

Settings methodologies for monitoring floating marine macro litter: the MEDSEALITTER effort

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Although the Mediterranean Sea is one of the largest biodiversity hotspots, it is also one of the most polluted seas worldwide. Concentrations of floating litter in the Mediterranean Sea are suspected to be very high, though current data do not allow yet their complete assessment and the identification of sources and accumulation areas.

In this context, a priority issue is the development of widely agreed standardized monitoring protocols to be implemented under the Marine Strategy Framework Directive, supporting Marine Protected Areas (MPA).

MEDSEALITTER project is actively investigating methodologies for monitoring floating marine macro litter. The approach aims at networking representative MPAs, scientific organizations and environmental NGOs for developing and testing efficient and cost-effective protocols to monitor and manage litter impact on biodiversity. Different experimental designs were conducted to implement protocols at two spatial scales: i) in pilot large scale areas, using synoptic surveys from ferries; ii) in pilot MPAs, using a) visual surveys conducted from commercial vessels, sailing vessels and aircrafts and b) analyses of automated photographs obtained from aircrafts and drones surveys. Results allowed a comprehensive assessment of the effect of various observation parameters on the sighting probability of floating marine litter. Overall, the accurate determination of the settings needed to draft consistent monitoring protocols will take into account spatial scale surveillance, type of survey (visual/automatic), detectability and platform used.

The common protocol will be tested in 2018 in pilot areas representing various Mediterranean ecological environments.

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