



The GMES Marine Core Service in the Mediterranean Sea: a permanent infrastructure for ocean monitoring and forecasting and the interfaces with ocean observatories

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The GMES Marine Core Service is being implemented by the EU Space Program project MyOcean (<http://www.myocean.eu.org/>). The project considers the global ocean and the European Seas and here we will overview the overall system of data collection and forecast production that is at the basis of the service for the Mediterranean Sea. It is the practical implementation of research development on operational oceanography for the past thirty years. The specificity of the data collection for operational oceanography is the real time data dissemination system, both for satellite and in situ data collected by fixed or moving measuring platforms. The real time data access requirements are set by the need to assimilate data into numerical models in order to bring initial conditions closer to reality thus reducing the uncertainties of the forecast and making the forecast usable. In the Mediterranean Sea the satellite monitoring system is composed of real time sea level along track altimeter data, sea surface temperature analyses from multisensors on board of several satellites and ocean colour from optical sensors. The in situ real time observing system is composed by a Ship Of Opportunity Program (SOOP) adapted to the specificity of the Mediterranean Sea data collection, a MedARGO program and fixed upper-water column buoy stations, both coastal and open ocean. The latter are used mainly for validation and calibration of the numerical models and are left outside the assimilation cycle, as independent data.

The challenge of the next years will be to use also information available from deep sea observatories to correct for specific model errors such as bottom pressure estimates and for validation purposes. Issues connected with the usage of this information in different sectors of the Marine Core Service will be discussed.