

MARITIME

(EL) Upgrade of Maritime Surveillance (UMS)

(Established in March 2018)

For Public Release

PROJECT DESCRIPTION

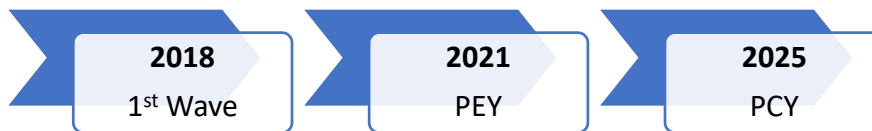
The Upgrade of Maritime Surveillance (UMS) project aims to enhance the EU's maritime situational awareness by integrating existing maritime surveillance capabilities—land-based, aerial, and naval—and enabling real-time information exchange between EU Member States.

OBJECTIVES/PRODUCTS

The main objective of the Upgrade of Maritime Surveillance (UMS) project is to enhance the Maritime Surveillance, Situational Awareness, and Response Effectiveness of the European Union, thereby contributing to the protection of the EU and its citizens. To achieve this, the project leverages existing infrastructures, such as MARSUR, and identifies capability gaps through studies that assess existing systems, shortfalls, emerging technologies, and early warning systems (EWS). These assessments guide the definition of requirements for an Integrated Maritime Surveillance System, enabling the development of new capabilities aligned with future operational needs (PCY).

INDICATORS

Project Execution Year (PEY) and Project Completion Year (PCY):

**DELIVERABLES ACHIEVED****Key Achievements to Date:**

- Strong confirmation of commitment by all participating Member States (MS) at project initiation.
- Agreement on the geographical scope—covering all maritime areas surrounding the EU.
- Consensus on using MARSUR as the sole information-sharing network.
- Successful completion of the Project Execution Year (PEY) using existing capabilities.
- Defined the path toward the Project Completion Year (PCY) by setting integrated system requirements.
- Agreement on research and development (R&D) domains of interest supporting UMS objectives.
- Finalization of High-Level Operational Requirements (HLORs) for both UMS and the linked DECISMAR project.
- A Letter of Intent was signed between Greece and Cyprus to support the funding of DECISMAR.



EL, BG, CY, ES, FR, HR, IE, IT



PT

IDEATION
INCUBATION
EXECUTION
CLOSING**Contribution to the more binding commitments**
Yes**Capability Perspective****EU CDP priority**
Maritime Domain Awareness**CARD references**
Maritime Surveillance**Operational Viewpoint****HICG**
Maritime Domain Awareness**EDA support**

No

- DECISMAR received €7.4M in EU funding in 2020, plus €400K in national contributions.
- Seven dedicated workshops organized by the project coordinator (Greece).
- The Project Arrangement has been signed by all Project Members and is currently in force.
- Approval of joint risk and response analysis, outlining specific maritime security risks and challenges.
- Establishment of a structured process for data exchange among participants.
- Test runs using Hellenic Navy (HN) assets to validate information-sharing mechanisms (at no cost to partners).
- Construction of a Maritime Surveillance Hub at the Hellenic Fleet Operation Center (2021), fully funded by Greece.
- Agreement on a common data exchange list between pMS.
- Approval by EDA for ad hoc non-CAT. B support upon request by the project coordinator.
- Formation of a working group to draft the project's business planning documents, with agreed informal Terms of Reference.

Up to Deliverable D9: Technical Requirements

- Key Highlights of D9
- System Architecture Definition: A decentralized, semi-fixed network of unmanned, floating platforms equipped with multi-domain sensors and connected to a resilient, secure C3 (Command, Control, Communication) infrastructure.
- Sensor Suite Requirements: Detailed specifications for radar, sonar, EO/IR cameras, ESM, AIS receivers, and environmental sensors. Emphasis is placed on long-range detection, real-time data processing, and low false positive rates.
- Data Fusion and Analytics: Includes advanced data fusion, AI/ML-based behavior pattern analysis, automated detection and tracking mechanisms to enhance decision-making with minimal human intervention.
- Communication Infrastructure: Encompasses secure, encrypted, redundant communication protocols with SATCOM, BLOS, and VHF/HF capacities, ensuring interoperability and data continuity.
- Cybersecurity and Regulatory Compliance: Robust multi-layered cybersecurity framework, compliance with GDPR and IMO regulations, and full integration of safety, privacy, and environmental safeguards.
- Legacy & Innovation Integration: Clear strategy for incorporating legacy systems through adaptable interfaces, alongside frameworks to integrate emerging technologies (e.g., quantum sensors, AI-driven processors).
- Cost-Effectiveness and Modularity: Emphasizes modular design, use of renewable energy, reduced staffing requirements, and long-term sustainability with lifecycle cost analysis.
- Training and UI/UX: Operator training strategy, simulation-based learning, user-friendly interface, and intuitive dashboards for effective situational awareness and rapid response.
- Hub Concept & Network Support: Specifications for a Maritime Surveillance Hub (already tested and implemented at the Hellenic Fleet Ops Center), enabling seamless integration with national command structures and EU HQs.

Strategic Importance of D9

- Deliverable D9 formalizes the technical blueprint for the UMS project, acting as a reference document for:
- Defining subsequent development priorities.
- Framing future R&D requirements.
- Supporting industrial engagement (e.g., DECISMAR).
- Guiding operational testing and validation during the transition to the PCY (2025).

CRITERIA FOR SUCCESS

- Integration of national maritime surveillance systems.
- Enhanced EU-wide maritime situational awareness.
- Operational data exchange capability among participating states.
- Identification and closure of capability gaps in the maritime domain.