



19th Meeting of the Southern African and Islands Hydrographic Commission

National Report by Portugal

SAIHC Associate Member State

SAIHC19, 29 - 31 August 2023



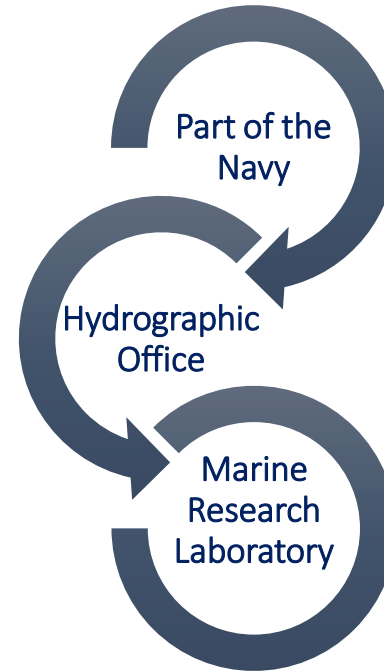
IHO

International
Hydrographic
Organization

Portuguese Navy Body with administrative and financial autonomy

- National Hydrographic Office
- National Research Lab (R&D)

- Minister of Defence
in articulation with the
- Minister of the Sea
- Minister of Science, Technology and Higher Education



hidrográfico
marinha-portugal

Instituto Hidrográfico

Legal Framework



Headquarters, Lisbon



Hydrographic Base, Seixal (river Tagus south bank)





IHO

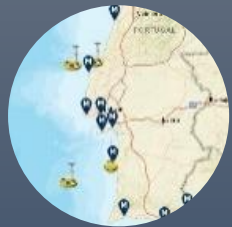
International
Hydrographic
Organization

Activities related to marine science and techniques

- Hydrographic service
- Research and Development
- Protection of the marine environment
- Environmental support to naval and maritime operations



**Safety of
Navigation**



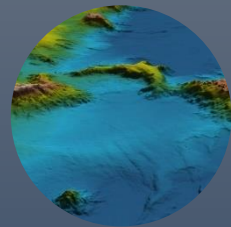
Oceanography



Chemistry



Geology



Hydrography

Data Management

GEOMETOC Support to Naval & Maritime Ops

IHPT Technical Areas & Main Programs



Ocean Mapping

Hydrographic Surveys

Hydrographic and Nautical
Cartography

Seafloor characterization, Seismic
surveys & ROV

Ocean Observation

Observation & Environmental
Monitoring

Marine Chemistry and Pollution

Ocean Forecasting

GEOMETOC maritime operations
support

Support to mariners



IHO

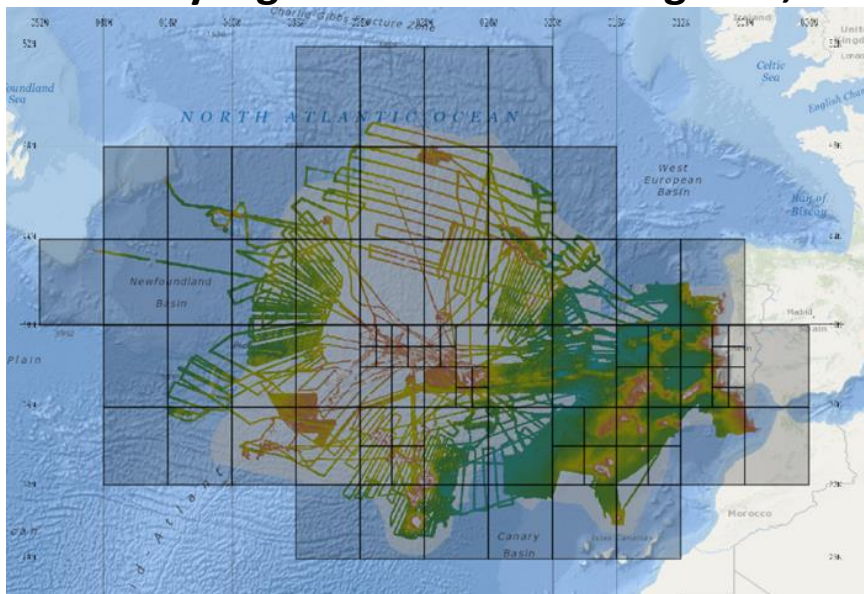
TOP ACHIEVEMENT DURING THE YEAR: SURVEYS

SEAMAP 2030: MAPPING OF THE PORTUGUESE SEA PROGRAM

International Hydrographic Organization



Presently high-resolution coverage: 58,3%

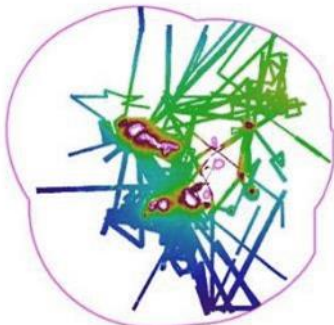




<https://www.hidrografico.pt/projeto/16>

RESOLUTION(S)

- Depth 50m-250m – Res. 32m
- Depth 250m-1000m – Res. 64m
- Depth 1000m-2000m – Res. 128m
- Depth 2000m-4000m – Res. 256m
- Depth +4000m – Res. 512m

<https://gridmar.Hidrografico.pt>

- Validation of data from scientific cruises
- Cartographic Production
- Making data available to the community

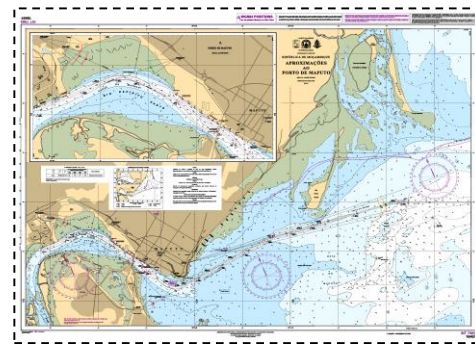
NO SURVEYS in SAIHC Region since last meeting



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TOP ACHIEVEMENT: NAUTICAL CARTOGRAPHY

International Hydrographic Organization



Portuguese Folio-Region H

Country	NC (Portuguese folio)	INT	ENC	Old Folio (Portuguese folio)
PAL* SAIHC Region	Mozambique	33	**	0
	Angola	46	6***	2
Overview	1	0	-	1

*PAL - African Portuguese speaking countries

** No PT national number assigned to Mozambique INT charts

*** Plus 2 in EAtHC Region

OBS: New chart scheme under development for the PAL to allow cancellation of the old folio.

These charts will be produced in the next 3-5 years in accordance with IHO specifications.

ENC/INT chart Production

ENC	INT Number	PT NAC Number	Title	Scale	Edition	Status
ANGOLA						
PT516303	2551	16303	Porto de Luanda	1/15000	1ª 2022	New Chart Produced
MOZAMBIQUE						
	7583	-	Aproximações ao Porto Maputo (Porto Maputo)	1/30 000 (1/10 000)	1ª 2023	Produced
	7641	-	Aproximações ao Porto de Quelimane (Porto Quelimane)	1/30 000 (1/10 000)	2ª 2023	Produced
	7662	-	Porto de Nacala	1/20 000	1ª 2023	Produced

Portuguese Folio

		Total				Total		
ENC	Mainland	40	78	CN	53	24	30	
	Madeira	13			8			4
	Azores	25			13			6
	Cabo Verde	17	9		3			
	Guiné-Bissau	1	20		2			
	São Tomé e Príncipe	2	8		0			
	Angola	2	46		8			
	Mozambique	0	33		0			
INLAND	Douro and Guadiana River	66						



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TOP ACHIEVEMENT: CAPACITY BUILDING

International Hydrographic Organization



Date	Actions/Activities	Place	Status
On-the-Job Training			
2022	PT-MZ Working meeting on the production of INT nautical charts; NtM formal Procedures and Introduction to ENC's.	Mozambique	Executed
2022/2023	PT-MZ Working on creation/implementation of NtM formal Procedures	By correspondence	Ongoing
CB Action			
2021/2022	ENC Training for Mozambique (from 2021 P-25) Action postponed due COVID-19.	Mozambique	Pending
Short and Long Courses			
2022/2023	CAT B (Hydrographic Surveys and Nautical Cartography) Two (2) Angolan Navy officers	IHPT-EHO (Portugal)	Ongoing
2023/2024	CAT A (Hydrographic Surveys and Nautical Cartography)	IHPT-EHO (Portugal)	Starts September 2023

School of Hydrography and Oceanography is a department of the IHPT: <https://www.hidrografico.pt/op/23>



CAT B Hydrography Course **Ongoing - September 2022**



CAT A Hydrography Course **Start - September 2023**

Bilateral Arrangements are in force since 2021 regarding hydrography, cartography, oceanography, R&D and capacity building, with: ISHMA (Instituto Hidrográfico e de Sinalização Marítima de Angola) and INIPM (Instituto Nacional de Investigação Pesqueira e Marinha de Angola).



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MAIN CHALLENGES: SURVEYS

International
Hydrographic
Organization

- Project: Development of new Satellite-derived bathymetry (SDB) modeling chain
- Project: Development of new Drone Image-derived bathymetry modeling chain
- Hydrographic Surveys effort in Angola harbors for **new chart** production.
- CSB – Portuguese national policy is currently under review.
- Data acquisition via **USV** (Unmanned Surface Vehicle)

<https://www.maritimerobotics.com/otter>





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MAIN CHALLENGES: NAUTICAL CARTOGRAPHY CAPACITY BUILDING

International
Hydrographic
Organization

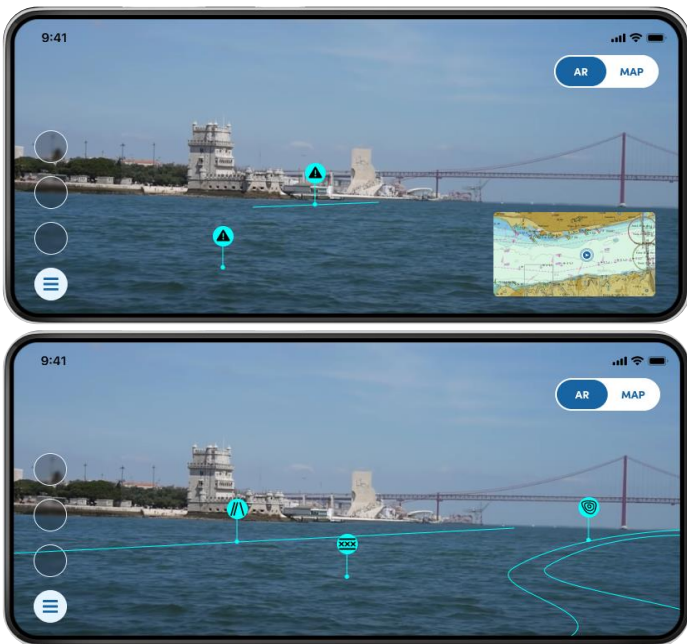
- **Implementation of S-100 focus on S-101 ENC**
- **Implementation of ENC chart production in Mozambique:
ENC S-57 and/or ENC S-101**
- **Build Hydrographic surveys capacity in Angola**
- **Build ENC production capacity in Mozambique**



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TOP ACHIEVEMENT DURING THE YEAR: MSDI

International Hydrographic Organization



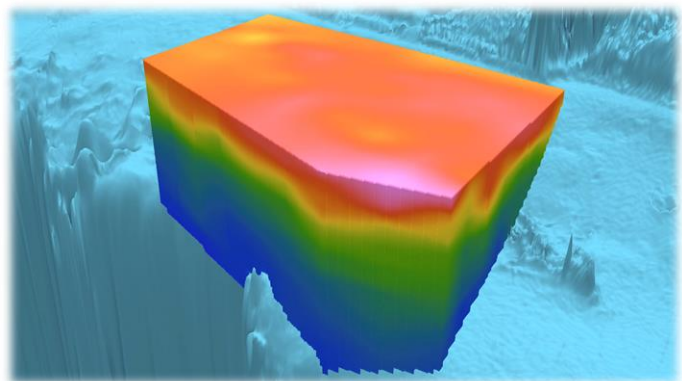
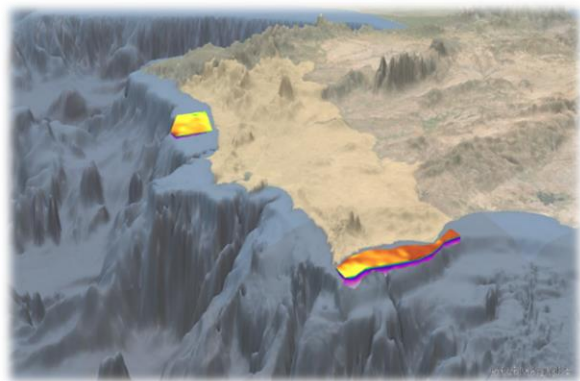
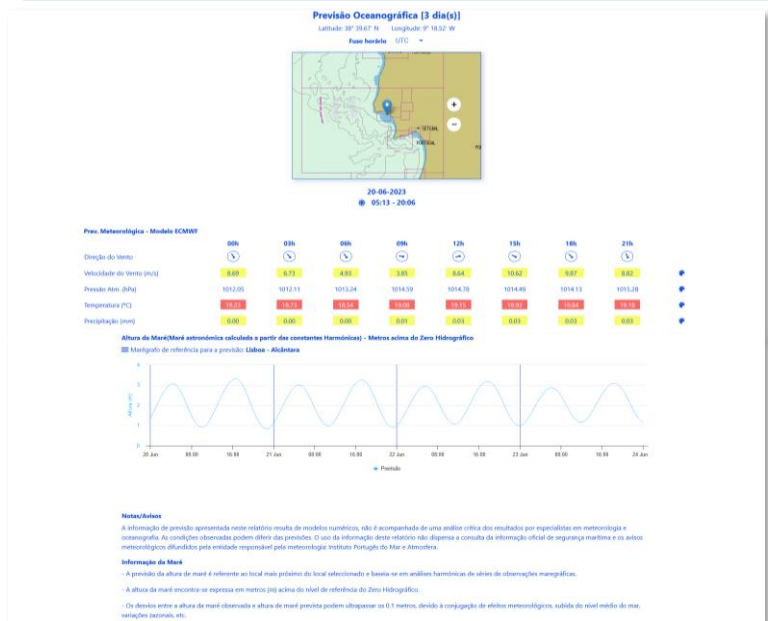
➔ Aumented reality application (Under development)

➔ 4D visualization

➔ Digital Pilots (Sailing Directions)



➔ Location Based Services (LBS)





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International
Hydrographic
Organization

MAIN CHALLENGES; PLANS: MSDI

→ People:

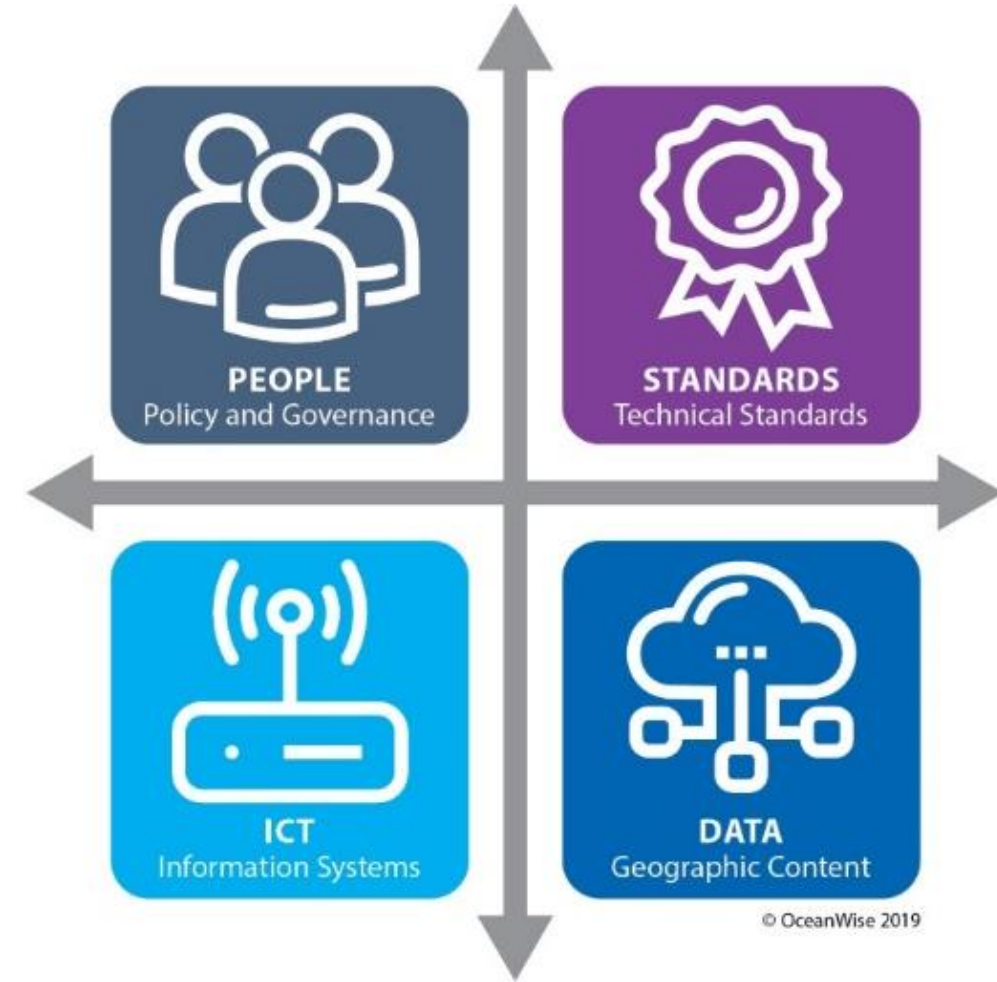
- Human resources (GIS, IT);
- People awareness (metadata, data policy, data integrity);
- Financing (projects).

→ Information systems:

- Storage, servers.

→ Data:

- Data integrity.





IHO

MAIN CHALLENGES; PLANS: MSDI S-124 (NAVIGATIONAL WARNINGS)



Coastal Warnings

Search Clear filters Hide filters

Originating entity Station Year

All All All

Portuguese (490 kHz) English (518 kHz)

NAVAREA Warnings II

Sort by Default Open Warnings Map Geographical search

PROMULGATED CANCELED ALL

Showing 1 to 32 of 7 results

RA53	RA52	RA51
1508/23	1507/23	1506/23
NORTH ATLANTIC - PORTUGAL-CONTINENTAL PORTUGAL-SOUTH COAST NEW DANGERS KILLER WHALES WERE SPOTTED IN POSITION 36-57.88N / 007-56.20W AT 01AUG23 AT 1105 LOCAL TIME, WITHOUT INTERACTIONS WITH SHIPS IN THE AREA IT IS ADVISABLE FOR ALL NAVIGATORS TO KEEP A CLOSEWATCH, AND REF...	NORTH ATLANTIC - PORTUGAL-CONTINENTAL PORTUGAL-WEST COAST SPECIAL OPERATIONS: NAVAL EXERCICES, MISSILE FIRINGS, SPACE MISSIONS, DUMPING ZONES, NUCLEAR TEST, ETC 03AUG23 FROM 0800 TO 1400 UTC, OPERACIONAL TRAINING SCOPE INMARITIME ENVIROMENT, WITH WHITE SMOKE SIGNALS IN POSITIONS: 38-00.00N 009-50.00W WIDE BERTH REQUESTED.	NORTH ATLANTIC - PORTUGAL-CONTINENTAL PORTUGAL-WEST COAST - LISBOA MARITIME SECURITY LEVEL INFORMATION - OTHER OPERATIONS WITH SUBMERSIBLES FROM 02AUG23 DURING DAYLIGHT PERIOD, DIVING OPERATIONS TAKE PLACE AT PACO DE ARCOS GEISER. WIDE BERTH REQUESTED.
Promulgation date 02 Aug 2023	Promulgation date 02 Aug 2023	Promulgation date 02 Aug 2023

Capitania do Porto de Angra do Heroísmo & Graciosa

EM VIGOR

AVISO LOCAL Nº 3/22 DATA DA PROMULGAÇÃO: 25/04/2022

DE: 24 FEV 2022 ATÉ: 30 ABR 2022

LOCAL: PORTO DA PRAIA NA ILHA GRACIOSA

ASSUNTO: REMOÇÃO DE BOIA CARDEAL NO PORTO DA PRAIA NA ILHA GRACIOSA

ENTIDADE ORIGINADORA: CAPITANIA DO PORTO DE ANGRA DO HEROÍSMO & GRACIOSA

DESCRIÇÃO: FOI RETIRADA PARA MANUTENÇÃO A BOIA CARDEAL LESTE (POSIÇÃO: 39° 03,02'N 27° 57,89'W) DO PORTO DA PRAIA NA ILHA GRACIOSA.

DATA DO CANCELAMENTO: 30 ABR 2022

Instituto Hidrografico

EM VIGOR

CÓDIGO: 4/22(T) DATA DA PROMULGAÇÃO: 10/03/2022

TÍTULO: ATLANTICO NORTE - PORTUGAL - PORTUGAL CONTINENTAL - COSTA SUL - PORTIMÃO - PARQUE OCEAN REVIVAL - BOIA APAGADA

ENTIDADE ORIGINADORA: INSTITUTO HIDROGRAFICO

DESCRIÇÃO (PORTUGUÊS): BOIA M2, POSIÇÃO , 37°05.93'N / 008°35.34'W (WGS 84), APAGADA. TODA A NAVEGAÇÃO QUE DEMANDAR A ÁREA DEVERÁ MANTER-SE ATENTA.

91

IPMA

EM VIGOR

ZCZC

WWP060 LPMG

NAVTEX ROUTINE

RE91

CENCOMAR

071454 UTC MAI 22

INSTITUTO PORTUGUES DO MAR E DA ATMOSFERA

WEATHER BULLETIN FOR SHIPPING FOR THE ATLANTIC ZONES LIMITED BY MERIDIANS 22W-07W AND BY PARALLELS 35N-45N.

TEST

NNNN

CENCOMAR

EM VIGOR

ZCZC

NAVTEX ROUTINE

RA14

CENCOMAR

061720 UTC MAI 22

NORTH ATLANTIC - PORTUGAL-CONTINENTAL PORTUGAL-WEST COAST - LISBON HARBOUR

ESTABLISHMENT OF OFFSHORE STRUCTURES IN OR NEAR SHIPPING LANES

NAV WARNING NR 1014/22 FROM 26APR TO 28APR22, UNDERWATER WORKS ON PACO DE ARCOS GEISER WIDE BERTH RESQUESTED.

NNNN

Capitania do Porto de Aveiro

EM VIGOR

AVISO LOCAL Nº 70/22 DATA DA PROMULGAÇÃO: 01/07/2022

DE: 04 JUL 2022 ATÉ: 30 SET 2022

LOCAL: RIA DE AVEIRO

ASSUNTO: LEVANTAMENTOS BATIMÉTRICOS

ENTIDADE ORIGINADORA: CAPITANIA DO PORTO DE AVEIRO

DESCRIÇÃO: 1. REALIZAÇÃO DE LEVANTAMENTOS BATIMÉTRICOS NA RIA DE AVEIRO (VÁRIOS ENFIAMENTOS DA BARRA ATÉ AO TERMINAL SUL), NO PERÍODO DE 04 DE JULHO A 30 DE SETEMBRO DE 2022. 2. REFERIDOS LEVANTAMENTOS SERÃO EXECUTADOS COM O APOIO DAS EMBARCAÇÕES "ATLANTICLAND I" - A-2767-AL E "INGOMAR" - A-2737-AL. 3. TODA A NAVEGAÇÃO DEVERÁ GUARDAR RESGUARDO.

DATA DO CANCELAMENTO: 30 SET 2022

ARQUIVOS: AVISO_073_LEVANTAMENTOS BATIMÉTRICOS 1 JUL 22.PDF

Capitania do Porto de Aveiro

EM VIGOR

AVISO LOCAL Nº 22/22 DATA DA PROMULGAÇÃO: 25/04/2022

DE: 23 ABR 2022 ATÉ: N/A

LOCAL: PORTO DE AVEIRO

ASSUNTO: ESTADO DA BARRA

ENTIDADE ORIGINADORA: CAPITANIA DO PORTO DE AVEIRO

DESCRIÇÃO: BARRA DO PORTO DE AVEIRO ABERTA A TODA A NAVEGAÇÃO A PARTIR DAS 15:00 HORAS DO DIA 23 DE ABRIL DE 2022.

2023-06-21

International Hydrographic Organization



Notice to Mariners



Coastal Warnings



Local Warnings



Meteorological Warnings



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TOP ACHIEVEMENT DURING THE YEAR: INITIATIVES OTHER

International
Hydrographic
Organization

A knowledge infrastructure for better Ocean Science

NODC-PT

The Portuguese National Oceanographic Data Centre (NODC-PT) is a node of the International Oceanographic Data and Information Exchange (IODE) program, a collaborative effort to preserve and reuse ocean data.

<https://nodc-portugal.pt>

IHPT is the National primary MSDI and Oceanographic Data Center.





IHO

TOP ACHIEVEMENT DURING THE YEAR: INITIATIVES OTHER

International Hydrographic Organization



Next meeting/conference planned to 2024





❖ **Mapping of the Portuguese sea (full coverage) - SEAMAP 2030**

❖ **Implementation of S-100**

in IHPT - Transition process and production of S-101 ENC's as a first step

❖ **Data acquisition via USV (Unmanned Surface Vehicle)**

<https://www.maritimerobotics.com/otter>



❖ Support for **capacity building** in marine sciences and techniques and updating nautical cartography in **Portuguese Speaking African Countries**

Lack of Resources



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TOP CHALLENGES AND /OR OBSTRUCTIONS

International
Hydrographic
Organization

- ❖ Support for **capacity building** in marine sciences and techniques and updating nautical cartography in **Portuguese Speaking African Countries**

Lack of Resources

- **financing, necessary for hydrographic surveys realization**
- **personnel and financing training**

- ❖ **Logistics and transportation are still the primary concern for any partnership or support actions**



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TOP PLANS THAT AFFECT THE REGION

(CHARTS, SURVEYS, TRAINING, OTHER)

International
Hydrographic
Organization

- ❖ Keep effort in Angola related to **Hydrographic Surveys** and **Chart Production (INT chart/ENC)**
- ❖ Keep support to **Mozambique** related to **Chart Production (INT chart/ENC)** and implementation of a formal procedure for **NtM**
- ❖ Keep **capacity building** efforts on SAIHC region namely through Training

Transition process and production of S-101 ENCs



IHO

ACTIONS REQUESTED FROM SAIHC19

International
Hydrographic
Organization

1. To take note of this report

Thank you for your attention

SAIHC19, 29 – 31 August 2023