# MEDITERRANEAN AND BLACK SEAS HYDROGRAPHIC COMMISSION

## XX CONFERENCE

**CONTRIBUTION BY MALTA**


**Herceg Novi, Montenegro**
**4 July - 6 July 2017**

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## Item 1 **Hydrographic Office**

### 1.1 General

Transport Malta is an autonomous corporate body with one clear strategic vision of serving as a holistic regulator of the transport sector in Malta. The Authority is made up of different Directorates, one being the Ports and Yachting Directorate which has a regulatory role. To achieve its objective the Ports and Yachting Directorate monitors the maritime activities which take place within the internal and territorial waters of Malta and manages port facilities which are under the control of the Authority, including yachting and mooring facilities.

The Hydrographic Office forms an integral part of the Ports and Yachting Directorate. The Chief Officer responsible for the Ports and Yachting Directorate who is also the Harbour master, acts as Director of the Hydrographic Office. The Maltese Hydrographic Office (MHO) performs a wide variety of roles in support of Transport Malta that include the gathering and providing hydrographic data, compiling and disseminating navigational charts, and providing maritime safety information to mariners, in compliance with the requirements of the International Convention for the Safety of Life at Sea (SOLAS).

The Hydrographic Office is based within the Transport Malta head office,
Malta Transport Centre, Xatt l-Ghassara ta' l-Gheneb,
Marsa, Malta.

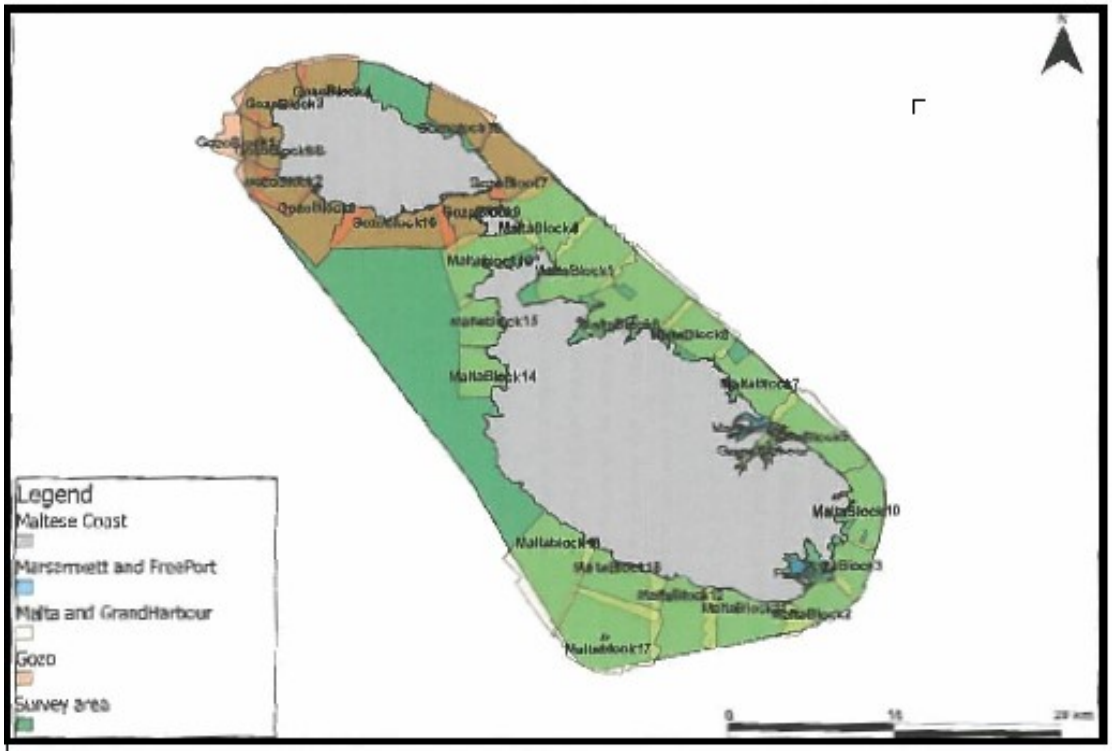
### 1.2 IHO Convention

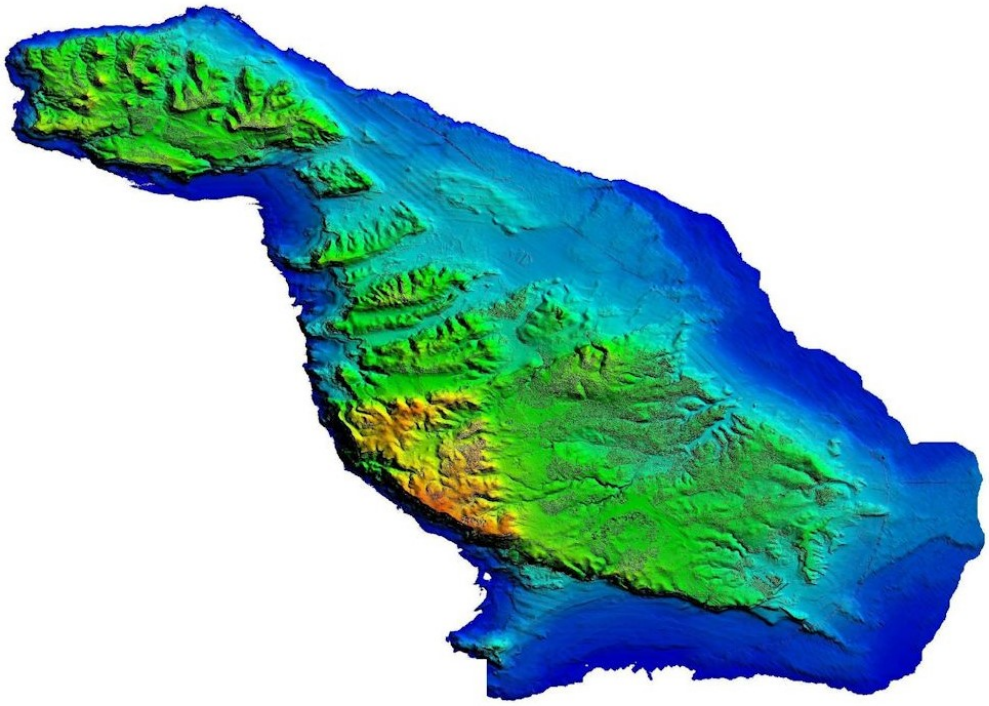
For many years, the MHO has maintained active links with the international hydrographic community and complied with conventions that came into force. In January 2017 the Malta Hydrographic Office became a full member of the International Hydrographic Office (IHO).

Item 2 **Surveys**

2.1. Surveying: The MHO's survey capability meets the requirement for large-scale surveys in port and harbour areas. Regular surveys have been carried out in ports and harbours to maintain Navigational Charts of Maltese waters. To perform this function the Hydrographic Office uses a 15m survey boat with a portable single beam echo sounder ELAC HYDROSTAR and GPS Trimble DSM 12 for positioning. Bathymetric surveys are carried out using sophisticated hydrographic hardware and software, The MHO also monitors tidal gauges and issues water level information.

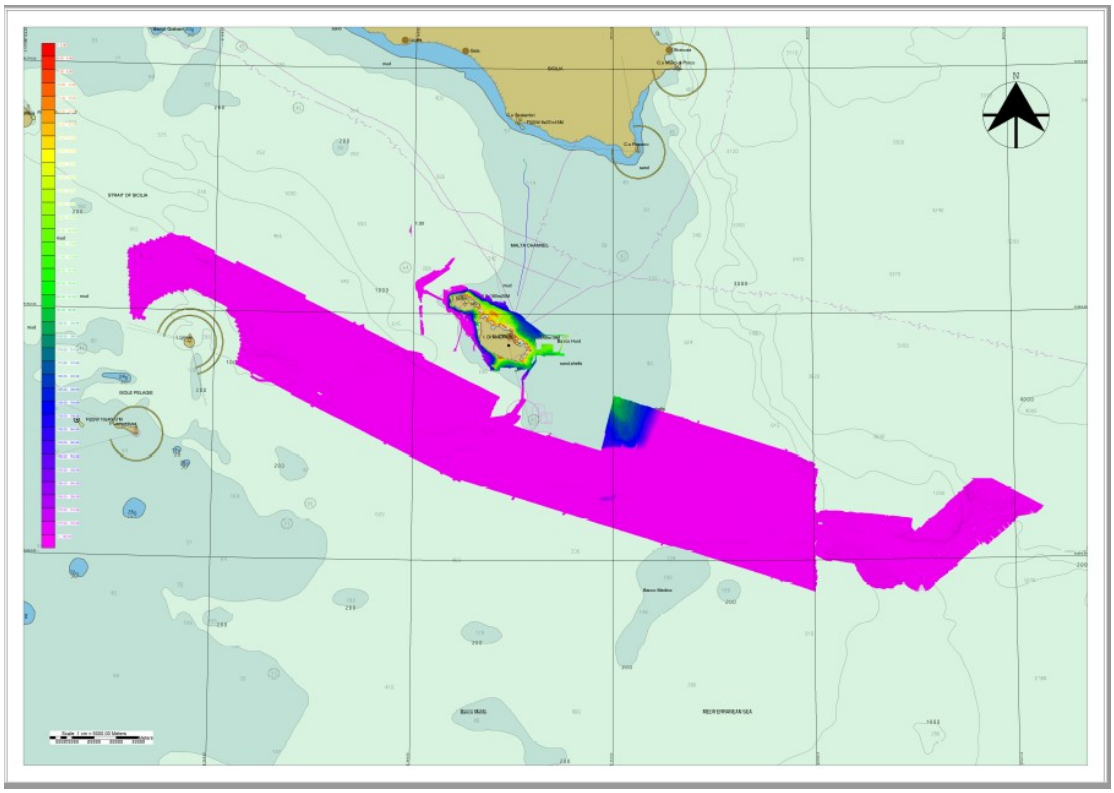
2.2 In 2012 the Malta Planning Authority carried out a LIDAR survey from the coastline to-20m contourand a Multibeam survey from -15m contour to 1 Nautical Mile off the coast. These surveys carried out as part of a project co funded through European Regional Development (ERDF) Funding entitled "SIntegraM: Spatial Data Integration for the Maltese Islands: Developing Integrated National Spatial Information Capacity" were categorised as IHO S44 order 2**.** **(**http://www.um.edu.mt/projects/cloudisle/other.html). The survey extents are shown in the below image.





Lidar and Multibeam Surveys carried out for the Malta Planning Authority in 2012.

In 2012 another survey was done by SHOM. This Multibeam survey carried out to IHO standard order 2 covers the south of Malta. The map below provides an overview of the coverage of Lidar and multibeam surveys of the waters pertaining to Malta.



Item 3 **New Charts and Updates**

Navigational Charts of Maltese waters are available in both paper and digital formats. Maltese Paper charts are produced by UKHO who have entered into a bilateral agreement with the local MHO who provide the necessary data. With regards to Digital charts, these are produced by the MHO who also assumes the responsibility of updating electronic navigational charts to support the VTS system and also produce limited paper charts and diagrams for specialist local purposes such as navigational warnings. Nautical cartography is limited but otherwise covered by the MHO's close links with UKHO.

Following the last MBSHC meeting in Georgia, Malta started discussions with IC-ENC and the UKHO to assess the possibility that Malta takes over the production of ENCs. In 2016, following an agreement with UKHO the Malta Hydrographic Office Joined IC-ENC and following agreement with UKHO to initiate the process to start producing 6 ENCs (Maltese) .These are MT 50211A, MT 50211b MT 60211c, MT 60211d, MT 60211e and MT 60211f.

Malta is in the process to produce more ENCs. The UKHO is collaborating with Malta for the production of more ENC's of the Maltese waters.

Item 4 **Publications**

MHO has a major role in providing Maritime Safety Information (MSI) data to users of the marine environment: This information varies from the immediate notification of the failure of lighthouses or buoys, to the routine administration of marinas and notification of temporarily prohibited areas, to changes affecting navigational charts.

Notices to Mariners are published on the government Gazette and Transport Malta website as they come in. These are categorised as local and coastal. Below is a list of these Notices to Mariners. The Coastal Notices to Mariners and Navigational warnings are sent to NavArea 3 Coordinator (Spain), Italy, Russia and the UKHO

| **Malta** | | |
|---|---|---|
| **Year** | **Coastal Notices** | **Local Notices** |
| **2015** | **31** | **97** |
| **2016** | **42** | **109** |
| **2017 (Until 30th May)** | **29** | **45** |

Information is sent to the UKHO in instances 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.

Besides the above several project publications are available from the Physical Oceanography Research Group. These are presented as item 8.8

Item 5 **MSI**

Navigational warnings are promulgated by the Armed Forces of Malta through NAVTEX and VHF transmissions. The Armed Forces of Malta are also responsible for operating the Malta Coast Radio Station and for the search and rescue operations

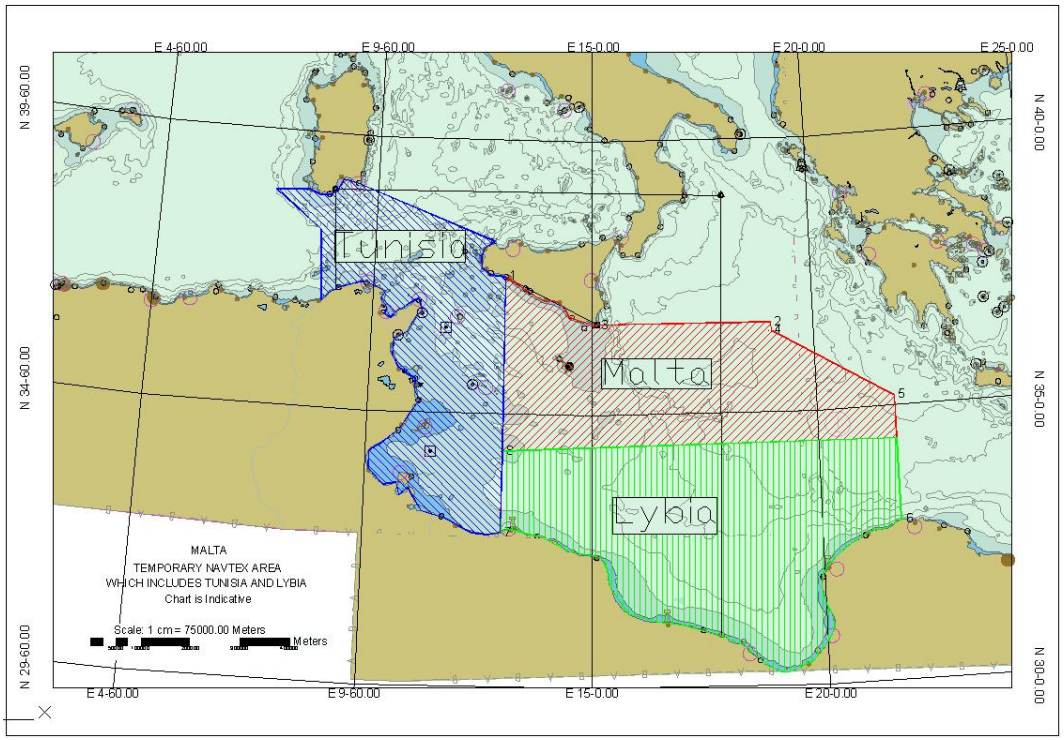
Contact details of Armed Forces opf Malta Coast Radio Station are as follows:

Malta Radio
Operations Centre
Armed Forces of Malta (AFM)
C2S COY, 4 Regt
Luqa Barracks
Luqa VLT 2000
Malta
TF : +356 22494203 / 8 / 9 / 10
TF : +356 22494202
TF : +356 21257267
FAX : +356 21809860
EMAIL : rccmalta@gov.mt
SAT : 421599999

For the past two years the NAVTEX service area has been reassigned to cover the west coast of Tunisia and the coast of Libya. This was agreed with Tunisia and the Navarea III Coordinator in 2015. The below is a list of Notices to Mariners that were promulgated in the Tunisian time slots.

| **Tunisia** | |
|---|---|
| **Year** | **Notices (Through Malta)** |
| **2015 (From 24th November)** | **9** |
| **2016** | **148** |
| **2017 (Until 30th May)** | **56** |

The below is an Indicative chart showing the current coverage by the NAVTEX service in Malta.




National Focal point:

Malta Hydrographic Office
Ports and Yacthing Directorate
Transport Malta
Malta Transport Centre
Marsa, MRS 1917
Malta

**GMDSS** Master Plan has been implemented and is operational in A1 and A2. A fully compliant coast radio system has been incorporated into the new existing VTS. This includes a NAVTEX transmitter with a complete re-location of all transmitters and antennae that took place in 2010.

Item 6 **S-55 Latest Update –** no update

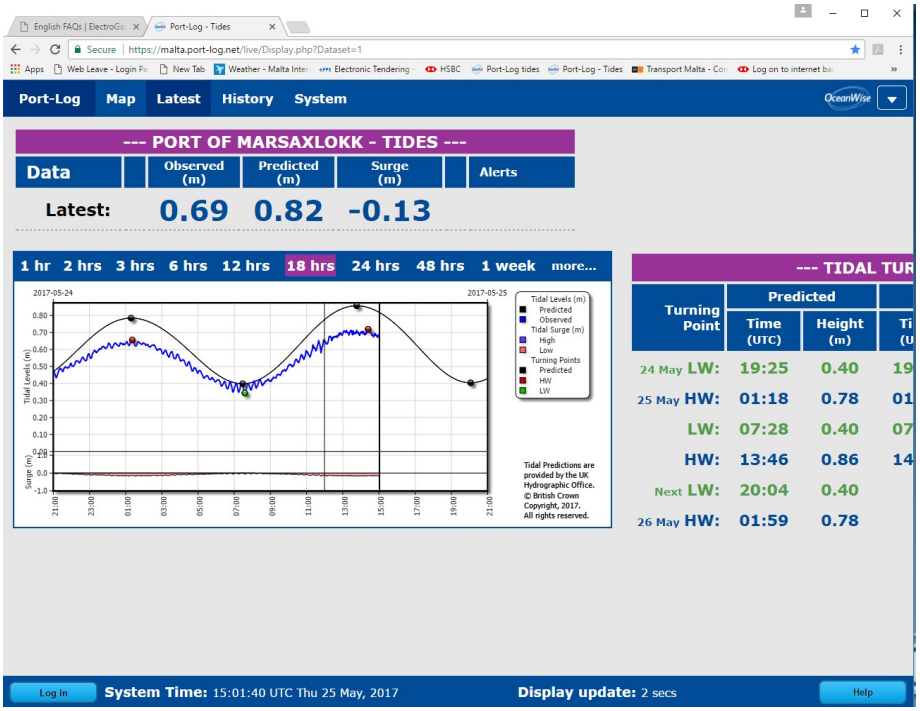
Item 7 **Capacity Building –**

One staff from the Hydrographic Office and one from the Coast Radio station, carried out the capacity building MSI course held in Turkey in October 2015. It is the intention of the MHO to enrol another personnel later on this year and hydrographic training will be required.

Item 8 **Oceanographic Activities**

**Tide Gauge Network**

A tide gauge was setup in the southern port of the Island to transmit tide data in real time. The site can be accessed by the following weblink :https://malta.port-log.net/live/Display.php?Dataset=1




Another tide gauge was set up by the Physical Oceanography Unit which is set up at PortoMaso.

## Activities performed by the Physical Oceanography Research Group during the academic year 2015-2016

The programme of activities of the Physical Oceanography Research Group (PO-Res.Grp) during the reporting period focused on the following elements:

a) **oceanographic research**, in a holistic perspective, including operational observations and forecasts, specialised data management and analysis, with the participation in international cooperative ventures;

b) **academic support to various University courses and a dedicated M.Sc, course in Applied Oceanography** which deals with technical and theoretical aspects related to meteo-marine observations, operational monitoring platforms, numerical modelling and forecasting and other methods related to ocean research and applications;

c) **promoting awareness on the sea**, on its naturalistic, scientific and cultural connotations, especially with the younger generation, including raising public awareness;

d) **promoting an inter-sartorial approach in marine affairs at a national level** by supporting the interaction between local institutions that are active in marine affairs, and in particular through the IOI Malta course on ocean governance.

## 8.2. Training and Education

### *8.2.1 Master of Science in Applied Oceanography*

*Operational Oceanography and Marine Studies within the University of Malta organised an MSc course in Applied Oceanography. The postgraduate course which was offered as a one year full time course in scholastic year 2015-2016*

***University of Malta***

**Number of Students: 5**
**Course Co-ordinator: Prof. Aldo Drago**


The PO-Res.Grp offered this one-year full time course for the second year running. The course builds on the core principles of oceanography in coastal and open sea domains, and the versatile and broad spectrum of disciplines and offshoot applications related to it. This specialized course spans and merges the legal, socio-economic, scientific and environmental elements into one whole to offer students a wide-ranging vision to marine affairs, linking science to management, putting technology at the service of users and stakeholders, and providing tools for more efficient service oriented applications.

### *8.2.2 The 11th and 12th Editions of the IOI Malta Training Course*

The 11th and 12th annual five-week IOI Regional Ocean Governance Training Programme for the Mediterranean, Black, Baltic and Caspian Seas was held in Malta between the 8th November and the 10th December 2015 and between 6th November 2016 and the 8th December 2016. The course is run under the auspices of the International Ocean Institute and managed by Prof. Alan Deidun. The 2015 course programme was enriched through the inclusion of two ad hoc seminars held during the course of the same training programme, homing in on the Sustainable Development Goals of the United Nations and, in particular SDG 14, which specifically addresses the health of our oceans, and Arctic issues.

## 8.3. Information and Dissemination

The major additions in oceanographic services developed during the reporting period consisted of the following:

- **KAPTAN Smartphone Application and Web facility**


The data for this integrated service to mariners is mainly derived from the CALYPSO HF radar observing system, consisting of HF radar CODAR SeaSonde installations on the northern Maltese and southern Sicilian shores at four selected sites. High resolution weather and marine numerical forecasting models run by the PO. Res. Grp. specifically for the Malta shelf area together with satellite observations provide a suite of meteo-marine nowcast and forecast maps of key parameters describing atmospheric conditions and sea state, and complement other weather forecasts

derived from GFS/WRF models and local weather stations. The service is available as asmartphone application and a web based service at www.capemalta.net/calypso/kaptan.

- **The Oil Spill Bulletin**

The Oil Spill Bulletin for the Maltese Islands was developed as part of the work conducted under the MEDESS-4MS MED programme strategic project. It is also a contribution to the MyOcean FO project. The online bulletin generates a forecast of an oil spill evolution in time alongside a complete meteo-marine forecast for a requested number of hours.

Another major initiative supported in the recent years consists of the **IOI-KIDS website** (www.ioikids.net) on the sea dedicated to school children and youngsters; this initiative is intended to provide an avenue for presenting knowledge on the marine environment in an appealing form to the younger generation, through the use of interactive games, news items, projects, and informative featured articles that aid students in their science lessons. It was supported in the past by the IOI Youth, Women and the Sea Programme as well as other fundings.

## 8.4. Projects

### *8.4.1 CALYPSO Follow On*

The CALYPSO Follow On project, funded by Italia Malta programme for 2007-2013 was completed in 2015. It built on the success of the previous CALYPSO project. The project was led by Prof. Aldo Drago with the participation of four Sicilian partners. CALYPSO Follow On strengthened the existing network of HF radars by installing another radar in Ragusa, and improved the services delivering radar data and derived products to users. A smartphone application KAPTAN was developed, together with a browser version, KAPTAN Online.
The project came to end with a Final meeting held in Catania on 2nd December 2015 which included a public seminar with the participation of a large number of stakeholders.

**CALYPSO user interface**

A web service was developed to make data generated by the HF radars, by forecasting meteo-marine models and observations easily available to applications on client devices. A smartphone application, KAPTAN, was developed to integrate this data for usage by mariners.

### *8.4.2 JERICO-NEXT*

JERICO-NEXT is an on-going Horizon 2020 project. The overall aim of this project is to improve the cooperation between coastal observatories in Europe, thereby providing

better information services to the research community and society in general. The Physical Oceanography Research Group is charged with creating a 2-way channel of communication with groups of operational oceanography data users. Following a dedicated call for expressions of interest a User Panel composed of selected experts representing different user ctegories has been set up.

### *4.3 EMODnet Data Ingestion*


EMODnet Data Ingestion is a Horizon 2020 project which targets to develop a central ingestion web portal into which various external data providers can submit their marine-related data packages. The data is submitted through an ISO19115 based submission form, thereby ensuring that the data provided by different entities is harmonised.

The role of the Physical Oceanography Research Group in this initiative is to facilitate machine-to-machine transfers from monitoring stations and data sources in the Maltese Islands to the relevant repositories. This project is a further endeavour of the PO Res. Grp. in promoting visibility, sharing and management of marine data, using ISO standards. It also facilitates local users to have access to data on international oceanographic data frameworks.

### *8.4.4 GLIDER South*


GLIDER South is another major physical oceanography research initiative, in which the Physical Oceanography Research Group will be collaborating with CNRS-INSU (Centre National de la Recherche Scientifique – Institut National des Sciences de l'Univers). This project was proposed, and will be coordinated, by Prof. Aldo Drago, within the JERICO NEXT Trans National Access activities.
An underwater remotely manned glider will be deployed close to Malta and along transects to the south, providing very pristine datasets in the stretch of sea up to the Libyan shelf area. Gliders are torpedo-like autonomous vehicles which dive into the sea making adaptive measurements of the water column with a payload of interdisciplinary sensors and communicating data in real time via satellite as they surface intermittently during their data acquisition expeditions. The glider mission is planned in spring 2017.

### 4.6 *PERSEUS*


PERSEUS (Policy-oriented marine Environmental Research in the Southern EUropean Seas) is a large-scale, four-year research project involving 53 partners from 21 countries and 300+ scientists over four years ending in 2015. It was one of the first EU-funded scientific research projects mandated to develop science-based policy

recommendations for the better governance of the marine environments in the Mediterranean Sea and the Black Sea, also referred to as the Southern European Seas (SES). The project served to identify the multi-scale interacting patterns of natural and human-made pressures on the Med and BS marine ecosystems and assess their effects through well-coordinated research and socio-economic analysis. The WP's of PERSEUS are spread out over 9 WP's, with the Po-Res. Grp. participating in WP 1 and WP 8, the latter being led by Prof. Aldo Drago and comprising activities of training and capacity building.

### *8.4.5 Other projects*

Other projects in which the Physical Oceanography Research Group is participating and which were commenced in the reporting period include:

***AMAre***: The ultimate aim of this MED programme project is to create strategies and recommendations at transnational level, adopting an ecosystem-based approach to Marine Spatial Planning (MSP), considering the goals of the Marine Strategy Framework Directive (MSFD) across Marine Protected Areas (MPAs). The Physical Oceanography Research Group will be compiling local data for Malta's North MPA on a dedicated geo portal that will be set up in the first year of the project. The main contribution will be to avail of oceanographic and spatial data for the management of MPAs. The PO-Res. Grp. Will be also leading the project WP4 comprising the testing phase where tools developed in the initial phase will be used to manage existing MPAs.

***SeaDataCloud***: This is an H2020 project aiming to build on the achievements of its predecessor, SeaDataNet II, which saw the development of a pan-European infrastructure for managing, indexing and providing access to marine-related data products from various observational activities in the European coastal marine waters, regional seas and global oceans. The Physical Oceanography Research Group is the national node that will be actively involved in increasing the amount of marine metadata and data available by seeking out data providers and facilitating their inclusion in the international SeaDataNet framework.

## 8.5. Operational activities

- The **collection of sea level data** from the station in the marina at the Malta Hilton Portomaso, which forms part of a regional network of sea level stations (MedGLOSS)
- The **operational running of the real-time coastal meteo station** on the breakwater of Marsaxlokk Bay for the delivery of observations of wind, wind gust, air temperature, air pressure and relative humidity at high sampling intervals, and the operational collection of **atmospheric heat flux** data at the University of Malta station
- The **operational running and upgrading of the ROSARIO II marine forecasting systems** which provide routine online meteo-marine forecasts for the area around the Maltese Islands
- The **upgrading and operational running of the MARIA/ETA atmospheric and MARIA/WAM and SWAN wave forecasting systems**
- Use of hydrodynamical model forecast fields for **oil spill drift and tracking on the shelf area around the Malta Islands and Malta Channel**;

- Identification and **recovery of oceanographic data** sets from third parties for the area round the Maltese Islands;
- Implementation of **operational services and value-added products** derived from numerical models and observations developed specifically for various entities in the Maltese Islands (such as the AFM, and MEPA).
- The **operational running of the HF-radar systems** installed within the ambit of the CALYPSO project for the delivery of real-time surface currents and waves in the Malta Channel.
- **Deployment of Lagrangian drifters and ARGO floats** to study circulation in the Malta Channel and beyond
- **Collection of delayed mode observations including sea currents and temperature**

### 8.6. Collaboration and networking

The COST Action ES1402, Evaluation of Ocean Syntheses, aims to establish and consolidate a network of European scientists working on the generation and evaluation of ocean syntheses by improving the understanding of the value and use of ocean syntheses and promote their use. The Physical Oceanography Research Group contributes as an MC member to this Action by collaborating in improving the coordination of the European efforts in the evaluation of ocean syntheses, to optimize their use and value, to ease their access, to promote their improvement and to raise confidence in their quality. This COST Action is providing an optimal framework for integrating several prominent European oceanographic centres. Recommendations and guidelines will be provided on the evaluation, quality and applications of ocean syntheses to end users. These evaluations require cross-disciplinary meetings with experts in Earth Observation, ocean and atmosphere syntheses, air-sea flux measurements and modelling and physical oceanography.

The PO-Res. Grp is a partner to several international networks, amongst which:

- **MonGOOS**, the Regional Alliance for GOOS (Global Ocean Observing System) in the Mediterranean
- Committee on the **International Oceanographic Data and Information Exchange** (IODE/IOC)
- **CIESM initiatives** namely HYDROCHANGES, Tropical Signals, JellyWatch and MedGLOSS

The PO-Res. Grp is a member of the national team responsible under Transport Malta for oil spill response and emergency activities. Participated in the oil pollution exercise MALTEX2015 where forecast data and oil spill modelling is provided.

### 8.7. Meetings and conferences

During the reporting period, staff from the PO-Res.Grp participated in the following international meetings:

- EMODnet Data Ingestion General Meeting in Amsterdam held from the 26th May 2016 to 27th May 2016;
- 41st CIESM (International Commission for the Scientific Exploration of the Mediterranean Sea) Congress, Kiel, Germany: 12th – 16th September 2016;
- INCREASE HF Radar Expert Workshop held from the 13th to 15th September 2016 in Lerici, Italy;

- 51st EMBS (European Marine Biology Symposium), Rhodes, Greece: 26th-30th September 2016.

### 8.8. Publications

1. , '*CALYPSO – An operational network of HF radars for the Malta-Sicily Channel*', *Proceedings of the Seventh International Conference on EuroGOOS 28-30 October 2014,. First published 2015. Eurogoos Publication no. 30. ISBN 978-91-974828-9-9.*

2. '*Tidal Currents in the Malta-Sicily Channel from High-Frequency radar observations*', Continental Shelf Research, Vol. 109, pp10–23.

3. '*Assessment of ocean variability in the Sicily Channel from a numerical three-dimensional model using EOFs decomposition*'

4. '*Determination of surface tidal currents characteristics by means of HF radar network measurements*', Proceedings of the Sentinel-3 for Science Workshop, 2-5 June, 2015, Venice, Italy.

5. '*Mapping sea Water Quality in the Malta Channel by means of remotely sensed data and HF radar-derived surface water currents'* , Proceedings of the Sentinel-3 for Science Workshop, 2-5 June, 2015,

6. '*Defining the trophic status of Maltese (Central Mediterranean) coastal waters through the computation of water quality indices based on satellite data*' Proceedings of the 14th International Coastal Symposium (Sydney, Australia). Journal of Coastal Research, Special Issue, No. 75,

7. *'Operational Data Management in support of Search and Rescue. Malta, Central Mediterranean Sea*', Environment, Coastal and Offshore Journal, pg. 46-49

8. '*KAPTAN – A smartphone application for mariners'*, submitted to the International conference on Marine Data and Information Systems, Gdansk, Poland, 11-13 October 2016.
9. '*The Mediterranean Decision Support System for Marine Safety dedicated to oil slicks predictions',* Special Issue, volume n.133, Deep Sea Research Part II: Topical Studies in Oceanography, pp 4-20

10. '*Analysis of the development and diffusion of technological innovations in oil spill forecasting: The MEDESS-4MS case',* Special Issue, volume n.133, Deep Sea Research Part II: Topical Studies in Oceanography, pp 186-195

11. '*Numerical modelling to the rescue: environmental models as a novel tool in simulating the trajectory of jellyfish blooms within coastal ecosystems – a case study from the Maltese Islands (Central Mediterranean)'*, 5th International Jellyfish Bloom Symposium, Barcelona May 30 - June 3, 2016

12. A further record of the blue swimmer crab *Portunus segnis* Forskal, 1775 (Decapoda: Brachyura: Portunidae) from the Maltese Islands (Central

Mediterranean). Bioinvasions Records 5(1): 43-46. DOI: http://dx.doi.org/10.3391/bir.2016.5.1.08

13. Which is the best predictor of sea temperature: satellite, model or data logger values? A case study from the Maltese Islands (Central Mediterranean). Journal of Coastal Research SI 75: 627-631.
14. Yet another first for Malta……first record of the Arabian angelfish (*Pomacanthus asfur*) [Forsskal, 1775] from the Mediterranean In: Karachle et al. Marine Biodiversity Records – March 2016 (Collective Article). Mediterranean Marine Science 17(1): 230-252.
15. The first record of the *Sargocentron* genus from the Maltese Islands (Central Mediterranean) - who will unravel the current conundrum? Bionvasions Records 5 (2): 123-126.
16. Machine Learning for benthic sand and maerl classification and coverage estimation in coastal areas around the Maltese Islands. *Journal of Applied Research and Technology* 14: 338-344.
17. New records of the silver-cheeked toadfish *Lagocephalus sceleratus* (Gmelin, 1789) in the Tyrrhenian and Ionian Seas: early detection and participatory monitoring in practice. Management of Biological Invasions 7(4): 313-319.
18. ASSESSING THE POTENTIAL OF SUEZ CANAL SHIPPING TRAFFIC AS AN INVASION PATHWAY FOR NON-INDIGENOUS SPECIES IN CENTRAL MEDITERRANEAN HARBOURS *Rapp. Comm. int. Mer Médit., 41, 2016 pg. 429.*
19. POPULATION, ECOLOGY AND GENETIC CHARACTERISTICS OF THE MEDITERRANNEAN BOX JELLYFISH *CARYBDEA MARSUPIALIS* IN THE ISLAND OF MALTA *Rapp. Comm. int. Mer Médit., 41, 2016 pg. 444.*
20. THE POTENTIAL OF COASTAL ECOTOURISM IN CENTRAL MEDITERRANEAN ISLANDS: A CASE STUDY FROM THE AEGADIAN ARCHIPELAGO. *Rapp. Comm. int. Mer Médit., 41, 2016 pg. 510.*
21. Multi-Frame Blind Image Deconvolution through Split Frequency - Phase Recovery. International Conference on Graphics and Processing, 2016 (in press).
22. Multi-frame and Blind Astronomical Image Deconvolution Through L1 and L2 Minimisation. Journal of the Astronomical Society of the Pacific (in press).
23. Gap Filling of the CALYPSO HF Radar Sea Surface Current Data through Past Measurements and Satellite Wind Observations, International Journal of Navigation and Observation, Volume 2016 (2016), Article ID 2605198.

## Item 9 Other activities

(a) Monitoring dredging operations in the development of a Freeport Harbour and around Malta.

b) Assisting the Chief Officer and Harbour Master in decision making for the berthing of vessels and safe passage around Malta and in Ports

and Harbours.

c) Monitoring Navigational Aids and issue Notices to Mariners and Navigational warnings.

d) Provide charts in connection with mooring areas in the Maltese coastal waters.

## 9.1 Marine Data Spatial Infrastructure - Malta

The Planning Authority in Malta incorporates the national Mapping Agency and is also a major data repository at a national level. In 2017 the Planning Authority has embarked on a national project with the support of EU funding for the development and implementation of a national spatial data infrastructure aimed at the creation of a strategic approach to spatial data and creation of critical base data sets covering the national territory. The SIntegraM project is expected to provide Malta with the necessary infrastructure in terms of aerial, terrestrial and marine technologies. Partnering with all Ministries, this project is expected to lay the foundations for enhanced governance of spatial data at a national level.

The Planning Authority is also the designated Competent Authority for the implementation of the Maritime Spatial Planning Directive. This year, the PA has joined a consortium of 11 partners covering 4 countries (France, Malta, Spain and Italy) and two international organisations (CPMR and UNEP- MAP) in the EU Funded Project SIMWESTMED. Co-ordinated by SHOM, this project is expected to understand issues, spatial demands, MSP processes across boundaries and analyse data and geographic information access with a view to facilitate transboundary co-operation amongst different MSP Competent Authorities. The SIMWESTMED project whilst focusing on the transboundary aspect of MSP, is expected to contribute towards the identification of requirements and potential for the development of a national maritime spatial data infrastructure that may support inter-operability at a regional level.

# Item 10 **Conclusions**

The Maltese Hydrographic Office now comprises of two qualified Hydrographic surveyors and another qualified Cartographer has been enrolled to cover Electronic Charting. It is maintaining the Maltese Navigation Charts and contributes highly to safety of navigation in Maltese waters by keeping up to date Nautical Charts and issues Notices to Mariners and Navigational Warnings to the Mariner.