

# Expanded Underwater Robotics Ready for Oil Spill

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## ABSTRACT

*Expanded Underwater Robotics Ready for Oil Spill* (eURready4OS) is a project funded by the EU DG-ECHO as proof-of-concept for in water oil detection using a fleet of autonomous vehicles: Autonomous Underwater Vehicles (AUV), Unmanned Aerial Vehicle (UAV) and Unmanned Surface Vehicle (USV) together with numerical modelling (MEDSLIK) coordinated by a command a control software (NEPTUS). The designed system bridge the gap of currently available surface and aerial means by keeping an eye underwater to build up a highly accurate and dynamic image of the in water spill. The project intends to provide training to a diverse group of teams to be better prepared for dealing with an emergency. The proposed strategy is twofold. On one hand, we have expanded the number of different countries and institutions involved (8 countries/ 11 Institutions) with regard our previous project (URready4OS). Secondly, we will transfer the know-how to Maritime Safety Agencies: starting with the Spanish Maritime Safety Agency (SASEMAR), the Irish Coast Guards (IRCG) and Cyprus Civil Defense (CCD), performing training exercises on board of their vessels and giving technical courses to technical personnel in charge. The first exercise was hold in Cartagena in June 2017 on board of the SASEMAR “Clara Campoamor” vessel coordinating simultaneously a fleet of 5 AUV (from 3 different manufacturers), 1 USV, 1 UAV and an auxiliary boat. All the

operation was controlled from the mother ship. During the exercise the URreay4OS system was able to detect a Rhodamine WT Spill deployed at 17 m depth. Next exercise is planned in Ireland with IRCG in 2018.