

## ANNEX 3

### PRELIMINAY MARITIME SERVICE PORTFOLIOS

No.	Identified Services	Identified Responsible Service Provider	Short Description
MSP1	VTS Information Service (IS)	VTS Authority	<p>The VTS IS is defined by IMO as "a service to ensure that essential information becomes available in time for on-board navigational decision making".</p> <p>IS is provided by broadcasting information at fixed times and intervals or when deemed necessary by the VTS or at the request of a vessel.</p> <p>An Information Service involves maintaining a traffic image and allows interaction with traffic and response to developing traffic situations. An Information Service should provide essential and timely information to assist the onboard decision-making process, which may include but is not limited to:</p> <ul style="list-style-type: none"> <li>• The position, identity, intention and destination of vessels;</li> <li>• Amendments and changes in promulgated information concerning the VTS area such as boundaries, procedures, radio frequencies, reporting points;</li> <li>• The mandatory reporting of vessel traffic movements;</li> <li>• Meteorological and hydrological conditions, notices to mariners, status of aids to navigation;</li> <li>• Maneuverability limitations of vessels in the VTS area that may impose restrictions on the navigation of other vessels, or any other potential hindrances: or</li> <li>• Any information concerning the safe navigation of the vessel.</li> </ul> <p>The VTS IS is designed to improve the safety and efficiency of vessel traffic and to protect the environment. Among other, such services include catalogue such as: Routing, Channel info, Security level, Berthing, Anchorage, Time slot, Traffic monitoring and assessment, Waterway conditions, Weather, Navigational hazards, any other factors that may influence the vessel's transit, Reports on the position, Identity and intentions of other traffic.</p>
MSP2	Navigational Assistance Service (NAS)	National Competent VTS Authority/ Coastal or Port Authority	<p>The NAS is defined by IMO as "a service to assist on-board navigational decision-making and to monitor its effects".</p> <p>NAS may be provided on request by a vessel in circumstances such as equipment failure or navigational unfamiliarity. Specific examples of developing situations where NAS may be provided by the VTS include:</p> <p>Risk of grounding; Vessel deviating from the recommended track or <b>sailing plan</b>; Vessel unsure of its position or unable to determine its position; Vessel unsure of the route to its destination; Assistance to a vessel to an anchoring position; Vessel navigational or maneuvering equipment casualty; Inclement conditions (e.g. low visibility, high winds); Potential collision between vessels; Potential collision with a fixed object or hazard; Assistance to a vessel to support the unexpected incapacity of a key member of the bridge team, on the request of the master.</p>

No.	Identified Services	Identified Responsible Service Provider	Short Description
MSP3	Traffic Organization Service (TOS)	National Competent VTS Authority/ Coastal or Port Authority	<p>The TOS is defined by IMO as "a service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within the VTS area".</p> <p>The purpose of the TOS is to prevent hazardous situations from developing and to ensure safe and efficient navigation through the VTS area.</p> <p>TOS should be provided when the VTS is authorized to provide services, such as when:</p> <ul style="list-style-type: none"><li>• vessel movements need to be planned or prioritized to prevent congestion or dangerous situations;</li><li>• special transports or vessels with hazardous or polluting cargo may affect the flow of other traffic and need to be organized;</li><li>• an operating system of traffic clearances or sailing plans, or both, has been established;</li><li>• the allocation of space needs to be organized;</li><li>• mandatory reporting of movements in the VTS area has been established;</li><li>• special routes should be followed;</li><li>• speed limits should be observed;</li><li>• the VTS observes a developing situation and deems it necessary to interact and coordinate vessel traffic;</li><li>• nautical activities (e.g. sailing regattas) or marine works in-progress (such as dredging or submarine cable-laying) may interfere with the flow of vessel movement.</li></ul>

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MSP4	Local Port Service (LPS)	Local Port/Harbour Operator	<p>LPS is applicable to those ports where it has been assessed that a VTS, as described above, is excessive or inappropriate.</p> <p>The main difference arising from the provision of LPS is that it does not interact with traffic, nor is it required to have the ability and/or the resources to respond to developing traffic situations and there is no requirement for a vessel traffic image to be maintained.</p> <p>Provision of LPS is designed to improve port safety and co-ordination of port services within the port community by dissemination of port information to vessels and berth or terminal operators. It is mainly concerned with the management of the port, by the supply of information on berth and port conditions. Provision of LPS can also act as a medium for liaison between vessels and allied services, as well as providing a basis for implementing port emergency plans. Examples of LPS may include:</p> <ul style="list-style-type: none"> <li>• berthing information;</li> <li>• availability of port services;</li> <li>• shipping schedules;</li> <li>• meteorological and hydrological data.</li> </ul>
MSP5	Maritime Safety Information (MSI) service	National Competent Authority	<p>The Global Maritime Distress and Safety System (GMDSS) as described in SOLAS Chapter IV defines the seventh functional requirement as:</p> <p>"Every ship, while at sea, shall be capable of transmitting and receiving maritime safety information".</p> <p>The MSI service is an internationally co-ordinated network of broadcasts of Maritime Safety Information from official information providers, such as:</p> <ul style="list-style-type: none"> <li>• National Hydrographic Offices, for navigational warnings and chart correction data;</li> <li>• National Meteorological Offices, for weather warnings and forecasts;</li> <li>• Rescue Co-ordination Centres (RCCs), for shore-to-ship distress alerts;</li> <li>• The International Ice Patrol, for Oceanic ice hazards.</li> </ul>

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MSP6	Pilotage service	Pilot Authority/Pilot Organization	<p>The aim of the pilotage service is to safeguard traffic at sea and protect the environment by ensuring that vessels operating in pilotage area have navigators with adequate qualifications for safe navigation. Each pilotage area needs highly specialized experience and local knowledge on the part of the pilot.</p> <p>Efficient pilotage depends, among other things, upon the effectiveness of the communications and information exchanges between the pilot, the master and the bridge personnel and upon the mutual understanding each has for the functions and duties of the other.</p> <p>The Pilot's Portable Unit (PPU) is a useful tool for safe navigation in clear and restricted visibility. Data accessible by the PPU should be made available in a structured, harmonized and reliable manner, and the interface for accessing such e-Navigation information should be standardized.</p> <p>Establishment of effective co-ordination between the pilot, the master and the bridge personnel, taking due account of the ship's systems and equipment available to the pilot, will aid a safe and expeditious passage.</p>
MSP7	Tugs service	Port/Commercial Tug Organization	<p>Efficient tug operations depend on, among other things, the effectiveness of the communications and information exchanges between relevant stakeholders. The aim of the tugs services is to safeguard traffic at sea and protect the environment by conducting operations such as:</p> <ul style="list-style-type: none"> <li>• Transportation (personnel and staff from port to anchorage) operations.</li> <li>• Ship assistance (ex: mooring) operations</li> <li>• Salvage (grounded ships or structures) operations</li> <li>• Shore operations</li> <li>• Towage (harbour/ocean) operations</li> <li>• Escort operations</li> <li>• Oil spill response Operations</li> </ul>

No.	Identified Services	Identified Responsible Service Provider	Short Description
MSP8	Vessel shore reporting	National Competent Authority, Shipowner/Operator/Master	<p>The aim of vessel shore reporting is to safeguard traffic at sea, ensure personnel safety and security, ensure environmental protection and increase the efficiency of maritime operations.</p> <p><b>Single-Window</b> is one of the most important solutions to reduce the Mariners workload (amount of time spent on preparing and submitting reports to shore-based authorities). To achieve this, reports should be automatically generated as much as possible from onboard systems. Some other important possibilities for vessel shore reporting system may include:</p> <ul style="list-style-type: none"> <li>• Single-entry of reportable information in single-window solution</li> <li>• Automated collection of internal ship data for reporting</li> <li>• All national reporting requirements to apply standardized digital reporting formats based on IMO FAL forms</li> <li>• Automated or semi-automated digital distribution/communication of required reportable information.</li> </ul>
MSP9	Remote monitoring of ships systems	VTs Authority, Shipowner	<p>The objective of the service for remote monitoring of vessel systems is to promote the safety of the vessel and personnel, protect the environment and improve and maintain the ships efficiency.</p> <p>The remote monitoring system can be combined with automated operation and control features as part of a fully integrated systems covering many aspects of the ship operation such as:</p> <ul style="list-style-type: none"> <li>• Propulsion (Main Engine) and Power Monitoring &amp; Control</li> <li>• Auxiliary Machinery Monitoring and Control</li> <li>• Cargo &amp; Ballast Monitoring &amp; Control</li> <li>• Navigation equipment monitoring</li> <li>• Condition based monitoring</li> <li>• Mitigation of potential of fire and flood outbreaks and malfunctioning of necessary auxiliary systems and their supplies.</li> <li>• Managing critical vessels pares parts</li> <li>• Flood Prevention Systems</li> <li>• Fire Detection and Alarm System</li> </ul> <p>temperatures, pressure, level, viscosity, flow control, position of vessel, speed, torque control, voltage, current, machinery status (on/ off), and equipment status (open/ closed).</p>

No.	Identified Services	Identified Responsible Service Provider	Short Description
MSP10	Telemedical Assistance Service (TMAS)	National health organization/ dedicated health organization	<p>According to the IMO/ILO solution 164 the TMAS centre should provide medical advice for seafarers 24 h/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 onboard ship.</p> <p>Within the maritime medicine the prevailing view has for a long time been that a standardization of the TMAS services is both necessary and wanted. This would firstly enhance the quality of the medical practice, and secondly, a standardization of reporting and registering of medical events will make a much better basis for advancement.</p>
MSP11	Maritime Assistance Service (MAS)	Coastal/Port Authority/ Organizations	<p>The primary mission of MAS is to handle communication between the coastal State, ship's officers requiring assistance, and other players in maritime community. These can be fleet owners, salvage companies, port authorities, brokers, etc.</p> <p>The MAS is on 24-hour alert to deploy rapid assistance and professional support for ships in connection with: Combating pollution, fire and explosions on board, collision, grounding, maritime security, terror mitigation, etc.</p> <p>The Ship Security Alert System enables a vessel to send a distress call if it is attacked by pirates, etc. On receiving such a call, the MAS is responsible for alerting the relevant authorities responsible for a response.</p> <p>The MAS is responsible only for receiving and transmitting communications and monitoring the situation. It serves as <b>a point of contact</b> between the master and the coastal State concerned if the ship's situation requires exchanges of information between the ship and the coastal State.</p> <p>Situations where the MAS apply are as follow:</p> <ul style="list-style-type: none"> <li>• Ship involve in an incident (loss of cargo, accidental discharge of oil, etc.) that does impair its seakeeping ability but nevertheless has to be reported.</li> <li>• Ship in need of assistance according to the master's assessment, but not in distress situation that requires the rescue of personnel on board.</li> <li>• Ship in 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.</li> </ul> <p>The MAS entails the implementation of procedures and instructions enabling the forward of any given information to the competent organization and requiring the organizations concerned to go through the MAS in order to make contact with the ship.</p>

No.	Identified Services	Identified Responsible Service Provider	Short Description
MSP12	Nautical Chart Service	National Hydrographic Authority/ Organization	<p>The aim of the nautical chart service is to safeguard navigation at sea by providing information such as nature and form of the coast, water depth, <b>tides table</b>, obstructions and other dangers to navigation, location and type of aids to navigation.</p> <p>The Nautical Chart service also ensure the distribution, update and licensing of electronic chart to vessels and other maritime parties.</p>
MSP13	<b>Nautical publications service</b>	National Hydrographic Authority/ Governmental Agencies	<p>The aim of the nautical publication service is to promote navigation awareness and safe navigation of ships. The nature of waterways described by any given nautical publication changes regularly, and a mariner navigating by use of an old or uncorrected publication is courting disaster. Nautical publications includes:</p> <ul style="list-style-type: none"> <li>• Tidal currents, aids to navigation system, buoys and fog signals, radio aids to marine navigation, chart symbols, terms and abbreviations, sailing directions.</li> <li>• A Chart and Publication Correction Record Card system can be used to ensure that every publication is properly corrected prior use by mariners.</li> </ul>
MSP14	Ice navigation service	National Competent Authority/ Organization	<p>The ice navigation service is critical to safeguard the ship navigation in ice-infested waters, given how quickly the ice maps become outdated in the rapid changing conditions of the ice-covered navigational regions. Such services include:</p> <ul style="list-style-type: none"> <li>• Ice condition information and operational recommendations/advice</li> <li>• Ice condition around a vessel</li> <li>• Vessel routing</li> <li>• Vessel escort and ice breaking</li> <li>• Ice drift load and momentum,</li> <li>• Ice patrol</li> </ul>
MSP15	Meteorological information service	National Meteorological Authority/WMO/ Public Institutions	<p>The meteorological service is essential to safeguard the traffic at sea by providing weather, climate digital forecasts and related information to mariners who will use these types of information to support their decision making. Such information include:</p> <ul style="list-style-type: none"> <li>• Weather routing, Solar radiation, Precipitation,</li> <li>• Cold/hot durations, Warnings</li> <li>• Air temperature, Wind speed &amp; Direction</li> <li>• Cloud cover, Barometric pressure</li> </ul>

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MSP16	Real-time hydrographic and environmental information services	National Hydrographic and meteorological Authorities	<p>The real time hydrographic and environmental information service is essential to safeguard navigation at sea and protect the environment. The service provided are such as:</p> <ul style="list-style-type: none"> <li>• Current speed and direction</li> <li>• Wave height</li> <li>• Marine habitat and bathymetry</li> <li>• Sailing Directions (or pilots): detailed descriptions of areas of the sea, shipping routes, harbours, aids to navigation, regulations, etc.</li> <li>• Lists of lights: descriptions of lighthouses and lightbouys</li> <li>• Tide surge prediction tables and tidal stream atlases</li> <li>• Ephemerides and nautical almanacs for celestial navigation</li> <li>• Notice to Mariners: periodical (often weekly) updates and corrections for nautical charts and publications</li> </ul>
MSP17	Search and Rescue (SAR) Service	Search and Rescue Authorities	<p>The SAR service is responsible for assisting, coordinating search and rescue operations at sea. In maintaining a state of full readiness the MRCC may perform the following rescue functions:</p> <ul style="list-style-type: none"> <li>• Survivors of any aircraft (not in an act of war) crashes or forced landings at sea;</li> <li>• The crew and passengers of vessels in distress;</li> <li>• Survivors of maritime accidents or incidents;</li> <li>• The SAR services must also coordinate the evacuation of seriously injured or ill person from a vessel at sea when the person requires medical treatment sooner than the vessel would be able to get him or her to a suitable medical facility.</li> </ul> <p>MRCC may also be pro-actively involved in activities such as:</p> <ul style="list-style-type: none"> <li>• Information collection, distribution, and coordination,</li> <li>• Monitoring towing operations,</li> <li>• Monitors and evaluates levels of risk from Maritime Safety Information (MSI) broadcasts to ensure an immediate response in case of life threatening situations developing;</li> <li>• Monitoring vessels not under command,</li> <li>• Pollution reports and vessels aground.</li> </ul>

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