

**REPORT  
ON  
MARITIME AFFAIRS  
(SUMMARY)**

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# Report on Maritime Affairs (Summary)

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## **Part I: Important Tasks for Maritime Administration**

### **Chapter 1: Assurance of Stable International Marine Transport**

#### **1. Efforts Aimed at Equilibrating Conditions for International Competition Involving Japanese Oceangoing Shipping Operators and Increasing Japanese Flagged Vessels and Japanese Seafarers Systematically**

Consultation in search of the "Ideal Means of Stable Marine Transport in Future" was conducted by the Minister of Land, Infrastructure, Transport and Tourism to the Council of Transport Policy in February 2007, in order to ask the Council to discuss a means of assuring stable marine transport indispensable for Japan to accomplish continued sustainable growth as a maritime and trading nation in a global international economic community, and in December of the same year, the policy proposal was compiled to recommend prompt study of the tonnage tax, efforts towards introduction of laws for securing Japanese flagged vessels and Japanese seafarers and so forth from the viewpoint of equilibrating conditions for international competition involving Japanese oceangoing shipping service operators as well as of increasing Japanese flagged vessels and Japanese seafarers systematically.

The "Law for Partial Amendment of the Marine Transportation Law and Mariners Law" was approved in the 169th session of the Diet, which contains formulation of the basic policy by the Minister of Land, Infrastructure, Transport and Tourism with a view to securing Japanese flagged vessels necessary for efforts to assure stable marine transport, nurture and secure seafarers as well as to support measures such as the application of the tonnage tax to oceangoing shipping operators in the case where the plan for securing Japanese flagged vessels and Japanese seafarers formulated by oceangoing shipping operators is authorized by the Minister of Land, Infrastructure, Transport and Tourism and measures to ensure proper implementation of the plan, considering the said policy proposal.

It has been decided that efforts will hereafter be made to steadily increase Japanese flagged vessels and Japanese seafarers through promoting appropriate operation of the scheme for authorizing the plan to secure Japanese flagged vessels and Japanese seafarers, with a view to securing stable international marine transport.

### **Chapter 2: Securing and Nurturing Human Resources to Take a Major Role in the Maritime Industry**

#### **1. Securing and Nurturing Seafarers**

Marine transport, which is indispensable for the society and economy of Japan as a maritime state, is supported by seafarers engaged in ship navigation and ocean engineers who manage and support it on land. In securing the safety and stability of marine transport, the role played by seafarers (ocean engineers) as the human infrastructure is considerable. Since the valuation related to the navigational safety of Japanese-flag ships and ships served by Japanese seafarers on board is extremely high in these days, the government should positively promote efforts to secure and nurture excellent Japanese seafarers (ocean engineers). With this in mind, the Human Infrastructure Task Force was established within the Maritime Affairs Subcommittee of the Traffic Policy Council, which investigated and discussed an ideal maritime policy to secure and nurture human resources in the field of maritime affairs, focusing on securing and nurturing excellent Japanese seafarers (ocean engineers) in February 2007. Subsequently, a final policy proposal to the effect that efforts were required mainly for 4

measures, namely nurturing seafarers, gathering them, targeting their career development and supporting their transformation into ocean engineers on land was made.

The bill for amending a part of the Sea Transportation Law was submitted to the 169th session of the Diet in February of this year, with a view to creating a new system in which shipping operators draw up a plan considering the policy proposal concerned to secure Japanese flag ships and seafarers based on the basic policy formulated by the Minister of Land, Infrastructure and Transport for the purpose of dealing with the shortage of successors and so forth in the future and to reinforce measures to secure and nurture seafarers, and taking measures in the budget to provide support to the operators concerned and so forth in the case where approval is obtained from the Minister. This bill was approved in May of this year.

Hereafter, it has been decided to change the target of the seafarer-related budget system from measures for dealing with separation from service to those for securing and nurturing seafarers who are to play a major role in the next generation, considering improvement of the system based on amendment of the law mentioned above, and to deal with the target as the "project of comprehensive measures to secure / nurture seafarers and so forth."

## **2. Support for the Nurture of Next-generation Human Resources in the Shipbuilding Industry**

Since nearly half of the skilled technical experts in shipbuilding in the Japanese shipping industry are over 50 years old, an unprecedented rapid and large-scale alternation of generation will take place in the coming decade. If effective measures are not taken under such circumstances, the level of technique at manufacturing sites, which has underpinned the international competitiveness of the Japanese shipbuilding industry to date, will abruptly deteriorate, which might lead to the loss of such competitiveness. With such conditions in mind, an intensive training project commenced from fiscal 2004 to ensure that "expert workman (takumi)" techniques related to shipbuilding can be smoothly handed down to the younger generation. The Maritime Bureau is providing assistance for this project through the Cooperative Association of Japan Shipbuilders. In fiscal 2007, the "Aioi Technical Training Center" was newly established in the Aioi area, where the training of personnel is to be started in fiscal 2008. The Maritime Bureau will continue to provide active support in the future.

## **3. Promotion of Maritime Public Relations**

Although the sea plays an important role for Japan, which is completely surrounded by the sea, the boon provided by the sea is not widely recognized by the citizens as yet. Under these circumstances, in the light of the purport of the Marine Basic Law put into effect in July 2007 and the policy proposal submitted in December 2007 by the Human Infrastructure Task Force within the Maritime Affairs Subcommittee of the Traffic Policy Council, the Ministry of Land, Infrastructure, Transport and Tourism, maritime affairs-related organizations, and so forth established the "Next-generation Human Resources-nurturing Promotion Conference for the Maritime Industry" with a view to making concerted efforts towards promoting intensive public relations activities that can instill excitement and romance into the minds of young people. This Promotion Conference, having formulated the "Action Plan," carried out activities across the country for the purpose of widely conveying the charm of the sea, and opened, at the same time, the portal site "uminoshigoto.com (marine work.com)" (<http://www.uminoshigoto.com>) on the Internet.

In addition, in order to promote the maritime policy vigorously and seek realization of a new Maritime Nation of Japan, it is essential to increase citizen's understanding of the sea, and, therefore, it is also stipulated in the Marine Basic Law that the government should, for that purpose, make efforts to conduct activities of diffusion, enlightenment, and so forth. For this

purpose, "Commendation of the Contributor of the Promotion of Building the Maritime Nation of Japan" as a commendation by the Prime Minister has just been jointly created in 2008 by 5 ministries including the Ministry of Land, Infrastructure, Transport and Tourism to build momentum for citizens to deepen their understanding of the sea, by commending individuals and organizations who have made remarkable achievements in diffusion, enlightenment, learning, research, industrial development, and so forth in the wide areas of science and technology, fisheries, maritime affairs, the environment, and so forth, to honor them for their achievements and to let such merit be known broadly in society. In the first round of commendation, it was decided to award the prize to 6 individuals and 2 organizations in the fields of "Special Achievements in Promoting Construction of the Maritime Nation" and "Outstanding Achievements in Relation to Maritime Affairs."

Field of "Special Achievements in Promoting Construction of the Maritime Nation"

(Special achievements in relation to maritime affairs in wide areas such as diffusion, enlightenment, promotion of science and technology as well as regional development)

Kyoto Marine High School (Kyoto Prefecture)

Tadao Kuribayashi (Professor Emeritus of Keio University)

Yoichi Komori (Writer)

Tetsuo Yuhara (Special-appointment Professor of the Sustainability Study Coordinative Research Organization of the Tokyo University / Representative Director of the Marine Technology Forum)

Field of "Outstanding Achievements in Relation to Maritime Affairs"

(Outstanding achievements in each section involved in maritime affairs) Section of science and technology development in relation to maritime affairs

Taro Aoki (Program Director of the Advanced Technology Research Program in the Marine Engineering Center, Japan Agency for Marine-Earth Science and Technology)

Fisheries section Kisakata Fisheries Class (Research group belonging to the Kisakata Branch, Southern Regional Headquarters, Akita Prefectural Fisheries Cooperative Association)

Maritime affairs section Kunio Minamizaki (President and Representative Director of Comproatech Co., Ltd.)

Natural Environment Conservation section Itaru Uchida (Director of the Nagoya Port Public Aquarium)

## **Chapter 3: Tackling Environmental Problems in Maritime Transport**

### **1. Measures to Reduce or Control the CO<sub>2</sub> Emissions in International Maritime Transport**

Regarding the efforts towards controlling or reducing CO<sub>2</sub> in international maritime transport, it is stipulated in Article 2, Section 2 of the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) that control or reduction of the CO<sub>2</sub> emissions be pursued by work operation through the International Maritime Organization (IMO), which is a specialized institution of the United Nations. Japan has, believing that diffusion of ships high in energy efficiency is the most effective measure, made a proposal for establishing the new ship design CO<sub>2</sub> index to measure the energy efficiency in actual sea conditions at the 57th meeting of the Maritime Environment Protection Committee (MEPC57) held at the end of March 2008.

At present, while various measures are being studied to develop a method for reduction or control of the CO<sub>2</sub> emissions from international maritime transport, it is expected that diffusion of ships excelling in energy efficiency in the international shipping market be promoted by

having the new ship design CO<sub>2</sub> index to measure the energy efficiency in actual sea conditions by Japan established as the international standard, so that control or reduction of the CO<sub>2</sub> emissions can be enhanced, and, at the same time, technology development for improvement in energy efficiency will be advanced, making the most of the shipbuilding technology of Japan ranked top level in the world, which will lead to development of the Japanese maritime industry as well.

## **2. Efforts Aimed at Development of a New Convention for Ship Recycling**

Since ship recycling (ship dismantling: a ship that has completed its useful life is dismantled, and a large part of it is reused as steel materials and so forth) cannot be economically justified except in countries where there is demand for reused or recycled materials in the vicinity and the labor cost is low, in recent years, the main ship recycling countries are shifting to countries such as India and Bangladesh. However, in these countries, measures to secure safety at the time of operation and conserve the surrounding environment are not sufficiently taken, creating concerns regarding the poor labor environment and marine pollution sound recycling facilities. In view of such circumstances, at the 24th Assembly of the IMO held in December 2005, it was resolved to develop a new mandatory convention concerning ship recycling in 2008 ~ 2009. Following this resolution, consideration of the draft convention has been progressing, starting from the 54th Maritime Environment Protection Committee (MEPC) held in March 2006 in anticipation of the new convention to be adopted in May 2009.

Hereafter, while demand for recycled ships may increase in the short term due to acceleration of the phasing out of single-hull tankers and so forth, it is necessary for Japan, a leading country of shipping and shipbuilding, to lead international discussions aimed at constructing a framework for securing sufficient ship recycling capacity on a global basis and, at the same time, realizing safe and environmentally sound recycling of ships. For this purpose, the Maritime Bureau, having established the Ship Recycling Strategy Committee comprising intellectuals knowledgeable in shipbuilding, shipping, and the environment, is discussing ship recycling comprehensively, including those on strategic measures to be taken in various international organizations, in order to develop an effective convention.

## **3. Promotion of Measures to Reduce NO<sub>x</sub> Emitted from Ships**

In recent years, while concerns regarding environmental problems such as global warming are becoming more serious, emission of air pollution substances including nitrogen oxides (NO<sub>x</sub>) that adversely affect the human body or cause acid rain and so forth is generating a large problem on a global basis. With respect to NO<sub>x</sub> and other air pollution substances emitted from ships, adverse contribution by ships tends to increase in proportion to growth in marine transportation volume in the future, which has continued to augment in recent years. Under these circumstances, active discussion is under way in the IMO in the direction of reinforcing regulation largely on NO<sub>x</sub> emission from ships. As Japan has proposed to the IMO strict regional regulation for 80% reduction of NO<sub>x</sub> emission compared to the current state considering the tremendous impact on the environment of NO<sub>x</sub> emitted in waters close to land for the purpose of reducing the burden on the environment as far as possible, to be applied only to specific coastal areas whose air environment needs to be improved, a regulation-strengthening proposal incorporating the NO<sub>x</sub> emission regulation to be implemented from 2016 proposed by Japan was approved at the meeting (MEPC57) held in April of this year.

In order to support this tendency of strengthening regulation, the Maritime Bureau is, with cooperation among industry, academia, and government, developing an environmentally friendly diesel engine for ships to reduce the NO<sub>x</sub> emission volume by 80% and is seeking to put it into practical use by fiscal 2012.

## **Chapter 4: Promotion of Coastal Shipping and Domestic Passenger Ships**

### **1. Promotion of Measures for Development of Coastal Shipping**

#### **Spreading and furthering the movement of grouping coastal shipping companies**

Many coastal shipping companies of which 99.6% are medium- and small-size enterprises are currently facing problems such as shortage and aging of seafarers, difficulty in management to ensure safe and stable navigation, and aging of ships.

In recent years, there are instances where a loose grouping movement is going on, utilizing ship management companies, in order to solve these problems. The grouping movement represents a business model for medium-, small-, and micro-sized coastal shipping companies to manage ships owned and seafarers collectively (or partially), utilizing ship management companies established jointly by them. Since such grouping is important for securing stable marine transport and revitalization of coastal shipping, the government is also advancing active efforts towards spreading and furthering it.

### **2. Review of Support for the System of Subsidy for Remote Island Routes**

Although remote island routes provide the sole means of transportation for the inhabitants of remote islands surrounded completely by the sea, the number of passengers transported has decreased due to reduction in population, aging, aggravation of the state of local finance, and so forth, and, in addition, the financial condition of route operators has deteriorated because of the steep rise in crude oil prices in recent years.

Under these circumstances, related parties have pointed out that the current remote island route subsidy system is insufficient, partly due to financial constraints.

For this reason, in order to sort out serious problems in respect of the system of subsidy for remote island routes and study measures for improvement, a roundtable conference organized by the Director-General of the Maritime Bureau was established in January this year, in which knowledgeable intellectuals discussed maintenance of remote island routes. As 7 review meetings have so far been held, it has been decided to reflect the opinions discussed in this roundtable conference in measures to be taken in the future, while continuing cooperation with related parties.

### **3. Revitalization of Domestic Passenger Routes**

While the business condition of domestic passenger ship operators has continued to be severe due to the decrease in the number of passengers and cost increases due to the high rise of fuel oil price, the domestic passenger route is, on the other hand, valued by more users with expectations as a precious mode of transport in Japan surrounded completely by the sea and also as a space for traveling in which a slow life can be fully enjoyed, attracting attention as a tool for transmitting the appeal of Japan as well.

To revitalize the domestic passenger route considering this situation, "Enhancing the Appeal of Voyages by Sea" and "Promotion of the Exchange of Sightseeing Tours to and from Remote Islands" have been positioned as important tasks, and, at the same time, the government, passenger ship industry, travel industry, local related parties, and so on have combined their efforts to develop joint work for the strategic transmission of information to improve the perception about ships as well as the development and sales promotion of articles on voyages suited to users' needs.

As a part of such efforts, candidate scenes for the "Selection of the 100 Best Scenes Viewed from Ships" have been solicited since April 2007, and recently, all 100 have been selected, and those winning the "Best Shot Prize" and "Best Comment Prize" were chosen at the same time.

On the other hand, as an effort towards promoting the exchange of sightseeing tours to and from remote islands, the Committee for Promoting the Exchange of Sightseeing Tours to and from Remote Islands was established within the Ministry of Land, Infrastructure, Transport and Tourism in March 2007, in order to advertize the appeal of local resources such as the unique culture, history, climate, nature, and so forth of the remote islands, and support regions that are prepared to take the initiative in devising promotions for the exchange of sightseeing tours.

Seizing the moment of these efforts, related parties will, in closer cooperation, strive to enhance the appeal of sea voyages and increase the exchange of sightseeing tours to and from remote islands.

## **Chapter 5: Efforts to Ensure Safe Navigation in the Straits of Malacca and Singapore and So Forth**

### **1. Current State of the Straits of Malacca and Singapore and Efforts towards Enhance Safety of Navigation and Environmental Protection in that Straits**

In the past, with respect to what cooperation among related States should be like in relation to the Straits of Malacca and Singapore, it was in a state where it was impossible to draw any conclusion due to conflicting interests among littoral States and between littoral States and user States, though the necessity of safe navigation, security, and environment conservation in that straits was intensely recognized on the occasion of the simultaneous multiple terrorist attacks in the United States in September 2001, urging discussion among related States to shift into full swing, in which the IMO has played a major role.

This produced a result, after going through the Jakarta Meeting in September 2005 and Kuala Lumpur Meeting in September 2006, in the form of an agreement among related States finally at the Singapore Meeting in September 2007. In Singapore Meeting, it was agreed to establish a "Cooperative Mechanism" materializing what the cooperation between the littoral States and user States should be like in an international strait, based on the spirit of Article 43 of the United Nations Convention on the Law of the Sea, for the first time in the world. This mechanism comprises three elements of the Cooperation Forum, the Project Coordination Committee, and the Aids to Navigation Fund, through which it was agreed to make specific efforts. In addition, at Singapore Meeting, Japan and other user States such as the United States, China, and the Republic of Korea expressed support for six projects to be promoted under Cooperative mechanism.

It is necessary for Japan as a major user State of the Straits of Malacca and Singapore, to continue to exert international leadership in cooperation for support for safety measures in the future, making use experience of cooperation and the relationship of mutual trust with littoral States, for a long time in the past. In other words, Japan intends to continue providing support for littoral States through assistance for various projects including replacement and maintenance of aids to navigation, participation in the Cooperative Mechanism, and so forth, and, at the same time, actively conduct operations for coordination of interests between littoral States and user States and so on. In addition, in order to have the Cooperative Mechanism function effectively, Japan intends to continue urging user States over a wide range to participate in this Mechanism in the future. Furthermore, it has been decided to actively work on related parties in addition to private organizations to whom support has been provided with a view to increasing the number of new private supporters in the future within Japan as well.

### **2. Countermeasures against Piracy and So Forth**

In November 2007, a resolution to deal with the threat of pirates and armed robbers off the

coast of Somalia increasing in number in recent years was adopted with the support of many countries including Japan at the General Meeting of the IMO. This resolution requires the governments of IMO member countries and related organizations to make efforts towards eradication of pirates and the like as well as assistance in early release of ships now under seizure and so on. In addition, at the United Nations Security Council as well, there was discussion on countermeasures against pirates and the like off the coast of Somalia increasing in number, and a resolution for countermeasures against Somalian pirates was adopted in June 2008 to allow the countries cooperating with the Somalian temporary government to take necessary actions for countermeasures against pirates and armed robbers over a certain period and under certain requirements, demonstrating that the importance of countermeasures against pirates and the like is increasing internationally.

Since Somalian offshore areas are very important waters for international marine transport just like the Malacca-Singapore Strait and it is an extremely important task for Japan to secure safe navigation there, it has been decided that Japan will more strongly promote various measures such as reinforcement of independent security measures and request for tighter security of coastal countries, while striving in the future for close cooperation within the Japanese government and with related countries as well as related international organizations.

## **Chapter 6: Tackling Other Main Policy Tasks**

### **1. Response to the Basic Marine Plan**

As the Maritime Bureau is in charge of a very wide area in the maritime policy, namely to "conserve the ocean environment," "secure marine transport," "ensure safety on the sea," "promote maritime industry and strengthen international competitiveness," and "enhance understanding of citizens with respect to maritime affairs and nurture human resources" among the "measures required to be taken comprehensively and systematically by the government" specified clearly in the Basic Marine Plan, the Bureau will continue to make efforts towards further development of the maritime industry as a whole, further reinforcement of its international competitiveness, and so forth in the future, while various measures will be promoted in a concentrated and comprehensive manner.

### **2. Trend of Administrative Reform and Review of Administrative Organization Reform of Independent Administrative Institutions**

- The National Maritime Research Institute will be integrated with another traffic-related research institutes and so on.
- In respect of the National Institute for Sea Training, how practical training in boarding one's own ship should be conducted, what practical training in boarding a sail boat should be like, how the ship's hull should be constructed, and so forth will be reviewed.
- In respect of the Marine Technical Education Agency, the function of the Kojima branch school of the Marine Technical College will be integrated into the main school of the College and its school building will be demolished.
- Operations of the Japan Railway Construction, Transport and Technology Agency such as high-level ship-related technology development will be reviewed to discontinue interest subsidy and debt guarantee and so forth.

#### **Abolition of the Seafarer Labor Committee**

It has been decided to abolish the Seafarer Labor Committee as of October 1, 2008, after transferring its office work to another existing organization.

### **3. Efforts towards Safety Assurance Measures**

#### **Reinforcement of the audit of safety management and seafarers labor / guidance system**

In recent years, there have been intense efforts to ensure navigational safety in the form of the appropriate navigational management of ships and improved working environment of seafarers, since accidents involving ships, including coastal freighters or ultra high-speed vessels, have been occurring. The safety assurance of vessel navigation is the responsibility of the Inspector of Safety Management and Seafarers Labor, who is appointed in each regional transport bureau and so forth, after unification of the Inspector of Navigation in charge of inspection of navigation management of passenger boats as well as freighters and the Mariners' Labor Inspector in charge of the working conditions of seafarers in April 2005. In addition, the Safety Management and Seafarers Labor Division was established in the Maritime Bureau in the Ministry in July 2006 for the purpose of conducting planning, gestation, and guidance in an integrated fashion. As a consequence, efficient and agile audit can be performed by the executive officer, who has a wide supervisory authority related to business laws (Maritime Transportation Law and Coastal Shipping Business Law) and seafarer-related laws (Mariners Law, Mariners Employment Security Law, Law for Ship's Officers and Boats' Operators).

Moreover, the training system has been reinforced, and, at the same time, a new audit system has been constructed, capable of checking past audit status, record of contraventions, and so forth anytime on the spot during an audit, in order to enhance accuracy when the Inspector of Safety Management and Seafarers Labor is executing duties.

#### **How serious accidents are dealt with**

When a serious ship accident occurs, measures are taken, with the cooperation of the Japan Coast Guard and so forth, such as prompt inspection, an examination to find out the cause, reprimand or guidance of the party concerned, in accordance with the laws for reconstructing the safety management system, and the implementation of thorough navigation management in order to prevent the recurrence of similar accidents on a nationwide basis and so forth. In fiscal 2007, the Bureau dealt with accidents of a ultra high-speed hydrofoil ship off the coast of Miura Peninsula, damage to power transmission lines at Hiradoseto, Nagasaki Prefecture, and so on, multiple collisions in the Akashi Strait, collision of passenger ships and others in the offing at Ishinomaki Port and so forth.

#### **Implementation of the assessment of the transport safety management**

The Inspector of Safety Management and Seafarers Labor conducts assessment of transport safety management like checking basic understanding in relation to the safety management system and the state of implementation as well as providing advice aimed at further improvement of the transport safety management system and so forth through interviews with top management of each shipping operator, in addition to implementation of traditional security audits.

Moreover, in anticipation of the accurate implementation of the Transport Safety Management System, the Bureau implements training aimed at improvement of quality of the Inspector of Safety Management and Seafarers Labor who conducts management assessment, and, at the same time, the training for the officer responsible for overall safety control of shipping operators and so forth.

Through the efforts mentioned above, it is expected that construction and improvement of the autonomous safety control system by shipping operators will be steadily promoted to largely contribute to assurance of safe navigation of ships and prevention of accidents at sea.

### **4. Efforts to Ratify the ILO Maritime Labour Convention**

At the 94th Session (for Maritime Affairs) of the International Labour Organization (ILO) Conference held in February, 2006, the Maritime Labour Convention 2006 was adopted, which unifies all the 60 or so conventions and similar bodies that have been adopted to date since the 1919 establishment of ILO, to ensure they reflect the present era, and simultaneously improve their effectiveness.

With regard to the preparation of the domestic law based on the Convention, in the Maritime Affairs Subcommittee of the Traffic Policy Council (Human Infrastructure Task Force), deliberation was made from the viewpoint of improving the labor environment for seafarers in response to the progressively more apparent shortage of seafarers. In the policy proposal of December 2007, the requirement was included to give precedence to the preparation of a domestic law for items that will contribute to improvement of the labor environment for seafarers under agreement between labor and management. In consideration of this, the Ministry of Land, Infrastructure, Transport and Tourism submitted to the Diet in February 2008 a "Bill for the Partial Amendment of the Marine Transportation Law and Mariners Law." The requirements to secure rest hours, post normal assignment tables, deliver working hour records, and so forth are included in the amended part of the Mariners Law as items in the domestic law based on the Maritime Labor Convention.

In this connection, it has been decided to separately continue advancing the study aimed at required revision of the system in anticipation of ratification of the Maritime Labor Convention, because tasks still remain for which it is necessary to take new actions.

### **5. Implementation of the New System of Pilot Dues**

While pilot dues have to be impartial, fair, and transparent in view of the high public interest involved in the piloting service, in the past system, the government established pilot dues in accordance with the nationally uniform standard by ministerial ordinance (the system of establishing dues by ministerial ordinance). Negative impacts pointed out as a consequence of the previous system included that it was difficult to introduce incentives to encourage pilots to improve service efficiency, and that it failed to reflect views of users who received pilotage services. Consequently, following amendment of the Marine Pilot Law as well as related laws and regulations and so forth, the system for approval of the upper limit and notification of dues that abolishes the system of establishing dues by ministerial ordinance, prevents inappropriately high dues and, at the same time, allows dues to be established flexibly, promptly, and freely was introduced to be started from April 1, 2008.

Thanks to the start of the system for the approval of the upper limit and notification of dues, each pilot can now establish diverse dues, various kinds of discounts for business promotion, and so forth, reflecting the intentions of users under proper competition. As a result, it is expected that reduction in pilot dues will be promoted as incentive works for the improvement of efficiency in the service of the pilot through active utilization of the system where the user appoints the pilot, and that advance in improvement of efficiency in the service operation of the Pilots' Association as pilotage zones will be integrated within the 3 major bays (Tokyo Bay, Ise Mikawa Bay, and Osaka Bay).

## Part II: Current State of Maritime Affairs and the Tasks Involved

### Chapter 1: Area of Maritime Transport

#### 1. Oceangoing Shipping

The volume of global cargo movement on the ocean in 2007, in terms of tonnage, was 7.57 billion tons (an increase of 5.2% from the previous year) and, in terms of ton-miles, was 32,932 billion ton-miles (an increase of 4.7% ), recording an all-time high in both tonnage and ton-miles in succession from the previous year.

With respect to the breakdown of the volume of world cargo movement on the ocean, petroleum (crude oil and petroleum products) accounted for 32%, which was the highest percentage among all items, followed by coal, iron ore and grain, for which the percentage was collectively 25.5 %.

#### (2) Ton-miles

(Unit: one billion ton-miles)

	Petroleum			Dry Cargo					Grand Total
	Crude oil	Petroleum products	Total	Iron ore	Coal	Grain	Other	Total	
2000	8,180	2,085	10,265	2,545	2,509	1,244	7,130	13,428	23,693
Rate of increase	3.7	5.8	4.1	10.4	3.7	16.9	11.9	10.4	7.6
2001	8,074	2,105	10,179	2,575	2,552	1,322	7,263	13,712	23,891
Rate of increase	-1.3	1.0	-0.8	1.2	1.7	6.3	1.9	2.1	0.8
2002	7,848	2,050	9,898	2,731	2,549	1,241	7,753	14,274	24,172
Rate of increase	-2.8	-2.6	-2.8	6.1	-0.1	-6.1	6.7	4.1	1.2
2003	8,390	2,190	10,580	3,035	2,810	1,273	8,156	15,274	25,854
Rate of increase	6.9	6.8	6.9	11.1	10.2	2.6	5.2	7.0	7.0
2004	8,795	2,305	11,100	3,444	2,960	1,350	8,720	16,474	27,574
Rate of increase	4.8	5.3	4.9	13.5	5.3	6.0	6.9	7.9	6.7
2005	9,239	2,510	11,749	3,918	3,113	1,686	9,132	17,849	29,598
Rate of increase	5.0	8.9	5.8	13.8	5.2	24.9	4.7	8.3	7.3
2006	9,495	2,635	12,130	4,192	3,540	1,822	9,763	19,317	31,447
Rate of increase	2.8	5.0	3.2	7.0	13.7	8.1	6.9	8.2	6.2
2007	9,685	2,755	12,440	4,790	3,750	1,857	10,095	20,492	32,932
Rate of increase	2.0	4.6	2.6	14.3	5.9	1.9	3.4	6.1	4.7

Source: Fearnley's "REVIEW 2007"

Note: Values for 2007 are estimates.

#### Diagram 2: Volume of the world ocean cargo movement by major commodities

##### (1) Tonnage

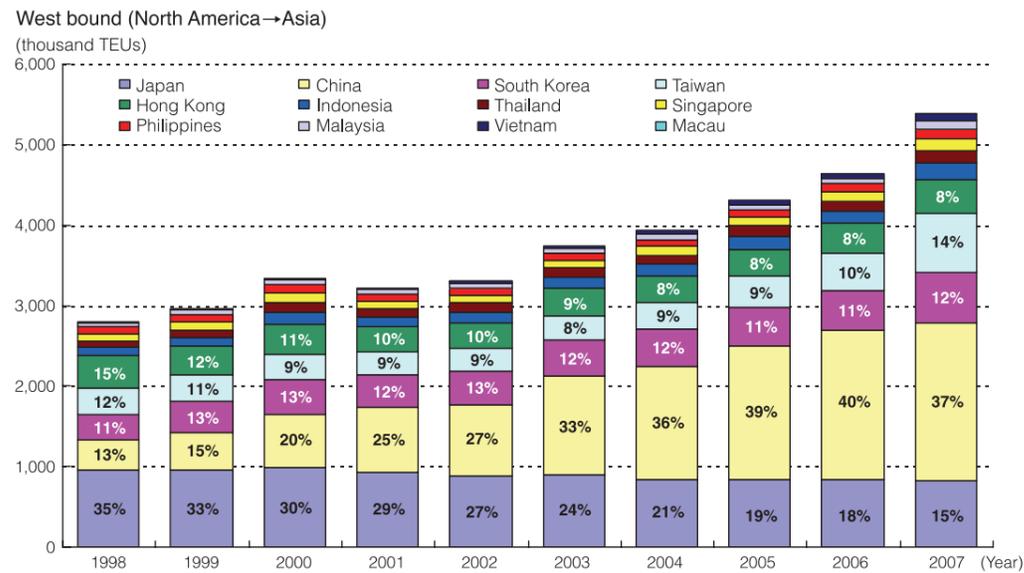
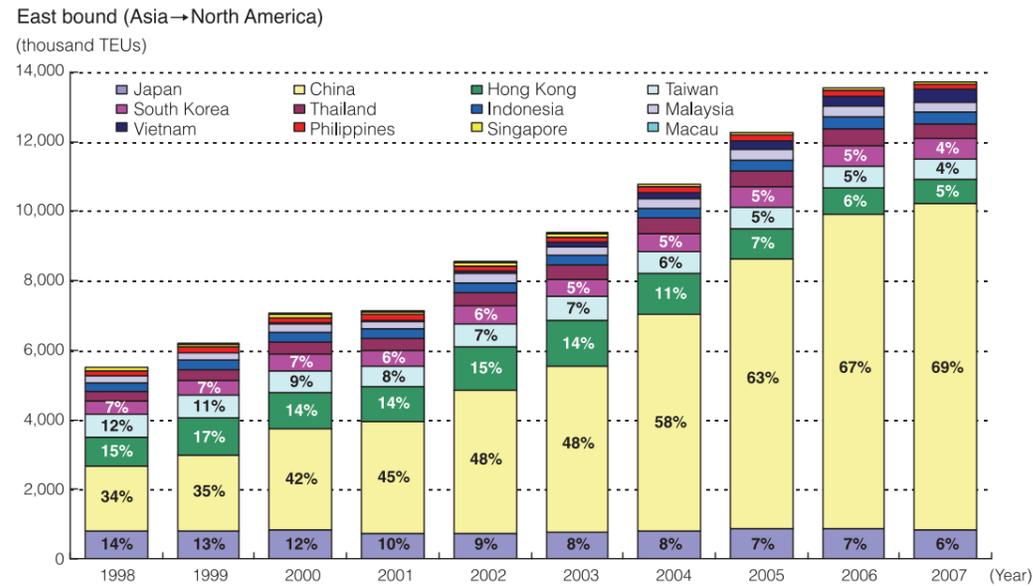
(Unit: one million Tons)

	Petroleum			Dry Cargo					Grand Total
	Crude oil	Petroleum products	Total	Iron ore	Coal	Grain	Other	Total	
2000	1,608	419	2,027	454	523	230	2,361	3,568	5,595
Rate of increase	4.8	4.2	4.6	8.9	10.6	17.3	9.9	10.3	8.2
2001	1,592	425	2,017	452	565	234	2,385	3,636	5,653
Rate of increase	-1.0	1.4	-0.5	-0.4	8.0	1.7	1.0	1.9	1.0
2002	1,588	414	2,002	484	570	245	2,519	3,818	5,820
Rate of increase	-0.3	-2.6	-0.7	7.1	0.9	4.7	5.6	5.0	3.0
2003	1,673	440	2,113	524	619	240	2,637	4,020	6,133
Rate of increase	5.4	6.3	5.5	8.3	8.6	-2.0	4.7	5.3	5.4
2004	1,754	461	2,215	589	664	236	2,789	4,278	6,493
Rate of increase	4.8	4.8	4.8	12.4	7.3	-1.7	5.8	6.4	5.9
2005	1,784	495	2,279	652	710	310	2,769	4,441	6,720
Rate of increase	1.7	7.4	2.9	10.7	6.9	31.4	-0.7	3.8	3.5
2006	1,851	517	2,368	734	754	325	3,014	4,827	7,195
Rate of increase	3.8	4.4	3.9	12.6	6.2	4.8	8.8	8.7	7.1
2007	1,888	535	2,423	799	798	332	3,220	5,149	7,572
Rate of increase	2.0	3.5	2.3	8.9	5.8	2.2	6.8	6.7	5.2

On the east-bound route (Asia – North America), the increase in cargo movement decelerated after the middle of 2007 to 13, 730 thousand TEUs (an increase of 1% from the preceding year), due to the decline in the housing market initiated by the subprime loan problem. By country, the largest volume in terms of east-bound cargo movement was shipped from China, accounting for about 70% of the total volume.

On the other hand, on the west-bound route (North America – Asia), the volume of cargo movement recorded a double-digit increase to 5,370 thousand TEUs (an increase of 16% from the preceding year), as China in particular and other newly emerging Asian countries are boosting their presence as consumer nations. Cargo shipped to China accounted for the largest share of about 40% (1,870 thousand TEUs).

**Diagram 3: Transition in container cargo movement on the North American route by country**



Source: Compiled by the Japan Maritime Center, based on the data of PIERS

**Diagram 4: Volume and value of the maritime trade of Japan by commodities**

(Unit: 1,000 tons; 100 million yen)

Item	Year	2006		2007		Rate of increase from the preceding year (%) (in terms of volume)
		Volume	Value	Volume	Value	
Total of import and export		958,932	1,025,878	964,063	1,075,541	0.5%
Export	Total	144,367	526,206	150,220	552,984	4.1%
	Steel	34,837	34,658	35,564	37,396	2.1%
	Cement	10,121	313	9,607	320	-5.1%
	Machinery	15,024	181,558	15,850	174,157	5.5%
	Passenger car	7,533	109,584	8,253	126,744	9.6%
	Electric goods	1,633	53,192	1,616	48,862	-1.0%
	Fertilizer	869	121	907	150	4.4%
	Others	74,350	146,780	78,423	165,355	5.5%
Import	Total	814,565	499,671	813,843	522,557	-0.1%
	Total of dry cargo	501,706	330,283	504,976	339,416	0.7%
	Iron ore	134,287	8,339	138,881	10,375	3.4%
	Coal	177,209	16,119	186,486	17,405	5.2%
	Phosphate rock	784	117	722	126	-7.9%
	Salt	8,895	413	8,551	428	-3.9%
	Copper ore	4,633	10,667	5,051	12,765	9.0%
	Nickel ore	4,214	402	4,299	753	2.0%
	Bauxite	1,688	78	1,987	114	17.7%
	Timber	12,218	5,802	10,330	5,303	-15.5%
	Pulp	2,365	1,671	2,097	1,683	-11.3%
	Chip	13,776	2,454	14,337	2,879	4.1%
	Wheat	5,337	1,489	5,275	1,922	-1.2%
	Rice	607	352	643	434	6.0%
	Barley/Naked barley	1,383	303	1,406	487	1.7%
	Corn	16,883	3,007	16,628	4,517	-1.5%
	Soy beans	4,042	1,491	4,161	1,955	2.9%
	Others	113,385	277,579	104,122	278,270	-8.2%
	Total of liquid cargo	312,860	169,389	308,867	183,141	-1.3%
	Crude oil	209,141	115,351	203,142	122,788	-2.9%
	LNG	62,189	26,595	66,782	31,390	7.4%
	LPG	14,512	9,406	13,792	9,918	-5.0%
	Fuel oil	3,934	1,940	4,097	2,271	4.1%
Others	23,084	16,097	21,054	16,774	-8.8%	

Prepared by the Maritime Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, based on the foreign trade statistics of the Ministry of Finance

**Diagram 5: Volume transported and freight earned by Japanese merchant fleet**

(Unit: 1,000 tons; 100 million yen; %)

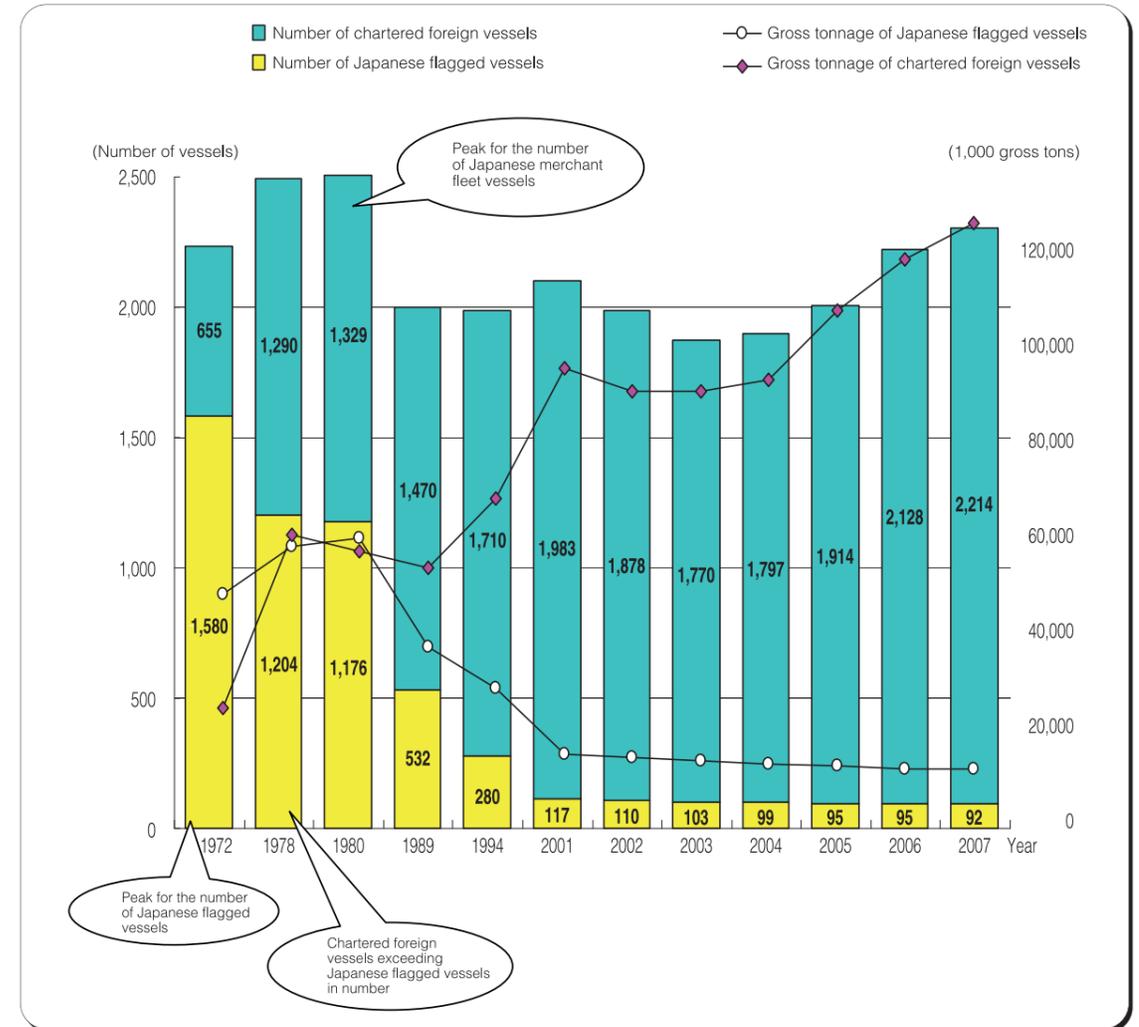
Category	2006			2007			Rate of increase from the preceding year			
	Japanese flagged vessel	Chartered foreign ships	Total	Japanese flagged vessel	Chartered foreign ships	Total	Japanese flagged vessel	Chartered foreign ships	Total	
Export	Liners	513	14,318	14,831	787	13,561	14,348	53.4	-5.3	-3.3
	(Container ships of the above)	54	1,549	1,603	82	1,775	1,857	51.9	14.6	15.8
		152	8,473	8,625	221	8,833	9,054	45.4	4.2	5.0
		39	1,309	1,348	63	1,537	1,600	61.5	17.4	18.7
	Trampers	1,156	32,271	33,427	1,303	34,944	36,247	12.7	8.3	8.4
		169	4,234	4,403	353	7,631	7,984	108.9	80.2	81.3
	Tankers	470	5,969	6,439	263	5,844	6,107	-44.0	-2.1	-5.2
	22	199	221	18	220	238	-18.2	10.6	7.7	
Total	2,139	52,558	54,697	2,353	54,349	56,702	10.0	3.4	3.7	
	245	5,982	6,227	453	9,626	10,079	84.9	60.9	61.9	
Import	Liners	1,081	17,209	18,290	931	17,393	18,324	-13.9	1.1	0.2
	(Container ships of the above)	50	1,109	1,159	55	1,138	1,193	10.0	2.6	2.9
		275	14,736	15,011	347	15,435	15,782	26.2	4.7	5.1
		25	962	987	35	1,045	1,080	40.0	8.6	9.4
	Trampers	17,858	315,079	333,937	17,000	305,063	322,063	-9.9	-3.2	-3.6
		159	4,389	4,548	172	6,015	6,187	8.2	37.0	36.0
	Tankers	25,988	124,936	150,924	25,207	161,873	187,080	-3.0	29.6	24.0
	436	1,936	2,372	391	2,557	2,948	-10.3	32.1	24.3	
Total	45,927	457,224	503,151	43,138	484,329	527,467	-6.1	5.9	4.8	
	645	7,434	8,079	618	9,710	10,328	-4.2	30.6	27.8	
Offshore trade	Liners	1,279	78,670	79,949	1,428	80,496	81,924	11.6	2.3	2.5
	(Container ships of the above)	156	7,478	7,634	194	8,206	8,400	24.4	9.7	10.0
		1,279	78,411	79,690	1,428	80,239	81,667	11.6	2.3	2.5
		156	7,453	7,609	194	8,181	8,375	24.4	9.8	10.1
	Trampers	5,087	103,990	109,077	4,361	113,540	117,901	-14.3	9.2	8.1
		86	2,800	2,886	70	3,754	3,824	-18.6	34.1	32.5
	Tankers	2,975	53,201	56,176	3,091	46,132	49,223	3.9	-13.3	-12.4
	48	1,289	1,337	50	1,299	1,349	4.2	0.8	0.9	
Total	9,341	235,861	245,202	8,880	240,168	249,048	-4.9	1.8	1.6	
	290	11,567	11,857	314	13,259	13,573	8.3	14.6	14.5	
Total	Liners	2,873	110,197	113,070	3,146	111,450	114,596	9.5	1.1	1.3
	(Container ships of the above)	260	10,136	10,396	331	11,119	11,450	27.3	9.7	10.1
		1,706	101,620	103,326	1,996	104,507	106,503	17.0	2.8	3.1
		220	9,724	9,944	292	10,763	11,055	32.7	10.7	11.2
	Trampers	25,101	451,340	476,441	22,664	453,547	476,211	-9.7	0.5	-0.0
		414	11,423	11,837	595	17,400	17,995	43.7	52.3	52.0
	Tankers	29,433	184,106	213,539	28,561	213,849	242,410	-3.0	16.2	13.5
	506	3,424	3,930	459	4,076	4,535	-9.3	19.0	15.4	
Total	57,407	745,643	803,050	54,371	778,846	833,217	-5.3	4.5	3.8	
	1,180	24,983	26,163	1,385	32,595	33,980	17.4	30.5	29.9	

Source: Surveyed by the Maritime Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.  
 Note: 1. The numerical value on the upper and lower column of each item indicates the volume transported and freight earned respectively.  
 2. The number of container vessels is included in that of liners.  
 3. The numerical values for 2007 are provisional.

**Total available shipping space of the Japanese merchant fleet**

The number and tonnage of ships belonging to the Japanese merchant fleet, almost all of which were so-called flag-convenience ships, by flag of registry were 1,597 vessels (69.3% of the total fleet) and 63,670 thousand gross tons (68.4%) for Panama-flags, and 109 vessels (5.4%) and 4,680 thousand gross tons(5.0%) for Liberia-flags.

**Diagram 6: Transition in composition of the Japanese merchant fleet**



Source: Surveyed by the Maritime Bureau, the Ministry of Land, Infrastructure, Transport and Tourism

**Financial situation of the three largest shipping companies**

In terms of the business performance of the 3 largest shipping companies (in terms of non-consolidated results) in fiscal 2007, revenue and profit largely increased compared to the same period of the preceding year despite the soaring price of fuel oil and so forth, and 308.1 billion yen net profit was posted for the fiscal year, due to the steady trend in the cargo movement mainly in the Asian region, following the increase in consumer demand in newly emerging countries such as China and India, and steep rise in the freight market for trampers due to shortage of the shipping space for bulk cargoes such as iron ore and coal bound for China in particular despite the soaring price of fuel oil.

**Diagram 7: State of profit and loss of three largest shipping companies**

(Unit: 100 million yen)

	Operating revenue		Operating expenses		Operating profit or loss		Ordinary profit or loss		Net profit after tax for the term	
		Rate of increase or decrease from the preceding fiscal year (%)		Rate of increase or decrease from the preceding fiscal year (%)		Rate of increase or decrease from the preceding fiscal year (%)		Rate of increase or decrease from the preceding fiscal year (%)		Rate of increase or decrease from the preceding fiscal year (%)
Fiscal 2006	31,714	13.3	29,852	17.5	1,862	-27.6	2,133	-21.5	1,447	-15.3
Fiscal 2007	39,648	25.0	35,498	18.9	4,150	122.9	4,547	113.2	3,081	112.9

Prepared by the Maritime Bureau, based on the financial data of each company  
(Note) Total figures may not tally with the totals of each figure due to rounding.

**Current standing of oceangoing cruising**

The cruising population in Japan accounts for only about 1% of the world total of about 16 million. In particular, when compared with the U.S., an advanced country in cruising, the population remained at an extremely low level. The global cruising population, meanwhile, has almost more than doubled in number over the past decade.

**Diagram 8: Transition in the population of passengers on global cruise ships**

(Unit: thousand persons)

Name of Country (or area)	1990	1995	2000	2001	2002	2003	2004	2005	2006
U.S.	3,500	4,600	6,900	6,900	8,650	9,000	9,500	11,200	11,200
Canada	150	250	300	300	300	300	300	300	300
U.K.	180	400	800	776	823	960	1,027	1,069	1,200
Germany	190	309	283	392	428	429	583	639	639
Italy	-	250	250	250	250	250	353	514	514
France	75	200	223	225	225	250	250	233	252
Other countries in Europe	180	250	250	250	250	250	250	250	826
Australia	100	150	200	200	200	250	500	500	310
Cyprus	-	75	75	75	75	75	75	75	75
Asia (except Japan)	75	450	800	849	800	600	600	600	600
Japan	175	225	216	200	169	140	160	156	177
Total	4,625	7,239	10,297	10,417	12,170	12,504	13,598	15,536	16,093

(Note) 1. Quoted from Douglas Ward's "Ocean Cruising & Cruise Ships, 2008"  
2. Figures for Japan are surveyed by the Maritime Bureau, the Ministry of Land, Infrastructure, Transport and Tourism.

**Diagram 9: Transition in the number of Japanese passengers on oceangoing cruise ships**



**World Trade Organization (WTO)**

The new round of negotiation (Doha Development Agenda) has been started as a result of the 4th Ministerial Conference held in Doha, Qatar in November 2001.

The Doha Round is now being discussed strenuously towards the more liberalized agreement by the end of 2008. The service sectors, including the maritime transportation service sector, are also holding intensive discussions among the member States in plurilateral meetings and bilateral negotiations in order to achieve the final agreement to exceed the level of commitments of the previous round (Uruguay Round).

With respect to the maritime transportation service sector, no agreement on liberalization has been reached, even through the negotiations, such as the Uruguay Round, and the principal provisions of the WTO's General Agreement on Trade in Services (GATS), including most-favored nation treatment, do not currently apply to this sector.

Japan, who sets the "principle of free shipping" as the foundation of its policy on oceangoing transport, gathering members highly interested in marine transport to target agreement in this round, held and presided over the Maritime Friends Meeting (14 Maritime Friends countries (regions): namely Australia, Canada, China, the EC, Hong Kong, Iceland, Japan, South Korea, Mexico, New Zealand, Norway, Panama, Switzerland and Taiwan), among which lively discussion ensued.

**2. Domestic Passenger Ships**

As of April 1, 2008, 983 business operators (a decrease of 15 operators from the preceding year) managed 1,700 routes (a decrease of 38 routes from the preceding year), with 2,445 vessels (a decrease of 38 vessels from the preceding year) commissioned in service.

With respect to the actual transportation records for fiscal 2006, the number of transported passengers was 99,170 thousand (up 3.9% from the preceding fiscal year), and the transported passenger-kilometer total was 3,783 million (up 6.0% from the preceding fiscal year).

On the other hand, with regard to the actual transportation records for automobiles, the number of units was 5,245 thousand for trucks (up 2.3% from the preceding fiscal year) and 10,251 thousand for passenger cars / other vehicles transported (up 8.4% from the preceding fiscal year), while in terms of vehicle-kilometers, 1,094 million for trucks (up 2.2% from the

**Diagram 10: Approximate numbers for routes and services by type of service**

Type of service	Year	Number of business operators	Number of routes	Number of vessels
General passenger liner service	2004	454	626	1,327
	2005	461	641	1,307
	2006	456	637	1,332
	2007	447	611	1,306
	2008	457	638	1,332
Special passenger liner service	2004	10	13	15
	2005	9	12	12
	2006	9	12	12
	2007	8	11	11
	2008	9	12	12
Passenger tramper service	2004	489	977	1,052
	2005	497	997	1,085
	2006	520	1,047	1,101
	2007	513	1,040	1,090
	2008	517	1,050	1,101
Total	2004	953	1,616	2,394
	2005	967	1,650	2,404
	2006	985	1,696	2,445
	2007	968	1,662	2,407
	2008	983	1,700	2,445
Total ferry routes of the above	2004	161	207	392
	2005	163	202	384
	2006	162	203	388
	2007	158	187	364
	2008	146	169	388

**Diagram 11: Actual recorded number of passengers transported**

(Unit: million passengers; million man / kilometer; %)

Type of service	Fiscal Year	Number of passengers transported		Man / kilometer transported	
			Rate of increase from the preceding year		Rate of increase from the preceding year
General passenger liner service	2002	100.0	0.4	3,747	-2.3
	2003	97.3	-2.7	3,869	3.1
	2004	92.0	-5.4	3,708	-4.0
	2005	94.0	2.2	3,870	4.4
	2006	89.6	-4.7	3,631	-6.2
Special passenger liner service	2002	0.3	-25.0	3	25.0
	2003	0.3	-16.7	2	-46.7
	2004	0.2	-12.0	1	-18.8
	2005	0.2	-9.1	1	-53.8
	2006	0.1	-14.1	1	-11.9
Passenger tramper service	2002	8.5	-42.2	143	-14.9
	2003	9.7	14.1	158	10.5
	2004	8.7	-10.3	160	1.3
	2005	9.0	3.4	154	-3.8
	2006	9.5	5.5	151	-1.9
Total	2002	108.8	-1.8	3,893	-2.8
	2003	107.3	-1.4	4,024	3.4
	2004	100.9	-6.0	3,869	-3.9
	2005	103.2	2.3	4,025	4.0
	2006	99.2	-3.9	3,783	-6.0

(Note) Total figures may not tally with the totals of each figure due to rounding.

preceding fiscal year) and 757 million for passenger cars / other vehicles (up 6.4% from the preceding fiscal year).

#### Public subsidy for the maintenance / improvement of shipping lines

Japan has more than 6,800 islands, including Honshu, Hokkaido, Shikoku, Kyushu and Okinawa's main island, more than 400 of which are inhabited.

Although remote island routes connecting islands to islands and islands to the mainland play an important role as a means of transporting inhabitants of remote islands and their daily commodities, the number of passengers continues to decline year after year, due to the rapid decrease in population in rural areas and so forth, intensifying severe conditions for the management of ship operators providing services to remote islands.

For this reason, efforts are being made to maintain / improve these shipping services by granting such ship operators subsidies to cover losses suffered from their management of the route operation, based on the Act for Improvement of Sea Routes at Remote Islands. During fiscal 2007, about 5,570 million yen was paid to 101 operators and 111 shipping services to cover such losses.

Moreover, from fiscal 2004 onward, in order to promote the installation of barrier-free facilities on boats in services for remote islands, where societies are more rapidly aging than on the mainland, it has been decided to subsidize 50% of the construction cost incurred for the installation of barrier-free facilities and in building ships for renewal, which will be in service on navigation routes designated as eligible for subsidies or the cost of reforming vessels to install barrier-free facilities on the same.

#### Promotion of effort to install barrier-free facilities on passenger ships

It has been decided to obligate all ships to secure an effective width of 80 cm or more for the corridors, install hand-rails as well as elevators (for routes for boarding and leaving the ship ranging to other deck boards) and so forth along one route or more for boarding and leaving the ship to the barrier-free seats for passengers or space provided for wheelchairs, assuming that aged or physically disabled passengers are assisted by a helper or crew on the way. In addition, it has been decided to obligate all vessels to secure an effective width of 120 cm and more for corridors, install hand-rails, elevators (for inboard migration pathways ranging to other deck boards), space for the rotation of wheelchairs on the way and so forth along one route or more for moving inside ships from barrier-free seats for passengers or space for wheelchairs to inboard facilities for passengers (rest rooms, restaurants, commissary depots and promenade decks), based on the assumption of unaided movement for aged or physically handicapped passengers as a general rule.

While the target represents about 500 passenger ships (an estimation based on an annual average of 50 boats built), about 50% of the total of 1,000, to be barrier-free by 2010, only 131 passenger ships (14.1%) of 932 in total were actually barrier-free as of the end of March, 2008 on account of stagnant conditions in the construction of vessels for use, in turn resulting from the unfavorable performance of the passenger ship business in recent years, the increased cost burden based on the impact of a sharp rise in the price of crude oil or otherwise and so forth .

### 3. Coastal Shipping

Coastal shipping services accounted for 35.9% (in terms of ton-kilometers for the fiscal year 2006) of domestic cargo transport, transporting about 80% of steel, petroleum, cement and so forth, which are important basic industrial materials to support the national economy / national life of Japan.

**Diagram 12: Movements in cargo transport volume by transport facilities**

Fiscal year	Tons of cargo transported (ten thousand tons)					Ton-kilometers transported (million ton-kilometers)					Average transported distance (kilometers)			
	Coastal shipping	Vehicles	Rail	Air	Total	Coastal shipping	Vehicles	Rail	Air	Total	Coastal shipping	Vehicles	Rail	Air
1970	37,665 (7.17)	462,607 (88.06)	25,036 (4.77)	12 (0.00)	525,319 (100.00)	151,243 (43.18)	135,916 (38.80)	63,031 (18.00)	74 (0.02)	350,264 (100.00)	402	29	252	617
1975	45,205 (9.00)	439,286 (87.41)	18,062 (3.59)	19 (0.00)	502,572 (100.00)	183,579 (50.92)	129,701 (35.98)	47,058 (13.05)	152 (0.04)	360,490 (100.00)	406	30	261	800
1980	50,026 (8.36)	531,795 (88.91)	16,282 (2.72)	33 (0.01)	598,136 (100.00)	222,173 (50.63)	178,901 (40.77)	37,428 (8.53)	290 (0.07)	438,792 (100.00)	444	34	230	879
1985	45,239 (8.08)	504,805 (90.19)	9,628 (1.72)	54 (0.01)	559,727 (100.00)	205,818 (47.41)	205,941 (47.43)	21,919 (5.05)	482 (0.11)	434,160 (100.00)	455	41	228	893
1990	57,520 (8.49)	611,357 (90.22)	8,662 (1.28)	87 (0.01)	677,626 (100.00)	244,546 (44.72)	274,244 (50.16)	27,196 (4.97)	799 (0.15)	546,785 (100.00)	425	45	314	918
1995	54,854 (8.26)	601,657 (90.57)	7,693 (1.16)	96 (0.01)	664,301 (100.00)	238,330 (42.71)	294,648 (52.80)	25,101 (4.50)	924 (0.17)	558,079 (100.00)	435	49	326	963
2002	49,725 (8.44)	533,949 (90.59)	5,659 (0.96)	100 (0.02)	589,433 (100.00)	235,582 (41.28)	312,028 (54.67)	22,131 (3.88)	991 (0.17)	570,732 (100.00)	474	58	391	991
2003	44,554 (7.77)	523,407 (91.28)	5,360 (0.93)	103 (0.02)	573,426 (100.00)	218,190 (38.69)	321,862 (57.08)	22,794 (4.04)	1,027 (0.18)	563,873 (100.00)	490	62	425	997
2004	44,025 (7.91)	507,588 (91.14)	5,219 (0.94)	107 (0.02)	556,939 (100.00)	218,833 (38.39)	327,632 (57.48)	22,449 (3.94)	1,058 (0.19)	569,972 (100.00)	497	65	430	989
2005	42,615 (7.83)	496,588 (91.19)	5,247 (0.96)	108 (0.02)	544,558 (100.00)	211,576 (37.09)	334,979 (58.72)	22,813 (4.00)	1,075 (0.19)	570,443 (100.00)	497	68	435	996
2006	41,664 (7.70)	496,133 (91.35)	5,187 (0.96)	110 (0.02)	543,094 (100.00)	207,849 (35.92)	346,534 (59.88)	23,192 (4.01)	1,094 (0.19)	578,669 (100.00)	499	70	447	995

Prepared, based on the "Land Transport Statistics Handbook" issued by the Ministry of Land, Infrastructure, Transport and Tourism.

- (Note) 1. The share (%) of each transport facility is indicated in parentheses.  
 2. Excess baggage and mail are included in the air transport volume indicated.  
 3. The figures for vehicles include those for mini-cars beginning in fiscal 1990.  
 4. Fractions of 0.5 and over are counted as one unit, and smaller figures are disregarded.  
 For this reason, there may be cases where sub-totals do not add up to the grand total.

As of April 1, 2008, the numbers of registered business operators and reported operators were 2,772 and 1,434, respectively, of which medium and small enterprises (those with capital of 300 million yen or less or 300 employees or less) accounted for 99.6%.

The volume of cargo transported via coastal shipping in fiscal 2006 decreased by 1.8% from the preceding fiscal year in terms of ton-kilometers. Among major cargo commodities (in terms of tons), petroleum products continued to decrease for the fourth successive year, declining by 1.0% from the preceding fiscal year, because they were affected by the policy of discontinuing use of petroleum through the promotion of energy saving, steel increased by 1.8% from the preceding fiscal year, affected by the worldwide increase in demand, and limestone decreased by 4.9% from the preceding fiscal year due to the effect of reduction in public works.

**Diagram 13: Transition in the volume of cargo transported by coastal shipping**

Fiscal year	Tons transported (thousand tons)			Ton-kilometers transported (hundred million ton-kilometers)		
		Comparison to 1970	Comparison to the preceding year		Comparison to 1970	Comparison to the preceding year
1970	376,647	100.0	–	1,512	100.0	–
1975	452,054	120.0	112.6	1,836	121.4	95.4
1980	500,258	132.8	97.2	2,222	147.0	98.4
1985	452,385	120.1	90.4	2,058	136.1	92.6
1990	575,199	152.7	127.1	2,445	161.7	118.8
1995	548,542	145.6	95.4	2,383	157.6	97.5
1997	541,437	143.8	98.7	2,370	156.7	99.5
1998	516,648	137.2	95.4	2,270	150.1	95.8
1999	522,602	138.8	101.2	2,294	151.7	101.1
2000	537,021	142.6	102.8	2,417	159.9	105.4
2001	520,067	138.1	96.8	2,445	161.7	101.2
2002	497,251	132.0	95.6	2,356	155.8	96.4
2003	445,544	118.3	89.6	2,182	144.3	92.6
2004	440,252	116.9	98.8	2,188	144.7	100.3
2005	426,145	113.1	96.8	2,116	139.9	96.7
2006	416,644	110.6	97.8	2,078	137.4	98.2

Compiled from the "Yearly Statistical Report of Coastal Shipping Transport" issued by the Ministry of Land, Infrastructure, Transport and Tourism and others.

- (Note) 1) Since the survey method was changed in fiscal 1974, the actual recorded figures for fiscal 1970 were estimated using calculations striving for consistency with the survey method.  
 2) The comparison to the preceding year for the years before 1997 is that to the preceding year shown

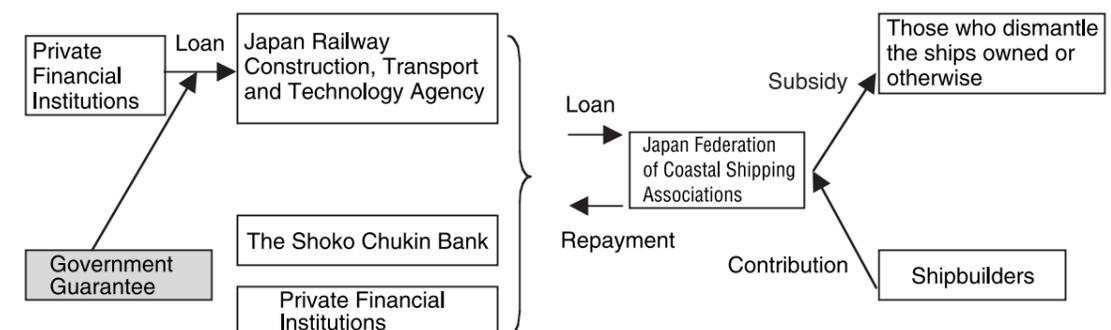
Meanwhile, the shipping rates for coastal transport have been declining in recent years due to the stagnant domestic economic climate, excess shipping space supply and so forth, although they have shifted to an upward tendency for coastal cargo carriers since the second half of 2005. For coastal tankers, however, they still remain unchanged.

**Smooth and steady implementation of provisional coastal shipping measures**

After discontinuing the project involving adjusting the available tonnage by the scrap-and-build formula, implemented since 1966 as a measure to counter excessive tonnage, a project of provisional measures for coastal shipping was introduced in May 1998 with a view to revitalizing the coastal shipping business.

With regard to the state of implementation, subsidies were granted for 1,636 vessels with eligible tonnage of 1,870 thousand tons, amounting to 123 billion yen, while 62.4 billion yen was

**Diagram 14: Outline of provisional measures for coastal shipping services**



contributed to the government from the owners of 803 vessels with eligible tonnage of 1,850 thousand tons (in terms of the approved amount as of March, 2008).

#### 4. Port Transport

##### Current state surrounding Japanese ports

The transition in cargo movement, in relation to the ocean transportation of containers among Asia / North America / Europe, was about 35.0 million TEUs for 2004, against a total of about 11.0 million TEUs for 1990. This picture reveals a noteworthy increase in the volume of containers transported involving Asia, as the increase in North America-Asia, Europe-Asia and within the Asia region represents about 11, 10 and 9 million TEUs respectively, while that in North America-Europe is by about 3 million TEUs.

##### Current state of the port transport business

The number of licenses, permits and operators of the port transport business at the 93 ports, designated by the Port Transport Business Law nationwide as of the end of March, 2007, is as follows. In addition, medium and small enterprises account for about 88 %, representing a very high percentage.

##### Trends of port transport volume

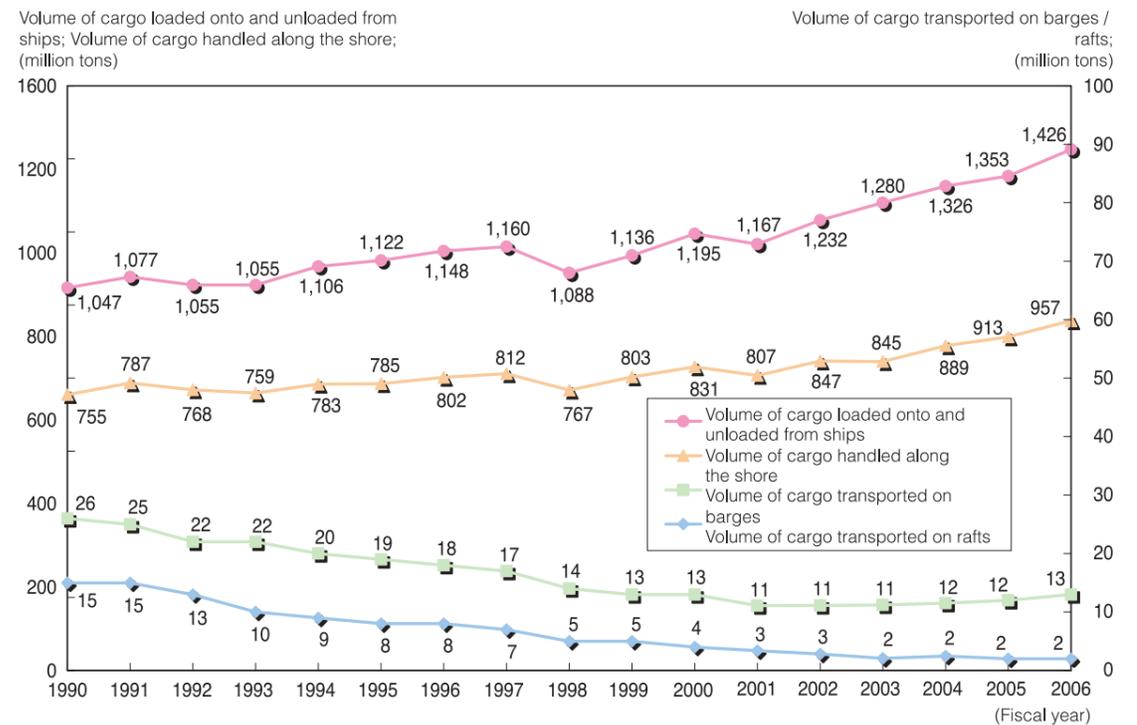
Port transport volume (the volume of cargo loaded and unloaded onto and from ships) was about 1,426 million tons, up about 5% from the preceding fiscal year, on a nationwide basis in fiscal 2006.

**Diagram 15: Number of Licenses, Permits and Operators of the Port Transport Business at Each Port**

Category	Number of Licenses / permits	Number of operators	Net number of operators
General port transport business	614	1,257	938
Port cargo-handling business	986		
Barge transport business	158		
Raft transport business	50		
Number-checking business	7	32	
Apprausement business	15		
Weight-checking business	23		

Surveyed by Ports and Harbors Bureau of the Ministry of Land, Infrastructure, Transport and Tourism (on the last day of March 2007)

**Diagram 16: Transition in port transport volume**



##### Efforts for deregulation in the port transport

Deregulation was implemented in May, 2006, replacing the license system for general port transport business in local ports other than the nine main ports (Ports of Chiba, Keihin, Shimizu, Nagoya, Yokkaichi, Osaka, Kobe and Hakata) with the permission system (abolition of supply and demand adjustment regulations) and the transport charges / fee approval system with the advance filing system and so on.

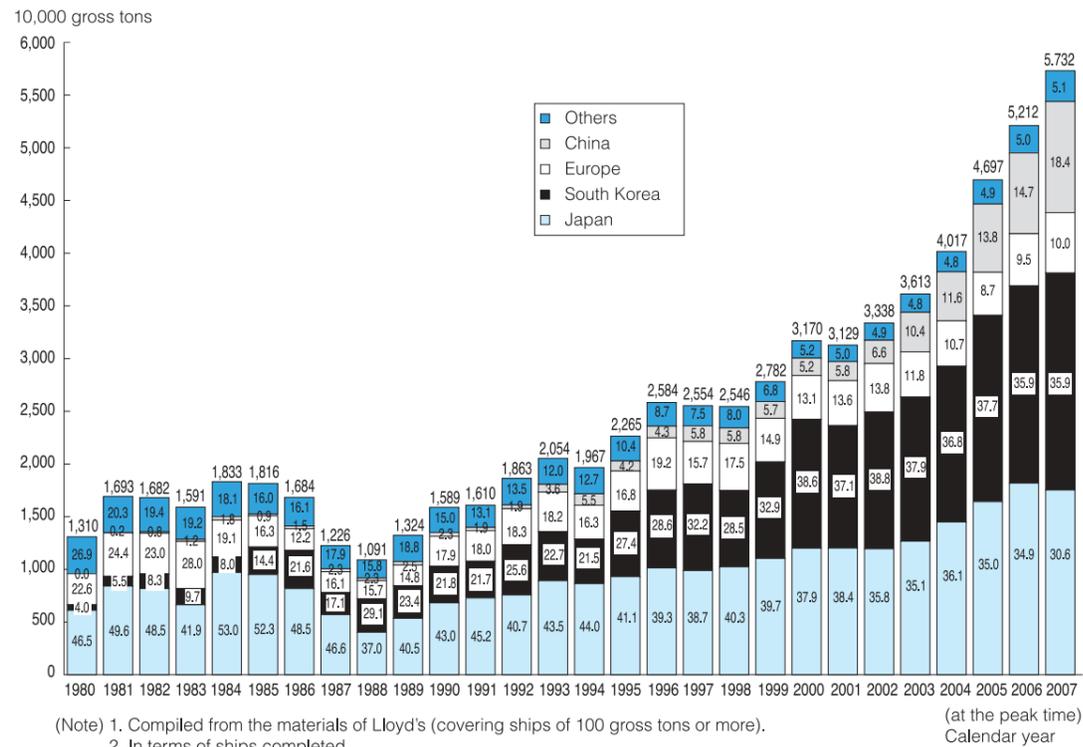
## Chapter 2: Shipbuilding and Ship Machinery Industries

### 1. Shipbuilding Industry

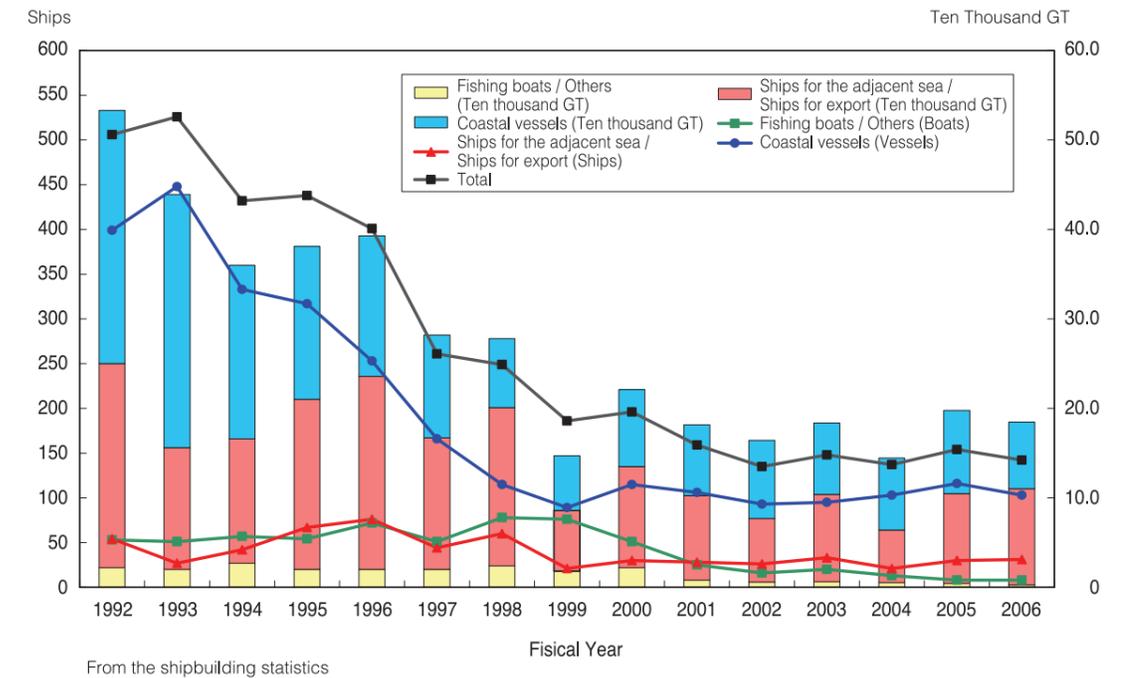
In the world shipbuilding market, the demand for ships to be newly built, mainly tankers and bulk carriers, is following a steady upward trend with the increase in maritime transport, due to the recent expansion of imports by China of bulk cargo, including iron ore as well as crude oil and so on in the background. The total global tonnage of newly built vessels in 2007 was recorded at 57.32 million gross tons, once again reaching a historical record high, just like last year. Due to this high demand for shipbuilding and so forth, ship prices are rocketing and the peak is being maintained.

On the other hand, international competition is expected to further intensify in future, because China is capitalizing on its low labor cost to expand its shipbuilding capacity and make aggressive capital investment, currently accounting for about 20% of the tonnage of ships built in the world.

**Diagram 17: Transition in the tonnage of newly built ships in the world**



**Diagram 18: Transition in the tonnage of newly built medium- and small-sized ships**



**Trends in the Japanese shipbuilding market**

The Japanese shipbuilding industry is providing ships of good quality to ship-owners with high-level technical capabilities, making it possible to appropriately respond to their diverse needs, with consistent improvement in productivity, fully reliable related industries within the country, a meticulously organized system of maintenance and control, and so forth in the background, keeping the top-class position in the world shipbuilding market. At present, Japan still accounts for about one third of the world in tonnage of newly built ships. In recent years, since the level of unfilled orders remains high due to the global increase in demand for shipbuilding, and more ships are progressively being constructed for which orders were accepted in the period of rising ship prices, it can be said that the market is booming, though the current situation does not allow any optimism for the future, as the high rise in prices of materials such as steel products is becoming more obvious.

This serious situation continued for a long time for medium- and small-sized shipbuilders, who support coastal shipping and fishing boats, following stagnation in coastal vessel demand, caused by the persistently low level of freight / charter fees and so on, and the decreasing number of fishing boats, due to international reinforcement of fishing regulations. In particular, business operators engaged in building coastal vessels shifted their business to block erection and repair, while some of them closed their business. Against this backdrop, the tonnage of newly built medium- and small-sized ships continues to remain at a low level, though demand for shipbuilding is expected to climb in the future, since the willingness of coastal shipping operators to construct new coastal vessels to replace old ones is recently recovering, following an increase in the volume of marine transport and so on.

**Promotion of international cooperation**

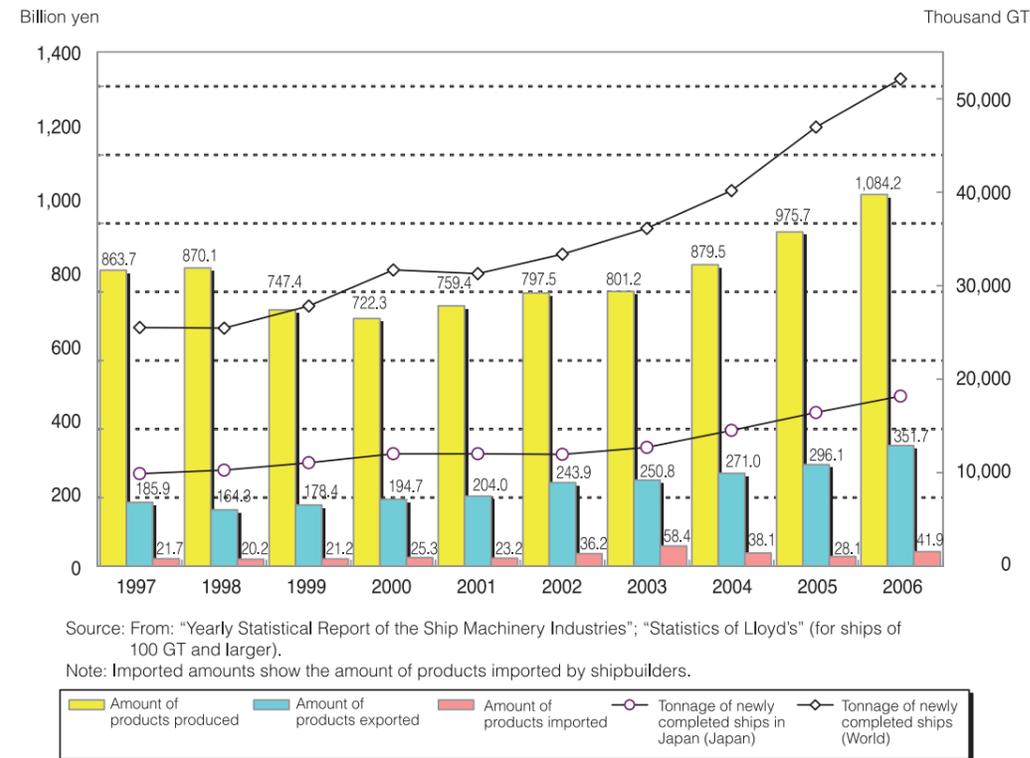
Since the international shipbuilding market, mainly for large-sized oceangoing ships, is the only global market, competition among business operators from each country is fierce and the policy of a country and order acceptance practice of shipbuilders and so on directly affects the competitive environment in the international shipbuilding market. However, since competitive conditions are not necessarily identical, due to the existence of government subsidies and so on in different countries, multilateral policy coordination is both necessary and vital for the sound development of the shipbuilding industry. Since it is foreseen that, in future, the competitive environment in the international shipbuilding market will intensify due to expansion of facilities in the newly developing shipbuilding countries and so forth, the importance of international policy coordination is further increasing.

With such recognition, Japan has decided to strive harder than ever for the development of a common market perception and coordination of policies, seeking dialogue and collaboration with a wide range of countries, through bilateral and multilateral discussion and so on at a government level.

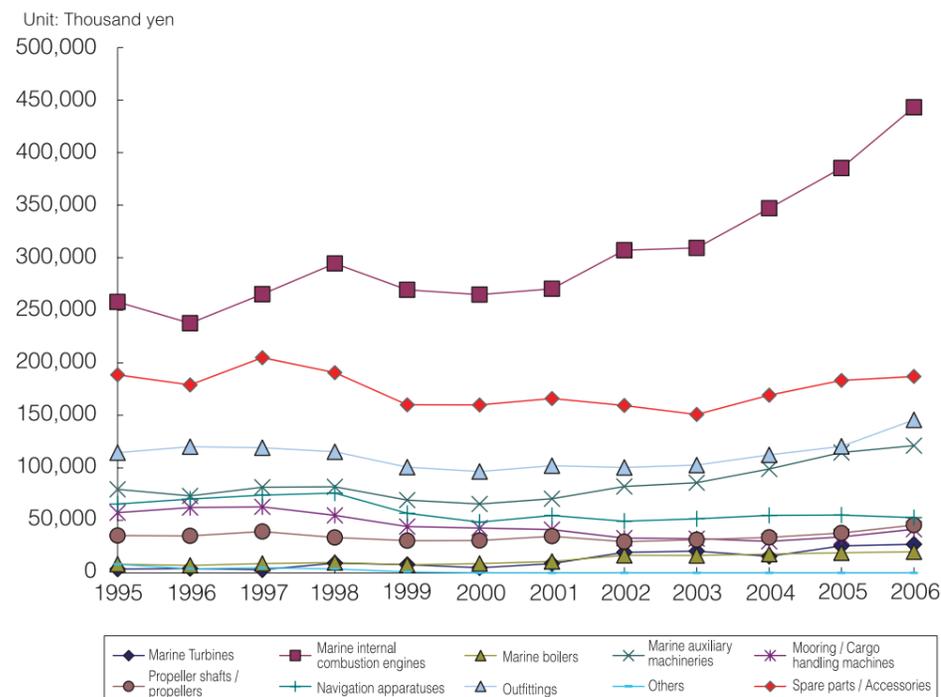
**2. Ship Machinery Industries**

The value of products produced by the Japanese ship machinery industries in 2006 recorded a large increase, amounting to 1,084.2 billion yen (up 11.1% from the preceding year). With respect to diesel engines for ships, both the total value and engine output of diesel engines produced in each category increased; those of large-sized diesel engines (with engine outputs of 10,000 horsepower or more) to 130.1 billion yen (up 13.7%) and 7.57 million horsepower (up 6.4%), those of medium-sized diesel engines (1,000 or more and also less than 10,000 horse power) to 67.1 billion yen (up 41.3%) and 3.59 million horsepower (up 37.1%), and those of small-

**Diagram 19: Transition in the amounts of products of Japanese ship machinery industries produced / exported and imported**



**Diagram 20: Transition in the amount of ship machinery industry products produced by item**



sized diesel engines (with engine outputs of less than 1,000 horsepower) to 40.8 billion yen (up 9.5%) and to 3.95 million horsepower (up 2.9%).

The export amount of ship machinery products in 2006 was 351.7 billion yen, up 18.8% from the preceding year, because export sales to Asia and the European region remained very strong and so on. The import amount increased as well to 41.9 billion yen, up 49.0% from the preceding year.

### 3. Development and Practical Application of New Technologies

At present, the targeted trajectory for Japan's marine industrial technology, which has faced up to the major challenge of strengthening its international competitiveness, is the reinforcement of explicit efforts to develop the technology for constructing a physical distribution system needed in the 21st century, dealing with the problems of environment / energy, contributing to the highly advanced use of the ocean, and opening up new undeveloped areas with creative technology, and so on, in which shipbuilding technology should play a pivotal role. To achieve such goals, the development / spread / practical use of ships and other items exploiting new technologies are underway and promoted.

#### Development of the Super Eco-Ship

The next-generation coastal vessel (Super Eco-Ship), for which research and development were conducted from fiscal 2001 to 2007, is a vessel of a new type, with excellent environmental performance to contribute to reduction in carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and fuel cost as well as economic efficiency, thanks to adoption of an electricity-driven system. It is expected that the spread of the Super Eco-Ship will greatly contribute to revitalization of coastal shipping, advance in modal shift, reduction the burden on the environment attributable to the field of transport, and so forth. In fiscal 2007, which is the last fiscal year for the project, a demonstration experiment on the real sea was conducted using the Ship mounted with innovative elemental technological instruments such as the double counterturn pod propeller, energy-saving support system, and so on.

The Super Eco-Ship has been progressively put into practical use thanks to the research results already obtained such as the new hull form. Based on the performance records of the Ship already put in actual service, it has been confirmed that the emission volume of CO<sub>2</sub> and NO<sub>x</sub> was reduced by 10% or more and about 30% respectively, and fuel efficiency was substantially improved (by 10% or more), winning favorable recognition with comments like, "You can rest well as it is quiet inside," "You can easily navigate even when the sea conditions are rough and severe," and so on.

#### Ten-mode marine project

Since the fuel efficiency of a ship changes greatly, affected by the waves, wind, and tide, it has been difficult to assess at the design stage of a ship the fuel efficiency in the actual state of navigation. In view of this, an objective indicator (actual fuel efficiency indicator) that can assess at the design stage of a ship the fuel efficiency in the actual state of navigation will be developed to allow the ship-owner to select a new ship from the viewpoint of fuel efficiency, thereby promoting the spread of ships excellent in performance on the real sea, with a view to reducing the emission volume of CO<sub>2</sub> from ships.

In fiscal 2008, a simulation computing method and a tank test method to calculate the actual fuel efficiency indicator will be developed, and the result of calculation using the data measured actually on ship will be verified.

### Research and development for a platform on the high seas

The importance of appropriate conservation, control, and sustainable utilization of marine products, minerals, resources, and so forth related to the sea is increasing, as energy and food problems are becoming progressively more apparent, following global warming as well as the growth of China and other countries, rising interest across the world in the development of marine mineral resources such as rare metals essential for IT-related instruments, and so forth. With such circumstances in the background, research and development were initiated for a platform on the high seas under the 4-year plan from fiscal 2007 to 2010 for the purpose of advancing Japan's ocean utilization by establishing a floating structure technology that is to be the basis of utilization of space on the sea in order to promote the utilization of vast unutilized space and natural energy available on and in the ocean on a long-term basis, and by enhancing the reliability of the floating structure, reduction in burden on environment and cost as well as higher efficiency in designing.

More specifically, a balanced designing method aimed at keeping balance among safety, economic efficiency, and impact on the environment will be developed for the floating structure capable of responding flexibly to diverse forms of utilization on and in the deep sea.

### Development of Natural Gas Hydrate (NGH) Carrier

Since Natural Gas Hydrate (NGH = a solid material in which molecules of natural gas are surrounded by those of water in a basket-like state) transforms itself into the stable solid material at minus 20°C, it can help limit the initial investment required in manufacturing plants and transporting ships and so forth, in comparison to liquefied natural gas (LNG), that transforms at minus 162°C, meaning NGH can enable the development of many medium- and small-sized gas fields that are left undeveloped in Oceania and the South East Asian region. Consequently, NGH is considered to be a promising technology to cope with future expanded demand.

This development targets optimization of the system required for the marine transport of NGH and so forth, to complete the NGH transportation chain, consisting of "manufacture", "marine transport" and "regasification", and to contribute to securing the stable future supply of natural gas.

In fiscal 2008, development of a cargo-handling system and basic design of an NGH carrier based on the development conducted hitherto will be implemented. In addition, studies on the safety standard aimed at practical use and so forth will continue to be conducted.

### Research and study of a coordinated navigation support system

Since 2007, research and study has got underway to construct a coordinated navigation support system that enables ships to coordinate with others by conveying messages to them promptly and unfailingly, concerning their own steering intention.

### Practical use of megafloats

Research and development were conducted from fiscal 1995 to 2000 into megafloat, a product featuring the latest in cutting-edge technology from Japan, and including features such as earthquake-resistance and environmental-friendliness, to promote the smooth construction of social capital and capitalize on the use of ocean space.

The Ministry of Land, Infrastructure, Transport and Tourism promotes the practical use and spread of megafloats, for which various uses are conceived, such as port facilities, including a container terminal, energy base and leisure facilities, in addition to an airport and information backup base.

## Chapter 3: Section of Seafarers

### 1. Current State of Seafarers and the Tasks Involved

#### Status of the number of seafarers, etc.

The number of seafarers (including reserve seafarers), having peaked at about 278 thousand in the year of 1974, has continued to decline ever since, in both categories of oceangoing ships and fishing boats. The factors behind this decline in both categories include the increasingly severe international competition in the area of ocean transport, and a falling number of fishing boats, due to more stringent international reinforcement of fishing regulations and so on.

With respect to the age-related composition of seafarers, the middle-aged and elder middle-aged (over 45 years old) accounted for 55% in 2006, as compared to 49.1% in 1995, showing a continued tendency toward aging.

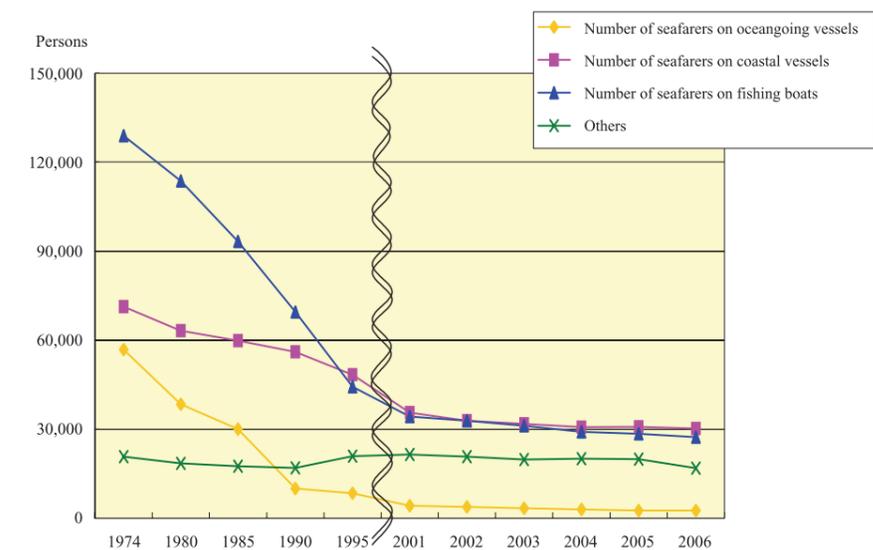
### 2. Education / Employment of Seafarers

#### Education / development of seafarers

The Marine Technical Education Agency was inaugurated on April 1, 2006, unifying the Marine Technical College and the School for Seafarers Training, because it was necessary to proceed with a review of the organization / operation of seafarer training institutes in order to

Diagram 21: Transition in the number of Japanese seafarers

	1974	1980	1985	1990	1995	2001	2002	2003	2004	2005	2006
Number of seafarers on oceangoing vessels	56,833	38,425	30,013	10,084	8,438	4,233	3,880	3,336	3,008	2,625	2,650
Number of seafarers on coastal vessels	71,269	63,208	59,834	56,100	48,333	35,606	32,860	31,886	30,708	30,762	30,277
Number of seafarers on fishing boats	128,831	113,630	93,278	69,486	44,342	34,267	32,897	31,185	29,099	28,444	27,347
Others	20,711	18,507	17,542	16,973	20,925	21,541	20,765	19,801	20,077	19,926	16,907
Total	277,644	233,770	200,667	152,643	122,038	95,647	90,402	86,208	82,892	81,757	77,181



- Surveyed by the Maritime Bureau (Up to 2005, figures are based on Seafarer Statistics.)
- The number of seafarers is the total of that of crew and reserve seafarers employed by Japanese ship-owners.
- The number of others is that of seafarers manned on tugboats, barges and government and other public office ships.
- The number of seafarers excludes that of foreign seafarers. (Numbers were modified accordingly, tracing them back into the past.)

respond more accurately to the needs of the maritime industry as a whole, while targeting more efficient and effective operation.

#### **Measures for the employment of seafarers**

Given the increasing need for the smooth transfer of the seafaring workforce among business operators, measures are taken to promote the same; reducing the mismatch between the needs of jobseekers and employers by ensuring the former have a workplace suited to their ability, where they can make the best use of their skills.

### **3. Improvement in the Working Environment**

#### **Efforts to secure adequate labor conditions and manning standards**

In order to secure adequate labor conditions and working environment for seafarers, taking into consideration the particularity of labor on the sea, the necessary standards for the labor conditions such as working hours, holidays and wages as well as the manning standards are established under the Mariners Law and so forth, while a review is conducted to comply with the updated needs.

With a view to securing systems required for safe navigation, such as the number of rating forming part of navigational watch, an obligation has been imposed as from April, 2006 to insist that at least one seafarer in possession of a certification of at least 6th-grade maritime officer (navigation), be posted as the officer on navigational watch on board sea-going ships, excluding those of less than 20 gross tons and fishing vessels, which usually navigate in inland water or in water within, or closely adjacent to, sheltered waters or area where port regulations apply. In addition to this obligation, to promote the acquisition of the 6th-grade maritime officer certification, measures are taken to facilitate increased opportunities for acquisition, such as the unified implementation of training program and certification course, an expansion of the limit on the number of those taking such program courses, flexible implementation of extra tests and so on.

#### **Safety and health at work as well as disaster prevention activities for seafarers**

In November 2007, the 9th basic plan concerning disaster prevention for seafarers was drawn up for the period starting from fiscal 2008. The 2008 implementation plan concerning disaster prevention for seafarers based on it (drawn up in March 2008) prioritizes efforts towards the strict requirement of wearing survival suits during work and reduction in incidents of "falling" and "getting pinched," accounting for a high percentage of disasters involving death and injury, and, at the same time, aims at promoting measures to further prevent disasters involving seafarers, such as those to prevent disasters involving death and injury in handling an increase in the number of aged seafarers, to prevent lifestyle-related diseases, and to have the importance of prevention of health hazards caused by asbestos known thoroughly.

### **4. International Cooperation in the Area of Seafarers**

Many seafarers from the Asian region are on board ships of the merchant fleet of the world including Japan. Nurture of excellent seafarers in the Asian region greatly affects the development of marine transport not only in their home countries but also in Japan, and, at the same time, largely contributes to the safe navigation of ships, assurance of safety on the sea, and conservation of the ocean environment in the oceans of the world including the waters around Japan.

In view of this, Japan is actively promoting international cooperation in the field of seafarers for the purpose of making wide use of its knowledge on seafarers for international cooperation and contributing to nurturing of seafarers in developing countries.

## **Chapter 4: Assurance of Maritime Safety / Security and Conservation of the Environment**

### **1. Measures to Secure Maritime Safety**

#### **Securing safety for ships**

The Maritime Quality Management System (QMS), a quality control system governing operational execution in individual departments for ship inspection, the registration and measurement of tonnage and the supervision of foreign ships was constructed, with system operation having commenced in December, 2005, and ISO9001 certification of that QMS was obtained in June, 2006.

#### **Securing safe navigation via a licensing system and so on**

Ship-owners and so on must have ship officers on board, complying with shipping crew staffing standards based on the size of the ship, navigation area etc. As of the end of March, 2008, the total of those holding maritime technical officer's licenses numbered about 370,000.

The piloting system is a system that pinpoints spots where shipping traffic is congested, while dangerous paths of marine traffic are designated as pilotage zones (35 zones nationwide) and a pilot licensed by the Minister of Land, Infrastructure, Transport and Tourism (There were 658 pilots nationwide as of the end of March, 2008. In fiscal 2007, 41 people obtained the pilot's license.) must be on board any ship traversing any of such pilotage zones and guide the ship safely and smoothly. By securing such a system to constantly provide the user with a piloting service, in which the efficiency / adequacy of the piloting operation is enhanced, the education for nurturing pilots is improved / reinforced and so forth, which is intended to further improve the safety of ship navigation.

### **2. Measures to Ensure Security**

#### **Law for the Security of Ships in International Navigation and Port Facilities**

The owners of ships engaged in international navigation are obligated to prepare ship security rules, containing the items necessary to ensure security, and obtain the relevant approval from the Minister of Land, Infrastructure, Transport and Tourism. Once obtained, the ship security certificate issued by the Minister of Land, Infrastructure, Transport and Tourism shall be kept within the ship. As of April 1, 2008, ship security certificates had been granted to 208 Japanese-flag vessels.

With regard to port facilities, the managers of international port facilities have been obligated to prepare pier security rules, containing the items needed to ensure security. As of July 1, 2007, pier security rules had been prepared for 129 ports nationwide.

### **3. Measures Toward Environmental Conservation**

#### **Efforts aiming for international regulation with respect to the prevention of pollution from ships**

In 1983, Japan joined the "International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto" (MARPOL Convention), and established a domestic law, "Law Relating to the Prevention of Marine Pollution and Maritime Disaster" to comply with the same.

#### **Efforts aiming for international regulation with respect to the prevention of air pollution attributable to ships**

In the deliberation for tightening the regulation against NOx at the IMO, it was agreed to implement a tighter regulation in 2 stages before anything else. That is to say, it was agreed that the regulation is to be put into force around 2011 in the first stage at the level where implementation is possible with the technology to reduce NOx already established (secondary regulation), and in the second stage, the regulation is to be implemented around 2016 at the level where improved technology to reduce NOx is envisaged to be ready for utilization (tertiary regulation). With respect to the secondary regulation, consensus was formed at a relatively early stage, though regarding the tertiary regulation, Japan proposed a regional regulation to reduce the regulated value of NOx by 80% from the current level in limited specific coastal areas where improvement in the air environment is needed, while, on the other hand, Europe proposed a total global regulation to reduce the regulated value of NOx by 40~50% from the current level in all ocean areas across the world. Japan's proposal was predicated on the technology of leading the gas emitted from the engine capable of reducing NOx substantially to treatment equipment and decomposing NOx (emission gas aftertreatment technology), while Europe's proposal was based on the technology of reducing NOx generated within the engine by improvement of the engine itself. At the beginning, the discussion advanced in a split manner with each of the 2 parties supporting its own position. Nevertheless, Europe came to understand the rationality of the regional regulation proposed by Japan, that is to say, while a ship is navigating on the high seas, priority should be placed on reduction in fuel cost and CO<sub>2</sub> rather than strict regulation against NOx, which should be enforced in specific coastal areas where reduction in NOx is highly required, among other things. As a result, the proposed amendment of the convention incorporating Japan's proposal was approved at the 57th meeting of the Maritime Environment Protection Committee (MEPC57) held in April this year.

#### **Efforts targeting international regulation with respect to the control of ballast water**

As the "International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004" (Ballast Water Management Convention) was adopted at the IMO in February 2004, ballast water processing equipment has actively been developed in many countries worldwide, including Japan.

In addition, over three years from fiscal 2003, Japan supported the research and development of a new type of vessel (non-ballast water ship) capable of navigating safely without carrying ballast water as a drastic measure to combat environmental problems resulting from ballast water in transit. As the results, the inclined bottom hull form was developed. Moreover, as it has been confirmed that the non-ballast ship performs satisfactorily in comparison with a traditional ship, efforts to ensure the practical use and spread of the new hull form will henceforth be made.

#### **Efforts to solve the problem of oil pollution caused by ships**

Due to the partial revision of the "Act on Liability for Oil Pollution Damage," the some obligations were introduced to confirm the status of insurance coverage for ships which enter a port in Japan. These obligations are that the certificate issued by the Ministry of Land, Infrastructure, Transport and Tourism would have to be on board in principle, and that the status of insurance coverage would have to be reported in advance when entering a port in Japan. In addition, in cases where damages associated with bunker oil pollution occur, the shipowner etc. will now be liable without fault in principle.

#### **Countermeasures against asbestos**

As the "Law for the Relief of Health Hazard by Asbestos" came into effect on March 27, 2006, the decision was made to work for a prompt and stable achievement of relief at the expense of business operators, the government and local authorities as a whole, to avoid any gap emerging among those who suffer from asbestos-related health hazards.

At present, in Japan, the new use of material containing asbestos on ships is totally prohibited. In addition, from the standpoint of preventing such health hazards caused by asbestos, efforts are made to provide seafarers working on board with thorough guidance in the shape of warnings and preventive measures when handling asbestos. At the same time, health consultations and so on are provided to those who were previously engaged in such work.

#### **4. Port State Control (PSC)**

In Japan, the PSC is implemented by 43 local offices and 128 PSC officers (as of fiscal 2008). In addition, Japan is implementing PSC within the framework under the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU), in cooperation with neighboring countries, and is also actively contributing to its technical cooperation program.

### **Chapter 5: Measures to Increase the Utilization of Small Ships and Promote Maritime Activities**

#### **Comprehensive measures for promoting the appropriate use of small boats**

Since marine leisure has now become one of the leisure activities for citizens, and, in addition, increased opportunities to enjoy rental boats or the nationwide deployment of "sea stations" and so on, has increased the familiarity of all people with water, the demand for marine leisure is expected to further increase. In order to promote the further use of small boats, efforts must be made to further improve the usage environment and thus deal with related problems such as a shortage of mooring sites, spread of the recycling system of FRP boats and an increase in the insurance coverage ratio for pleasure boats. In view of the importance of efforts, which take the actual circumstances of each region into consideration for attaining such goals, each of the district transport bureaus shall reinforce the coordination, information exchange and so on among related organizations, including local authorities, by holding a "Boat Use Promotion Measures Liaison Conference", and, at the same time, create a "Pleasure Boat Consultation Desk" to widely provide general users with related information and so on. In addition, by obligating everyone on board a wet bike to wear life jackets and so on, and thorough publicity / enlightenment on the licensing system for small boats, it is intended to promote the safe and sound use of small boats.