

Demonstration of the operational ESEOO tools capabilities to monitor and forecast environmental conditions: The Finisterre-2006 oil spill exercise

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ABSTRACT

Inside ESEOO Project, another oil spill exercise was done between 14th and 16th Nov, 2006 around Cape Finisterre.

The helicopter Helimer Galicia informs that day 13 to the 18 hours has observed three spots 28 miles to the west of Punta Ínsua. The helicopter launches a buoy (SC40) in every spot to follow them by satellite. A day later, day 14 to the 18 hours, the vessel of the Coast Guard observes another three spots at 10 miles in the west of the island Sálvora, three PTR-07 type ARGOS buoys are released. On the 14th the USyP (Unit of Tracking and Forecast) is called for in the Maritime Captaincy of A Coruña. The USyP is an advisory group of the Center of Coordination of Operations in the Sea (CECOMAR), that it has assigned the mission to inform to the CECOMAR management committee, about the situation and weather forecast and oceanographic of the zone affected by the crisis. Besides, it is also in charge to carry out the prediction of the drift of the oil spill and the monitoring of the buoys. The room of the USyP will receive two types of information, for a part the weather and oceanographic information, supplied by the members of the ESEOO that are involve in the same USyP, and on the other hand, the information of the means of observation, boats, helicopters, etc, through the room of crisis.

The information received by the means of observation, will be very useful for all the forecast system. This forecast system was composed by 2 weather models (HIRLAM and MM5), a swell model (WAM), 4 hydrodynamic models (ESEOAT, MOHID, ROM, Simphonie) and a drift model (TESEO), that calculates the planned trajectory, from the data provided by the previous models and introducing it the initial position of the spill.

The drift of the external and internal spots was calculated with the ESEOAT as well as with the MOHID systems. The nearest buoys reached the Estuary of Corubiión after less than one day of being in the sea. The forecasts with the MOHID with 2 km of resolution were very accurate. On the other hand, the distant buoys followed a parallel route to the coast reaching the height of Cabo Prior in 72 hours and the differences between the predictions and the data of the buoy in that moment, after going 73 nautical miles, were of around 12 miles.