



**mass task force**

**possible MASS related work items for the IALA committees**

**September 2024**

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# Purpose and scope

## Purpose

The purpose of this document is to:

* Based on the Del2 - Publications review scoping report, identify possible MASS related work items for the IALA committees that require revision to accommodate the advent of MASS.
* Identify new tasks that may be required to address the advent of MASS insofar as they are not adequately or fully addressed in other tasks identified in the work plan 2023-2027.
* Assist IALA and its Committees to adopt work programme tasks to facilitate IALA documentation related to Marine Aids to Navigation, including VTS to reflect the advent of MASS.

## Scope

This report is an initial report on possible MASS related work items for the IALA committees to determine where existing tasks included in the work plan 2023-2024 may require update or modification or the proposal to create new tasks to incorporate the requirements and challenges of AtoN and VTS provision for MASS.

# Background

## Recent MASS review

This report is a resulting action from the publication of the IALA report *The Future of Maritime Autonomous Surface Ships (MASS) - Future Scenarios Regarding the Development and Evolution of Mass* [1] and the *Publications review scoping report*. The report on possible MASS related work items for the IALA committees aims to guide Committee and Working Group (vice) Chairs and IALA members in consideration of MASS related tasks and this report sets out a plan of action to help the committees review the existing IALA guidance in the light of the information contained within the MASS report and the report on possible MASS related work items for the IALA committees.

# methodology

The report is based on the findings of the MASS scoping exercise (Del2) report where all the Recommendations and Guidelines are listed in the scheme below linked with the proposed task number assigned.

Through the task number, the committee is proposed to discuss and work on the implication of MASS advent to this specific task.

In the case where a Recommendation and/or Guideline identified in the Del2 - Publications review scoping report is not assigned to a task and is deemed not covered by the task assigned, upon the discretion of the Committee and Working Group (vice) Chairs, a task can be created to this effect.





# Next steps

## Committee work

The IALA committees should incorporate review of the relevant tasks in their work programme ensuring that the reviews include at least the following:

* Check of references throughout the document for updates and implications of any changes.
* Identification of cross committee references and liaison requirements.
* Proposal of additional content and/or modification of existing content.

# References

1. IALA. (2023) The Future of Maritime Autonomous Surface Ships (MASS) - Future Scenarios Regarding the Development and Evolution of MASS
2. IALA. (2024) Developments with Autonomous ships (Working draft) <https://www.iala-aism.org/content/uploads/2022/02/Possible-case-studies-Operations-and-Trials-of-Autonomous-Ships-24-Jan-22.pdf> Accessed 25/03/2024

appendix A – record of initial scoping review relevant documents

| **Type** | **Compliance** | **Number** | **Ed.** | **Name** | **Parent.** | **Committee** |
| --- | --- | --- | --- | --- | --- | --- |
| Recommendation | Informative | R0138 | 1.1 | Use of GIS and Simulation by Aids to Navigation Authorities | S1010 | ARM |
| Recommendation | Informative | R0143 | 2.0 | Provision of Virtual Aids to Navigation | S1010 | ARM |
| Recommendation | Normative | R1002 | 1.1 | Risk Management for Marine Aids to Navigation | S1010 | ARM |
| Recommendation | Normative | R1002:fr | 1.1 | Gestion des risques pour les aides à la navigation maritimes | S1010 | ARM |
| Recommendation | Informative | R1010 | 1.1 | The Involvement of Maritime Authorities in Marine Spatial Planning | S1010 | ARM |
| Recommendation | Informative | R1019 | 1.1 | Provision of Maritime Services in the context of e-Navigation in the domain of IALA | S1070 | ARM |
| Recommendation | Normative | R1024 | 1.0 | Cyber security for the IALA domain | S1010 | ARM |
| Guideline | N/A | G1018 | 4.0 | Risk Management | R1002 | ARM |
| Guideline | N/A | G1033 | 1.0 | Provision of aids to navigation for different classes of vessels, including high speed craft | R1010 | ARM |
| Guideline | N/A | G1054 | 2.0 | Preparing for a Voluntary IMO Audit on Aids to Navigation Service Delivery | R1021 | ARM |
| Guideline | N/A | G1058 | 3.0 | Use of Simulation as a Tool for Waterway Design and Aids to Navigation Planning | R0138 | ARM |
| Guideline | N/A | G1078 | 2.0 | The Use of AtoN in the Design of Fairways | R1001 | ARM |
| Guideline | N/A | G1079 | 1.0 | Establishing and Conducting User Consultancy by Aids to Navigation Authorities | R1010 | ARM |
| Guideline | N/A | G1081 | 2.0 | Provision of Virtual AtoN | R1043 | ARM |
| Guideline | N/A | G1104 | 1.0 | The application of maritime surface picture for analysis in risk assessment and the provision of Aids to Navigation | R1002 | ARM |
| Guideline | N/A | G1105 | 2.0 | Shore-side Portrayal Ensuring Harmonization with e-Navigation Related Information | R0148 | ARM |
| Guideline | N/A | G1121 | 1.0 | Navigational Safety within Marine Spatial Planning | R1010 | ARM |
| Guideline | N/A | G1159 | 2.0 | Ship Reporting from a shore-based perspective | R1023 | ARM |
| Recommendation | Informative | R0140 | 2.1 | The Architecture for Shore-based Infrastructure 'fit for e-Navigation' | S1060 | DTEC |
| Recommendation | Normative | R0144 | 1.1 | Harmonized implementation of Application Specific Messages (ASM) | S1070 | DTEC |
| Guideline | N/A | G1095 | 1.0 | Harmonised implementation of Application-Specific Messages (ASMs) | R0144 | DTEC |
| Guideline | N/A | G1113 | 1.0 | Design and Implementation Principles for Harmonized System Architectures of Shore-based Infrastructure | R0140 | DTEC |
| Guideline | N/A | G1114 | 1.0 | A Technical Specification for the Common Shore-based System Architecture (CSSA) | R0140 | DTEC |
| Recommendation | Informative | R1017 | 1.1 | Resilient Position Navigation and Timing (PNT) | S1030 | ENG |
| Guideline | N/A | G1178 | 1.0 | An introduction to the artificial intelligence (AI) from an IALA perspective | R1024 | ENG |
| Guideline | N/A | G1179 | 1.0 | An introduction to the internet of things (IoT) from an IALA perspective | R1024 | ENG |
| Guideline | N/A | G1180 | 1.0 | Resilient Position, navigation and timing (PNT) | R1017 | ENG |
| Recommendation | Normative | R0127 | 3.2 | VTS operations | S1040 | VTS |
| Recommendation | Normative | R0128 | 5.0 | Operational and Technical Performance Requirement for VTS Equipment | S1040 | VTS |
| Recommendation | Normative | R0145 | 1.1 | Inter-VTS Exchange Format Service | S1070 | VTS |
| Guideline | N/A | G1027 | 1.2 | Simulation in VTS Training | R0103 | VTS |
| Guideline | N/A | G1070 | 1.1 | VTS role in managing Restricted or Limited Access Areas | R0128 | VTS |
| Guideline | N/A | G1089 | 2.1 | Provision of VTS services (INS, TOS & NAS) | R0127 | VTS |
| Guideline | N/A | G1102 | 1.1 | VTS Interaction with Allied or Other Services | R0128 | VTS |
| Guideline | N/A | G1110 | 2.0 | Use of Decision Support Tools for VTS Personnel | R0127 | VTS |
| Guideline | N/A | G1115 | 1.1 | Preparing for an IMO Member State Audit Scheme (IMSAS) on VTS | R1013 | VTS |
| Guideline | N/A | G1130 | 2.0 | Technical aspects of information exchange between VTS and allied or other services | R0128 | VTS |
| Guideline | N/A | G1141 | 2.1 | Operational procedures for delivering VTS | R0127 | VTS |
| Guideline | N/A | G1150 | 3.0 | Establishing, planning, and implementing a VTS | R0119 | VTS |
| Guideline | N/A | G1160 | 1.1 | Competencies for planning and implementing a VTS | R0119 | VTS |