

International Maritime Pilots' Association

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**International Regulation
Of MASS:
IMO's MASS Code**

**Paul Kirchner
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IMO MASS Activities: History

- **2017. Paper submitted to MSC 98 by 9 delegations requesting “Regulatory Scoping Exercise” (RSE) to establish the extent to which the IMO’s current regulatory framework may need to be adjusted or supplemented to address the operation of Maritime Autonomous Surface Ships (MASS). MSC agrees to the RSE.**
 - **Legal Committee (LEG) and Facilitation Committee (FAL) also initiate RSE for documents and matters under their respective remits.**

HISTORY, cont.

- **2019. MSC adopts interim guidelines on MASS trials in international waters.**
 - **Very general and aspirational**
 - **Flag state may authorize a trial if it is satisfied that the trial “address[es] the risk to safety, security and protection of the environment.”**
 - **Considerable discussion of the right of port States and coastal States to regulate/prevent trials in their waters.**
 - **Compromise language: “Where necessary, authorization should also be obtained from the coastal State and/or port State Authority where the trial will be conducted.”**

HISTORY, cont.

- **May, 2021. MSC 103 approves the “Outcome” of the RSE. Invites delegations to submit proposals for the way forward to address MASS.**
 - **Outcome: MSC.1/Circ. 1638 – 103 pages**

HISTORY, cont.

- **October, 2021. Proposals submitted to MSC 104 by several delegations requesting a work item to develop a code for MASS and necessary consequential amendments to various IMO instruments.**
 - **MSC approves the item with a target completion date of 2025.**
 - **Secretariat and chair directed to prepare a draft “roadmap” of activities and deliverables.**

HISTORY, cont.

- **May, 2022. 105th Session of MSC:**
 - **Adopts the roadmap for work item.**
 - **Agrees that first task will be to develop a non-mandatory MASS Code.**
 - **Goal-based performance standards for MASS, target completion 2024**
 - **Will set the stage for subsequent mandatory Code, also goal-based, approved by 2025, adopted by 2026, and enter into effect on 1 January 2028**
 - **Agrees to establish a joint working group with LEG and FAL Committees to coordinate their respective work.**
 - **Establishes an MSC MASS Correspondence Group (CG).**
 - **Coordinator is rep from Marshall Islands**

CURRENT STATUS: Work proceeding on non-mandatory goal-based MASS Code under MSC leadership.

- **MASS working group (WG) at every MSC session, intersessional meetings of WG, most of the detailed drafting done by CG, which also has virtual meetings.**
- **CG work on individual chapters of the Code assigned to splinter groups each of which is headed by a volunteering delegation and composed of as many delegations as agree to participate.**
 - **IMPA: Navigation (Japan), Remote Operations (UK), Management of Safe Operations (Germany), and Towing and Mooring (Canada/Italy)**

Basic decisions already made regarding the Code:

- **MASS ships, remote operations center, and (possibly) MASS functions/systems to be approved and certified by flag state under standards and requirements consistent with goals set out in Code.**
- **MASS subject to existing IMO instruments (e.g., SOLAS, COLREG), and Code addressed to matters not adequately or fully addressed in those instruments.**
 - **No need to amend COLREG, but**
- **Code limited to cargo ships, for now.**

Format of Code, as currently developed:

- **Part 1, Introduction**
 - **purpose, principles and objectives; application; relationship to other instruments; terminology/definitions; approval process, certificate and survey**
- **Part 2, Main Principles for MASS and MASS Functions**
 - **operational concept (CONOPS, OE, ODD, Fallback, and Mode(s) of Operation), risk assessment, system design, software, connectivity, alert management, human element**
- **Part 3, Goals, Functional Requirements and Expected Performance**
 - **17 chapters dealing with aspects of MASS operations (e.g., navigation, remote operations, communications, towing and mooring, emergency response)**

What's ahead in 2024:

- **Continuing work by CG**
- **Joint MSC-LEG-FAL (JWG) 3, May 8-10, 2024**
- **MSC 108 (MASS WG) May 15-24: further development of draft Code**
- **MSC MASS Intersessional WG 3, Sept 9-13**
- **MSC MASS Intersessional WG 4, Oct 25-29**
- **MSC 109 (MASS WG), November 25-29: finalization, approval, and adoption of non-mandatory Code, begin work on mandatory Code and consequential amendments to existing instruments.**

AN OBSERVATION AND SOME ISSUES

- **Important to keep in mind that ultimate intended feature of MASS is ships operating without control by onboard humans. That's the real reason for the Code.**
- **Some Code issues:**
 - **What is the operative difference between the non-mandatory Code and the mandatory Code?**
 - **Will the Code affect the ability/rights of coastal and port states to regulate MASS in their waters?**
 - **Will the Code affect compulsory pilotage, piloting practices, and pilots?**