



Recent progress made in the MERCATOR global ocean monitoring and forecasting system

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Mercator Ocean (<http://www.mercator.eu.org>) is a global ocean forecast service. It is a French public company owned by the 6 major French agencies dealing with oceanography: CNES, CNRS, Ifremer, IRD, Météo-France and SHOM. It runs OPA/NEMO OGCM configurations in real time at global scale ($1/4^\circ$) with enhanced resolution ($1/15^\circ$) and capacity in the North Atlantic and Mediterranean. These model configurations are coupled with assimilation schemes which allow a fully multivariate assimilation of ocean observations, both remotely sensed and in situ. They provide routinely numerical products to users. These real-time products are routinely validated and interpreted by ocean forecasters. This is the global component of the European ocean forecasting system (MERSEA), and one of the GODAE systems. After a brief presentation of MERCATOR operational capacity, we will show recent scientific results obtained. We will illustrate through some of the downstream applications the service capacity we have today with the existing model/assimilation and observation systems, and we will show results from impact studies demonstrating the need for the long term complementary remotely sensed and in situ observing systems.