Qualification of the MyOcean Global Ocean Monitoring and Forecasting System Skill Assessment for Various Applications

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The operational oceanography European project MyOcean is part of the Global Monitoring for Environment and Security GMES program. During the next 3 years, 61 European partners in 29 different countries will work to build a pan European ocean monitoring and forecasting capacity. The "marine core service" will be produced by ocean forecast centers and data centers working together. MyOcean is particularly attentive with the setting of quality control, including the scientific validation of the products.

The computation of various forecast scores and the inter-comparison of these scores between the various systems is done with an ensemble of metrics defined in the context of MERSEA and GODAE. Based on these metrics and on various data comparisons, this contribution will give an overview of the quality of the product of the state-of-the-art analysis and forecast system.

We will look at the global Ocean system which is run at Mercator-Ocean and is based on the ocean and sea ice modelling system NEMO and on an assimilation system based on Kalman filter/SEEK. It is declined in eddy permitting and eddy resolving configurations: The current version of the global system has a ¼° horizontal resolution, with a North Atlantic (including the tropics) and Mediterranean zoom at 1/12° , and a global 1/12° system is under development which will be the reference global system at the end of MyOcean.

One of the aims of this quality report (which will probably be updated on a quarterly basis) is to interact with the scientific community and other users so that one can derive the level of confidence (or the correction one can make) for the use of the products in one's own application. We will show that measuring the quality of the systems points out the importance of the real time observation network. In order to monitor the ocean we need a perpetual relatively high resolution spatial and temporal coverage, as an input for ocean analysis and forecast systems as well as for a validation purpose. We also need reliable references like long ocean reanalyses in order to validate these systems but also to provide useful information such as interannual or decadal anomalies (for instance for users who whish to initialize seasonal forecast, decadal forecast).