

Maritime Safety

Carriage of Cargoes and Containers

Fire Protection

Navigation

Automatic Identification Systems (AIS)

Charts, ECDIS

E-navigation

Electronic charts

Long-range identification and tracking of ships (LRIT)

Marine Electronic Highway

Ships' routing

Vessel Traffic Services

Voyage Data Recorder (VDR)

Places of refuge

Standard Marine Communication Phrases

Pilotage

Preventing Collisions

Radio

Communications and Search and Rescue

Ship Design and Equipment

Stability and Subdivision

Safety Regulations

Safety Topics

Maritime Security and Piracy

Marine Environment

Legal Affairs

Human Element

Facilitation

Member State Audit Scheme & Implementation Support

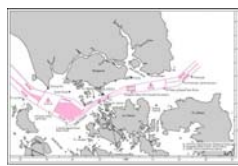
Technical Cooperation

Conferences

Reduction of administrative burdens

Circulars

Ships' routing



The practice of following predetermined routes for shipping originated in 1898 and was adopted, for reasons of safety, by shipping companies operating passenger ships across the North Atlantic. Related provisions were subsequently incorporated into the original SOLAS Convention.

Traffic separation schemes and other ship routing systems have now been established in most of the major congested, shipping areas of the world, and the number of collisions and groundings has often been dramatically reduced.

IMO's responsibility for ships' routing is enshrined in SOLAS Chapter V, which recognizes the Organization as the only international body for establishing such systems.

Rule 10 of the COLREGs prescribes the conduct of vessels when navigating through traffic separation schemes adopted by IMO. IMO's responsibilities are also determined under the United Nations Convention on Law of The Sea (UNCLOS), which designates

IMO as "the competent international organization" in matters of navigational safety, safety of shipping traffic and marine environmental protection.

Governments intending to establish a new routing system, or amend an existing one, must submit proposed routing measures to IMO's Sub-Committee on Navigation, Communication and Search and Rescue (NCSR), which will then evaluate the proposal and make a recommendation regarding its adoption. The recommendation is then passed to the MSC for adoption.

As well as traffic separation schemes, other routing measures adopted by IMO to improve safety at sea include two-way routes, recommended tracks, deep water routes (for the benefit primarily of ships whose ability to manoeuvre is constrained by their draught), precautionary areas (where ships must navigate with particular caution), and areas to be avoided (for reasons of exceptional danger or especially sensitive ecological and environmental factors).

Ships' routing systems, including traffic separation schemes, that have been adopted by IMO, are contained in the recent IMO Publication, *Ships' Routing* - currently 2013 Edition, which is updated when schemes are amended or new ones added.

The publication includes General provisions on ships' routing, which are aimed at standardizing the design, development, charted presentation and use of routing measures adopted by IMO. The provisions state that the objective of ships' routing is to "improve the safety of navigation in converging areas and in areas where the density of traffic is great or where freedom of movement of shipping is inhibited by restricted searoom, the existence of obstructions to navigation, limited depths or unfavourable meteorological conditions".

Elements used in traffic routing systems include:

- traffic separation scheme: a routing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes
- traffic lane: an area within defined limits in which one-way traffic is established. natural obstacles, including those forming separation zones, may constitute a boundary
- separation zone or line: a zone or line separating traffic lanes in which ships are proceeding in opposite or nearly opposite directions; or separating a traffic lane from the adjacent sea area, or separating traffic lanes designated for particular classes of ship proceeding in the same direction
- roundabout: a separation point or circular separation zone and a circular traffic lane within defined limits
- inshore traffic zone: a designated area between the landward boundary of a traffic separation scheme and the adjacent coast
- recommended route: a route of undefined width, for the convenience of ships in transit, which is often marked by centreline buoys
- deep-water route: a route within defined limits which has been accurately surveyed for clearance of sea bottom and submerged articles
- precautionary area: an area within defined limits where ships must navigate with particular caution and within which the direction of flow of traffic may be recommended
- area to be avoided: an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all ships, or by certain classes of ships

See also: MSC/Circ.1060 Guidance Note on the Preparation of Proposals on Ships' Routing Systems and Ship Reporting Systems.

Weather routing

Weather conditions can also affect a ship's navigation, and in 1983 IMO adopted resolution A.528(13), Recommendation on Weather Routing, which recognizes that weather routing - by which ships are provided with "optimum routes" to avoid bad weather - can aid safety. It recommends Governments to advise ships flying their flags of the availability of weather routing information, particularly that provided by services listed by the World Meteorological Organization.

Related Documents

- [MSC/Circ.1060 Guidance Note on the Preparation of Proposals on Ships' Routing Systems and Ship Reporting Systems \(133 kB\)](#)
- [Model document templates for ships' routing system and ship reporting system proposals \(68 kB\)](#)
- [SOLAS regulations V/10 - Ships' routing & V/11 - Ship Reporting Systems \(54 kB\)](#)
- [Historical background on Ships' Routing \(11 kB\)](#)