Applying the MyOcean MCS to the Benefit of National Users in Malta

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The MyOcean MCS mainly provides data at the basin and regional scales. On the other hand local users require high resolution data products, especially for applications close to the coast. A major effort is needed to close the gap between global/regional scale data provision and demands for coastal applications in the form of specialized added-value services and products targeting stakeholders in coastal remits. This entails the integration and enhancement of MCS data with coastal scale observations and high resolution numerical model fields.

In Malta several local users are increasingly becoming aware of the benefits deriving from the use of the MyOcean MCS data to gain access to shelf scale baseline information, as well as serving to provide boundary conditions for downscaling to coastal applications. Key users include:

- *Private and public entities involved in shipping and/or port facilities* who require real-time data on meteorological and sea-state conditions and forecasts, especially for the areas in front of harbours for safety purposes and to maximise operational efficiency.
- The *Armed Forces of Malta (AFM)* require accurate meteo-marine hindcasts, nowcasts and forecasts for the different regions of the Maltese S&R area to be used in specialised applications such as that relating to the tracking of floating objects at sea.
- The *Malta Environment and Planning Authority* need information on baseline physico-chemical parameters in the area around the Maltese Islands to identify trends and background signals in relation to the health of coastal seas and the protection of the marine environment.
- The Maltese Islands are situated in an area of very heavy shipping and the threat from recurrent oil spillages in the surrounding seas is very high. The provision of accurate nowcasts and forecasts covering as large a marine area as possible from multiple sources and their use in state-of-the-art oil spill models constitute an important element towards the protection of marine economic resources.

The Physical Oceanography Unit (PO-Unit) is developing the Malta MyOcean Service Platform (MMSP) through which users will be able to access online dedicated products and services derived from the MCS data. This platform is designed on two main elements:

- The *Malta MyOcean Analyst* dealing with past and current **observations**, and **analysis** fields.
- The *Malta MyOcean Forecaster* dealing with **forecast** data generated from models.

The MMSP is targeted to allow users to select their particular region of interest around the Maltese Islands, and provides information through a user-friendly web interface that allows flexibility for multiple data viewing, and the synthesis of data in both time and space windows. Time series and summary data are envisaged at pre-defined specific points of interest.

Within MMSP, the PO-Unit is developing the MyOcean DashBoard. This comprises an interface that allows users to view in operational mode specific MCS-derived statistics of key environmental parameters at five pre-defined coastal sub-areas around the Maltese Islands.

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The MyOcean MCS mainly provides data at the basin and regional scales while local users often require high resolution data products, especially for applications close to the coast. The integration and enhancement of MCS data with coastal scale observations and high resolution numerical model fields is therefore needed to close the gap between global/regional scale data provision and demands for coastal applications.

The Malta MyOcean Dashboard

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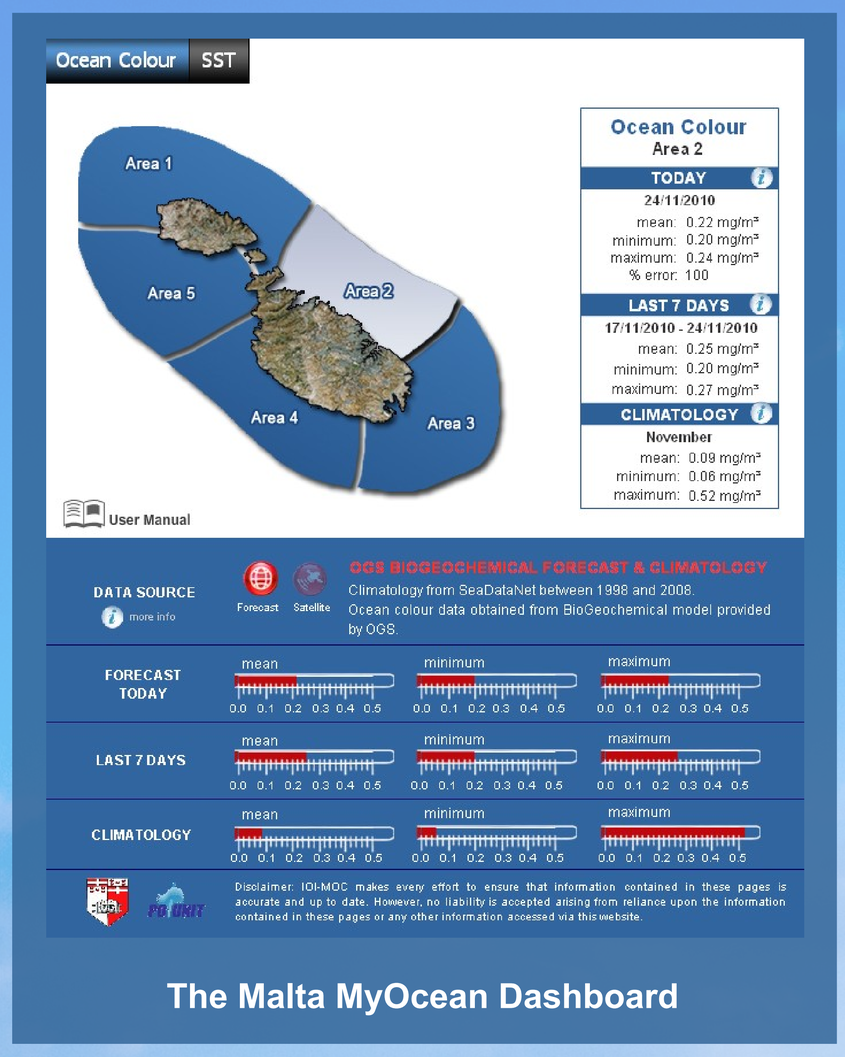


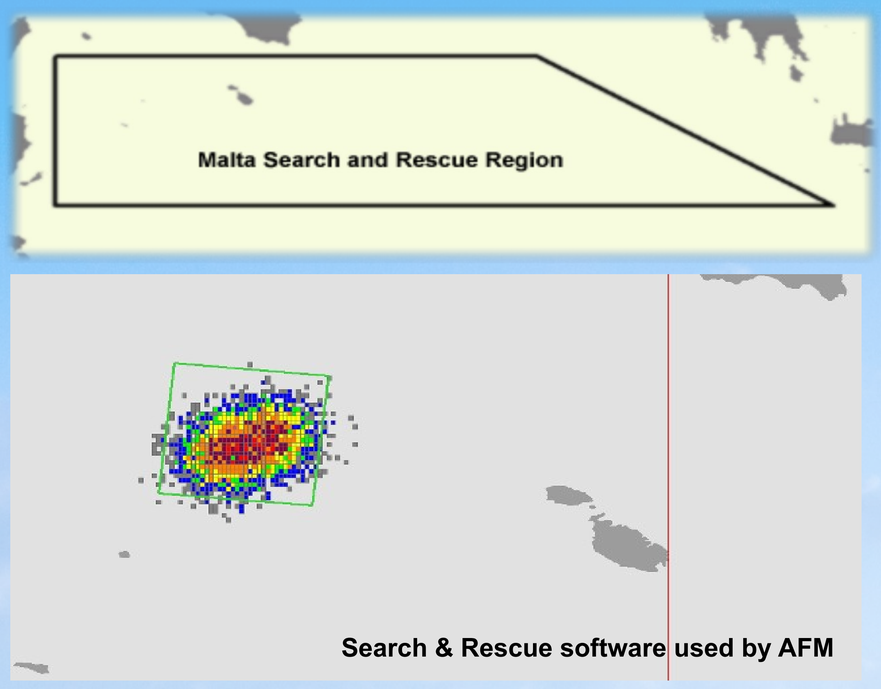
The Malta MyOcean Dashboard

Maltese Local Users of the MCS

MALTA MARITIME AUTHORITY
Oiltanking
MALTA MARITIME PILOTS

Search & Rescue

Armed Forces of Malta (AFM) **require accurate meteo-marine hindcasts, nowcasts and forecasts for the different regions of the Maltese S&R area to be used in specialised applications such as that relating to the tracking of floating objects at sea.**



Search & Rescue software used by AFM

The Malta MyOcean Service Platform

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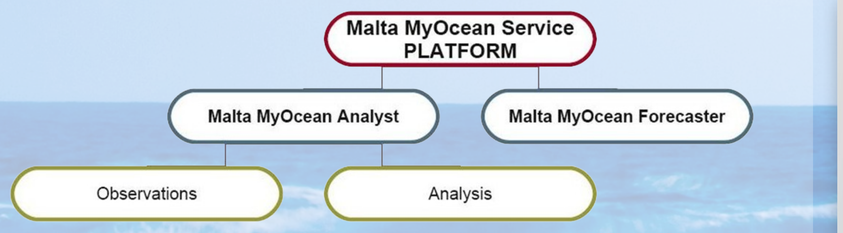
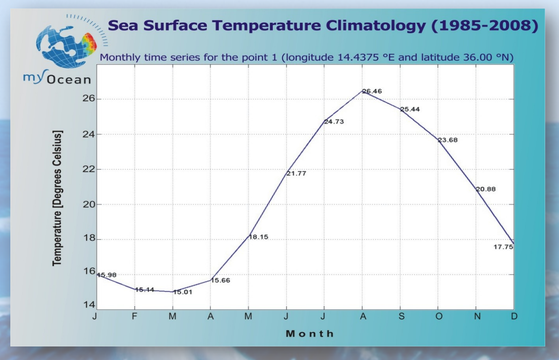
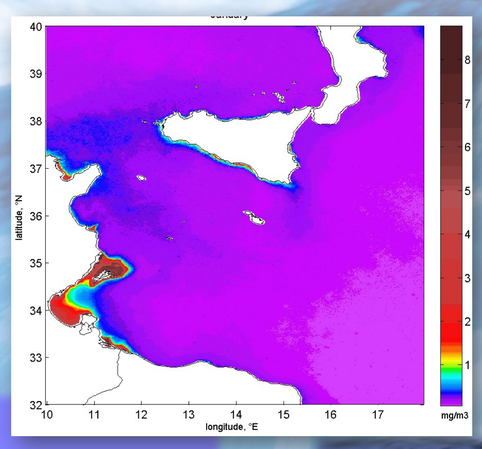
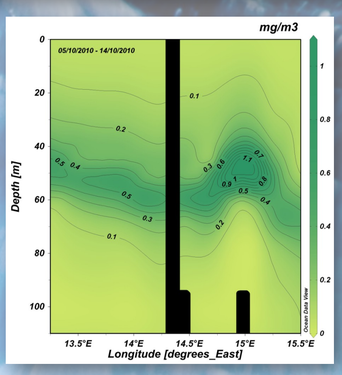


Structure of the Malta MyOcean Service Platform

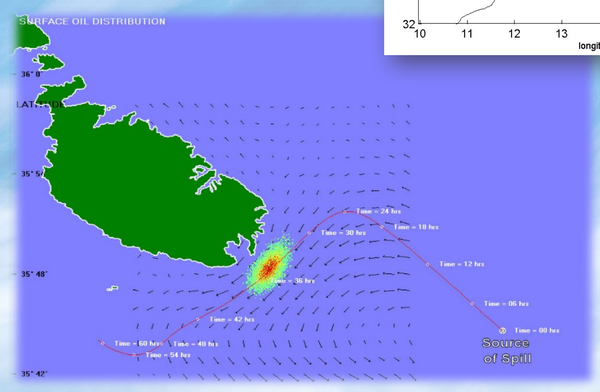


Chlorophyll-a concentration climatology for January derived from SeaWIFS satellite observations from 1998 to 2008

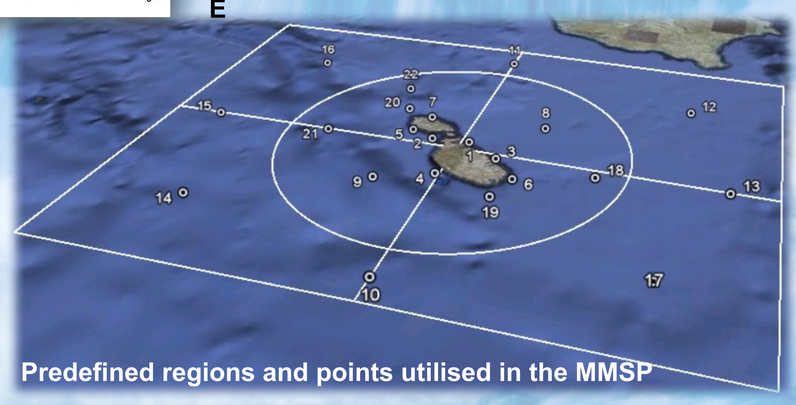




Vertical Ocean Colour Profile at latitude 35.968▼ N and longitudes13.344▼ E -15.344▼ E



MEDSLIK simulation of oil spill



Predefined regions and points utilised in the MMSP

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