

**MEDITERRANEAN AND BLACK SEAS
HYDROGRAPHIC COMMISSION**

XVI CONFERENCE

CONTRIBUTION BY MALTA



MALTA MARITIME AUTHORITY

**UKRAINE, Odessa
22-24 September 2009**

Item 1 **Hydrographic Office**

The Malta Maritime Authority is responsible for all maritime sectors. The Hydrographic office forms part of the Malta Maritime Authority under the Marine Department. The Harbour Master is responsible for the Marine Department and this role has now been appointed to Capt. David Bugeja.

The Hydrographic Office is responsible for safety to navigation incorporating updates of navigational charts, navigational aids, notices to mariners and navigational warnings (copy attached).

The Malta Maritime Authority has moved to new premises in August 2006. The New address is:

Malta Maritime Authority
Ports Directorate
Maritime Trade Centre
Xatt I-Ghassara ta' I-Gheneb,
Marsa HMR 1917
Malta

Item 2 **Surveys**

The Hydrographic Office is equipped with a 15m survey boat to survey the ports and harbours. Since the Hydrographic equipment, single beam echo sounder ELAC HYDROSTAR and GPS Trimble DSM 12 for positioning acquired through the MEDA 7 EU project, are portable these can be mounted on a smaller boat so as to survey very shallow areas.

Regular surveys have been carried out in ports and harbours to maintain British Admiralty Charts.

Item 3 **New Charts and Updates**

Through the EUMEDIS MEDChartnet project the Malta Maritime Authority was supplied with 11 ENC's. These charts are still being used by our VTS on a trial basis. The Hydrographic unit is maintaining these charts but they have not been released for distribution.

The UKHO at present produce the Maltese paper charts, and there is an agreement for the production of ENC's of the Maltese waters.

The UKHO have released 6 ENC's corresponding to paper charts BA 194, BA 2537, and 2538, BA 177, BA 211 and BA 36 Thus having all the ENC's required to navigate in the Maltese Waters.

Item 4 **Publications**

There are no Maltese publications but information is sent to the UKHO where the Mediterranean Pilot Sailing Directions NP 45, List of Lights and fog signals NP 78, Admiralty list of Radio Signals NP 286(3) and Maritime Communications NP 289, are being updated with the latest Maltese information.

Notices to mariners are issued as they come in. These are promulgated through the Maltese Government Gazette, Area 3 Coordinator, Italy, Russia and the UKHO.

- Item 5 **MSI**
- NAVTEX** This service is operated by the military service (Armed Forces of Malta) that is also responsible for the search and rescue operations.
- The NAVTEX area is bounded by:
- | | |
|-------------------------|--------------|
| In the North by LAT (N) | 39° 00 |
| In the South by the | Libyan Coast |
| In the West by LONG (E) | 09° 00 |
| In the East by LONG (E) | 18° 00 |
- GMDSS** Master Plan has been implemented and is awaiting commissioning. A fully compliant coast radio system has been incorporated into the new existing VTS. This includes a new NAVTEX transmitter with a complete re-location of all transmitters and antennae. The new NAVTEX was commissioned in August 2009
- Item 6 **S-55 Latest Update**
- Item 7 **Capacity Building**
- Following the 15th MBSHC meeting Malta requested the IHB to assist in the above and a delegation from Italy on behalf of the IHB visited the Maltese Hydrographic unit and presented a report. Copy is attached and may be found on IHO website.
- Item 8 **Oceanographic Activities**
- Tide Gauge Network**
- A digital tide gauge records sea level data. This data is transmitted to the office by VHF in real time. This data is forwarded to the PMSL laboratory and to the UKHO. An old mechanical tide gauge has been installed in the south port, which is 8 Nautical Miles away. The same datum was transferred to this port. No tide difference was observed during the years of operation.
- The Physical Oceanography Unit (PO-Unit)**
- 1) The Physical Oceanography Unit (PO-Unit) constitutes the research arm of the IOI-Malta Operational Centre at the University of Malta. It undertakes fundamental research in coastal meteorology, hydrography and physical oceanography with a main emphasis on the experimental study of the hydrodynamics of the sea in the vicinity of the Maltese Islands. It offers facilities for the gathering, processing, analysis and management of high quality physical oceanographic observations both for long term and baseline studies as well as for general applications in marine environmental research and assessments. The PO-Unit also acts as a national oceanographic data centre and promotes the IOC/IODE products and activities in Malta. It provides support to local entities involved in marine research and monitoring, to collect and maintain oceanographic data according to international standards

Operational Forecasting Systems

2. The PO-Unit currently operates 3 forecast systems. These are the Maria Malta/ETA Atmospheric Forecast System, the Maria Malta/WAM Wave Forecast System, and the Rosario-II Malta Shelf Hydrodynamical Forecast System. These are described in more detail below.

2.1 The Maria Malta/ETA Atmospheric Forecast System

The MARIA Malta/ETA Atmospheric forecasting system consists of operational numerical models to forecast meteorological conditions in the Central Mediterranean and the area around the Maltese Islands. Forecasts are published on a daily basis and may be viewed on: <http://www.capemalta.net/maria/pages/atmosforecast.html>. The domains covered by this service are the entire Mediterranean region at a resolution of 32km, and the Central Mediterranean with a higher resolution of 5km.

The Eta model is a hydrostatic limited area grid point model with a "step-mountain" vertical coordinate. In the horizontal, it is defined over the semi-staggered E grid and the "mountains" are represented as grid-box mountain blocks. Lateral boundary conditions are one-way interaction defined from 6-hr tendencies from NCEP global model forecasts.

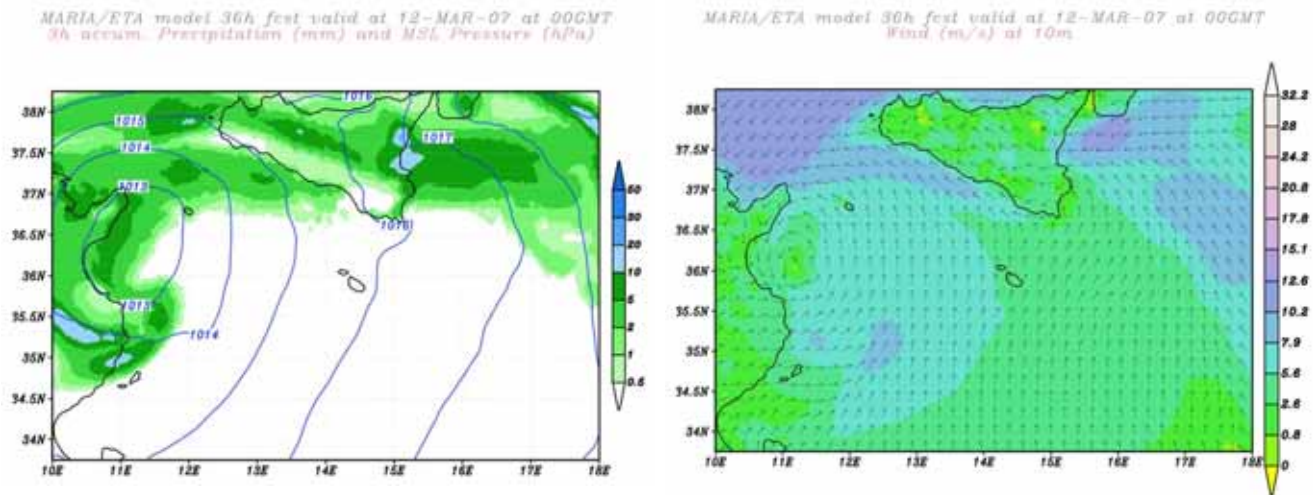


Figure 1: Sample outputs from the MARIA Malta/ETA Atmospheric Forecasting System

2.2 The Maria Malta Wave Forecast System

The Maria Malta Wave forecasting system provides daily predictions of sea state conditions in the Central Mediterranean and the area around the Maltese Islands. The operational setup produces wave forecasts at the level of the entire Mediterranean region at a resolution of 0.5° in both longitude and latitude, as well as at a higher resolution of 0.125° covering the central Mediterranean. Forecasts may be viewed on:

<http://www.capemalta.net/maria/pages/waveforecast.html>.

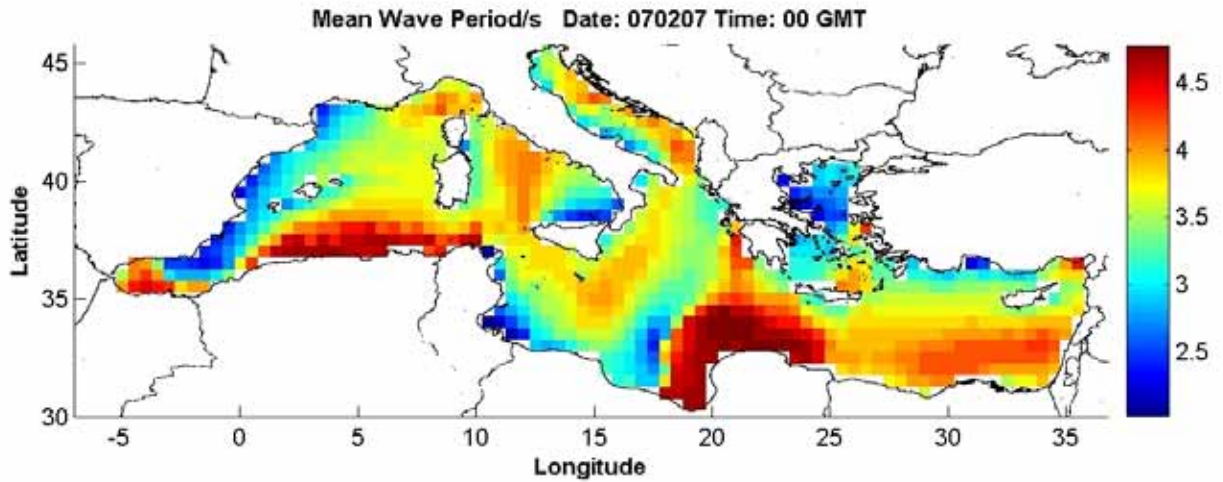


Figure 2: Sample Output from the Malta Maria Wave Forecast system for the Entire Mediterranean

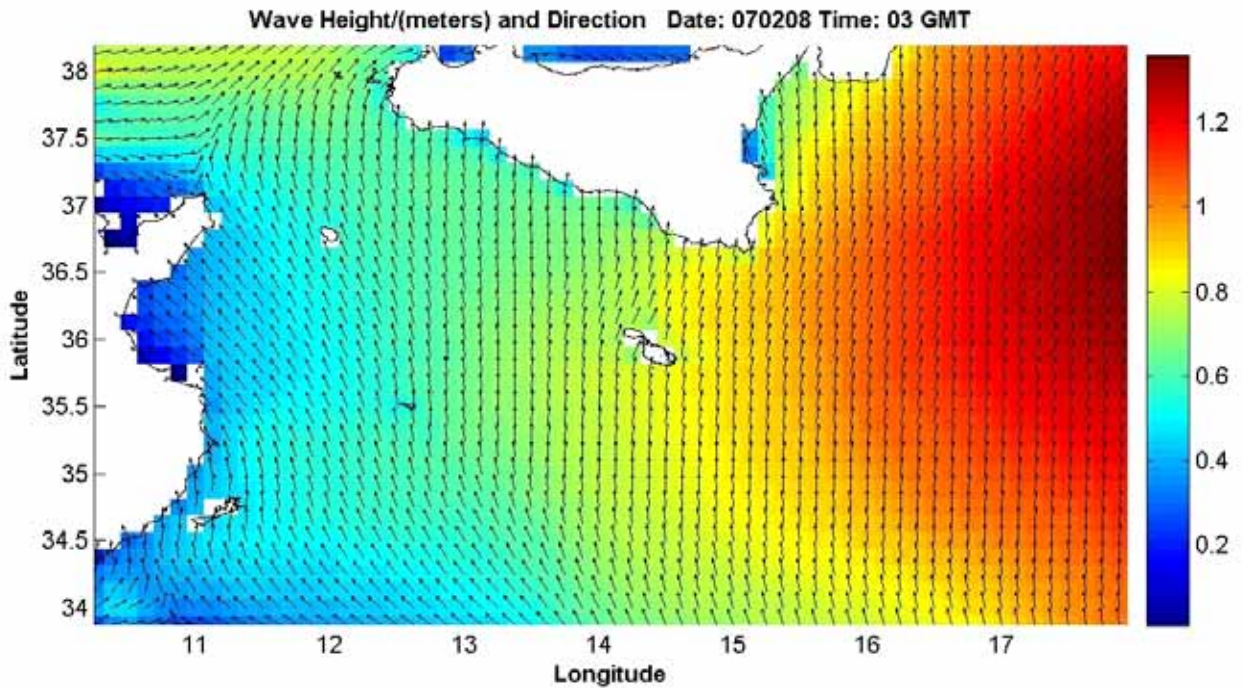


Figure 3: Sample Output from the Malta Maria Wave Forecast system for the Central Mediterranean

2.3 The Rosario-II Malta Shelf Hydrodynamical Forecasts

The Rosario-II Malta Shelf Hydrodynamic bulletin is issued daily and consists of 3-hourly averaged forecast fields for 3 and a half days from Day 1 at 00:00 GMT to Day 4 at 12:00 GMT. The bulletin is provided in two different resolutions – $1/64^\circ$ and $1/96^\circ$. The latest Rosario-II forecasts may be viewed on the following site:

<http://www.capemalta.net/MFSTEP/results0.html>

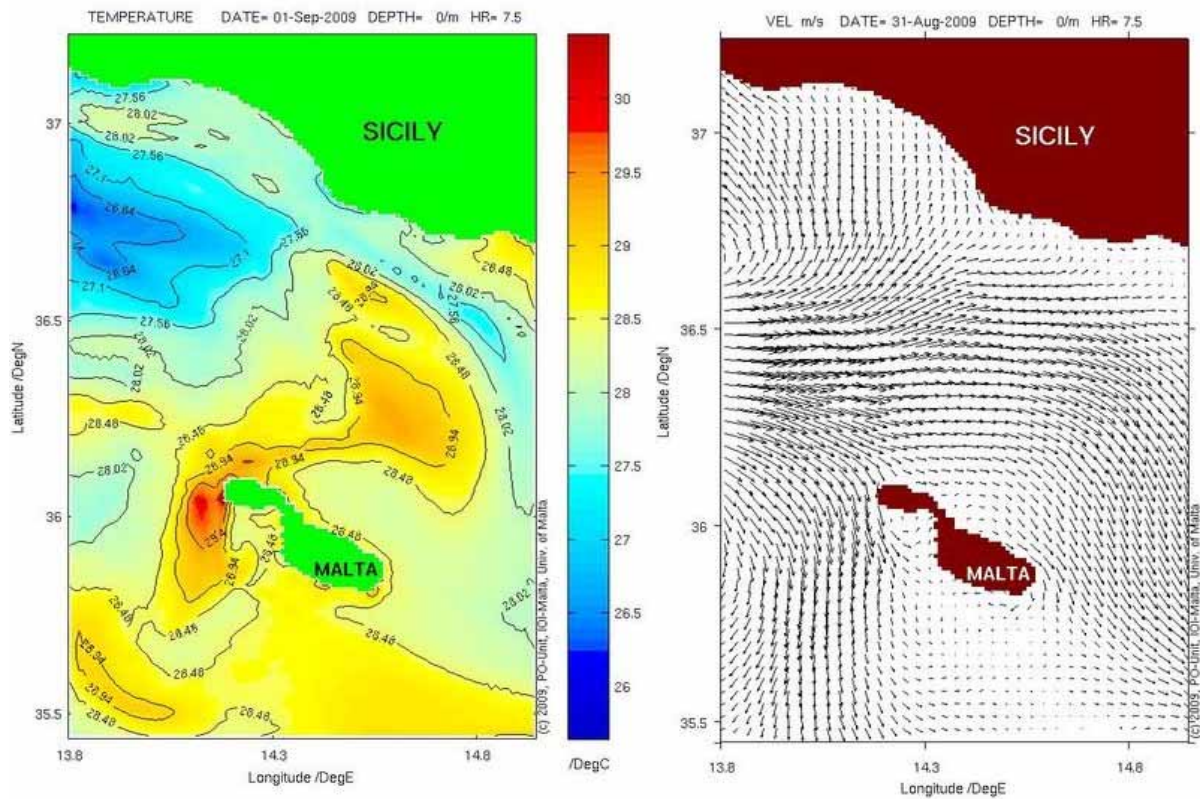


Figure 5: Sample Output Fields from the ROSARIO-II forecasts

The Malta MedGLOSS Sea Level Station

The MedGLOSS Sea Level Station is a real-time coastal observing station located in the marina at the Malta Hilton Portomaso. It has been collecting data since February 2001 and forms part of the CIESM/IOC Mediterranean regional subsystem of the Global Sea Level Observing System (MedGLOSS) which is a real-time monitoring network for the systematic measurement of the sea level in the Mediterranean and Black Sea.

Item 9 **Other activities**

- (a) Monitoring dredging operations in the development of a Freeport Harbour.
- (b) Assisting the Harbour Master in decision making for the berthing of vessels and safe passage in Ports and Harbours.
- (c) Monitoring Navigational Aids.
- (d) The Maltese Hydrographic office assisted 3 delegates from Cyprus to install and demonstrate the Pangea Hydrographic software on a portable PC (MEDA 7). They were also given training on the use of the programme on planning and post processing of data.

Item 10 **Conclusions**

The Maltese Hydrographic Unit now comprises of two qualified Hydrographic surveyors and another officer has been enrolled and started basic training in Hydrography and Electronic Charting. In its limited functions, it is able to maintain the Maltese Navigation Charts and contributes highly to safety of navigation in Maltese waters by issuing Notices to Mariners and Navigational Warnings.