge simulator at a drill facility for Filipino seafarers	—Obtain external certification for seafarer training program management system, and continue to run the system effectively
○	—Conducting continuously	—Prevent accident recurrence through timely reporting and dissemination of information on near-misses and accidents
○	—Took part on every occasion in the Ship Standard Specification Committee Task Force Meetings. Released Ver. 4.0 of the MOL safety standard specifications in November 2011	—Formulate policies for improving vessel equipment based on the fail-safe concept
○	—Continuing to introduce and use an integrated system (SHIPNET)	
○	—Introduced on 8 Ferry Sunflower Limited vessels, 15 MOL domestic carriers, 9 MOL ferries, and 4 Meimon Taiyo Ferry Co., Ltd. vessels	—Accelerate and promote increased efficiency of vessel-land operations through introduction of an advanced IT system and share information better

(Continued on next page)

	Objectives of Midterm Management Plan (FY2010–12)	FY2011 Targets	
Care for Human Rights, Employees and Seafarers	Raise human rights awareness in Japan and overseas, and ensure human rights are protected	1) Continue and strengthen activities for fostering human rights awareness (conduct training for all levels in the company and promote seminar opportunities for personnel who are not human rights specialists)	
	Enhance the personnel system to further motivate employees and enable them to demonstrate their abilities	2) Identify issues based on the results of the questionnaire for overseas sites on the Global Compact and implement measures	
	Reduce overtime work and develop workplace conditions that instill peace of mind in employees in line with an individual's stage of life		3) Review the personnel system to further motivate employees and enable them to demonstrate their abilities
			4) Introduce new measures to reduce overtime work by 10% from the previous fiscal year (42.3 hours)
			5) Use of at least 10 days of annual leave (7.1 days used on average in FY2010)
			6) Use of all 7 special summer vacation days (5.3 days used on average in FY2010)
	Enhance the employees' health management system and risk management system		7) Revise and execute program for complying with Act on Advancement of Measures to Support Raising Next-Generation Children
8) Further strengthen response to globalization (conduct training to develop core personnel at overseas Group companies and other measures)			
9) Strengthen career development program to support job performance by women managers			
10) Provide support for job performance by people with disabilities			
11) Provide support for job performance by seniors			
12) Strengthen and enhance health management systems for prevention and early response			
13) Enhance interview-based instruction, consultation and health education to promote health			
14) Support health management for overseas workers			
15) Establish and distribute communicable diseases manual			
16) Strengthen safety management systems and conduct drills			
Improve occupational safety and health and welfare programs for seafarers		17) Continue calculating LTIF ⁷ , including for Group companies	
		18) Achieve zero fatal worker accidents, one of the "Four Zeroes"	
		19) Maintain LTIF ⁷ of 0.25 or less	
Foster our own multinational seafarers and employ them as core seafarers		20) Continue preparing for adoption of the Maritime Labour Convention, which stipulates shorter on-board working hours	
		21) Continue installing fleet broadband, and consider a next-generation communication system that includes health and welfare and test on actual ships	
		22) Partner with universities in the Philippines with maritime science departments and train select third-year students at MOL's training centers	
Provide employees and seafarers with a sense of pride and joy from working at the company		23) Fully establish and utilize program for recognizing outstanding seafarers	
		24) Make effective use of the company intranet, Japanese/English company newsletters and DVDs	
Environmental Measures	Evolve into a corporate group that meets today's demands by offering transport solutions with a lower environmental burden	(See pages 28 to 31 for "Environmental Targets and Results")	
Social Contribution Activities	Implement principled social contribution activities (tackle social issues around the world)	1) Continue and deepen existing activities in line with Millennium Development Goals ¹⁹ , including transport of relief provisions, and consider and implement new activity proposals selected in FY2010	
	Enhance social contribution activities drawing on the company's resources	2) Expand activities worldwide to contribute to conservation of biodiversity and protection of the natural environment	
	Conduct social contribution activities integrated with business activities	3) Consider and implement new activity proposals for contributing to regional communities in which MOL conducts business that were selected in FY2010	
	Expand social contribution activities participated in by employees and seafarers in Japan and overseas	4) Continue and deepen existing activities, and consider and implement new activities, including a field trip program that utilizes marine shipping facilities	
Response to the Great East Japan Earthquake		5) Consider and implement new activity proposals in emerging countries selected in FY2010	
		6) Provide feedback on social contribution activity proposals of Group companies	
		7) Increase participation in existing activities, including beach cleanups	
		8) Consider beach cleanup around the port of Kashima	
		Fulfill social responsibilities related to restoration and recovery from the Great East Japan Earthquake	
		–Contribute through business activities, including early resumption of port calls to disaster-hit ports and transport of recovery supplies	
		–Conduct social contribution activities that help people affected by the disaster and help in the restoration and recovery of the disaster-stricken region	
		–Ensure safety of seafarers, etc., in connection with nuclear damage, conduct initiatives to dispel rumors, eliminate anxieties among seafarers, etc., and help maintain distribution	
		–Actively participate in electricity conservation efforts	

¹⁹ MOL Group Information Portal (MIP). A portal site accessible by MOL Group employees worldwide.

²⁰ Safety Operation Supporting Center.

²¹ Bridge Resource Management (BRM) drills. These drills involve recreating past incidents with a simulator and learning how to respond.

²² Ship Handling Simulator (SHS) drills. These drills are conducted with a life-like simulator that recreates an actual ship using a large screen.

²³ Fleet Management System (FMS). The system supports safe vessel operations by continually displaying the movement of all operated ships on monitors along with information on weather conditions, ocean conditions and various types of safety information.

Legend: ● Achieved ○ Generally achieved △ Partially achieved ● Did not achieve (target period/content changes)

FY2011 Results

FY2012 Targets

○	Conducted level-specific training. People other than human rights specialists (6 people) attended the Human Rights Forum (organized by Buraku Liberation League Tokyo), and a seminar for developing people in charge of recruitment to promote human rights (organized by the Industrial Federation for Human Rights, Tokyo)	1) Continue and strengthen activities to instill and improve human rights awareness (conduct training at all levels, use the intranet to convey information about human rights, and promote outside seminar opportunities for personnel who are not human rights specialists)
○	Provided feedback on results (and issues) to each region	
○	Revised the system for shorter hours for employees with young children	2) Review the personnel system to further motivate employees and enable them to demonstrate their abilities
●	FY2011 result: 44.2 hours. Plan to formulate and implement more effective measures to achieve a reduction	3) Introduce new measures to reduce overtime work by 10% from the previous fiscal year (when overtime hours were 44.2)
●	FY2011 result: 7.0 days used. Continuing to promote use of leave	4) Use of at least 10 days of annual leave (7.0 days used on average in FY2011)
●	FY2011 result: 5.1 days used. Continuing to promote use of special summer vacation days	5) Use of all 7 special summer vacation days (5.1 days used on average in FY2011)
○	Finished revising program for complying with Act on Advancement of Measures to Support Raising Next-Generation Children. Internal notice in the third quarter	6) Implement various measures toward achieving action plan targets for general companies
○	Finished comparing and analyzing platforms at overseas Group companies. Enhanced overseas training program for head office employees	7) Strengthen development and utilization of personnel for global development
○	Supported Women's Initiatives ⁶⁾	8) Support the performance of female managers and career development
○	Added one position for people with disabilities	9) Provide support for job performance by people with disabilities
○	Increased by one the number of people eligible for the continuous employment system (AEP)	10) Provide support for job performance by seniors
○	Changed industrial physician. Introduced web-based system to allow all employees, whether seafarers or land-based, to check the results of health examinations	11) Strengthen health management systems for prevention and early detection, and implement various measures
○	Conducted training and interviews for seafarers and land-based personnel	12) Enhance health education and increase consultation opportunities to promote health
○	Introduced a web-based questionnaire (which is conducted monthly). Expanded health support system	13) Strengthen the health management support system for expatriate staff
○	Created a manual and distributed it internally	
○	Updated the emergency contact network	14) Strengthen safety management systems and conduct drills
○	Calculated LTIF ⁷⁾ for MOL's land-based employees and domestic Group companies	15) Continue calculating LTIF ⁷⁾ of Head Office and domestic Group companies
●	Fatal worker accidents: MOL vessels: 1; chartered vessels: 1. Currently preparing guidelines for handling elevators, revising equipment standards and reviewing the fail-safe system to prevent a recurrence. Reminded all vessels regarding outboard work	16) Achieve zero fatal worker accidents, one of the "Four Zeroes"
●	LTIF ⁷⁾ =0.31. 2012 goals are to eradicate accidents causing injury or death and to continue implementing various prevention measures. At the same time, we will bring in methods for analyzing human factors in particular from other types of businesses and industries in an effort to prevent similar accidents from happening again	17) Maintain LTIF ⁷⁾ of 0.25 or less
○	A seafarer staffing firm in the Philippines obtained Nippon Kaiji Kyokai certification as an institution compliant with the Maritime Labour Convention. The MLC task force filed its final report in February 2012. Plans now call for coordination with relevant departments in the company as necessary	18) Continue preparing for adoption of the Maritime Labour Convention, which stipulates shorter on-board working hours
○	Progressively introducing fleet broadband (FBB) on MOLSHIP. Already introduced FBB on MTANK. In 2011, MOLLNG introduced OceanBB, a high-speed, flat-rate Internet connection service for vessels using VSAT, to 5 LNG carriers. Also, lent mobile routers at Japanese ports	19) Continue installing FBB, consider a next-generation communication system that includes health and welfare, and test on actual ships
○	Introduced the Officer Candidate Program for 3rd Year Students selected from affiliated maritime colleges in the Philippines. These students received education and training at an MIS ⁸⁾ training facility from June 2011. The first group of 84 students completed the course at MIS	20) Enhance training program on training ship
○	In operation. 5 people were honored in 2008, followed by 6 in 2009, 8 in 2010 and 7 in 2011	21) Fully establish and utilize program for recognizing outstanding seafarers
○	<ul style="list-style-type: none"> Worked with the Marine Safety Division to create a DVD showing measures being implemented by Group executives and employees to ensure world-leading safe operations Began issuing press releases and notices from the Public Relations Office through MIP¹⁾ Planned and produced feature articles on distinctive Group company activities in Japan and overseas in the Unabara and OPEN SEA magazines. (15 articles were carried in Unabara) 	22) Make effective use of the company intranet, Japanese/English company magazines and DVDs
		23) Revamp the company's website
○	Continued existing activities and strengthened relations with frontlines through site inspections and other means	1) Continue to conduct activities in line with the MDGs ⁹⁾ , including transport of relief provisions
○	Expanded activities in Japan and overseas, including forest protection activities and beach cleanup drives	2) Expand activities to contribute to biodiversity and protection of the natural environment
○	Supported the construction of a daycare center in the Philippines through a Group company	3) Conduct activities that contribute to local communities, including supporting disaster-hit regions
○	Expanded private-sector company training for teachers. MOL captains gave lectures at junior high schools in Tokyo	4) Provide training programs for students and teachers
△	Considering implementing in FY2012	5) Consider conducting activities that simultaneously contribute to society and develop business
○	Provided in July 2011	6) Expand activities participated in by employees and seafarers in Japan and overseas
○	Large year-on-year increase (by 60 people) in participation in environmental protection activities in Thailand	
○	Considered and made preparations for implementing in FY2012. (Conducted beach cleanup in April 2012)	
○	—Provided and transported relief supplies for free	Fulfill social responsibilities related to restoration and recovery from the Great East Japan Earthquake
○	—Donated refrigerated containers, used the cruise ship <i>Fuji Maru</i> to support relief efforts	—Continue to offer stable transportation services that support lifelines such as resources, energy and daily supplies through business activities
○	—Lobbied the Japanese Shipowners' Association and the Ministry of Land, Infrastructure, Transport and Tourism, resulting in the public announcement of radiation levels at each port and government certification system to ensure safety	—Continue supporting recovery and reconstruction process after the Great East Japan Earthquake, including by donating containers
○	—Reduced power consumption by 24% year on year by removing some lighting, adjusting room air temperatures, etc.	—Actively participate in electricity conservation efforts

⁶⁾ Women's Initiatives are voluntary initiatives by women managers. They involve activities related to career development for women, with the aim of fostering a culture for anyone to work with more vitality.

⁷⁾ Lost Time Injury Frequency (LTIF). Number of work-related accidents per hour per one million people.

⁸⁾ Magsaysay Institute of Shipping (MIS). A seafarer training facility that was jointly established with Magsaysay Maritime Corporation in the Philippines in 1993. It trains more than 4,000 people a year.

⁹⁾ Millennium Development Goals (MDGs). One of the common frameworks that integrates the Millennium Declaration adopted at the United Nations Millennium Summit held in September 2000 and the International Development Goals that were adopted at major international conferences and summits in the 1990s. The MDGs consist of specific numerical targets to be achieved by 2015 in eight fields.

Social Features

Management

The Environment

Society

Corporate Governance, Compliance and Accountability

MOL has implemented a series of management reforms, established its Rules of Conduct and taken other steps to put in place a corporate governance structure and compliance system that is optimal for realizing the ideas set forth in the MOL Group Corporate Principles. Moreover, by vigorously fulfilling our accountability obligations, we are working to cultivate a sense of trust in MOL's sustainable growth.

Corporate Governance

Basic Concept of Corporate Governance

MOL puts emphasis on frameworks for improving the transparency of corporate management from the shareholders' viewpoint and maximizing stakeholders' benefits through optimum allocation of management resources. In the MOL Group Corporate Principles, this concept is stated as "We will strive to maximize corporate value by always being creative, continually pursuing higher operating efficiency, and promoting an open and transparent management style that is guided by the highest ethical and social standards." We have put in place various systems accordingly.

Clarifying Each Governance Function

The Board of Directors comprises six internal and three outside (independent) directors (as of July 2012). Outside directors receive reports on important issues every time, providing a framework that allows the supervisory functions of outside directors to work effectively.

The company has adopted the corporate auditor system, and two of the four auditors are appointed from the outside (independent corporate auditors). In May 2006, to increase the independence of the auditors, we established the Corporate Auditor Office as an organization directly controlled by the corporate auditors and Board of Auditors, thus enhancing a system that allows for more practical and efficient corporate auditing.

The Financial Instruments and Exchange Act came into force in fiscal 2008 and requires an assessment and report of the internal control system for ensuring the effectiveness of financial reporting. MOL conducts such assessments led by the Internal Audit Office. As a result, MOL has submitted an internal control report containing management's assessment that internal controls over financial reporting at MOL are effective to the Kanto Local Finance Bureau in Japan every year since June 2009. Details

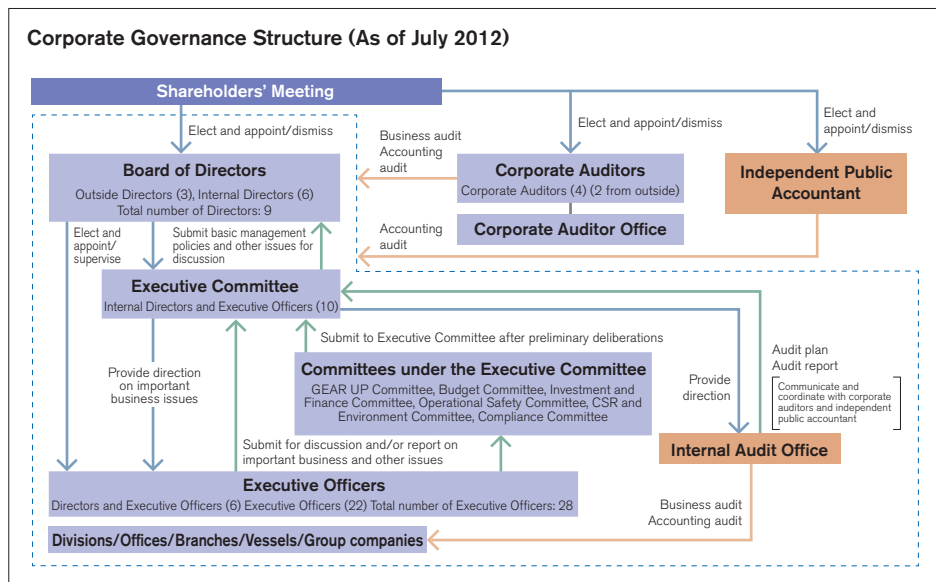
of these internal control reports were confirmed to be appropriate in the internal control audit report by the external auditors.

Business Continuity Plan

In the event of an earthquake or other natural disaster, or outbreak of an infectious disease, MOL's highest priority is ensuring the safety of MOL-operated vessels and company executives and employees. The company has formulated a business continuity plan documenting procedures to enable it to continue providing its core ocean transport services and quickly restore operations in the unlikely event that they are suspended. This business continuity plan establishes organizations and delegates authority for duties relating to maintaining the safe operation of vessels, performance of transportation contracts and charter agreements, financial preparation, securing required personnel and other matters. Furthermore, MOL conducts regular drills, and changes work procedures bases on issues arising from these drills.

Future Measures

A feature of the Board of Directors is deliberation on corporate strategy and vision. In principle, at each meeting, the board focuses on a particular topic such as management strategies and MOL's long-term vision. These discussions provide an opportunity for lively and meaningful debates at board meetings that include the outside directors and corporate auditors. Moving forward, we will work so that our governance systems, which include these deliberations, function even more effectively. We are also strengthening our risk management and business intelligence systems that support sustainable growth. And we are bolstering survey activities for use in making management decisions, and maintaining an internal portal site for sharing information.



Statement of Principles for Compliance (Compliance Rules Article 3)

1. Strive to follow the MOL Corporate Principles and make them a reality.
2. Always recognize the public mission and social responsibilities of the company's business, and maintain the trust of the company's stakeholders.
3. Strictly comply with laws, regulations, and the like, and conduct fair and transparent corporate activities in the context of social norms and corporate ethics.
4. Never yield to antisocial influence, and never be a party to antisocial acts.

Compliance

Approach to Compliance

MOL believes compliance means more than just strictly complying with legislation and internal rules (including voluntary Rules of Conduct). It also covers observing the Rules of Conduct in corporate activities and daily operations, including respecting human rights and refusing to permit discrimination and harassment, in accordance with social norms and corporate ethics. In order to instill a compliance mind-set and strengthen the systems supporting this, MOL is conducting various activities worldwide. These include an E-Learning program as well as legal affairs seminars for the MOL Head Office and Group companies, including those overseas. MOL will continue to strengthen its compliance systems with a view to Global Group management.

Organizations Responsible for Compliance

Compliance Committee

The Company formed the Compliance Committee as a subordinate organization of the Executive Committee, with a member specified by the Executive Committee serving as chairman. The membership comprises Executive Officers responsible for the Internal Audit Office, the Corporate Planning Division, the Human Resources Division, and the General Affairs Division.

Compliance Officers

General managers of divisions and offices are appointed as compliance officers. They take a thorough approach to compliance as the person responsible, and are also required to report to the Compliance Committee Secretariat Office in the event of a compliance issue and take necessary corrective actions.

Compliance Advisory Service Desks

In fiscal 2011, MOL established a new advisory service desk through an outside attorney, adding to the existing desk that is independent from divisions, offices, and branches and for which the General Manager of the Internal Audit Office is responsible. These advisory service desks receive reports and requests for consultation from executives and employees of MOL and MOL Group companies in Japan and overseas, as well as temporary employees, domestic business partners and other outside parties. In addition to giving feedback on how the issue was resolved to the person reporting an issue, the advisory service desks ensure that those reporting an issue and those who cooperate in the investigation are protected from any retribution or unfair treatment.

Accountability

MOL aims to build sound relationships with shareholders and other investors. In this regard, MOL fulfills its accountability for information disclosure based on three key principles of being "timely," "accurate," and "fair." At the same time, MOL works hard to execute highly transparent management with the president himself taking the initiative and responsibility for investor relations (IR). MOL holds small meetings with the president and other management executives in attendance, providing an opportunity to explain details of its business environment and management strategy from a medium- to long-term perspective in a straightforward manner. MOL also engages in dialogue with market participants through direct exchanges of



Results presentation for investors

opinion and discussions with investors. Furthermore, we are mindful of creating even more opportunities to explain the company. We hold various other meetings, including the Annual General Meeting of Shareholders, avoiding the dates most Japanese companies hold their annual meetings, and quarterly results presentations, as well as briefing sessions for individual investors.

On our website, we use various IR tools such as our Annual Report and Investor Guidebook to actively convey details of our management strategy, investment plans, environmental data for each business, and other information. IR tools and information related to financial results are prepared in both Japanese and English and posted on our website as part of our commitment to global fair disclosure. In fiscal 2012, we intend to raise the convenience of our IR tools, providing easy access to information needed by investors by changing the structure of the Investor Relations section of our website to make it easier to browse from the standpoint of investors. Amid tumultuous changes in our operating environment, we are determined to step up our IR activities as well as strengthen our internal IR structures to promote greater disclosure, as we work to foster confidence in MOL's sustainable growth.

External Recognition

- MOL's IR activities were recognized with the IR Prime Business Award Grand Prix in 2005 by the Japan Investor Relations Association. We were once again recognized with the IR Prime Business Award in 2008 after being ineligible for the award for two years as a past winner, under the award regulations.
- MOL's Annual Report won the fiscal 2004 best award in the Nikkei Award sponsored by Nikkei Inc. This was followed by excellence awards in fiscal 2005 and fiscal 2006. We have also won prizes in this annual competition on five other occasions.
- MOL was selected as one of the recipients of the Tokyo Stock Exchange (TSE)'s FY2009 Disclosure Award. The TSE recognized the fullness of MOL's disclosure.
- MOL continues to be selected as a component of socially responsible investment indexes such as the Dow Jones Sustainability Indexes, and the FTSE4Good Index.



IR Prime Business Award

The responsibility to provide information is not limited to management and financial issues. When four major marine accidents involving MOL-operated vessels occurred in fiscal 2006, MOL disclosed the situation directly after each incident. MOL believes that it has a responsibility to society to disclose such situations to everyone who might be directly or indirectly affected. Since these accidents, while working to prevent a recurrence, we have maintained a policy of disclosing information quickly, even if it is negative. We hold regular drills for responding to the media in emergencies and are working to strengthen our ability to be able to quickly and properly disclose information.

MOL's Communication Tools



Annual Report



MOL Investor Guidebook



Corporate Profile

Safe Operation

Marine incidents can have a serious effect on the environment and local communities as well as the trust placed in transportation services. Safe operation is thus of the utmost importance for management of a shipping company from the standpoints of risk management and service quality. In Feature 1, we introduced several measures for reinforcing safe operation following a voyage of an MOL vessel. Here, we explain various other initiatives as well as MOL's framework for supporting safe operation.

Safe Operation Management Structure

At present, safe operation is managed under the structure shown in the diagram below.

The Operational Safety Committee is chaired by the president of MOL and reports directly to the Executive Committee. This committee discusses and determines basic policies and measures for ensuring safe operation of vessels through rigorous attention to every detail. The Safety Operations Headquarters, meanwhile, is responsible for implementing specific measures, with progress overseen by the Safety Assurance Committee. The Ship Standard Specification Committee discusses and determines MOL Safety Standards and owned ship maintenance standards from a fail-safe* perspective.

* Equipment and systems are designed to operate safely at all times, even when trouble occurs due to operator error or malfunction.



Measures for Reinforcing Safe Operation and their Implementation

In order to utilize lessons learned from past accidents for safe operation, the company looks closely at the causes and events that led up to the accidents and implements action plans for eradicating these as a measure for reinforcing safe operation.

The measures for reinforcing safe operation are broadly split into two groups: measures concerning seafarers, ship management and the safety culture, and measures concerning ship facilities. The company appoints divisions responsible for individual areas, creates action plans

and establishes deadlines for the achievement of measures. The company continues to make improvements by regularly confirming progress and periodically revising measures.

The slogan for the safe operation reinforcement measures is "Never Forget 2006." We are now in Phase 4 of this improvement program.

Phase 1: January 2007 to September 2008

Phase 2: October 2008 to September 2009

Phase 3: October 2009 to September 2010

Phase 4: October 2010 to March 2013

In Phase 4, we are concentrating on the following measures, with a focus on the "Human Factor."

- Improving communication to seafarers on ships and land-based employees.
- Preventing new incidents and reoccurrences of previous incidents.
- Ensuring our crew and staff understand and are convinced of the aim and background of regulations and procedures, listening to crew aboard vessels and reflecting their opinions in various measures.
- Implementing education to ensure that crew have the appropriate knowledge, technical skills and other skills for their positions.
- Ensuring safe operation of chartered vessels.

Making Processes for Realizing Safe Operation Visible

MOL is currently working to make its processes to achieve safe operation more visible so that customers can choose MOL's services with confidence. Specifically, we have introduced objective numerical indicators for measuring safety levels and have set numerical targets based on them. Efforts are currently underway to achieve the targets.



1. Four Zeroes (an unblemished record in terms of serious marine incidents, oil pollution, fatal accidents and cargo damage)
2. LTIF*¹ (Lost Time Injury Frequency): under 0.25
3. Operational stoppage time*²: 24 hours/ship or below
4. Operational stoppage accident rate*³: 1.0/ship or below

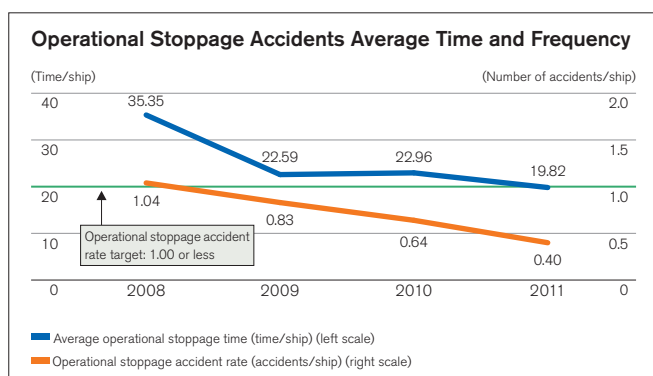
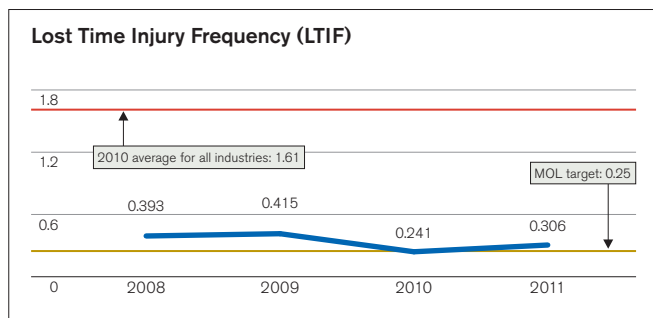
*1. Number of work-related accidents per one million hours worked that resulted in time lost from work of one day or more. Average for all industries (2011) was 1.62; for shipping industry, 0.66; for shipbuilding and repair, 1.06. (Source: 2011 Survey on Industrial Accidents issued by the Ministry of Health, Labour and Welfare)

*2. Expresses the amount of ship operational stoppage time due to an accident per ship per year.

*3. Expresses the number of accidents that result in ship operational stoppage per ship per year.

Our performance in these areas in fiscal 2011 was as follows.

1. Did not achieve: (One serious marine incident by a chartered vessel. Two fatal worker accidents by an MOL vessel and a chartered vessel)
- 2-4: Achieved as follows:



Breaking the Chain of Errors*

We continue to make improvements related to both seafarer training and ship facilities to break the chain of errors in which minor factors combine and ultimately lead to major maritime accidents.

In terms of seafarer training, we are reinforcing our OJT Instructor System (Please refer to page 7 for details) and enhancing land-based education and training curriculums and programs. Further, we are working to raise safety awareness among seafarers by collecting information on close calls (risky incidents that came very close to causing a more serious accident) from each ship in operation and distributing that information to ships along with easy-to-understand photos and illustrations.

In terms of ship facilities, we are working to equip ships with error-resistant equipment. This involves promoting the fail-safe design concept by providing feedback to shipyards and equipment manufacturers on areas of non-conformance and areas in need of improvement from vessels in operation.

* Various factors lead to accidents like links in a chain.

Preventing Work-related Accidents

It is our perennial goal to completely eliminate work-related accidents on the approximately 950 vessels MOL operates. We are working step by step to achieve this goal.

In addition to gathering information about accidents that occurred on MOL-operated vessels or at other companies and sharing this information with relevant parties, we study accidents in other industries

and incorporate analysis techniques. We use this information as the basis for developing and implementing highly effective countermeasures. Furthermore, by strengthening seafarer education and training systems we are working to prevent incidents from recurring or even happening in the first place.

Development of IT for Ship Management

We will continue to promote greater use of information technology at ship management companies and on board ships and work to integrate ship management systems within the MOL Group. These efforts are geared to raising the efficiency of safe operation management processes between ships and ship management companies and to effectively sharing information on safe operation within the group.

Other Measures

We are implementing the following measures:

1. We created a training video based on investigations of the causes and distributed it to the relevant departments in order to ensure the experience gained from accidents never fades with time.
2. We hold Safety Conferences to provide opportunities for seafarers to meet face to face and share views on measures for preventing the recurrence of accidents, and raising greater awareness.
3. We have held operational workshops for office staff once a quarter since November 2010 to widely disseminate information within the company on measures for reinforcing safe operations, case studies of incidents and measures based on them.
4. In June 2011, we produced a video entitled "Forging Ahead to Become The World Leader in Safe Operation" that introduces MOL measures to reinforce safe operation. The video is being distributed not only to company departments and MOL-operated ships but also to customers and other relevant outside parties in an effort to raise awareness within the company and promote greater visibility for safe operation measures.



DVD "Forging Ahead to Become The World Leader in Safe Operation"

Environmental Management Policy

The MOL Group seeks to offer more environmentally-friendly services through various environmental protection measures as it meets world demand for shipping. These measures include developing and adopting environmental technologies, operating vessels with minimum environmental impact, and implementing approaches to preserve the atmosphere and the marine environment.

MOL Group Environmental Policy Statement

Philosophy

As one of the world's leading multi-modal transport groups, the MOL Group is committed to protecting the health of our marine/global environment and therefore promotes and supports the following policies.

Policies

1. Protect all aspects of the marine/global environment and foster safe operation;
2. Comply with all environmental legislation and regulations that we are required to by law, and all relevant standards and other requirements that we subscribe to. And, whenever possible, further reduce the burden on the environment by setting and achieving even tougher voluntary standards;
3. Periodically review and revise our environmental protection measures on the basis of our framework for setting and reviewing environmental objectives and targets;
4. Conserve energy and materials through recycling and waste reduction programs;
5. Purchase and use environmentally safe goods and materials;
6. Promote the development and use of environmentally safe technology;
7. Educate and encourage group employees to increase their focus on protection of the environment through enhanced publicity efforts, and communicate our Environmental Policy to group employees;
8. Publish our Environmental Policy Statement and disclose our environmental information on a regular basis;
9. Always strive to ensure that our business activities contribute to and adequately support worthy environmental protection activities.

Group Environmental Audits

ISO 14001 Certification

Company name	Acquired date	Certifying institution
Mitsui O.S.K. Lines, Ltd.	January 2003	Det Norske Veritas AS (DNV)
Kusakabe Maritime Engineering Co., Ltd.	May 2004	CI Japan Limited
MOL Logistics (Japan) Co., Ltd.	April 2006	Nippon Kaiji Kentei Quality Assurance Ltd.
Mitsui O.S.K. Kosan Co., Ltd.	July 2006	The British Standards Institution
MOL LNG Transport Co., Ltd.	December 2006	Nippon Kaiji Kyokai
MOL TANKSHIP MANAGEMENT (EUROPE) LTD.	May 2008	DNV
MOL TANKSHIP MANAGEMENT (ASIA) PTE. LTD.	March 2010	DNV
NEW ASIAN SHIPPING COMPANY, LIMITED	November 2011	Nippon Kaiji Kyokai

MOL Group Companies with Green Management Certification

(Foundation for Promoting Personal Mobility and Ecological Transportation)

Company name	Acquired date	Company name	Acquired date
International Container Transport Co., Ltd.	October 2005	Utoc Logistics Corporation	February 2007
Meimon Taiyo Ferry Co., Ltd.	December 2005	Kobe Towing Co., Ltd.	March 2007
Diamond Line K.K.	February 2006	Utoc Corporation	June 2007
Green Kaiji Kaisha, Ltd.	March 2006	Green Shipping, Ltd.	July 2007
Ferry Sunflower, Ltd.	May 2006	Shosen Koun Co., Ltd.	October 2007
Nihon Tug-Boat Co., Ltd.	August 2006	Ube Port Service Co., Ltd.	November 2007
Japan Express Packing & Transport Co., Ltd.	November 2006	Kitanihon Tug-Boat Co., Ltd.	June 2008
		MOL Ferry Co., Ltd.	March 2010

EcoAction 21 (Institute for Global Environmental Strategies)

Company name	Acquired date
MOL Techno-Trade, Ltd.	July 2007

System to Promote Environmental Management

At MOL, under the president, who has the ultimate decision-making authority, the CSR and Environment Committee, a subcommittee of the Executive Committee, discusses basic policies on the environment, and works to promote business activities in line with the MOL Group Environmental Policy Statement. The committee's deliberations helped MOL to formulate its environmental strategy for the midterm management plan, "GEAR UP! MOL," which was launched in fiscal 2010. This strategy forms part of the MOL Group's overall strategies. The committee operates two unique environmental management systems—MOL EMS21 and the MOL Group Environmental Target System—as it promotes the MOL Group's environmental activities.

Midterm Management Plan, "GEAR UP! MOL" Environmental Strategy

Evolve into a corporate group that meets today's demands by offering transport solutions with a lower environmental burden

MOL is reinforcing and emphasizing the advantages that ocean transport offers, as an environmentally efficient mode of transportation, in various ways, including development of the *Senpaku ISHIN* project. The MOL Group thus contributes to sustained global economic growth by offering transportation services that can respond to customers' needs while protecting the global environment.

- Place safe operation as the top priority
- Improve efficiency and reduce the environmental impact of ships
 - Progress of the *Senpaku ISHIN* Project
 - A commitment to ECO SAILING
 - Reduced CO₂ emissions per ton-mile
- Offer low environmental impact solutions as a whole group
- Invest ¥28.0 billion over three years to develop and implement environmental technologies
- Advocate policies and measures aimed at contributing to actual reductions in environmental impact
- Contribute to conservation of biodiversity and protection of the natural environment

Environmental Management System

MOL EMS21

We introduced our environmental management system—MOL EMS21—in April 2001. In January 2003, we expanded its scope to all of our operated vessels (except charter vessels on contracts of one year or less), and acquired internationally recognized ISO 14001 certification. In the MOL EMS21 system, the director responsible for environmental management (chairman of the CSR and Environment Committee) confirms and assesses how effectively the system functions, based on internal audits held at least once a year. The internal audits are conducted by the CSR and Environment Office, Corporate Planning Division, targeting all divisions in the Tokyo Head Office, and the Marine Safety Division implements environmental inspections on our vessels. Det Norske Veritas AS (DNV), an ISO 14001 external certification body, holds an annual audit and a renewal assessment every three years.

ISO14001 Certification

Scope

Ship operation activities at sites and Head Office associated with multi-modal logistics/ocean services (except charter vessels on contracts of one year or less)

Certifying institution

Det Norske Veritas AS (DNV)

Accreditation

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The MOL Group Environmental Target System

The MOL Group implements the MOL Group Environmental Target System covering main Group companies in Japan and overseas. Regarding the environmental burden due to each company's business activities, every fiscal year, based on general guidelines, each company sets its own environmental targets in line with the midterm environmental targets, and sets out an action plan to achieve those targets. Data from each company regarding its environmental burden (consumption of fuel, electricity, paper, and generated waste), are collected and the Group-wide environmental burden is tabulated. Currently, the program covers 70 companies, including 54 Group companies in Japan and 16 overseas affiliates and subsidiaries (as of March 31, 2012).

FY2011 Environmental Accounting

Environmental Protection Costs

(¥ million)

Category	Items	Investment	Cost
(1) Costs in business areas (Global environmental protection)	Measures to reduce exhaust gas from vessels	2,951	1,176
	Measures on vessels to preserve the marine environment	150	0
	Office related	15	0
(2) Costs for management activity	Environmental management activities	0	94
(3) Costs for R&D	R&D	0	1,346
(4) Social activity costs	Social contribution activities	0	0
	Total	3,116	2,616

Environmental Protection Effects

Category	Details of effects	Index (g/ton•mile)	FY2010	FY2011	Effects
(1) Effects related to resources invested in business activities	Total energy volume input	Fuel	4.128	4.060	-0.068
	(2) Environmental burden of business activities	Greenhouse Gas, etc. emissions	CO ₂	12.860	12.649
NO _x			0.347	0.341	-0.006
SO _x			0.221	0.196	-0.025

Aggregation Method

Reference Guidelines

Japan's Ministry of the Environment "Environmental Accounting Guideline (FY2005)"
Cost does not include depreciation and amortization expenses.

Tabulation Period

FY2011 (April 1, 2011 to March 31, 2012)

Scope of Tabulation

Head Office and operated vessels of Mitsui O.S.K. Lines, Ltd. (non-consolidated) and ocean-going vessels and ferries operated by MOL Group companies in Japan.

Changes in the aggregation method

The method for calculating the ton-mile in indicators of environmental protection effects has changed in some divisions. Indicators under the previous standard and effects are shown below.

	FY2010	FY2011	Effects
Fuel (g/ton•mile)	2.105	2.000	-0.105
CO ₂ (g/ton•mile)	6.558	6.232	-0.326
NO _x (g/ton•mile)	0.177	0.168	-0.009
SO _x (g/ton•mile)	0.113	0.097	-0.016

Environmental Targets and Results

The MOL Group's midterm management plan, "GEAR UP! MOL," sets midterm environmental targets for the period from fiscal 2010 through fiscal 2012, as well as targets for each fiscal year, in accordance with the environmental strategy in the plan. The company has been working to achieve these targets. In fiscal 2012, the final year of the plan, the company will continue to work actively to bring its environmental strategy to a successful conclusion, with the aim of evolving into a corporate group that can meet today's demands by offering transport solutions with a lower environmental burden.

	FY2010–12 Midterm Environmental Targets	FY2011 Environmental Targets
1 Ensure Safe Operation	Eliminate Pollution of the Marine Environment Caused by Shipping Accidents	
	Eliminate shipping accidents that lead to ocean pollution from oil outflows	Prevent oil spills
	Actively adopt vessel specifications that minimize environmental damage	Prevent oil spills by changing the stern tube sealing arrangement for new vessels—the method for preventing seawater ingress through the gap between the propeller shaft and the vessel hull—from an oil bath type to an air seal type
2 Improve Efficiency and Reduce the Environmental Impact of Ships and Actively Invest to Develop and Implement Environmental Technologies	Promote Senpaku ISHIN Project	
	Constantly refine next-generation vessel concepts	
	Design ISHIN ships	Consider applying design of ISHIN-I (next-generation car carrier) to a larger vessel with wide beam for to-be-expanded Panama Canal
		Begin designing an LNG-fueled vessel as core component technologies of ISHIN-II (next-generation ferry)
		Begin refining main engine waste heat energy recovery system and designing it for a large vessel, as core component technologies of ISHIN-III
	Run experiments on existing vessels for major component ISHIN ship technologies	Begin building hybrid car carrier. Determine hybrid system specifications and complete development
		Push ahead with applied research of main engine waste heat energy recovery system, as core component technologies of ISHIN-III (next-generation iron ore carrier), on actual vessels
		Continue evaluating the performance of low-friction paint from each manufacturer. Apply newly developed next-generation low-friction paint to two car carriers and evaluate its performance
	Propose new concept vessel to follow ISHIN ships	Improve design method to create more optimal PBCFs for each propeller type
		Continue developing large-scale solid sail in the "Wind Challenger Project" for wind-propelled ships, come up with conceptual design for a wind-propelled vessel with a sail, and develop navigation method for wind-propelled vessels
		Launch meetings that connect business needs with new developments, and identify issues
	Prepare and implement a roadmap for introducing the component ISHIN ship technologies	
		Utilize roadmap for instituting component ISHIN ship technologies to create actual vessels fitted with ISHIN component technologies
	Reinforce functions/activities of the MOL Technology Research Center	
	Develop technologies for reducing emissions of CO ₂ , NO _x , SO _x and PM (particulate matter)	Continue to apply heat-shielding paint to vessels, and scrutinize performance of thermal glass barrier technologies
		Develop NO _x - and PM-reducing technologies using fuel additives and prototype fuel nozzles in a test engine
	Develop technology for raising the combustibility of ship fuel	Verify improvement in combustion efficiency from using prototype fuel nozzle in a test engine
		Verify technology for raising the combustibility of ship fuel applying micro-nano bubble technology in a test engine
	Fully Practice ECO SAILING and Pursue Efficient Operations	
	Promote optimal utilization of reduced navigating speeds	Help vessel types other than containerships to establish optimal operating methods at reduced navigating speeds and prevent accidents at reduced speeds
Promote utilization of WNI Ocean Routing (an information service on weather, ocean conditions, optimal routes, etc., provided by Weathernews Inc.)	Continue utilizing WNI Ocean Routing	
Utilize FMS Safety-Bridge System (on-board system that plans optimal routes based on the latest data on weather and ocean conditions)	Promote utilization of FMS Safety-Bridge System—Increase access by 10% over FY2010	
Substantially expand use of fuel additives	Promote use of fuel additive	
Promote installation of PBCFs and other devices to improve propeller efficiency on MOL vessels	Install PBCFs and other devices to improve propeller efficiency on all newly built MOL vessels	
Promote installation of energy-saving LO lubricators on MOL vessels	Install energy-saving LO lubricators on all newly built MOL vessels	
Promote installation of electronically-controlled engines (approx. 20 vessels)	Promote installation of electronically-controlled engines (approx. 3 vessels)	
Install onshore power supply systems (approx. 14 vessels)	Install onshore power supply system (1 vessel)	
Reduce CO₂ Emissions per Ton-mile (oceangoing vessels operated by MOL and domestic consolidated subsidiaries)		
Reduce by 10% by FY2015 compared to FY2009	Reduce by 1% compared to FY2010	
Initiatives for Preventing Atmospheric Pollution		
Reduce NO_x and SO_x emissions per ton-mile (oceangoing vessels operated by MOL and domestic consolidated subsidiaries)		
Reduce by 10% by FY2015 compared to FY2009	Reduce by 1% compared to FY2010. Calculate SO _x at domestic consolidated subsidiaries	
Make MOL's unique technologies for reducing PM (particulate matter) feasible for practical application	Install DPF system on actual vessels, conduct durability experiments (continuously through FY2012)	

Legend: ● Achieved ○ Generally achieved △ Partially achieved ● Did not achieve (target period/content changes)

Achievement Against FY2011 Environmental Targets

FY2012 Environmental Targets

○	There were no major oil spills. Filed Safety Alert regarding oil spill incident prevention every quarter, and conducted two response drills simulating a serious marine incident to be prepared in the event of an incident Commercialized the world's first portable liquid-level gauge for fuel tanks with a manufacturer, reducing the work load during refueling and helping prevent fuel spills from overfilling
○	Added the air seal type to the MOL Safety Standard Specifications for equipment and facilities and progressively installed on new ships
○	Completed basic design. Expect to reduce CO ₂ emissions by approx. 35% per standard vehicle with a twin engine, twin propeller configuration (compared with existing vessels)
○	Completed prototype design of LNG-fueled vessel. Considered technical issues, operational problems, and economy
○	Decided to install a high-efficiency waste heat energy recovery system on a new large-scale iron ore carrier scheduled for delivery in 2013. Expect to reduce fuel consumption by approx. 6% compared with existing large-scale iron ore carriers
○	Completed development of hybrid system. Installed on the car carrier <i>Emerald Ace</i>
○	Decided to install a high-efficiency waste heat energy recovery system on a new large-scale iron ore carrier scheduled for delivery in 2013
○	Evaluated the performance of low-friction paint (coating) on 18 vessels. Evaluated the benefits of next-generation low-friction paint on two car carriers
○	Evaluated optimal design values using computer analysis and tank testing. Installed a prototype on an actual vessel
○	Developed large-scale solid sail, came up with conceptual design for a wind-propelled vessel with a sail assisted by an engine, and developed navigation method for wind-propelled vessels
○	Conducted in all sales and marketing divisions. Selected candidates for connecting identified needs with R&D
○	Promoted component technologies (T/C variable nozzles, "TAICRUSH HD," hybrid car carriers, and optimum trim system) that were scheduled for installation on actual ships in FY2011 in line with the road map
○	Promoted the application of heat-shielding paint. Scrutinized the heat-shielding benefits of thermal glass barrier technologies
○	Evaluated the performance of the fuel additive "TAICRUSH HD" in a test engine. Confirmed clear benefits in low load range in main engine output. Completed improved gas agitator, filed patent application and made preparations for confirmation by a classification society
○	Tested the benefits of four prototype heavy fuel oil rotary nozzles, but couldn't confirm fuel efficiency benefits. Conducted evaluations for improving performance
○	Conducted testing to confirm operation of an improved micro-nano bubble generator. Evaluating performance in a test engine
○	Inspected data from reduced navigation speed operations and provided technical support based on the inspection results. Made more progress with reduced navigating speeds Set targets for the environmental impact of containerhips (CO ₂ , NO _x and SO _x emissions) as service indicators, and regularly announced achievement status on "Count On MOL" website
○	Continued using in all vessel operating divisions
○	Access increased by 7%. Installed access system on 13% more vessels than in FY2010
○	Promoted development and adoption of new agitators for the fuel additive "TAICRUSH HD." Adopted this fuel additive on more vessels (24 in FY2011 compared with 16 in FY2010)
○	Installed propeller efficiency-improving devices on all 23 delivered vessels (PBCFs on 16 vessels, and other devices to improve propeller efficiency on 7 vessels)
○	Installed energy-saving LO lubricators on all 23 delivered vessels
○	Installed electronically-controlled engines on 2 containerhips and 1 dry cargo ship
○	Completed on 1 vessel in FY2010. Completed introduction on 13 vessels as planned
○	Reduced by 1.8% and by 5.3% year on year at MOL and domestic consolidated subsidiaries, respectively
○	SO _x : reduced by 12.8% and 14.3% year on year at MOL and domestic consolidated subsidiaries, respectively
○	NO _x : reduced by 1.8% and 5.3% year on year at MOL and domestic consolidated subsidiaries, respectively
○	Installed on ordinary cargo ships and conducted durability experiments

	Prevent oil spills
	Continue applying MOL Safety Standard Specifications for equipment and facilities to new vessels
	Complete <i>ISHIN-I</i> and <i>ISHIN-II</i> prototype designs ahead of plan. Consider progressively adopting feasible <i>ISHIN-I</i> , <i>ISHIN-II</i> and <i>ISHIN-III</i> core component technologies, centered on main engine waste heat recovery system and propulsion system
	Take delivery of hybrid car carrier. Evaluate environmental burden reductions in actual operation
	Take delivery of a large-scale iron ore carrier equipped with a high-efficiency waste heat energy recovery system
	Continue evaluating the performance of low-friction paint (coatings) from each manufacturer. Apply next-generation low-friction paint to two new car carriers (Ministry of Land, Infrastructure, Transport and Tourism project)
	Promote R&D for improving PBCF efficiency and determine new PBCF shape
	Consider detailed specifications for large-scale solid sail and begin design for producing an on-land prototype. Develop conceptual design for a wind-propelled vessel with a sail with a fuel engine and navigation method for wind-propelled vessels
	Conduct R&D from internal needs obtained from meetings that connect business needs with new developments
	Continue utilizing roadmap for instituting component <i>ISHIN</i> ship technologies to create actual vessels fitted with these technologies
	Promote the application of heat-shielding paint
	Evaluate the benefits of "TAICRUSH HD" and various other fuel additives, and consider improving combustion efficiency and fuel efficiency
	Collect data on special nozzles and standard nozzles while in operation, and evaluate improvement in combustion efficiency and fuel economy, as well as purification of exhaust gas
	Verify technology for raising the combustibility of ship fuel applying micro-nano bubble technology
	Contribute to safe operation with technology for supporting the ultra-slow-steaming operation of main diesel engines Build a framework for sharing information internally about reduced navigating speeds and fuel reduction measures. Test the benefits of technologies for improving the fuel efficiency of main engines at low loads and conduct reviews for applying new technologies (such as EGB). Include effective technologies in MOL vessel standard specifications (MOL standards)
	Effectively utilize WNI Ocean Routing
	Promote utilization of FMS Safety-Bridge System Maintain the ratio of MOL vessels and chartered vessels using the system at 95% and 70% or more, respectively, throughout the year
	Promote use of fuel additives
	Install PBCFs and other devices to improve propeller efficiency on all newly built MOL vessels
	Install energy-saving LO lubricators on all newly built MOL vessels
	Promote installation of electronically-controlled engines (approx. 3 vessels)
	Conduct trial for beginning onshore power supply operations for vessels that have introduced the system (4 vessels)
	Reduce by 1% compared to FY2011
	Reduce by 1% compared to FY2011
	Reduce by 1% compared to FY2011
	Conduct durability experiments on actual vessels equipped with the DPF system, identify problems and make improvements

(Continued on next page)

	FY2010-12 Midterm Environmental Targets	FY2011 Environmental Targets
	Comply with Environmental Regulations	
	Comply with current regulations and prepare to comply in the future when regulations are tightened and their scope is expanded geographically	
		Successfully implement responses in accordance with Tier-II NOx regulations
		Prepare to comply with stricter regulations in North America and other regions, and prepare to accommodate their geographic expansion
		Survey situation in each country for determining timing of treaty enforcement
		Introduce SEEMP on dry bulkers and LNG carriers (Continue using on tankers)
3 Offer Low Environmental Impact Solutions as a Whole Group	Further Accommodate Modal Shift	
	Reduce customer CO₂ emissions using Japan's largest ferry network	Reduce customer CO ₂ emissions by approx. 600,000 tons annually using Japan's largest ferry network
	Promote the environmental advantages of domestic carriers and ferries	Continue PR via Group company and industry group websites and other channels
	Conduct research and develop technologies toward practical viability of ISHIN-II (ferry that uses LNG as fuel)	Conduct research on domestic regulations for ISHIN-II, offer suggestions for establishment of international regulations
	Actively Develop Existing Low-Environmental-Impact Solutions	
	Provide tugboat services with reduced environmental impact due to reduced navigation speeds	Continue operating tugboats at reduced navigation speeds
	Promote PBCFs sales through MOL Techno-Trade, Ltd.	Achieve cumulative PBCF installations of 2,000 units
		Conduct energy-saving operations in controlled-temperature warehouses at the Ohi Logistics Center
	Actively Consider New Low-Environmental-Impact Solutions	
	Participate in experiments to demonstrate the "eco tug" concept (tugboats with reduced environmental impact)	Determine method of introducing "eco tugs" and other aspects; secure partners for promoting these tugs
		Consider full-scale energy-saving measures, including the use of natural energy at the Ohi Logistics Center
	Contribute to recycling through environment-related businesses of Kusakabe Maritime Engineering Co., Ltd.	Continue environment-related businesses of Kusakabe Maritime Engineering Co., Ltd.
	Introduce environmental materials for ships	Continue introducing eco-friendly amenities on cruise ships
	Promote reduced environmental impact at existing buildings managed by Daibiru Corporation	Install low-environmental-impact air conditioning systems and lighting in refurbished buildings
		Promote adoption of rainwater reuse, rooftop gardens, natural ventilation, high thermal barrier/heat-shielding glass
	Popularize use of improved PBCFs through MOL Techno-Trade, Ltd.	Take part in R&D on improved PBCFs
	Maintain and Enhance MOL Group Environmental Award Program	
		Increase number of entries for MOL Group Environmental Award, and improve the entries' content
	4 Advocate Policies and Measures Aimed at Contributing to Actual Reductions in Environmental Impact	Take Part in Policymaking and Actively Make Recommendations so that Environmental Policy Promotes Utilization and Reinforcement of the Reduction and Sustainable Economic Growth
Measures for greenhouse gases emitted by oceangoing vessels: Work to shape policy in line with IMO's nine basic principles		Lobby through industry groups on discussions in the IMO toward introducing regulations in the international ocean shipping sector that will contribute to the equitable and actual reduction of Greenhouse Gases, without hampering international trade or growth
Measures for greenhouse gases emitted by domestic carriers and ferries: Work to shape policy to promote modal shift		Lobby through industry groups for promoting modal shift (and preventing backward steps)
5 Contribute to Conservation of Biodiversity and Protection of the Natural Environment	Raise Awareness of Employees Regarding Biodiversity Protection and Nature Conservation and Promote Activities, Technological Development	
	Continue existing activities and conduct new activities that contribute to conservation of biodiversity and protection of the natural environment	
	Eliminate pollution of the marine environment caused by shipping accidents	Prevent ocean pollution caused by shipping accidents
	Develop and install ballast water treatment systems	Make preparations for installing ballast water treatment system
	Expand social contribution activities that help in biodiversity protection and nature conservation	Expand existing activities and consider new activities based on system for proposals on the MOL Group's social contribution activities
	Raise employee awareness of biodiversity protection and nature conservation	
		Use the company newsletter to disseminate articles that raise awareness about biodiversity
	Continue utilizing renewable energy at domestic sites and consider new installations	
		Continue utilizing solar power generation at the Tokyo International Container Terminal and the MOL Technology Research Center
		Advance studies of business sites to install solar power and its facilities
	Reduce environmental impact associated with domestic business activities (MOL and domestic Group companies)	
	Reduce unit energy consumption at domestic business sites by 3% compared to FY2009	Reduce unit energy consumption at domestic business sites by 2% compared to FY2009
	Reduce unit energy consumption by domestic transport modes by 3% compared to FY2009	Reduce unit energy consumption by domestic transport modes by 2% compared to FY2009
	Reduce office paper usage (per employee) by 3% compared to FY2009	Reduce office paper usage (per employee) by 2% compared to FY2009
	Recycle as much as possible and reduce non-recyclable waste	Recycle as much as possible and reduce non-recyclable waste
Comply with domestic environmental regulations		
	Tokyo Metropolitan Environmental Security Ordinance: Develop and implement specific environmental burden reduction measures	
	Amended Energy Conservation Law: Develop and implement specific reduction measures	

Legend: ○Achieved △Generally achieved △Partially achieved ●Did not achieve (target period/content changes)

Achievement Against FY2011 Environmental Targets

FY2012 Environmental Targets

	○	Responding at present. Confirmed response to Tier-II NOx regulations when negotiating specifications for new vessels
	○	Collected information about low sulfur fuel oil regulations in the U.S., EU and elsewhere. Made this information known and held workshops
	○	Continued to survey the situation in each country
	○	Began operating SEEMP on LNG carriers in April 2011 and on dry bulkers in January 2012. SEEMP on tankers obtained the world's first certification in December 2011 from a certifying institution, attesting to its compliance with regulations
	○	Reduced customer CO ₂ emissions by approx. 550,000 tons annually
	○	Continued PR on websites
	○	Continued to carry out surveys and research in "GHG-reduction Infrastructure Study Committee" and "Ferry That Uses LNG as Fuel Study Committee" of Japan Ship Technology Research Association
	○	Continued operating tugboats at reduced navigation speeds at each tugboat company
	○	Cumulative PBCF installations reached 2,000 units
	○	Rigorously enforced energy-saving operations, including changing air conditioner settings, and conducted awareness activities. As a result, achieved power savings far in excess of government requirements
	○	Continued to consider
	○	Considered energy-saving measures, including obtaining opinions from outside experts by utilizing the Ministry of the Environment's "Energy-saving Potential Diagnosis Program"
	○	Continued to operate a metal recycling plant on a trial basis. As before, used natural gas, which emits low levels of CO ₂ , as fuel
	○	Continued introducing low-environmental-impact amenities (toilet paper and lunch boxes). Exchanged towels in passenger quarters only on request, reduced paper bags and packaging, etc.
	○	Promoted design with an emphasis on energy efficiency in a new building under construction (Daibiru-Honkan building). This included installing an automated light adjustment system (which will reduce lighting electricity consumption by 30% compared with before by automatically adjusting lighting to control brightness at workers' desks to 700 LX).
	○	Continued developing with AKISHIMA LABORATORIES (MITSUI ZOSEN) INC. toward early commercialization
	○	Received entries from 10 divisions in FY2011 (compared with 6 divisions in FY2010) CO ₂ reduction benefits were higher than in FY2010
High Environmental Efficiency of Shipping and Contributes to Environmental Impact		
	○	Contributed to the adoption of GHG emissions regulations that are applied uniformly to all vessels through industry groups
	○	Lobbied through industry groups on the the expressway toll issue, Traffic Safety Policy Basic Act and other issues
and Social Contributions to this End		
	○	There were no serious marine incidents
	○	Obtained a certificate of compliance from the Japanese government for an ozone-based ballast water treatment system that MOL helped to develop. Decided to install the ballast treatment system first on three vessels from FY2012
	○	Expanded activities, including forest protection activities and beach cleanups in Japan and overseas. Also considered new activities
	○	Published articles to raise awareness of biodiversity with a sea theme in the company newsletter
	○	Continued implementing
	○	Installation at company housing for employees completed in FY2011
	○	Decreased 3.8% in the group as a whole (Decreased 6.9% at MOL)
	●	Decreased 0.7% in the group as a whole
	○	Decreased 8.9% in the group as a whole (Decreased 8.2% at MOL)
	○	Set targets for each company and began working toward achievement
	○	Introduced two hybrid transfer cranes at the Tokyo International Container Terminal
	○	Conducted a full-scale power-saving drive, particularly in office buildings and warehouses. Submitted documents required by law

		Closely watch the review of the Tier-III NOx regulations, which will take effect in specified sea areas from 2016, and respond
		Prepare to comply with stricter regulations on low sulfur fuel oil in North America and other regions, and prepare to accommodate their introduction across a wider area
		Survey situation in each country for determining timing of ship recycling treaty enforcement, promote creation of inventory lists
		Monitor the SEEMP creation status of all operated vessels, and promote introduction of the company's EEOI calculation method and monitor figures
		Reduce customer CO ₂ emissions by approx. 600,000 tons annually using Japan's largest ferry network
		Continue PR via Group company and industry group websites and other channels
		Conduct research on domestic regulations for <i>ISHIN-II</i> , continue offering suggestions for establishment of international regulations
		Continue operating tugboats at reduced navigation speeds
		Achieve cumulative PBCF installations of 2,150 units
		Conduct energy-saving operations in controlled-temperature warehouses at the Ohi Logistics Center
		Determine method of introducing "eco tugs" and other aspects; secure partners for promoting these tugs
		Consider full-scale energy-saving measures, including the use of natural energy at the Ohi Logistics Center
		Continue environment-related businesses of Kusakabe Maritime Engineering Co., Ltd.
		Continue introducing low-environmental-impact amenities on cruise ships
		Install low-environmental-impact air conditioning systems and lighting in refurbished buildings. Promote adoption of rainwater reuse, rooftop gardens, natural ventilation, high thermal barrier/heat-shielding glass
		Take part in R&D on improved PBCFs
		Entrench the MOL Group Environmental Award
		Actively make representations for economic methods
		Lobby through industry groups for promoting modal shift (and preventing backward steps)
		Prevent ocean pollution caused by shipping accidents
		Install ballast water treatment system first on car carriers and containerhips
		Expand activities that contribute to conservation of biodiversity and protection of the natural environment
		Regularly produce environment-related articles in the company newsletter
		Continue utilizing solar power generation at the Tokyo International Container Terminal, the MOL Technology Research Center and company housing for employees
		Reduce unit energy consumption at domestic business sites by 3% compared to FY2009
		Reduce unit energy consumption by domestic transport modes by 3% compared to FY2009
		Reduce office paper usage (per employee) by 3% compared to FY2009
		Recycle as much as possible and set targets for non-recyclable waste reduction
		Tokyo Metropolitan Environmental Security Ordinance: Develop and implement specific reduction measures
		Amended Energy Conservation Law: Develop and implement specific reduction measures

Special Features

Management

The Environment

Society

Environmental Burden of the MOL Group

The MOL Group conducts a range of business activities at sea, including international shipping, and on land. The following is a summary of MOL's and the MOL Group's consumed resources and environmental impacts during fiscal 2011 in the course of those activities. The MOL Group is working to reduce these environmental impacts.

Environmental Burden of the MOL Group (FY2011)

Activities at Sea (Vessels)

	INPUT		OUTPUT	
MOL (non-consolidated)	Fuel oil (C oil ^{*1})	5,270 thousand tons	CO ₂	16,638 thousand tons
	Diesel oil (A oil ^{*2})	70 thousand tons	NOx	449 thousand tons
			SOx	258 thousand tons
Group companies (domestic shipping)^{*3}	Fuel oil (C oil ^{*1})	250 thousand tons	CO ₂	826 thousand tons
	Diesel oil (A oil ^{*2})	17 thousand tons	NOx	22 thousand tons
			SOx	— ^{*5}
Group companies (international shipping)^{*4}	Fuel oil (C oil ^{*1})	512 thousand tons	CO ₂	1,670 thousand tons
	Diesel oil (A oil ^{*2})	24 thousand tons	NOx	45 thousand tons
			SOx	25 thousand tons

Activities on Land

	INPUT		OUTPUT	
MOL (non-consolidated)	Fuel	104 kl	CO ₂	7,499 tons
	Electricity	19,772 thousand kWh	NOx	6 tons
	Municipal gas	139 thousand m ³	Waste	119 tons
	LPG	4 tons		
	Heat	1,382 GJ		
	Water	7,812 m ³		
	Office paper	7,025 thousand sheets ^{*7}		
Group companies^{*6}	Fuel	6,714 kl	CO ₂	61,263 tons
	Electricity	72,622 thousand kWh	NOx	21 tons
	Municipal gas	1,452 thousand m ³	Waste	2,233 tons
	LPG	81 tons		
	Heat	38,149 GJ		
	Water	675,429 m ³		
	Office paper	39,388 thousand sheets ^{*7}		

*1 Heavy fuel oil C: Mainly for vessel main engines

*2 Heavy diesel oil A: Mainly for onboard generators

*3 MOL Ferry Co., Ltd., Ferry Sunflower Limited, Meimon Taiyo Ferry Co., Ltd., MOL Naikou, Ltd., Ube Port Service Co., Ltd., Kitanihon Tug-Boat Co., Ltd., Green Kaiji Kaisha, Ltd., Green Shipping, Ltd., Kobe Towing Co., Ltd., Nihon Tug-Boat Co., Ltd., and MOL Techno-Trade, Ltd. (11 companies in total)

*4 Mitsui O.S.K. Kinkai, Ltd., Tokyo Marine Co., Ltd., Nissan Motor Car Carrier Co., Ltd. and Mitsui O.S.K. Passenger Line, Ltd. (four companies in total)

*5 Data on SOx emissions of Group companies (coastal transport) is not available.

*6 All consolidated subsidiaries in Japan, and Meimon Taiyo Ferry Co., Ltd. and Nippon Charter Cruise, Ltd. which are both affiliated companies accounted for by the equity method. However, results exclude some companies whose environmental burden is negligible.

*7 Converted to A4 size.

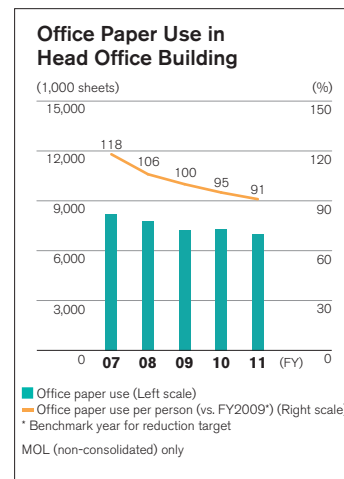
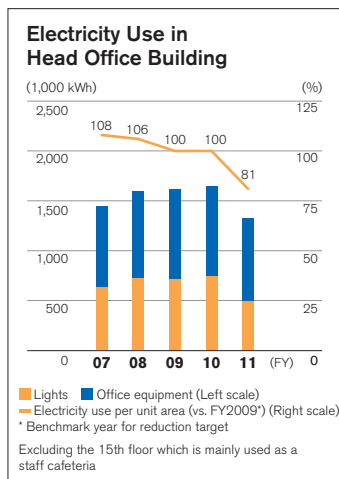
Measures at Offices

The MOL Group strives to reduce the environmental impact generated by office operations (office paper, electricity, and waste) as well as in sea and land transportation activities. The

MOL Head Office Building in particular has taken rigorous steps to save electricity in response to electricity supply shortages in the wake of the Great East Japan Earthquake. These measures include suspending the use of one elevator, turning off hand dryers in toilets, raising the air conditioner thermostat setting from 26°C to 28°C during summer, precooling rooms as appropriate, shutting blinds, turning lights out at lunchtime, and removing some lighting.



MOL Head Office Building



Approaches to Tackling Global Warming and Preventing Air Pollution

Shipping is a more energy efficient mode of transport than other modes of transport. That said, because vessels burn fossil fuels they inevitably emit carbon dioxide (CO₂), which is a cause of global warming, as well as nitrogen oxide (NO_x), sulfur oxide (SO_x), soot and other emissions, which are linked to acid rain and atmospheric pollution. The MOL Group is fully aware of the effects on air quality associated with its business activities and thus proactively works to reduce the impact on an ongoing basis.

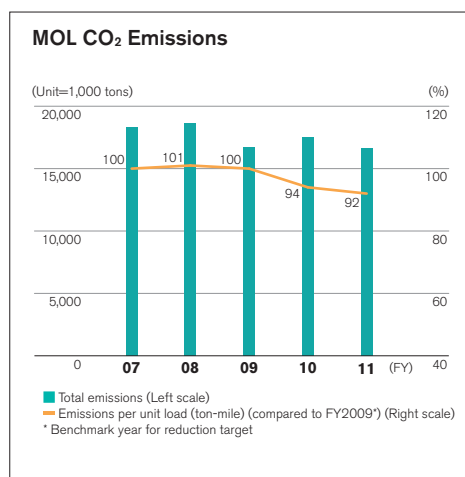
Approaches to Tackling Global Warming

Approaches of the Ocean Shipping Industry

The shipping business operates all over the world. Furthermore, because this is a single international market, it makes sense that, in principle, all environment-related measures must apply the same standard to all sea areas and vessels. For this reason, under the Kyoto Protocol, the approach to reduction of greenhouse gas (GHG) emissions from vessels engaged in international shipping is delegated to the International Maritime Organization (IMO), a specialist agency of the United Nations. From January 2013, all ocean-going vessels worldwide, including existing vessels, will be obliged to have a "Ship Energy Efficiency Management Plan," and new energy efficiency regulations will govern new vessels. MOL will continue to contribute to initiatives of industry groups and governments to create a framework, through the IMO, that leads to substantial reductions in GHGs from international shipping. Based on the nine fundamental principles of the IMO, the framework should be "binding and equally applicable to all flag states in order to avoid evasion" and "based on sustainable environmental development without penalizing global trade and growth," among other conditions.

MOL Approaches

One of the environmental strategies in our midterm management plan, "GEAR UP! MOL," is to reduce CO₂ emissions per unit load (ton-mile) by 10% in fiscal 2015 compared with fiscal 2009. This target applies to ocean-going vessels operated by MOL and domestic consolidated subsidiaries. In order to achieve the targeted reduction, we are developing and adopting new environmental technologies, thoroughly practicing ECO SAILING, and introducing larger vessels. In fiscal 2011, the company and consolidated subsidiaries achieved a reduction of 2.1% year on year (and a reduction of 7.5% compared with fiscal 2009). These reductions were achieved through further adoption of reduced navigation speeds, and also reflected the benefits of investments in environmental facilities.



Environmental Technologies

The MOL Group is engaged in developing various environmental technologies for ships. In Feature 2 (on pages 10 and 11 of this report), we look at core component technologies of the *Senpaku ISHIN* project. In this section, we showcase other main initiatives.

Use of Renewable Energy: Besides solar power generation showcased in Feature 2, the company is taking part in the "Wind Challenger Project" led by The University of Tokyo. This project is researching wind-propelled ships, which involves using sails as the main driving power, with a propulsion system in an auxiliary role. In addition to MOL, two other ocean shipping companies, Nippon Kaiji Kyokai, shipbuilders and other parties are participating in the project. Launched in September 2009, the project is now developing large-scale solid sail structures using composite materials, as well as examining particulars for vessel designs to develop, and developing fluid analysis techniques and weather routing methods.



An artist's impression of the "Wind Challenger Project"

PBCF Boost Vessels' Propulsion Power: Propeller Boss Cap Fins (PBCF), jointly developed by MOL and other parties, improve propeller efficiency. PBCF produce a 4% to 5% improvement in fuel efficiency at the same speed, along with commensurate reductions in CO₂ emissions. These fins have been widely installed on MOL operated vessels, as well as other vessels around the world. As of March 31, 2012, PBCF had been introduced to more than 2,100 vessels worldwide, including vessels scheduled to be built. MOL is currently developing new PBCF with AKISHIMA LABORATORIES (MITSUI ZOSEN) INC., which target a further improvement in fuel efficiency of another 1 point. An additional patent was filed for them in March 2009. We aim to make these new fins commercially available as early as possible.



PBCF

R&D on high-performance antifouling ship bottom paints that improve vessels' fuel efficiency:

Ships consume most of their fuel in overcoming the resistance when navigating. Reducing this resistance contributes directly to lower fuel consumption and reduced CO₂ emissions. The drag of seawater over a vessel's wetted surface accounts for 50% to 80% of all resistance, including wind and wave resistance.

MOL has teamed up with Nippon Paint Co., Ltd. and Nippon Paint Marine Coatings Co., Ltd. to develop a super-slick antifouling ship bottom paint with high performance friction-reducing properties. The paint will dramatically reduce fuel consumption by reducing seawater drag. This research and development is part of our commitment to realizing *Senpaku ISHIN*, and is expected to lower CO₂ emissions by 8% to 12% compared to conventional antifouling paints.

Wind resistance-reducing design: The unique shape of car carriers means that there is a large surface area exposed to wind pressure, and the impact of this resistance is considerable. In 2003, MOL took delivery of the *Courageous Ace*, which was the first vessel to adopt a beveled, rounded superstructure at the bow. Since then, MOL has deepened research on vessel shapes to lower wind resistance. Under the *Senpaku ISHIN* project, the company is aiming to make further improvements to the shape of ships' sterns. The benefits of these improvements are being validated with Akishima Laboratories (Mitsui Zosen) Inc.

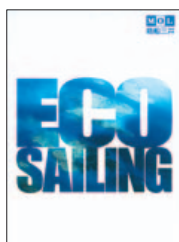
In December 2010, the MOL Group's reduced wind resistance car carrier fleet was joined by the *City of St. Petersburg*, which is owned by Nissan Motor Car Carrier Co., Ltd. Built by Kyokuyo Shipyard Corporation, this vessel can carry up to 2,000 cars. A sleek, semispherical bow design reduces wind resistance by up to 50% compared to Nissan Motor Car Carrier's existing vessels. This unique bow design has received high marks, with the vessel selected as the "Ship of the Year 2010" by the Japan Society of Naval Architects and Ocean Engineers in May 2011.



The car carrier *City of St. Petersburg*

A Commitment to ECO SAILING

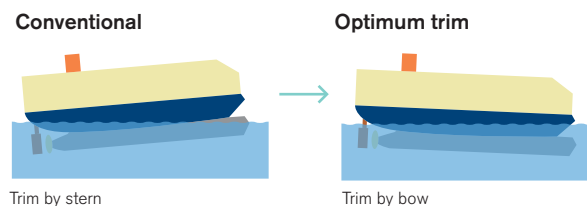
To save fuel and reduce environmental impact, we monitor energy flow in our vessels and do our utmost to eliminate energy losses in our operations. We call this approach ECO SAILING. We rigorously apply the principles of ECO SAILING whenever we operate vessels. Specifically, we 1) properly reduce navigation speeds, 2) take advantage of weather and sea condition forecasts and the optimum trim, 3) select optimum routes, 4) reduce vessels' wetted surfaces, 5) optimize operation and maintenance of main engines, auxiliary equipment and other machinery, 6) develop energy-efficient ship designs, and 7) equip vessels with Propeller Boss Cap Fins (PBCF).



ECO SAILING Pamphlet

Slow steaming: MOL has proven on MOL-operated vessels that it is possible to achieve continuous operation in a load range that couldn't be used in the past by increasing the output of the main engine's auxiliary blower motor. This accomplishment has increased the opportunities for practicing slow steaming.

Optimum trim system: MOL has developed an optimum trim system for vessels along with AKISHIMA LABORATORIES (MITSUI ZOSEN) INC. The optimum trim system quantitatively assesses MOL captains' extensive practical knowledge of vessel running attitudes through tank testing and actual ship testing. This data is translated into graphs that make it easy for seafarers to use. A pilot test of the system on a car carrier using optimum trim showed an increase of up to 4% in fuel efficiency compared to the conventional condition. MOL expects that it won't be long before all vessels will navigate with optimum trim.



Increasing Transportation Efficiency with Larger Ships

MOL believes that the introduction of larger vessels and improvement of propulsion are effective measures to fulfill the social responsibility of the shipping industry to meet burgeoning international demand for ocean shipping and, at the same time, to prevent global warming. In December 2007, MOL took delivery of the *Brasil Maru* (approximately 320,000 DWT), one of the world's largest iron ore carriers. The *Brasil Maru* combines her very large size with excellent propulsion and an energy-saving design such as propellers specially designed to improve propulsion efficiency. These qualities earned the *Brasil Maru* selection as the "Ship of the Year 2007" by the Japan Society of Naval Architects and Ocean Engineers.



The iron ore carrier *Brasil Maru*

Approaches to Preventing Air Pollution

NOx (Nitrogen Oxide)

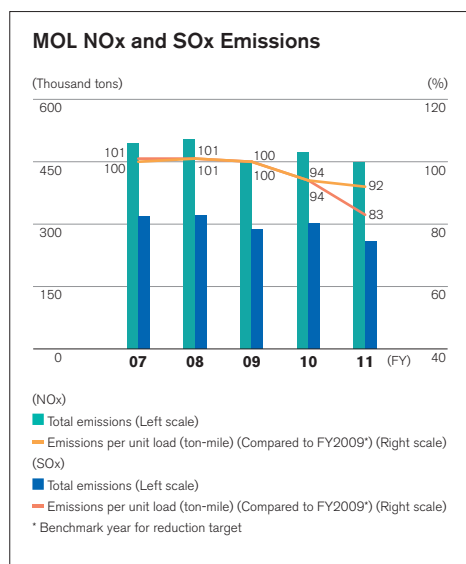
NOx is generated when nitrogen contained in fuel oil and air binds with oxygen in the air at high temperatures when fuel burns in the engine. NOx emissions can be reduced to some degree by controlling combustion temperature in the engine. MOL is promoting the adoption of electronically controlled engines that reduce NOx, soot, and smoke by more effectively controlling the intake and exhaust valves. We are operating 27 vessels featuring electronically controlled engines beginning with the containership *MOL Creation*, which was delivered in June 2007. By the end of March 2012, 29 vessels equipped with electronically controlled engines had been delivered.

SOx (Sulfur Oxide)

SOx is generated by burning fuel oil containing sulfur. In order to reduce the volume of SOx emissions, MOL has set a standard for the sulfur content in the fuel it procures that is stricter than the international treaty governing sulfur content in fuel oil.

Average Sulfur Content (%) in Marine Heavy Fuel Oil Used by MOL

FY2005	2.82%
FY2006	2.75%
FY2007	2.62%
FY2008	2.59%
FY2009	2.59%
FY2010	2.58%
FY2011	2.33%
MARPOL Treaty (general sea areas)	3.50%



Reducing Soot/Smoke and Dust

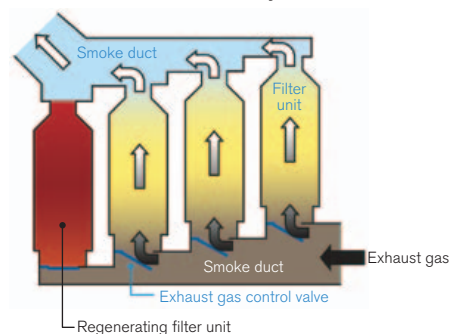
First Installation of a Maintenance-free DPF on an Ocean-going Vessel in the World

MOL has been developing a diesel particulate filter (DPF) for diesel engines on vessels that use marine heavy fuel oil together with Nippon Kaiji Kyokai (ClassNK) and Akasaka Diesels Limited, with research support from ClassNK under a scheme supporting joint research and development with industry and academia. In 2010, we conducted a test installation on the main engine of a coastal ferry. Recently, we began trial operation of this system on the diesel engine used for power generation on an MOL Group-operated ocean-going vessel. This was the world's first installation of a self-cleaning DPF on an ocean-going vessel.

<Features>

This system incorporates a filter that relies on silicon carbide ceramic fibers. The filter collects particulate matter (PM) when exhaust gas goes through it. It can collect over 80% of PM produced by the engine, significantly reducing black smoke emissions. It is also a self-cleaning system that automatically combusts and eliminates PM buildup in the filter. This allows for continual operation without clogging of the filter, and requires no maintenance by seafarers.

Exhaust Gas Purification System



Using Onshore Power Supplies

Emissions of NOx, SOx, soot and smoke and other pollutants can be significantly reduced while at berth by reducing the use of conventional diesel power generators and receiving electric power supply from onshore instead.



The containership *MOL Matrix* using an onshore power supply system

Tugboat companies in the MOL Group have been installing electric power supply systems connected to the local electricity grid to power tugboats at berth. This not only reduces the workload for crew members due to reduced use of generators, but also reduces emissions of NOx, SOx, soot and others. In some ports, the shore power supply system is even used to power domestic carriers while at berth.

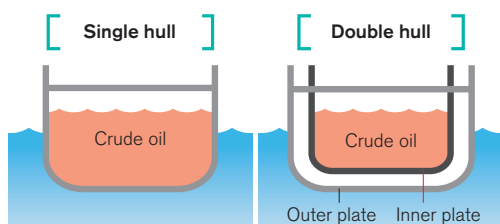
Approaches to Protecting Biodiversity and the Marine Environment

The MOL Group is working to prevent marine pollution caused by marine accidents by rigorously ensuring safe operation. At the same time, MOL is actively pushing ahead with measures to protect the seas and oceans, which are not only our place of business but also the shared heritage of everyone on Earth, in order to protect biodiversity.

Approaches to Marine Environmental Protection

Double-Hull Tankers

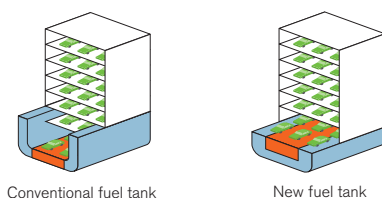
We have adopted double-hull vessels in our tanker fleet in order to prevent spills of crude oil, petroleum products, and chemicals caused by a grounding or collision of vessels. Our fleet of tankers is 100% double-hulled.



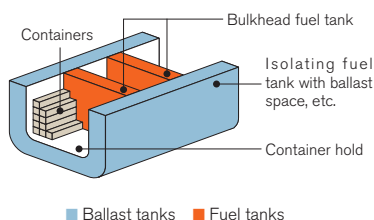
Double-Hull Fuel Tanks

All vessels carry fuel for their voyages. Therefore, in the same way as with tankers, we have pushed the adoption of double-hull fuel tanks in order to reduce the risk of oil leaking into the ocean in the event of an accident. All vessels delivered since August 2010 have double-hull fuel tanks (or equivalent measures).

Car carrier



Containership



Onboard Waste Disposal

On a vessel, which is also a home for seafarers, the same type of garbage as in a household is generated. On our operated vessels, based on the MARPOL Treaty, we draw up on-board waste management plans requiring separation, collection, storage and disposal of on-board waste. Waste management officers supervise this process, and work to build thorough awareness of the plan among officers and crew

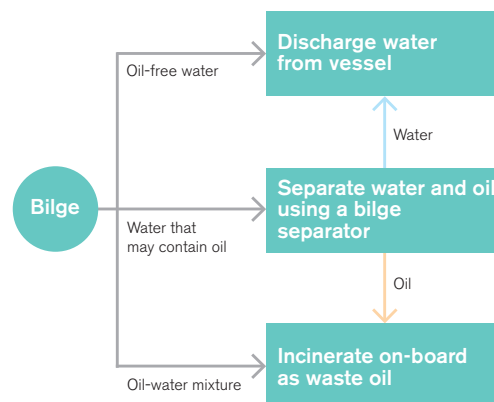
members. Food waste and other biodegradable trash are ground into small particles and disposed of in specified areas of the open sea, and plastic waste is disposed of appropriately on land.

Proper Processing of Waste Oil

Fuel oil for vessels contains many impurities. Water and other contaminants are extracted by pre-treatment before the fuel is used in engines and other equipment. Waste oil containing water and impurities from pre-treatment is heated in a special tank to remove water, and then incinerated in conformity with environmental regulations.

Processing Bilge Water

In a vessel's engine room, bilge water (waste water containing oil) is generated by leakage from seawater pipes and equipment and during maintenance work. We have introduced a bilge source separation system that categorizes bilge water in three stages according to the presence of oil, and collects and disposes of it properly.



Caring for the Environment When Scrapping Vessels

Aging vessels must be scrapped in the interest of safe operation and protection of the marine environment. However, measures for workers' safety and hygiene and the environment have been insufficient when scrapping ships in some countries in Asia. When selling a ship on the assumption that it will be scrapped, we check that the scrapping yard takes environmental measures in conformity with ISO 14001 (or the environmental management equivalent), and uses scrapping methods and procedures that are sufficiently safe for the environment and personnel. In the international community, in May 2009, the IMO adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, and is proceeding with ratification toward its enforcement. This treaty prohibits and restricts the fitting and use of treaty-specified hazardous materials. At the same time, it requires vessels to prepare and update inventory lists

showing the quantity and location of hazardous materials on ships over a ship's lifetime. These lists must be handed over to recycling facilities when the ship is finally scrapped. MOL was quick to initiate measures to prepare such lists. Furthermore, in 2010, the company established a task force made up of related divisions in the company, which is working to ensure that the treaty is understood throughout the group, and to share information, including the results of site surveys of scrapping facilities.

Measures to Protect Biodiversity

The MOL Group's activities could have an impact on biodiversity in the following ways:

1. Cross-border transportation of alien species via ship ballast water, and organisms attached to vessels and containers
2. Impact on eco-system of antifouling ship bottom paints
3. Impact on eco-system of buildings and structures on coasts
4. Impact on eco-system of paper, stationery, etc., used in offices

MOL works to develop and adopt technologies to minimize the impact of vessels on biodiversity. Furthermore, when constructing buildings on shores or the coast, MOL conducts impact assessments with project partners. Moreover, MOL rigorously conducts green procurement and recycling in offices. To raise the awareness of employees regarding protection of biodiversity and the natural environment, MOL makes use of in-house communications tools and participates in activities that protect the natural environment. (See page 44 for details.)

Participation in "Nippon Keidanren's Declaration of Biodiversity" as a Promotion Partner

MOL supports and adheres to the Declaration of Biodiversity by the Japan Business Federation (Nippon Keidanren), and participates as a "Promotion Partner" to clarify this commitment internally and publicly.

Nippon Keidanren's Declaration of Biodiversity (Summary)

1. Appreciate nature's gifts and aim for corporate activities in harmony with the natural environment
2. Act from a global perspective on the biodiversity crisis
3. Act voluntarily and steadily to contribute to biodiversity
4. Promote corporate management for sustainable resource use
5. Create an industry, lifestyle and culture that will learn from biodiversity
6. Collaborate with relevant international and national organizations
7. Spearhead activities to build a society that will nurture biodiversity

Environmental Education

MOL is working to raise employee awareness of protecting biodiversity and preserving nature as well as combating global warming through the following initiatives. Our aim is to synergistically raise both awareness and knowledge concerning the environment and ensure this is applied in day-to-day activities. From this perspective, we intend to continuously enhance and increase environmental education in the company.

In-house Newsletter "Monthly Environment"

We distribute a newsletter containing the latest news concerning global environmental protection via the MOL Group's intranet site.

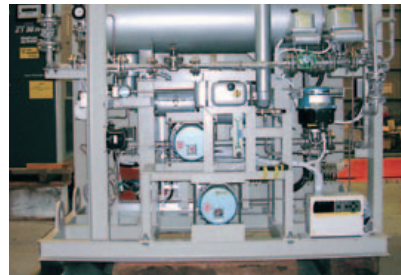
Environmental E-Learning

In 2011, we launched an environmental E-Learning program using our intranet for MOL employees. The program is designed to test employees' general knowledge about environmental protection and their understanding of MOL's environmental strategy and specific environmental protection initiatives.

Organisms in Ballast Water and on Vessels

Ballast water is discharged when cargo is loaded. It may have an impact on local ecosystems by introducing foreign marine organisms from another location as well as the preservation and sustainable use of biodiversity. This potential cross-border transportation of foreign marine organisms in ballast water has been highlighted as an international issue since the late 1980s. As a result, a treaty on ballast water management was adopted by the IMO in February 2004, and work is proceeding on ratification ahead of enforcement. After 2017, all vessels will be required to treat ballast water to reduce the content of marine organisms to a specified level rendering it harmless. We have developed a ballast water purification system and conducted on-board demonstrations in cooperation with manufacturers and other concerned parties. We obtained the necessary approval for putting the system into use at the Marine Environment Protection Committee 61 (MEPC 61) meeting held in October 2010. In addition, ballast water purification systems have already been installed on nine MOL and MOL Group company Mitsui O.S.K. Kinkai, Ltd. vessels, well before the enforcement of the IMO treaty. This is just one example of efforts to render ballast water harmless as quickly as possible.

Marine organisms attaching to the bottom of vessels due to the fouling of ship bottom paint and crossing borders is also an issue in the industry. The IMO is discussing guidelines to prevent this. MOL is expressing its views on practicality and other aspects through industry groups to contribute to the process of creating international guidelines.



Ballast water purification experimental system

Antifouling Ship Bottom Paints

In the past, paint containing tributyltin (TBT), which has a high antifouling property, was used for coating ship bottoms. However, after the harmful effect of TBT on ecosystems was widely confirmed, the IMO adopted an international convention that imposed regulations on the use of ship bottom paints, including TBT and other organic tin paints. The international convention came into force in 2008. MOL began switching to tin-free (TF) paint earlier than this, and as a result, we completed the switch on all of our managed vessels in fiscal 2005.

Group Companies' Initiatives

As part of the midterm management plan, "GEAR UP! MOL," the MOL Group has adopted an environmental strategy aimed at offering business services and solutions that reduce the environmental impact of operations, including promoting a modal shift with ferry transport. Below are examples of achievements by individual MOL Group companies putting the strategy into practice.

The 6th MOL Group Environmental Award

We introduced the MOL Group Environmental Award in fiscal 2005 in order to promote environmental management in Group companies. Every year, this award recognizes meritorious activities aimed at developing and introducing environmental technologies and other environmental activities in the Group. Awards are presented at the Group Executive Committee meeting of Group company presidents.

Most Outstanding Performance Award: Installation of Solar Power Generation Systems and Onshore Power Supply Systems Meimon Taiyo Ferry Co., Ltd.

In fiscal 2009, this company fitted the *Ferry Fukuoka 2* with one of the world's largest solar power generation systems and an onshore power supply system with the goal of reducing CO₂ and other exhaust gases. The solar power generation system generates 50 kW of electricity, equivalent to the amount of power consumed by 16 ordinary households, from 280 solar panels placed on the vessel's upper-most deck. The onshore power supply system brings in 6,600 volts of high-voltage electricity from the shore when the vessel is docked, thereby achieving the equivalent of engine idling-stop for vessels.



Solar power generation system



Onshore power supply system

Outstanding Performance Award: Development of an Optimum Trim System for Car Carriers Mitsui O.S.K. Lines, Ltd., MOL Ship Management Co., Ltd. (Please refer to page 34 for details.)

Outstanding Performance Award: Introduction of Ship Energy Efficiency Management Plan (SEEMP) MOL Tankship Management (Europe) Ltd. MOL Tankship Management (Asia) Pte Ltd. Mitsui O.S.K. Lines, Ltd.



MOL SEEMP

We have begun energy-efficient vessel operations in our tanker fleet ahead of the IMO's enforcement of stricter requirements in 2013 by introducing SEEMP for reducing environmental impact. MOL's SEEMP obtained the world's first certification in December 2011 from a certifying institution, attesting to its compliance with regulations.

Outstanding Performance Award: Energy-efficient Operation Japan Express Co., Ltd. (Yokohama)

This company achieved power savings at the Ohi Logistics Center far greater than those required by the government, by implementing energy-saving measures with the cooperation of all staff before the enforcement of a decree to restrict power usage.



Ohi Logistics Center

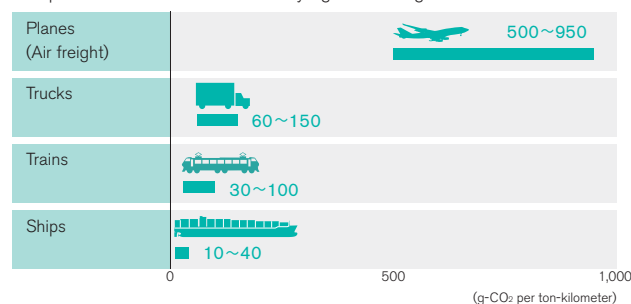
In addition to the above, the company was recognized for various other measures. These included validating the continuous operation of a main engine by installing a larger auxiliary blower, introducing low-environmental-impact reefer containers, participating in a low sulfur fuel incentive program, and adopting a ballast water treatment system.

Modal Shift Promotion

Modal shift involves a switch from transporting freight by plane or vehicle to ships or other means that can transport large volumes of freight all at once. It is a very effective way of reducing CO₂ emissions. The MOL Group offers transportation services by ship around the world and provides environmentally-friendly transportation services as one of the largest ferry and domestic shipping service firms in Japan.

Per-Unit-Load CO₂ Emissions by Mode of Transport

Comparison of CO₂ emissions carrying 1-ton cargo for 1 km



Source: "SMART GOODS TRANSPORT," The Low Carbon Leaders Project

MOL Group Domestic Ferry Service Network



Initiatives to Reduce Environmental Load at Container Terminals

Utoc Corporation, Shosen Koun Co., Ltd.

MOL and MOL Group company Utoc Corporation installed a 200 kW solar power generation system at the Tokyo International Container Terminal in 2007.

In fiscal 2011, the system generated approximately 218,000 kWh of power, which covered about 34% of the power needs for the control building. In addition, Utoc Corporation and Shosen Koun Co., Ltd. have



Tokyo International Container Terminal

also progressively introduced hybrid transfer cranes at their container terminals in Tokyo and Kobe, respectively. These cranes consume approximately 40% less fuel than conventional ones. (four cranes were introduced in fiscal 2011.)

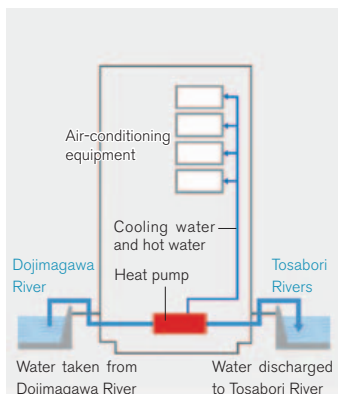
Environmentally-Friendly Buildings

Daibiru Corporation

The Daibiru-Honkan building, which is scheduled for completion at the end of February 2013, will use river water for cooling water in the summer and heating in the winter. Because no waste heat from air conditioning is released into the atmosphere, the building will contribute to lower CO₂ levels and less of an urban heat island effect. Furthermore, the exterior bricks of the former Daibiru-Honkan building will be reused to restore the lower levels. This will help to maintain the historical character of the Nakanoshima area, limit waste and save resources.



Artist's impression of the Daibiru-Honkan building (Nakanoshima, Osaka)



The building's district heating and cooling system will use river water.

Efforts to Reduce the Environmental Impact on Cruise Ships

Mitsui O.S.K. Passenger Line, Ltd. (MOPAS)

The cruise ship the *Nippon Maru* makes an effort to reduce environmental impact not only in navigation, but also in the aspects unique to passenger ships. For example, the company uses eco-friendly products, exchanges towels in passenger quarters only when requested, and takes steps to reduce paper bags and packaging for all items in the gift shop. It also seeks to enlist the cooperation of passengers to reduce environmental impact.



The cruise ship *Nippon Maru* (renovated in March 2010)

Developing a Beverage Can Recycling Business to Promote a "Recycling-oriented Society"

Kusakabe Maritime Engineering Co., Ltd.

This company's recycling plant "Tri-R-Kobe" turns collected empty aluminum beverage cans into pellets, and sells them as excellent deoxidizing agents for use in steelmaking. By using natural gas, which has relatively low CO₂ emissions, as fuel for the plant, and recycling combustible gas from inside its furnaces, the plant is designed eco-friendly.



Commercially-recycled aluminum pellets

Sales of PBCF and Other Products with Environmental Benefits

MOL Techno-Trade, Ltd.

This company sells products that offer environmental benefits*. In fiscal 2011, cumulative sales units of Propeller Boss Cap Fins (PBCF) reached 2,100 vessels.

* Products with environmental benefits

Examples of products used by the MOL Group which benefit the environment include: PBCFs, which control fuel consumption and exhaust gas; IZ energy-saving lighting; Adgreencoat and ZEFFLE Infrared Reflective coating that control temperature rises in cabins; "SANWA Aerators," which efficiently dispose of waste water; "BY • FAR Z," a relatively environmentally-friendly detergent to disperse oil; and "TAICRUSH HD," a fuel additive for improving fuel efficiency and reducing CO₂ emissions.



"TAICRUSH HD" fuel additive

Caring for Land-based Staff

The MOL Group is enhancing recruitment activities, training programs and various other systems with the aim of ensuring the growth of both the MOL Group and individual employees. The Group also endeavors to enhance employee health and develop workplaces that instill peace of mind in employees in line with an individual's stage in life. Under the mid-term management plan (fiscal 2010 to fiscal 2012), we have set a number of numerical targets, and are working to achieve those during the term of the plan.

Recruitment and Human Resources Development

In recruiting employees, MOL conducts fair recruitment activities to recruit people who have the qualities the company is looking for such as a fighting spirit, toughness, leadership ability and communication ability. Regarding human resource development, MOL regards an employee's first 10 years in the company as a cultivation period for becoming a marine transport professional. Training falls into two broad categories: on-the-job training (OJT) and off-the-job training (OFF-JT). The OJT system develops employees by exposing them to jobs in various workplaces. Meanwhile, OFF-JT includes position-specific training, overseas training and on-board training to gain experience on the frontlines of our business. In addition, for mid-level and higher-level employees, we run management skill-enhancement training and "MOL Group Management Schools" to develop future leaders of the MOL Group.



Employees on language training in China



A new cadet in training

HR System and Evaluation System

We have adopted a system for personnel management and remuneration that encourages employees to take the initiative more in their work and more appropriately reflects responsibility and results. Aiming to ensure a fair and highly transparent evaluation, managers conduct interviews with their subordinates every quarter.

Consideration for Health Care and Work Environments

In addition to complying with laws and regulations, we have introduced the following systems and structures for managing employee health and enhancing working environments so that employees can work energetically, and in good health, both physically and mentally.

Health Management

- Appointed a person responsible for promoting health management
- Implement yearly medical check-ups and follow-up
- Hold monthly Health Management Meetings
- Provide daily medical services at the company clinic in the head office
- Implement medical exams before, during and after overseas postings for employees working overseas

- Subsidize breast cancer and cervical cancer screening fees for female employees
- Implement regular mental health consultations at key worksites in Japan
- Implement online mental health self-evaluation
- Conduct yearly organizational mental health review
- Conduct mental health seminars for managers, including those at MOL Group companies
- Implement measures to reduce overtime work (implement no-overtime days, have days when everyone in the company leaves at a certain time, and strengthen processes for approval of overtime work)
- Implement medical check-ups and recovery leave for employees spending an extended period of time at worksites
- Open massage room (inside the head office building)

Care for Working Environments

- Accept various consultations in the Counseling and Aid Center in the Human Resources Division, in the head office (The Counseling and Aid Center receives various requests for consultation from sea- and land-based staff, past employees and family members, and MOL Group employees, and maintains strict confidentiality. Matters consulted on include workplace human relations, work-related worries and harassment, as well as personal problems.)
- Implement Casual Days (every Friday, and every day between June and September)
- Introduce safety confirmation system to confirm safety in a disaster

Instill an Awareness of Human Rights

Human Rights Training

The Counseling and Aid Center in the Human Resources Division is also responsible for human rights education. We conduct human rights training every year at all levels to foster a work environment where all corporate officers and employees share an understanding of the need for mutual respect and can carry out their work with a positive frame of mind. There are various issues surrounding the subject of human rights, but we try to devise training programs based on the goals of the UN Global Compact, in which we participate, as well as important international regulations such as the International Covenants on Human Rights. Our training is designed to eliminate human rights breaches or discrimination caused by mistaken beliefs founded on baseless biases or delusions.

Activities as a Member of the Human Rights Awareness Group

Corporate counterparts draw on their respective experiences and knowledge for brainstorming and training people about human rights in various fields. The insight gained is reflected in internal training programs.

Human Rights Enlightenment Slogan Solicitation and Awards

Before "Human Rights Week," which is held in the first week of December every year, we solicit "Human Rights Slogans" from MOL and MOL Group employees and their families and give internal awards to the best entries.

Dissemination of Human Rights Information

We distribute internally a journal issued by a human rights awareness group of which the company is a member.

Furthermore, in order to stimulate awareness regarding human rights issues in daily life, we use our intranet to introduce events and seminars about human rights in Japan, as well as human rights-related facilities (such as museums).

Systems that Support Diverse Human Resources and Work Styles

MOL operates various systems with the aim of utilizing diverse human resources and offering employees a variety of work formats, so that employees are much more motivated and can concentrate on work.

- Child-care leave: In addition to morning sickness and maternity leave, MOL also has a child-care leave system for the period before children are accepted at day care. A total of approximately 90 employees have taken child-care leave since the system was introduced in 1992.
- Shorter hours and exclusion from overtime for employees with young children: This system was introduced in fiscal 2010.
- "Refresh" leave: Employees are allocated extra holidays after 15 years and 25 years of continuous service.

Land-based Employees by Gender and Position

	March 31, 2010		March 31, 2011		March 31, 2012	
	Men	Women	Men	Women	Men	Women
Group leaders and above	235	4	215	6	206	6
Managers	165	10	187	8	183	8
Below manager level	290	196	282	195	282	199
Total	690	210	684	209	671	213
	900		893		884	

Number of Industrial Accidents (Land-based; Excludes Commuting Accidents)		
FY2009	FY2010	FY2011
1	0	0

Number of Leave Days Due to Industrial Accidents		
FY2009	FY2010	FY2011
0	0	0

- Nursing care leave: Employees may take up to two years' nursing care leave.
- Re-employment system for mandatory retirees: MOL has introduced an active senior program in response to a law in Japan enacted to encourage stable employment of workers who have reached the mandatory retirement age.

Meeting the Needs of Expatriate Staff and Locally-hired Employees

The company appoints a person to support various aspects of the lives of expatriate employees and their families, including medical care, children's education, and safety, in the nations where they work. And we have hired about 3,600 national staff at local subsidiaries all over the world, contributing to the growth of local economies.



MOL (Brasil) Ltda. Sao Paulo Headquarter



Mitsui O.S.K. Lines (India) Pvt. Ltd. Mumbai Office

Relationships with Labor Unions

Land-based employees belong to the Mitsui O.S.K. Lines Labor Union, and seafarers are members of the All Japan Seamen's Union. Both unions enjoy good and sound relations with MOL management.

Average Number of Annual Leave Days Taken (Including Summer Vacation)		
FY2009	FY2010	FY2011
12.8	12.4	12.1

Number of Working Mothers (Mothers with Children Under the Age of 15)		
FY2009	FY2010	FY2011
33	33	38

Number of Employees Using Child-care Leave System (Excluding Land-based Contract Employees)		
FY2009	FY2010	FY2011
8	7	7

Ratio of Female Employees Taking Child-care Leave		
FY2009	FY2010	FY2011
100%	100%	100%

Number of Employees Taking Maternity Leave (Pre- and Post-Childbirth) (Excluding Land-based Contract Employees)		
FY2009	FY2010	FY2011
2	4	5

(MOL non-consolidated data)

Voices from the Forefront

Hanako Hirose

Coal and Iron Ore Carrier Group, Coal and Iron Ore Carrier Division
(Joined MOL in 2006, Senior Assistant)

Working Hard Every Day with the Understanding of the Company and the Support of My Family

I am responsible for customers in Japan in the Coal and Iron Ore Carrier Division, having returned from my second term on child-care leave. My second term was longer than the first, and the company introduced a system offering shorter working hours following my return to work. This support system, which allows employees to continue working while raising

their children, gets better every year. I am sure that many employees will take advantage of this system in the future. Personally, I am thankful to the various people around me that supported me every day when I had to work at home because I'd strained my back or had to take turns with my partner to drop the kids off at day care or pick them up. It is because of the support of these people that I was able to take a second term of child-care leave.

I want younger employees to know that if they use the company's systems, they can produce results at work and lead a fulfilling work life by working in various ways.



Caring for Seafarers

Seafarers ensure safe operation and manage vessel operations, the very basis of our business. In this section, we look at our basic policy, and what MOL is doing to care for seafarers and their families.

MOL's Basic Policy

A key policy in MOL's current midterm management plan, which covers the period from fiscal 2010 to fiscal 2012, is to "secure skilled seafarers and keep them well trained."

MOL's seafarers crew approximately 300 vessels. The large majority of our seafarers are from more than 20 countries other than Japan; Japanese seafarers account for only around 3% of our seagoing employees. MOL therefore employs and promotes skilled individuals from around the world, irrespective of nationality. MOL pays due consideration to this diverse, multinational workforce in terms of the working environment on-board and on shore as well as remuneration and benefits. At the same time, we run high-level development and training programs to produce outstanding seafarers who are highly motivated and possess the excellent skills and knowledge we require.



Employing Diverse Human Resources

We have established bases for recruiting, training and developing seafarers around the world. We have also set up a scholarship system at overseas maritime academies to support aspiring seafarers. For people from countries who cannot acquire specialist maritime certifications, we have also introduced a cadet system so that students can gain the necessary experience for earning qualifications. Promising



Cadets from various countries undertake training

young seafarers from various countries who have received such support will be employed as personnel who have the potential to be key MOL members for safe operation in the future.

Meanwhile, in Japan people other than graduates from maritime schools and universities can still acquire specialist maritime qualifications after joining the company.

Education and Training for Seafarers

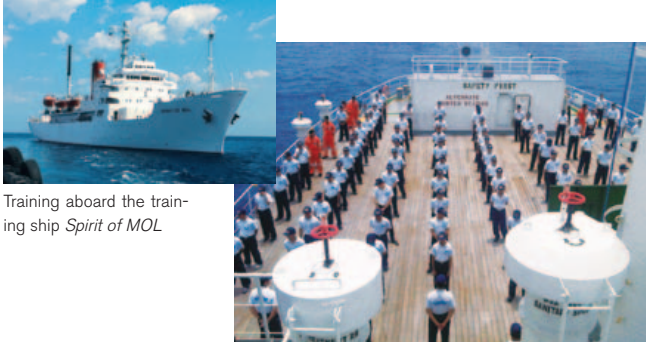
Developing and securing a stable workforce of excellent seafarers who meet MOL's skill standards is a crucial point in maintaining safe operations. MOL has established the "MOL Rank Skill Training and Evaluation Program," a training and education program that sets skill and knowledge requirements for every seafarer at the front-line according to his/her position. Every seafarer of the MOL Group must work through this program as a requirement for promotion. MOL also has crew training centers in eight locations in six countries. These MOL training centers provide a variety of training, ranging from classroom lectures on theory to practice using real engines and various simulators. This training enables seafarers to operate the latest on-board equipment and machinery and to comply with new laws and regulations. In the Philippines, which supplies more than half of MOL's seafarers, we have introduced an officer candidate program for students selected from seven partner maritime colleges, who are trained for two years at company training facilities for the second half of their college education, subject to approval from the Commission on Higher Education.



A graduation ceremony for the officer candidate program in the Philippines

Training Ship Utilization

One initiative unique to MOL is the ownership and operation of the training ship *Spirit of MOL* as a training facility for educating new seafarers on the basics of safe operation. Graduates of maritime academies selected by the company learn specialist maritime knowledge and skills through safety and practical training, and by living together with other cadets of various nationalities, they develop pride and a sense of belonging as members of the MOL Group.



Training aboard the training ship *Spirit of MOL*

The Role Expected of MOL Seafarers

After employment, MOL seafarers engage not only in ship operation but also duties that support operations such as land-based vessel and seafarer management, and providing the required technical support for cargo handling. Such land-based positions are open broadly to all the seafarers, and many seafarers support the company's safe operations from the land using their experience at sea in various locations that are not their homelands, such as Japan, Singapore, Hong Kong and the U.K. In the case of Japanese seafarers, for the first 10 or so years of their careers, they concentrate on serving aboard ships and accumulate competence as future captains and chief engineers. These employees may then either take up land-based positions where they utilize their experience, or follow their career paths by serving aboard various types of vessels. Thus, MOL seafarers are required to serve as all-around players to lead the whole MOL Group.

A Good Working Environment for MOL Seafarers and Care for Their Families

As part of measures to create a good working environment for seafarers, MOL is running safety training programs and ceaselessly improving working environments with the aim of eradicating work-related accidents (lost time injuries). Furthermore, with a maritime labor convention imposing strict requirements to manage on-vessel work scheduled to come into force, MOL is making preparations to implement changes before this convention becomes effective.

In terms of welfare, MOL conducts regular health checks and mental health consultations for seafarers. At the same time, MOL cares for seafarers and their families, who must spend considerable time apart. MOL has established consulting offices for seafarers and their families in each location overseas, and offers services that are closely tailored to particular countries and regions. Moreover, MOL is introducing high-speed Internet connections aboard vessels to make it more convenient for seafarers to exchange e-mail with family and friends during voyages.

In addition to the above, seafarers who have demonstrated leadership and made notable achievements in terms of safety or efficiency of vessel operation are invited every year along with their families to the head office in Tokyo to receive commendations from the president of MOL.



A gathering of seafarers and their families in Croatia



A gathering of seafarers and their families in the Philippines

Voices from the Forefront

Ajit Chadha

Captain of the containership *MOL Maestro*
(Recipient of MOL Presidential Award in 2011)

I have been working for MOL for more than 15 years. The reason for that is because of the rigorous enforcement and transparency of the company's safe operation support system and manual. The company naturally tries to save costs where it can, but it never begrudges investment in safety equipment. I feel that the support we receive from land enables all seafarers to work with peace of mind. Personally, it enables me to captain the vessel with the aim of achieving the "Four Zeros."

I believe that our mission is to disseminate the company's safety message and ensure the company's safety culture is passed on to the next generation of MOL seafarers.



Mr. Chadha and his wife (fourth and third from the right) at the 2011 awards ceremony for outstanding seafarers

Social Contribution Activities

MOL is engaged in various social contribution activities other than those discussed in Feature 3 of this report “Global Social Contribution Activities.” Here we look at just some of them.

Contribution to UN Millennium Development Goals*

Supporting UN World Food Programme and Participating in Related Events

MOL participates in the Japan Association for the UN World Food Programme, an organization that coordinates private-sector support for the program, and provides support for it in the form of donations and the like. Employees also volunteer and participate continuously in a charity event, “WFP Walk the World,” which is held to prevent children around the world from going hungry.



* One of the common frameworks that integrates the Millennium Declaration adopted at the United Nations Millennium Summit held in September 2000, and the International Development Goals that were adopted at major international conferences and summits in the 1990s. The Millennium Development Goals consist of specific numerical targets to be achieved by 2015 in eight fields, including “achieve universal primary education” and “reduce child mortality.”

Contributing to Protection of Biodiversity and Preserving Nature

Beach Cleanup

We have conducted beach cleanups at Odaiba Seaside Park in Tokyo and Yuigahama Beach in Kamakura, Kanagawa Prefecture, since 2000. In 2012, in addition to these locations, we also cleaned the beach at Hirai, Kashima City in Ibaraki Prefecture.



Assisting in Marine and Hydrographic Research

For many years, MOL has observed marine weather and reported its observations to the Japan Meteorological Agency (JMA) and other weather organizations around the world. The contribution of these

activities to advances in meteorological precision has been recognized externally. The car carrier *Solar Wing* was awarded a commendation in fiscal 2011 by the Minister of Land, Infrastructure, Transport and Tourism, while the LNG carrier *LNG Vesta* and the steaming coal carrier *Soma Maru* received the fiscal 2011 JMA Director-General prize.



The LNG carrier *LNG Vesta*

Contributing to Local Communities

Private-sector Company Training for Teachers

Since 1994, MOL has accepted participants in an internship program to instruct school teachers about private-sector companies sponsored by the Keizai Koho Center-Japan Institute for Social and Economic Affairs. In fiscal 2011, MOL hosted 13 teachers from Tokyo for internship sessions and onsite observation that took place over three days during summer vacation in August. In addition to topics such as shipping and an overview of MOL businesses, the internship sessions highlighted MOL's approach to CSR activities and safe operation measures, and participants toured the MOL Safety Operation Supporting Center (SOSC). As an opportunity to see and experience MOL's operations up-close, they also visited MOL's container terminal and distribution center in Ohi, Tokyo, and the cruise ship *Nippon Maru*, and experienced firsthand the bridge simulator.



Participants tour the SOSC

The latest information and details of other activities can be found on our website.

<http://www.mol.co.jp/csr-e/society/index.html>

Third-Party Opinion



Keisuke Takegahara
General Manager, Environmental Initiative &
Corporate Social Responsibility-Support Department
Development Bank of Japan Inc.

What impressed me upon reading this year's report was the fact that it tells a unified story while also taking up numerous topics that reflect the diversity of MOL's stakeholders. I think this was possible because safety was an important theme that ran through everything. In line with the company's goal of being the world leader in safe operation, as stated in its midterm management plan, MOL can be seen as fulfilling its responsibilities to society through sophisticated, multifaceted risk management that is aimed at meeting the supply responsibilities inherent in ocean transport services, MOL's core business. To be sure, rigorously ensuring safety involves management systems, such as support via the Safety Operation Supporting Center and safety campaigns, but it is also indivisible from people—advanced education and training, motivating employees with various opportunities, etc.—so safety is closely connected to human rights and other social issues. At the same time, the extent to which safe and efficient transportation contributes to the environment also cannot be ignored. I think one characteristic of this year's report is that it again delves into the importance of safety as constituting the basis of the company's CSR, as demonstrated by the response to the Great East Japan Earthquake. In particular, the feature that presents the diverse initiatives surrounding safe operation by following a journey of one ship and introduces onboard and onshore support initiatives side by side is highly readable and easy to follow. I think this feature speaks to MOL's awareness of the diversity of the report's readers.

In addition, the fact that MOL's approach to addressing the environment through technological innovation in the form of the *Senpaku ISHIN* project has reached the stage of practical application with the delivery of a hybrid car carrier stands out as one of the highlights of this year's report. Technological innovation achieved through partnering with stakeholders, specifically, electric machinery manufacturers and shipbuilders, sends a strong message as an initiative that greatly contributes to bolstering the competitiveness of Japan's shipbuilding technologies and shipping industry, especially in light of the coming restrictions on CO₂ emissions in international waters.

In this way, the report has a three-dimensional thematic organization, with safety underlying all the themes, and the environment, with focus on technological innovation, providing an overlay. This structure successfully illuminates the form of the company's midterm plan, and this year's report deserves praise on this point. There are also areas in which I would like to see further progress, and extensions of them. Specifically, regarding the fact that MOL did not achieve its "Four Zeroes" due to a contractor accident, the Top Message relays that measures to prevent recurrence are being rigorously implemented and that monitoring and disclosure will be conducted using clear evaluation metrics. I think the specifics of these measures, however, should not have been buried in a list and should have been described in greater detail. With regard to *Senpaku ISHIN* as well, the component technology roadmap introduced last year clearly and straightforwardly conveyed MOL's stance toward prioritizing practical feasibility, so by the same measure I was disappointed that it wasn't included this year. I hope that it will be added back in next year's report.

The report (page 15) understates this, but what is conveyed by MOL's series of initiatives is a company that literally contributes a great deal to society through its main business operations. I would like to see this raised to an even higher level, starting with strengthening supply chain-related initiatives, such as the MOL Group Basic Procurement Policy.

Addressing the Challenge

Mr. Takegahara points out that safety is the underlying theme of this year's report, and that the *Senpaku ISHIN* project has finally reached the stage of practical application thanks to collaboration with various stakeholders.

We fully intend to further strengthen initiatives for fulfilling our corporate social responsibilities to continue contributing to society with a series of initiatives through our main business operations, as was highlighted by Mr. Takegahara.

It was also pointed out that Feature 1 presented our safety initiatives in an easy-to-understand manner, but also that accident recurrence prevention measures and related information needed to be provided

in greater detail and that the *Senpaku ISHIN* roadmap should continue to be included in the report. As the General Manager of the Environmental Initiative & Corporate Social Responsibility-Support Department at the Development Bank of Japan, Mr. Takegahara is involved with a whole host of companies, and we intend to utilize his invaluable feedback to further improve next year's report.



Kiyotaka Yoshida Managing Executive Officer, Vice Chairman of the CSR and Environment Committee

Q&A with Readers

MOL administers a questionnaire that broadly solicits feedback from people outside the company in order to help improve CSR activities and future Environmental and Social Reports. We received 579 responses (561 valid responses) to the questionnaire we conducted on Environmental and Social Report 2011 issued last year. Here we introduce several typical questions and our responses.

Q1: In a general sense, MOL has nothing to do with our day-to-day lives, but there is actually a very close connection. MOL is essential to our daily lives. I would like to see your business activities presented based on this perspective. (Female, 40s, consumer)

A1: Thank you for your request. As you point out, shipping companies mainly do business with other corporations, so there are few opportunities to interact directly with the public, and some people are not very familiar with what we do as a result. In our Environmental and Social Report, therefore, we introduce MOL's business activities from the standpoint of how we support people's lives and industry so that readers may better understand the ocean transport industry. In this year's report, the introduction of MOL's business was expanded and the report was designed with more visuals to appeal to people's sense of sight, and not just text. We worked in particular to make the report even more interesting for readers.

Q2: It was a real eye-opener to read in Feature 2, "Enhancing Safe Operation," that there are pirates even today. The ocean has many risks and they can all end up being fatal. I really learned the truth of that. In terms of safety as well, the explanations were very easy to follow and I read the section with a great deal of interest. I imagine for captains, having the "call center" must be very reassuring. I also think it is great that MOL has a training vessel for new seafarers. The report would be even better if it contained comments from new employees. (Male, 30s, customer)

A2: Thank you for your valuable feedback. Rigorously ensuring safe operation is an absolute imperative for MOL. We carry out various initiatives to be a world leader in this area. In this year's report, we

increased the feature on safety by two pages and included more reports from the field than in the past. We intend to continue to find creative ways to convey MOL's initiatives to everyone.

Q3: It was a revelation that there were hybrids in the shipping industry, not just in the car world. That impressed me. It's a wonderful initiative. I came away with a sense of the value of approaching zero emissions in everything through further technological improvement. (Female, 40s, company employee)

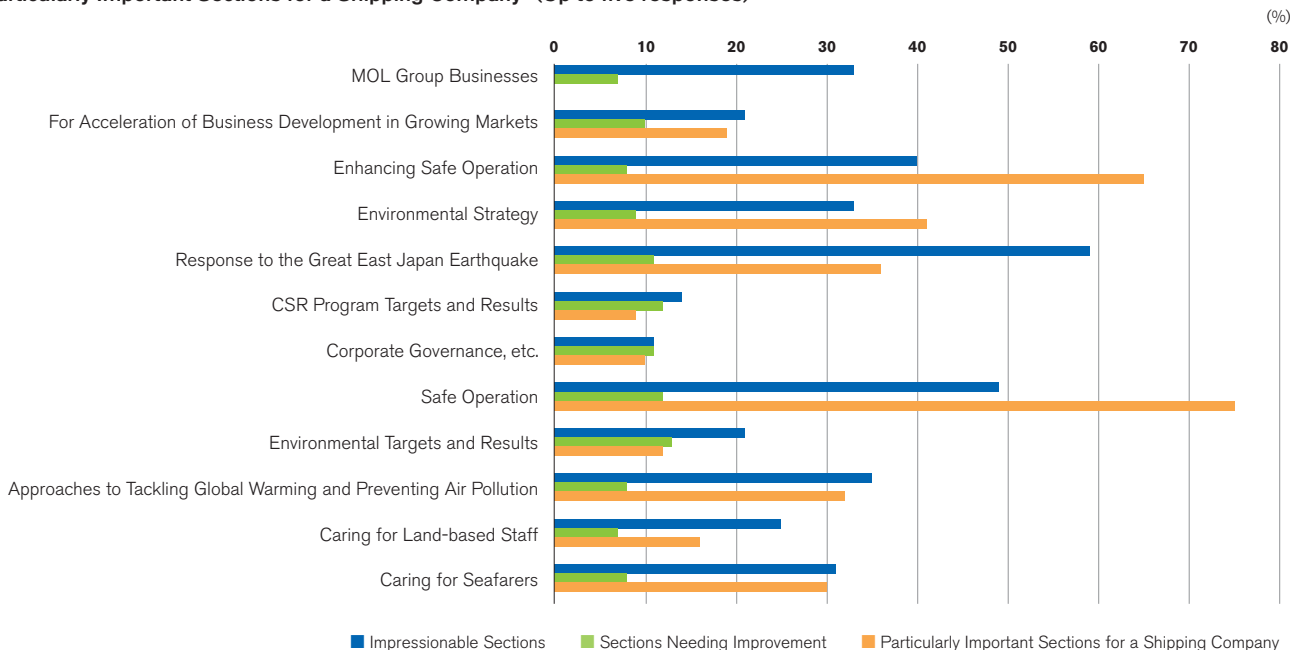
A3: Shipping is a highly energy-efficient mode of transport compared to other forms of transportation, but we will continue being sufficiently aware of the environmental impact of our business activities and continue to proactively develop environmentally sensitive ships powered by next-generation fuels.

Q4: I would like to see MOL take advantage of the fact that its business involves traversing the world's oceans and become more involved in delivering donated items from Japan and other goods to impoverished regions. I would also like to see MOL contribute to local educational activities. (Male, 50s, customer)

A4: Thank you for your comments. Utilizing the MOL Group's resources and worldwide network, we help transport relief supplies such as shoes for children in Zambia and medical vehicles for Cambodia. In addition, in Tokyo and Kobe, we hold tours of shipping terminals for junior and senior high school students. You can find more information on the MOL Group's social contribution activities in the CSR/Environment section of MOL's website.

<http://www.mol.co.jp/csr-e/index.html>

Of the Report's Main Sections: "Impressionable Sections" and "Sections Needing Improvement" (Multiple responses), and "Particularly Important Sections for a Shipping Company" (Up to five responses)



Corporate Profile (As of March 31, 2012)

Name: Mitsui O.S.K. Lines, Ltd.
President: Koichi Muto
Shareholders' equity: ¥637.4 billion
Number of shares issued: 1,206,286,115
Number of shareholders: 116,681
Share listings: Tokyo, Osaka, Nagoya and Fukuoka stock exchanges
Business: Multi-modal transport mainly by ocean-going vessels
Number of MOL Group employees: 9,431 (The parent company and consolidated subsidiaries)

Number of Group companies: 399 (The parent company and consolidated subsidiaries)
Group fleet: 954 vessels, 67,420 thousand DWT
Head Office: 1-1 Toranomon 2-chome, Minato-ku, Tokyo 105-8688, Japan
Branches and offices in Japan: Nagoya, Kansai (Osaka), Kyushu (Fukuoka), Hiroshima
URL: <http://www.mol.co.jp>

Consolidated Subsidiaries in Japan (59 companies)*

1. Bulkships (5)

MOL LNG Transport Co., Ltd., Mitsui O.S.K. Kinkai, Ltd., Chugoku Shipping Agencies Ltd., Tokyo Marine Co., Ltd., Nissan Motor Car Carrier Co., Ltd.

2. Containerships (8)

Utoc Corporation, Utoc Logistics Corporation, Utoc Stevedoring Corporation, Mitsui O.S.K. Lines (Japan), Ltd., MOL Logistics (Japan) Co., Ltd., International Container Transport Co., Ltd., Shosen Koun Co., Ltd., Chiba Utoc Corporation

3. Ferry and Domestic Transport (13):

MOL Ferry Co., Ltd., Ferry Sunflower Limited., Diamond Line K.K., MOL Naikou, Ltd., Blue Sea Network Co., Ltd., Blue Highway Express Kyushu Co., Ltd., Blue Highway Service K.K., Kanki Unyu Co., Ltd., Kanki Express Co., Ltd., Sunflower Marine Service, Bantan Renraku Kisen Co., Ltd., Beppu Port Service Co., Ltd., Meigan Kaikyou Ferry Co., Ltd.

4. Associated Businesses (23)

Ube Port Service Co., Ltd., MOL Career Support, Ltd., M.O. Tourist Co., Ltd., Daibiru Facility Management Ltd., Kosan Kanri Service West Corporation, Kitanihon Tug-Boat Co., Ltd., Kusakabe Maritime Engineering Co., Ltd., Green Kaiji Kaisha, Ltd., Green Shipping, Ltd., Kobe Towing Co., Ltd., Japan Express Co., Ltd. (Yokohama), Japan Express Co., Ltd. (Kobe), Japan Express Packing & Transport Co., Ltd., MOL Kaiji Co., Ltd., Mitsui O.S.K. Passenger Line, Ltd., Mitsui O.S.K. Kosan Co., Ltd., MOL Techno-Trade, Ltd., Daibiru Corporation, Ikuta & Marine Co., Ltd., Nihon Tug-Boat Co., Ltd., Japan Hydrographic Charts & Publications Co., Ltd., Kosan Kanri Service Co., Ltd., Hokuso Kohatsu K.K.

5. Others (10)

MOL Adjustment, Ltd., MOL Cableship Ltd., MOL Ship Tech Inc., MOL Ship Management Co., Ltd., MOL Marine Consulting, Ltd., MOL Accounting Co., Ltd., MOL Engineering Co., Ltd., MOL Ocean Expert Co., Ltd., MOL Information Systems, Ltd., Mitsui Kinkai Kisen Co., Ltd.

* As of June 30, 2012

Overseas Network (39 nations and regions)

Europe

U.K., Germany, Italy, Austria, The Netherlands, Belgium, France, Sweden, Denmark, Finland, Poland

Asia

China, South Korea, Taiwan, The Philippines, Vietnam, Cambodia, Thailand, Singapore, Malaysia, Indonesia, India, Pakistan, Sri Lanka

Middle East

Lebanon, U.A.E., Qatar, Oman

North America

U.S.A.

Central and South America

Mexico, Panama, Brazil, Chile

Africa

Ghana, Nigeria, South Africa, Cote d'Ivoire

Oceania

Australia, New Zealand

● Local Offices
 ● Main Calling Ports

<http://www.mol.co.jp>

[For inquiries]

Mitsui O.S.K. Lines, Ltd.

CSR and Environment Office, Corporate Planning Division

1-1, Toranomon 2-chome, Minato-ku, Tokyo 105-8688 Japan

Tel: +81-3-3587-7063 Fax: +81-3-3587-7702

E-mail: plemo@molgroup.com

