

Introduction

The Maritime Safety Committee, at its 101st session (5 to 14 June 2019), adopted resolution MSC. 467(101) on Guidance on the definition and harmonization of the format and structure of Maritime Services in the context of e-navigation and agreed to consolidate the descriptions of Maritime Services and to consider them together with all involved international organizations and interested Member States in order to harmonize the provision and exchange of maritime information and data.

In doing so, the Committee also approved MSC.1/Circ.1610 containing initial descriptions of Maritime Services in the context of e-navigation, which would be periodically updated, taking into account developments and related work on harmonization. Since the approval of MSC.1/Circ.1610, the initial descriptions of Maritime Services have been widely utilized, tested or further developed based on experiences gained.

As a result, the Facilitation Committee, at its forty-sixth and forty-seventh sessions, approved revised descriptions of Maritime Services within its remit. The Sub-Committee on Navigation, Communications and Search and Rescue, at its tenth session, also reviewed and updated the descriptions of Maritime Services within its remit and prepared a revision of MSC.1/Circ.1610.

The Maritime Safety Committee, at its 108th session (15 to 24 May 2024), approved the present revised circular containing the updated descriptions of Maritime Services in the context of e-navigation, as set out in the annex, consolidating the work of the Facilitation Committee and the Sub-Committee on Navigation, Communications and Search and Rescue based on information submitted by Member States and international organizations acting as domain coordinating bodies. This circular supersedes MSC.1/Circ.1610.



Descriptions of maritime services in the context of e-navigation

According to this circular, the maritime services have been categorized to 15 items, which described in below table:

Maritime Services
MS 1 – Vessel traffic service
MS 2 – Aids to navigation service
MS 3 – (Reserved for future use)
MS 4 – Port support service
MS 5 – Maritime safety information service
MS 6 – Pilotage service
MS 7 – Tug service
MS 8 – Vessel shore reporting
MS 9 – Telemedical assistance service
MS 10 – Maritime assistance service
MS 11 – Nautical chart service
MS 12 – Nautical publications service
MS 13 – Ice navigation service
MS 14 – Meteorological information service
MS 15 – Real-time hydrographic and environmental information services
MS 16 – Search and rescue service

The circular expands upon each of these services by providing information such as:

- The organization which has submitted the maritime service
- Coordinating bodies involved in the maritime service
- A detailed description of the maritime service
- The purpose of the maritime service
- The operational approach to maximize the efficiency in the execution of the maritime service
- The needs of the users of the maritime service
- The needed information to execute the maritime service
- Associated technical services
- Relation to other Maritime Services

MS 1 – Vessel traffic service: This Maritime Service in the context of e-navigation is a digital information service for the exchange of vessel traffic services (VTS) information by electronic means between a VTS and ships in the VTS area and shore-based users. The Maritime Service in the context of e-navigation means the exchange of VTS information by electronic means, which should not be confused with operational services for a VTS independent of the way of service provision.



MS 2 – Aids to navigation service: This Maritime Service describes the provision of aids to navigation (AtoN) deployed to enhance the safety of navigation.

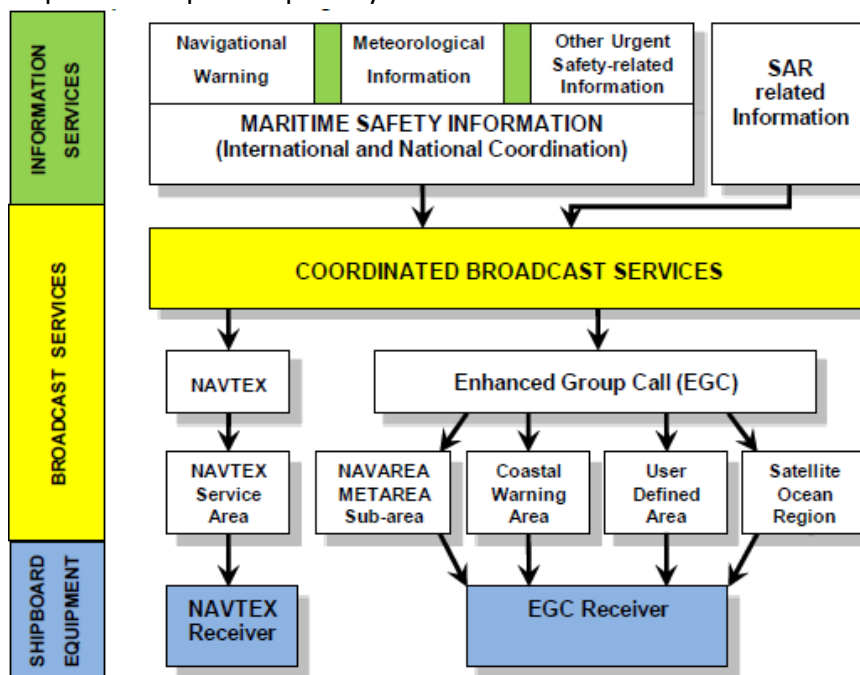
IALA defines an AtoN as a device, system or service, external to vessels, designed and operated to enhance safe and efficient navigation of individual vessels and/or vessel traffic. For the purposes of this service description, positioning, navigation and timing (PNT) services are included. However, the description of vessel traffic services (VTS) is contained in a separate Maritime Service.



MS 4 – Port support service: Port support service (PSS) is defined as a digital service in support of a ship calling at a port. It provides information necessary to organize and support the port call and a PSS varies depending on local needs. PSS may relay information from related nautical, vessel or cargo services and may incorporate other services if the respective Maritime Service is not available at a port. Examples of PSS include:

- Nautical data
- Operational data

MS 5 – Maritime safety information Service: This Maritime Service describes the provision of navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships. The maritime safety information (MSI) service is the internationally and nationally coordinated network of broadcasts containing urgent information which is necessary for safe navigation, received in ships by equipment which automatically monitors the appropriate transmissions, displays information which is relevant to the ship and provides a print capability.



MS 6 – Pilotage service: Ships proceeding or leaving a port or a specific area should have easy access to information regarding the pilotage service provided. Information such as local regulations, contact, notices, means of boarding, boarding point, limitations or pilot booking procedure, could be accessible by electronic means, where available.

The information provided through this service is not piloting information as pilotage is a service physically performed on board ships by duly qualified and certificated or licensed maritime pilots.

MS 7 – Tug service: This MS is intended to improve information regarding information about tug services needed in an area or port.



The need for tug services differs from port to port, the type of vessel and cargo. Traditionally, the user has received information from different sources. The Web is becoming more and more common. But there is still some information in analogue publications, from ship agents, VTS and operators.

In some cases, information about a tug service capacity and/or availability may be difficult to obtain owing to communication deficiencies.

Tug and escort vessels range from small vessels with limited capacity and service in ports and rivers to ocean-going vessels built for complex operations and salvage. Service from tug and escort vessels contributes to the safety of navigation, protection of the marine environment, and efficiency of marine transportation by conducting different types of operations, such as:

- transportation (personnel and staff between port and anchorages)
- ship assistance (e.g. mooring)
- salvage (grounded ships or structures)
- shore
- towage (harbor/ocean)
- escort
- oil spill response

Tug services would encompass all kinds of tug propulsion systems, such as:

- Conventional
- Azimuth stern drive
- Tractor
- Rotor

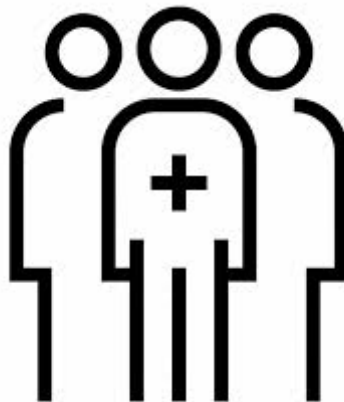
MS 8 – Vessel shore reporting: This MS provides information exchanges between shore and ship. It covers both:

- Ship-to-shore reporting typically connected to port calls; and
- Ship reporting systems linked to the safety of navigation.

The first is closely linked to the MSW concept in the FAL Convention of the Organization and the second, ship reporting systems as defined in SOLAS regulation V/11, is closely linked to ships' routing.

Ship reporting systems can be mandatory or non-mandatory. If so adopted by IMO, a ship reporting system will be mandatory for use by all ships, certain categories of ships, or ships carrying certain cargoes.

MS 9 – Tele medical assistance service: According to IMO/ILO resolution 164, the TMAS provider should be able to provide medical advice for seafarers 24h/day, 365 days/year. TMAS should be permanently staffed by physicians qualified in conducting remote consultations and who are well-versed in the particular nature of treatment on board ship.



Within maritime medicine, the prevailing view has been, for a long time, which a standardization of the TMAS services is both necessary and wanted. This would enhance the quality of the medical practice. A standardization of reporting and registering of medical events will also make a much better basis for advancement (MSC.1/Circ.1218 on Guidance on exchange of medical information between tele medical assistance services (TMAS) involved in international SAR operations and MSC/Circ.960 on Medical assistance at sea).

MS 10 – Maritime assistance service

The most common events requiring MAS are:

- Fire
- Explosion
- damage to the ship, including mechanical and/or structural failure
- collision
- pollution
- impaired vessel stability
- grounding

Resolution A. 950(23) on Maritime assistance services (MAS) specifies that the circumstances of a ship's operation that involve MAS are not those requiring the rescue of persons. Three situations can arise:

- The ship is involved in an incident (e.g. loss of cargo, accidental discharge of oil) that does not impair its seakeeping ability but nevertheless has to be reported;
- The ship, according to its master's assessment, is in need of assistance but is not in a distress situation (about to sink, fire developing, etc.) that requires the rescue of those on board; and
- The ship is found to be in a distress situation and those on board have already been rescued, with the possible exception of those who have remained aboard or have been placed on board to attempt to deal with the ship's situation.

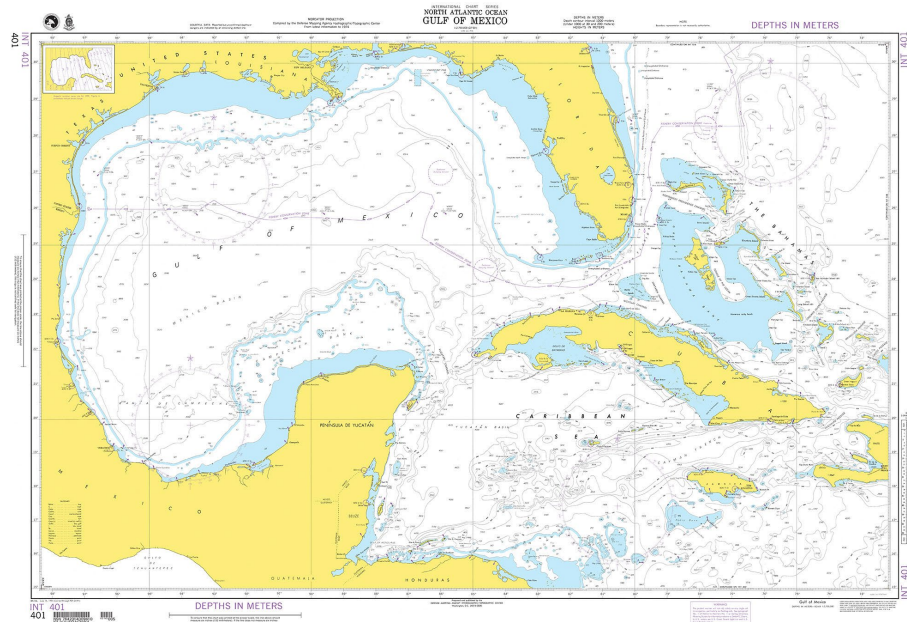
However, if in an evolving situation, the persons on board find themselves in distress, the involvement of MRCC will have priority over MAS. Accordingly, MAS is responsible only for receiving and transmitting communications and monitoring the situation.

Development of scenarios including their potential consequences with regard to the safety of persons and pollution, fire, toxic and explosion risks.

MS 11 – Nautical chart service

This Maritime Service provides geospatial information (in digital and/or printed format) to support safe maritime navigation. The types of information depicted in nautical charts include the configuration of the shoreline and sea floor, water depths, locations of dangers to navigation, locations and characteristics of aids to navigation, anchorages, and other features relevant to maritime navigation. SOLAS regulation V/2.2 defines a nautical chart or nautical publication as "a special-purpose map or book, or a specially compiled database from which such a map or book is derived, that is issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution and is designed to meet the requirements of marine navigation."

A nautical chart service should include updated functions to ensure that all navigational products and service are kept current. Update information should be delivered in a standardized format. Distribution networks should conform to standardized data authentication and distribution standards to ensure their safe and secure transmission and delivery.



MS 12 – Nautical publications service

This Maritime Service delivers a set of nautical information available for a particular marine area. The aim of the nautical publications service is to provide information as a support to the navigation process. This comprises information to complement nautical charts, such as information on ports and sea areas, as well as the contact information of authorities and services for a sea area or port. It further describes regulations, restrictions, recommendations and other nautical information applicable in these areas.

Nautical publications services include:

- The information traditionally provided within updated nautical publications such as sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage (SOLAS regulation V/27). The majority of the information can be delivered from shore to ship in a digital format. This will enhance the usability, increase the quality and update rate and give the navigator an opportunity to tailor the information needed;
- A discovery service to allow users to determine what is available in their area of interest (geographic and context);
- An ordering service to allow users to order the information required from the service providers identified; and
- A delivery service to allow the user to receive the information required.

MS 13 – Ice navigation service

To provide ice navigation information to maritime users in the vicinity of ice-infested regions.

MS 14 – Meteorological information service

To provide meteorological information to maritime users.

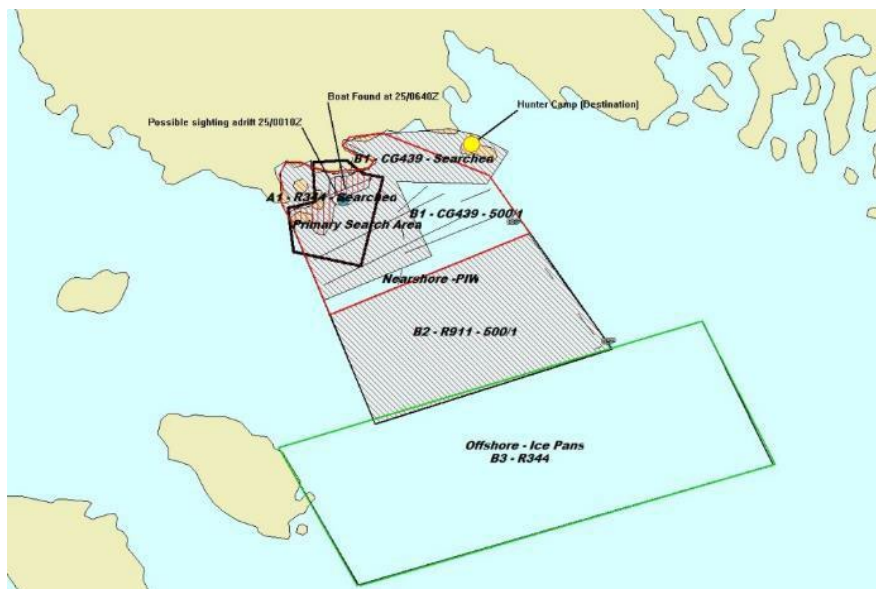
MS 15 – Real-time hydrographic and environmental information services

Oceanic and inland water level information is essential for the determination of under-keel clearance required for safe navigation. Real-time water level information is important for applications such as route planning port entry and the determination of tidal prediction. Water level information consists of:

- Observed and/or forecasted time series at one or more fixed stations;
- Forecasted gridded forecasts of water level for one or more regions; and/or
- A gridded hydroid surface.

MS 16 – Search and rescue service

The International Convention on Maritime Search and Rescue, 1979 (SAR Convention) was aimed at developing an international SAR plan to ensure that everywhere in the world, the rescue of persons in distress at sea would be coordinated by a responsible SAR organization or by cooperation between neighboring SAR organizations.



Following the adoption of the 1979 SAR Convention, the Maritime Safety Committee divided the world's oceans into 13 search and rescue areas, with provisional SAR plans in place for each of these areas. In each area, the countries concerned have search and rescue regions for which they are responsible.

Parties to the Convention must ensure that arrangements are made for the provision of adequate SAR services in their coastal waters. Parties are encouraged to enter into SAR agreements with neighboring States involving the establishment of SAR regions, the pooling of facilities, establishment of common procedures, training and liaison visits. The Convention also states that Parties should take measures to expedite entry into its territorial waters of rescue units from other Parties.

The Convention then goes on to establish preparatory measures which should be taken, including the establishment of rescue coordination centers (RCCs) and sub-centers. It establishes a common glossary to be used by all Parties and outlines operating procedures to be followed in the event of emergencies/alerts and during SAR operations. This includes the designation of an on-scene commander and their duties.

IMO and the International Civil Aviation Organization (ICAO) jointly publish the three-volume IAMSAR Manual. This manual provides international guidelines for a common aviation and maritime approach to organizing and providing SAR services. The three volumes are divided as follows:

- Volume I, Organization and Management;
- Volume II, Mission Coordination; and
- Volume III, Mobile Facilities.