THE MARITIME CHALLENGE

Broad swaths of EU coastal areas and outermost regions are regularly monitored thanks to near real time, satellite-based Earth Observation. While this kind of monitoring is very valuable, it is only available at certain times depending on the satellite’s orbit. When dealing with challenging and sometimes dangerous operations in harsh sea conditions, authorities need to be able to respond quickly. In these situations, satellites may not be the most efficient form of monitoring. Remotely Piloted Aircraft Systems (RPAS) can overcome this limitation and can be used as a complementary tool in the overall surveillance chain. This helps to increase maritime situational awareness for Member States as it enhances the maritime picture with additional sources of data and makes operations safer for coastal authorities mainly during bad weather conditions.

The data flows generated by the service are provided free of charge to any requesting authority belonging to EU Member States, Iceland, Norway and the European Commission, i.e. there are no contractual costs for the user.
KEY CHARACTERISTICS

Advantages of using RPAS include:

- Large coverage, long endurance of sea areas surrounding EU or EFTA countries or even EU adjacent sea basins, for extended periods
- Capability to stay on site to support local operation, to follow the development of the maritime picture, and to monitor the position of vessels in distress
- Rapid flight activation: depending on RPAS type, flights can begin very quickly once the operation has started and the contractor has been mobilised
- Flight data can be complemented with other maritime data available to EMSA in order to provide a more complete maritime picture
- Designed to operate during day and night and in a broad range of environmental conditions, i.e. variable temperature, high humidity, crosswind, rain and (as there is no human pilot onboard) potentially dangerous environments
- Aircraft-to-aircraft notification by transponder to increase aviation safety.

The sensor payload can include the following:

- Electro-optical cameras to record the maritime scene, e.g. photographic evidence linking the AIS signal to a vessel and/or general observation of vessel activities, detection of oil and litter
- Thermal infrared cameras for vessel identification, locating people in distress, general observation of vessel activities particularly at night, support to oil slick monitoring and pollution response operations
- AIS transponder to identify vessels and determine their position.