



## **Results of the Project AESOP (AERial and Satellite surveillance of Operational Pollution in the Adriatic Sea)**

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While accidental pollution rarely occurs within the Mediterranean waters, operational pollution, the illegal discharges of oily residues and oily ballast water, from ships is a major problem within the Mediterranean region. At the same time the quantity of maritime traffic crossing the basin contributes to render the situation even more worrying. As a result of its strategic position, the Mediterranean Sea has always represented a major route for transportation.

The presented project intended to assess the possibility of setting up an operational system for the detection of oil pollution at sea and the monitoring of main shipping routes in the Adriatic Sea with consideration of the user requirements. The project is based on the use of space-borne remote sensing to support the traditional aerial surveillance. The Adriatic Sea was selected as study area because of its morphological characteristics, ecological heritage and the intense maritime traffic. The project was structured in two different phases. The intention of the 1<sup>st</sup> phase was to assess the actual reliability of the system based on the comparison of the observations made by satellites and aerial means (cross-validating) and has been carried out in summer 2005. The 2<sup>nd</sup> phase was planned in Near Real Time mode (NRT) to allow a prompt response at sea and to increase the possibility of detecting the polluting ship and prosecuting the offenders. The 2<sup>nd</sup> phase has been carried out in summer 2006. An exploratory activity has been also carried out in collaboration with the University of Ljubljana to use AIS (Automatic Information System) for the identification of ships detected in the satellite images. For the 1<sup>st</sup> phase 75 ERS-2 and 5 RADARSAT products were used and for the 2<sup>nd</sup> phase 71 ERS-2 and 14 ENVISAT/ASAR products were analysed by the Joint Research Centre (JRC).

The results of the AESOP project seem very encouraging. For the first time Near Real Time detection of oil spills in satellite images and immediate verification by the Coast Guard has been undertaken in the Adriatic Sea.

Keywords:

Maritime surveillance, oil spill, illicit discharges, SAR, monitoring, Mediterranean Sea, Adriatic Sea, maritime safety.