



PORTUGAL NATIONAL REPORT

12TH SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC) MEETING

Dar-es-Salaam, Tanzania

21st – 23rd September 2015

INSTITUTO HIDROGRÁFICO
(IHPT)

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INTRODUCTION

This report describes the main technical activities and developments at the Portuguese Hydrographic Institute (IHPT) during the period from September 2014 to August 2015. It was elaborated in order to be presented to the 12th SAIHC Meeting and covers the following areas: Hydrography, Cartography, Information Technologies and GIS, Marine Safety, and Technical Assistance and Training.

HYDROGRAPHIC OFFICE

The most relevant information is presented in Annex Alfa.

1- SURVEYS

During the period of this report no surveys were executed by IHPT on the SAIHC Region.

In the context of the collaboration with other countries, although occurred in the Eastern Atlantic Hydrographic Commission (EAtHC) region, it should be mentioned the collaboration with the República de S. Tomé e Príncipe and with the Instituto Hidrográfico de la Marina (IHM) from Spain.

In the end of 2014, under the cooperation between Portugal and the República de S. Tomé e Príncipe, a hydrographic survey team from the IHPT had executed a hydrographic and topographic survey in Port of S. Tomé. With the collected data was published, in May of 2015 a new Nautical Chart (PT66420), in WGS84 with two plans - Approaches to São Tomé and Fernão Dias Harbours (1:25 000) and Ana Chaves Bay (1:10 000). This Chart replaced the older one published in 1958, and we expected it can contribute to the safety of navigation in the area and to the economic development of that country.

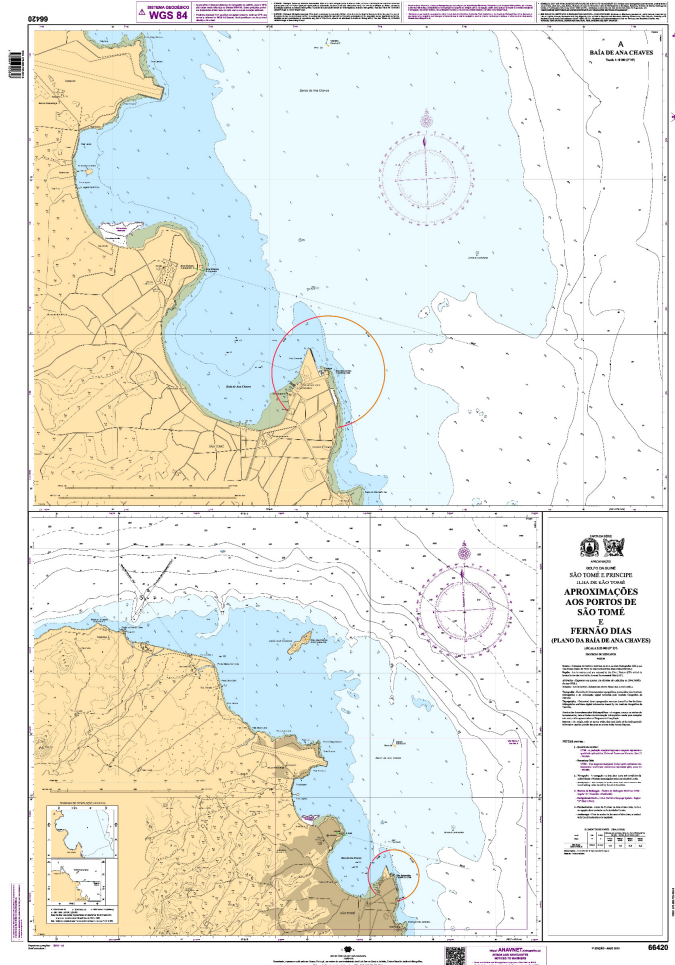


Figure 1 – NC PT 66420 Approaches to São Tomé and Fernão Dias Harbours and Ana Chaves Bay.

Following the intensive cooperation with IHM, in May of 2015 a collaborative survey was carried out involving survey teams of IHPT and IHM at the Guadiana River's Mouth. During the survey the difference between the Chart Datum from Portugal and that region of Spain was determined. With the collected data is expected to publish two similar Nautical Charts, one from each Institute, ending with the inconsistencies between the cartographic products of the two countries in that border.

At the National level, IHPT started this year a challenging project related with the hydrographic survey and the production of Nautical Charts and Electronic Navigation Charts of all Portuguese section of the Douro River. This section of the river, with about 210 Km, has five locks and very intense tourist navigation, important for the regional and country economy.

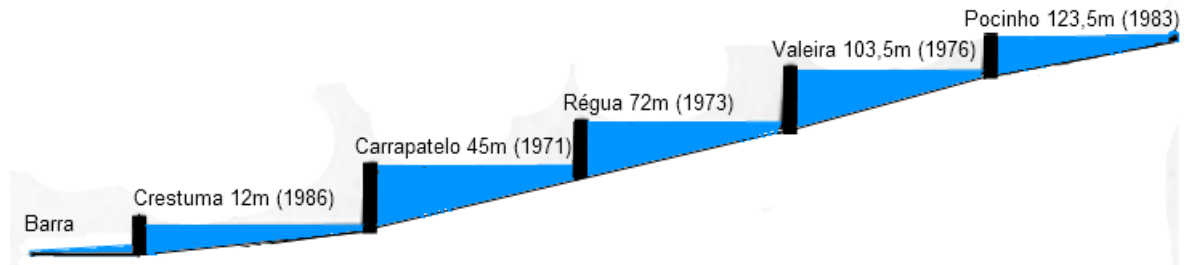


Figure 2 – Schema of Douro River Locks with their height (MSL) and construction year.

2- CHARTS AND UPDATES

IHPT continued the implementation of CARIS – Hydrographic Production Database (HPD) as the unique cartographic production system.

In addition to the Nautical Charts and the Electronic Navigational Charts, some charts for special purposes are also produced, for instance: charts for fishermen, charts for pleasure crafts, sedimentological charts and special charts for training purposes. All those charts are in accordance with IHO specifications and were very well accepted by the users.

All IHPT new charts and new editions are bilingual (Portuguese and English) and follow INT specifications, whether or not they belong to INT series.

Paper Charts

Since the last SAIHC meeting, IHPT did not produce any Nautical Chart of the region.

However, IHPT is involved in the production and co-production of the following Nautical Charts:

- INT Chart 7054 (Moçambique channel). Co-production between IHPT and SHOM, led by SHOM. SHOM already started the production. IHPT contributed providing data from ENC PT281101 (Canal de Moçambique - 1:700 000).
- INT 7631 (Approaches to Beira). (3rd ICCCM Action Item 3) Co-production between UK and MZ, PT involved for production of first INT chart version. Just recently was received a PDF of the Nautical Chart which is in evaluation.
- INT 7645 (Porto da Topuito). (3rd ICCCM Action Item 7) MZ production, with PT involved in production of first INT chart. According to INAHINA, they are in the topographic and bathymetric data acquisition process.

- INT 7661 (Nacala). (3rd ICCCM Action Item 16) Inform Chairman of use of one or two charts to cover port and approaches. IHPT is in conversations with INAHINA regarding this Action Item. However, if it is not considered necessary to have additional plans, it will be possible to produce just one Nautical Chart with two plans (Approaches to Nacala and Nacala Harbour).

Print on Demand (PoD).

Presently IHPT provides 100% of the national Nautical Charts using a Print-on-Demand system.

PoD-charts are continuously updated according to the published “Notices to Mariners”.

Electronic Navigational Charts (ENCs).

IHPT is a member and participates actively in the works of the International Centre for ENCs (IC-ENC), including their Technical Experts Working Groups.

Since the last SAIHC meeting Portugal did not produce any ENC of the region.

3- NEW PUBLICATIONS AND UPDATES

Since September of 2014, IHPT published the Annual Group of Notices to Mariners (2015), as well as, every month, the Monthly Group of Notices to Mariners.

Also, the fourth edition of “Pilot Portuguese Coastal Waters – From Rio Minho to Cabo Carvoeiro” was published in March 2015.

In addition to the Tide Tables for the main harbours of Continental Portugal, the Azores and Madeira Archipelagos, IHPT also publishes annually the Tide Tables to the African Portuguese Speaking Countries which, in the SAIHC, region includes the main harbours from Angola and Mozambique.

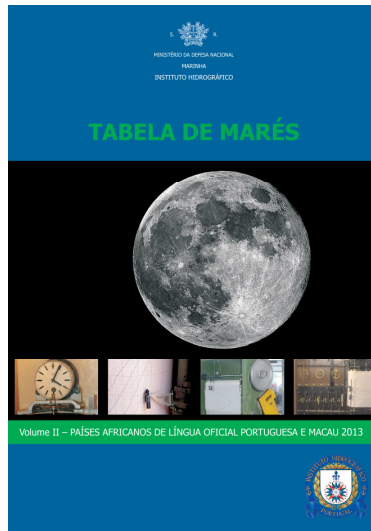


Figure 3 – Tide table for African Portuguese Speaking Countries

4- MARITIME SAFETY INFORMATION

IHPT, as the national coordinator for the Maritime Safety Information, provides a 24h service of Navigational Warnings, in cooperation with the NAVAREA II coordinator.

NAVTEX broadcast is made both in English and Portuguese and it is transmitted from Penalva Station (near Lisbon), São Miguel Island (in the Azores Archipelago) and from Porto Santo Island (in the Madeira Archipelago).

The GMDSS coverage is not completed yet due to delays on the establishment of Digital Selective Call capability, which are expected to be solved in a near future.

Monthly, IHPT publishes the Group of Notices to Mariners, containing all permanent, preliminary, and temporary warnings in force for the corresponding period. This information, covers all navigation charts and publications of Portugal, Angola, Cabo Verde, Guiné and São Tomé e Príncipe, and is also available on the web site (<http://www.hidrografico.pt>).

IHPT on-line application - ANAVnet, provides either entire NtM publications, or single NtM affecting individual documents; allowing in any case consultation and printing, including entire correction pages of nautical publications and graphical annexes to paste on charts. Regarding Navigational Warnings, ANAVnet allows consultation of warnings broadcasted by any of the Portuguese NAVTEX stations (coastal and local warnings), both in Portuguese and English languages.

Regarding Broadcast Stations (BS) from the national differential GPS network, the Continental Portugal component consists of two DGPS BS, with redundancy and integrity monitoring, located at Cape Carvoeiro and Sagres. There are also two BS in Azores Archipelago (Horta station) and in Madeira Archipelago (Porto Santo station).

Portugal has also three AIS coastal stations in Continental Portugal and in Azores and Madeira Archipelagos.

5- CAPACITY BUILDING

The cooperation of Portugal within the SAIHC region in the hydrography subject, during this report's period, was the following:

a. ANGOLA

IHPT established contacts with the Director of IHSMA (Hydrographic and Maritime Signalization Institute of Angola), Angola's HO, related to the future collaboration between IHPT and IHSMA. A proposal was also presented to execute the hydrographic and topographic surveys of the most important Angolan harbours and to produce the respective Nautical Charts and ENC's.

b. MOZAMBIQUE

The bilateral cooperation agreement between IHPT and INAHINA is being reviewed.

Apart from the collaboration in the production of the Nautical Charts mentioned in point 3, during the period of this report, there were no other activities of collaboration with INAHINA.

6- OCEANOGRAPHIC ACTIVITIES

IHPT has regular and robust activity in respect to physical, geological and chemical oceanography participating in national and European Union research projects in those fields. IHPT is running, presently, a comprehensive network of tide gauges (17), wave and multi-parametric buoys (7), and coastal weather stations (3) and HF radar systems (to measure superficial currents and waves: 4 stations) in the Portuguese EEZ (see figure 4).

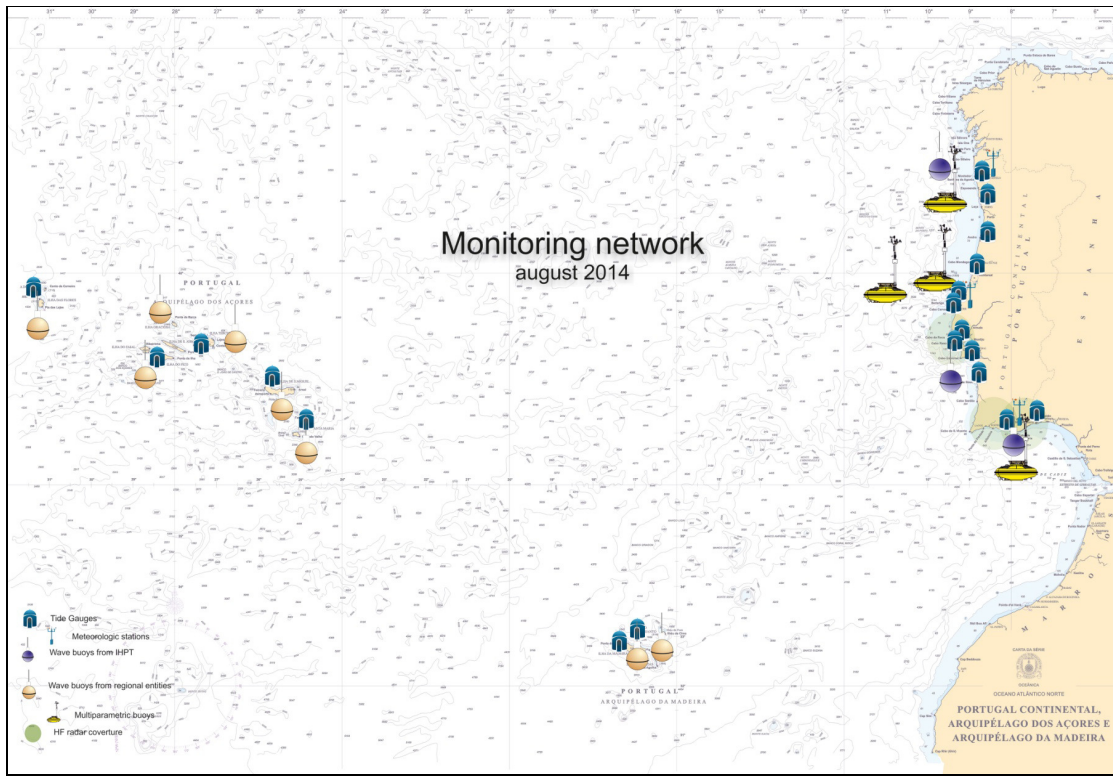


Figure 4 – Monitoring network

7- OTHER ACTIVITIES

a. Information technologies and GIS

IHPT has several portals at Internet and Intranet (hidrografico.pt) presenting information about its organization, main activities, products offered and specific geo-spatial on-line data.

The operational forecast system for sea state “Qual é a tua Onda?” continues to be maintained, depicting sea state forecasts and other generic information to the public. This information system is available to the general public, on the IHPT web portal, organized into usability sectors, such as the surf community, recreational navigation and fisheries.

Notices to Mariners and Navigational Warnings issued by the IHPT are also available at IHPT Internet portal ANAVNet, as well as general information on the Portuguese Nautical Charts and Nautical Publications.

IHPT also supports IC-ENC by providing a world ENC availability catalogue (independent of maker or distributor) to support the mariners.

b. Courses in Hydrography

IHPT School of Hydrography and Oceanography provides Specialization Courses in Hydrography (FIG/IHO Category A and B).

During the period of this report attended the courses the following students:

- 2014/2015 - Cat. B - 3 militaries of the Portuguese Navy.
- 2015/2016 – Cat. A – 4 militaries of the Portuguese Navy and 6 civilians (one Brazilian).
- IHPT received a delegation of 8 military students from the Angola Navy Academy in the period 15-26 June 2015, for training in safety of navigation and a small introduction to hydrography and nautical chart production.



Figure 5 – IHPT School of Hydrography and Oceanography

ANNEX A

HYDROGRAPHIC OFFICE GENERAL INFORMATION PORTUGAL (PORTUGUESE REPUBLIC)

INSTITUTO HIDROGRAFICO Rua das Trinas – 49 1249-093 LISBOA	
Department of which the Hydrographic Office is part <i>Ministère dont dépend le Service Hydrographique Ministerio del que depende el Servicio Hidrográfico</i>	Ministry of National Defence – Navy.
Principal functions of the H.O. - <i>Attributions principales du S.H.</i> <i>Principales funciones del S.H.</i>	Hydrographic Surveys, Analogue and Digital Nautical Charts, Sailing Directions, Lights and Radio Signals Lists, Notices to Mariners (monthly), Immediate Navigational Warnings, Tide Tables, Tidal Currents, Magnetic Compass Certification and Adjustment. Aids to Navigation Plans. DGPS, AIS projects. Oceanography. Provision of geophysical and environmental information for scientific and defence issues
National day - Fête nationale – Fiesta nacional	10 June
Telephone : Fax : E-mails : WEB site:	+ 351 21 094 3000 + 351 21 094 3299 dirgeral@hidrografico.pt dirtecnica@hidrografico.pt hidrografia@hidrografico.pt http://www.hidrografico.pt
Date of establishment and Relevant National Legislation – <i>Date de fondation et législation nationale concernée – Fecha de establecimiento y Leyes nacionales dereferencia</i>	22 September 1960 <ul style="list-style-type: none"> • Territorial Sea: Law n° 34/2006 • Baseline: Laws n° 2130/66 and 495/85 • EEZ: Laws n° 34/2006, n° 119/78 and n° 52/85
Name and rank of the Director or Head - <i>Nom et grade du directeur –</i> <i>Apellidos y graduación del Director</i>	Rear-admiral José Luís Branco Seabra de Melo, Director General
Tonnage – Tonelaje	2011 = 1,334,011
Total Budget - Budget total – Presupuesto Total	9 million Euros
Staff employed - Effectifs – Plantilla	For details, consult the WEB site: http://www.hidrografico.pt
N° of charts published - Nombres de cartes publiées – <i>N° de cartas publicadas</i>	219 (91 from Portuguese waters)
N° of INT charts published – Nombres de cartes INT publiées - N° de cartas INT publicadas. N° of ENC cells published – Nombres de cellules ENC publiées - N° de células ENC publicadas.	42 (35 from Portuguese waters) 89 (74 from Portuguese waters)
Type of publications produced (e.g. Tide Tables, Sailing Directions, List of Lights etc.) – Type de publications produites (par ex: Tables des marées, Instructions nautiques, Livres des Feux, etc. - Tipo de publicaciones producidas (por ej: Tablas de mareas, Derroteros, Libros de Faros etc.)	<ul style="list-style-type: none"> - Catalogue of Charts and Nautical Publications; - Catalogue of Nautical Charts of Portugal; - Tide Tables – Volume I – Portugal; - Tide Tables – Volume II – African Portuguese Speaking Countries; - List of Radio Aids and Services; - List of Lights, buoys, beacons and fog signals – Volume I – Portugal; - List of Lights buoys, beacons and fog signals – Volume II – Angola, Moçambique, São Tomé and Guiné Bissau; - List of Lights buoys, beacons and fog signals – Volume III – Cape Verde Archipelago - Sailing Directions – Continental Portugal – Volumes I to III; - Sailing Directions – Azores Archipelago – Volumes I to II; - Sailing Directions – Madeira Archipelago;

	- Sailing Directions - Angola and São Tomé e Príncipe Ports Pilot; - Sailing Directions - Cabo Verde – Volumes I to V; - Sailing Directions (Pleasure Craft) – Continental Portugal (Portuguese/English).		
Surveying vessels/ Aircraft – Bâtiments <i>hydrographiques/aéronefs – Buques hidrográficos/ Aeronaves</i> D. CARLOS I Almirante GAGO COUTINHO ANDRÓMEDA AURIGA ATLANTA CORAL FISÁLIA	Displacement 2285 2285 245 245 38.7 38.7 38.7	Date Launched 1989 1985 1985 1987 1981 1981 1981	Crew 34 34 13 13 3 3 3
Other information of interest – Autres informations utiles - Otra información de interés.	IHPT School of Hydrography and Oceanography provides Hydrography and Oceanography FIG/IHO/ICA category A and B courses.		