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 VII, which recognizes the organization as the only international body for establishing such systems.

Rule 15 of the COLREGs prescribes the conduct of vessels when navigating through traffic separation schemes 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”.

Ships' routeing 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' routeing, which are aimed at standardizing the design, development, charted presentation and use of routeing measures which is updated when schemes are amended or new ones added.

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 maneuver 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).

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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 ships proceeding in the same direction;
- Roundabout: a separation point or circular separation zone and a circular traffic lane within defined limits;
- Median traffic zone: a designated area between the landward boundaries 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 centrevirage buoys;
- Deep-water route: a route within defined limits which has been accurately surveyed for clearance of sea bed and submersed obstacles;
- Precautionary area: an area where 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’ Routeing Systems and Ship Reporting Systems.

Ships' routing

Weather routing

Whether conditions also affect a ship’s navigation, and in 1963 IMO adopted resolution A.262(13), Recommendation on Weather Routing, which recognizes that weather routing - by which ships are provided with “optimum routes” to avoid bad weather - not only helps safety. It recommends Governments to advise ships flying their flags of the availability of weather routing information, particularly provided by services listed by the World Meteorological Organization.