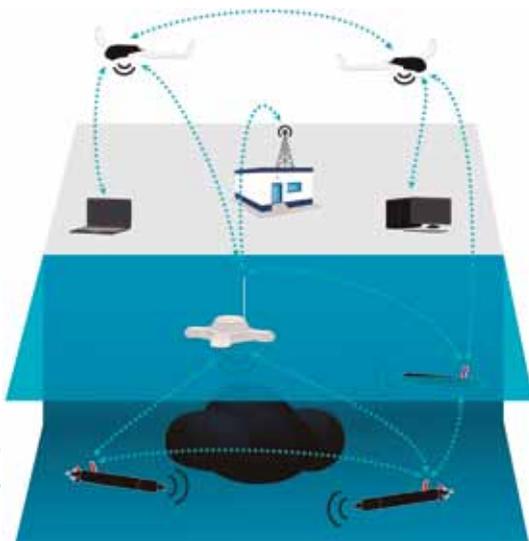


The aim

Form a fleet of autonomous vehicles equipped with the latest technology that can perform oil-spill detection, monitoring and identification of underwater oil plumes.

In the course of the project, a fleet of vehicles will be tested and trained for deployments. One of the outcomes of these exercises will be a set of precise protocols for deploying these robotics assets, which will be presented in the form of a "White Paper".



Wider benefits

As oil rigs move into ever deeper waters, the search for effective solutions for dealing with the unique challenges posed by potential accidents must continue. Recent environmental disasters have shown that these events occur more often than desired, and the URRready4OS project could contribute to the European efforts to devise quick and efficient solutions for dealing with such events in the future.



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www.upct.es/urready4os



What is URready4OS?



Underwater Robotics Ready for Oil Spills ("URready4OS") reflects the desired outcome of the project and hopefully the future state of preparedness. Recent events have shown that in reality we still have some way to go to achieve this.

The accident in the Gulf of Mexico that took place in 2010 on the Deepwater Horizon oil rig working on the Macondo exploration well affected almost 1000 kilometres of coast. The accident highlighted the need to develop and prepare suitable new technologies and

actions plans for dealing with other such potential accidents in the future. URready4OS is a project co-financed by the Commission as part of DG Humanitarian Aid and Civil Protection (DG ECHO) 2013 call for prevention and preparedness projects. It is a joint project of Spain, Cyprus, Portugal and Croatia, coordinated by Spain's Technical University of Cartagena (UPCT). Over two years, the project will see a fleet of robotic vehicles set up and coordinated, so that in future they can intervene and assist in the accurate detection of underwater oil spills.

The vehicles

URready4OS will use a fleet of vehicles with different capabilities and characteristics.

- AUVs (Autonomous Underwater Vehicles) will be provided by Spain, Croatia and Portugal. They are capable of diving up to tens of meters below the water surface.
- USVs (Unmanned Surface Vehicles) will be provided by Croatia. They operate on the surface of the water.
- UAVs (Unmanned Aerial Vehicles) will be provided by Spain and Portugal. They operate from air.

Algorithms will be designed and tests carried out with the purpose of coordinating such multivehicle missions and training them for joint interventions. All of the planned actions will contribute to the achievement of the project aims.



The actions

The actions to carry out are equally important, because all of them will come together in achieving the objectives.

- ✓ Preparing vehicles to have the ability to detect crude oil and different types of refined hydrocarbons such as diesel or gasoline, adjusting specific sensors.
- ✓ Perfectly coordinating a vehicle fleet to act accurately in case of oil spill.
- ✓ Creating and writing a protocol to follow in a hypothetical future spill.
- ✓ Developing software to help achieve our goals.

