**Input paper: ARM21-7.1.1**

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**Agenda item**  7.1

**Technical domain/ Task number**  Task 1.1.1

**Author(s)/Submitter(s)** CHINA MSA

Proposal on the update of IMO Model Course 7.03 on Officer In Charge of a Navigational Watch

# Summary

CHINA MSA has drafted an information paper relating to the training on Aids to Navigation (AtoN) within International Maritime Organization (IMO) Model Course 7.03 for the Committee’s review.

## Purpose of the document

Push forward TASK 1.1.1, updating the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) Model Courses 7.03 on the Officer in Charge of a Navigational Watch.

## Related documents

1. IALA Committee Work Programme 2025-2027
2. ARM 17-7.3.3 Enhancement of Marine AtoN Training within STCW Framework

# Background

The revised Maritime Buoyage System (R1001 Ed2.0 MBS) was approved by the 14th session of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) General Assembly on June 3rd, 2023. At its 109th session, the Maritime Safety Committee (MSC) of IMO approved SN.1/Circ.297/Rev.1 on IALA MBS.

The Sub-Committee on Human Element, Training and Watchkeeping (HTW) of the IMO has been reviewing the 1978 STCW Convention. AtoN Requirements and Management (ARM) Committee has conducted the task regarding the review of the STCW Convention from ARM 17 and has submitted an information paper to IMO. In ARM 20, Finland has drafted a proposal for the European Union, aiming to better align the use of AtoN for vessel positioning with current technological advancements, addressin future requirements for electronic AtoN, and ensuring consistency with IALA MBS.

# Discussion

The rapid development of modern electronic AtoN technology has enhanced maritime safety and efficiency, while simultaneously posing new challenges to the knowledge framework and operational capabilities of deck officers. To effectively address these challenges, it requires strengthening structured training programs for deck officers.

IALA should fully recognize the implications of the ongoing evolution of AtoN on maritime safety, clearly define future work priorities, and promote IMO to update the provisions related to the IALA MBS in the STCW Convention.

It is suggested that the ARM Committee consider the IMO proposal as set out in the annex, and update the content related with MBS in IMO Model Course 7.03.

# References

1. R1001 Ed2.0 The IALA Maritime Buoyage System

# Action requested of the Committee

The Committee is requested to:

1. consider the proposal in section 3.
2. and take actions as appropriate.

**ANNEX**

**VALIDATED MODEL TRAINING COURSES**

**Training for deck officers on the IALA Maritime Buoyage System**

**Submitted by IALA**

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| **SUMMARY** | |
| *Executive summary:* | This document provides information on the training regarding the IALA Maritime Buoyage System (MBS) in IMO Model Course 7.03 Officer in Charge of the Navigational Watch. |
| *Strategic direction, if applicable:* | 6 |
| *output:* | x.x |
| *Action to be taken:* | Paragraph 9 |
| *Related documents:* | HTW 10/INF.6;SN.1/Circ.297/Rev.1 |

**Introduction**

1 The IMO 7.03 Model Course Officer in Charge of a Navigational Watch is intended to help trainees acquire the necessary competence to safely carry out the responsibilities of deck officers both at sea and at ports. The 7.03 Model Course comprises three functions at the operational level. Function 1 pertains to navigation at the operational level and primarily aims to provide trainees with knowledge and skills in planning and conducting of a passage and for determining position, maintaining a safe navigational watch, and responding to emergencies, thereby contributing to improved navigational safety and efficiency.

2 IALA has recognized the evolution of AtoN and promptly carried out the revision of the Maritime Buoyage System(MBS). The revised MBS was officially adopted at the 14th IALA General Assembly, and its concomitant General Assembly, held in Rio de Janeiro, Brazil, June 3rd, 2023. It was also adopted at the IMO Maritime Safety Committee109th session, and distributed by the SN.1/Circ.297/Rev.1. The Ed2.0 MBS integrates traditional and modern AtoNs, and elaborates on different types of applications of AtoN, including fixed, flotating, mobile and electronic AtoNs.

**Background**

3 Due to the development of digitalization, there have been significant changes in maritime aids to navigation(AtoN). These developments have introduced new challenges and complexities in ensuring navigational safety and efficiency, while also imposing higher demands on the competence and capabilities of deck officers.

4 As a core facility for maritime traffic safety, navigation aids play an important role in indicating the direction of waterways and guiding ships in and out of ports. Navigation aids are experiencing a big shift from traditional visual signals to electronic and intelligent ones. With the growing maturity and wide application of technologies such as AIS and radar, the application and promotion of virtual navigation aids are progressively advancing, and their influence on navigation is expected to be even more prominent. Traditional astronomical navigation aids and visual landmarks are gradually being replaced by electronic systems, and in the future, they will also enter a stage of deep intelligence.

5 Continuous training is of crucial importance for ensuring maritime safety and operational efficiency. Deck officers must actively adapt to the ongoing advancements in technologies, move beyond traditional visual navigation methods, and master modern intelligent navigation systems. At the same time, they should adapt to the integration of traditional and electronic methods so as to be able to comprehensively assess the navigation environment when it is necessary.

6 IALA has recognized that there are gaps between the training related to MBS stipulated in the IMO Model Course 7.03 and the current operation situation. It remains limited to the level of traditional AtoN, putting forward requirements in terms of identifying the lights and shapes displayed on lateral and cardinal marks, and no learning requirements are made for electronic AtoN. This obviously cannot enable the deck officer to adapt to the current changes, which may subsequently have an impact on the safety and efficiency of navigation.

**Disscussion**

7 The IALA Maritime Buoyage System is an important part of the IMO Model Course 7.03. It plays a significant role in enhancing the awareness and application ability of watchkeeping officers regarding modern AtoN, thereby improving navigation safety and efficiency.

8 IALA is currently working on the revision of the training related to MBS in the IMO 7.03 model course and will submit the revision results at the subsequent meetings for the reference of the subcommittee.

**Action requested of the Sub-Committee**

9 The Sub-Committee is invited to note the information provided.