



## **The ESEOO Regional Ocean Forecast System: A new Spanish operational oceanographic tool**

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The ESEOO Project has boosted operational oceanography capacities in Spain for the last three years, creating and implementing different operational systems. Within this project, an important effort is being carried out in order to establish forecast systems, based on numerical modelling, that provide predictions of oceanographic variables, such as currents, which are determinant in the tracking and forecasting of spillage trajectories. To this aim, three different domains, named ESEOAT, ESEOMED and ESEOCAN, that cover together completely the Spanish waters have been selected to run different regional applications based on ocean circulation models. The POLCOMS model is used to run the two Atlantic domains (ESEOAT and ESEOCAN), whereas the DIECAST model is used in the Mediterranean run (ESEOMED). The ESEOO ocean forecast system provides daily ocean forecasts with a 72h horizon for the three regional domains. Validation of the system is an issue of maximum concern since it allows to enhance the confidence on the forecast system, as well as to detect its limitation. On that score, different regional assessments of the system skill have been performed by means of comparing simulated surface temperature and current data with in-situ and satellite observations. Additionally to the daily verification of ESEOO forecast outputs, 1-year hindcast exercises have been run for the different regional applications, providing a more comprehensive validation of the ESEOO system. The results shown in this contribution illustrate the capabilities of the ESEOO Ocean Forecast System, especially in terms of providing a realistic simulation of main ocean dynamic features, enhancing the confidence on its operational products.