

MARITIME SAFETY COMMITTEE  
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Agenda item 7

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## **DEVELOPMENT OF A GOAL-BASED INSTRUMENT FOR MARITIME AUTONOMOUS SURFACE SHIPS (MASS)**

### **IALA's contribution toward the safe operation of MASS**

**Submitted by IALA**

#### **SUMMARY**

*Executive summary:* This document informs the Committee of IALA's work related to MASS for ensuring the safety of navigation for both MASS and conventional ships.

*Strategic direction, if applicable:* 2

*Output:* 2.23

*Action to be taken:* Paragraph 11

*Related documents:* MSC 106/WP.8

#### **Background**

1 IALA has a long history of its contribution to the safety and efficiency of navigation and protection of the marine environment through the improvement and harmonization of Marine Aids to Navigation services, including VTS.

2 IALA has been aware of the current rapid development and emergence of maritime autonomous surface ships (MASS), especially some small MASS for scientific or observatory purposes that are already in operation. IALA notes IMO's work to include MASS in IMO instruments, i.e. regulatory scoping exercise (RSE) conducted by MSC, FAL and LEG for the safe operation of MASS and conventional ships.

3 In response to the above developments, IALA held an online workshop on Marine Aids to Navigation in an autonomous world in May 2021 hosted by Japan Coast Guard with the four IALA technical committees involved. The report of the workshop is available at the IALA Website [link](#).

4 IALA has established a MASS task force in order to facilitate and harmonize the work on MASS conducted by each technical committee, led by the Netherlands and Singapore.

### **Current work**

5 IALA believes that the current Marine Aids to Navigation services, including VTS, should also apply to MASS in order to ensure safe navigation by all ships and therefore, some IALA recommendations and guidelines are being or will be revised to emphasize this.

6 IALA is considering the implications of MASS from a VTS perspective to facilitate future shore-based requirements for managing ship traffic.

7 IALA also considers emerging new communication technologies, such as VHF Data Exchange System (VDES) and International Mobile Telecommunications (IMT) may become applicable to MASS and other ships for the acceleration of digitalization of maritime services. New IALA recommendations and guidelines are under development for the adoption of such technologies to Marine Aids to Navigation service.

8 IALA recognizes that the development or revision of MASS related IALA documents should be aligned with the development of the IMO instruments on MASS, such as terminology, definitions and levels of autonomy. However, IALA is of the view that since Marine Aids to Navigation and other services are provided to all ships, and some MASS of scientific or observatory purpose are already in operation, IALA guidance on MASS is required as soon as possible.

### **Future plan**

9 The development of IALA guidance on MASS is planned to continue into the next IALA working period commencing in 2023.

10 IALA welcomes collaboration with IMO and other international organisations on developing the MASS instrument as indicated in MSC 106/WP.8.

### **Action requested to Committee**

11 The Committee is requested to note the information provided.