



## **Recent developments of the Mercator Océan ocean monitoring and forecasting system and corresponding product quality**

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Mercator Océan (the French ocean forecast service provider) was setup in France about 10 years ago by all the French organisations holding stakes in ocean forecasting. It has since then constantly developed and is currently operating operational ocean forecasting systems based on state-of-the-art Ocean General Circulation Models (OGCM, we use the NEMO code) assimilating the observations of the Global Ocean Observing System (remote sensing + in situ). The mandate of Mercator Océan is to cover the global ocean at a resolution sufficient to both simulate the physics including the eddies (eddy resolving) and take the maximum benefit from the GOOS via data assimilation. To do so, Mercator Océan is strongly connected to the ocean modelling and data assimilation research communities, at French, European and international levels.

Mercator Océan is engaged in the Global Monitoring for Environment and Security (GMES) European initiative and is currently coordinating a European consortium (>60 partners) gathering all the European skills in ocean monitoring and forecasting to build the Marine forecast component of the GMES service. This is done in the MyOcean EU funded project (project started in 2009). A follow on 2.5-year project has just started in April 2012. Within the MyOcean consortium, among other commitments, Mercator Océan is the operator of the global ocean forecasting system, and one of the providers of global ocean reanalysis products.

We present here an update of the status of the Mercator Océan system. We describe the current system and its performances. We also present some improvements recently done with respect to downscaling from the global ocean to coastal regions, with respect to the inclusion of the biogeochemistry in addition to physics, and the related developments done within the NEMO OGCM.