

IUMI Policy Agenda

1. Autonomous / unmanned transports

Brief description

Unmanned transports are gaining acceptance from industry and public entities as research and innovation bring the possibility of driverless trucks and vessels closer to realization. This raises some legal and liability issues that need to be resolved.

Insurers also need to address the risks related to innovative technologies and the internet of things. New types of failure modes may be introduced due to the lack of knowledge and unforeseen interdependencies in the system design, operation complexity, and environmental challenges. Cyber-attacks, connectivity, interactions between components and between technical systems and humans, and autonomy assisted accidents are among the challenges.

To become insurable, the use of autonomous systems must rely on proper industry standards, certification and classification regimes. Verification of safe performance is crucial.

An unmanned vessel can be both remote controlled or fully automated, and it has been suggested that the first crewless vessel will be in service by the end of the decade. Most likely, there will be a number of variations and a stepwise progress, including the use of automated technologies with a reduced number of crew on board and for certain manoeuvres.

The IMO Maritime Safety Committee (MSC) has thus far agreed to focus on the following two levels of autonomy: (1) Remotely controlled ship with seafarers on board and (2) Remotely controlled ship without seafarers on board.

Interim guidelines for trials of Maritime Autonomous Surface Ships (MASS) were finalized by MSC in June 2019. As a basic principle, these trials shall meet at least the same level of safety, security and environmental protection as required for conventional vessels.

In April 2022, MSC 105 agreed to develop a goal-based Code for MASS. Work has since progressed, and MSC has agreed that the Code will apply to SOLAS cargo vessels only. It is further agreed in principle that the Code should contain a risk-analysis based approach, that a human master shall be responsible regardless of the vessel's mode of operation and that there is no need to amend COLREGS to accommodate MASS at this stage. A non-mandatory MASS Code is planned for adoption by MSC 111 in May 2026. This will be followed by an experience-building phase. The earliest possible entry into

force of a mandatory MASS Code through amendments of SOLAS and other IMO instruments will be 1 January 2032.

There are also several other initiatives relating to legislation and insurance of autonomous vessels. These include; Comité Maritime International (CMI) has formed an International Working Group on Unmanned Vessels which presented results from its research on liability issues to the IMO (LEG) in January 2024, Association Mondiale de Dispatcheurs (AMD) are considering how the adoption of unmanned vessels may impact marine insurance claims and the application of general average, and the International Group of P&I Clubs (IG) has formed a working group to consider liability matters. BIMCO has adopted a standard contract for autonomous vessels, AUTOSHIPMAN, which is adapted from the SHIPMAN 2009 form to govern ship management services and provide a framework for the obligations, responsibilities, and liabilities.

Timeline / important dates

- MSC scoping exercise June 2017 - June 2020.
- LEG scoping exercise April 2018 – July 2021.
- Target completion year within MSC for a non-mandatory code: 2026.
- MSC 111: May 2026.

IUMI will:

- Monitor ongoing industry and government-run projects and provide input as appropriate.
- Monitor development of a MASS Code by the IMO and take part in discussions on regulatory amendments.
- Encourage classification societies to take an active role in both technical and operational risk aspects of increasingly autonomous vessels.
- Encourage the development of industry standards, certification schemes and class requirements for autonomous systems and remote-control centres.