



The Mercator Océan ocean forecasting systems: recent results and assessment

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Mercator Océan develops and operates ocean forecasting systems. These systems are based on OGCM configurations (OPA/NEMO code), efficient assimilation schemes (OI, SEEK, 3Dvar) assimilating altimeter data, T/S profiles (including ARGO) and SST products. A suite of systems is operated routinely on a weekly bases, from low (2°) and mid ($1/4^\circ$) resolution global systems to high resolution ($1/12^\circ$) local ones. Real-time products are provided to users in various fields including among others marine safety, seasonal forecast, oil spill monitoring, regional/coastal modeling and other research applications. The new configurations developed or under development include a global $1/12^\circ$ forecasting system and a regional North eastern Atlantic $1/36^\circ$ including high frequencies, and global primary ecosystem modeling capacity, coupled to the physical one. Mercator Océan is contributing to several EU GMES projects such as MERSEA-IP, ECOOP and BOSS4GMES especially as service provider for the global ocean and the southern part of the Atlantic European coasts (IBI domain), and is coordinating the MyOcean project which had been successfully submitted to the EU and which is presently under negociation. It contributes also to GoDAE experiment which is the base of international operational ocean forecasting collaboration. In that context, Mercator Océan is coordinating the definition and development of the ocean analysis and forecast assessment methodology, the so-called GoDAE Metrics. After a brief presentation of Mercator systems, we present the recent developments, recent results about the validation/assessment of the quality of the products, and other recent

scientific results.