

New Vision for Maritime Traffic - a new development in maritime transport safety assurance

In Japan, fatalities and the number of missing persons involved in marine accidents tend to be decreasing as the number of marine accidents stays almost the same, but still many lives are lost every year.

It is suspected that the potential high risk of marine accidents may be caused by larger, faster vessels and foreign registered vessels, that are not totally aware of the Japanese navigation rules in the vicinity of the Japanese ports.

The Basic Act on Ocean Policy (effective July 2007) stipulates a comprehensive and systematic promotion of policies regarding the oceans. Responsibilities of the Government regarding assurance of efficient and stable maritime transportation as well as safety on the ocean are clearly set forth under this Act. A new approach by the maritime transportation safety administration, the goal of which is to establish a society without maritime accidents, is in demand to benefit economic development and a better society for citizens.

Additionally, installation of the Automatic Identification System (AIS) into vessels has been enacted as an obligation since July 2007, and it provides static information as well as dynamic information of vessels in real-time.

The Japan Coast Guard has been controlling and supporting vessel navigations to avoid collisions and shipwrecks with accurate tracking of data of vessels by upgrading AIS stations along the domestic seacoast.

The Japan Coast Guard established "New Vision for Maritime Traffic" for the coming generations as guidance to the new direction of the maritime traffic safety policy and specific measures.

(It was delivered at the MLIT Transport Policy Council Maritime Subcommittee, and approved by the Minister of MLIT in June 2008.)

● Principle measures of the “New Vision for Maritime Traffic”

The following 6 principle measures of the “New Vision for Maritime Traffic” are to be implemented for the next 5 years:

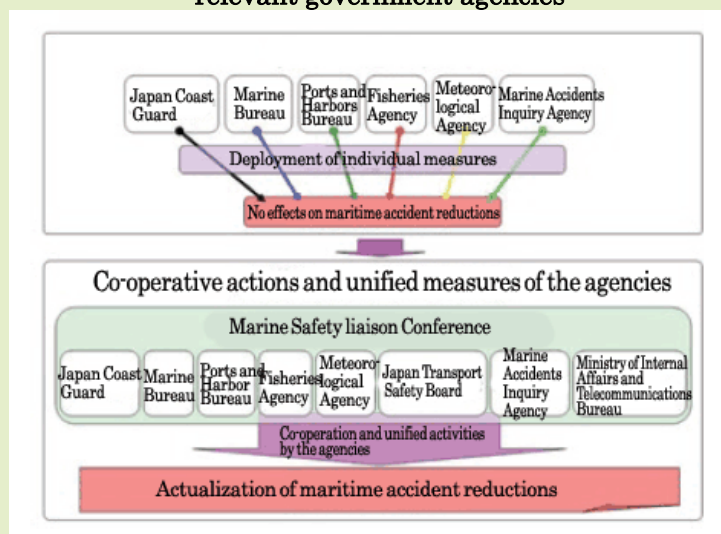
- 1 Reinforcement of maritime accident analysis and planning functions for counter measures.
- 2 Improvement of navigation safety measures and efficiency with availability of AIS.
- 3 Promotion of maritime accident prevention activities carefully enough to be appropriate to regional characteristics.
- 4 Provision of relevant safety information utilization characteristics.
- 5 Promotion of safety measures utilizing cutting-edge technologies such as IT.
- 6 Improvement and maintenance of aids to navigation.

1. Reinforcement of maritime accident analysis and planning functions for counter measures.

The Japan Coast Guard performs maritime accident analysis by taking advantage of on-site presence, and utilizes investigation analysis by the Transport Safety Board at the same time to reduce maritime accidents.

* AIS (Automatic Identification System) is a system used on ships for information (such as unique identification, size, course and speed) that can be automatically exchanged with other nearby ships. It requires AIS to be fitted aboard international voyaging ships with gross tonnage of 300 or more tons, passenger ships with grossmore tons, passenger ships with gross tonnage of 300 or less tons and non- international voyaging ships with gross tonnage of 500 or more tons.

Organization of Japan Coast Guard and relevant government agencies



In addition, the Marine Safety Liaison Conference was formed for the purpose of marine safety with the co-operation of relevant government agencies, and will perform accident prevention measures.

2. Improvement of navigation safety measures and efficiency with availability of AIS.

(1) Improvement of safety in congestion areas.

Narrow channels where traffic is congested with many vessels have potential hazards due to maritime accidents that trigger large scale chaos such as blocking traffic.

The Traffic Advisory Service Center will install a system to reinforce the effectiveness of safety measures such as making rules vary according to characteristics of its sea areas. Rectification measures will be taken to enforce such rules on occasions that are likely to lead to dangerous situations, and make collecting information from vessels an obligation. The utilization of AIS at the Traffic Advisory Service Center to organize vessel traffic will prevent the occurrence of dangerous situations that lead to marine accidents.

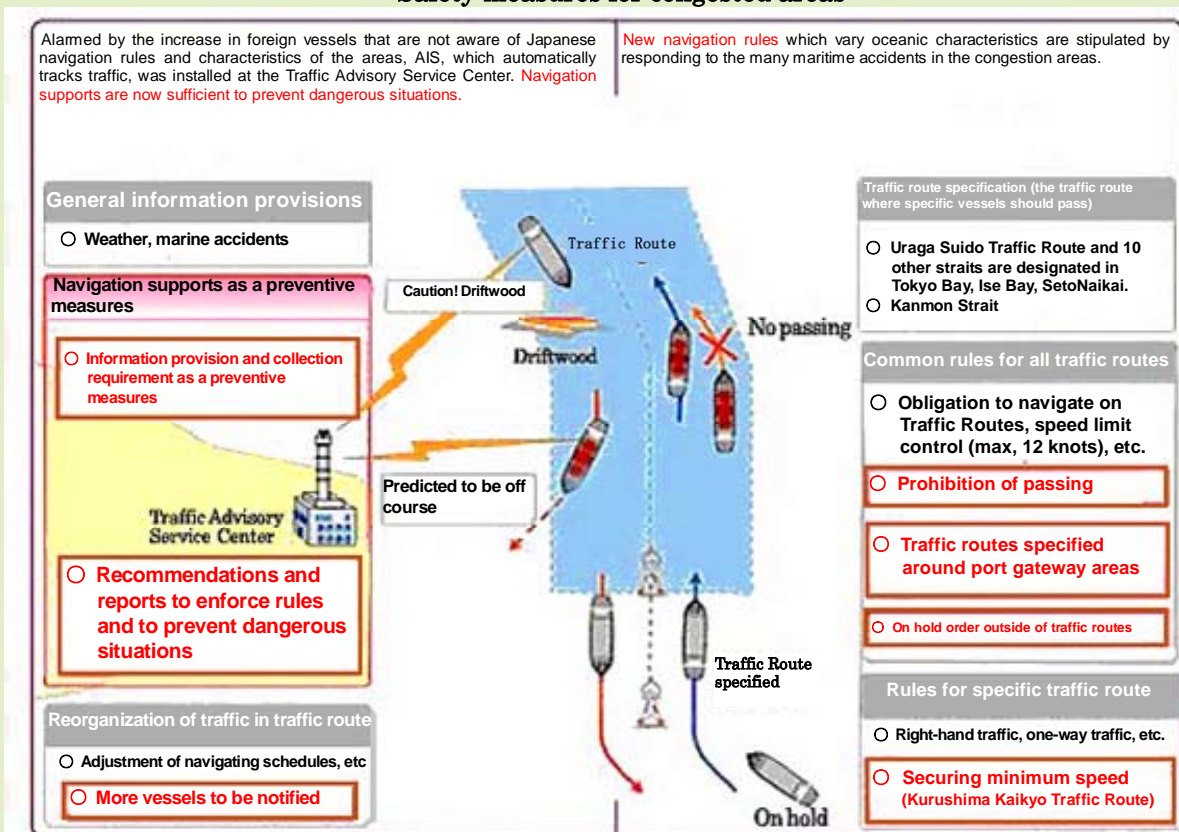
In addition, system reinforcement will be implemented to include installation of a marine control assistance system as well as information sharing with the patrol boats in the area. And such implementation will benefit the reinforcement of functions to efficiently track many vessels.

(2) Efficient flow of vessel traffic in ports/reinforcement of safety measures

Shipwrecks by large size ships within ports and surrounding ocean areas, as well as collisions and shipwrecks caused mainly by the mishandling of vessels, are increasing.

Installation of AIS, which tracks traffic of vessels in real-time, makes it possible for more vessels to navigate in the narrow channels and to reinforce traffic safety measures in the ports in the event of natural disasters such as typhoons. Improvement of traffic efficiency in the ports will be made while ensuring safety.

Safety measures for congested areas



3. Promotion of maritime accident prevention activities carefully enough to be appropriate to regional characteristics.

The key to ensuring the safety of marine leisure is making people aware of their own responsibility. The vital point is that government support the improvement and promotion of safety measures which are carried out voluntarily by respective regions, and help increase awareness of and familiarity with the skills of marine leisure for the inexperienced players in particular. Important as well is the making of safety education activities to be more effective and efficient.

Besides the fact that more than half the total of fatalities and missing in marine accidents is accounted for by fishing vessels, life jackets on fishing vessels are not used as much as they should be. Establishment and promotion of safety assurance systems, involving the Japan Fisheries Cooperative (JF) and the families of fishermen, will be carried out as well as implementing measurements appropriate to regional characteristics. Sufficient co-operation between the Fisheries Agency and local governments who have been acting on safety measures for the fisheries industry is needed as well.



Instruction while visiting fishing vessels

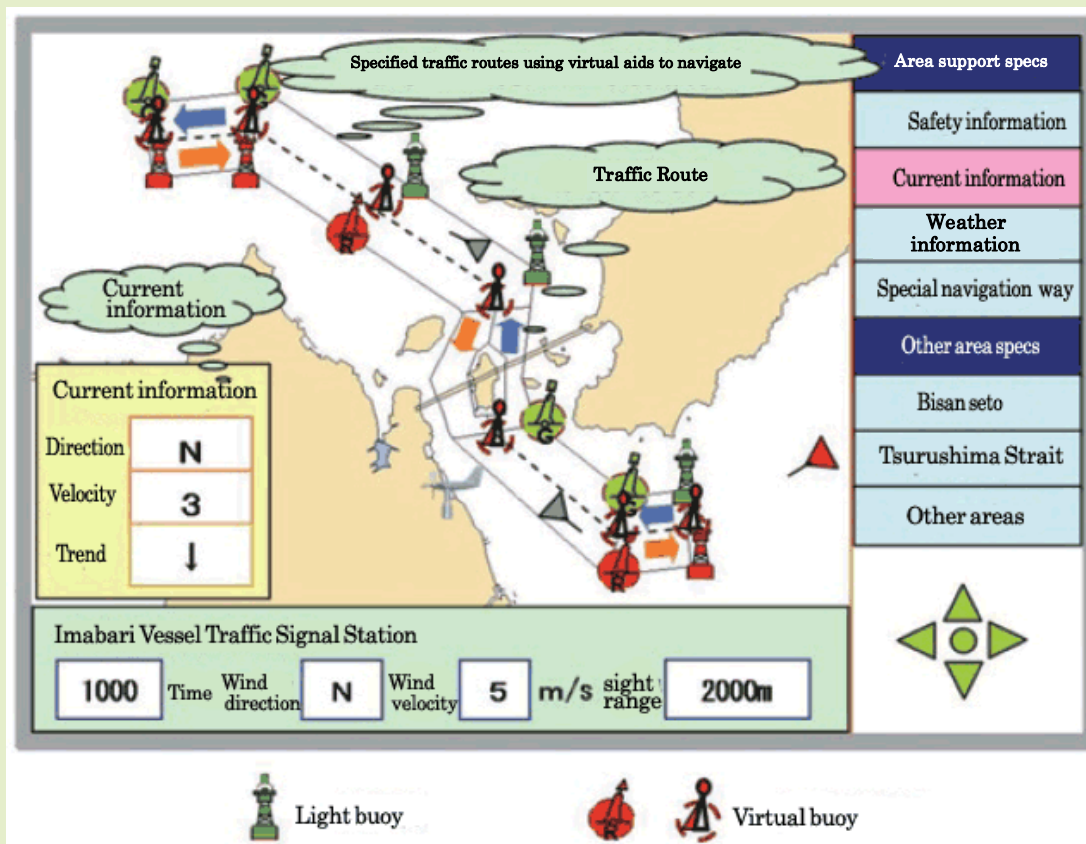
4. Provision of relevant safety information utilization characteristics.

As the technology develops of information provided and ways of distributing the information are diversifying. The provision of navigation support information by AIS and more sufficient information from MICS (Maritime Information and Communication System), which is mainly provided via web site and is accessible from computers and cell-phones, will improve convenience for users and efficiency for operations. Maritime related organizations need to provide practical information when it is necessary.

5. Promotion of safety measures utilizing cutting-edge technologies such as IT.

The ENSS (Electronic Navigation Support System) provides real-time visualized information such as virtual aids to navigation, meteorological and oceanological data, recommended courses, passage controlled areas and traffic control status on an AIS display. This system will be established in addition to the traditional written media through which such information used to be conveyed. This system makes it easy for navigators to obtain various kinds of safety information and will help to expand the use of AIS.

Image of ENSS showing virtual aids to navigate



6. Improvement and maintenance of aids to navigation.

Current locations of aids to navigation and its functions need to be reviewed as well as re-organization of vessel traffic flow. Maintenance and improvement of traffic safety will continue, because the use of navigation equipment on vessels is constantly expanding and becoming more sophisticated.

Moreover, navigation lights on Japan's coastal waters will be continuously replaced by light emitting diodes (LEDs), and Resilient Light Beacon, in order to increase visibility and recognition.

In addition, all these aids are lighted with LEDs powered by solar or other clean energy, which benefits in the reduction of CO2 emissions. Ocean wave protections and earthquake-resistance for aids to navigation facilities need to be improved to increase reliability in all weather conditions including earthquakes and typhoons.



Meshima Lighthouse using photovoltaic power

● Our goals

We are committed to enforcing the following policies aggressively to reach their respective goals.

- Collisions and shipwrecks in congested areas --

Goal: Reduction by half of marine accidents, which account for approximately 30% of collisions and shipwrecks.

- Maritime accidents under typhoons and other extreme weather in ports --

Goal: 0 accidents by large vessels in major ports which have safety protections installed.

- Maritime accidents by pleasure boats --

Goal: Approximately 20% reduction of maritime accidents by pleasure boats as well as fatalities and the number of missing persons that result from falling off of pleasure boats.