

POTENTIAL USE CASES

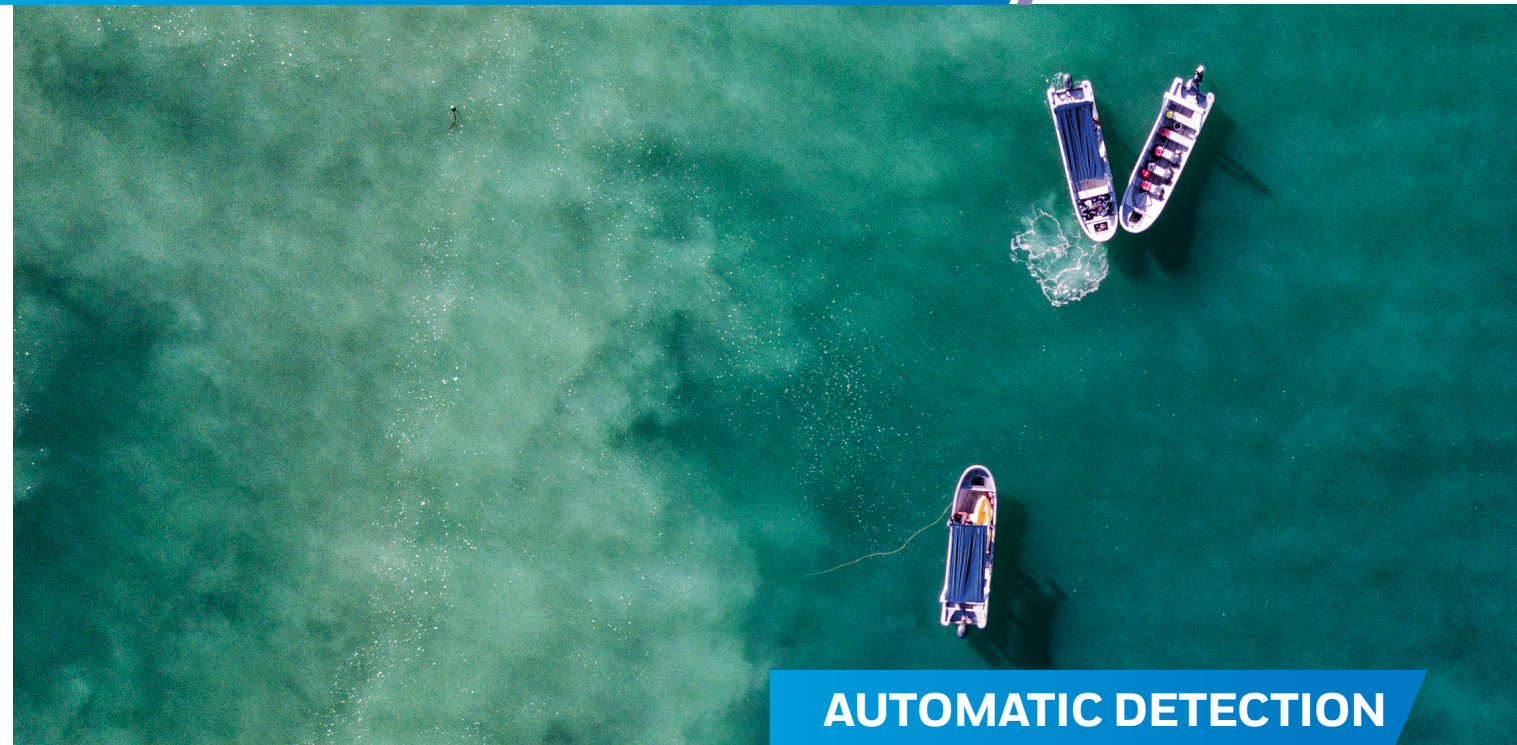
Multiple maritime surveillance domains can benefit from the system:

- **Safety** - detection and early warnings for vessels posing a potential risk, arriving at specific areas or following unusual routes. These situations can be automatically detected via #in area; #anchorage; #time of the day or #at port ABMs.
- **Security** - tracking for vessels involved in illegal activities, smuggling prohibited substances, or breaking embargoes. These situations can be automatically detected via #drifting; #at sea encounter; #not reporting; #spoofing position or # in area ABMs.
- **Border protection** - detection of vessels approaching shores to transfer goods or persons illegally. These situations can be automatically detected via #in area; #heading to shore; or #distance to shore ABMs.
- **Fisheries** - detection of illegal fishing activities. Situations such as the launching of fishing gear and the transhipment of illegal catch can be automatically detected via #sudden change of speed; #at sea encounter; or #sudden change of heading ABMs.

HOW TO GAIN ACCESS

The system is accessible on desktop from the SafeSeaNet Graphical User Interface (SEG) and on mobile devices from the Integrated Maritime Services application.

Requests for access should be made via email to: ims@emsa.europa.eu



emsa.europa.eu

AUTOMATIC DETECTION

AND ALERT TRIGGERING

OF SHIP BEHAVIOUR

USING AUTOMATED BEHAVIOUR MONITORING ALGORITHMS TO GIVE EMSA'S INTEGRATED MARITIME SERVICE USERS AN ENHANCED SITUATIONAL PICTURE

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WHAT IS AUTOMATED BEHAVIOUR MONITORING?

Automated Behaviour Monitoring (ABM) is a computer, rule-based system that analyses ship positions for the automatic detection of abnormal and/or specific vessel behaviour. The purpose of ABM is to support EMSA's Integrated Maritime Service (IMS) users in their maritime surveillance functions, by providing an enhanced situational picture in near real time.

The service is used by more than ten Member States and four EU bodies including the European Fisheries Control Agency (EFCA), the European Border and Coast Guard Agency (Frontex), the Maritime Analysis and Operation Centre - Narcotics (MAOC-N), and the EU Naval Force (EU Navfor).

MEET THE SYSTEM

The system analyses ship position reports using data from available tracking systems such as Long Range Identification and Tracking (LRIT), Terrestrial-AIS, Satellite-AIS, Vessel Monitoring System (VMS) and Earth Observation satellites, among others.

BEHAVIOUR PATTERNS

Patterns, such as entering an area of interest, encounters at sea, approaches to shore, drifting and deviations from usual routes, are detected and operators are automatically alerted in real time. The system has over 20 different algorithms with more being added as the system grows according to user needs.

ADVANTAGES OF ABM

The system is simple and easy to use. The user need only:

- identify the type of behaviour to be monitored (e.g. #drifting, #not reporting, #sudden change of speed)
- define the area of interest
- list those to be alerted
- select the preferred means of alert.

Alerts can be received via notification on the graphical user interface; via email to a user distribution list; and, via system-to-system alerts made directly to the user's own national system.

#ANCHORAGE /OUTSIDE PORT	#DRIFTING	#SPOOFING POSITION	#IN/OUT AREA	#SUDDEN CHANGE OF HEADING	#HEADING TO/OFF SHORE
#AT PORT AT SEA	#AT SEA ENCOUNTER	#NOT REPORTING	#TIME OF THE DAY	#SUDDEN CHANGE OF SPEED	#DISTANCE TO SHORE