



An advanced surveillance platform to improve the **EUROPEAN** **M** **A**uthority border **R** **S**ecurity efficiency and cooperation

Technological Components of the EURMARS Platform

The EURMARS platform integrates diverse surveillance technologies to strengthen European border security through a multi-layered, cooperative approach. It combines satellite-based monitoring, high-altitude platforms, UAV systems, and coastal sensors with AI-powered analytics, enabling real-time detection, assessment, and response to evolving threats across maritime and land borders.



Coastal Ground and Low Altitude Sensing Systems

- Real-time geo-referenced detections for ships, vessels, persons, and vehicles
- Focus on anomaly detection
- Complements detection & tracking capabilities of the other sensors



High Altitude Sensing Systems

- 3D-LiDAR sensors on the High-Altitude Platform (Stratobus) for reliable geo-referenced vessel detections through change detection in marine environments
- Not previously used for maritime surveillance



Satellite Based Systems

- Mix of satellite infrastructures for monitoring marine activities and environmental phenomena
- Event detection through cutting-edge AI/ML software to enable spatial and temporal analysis



UAVs

- Activated in response to abnormal events
- Airborne camera systems focus on ships, small vessels and persons at sea
- Generate geo-referenced detection events
- Verifying and confirming events while patrolling targeted sea areas



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FOR MORE INFORMATION

eurmars-project.eu

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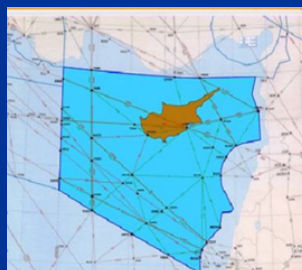
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EURMARS Pilot Use Cases



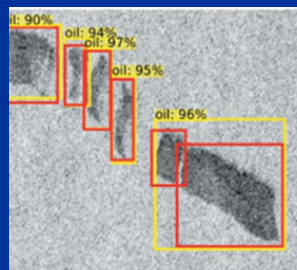
Maritime Border Control: Detection of trafficking and other illegal activities Sensing Systems

- Enhance the detection of abnormal behaviour of vessels, especially small boats
- Enhance the detection of abnormal vessel interactions



Search & Rescue Operations

- Detection and rescuing distressed individuals on a vessel
- Identifying individuals in danger
- Providing assistance to those in distress
- Saving lives in emergency situations
- Performing search and rescue operations on boats or ships



Maritime Structures and Oil Spills Surveillance & Monitoring

- Consistent Monitoring of Offshore Structures
- Prompt Identification and Detection of Environmental Incidents
- Forecast Provision of Potential Incident Development
- Support Decision Making by Suggesting Course of Actions



Land border control: illegal border crossing outside of business contingency plans

- Area Surveillance and Vessel Monitoring
- Ship-To-Ship Event Prediction and Monitoring
- Collaboration between border authorities

EURMARS Consortium



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