

INSTITUTO HIDROGRÁFICO

Capacity Building – Sharing experiences

João Paulo Delgado Vicente
Captain
Technical Director



**CONHECIMENTO
DO OCEANO**

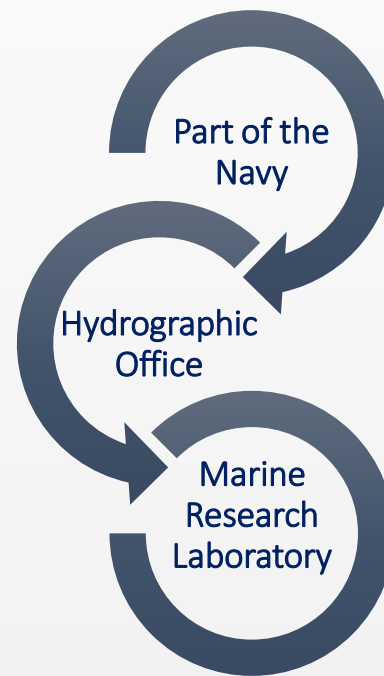


IHO

International Hydrographic Organization

Portuguese Navy organization with administrative and financial autonomy

- National Hydrographic Office
 - National Research Lab (I&D)
-
- Minister of Defence
in articulation with the
 - Minister of the Economy and the Sea
 - Minister of Science, Technology and Higher Education



Instituto Hidrográfico

Legal Framework



Headquarters, Lisbon



Hydrographic Base, Seixal (river Tagus south bank)





IHO

International
Hydrographic
Organization

Safety of navigation, protect and sustainable use of the sea



Levantamentos hidrográficos
Hydrographic surveys



**Ajudas, planeamento
e apoio à navegação**
Aids, planning and navigation support



**Monitorização oceanográfica
e ambiental**
Environmental & oceanographic monitoring



Laboratórios
Laboratories



**Cartografia Náutica e Cartografia
Hidrográfica Oficial**
Nautical Cartography and Official
Hydrographic Cartography



Geologia e química marinha
Marine geology & chemistry



Formação
Hydrography and oceanography school



Previsão operacional
Operational forecast



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Status

- The Portuguese-speaking African countries (PALOP) are Members of the IMO and not all are Members of the IHO and/or do not have built hydrographic capacity
- In many African countries, the existence of **limitations** in the acquisition of **current** bathymetric information, in the **production and updating** of cartography as well as in the **dissemination of maritime safety information**, means that the responsibilities expressed in the SOLAS Convention regarding navigation safety **are not fully assured**
- **Cartographic (nautical) coverage** in those territories comprises a mix of paper cartography from folios established before the 1970s, paper cartography from the INTernacional folio and ENC's produced by IH and UKHO
- Need to **collect data** and **reformulate the folios** as well as to raise awareness of these issues among governments and local institutions
- **Portugal**, through IH, still holds that **responsibility**, being recognized as **PCA** in the territories of Cape Verde, Guinea-Bissau, São Tomé and Príncipe, Angola and Mozambique.

- Portugal, through the IH, has taken on the responsibility of ensuring the production of nautical cartography in the maritime spaces of the PALOP countries, which involves the structured and regular collection of hydrographic data, carried out under bilateral co-operation agreements
- Considerable strides have been made with regard to hydrographic surveys, the production of new nautical cartography and support for capacity building in marine sciences and techniques
- In recent years, the Portuguese Navy's hydrographic ships have carried out missions under an Open Sea Initiative, whose hydrographic campaigns have contributed to a significant increase in the availability of bathymetric data and, consequently, new ENC's and C's, also contributing to knowledge of the ocean and the Blue Economy
 - **one of IH's most important programs and notable effort**

However...

	Região/RHC	Member		
		RHC	IMO	IHO
Angola	H/SAIHC	Observer EAtHC	1977	2021
		Member SAIHC		
Cabo Verde	G/EAtHC	Member EAtHC	1976	2023
Guiné-Bissau	G/EAtHC	Associate EAtHC	1977	NIL
Moçambique	H/SAIHC	Member SAIHC	1979	1998
São Tomé e Príncipe	G/EAtHC	Observer EAtHC	1990	NIL

	Raise awereness (0)	Maritime safety (MSI) (1)	Hidrography (2)	Cartography (3)
Angola	Awareness of obligations National Authority identified	Some related to Navigational Warnings and NtoM via UKHO, IHPT and South Africa	Some equipment and means Reduced operating capacity	NIL
Cabo Verde	Awareness of obligations National Authority identified	Some related to Navigational Warnings and NtoM via IHPT SHOM and UKHO	Some equipment and means No operating capacity	NIL
Guiné-Bissau	Low awareness of obligations - only at the level of a few organizations	NIL	NIL	NIL
Moçambique	Awareness of obligations National Authority identified	INAHINA/InOM (Need procedures)	InOM (Need training)	INAHINA /InOM (Only Papper Chart)
São Tomé e Príncipe	Very Low awareness of obligations	NIL	NIL	NIL

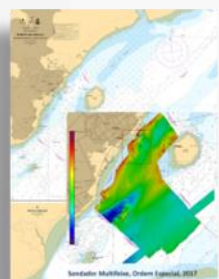
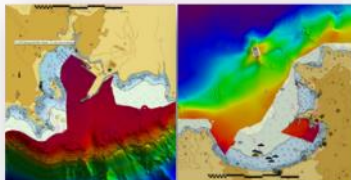


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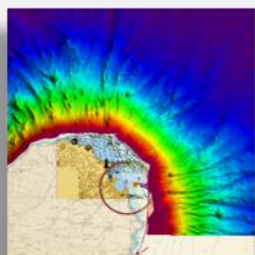
International Hydrographic Organization

Surveying

CABO VERDE



GUINÉ-BISSAU



SÃO TOMÉ E PRINCIPE



ANGOLA

MOÇAMBIQUE



IHO

International
Hydrographic
Organization

Actions/Capacity Building Schema

Angola
Cape Verde

**AUTHORITIES AND LOCAL ORGANIZATIONS
INVOLVEMENT**

INFRASTRUCTURES

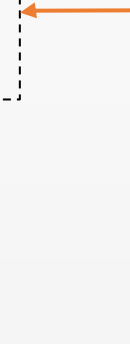
SURVEYS

**MIXED RESOURCES MIXED TEAMS
ON-THE-JOB TRAINING**

FORMAL TRAINING (Long or Short Courses)



**PORTUGAL
CARTOGRAPHIC
PRODUCTION**



Mozambique

NAUTICAL CARTOGRAPHY

LOCAL INFRASTRUTURES

**LOCAL RESOURCES MIXED TEAMS
ON-THE-JOB TRAINING**

IHPT SURVEYS

**S. Tomé and Príncipe
Guinea-Bissau**





IHO

International Hydrographic Organization

From Surveys to Charts (Ex: Angola)

AUTHORITIES AND LOCAL ORGANIZATIONS INVOLVED

IHPT



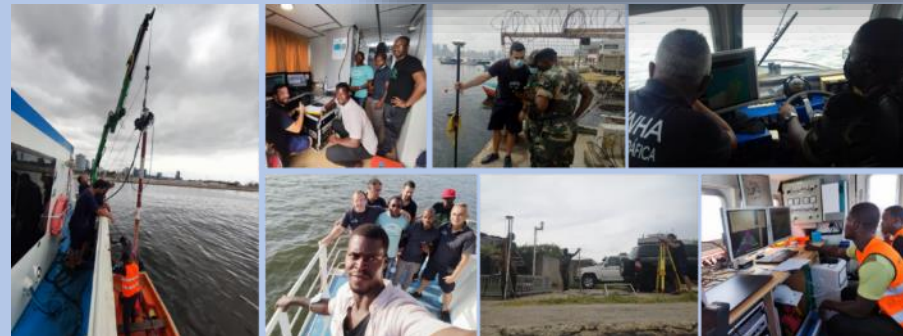
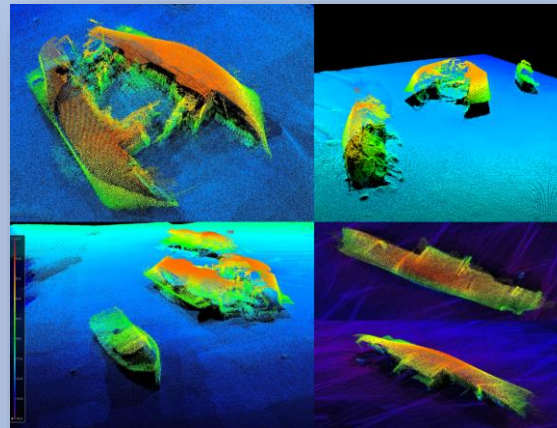
AMN



Budget:
IHPT: 35 000 euros plus
Hydrographic Vessel

INFRASTRUCTURES SURVEYS

MIXED RESOURCES MIXED TEAMS ON-THE-JOB TRAINING



IHPT

CARTOGRAPHIC PRODUCTION



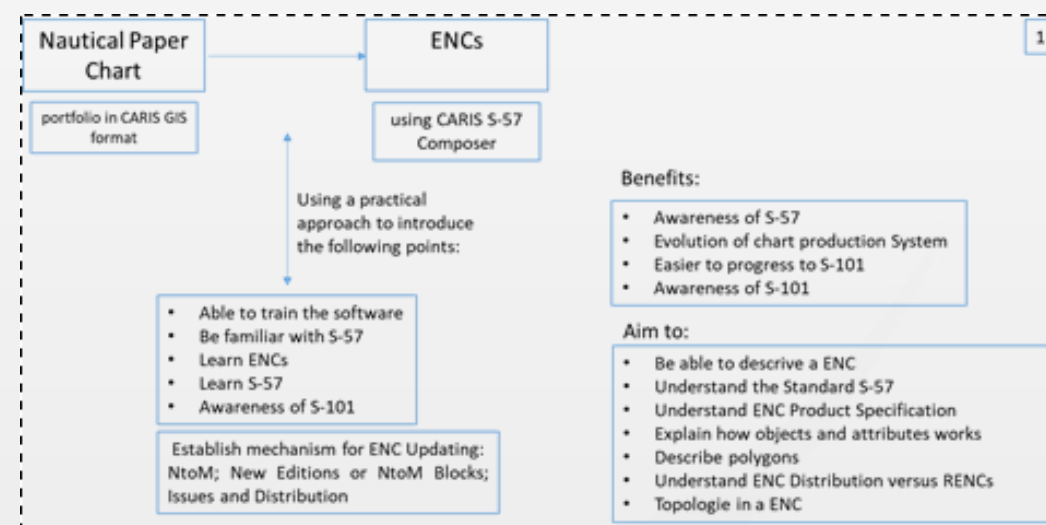


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OnJob-Training

Date	Actions/Activities	Place	RHC	Budget allocated/spend	Status
2022	<ul style="list-style-type: none"> PT-MZ Working meeting on the production of INT nautical charts NtM formal Procedures and Introduction to ENC's 	Mozambique	SAIHC	IHPT: 4000 euros	Executed
2022/2023	PT-MZ Working on implementation of NtM formal Procedures	By correspondence	SAIHC	IHPT: 3000 euros	Executed





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Short Courses

Date	Actions/Activity	Sessions/duration /trainers	Nº Participants	Entities	Place	RHC	Budget allocated/spend	Status
13-15 Dec 2023	MSI online Training Course to Angola	12/45min/4	45	Maritime Safety and Mariners Administration; Hydrography, Oceanography and Scientific Research Centre; Harbour Masters of the ports of Cabinda, Soyo, Luanda, Amboim, Lobito and Namibe	VTC	SAIHC	IHPT: 5 000 Euros (Human Resources)	Executed



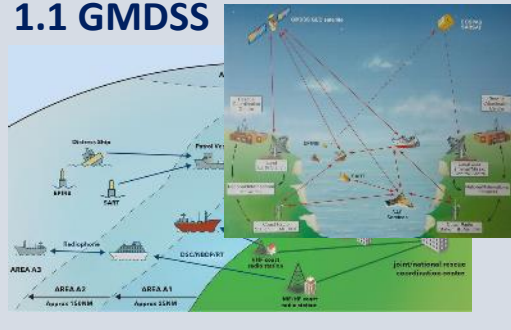


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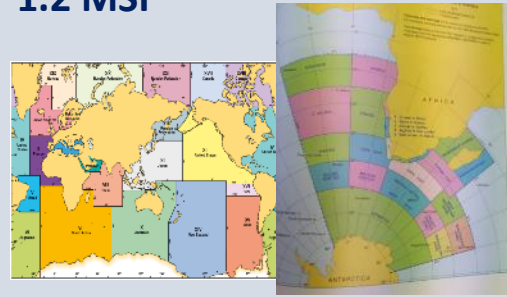
International Hydrographic Organization

MSI Short Course agenda

1.1 GMDSS



1.2 MSI



1.3 MSI-Broadcasting Services



1.4 Navigational Warnings



1.5 (GEO)ANAVNET



1.6 Notices to Mariners




1.7 Comunicados

o <https://arcg.is/ifrc4> ou do QR Code.

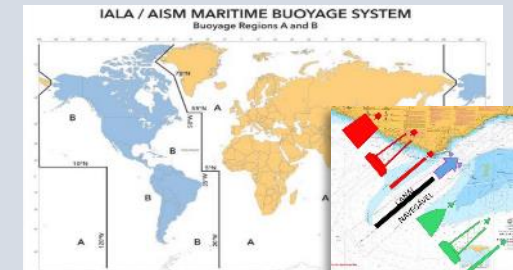
COMUNICADO SEGURANÇA DA NAVEGAÇÃO

O comunicado inicial a ser radio-antecedido pelo sinal de segurança; breve e conter, pelo menos, os seguintes elementos:

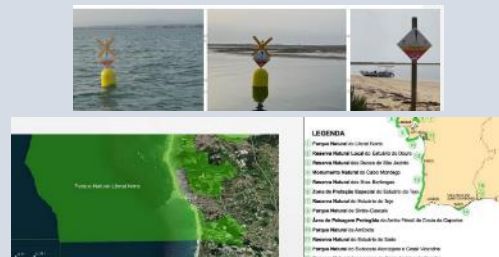
- O QUÊ – Descrição do perigo
- QUANDO – Grupo data/hora da observação
- ONDE – Posição geográfica (com referência do Datum da carta)
- QUEM – Navio e observador



1.8 Maritime Buoyage



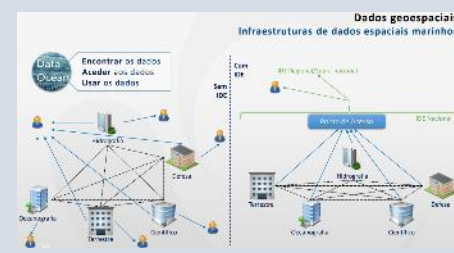
1.9 Special Areas



1.10 Nautical Cartography



1.11 Maritime Information



1.12 Conclusion





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Long Courses

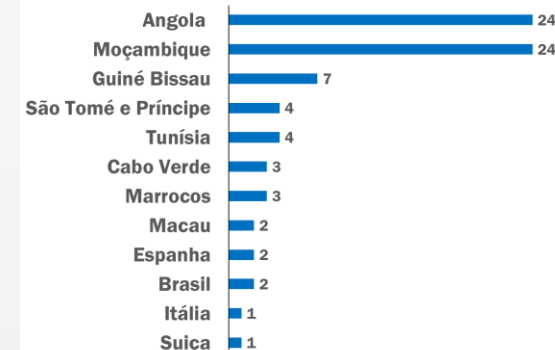
Date	Actions/Activities	Place	RHC	Budget allocated/spend	Status
2022/2023	CAT B (Hydrographic Surveys and Nautical Cartography) Two (2) Angolan Technicians One (1) Cabo Verde Navy	IHPT (Portugal)	SAIHC	21000 euros (registration) other expenses on behalf of the institutions	Executed
			EAtHC		Executed
2023/2024	CAT A (Hydrographic Surveys and Nautical Cartography) 2 Mozambique (Maputo Harbor) Students		SAIHC		Started/Ongoing September 2023



CAT B Hydrography Course



CAT A Hydrography Course



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



CAT B Hydrography Course **END - September 2023**



CAT A Hydrography Course **Start - September 2023
End – August 2024**

IHO-CB Action

Date	Actions/Activities	Place	RHC	Budget allocated/spend	Status
18-24 Feb 2024	Technical Visit (A-08 2024) (A-06 2022; A-10 2023)	Guinea-Bissau	EAtHC	IHO-CB: 5 000 €	Scheduled 17-24Feb2024
				IHPT: 7 000 €*	

Team: IHPT with IALA

* Only the time allocated to the involvement of the IHPT team in the preparation of the VT and the time outside the institution was taken into account.

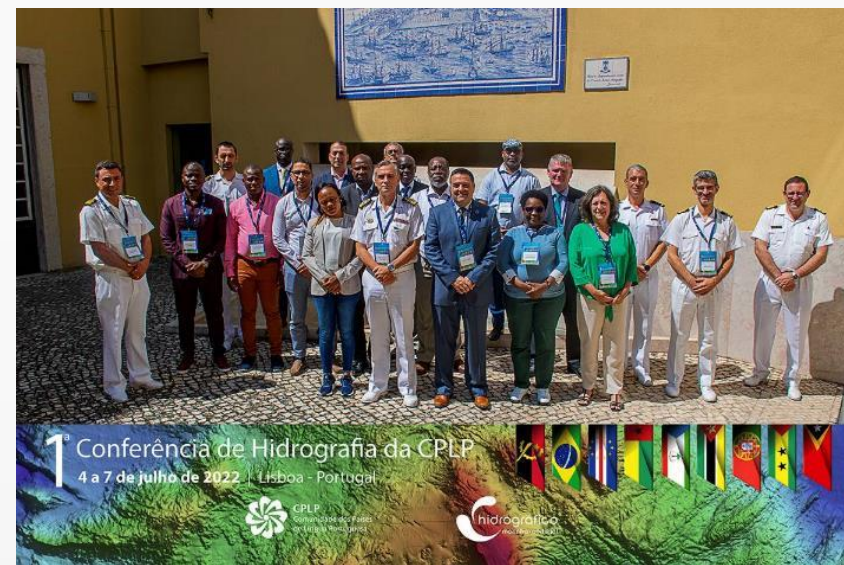


IHO

International Hydrographic Organization

CPLP Hydrographic Conference

- 1st Hydrographic Conference for Portuguese-speaking Countries Community (CPLP) @ Lisbon
- 2nd Conference: 04 to 08 Nov 2024 @ Cape Vert (Mindelo)
- Multibeam survey demonstration
- Budget: 25000 euros



 Angola
 Brasil
 Cabo Verde
 Guiné-Bissau
 Guiné Equatorial
 Moçambique
 Portugal
 São Tomé e Príncipe
 Timor-Leste



IHO

International Hydrographic Organization

Hidrographic Conference

	04 NOV	05 NOV	06 NOV	07 NOV	08 NOV
	Demonstrations & Seminars		Conference	Conference	Conference
0900-1030	Survey & MSI project Presentation	Oceanographic and geophysical seminar (VTC)	Opening Actions list	Countries Presentations	Visits to local Institutions
Break					
1100-1230	MSI Seminar (VTC)	MSI practice examples (VTC)	IHO, IALA & other organizations presentations	Other organizations, industry presentations	Visits to local Institutions
Lunch					
1330-1500	Survey Seminar (VTC) (data acquisition)	Survey Seminar (VTC) (data processing)	Countries Presentations	S-100 Roadmap and challenges	List of Actions, Next Conference Closing
Break					
1530-1700	Survey Demonstration	Survey Demonstration	Survey Demonstration	Survey Demonstration	





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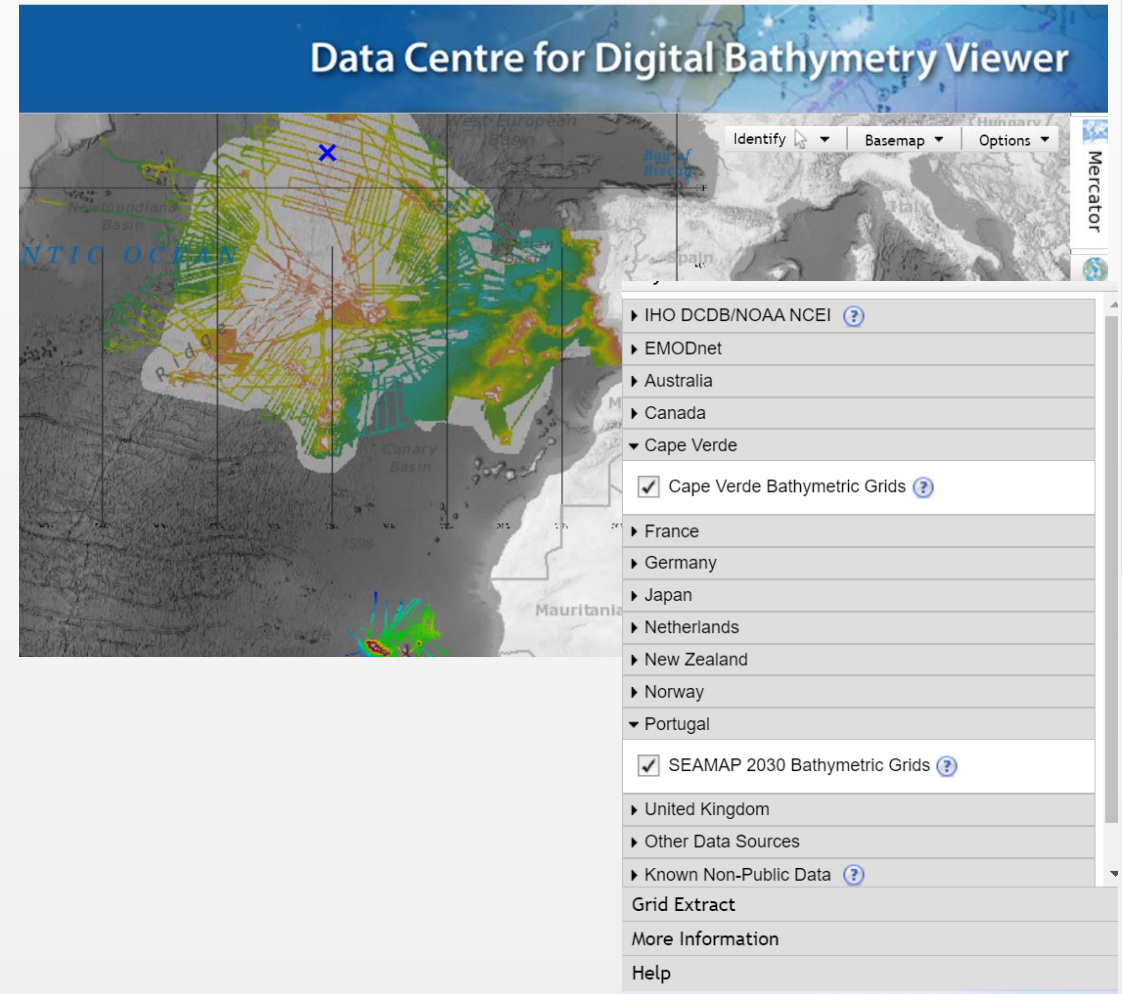
- **Points achieved**

- EAthC conferences in Lisbon and Cape Verde
- 1st Hydrography conference in Lisbon for Portuguese-speaking Countries Community
- New IHO members (Angola & Cape Verde)
- Portuguese hydrographic vessels missions in the East Atlantic
- Bathymetric Data Sharing (Portugal & Cape Verde)

- **Weaknesses/Dificulties**

- Low awareness of SOLAS convention obligations
- Lack of establishment of robust hydrographic services independent of political situations
- Constantly changing points of contact
- High cost of logistics
- Lack of adequately trained personnel

Final remarks



INSTITUTO HIDROGRÁFICO

Capacity Building – Sharing experiences

João Paulo Delgado Vicente
Captain
Technical Director



Thank you.

Questions?

**CONHECIMENTO
DO OCEANO**