



# IHO – Capacity Building Work Programme



## Regional seminar

### « 20 Years of Capacity Building Actions in EAthC - Assessment and Prospect »

29 – 30 April 2024







With the assistance of :

 <p><b>Morocco</b> Host country Development testimony</p>	 <p><b>France</b> EAtHC Capacity Building coordinator French training Workshop animation in French</p>
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 <p><b>United Kingdom</b> British training Workshop animation in English</p>	 <p><b>Spain</b> Spanish training</p>	 <p><b>Portugal</b> Portuguese training Workshop animation in Portuguese</p>	 <p><b>Nigeria</b> Development testimony</p>
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And the participation of :

 <p><b>MN [Marine Nationale] (Armée nationale Mauritanienne)</b> <b>Mauritanie</b></p>	 <p><b>IMP [Instituto Marítimo Portuario]</b> <b>Cap Vert</b></p>	 <p><b>SSMS [Service de Sécurité Maritime du Sénégal]</b> <b>Sénégal</b></p>	 <p><b>GPA [Gambia Port Authority]</b> <b>The Gambia</b></p>
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 <p><b>APGB [Administracao dos Portos da Guinee-Bissau]</b> <b>Guinée Bissau</b></p>	 <p><b>IMP [Instituto Marítimo Portuario]</b> <b>Guinée Bissau</b></p>	 <p><b>PAC [Port Autonome de Conakry]</b> <b>Guinée</b></p>	 <p><b>ARTFM [Autorité de Régulation du Transport Fluvio-Maritime]</b> <b>Guinée</b></p>
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<p><b>SLMA</b> [Sierra Leone Maritime Administration]</p>	<p><b>PAA [Port Autonome d'Abidjan]</b></p>	<p><b>GMA</b> [Ghana Maritime Authority]</p>	<p><b>GPHA [Ghana Ports and Harbours Authority]</b></p>
<p>Sierra Leone</p>	<p>Côte d'Ivoire</p>	<p>Ghana</p>	<p>Ghana</p>

			
<p><b>PAL</b> [Port Autonome de Lomé]</p>	<p><b>PAC</b> [Port Autonome de Cotonou]</p>	<p><b>NNHO [Nigeria Navy Hydrographic Office]</b></p>	<p><b>PAD</b> [Port Autonome de Douala]</p>
<p>Togo</p>	<p>Benin</p>	<p>Nigeria</p>	<p>Cameroun</p>

			
<p><b>CNHO</b> [Centre National d'Hydrographie et d'Océanographie (Marine Nationale)]</p>	<p><b>APN [Autorité Portuaire Nationale]</b></p>	<p><b>SSM</b> [Service de Signalisation Maritime]</p>	<p><b>GPM</b> [Gabon Port Management]</p>
<p>Cameroun</p>	<p>Cameroun</p>	<p>Gabon</p>	<p>Gabon</p>

			
<p><b>MTACMM [Ministère des Transports, de l'Aviation Civile et de la Marine Marchande]</b></p>	<p><b>PAPN</b> [Port Autonome de Pointe-Noire]</p>	<p><b>DMVN</b> [Direction de la Marine et des Voies navigables]</p>	<p><b>AMN</b> [Agência Marítima Nacional]</p>
<p>Congo</p>	<p>Congo</p>	<p>Congo (DR)</p>	<p>Angola</p>

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## OBJECTIVES AND CHALLENGES

### **This report has only one objective: to do much better.**

This after a 20-year cycle of insufficient actions to develop National Hydrographic Services (NHS) in Africa.

Not that nothing has been done: the evidence from Morocco and Nigeria proves that NHSs can achieve a level of operationality comparable to historically established NHSs.

Not that the ports have not been able to equip themselves to secure their access. The national reports of conference demonstrate this well.

However, much remains to be done to address the national and regional challenges of the blue economy, environmental resilience and state actions at sea.

Participants freely expressed their needs during workshops conducted in English, French and Portuguese. Accredited training schools in hydrography and marine cartography were presented. However, they only constitute one capability aspect.

It is now necessary, based on what already exists, to decide, specify and lead a new stage of development which, to take up the first expressions of need from the seminar, will have to address challenges of governance, management, nautical resources and materials, capacity to specify, carry out, process, archive hydrographic and oceanographic surveys, to chart, to model the ocean etc.

Evidence that we have not yet been able to properly answer.

Beyond that observations, to find solutions, a new perspective is necessary.

What did we – for example – hear?

- “Not just oceans: lagoons, rivers and lakes too”;
- “Gradually shift from North/South to South/South cooperation”;
- “Develop accredited African schools (poles of excellence) in which the language, the status of the students, their countries of origin, their financial capacities are not insurmountable obstacles”.

The skills sought are not limited to hydrography or cartography. Capacities that are sometimes “complex”, sometimes “basic”. Examples:

- “know how to convince decision-makers and development organizations”;
- “know how to motivate stakeholders carrying out projects addressing national and regional issues”;
- “know how to manage development projects”;
- “know how to select and maintain hydrographic and oceanographic equipment in operational condition.

What threatens, or at least delays, these few development ideas?

- Believe that it is possible to continue as before: let’s change the paradigm!
- It is not by communicating once a year that it will be possible to really progress. We need programs (the size of a subcontinent), action plans requiring continuous monitoring and therefore dedicated permanent teams;
- Believing that the IHO Secretariat (very few staff indeed) has sufficient funding or that member countries can easily offer resources in kind, particularly personnel. The new “IHO Fund Generation Project Team” may be able to provide financial solutions. Concerning human resources, it will now be possible to rely on Africa's own expertise capacities (South/South development).

This seminar obviously did not cover everything. It must nevertheless make it possible to promote new initiatives addressed in the following table of actions and recommendations.

## ACTIONS - RECOMMANDATIONS

### Find solutions to do much better

These actions and recommendations are primarily addressed, initially, to the EAtHC CB coordinator CHAtO. Charge to him:

- To submit them:
  - To CBSC
  - and the “IHO Fund Generation Project Team”;
- To continue the dialogue with EAtHC countries so that the use of this report adapts to changing needs and possible solutions.

They complement those already identified in the reports of Technical Visits carried out.

#### Short term (2024) :

- Completely realize the “Capacity Building Work Program 2024 (CBWP24)”. Of the 5 planned actions [four Technical Visits (TV): Guinea, DRC, Sao-Tomé and Príncipe (STeP), Guinea-Bissau) and a seminar] there remains 1 TV, that of STeP

Reference : <https://iho.int/en/capacity-building-and-technical-cooperation> (Capacity Building Work Programme V2)

- Report on this seminar to the next Capacity Building Sub-Committee No. 22 on June 5, 6 and 7, 2024 (CBSC22) and justify:
  - detailed requests for 2025 and three-year perspectives 2025-2027;
  - possibly amendments (at least under the EAtHC) to the IHO Capacity Building strategy. (Capacity\_Building\_Strategy\_2021\_ver05-4)

References :

<https://iho.int/en/cbsc22-2024> et <https://iho.int/en/miscellaneous-2> (strategy)

#### Medium term (2025-2026-2027) :

- make the ideas and recommendations of this report possible, which implies:
  - a minimum of funding from the IHO for mainly:
    - complete the Technical Visits program (if STeP is carried out, only Equatorial Guinea and Gabon would remain);
    - lead new missions dedicated to feasibility studies for the regional development of specialized training cycles in marine science and technology (hydrography, physical oceanography) and marine cartography. These missions would be coupled with interviews with international cooperation or development agencies.
- given the very weak financial capacity of the IHO, the search for and obtaining new sources of funding within the framework of the “IHO Fund Generation Project Team”.
  - (<https://iho.int/en/project-teams>) (“The objective of the PT is to submit IHO Fund Generation suggestions to Council 9 in 2025.”)


#### Long term (beyond 2027) :

- by this deadline, the EAtHC area should be implementing a structured development program, financed with a permanent project team (quality management and standardized project management included).
- it is not a question of finding ourselves in previous situations where projects are launched and remain without follow-up such as:
  - In 2005, the definition study on the West African Maritime Highways was initiated in order to be sent to international donors and high authorities of the countries concerned. It was called “CHARMER” for: “Cooperation in Hydrography for African Reliable Maritime Electronic Routes”.
  - then in 2016 with the HydroMAOC project, a new definition study focusing on : « a regional approach to improve marine environmental knowledge in Western and central Africa».

# 1 Introduction – Context – Process – Actors – Use of the report

## 1.1 Introduction : the subcontinent concerned

The seminar took place for the benefit of the EAtHC zone and more particularly its African part where the issues concern the Atlantic Ocean, lagoons, rivers and lakes.



Pays	Longueur côte "LC"	Longueur voies navigables "LVN"
1 Bénin,	121	150
2 Cap-Vert	965	ND
3 Cameroun	402	2090
4 Congo (Rép. de)	169	1120
5 Congo (Rép. dém. du)	37	15000
6 Côte d'Ivoire	515	980
7 Gabon	885	1600
8 Gambie	80	390
9 Ghana	539	1293
10 Guinée	320	1300
11 Guinée-Bissau	350	ND
12 Guinée équatoriale	296	ND
13 Libéria	579	ND
14 Maroc	3500	ND
15 Mauritanie	754	ND
16 Nigéria	853	8600
17 Sao Tomé et Príncipe	209	ND
18 Sénégal	531	1000
19 Sierra Leone	402	800
20 Togo	56	50
Angola	1600	1300
Moyenne "LC" avec Angola	627	
Moyenne "LVN" avec Angola		2548

- Longueur (km) de côte [Length of coast]: LC
- Longueur (km) des voies navigables [Length of waterways] : LVN
- Zone étudiée : du Maroc à l'Angola inclus (21 pays au total) [study area: from Morocco to Angola included (21 countries in total)]

## 1.2 Context: history, initial objectives of the seminar, program followed

### 1.2.1 History, initial objectives of the seminar

#### Background information

- First Technical Visits (TV) in EAtHC started in 2003 (Reference: <https://iho.int/en/capacity-building-assessment>). They were called WAAT: “West Africa Action Team”.
- In 2005, a definition study on the West African Maritime Highways was initiated in order to be sent to international donors and high authorities of the countries concerned. It was called CHARMER for “Cooperation in Hydrography for African Reliable Maritime Electronic Routes”. It did not succeed.
- This same initiative was relaunched in 2016 with the HydroMAOC project, a new a regional approach to improve marine environmental knowledge in Western and central Africa. It did not succeed anymore.
- That is about 20 years of TVs, High Level Visits (HLV) and seminars in the region. A good length of time to take stock of the results achieved;

#### Justification of the project

- Assessment and Prospect worth to be discussed between EAtHC Members, Associate Members or Observers.



- Some African countries have developed strong capacities in hydrography and physical oceanography that worth to be known.
- African academies may have now to offer new opportunities in marine science and technology
- Shouldn't this change the way of organizing the CB
- Perspectives: what are the evolution of the support from PCAs (S-100, other products and services...) ?

#### **Outputs/Products**

- An updated CB 3 years programme (regionally based)
- Identifications of news regional solutions for CB (well advanced African HO, Maritime Academies)
- Propositions for:
  - IHO CB strategy (<https://iho.int/en/capacity-building-and-technical-cooperation> )
  - CB procedures (<https://iho.int/en/cb-procedures>)

#### **Achievements and awaited benefits**

- Increased participation of coastal States of the region in the IHO actions
- Better use of CB funds
- Identification of possible alternative sources of funding
- Better coordination of educational activities (E-learning included) between hydrographic schools in Africa and other continents

#### **Past and/or current related projects supported by CBSC or other sources**

- All TVs, HLVs and seminars since 2003
- The new task force to explore the potential merits, structures, and options for alternate fund generation to support capacity building and other IHO initiatives

#### **1.2.2 Seminar program followed**

The program followed by the seminar is given in Annex C.

This same annex gives the Internet links to follow to access the seminar documents.

### **1.3 Progress : Implications of Morocco and the IHO – Organization**

The seminar (April 29 and 30, 2024) took place as a prelude to EAtHC N° 18 (May 1, 2 and 3, 2024) at the Royal Naval School (ERN) of the Morocco Royal Navy in Casablanca.

It was organized as part of the IHO's development and capacity building activities with its support. Action P-05 Seminar "20 Years of Capacity Building Actions in EAtHC Assessment and Prospect" (Référence : <https://iho.int/en/capacity-building-and-technical-cooperation/> Capacity Building Work Programme V2).

On the logistical level it should be noted:

- The excellence of the in-kind Moroccan welcome:
  - airport/hotel/conference travel;
  - meals and coffee breaks;
  - interpreting and associated equipment;
  - provision of an amphitheater and rooms for workshops;
  - assistance in obtaining visas
- The importance of the financial contribution of the IHO Secretariat for the benefit of 12 countries having expressed their interest. Without this contribution the participation of many countries would have been very compromised not only at the seminar but also at the CHAtO18 conference.

- International air flights;
- Hotel.

The seminar took place in face to face (a necessary condition for success).

## 1.4 Actors - Participations

The seminar was led by France (Shom) with the following interventions:

- From the United Kingdom (presentation of its training courses, animation of the workshop in English);
- From France itself (presentation of its training, animation of the workshop in French);
- From Spain (presentation of its training);
- From Portugal (presentation of its training courses, animation of the workshop in Portuguese);
- From Morocco (host country and testimony of development);
- From Nigeria (absent but who had provided his testimony of development);
- Finally all the other EAtHC countries present who were able to freely express their needs (workshops). The organization of the face-to-face seminar makes this possible.

<b>Participants</b>	<b>Number</b>
<b>EUROPE and IHO</b>	<b>11</b>
<b>MOROCCO</b>	<b>20</b>
<b>AFRICA without MOROCCO</b>	<b>37</b>
<b>INTERNATIONAL ORGANIZATIONS</b>	<b>5</b>
<b>INDUSTRY</b>	<b>7</b>
<b>TOTAL</b>	<b>80</b>

Overall, the countries represented at the EAtHC (Members, Associates, Observers) responded (participation of 20/24):

- All Members, except Nigeria which nevertheless made a contribution with a testimony on its development (participation of 9/10);
- All associated countries (participation of 8/8);
- Liberia, Equatorial Guinea, Sao Tome and Principe were absent (participation of 3/6<sup>1</sup>).

Note :

- The United Kingdom (Associate) was present but not the USA (Observer);
- Table of participants: Some representatives from industry and international organizations did not join the seminar immediately or only attended the following conference.

Notes :

- The backing of a funded seminar to a EAtHC conference, in person, is an essential condition for a significant presence at the latter.
- In other words, the next face-to-face EAtHC conference in 2026 must, as far as possible, be associated with a new seminar in order to maintain a significant participation rate that is

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<sup>1</sup> Note that one of these countries, Sao Tome and Principe, has never had a Technical Visit and that another, Equatorial Guinea, has only had one, initially, in 2003.

essential to the dynamics of regional cooperation. A seminar proposal will be submitted to this effect during the CBSC in 2025.

- Seminar which could then precede formal and official decisions during the conference which would follow it.

## 1.5 Use of the report

The report is used with the documents posted online at: <https://iho.int/en/eathc18-2024><sup>2</sup> (at the bottom of the page).

Other sources worth consulting:

- Technical Visit reports: <https://iho.int/en/capacity-building-assessment>
- National reports: <https://iho.int/en/eathc18-2024>

In summary :

- Previous inserts
  - Objectives and issues
  - Actions - recommendations
- Chapter 2 : « balance sheet »
  - An assessment of the capacity building of the EAthC between 2003 and 2023;
  - Two testimonies from countries (Morocco and Nigeria) having developed leading to the creation of a National Hydrographic Service.
- Chapter 3 : Existing training offers
- Chapter 4 : « workshop »
  - Organisation
  - Results
- Annexes where we will find in particular:
  - Contacts to communicate
  - Internet links to consolidate this report

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<sup>2</sup> Regional Awareness Seminar (29 - 30 April 2024)  
"20 Years of Capacity Building Actions in EAthC Assessment and Prospect"

## 2 Assessment of capacity building (2003 – 2023)

### 2.1 Country Status – Development Levels

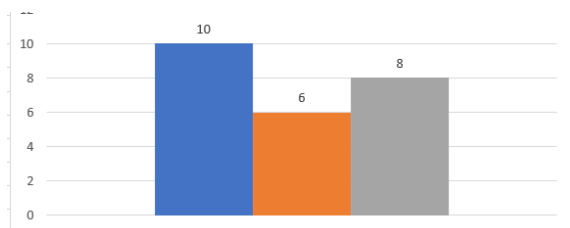
Reference (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-02.1\_Dev-hydro-carto\_2003-2023

#### 2.1.1 Countries status: IHO Members, EAthC associated and Observers

##### Abstract :

- 2003 → 2023: 4 countries joined OHI
- The total number of Members is now 10 (41.67% of the total number of countries i.e. 24)
- 6 countries are only observers (25%)

A	B	C	D	E	F	G	H
	Coastal State/Territory		IHO Member in 2003	IHO Member in 2024	Nouveaux 2003 --> 2024	EAthC Member or associated	EAthC Observers
2	France (1921 -1968)	1	1	1		1	
3	Spain (1921 - 1969)	1	1	1		1	
4	Portugal (1921 - 1968)	1	1	1		1	
5	Benin	1				1	
6	Cabo Verde (2023)	1		1	1	1	
7	Cameroon (2012)	1		1	1	1	
8	Congo	1				1	
9	Democratic Republic of Congo (1970)	1	1	1		1	
10	Côte d'Ivoire	1				1	
11	Gabon	1					1
12	Gambia	1					1
13	Ghana (2019)	1		1	1	1	
14	Guinea	1				1	
15	Guinea-Bissau	1				1	
16	Equatorial Guinea	1					1
17	Liberia	1					1
18	Morocco (1999)	1	1	1		1	
19	Mauritania	1				1	
20	Nigeria (1976)	1	1	1		1	
21	Sao Tome and Principe	1					1
22	Senegal	1				1	
23	Sierra Leone	1					1
24	Togo	1				1	
25	Angola (2021)	1		1	1	1	
26	<b>TOTAL</b>	<b>24</b>	<b>6</b>	<b>10</b>	<b>4</b>	<b>18</b>	<b>6</b>
27	<b>TOTAL %</b>		<b>25,00%</b>	<b>41,67%</b>		<b>75,00%</b>	<b>25,00%</b>



Membership of the IHO in the World

CHAto/EAthC  
IHO Members, Observers, Associated

Languages (only selection on: English, French, Portuguese, Spanish) spoken in West and Central Africa (EAthC, % of countries)

- English: 29%
- French: 52%
- Portuguese: 19%
- Spanish: 5%

Note :

- UK is associated
- AISM/IALA and USA are observers

### 2.1.2 Country development levels: Phases 1 (MSI), 2 (surveys), 3 (charting), National Hydrographic Committee. Inventory of Technical Visits

#### Summary and remarks:

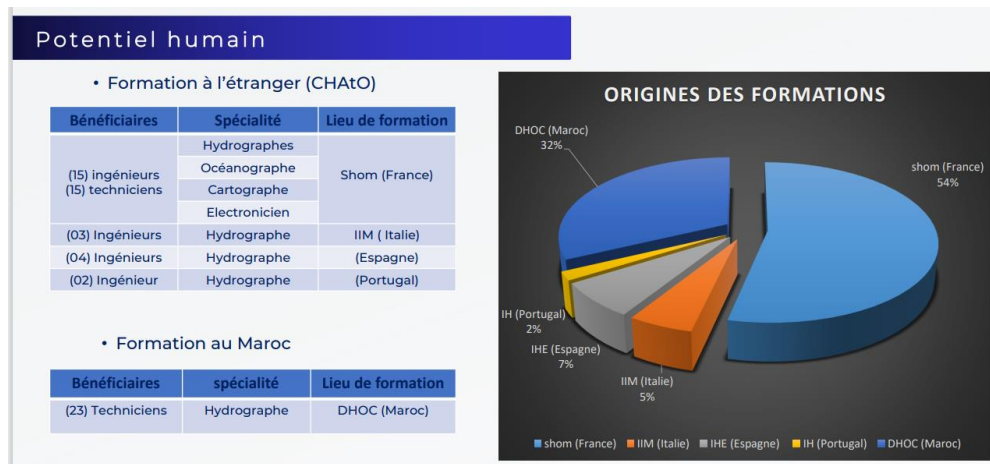
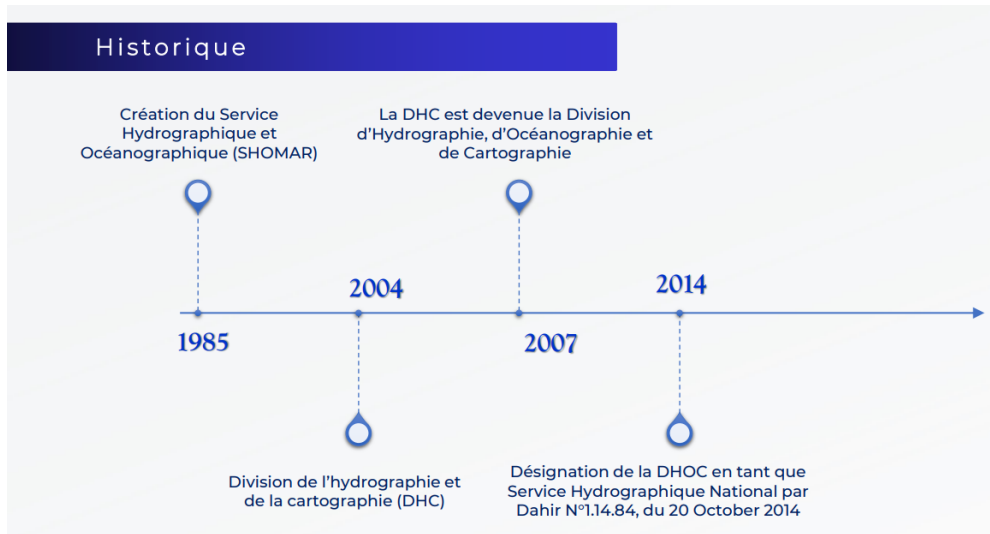
- NHC (National Hydrographic Committee): certain countries may have coordination structures whose activity is perhaps not recurrent (at least not reported) or insufficiently interdisciplinary
- Phase 1: Maritime Safety Information Intelligence (MSI) often limited to ports
- Phase 2: hydrographic surveys: many countries with only port capacities (lack of resources for national coverage)
- Phase 3: marine cartography: apart from Morocco and Nigeria, no country has the capacity to produce “SOLAS” compliant navigation charts

	A	B	C	D	E	F
1		EAthC / CHAtO				
2		Coastal State/Territory	NHC	Phase 1	Phase 2	Phase 3
3		France	2	4	4	4
4		Spain	2	4	4	4
5		Portugal	2	4	4	4
6		Benin	0	3	3	3
7		Cabo Verde	-1	2	3	3
8		Cameroon	0	2	3	3
9		Congo	2	3	3	3
10		Democratic Republic of the Congo	0	2	3	3
11		Côte d'Ivoire	0	2	3	3
12		Gabon	0	1	3	3
13		Gambia	0	2	3	3
14		Ghana	2	3	3	3
15		Guinea	1	1	3	3
16		Guinea-Bissau	0	1	1	3
17		Equatorial Guinea	0	1	1	3
18		Liberia	0	1	1	3
19		Morocco	2	4	4	4
20		Mauritania	0	2	3	3
21		Nigeria	1	4	4	3 and 4
22		Sao Tome and Principe	0	1	3	3
23		Senegal	2	3	3	3
24		Sierra Leone	0	2	1	3
25		Togo	2	3	3	3
26		Angola	0	-1	3	3



## 2.2 Testimony: Morocco (in French as original)

Reference (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-2.2\_Testimony\_MAROC



COMITE NATIONAL DE COORDINATION DANS LES DOMAINES DE L'HYDROGRAPHIE, DE L'OCEANOGRAPHIE ET DE LA CARTOGRAPHIE MARINE (CNCHOC)



### Missions du CNCHOC

**Article I du Décret N° 2.14.330 du 30.10.2014**

Le CNCHOC a pour missions:

- Contribuer à la définition d'une politique nationale dans les domaines de l'Hydrographie, de l'Océanographie et de la Cartographie marine;
- Approuver les programmes de développement de l'Hydrographie, de l'Océanographie et de la Cartographie marine;
- Elaborer un rapport annuel comprenant ses recommandations concernant lesdits domaines.

**Le CNCHOC est chargé d'assurer l'harmonisation des actions des Services Publics de l'Etat dans les domaines HOC**

Commissions du CNCHOC:

- Technique des marées (mise en place et suivi d'un réseau d'observatoires de marée aux ports du Maroc)
- Technique de l'hydrographie (élaboration et publication de la norme hydrographique nationale pour l'exécution des levés hydrographiques au Maroc)
- Technique SIG (mise en place d'une plateforme nationale d'échange de données spatiales)



Objectifs à court terme :

- Finalisation des démarches de prise d'autonomie de la DHOC en matière de production de cartes marines
- Mise en place d'une MSDI locale (au niveau de la DHOC)
- Renforcement de la coopération africaine dans les domaines HOC (Disposition de la Marine Royale à partager le savoir et le savoir-faire acquis par les cadres de la DHOC avec ses homologues des pays frères et amis africains)

Objectifs à moyen terme :

- Développement d'une capacité de production des produits S-100
- Montage d'un cours en hydrographie CAT B, accrédité FIG-OHI-ACI

Objectifs à long terme :

- Assurer la couverture cartographique totale des eaux sous juridiction nationale
- Réalisation d'une formation en cartographie au niveau interne (DHOC)

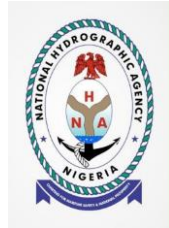
## 2.3 Testimony: Nigeria

Reference (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-2.3\_Testimony\_NIGERIA

History:

- 1976: establishment of NNHO (Nigerian Navy Hydrographic Office): Supervision of hydrographic and oceanographic surveys in Nigerian waters. Cartography. National NAVAREA II coordinator.
- Past 20 years
  - 2017 : Maritime Safety Information (MSI) Infrastructure (dissemination of vital information, notices to mariners for update own charts)
  - 2021: NNS *Lana*
  - 17 papers charts and 33 ENCs
  - Tidal predictions

- Capacity building
- Development of relationship with
  - local stakeholders: Nigerian Ports Authority (NPA), Nigerian Maritime Administration and Safety Agency (NIMASA), National Inland Waterways Authority (NIWA), University of Lagos, NEXIM Bank
  - and international stakeholders: United Kingdom Hydrographic Office, Service Hydrographique et oceanographique de la Marine (SHOM), Nippon Foundation – GEBCO Seabed 2030 Project
- 2021: establishment of National Hydrographic Agency (transfer of NNHO responsibility to NHA)



<p><b>1981 – Basic hydrography course for officers, survey recorder III and II for ratings – Currently working towards accreditation of the basic hydrography course by the IHO</b></p>	<p><b>NNHO : coordinating centre</b></p>	<p><b>NNS Lana – Offshore survey vessel</b></p>

Notes: ENABLING FACTORS THAT CONTRIBUTED TO THE PROJECT

- Leadership Continuity
- Collaboration with Stakeholders
- Indigenous Capacity Building Efforts

- Support from the Nigerian Navy
- Future plans
  - Prepare and execute an intensive 5-Year Survey and Charting Plan for NNS LANA to ensure total mapping of Nigeria's offshore maritime domain by 2026.
  - Installation of 4 standard automatic and integrated tidal observation stations along Nigeria's coastline.
  - Establish a network of precisely determined points to use as geodetic reference points to enhance the accuracy and reliability of NNHO charts and other nautical products.
  - Continue to build capacity for survey and nautical chart production through foreign and in-house training programmes.
  - Establishment of a Marine Spatial Data Infrastructure
  - Continue liaison with UKHO, SHOM and other stakeholders within and outside Nigeria

## 2.4 Review of capacity building activities within the IHO (2003-2023).

### 2.4.1 Organization of capacity development at the IHO: strategy, program, CBSC

<https://iho.int/fr/strategie-de-renforcement-des-capacites>

<https://iho.int/en/capacity-building-and-technical-cooperation>

#### 2.4.1.1 Capacity building and technical cooperation: strategy and program

Capacity Building is defined as the process by which the IHO assesses and assists in sustainable development of the Member States and other states, to meet the objectives of the IHO and the obligations related to SOLAS Chapter V, UNCLOS and other international instruments. Capacity Building is a strategic objective of the IHO.

##### **IHO CB Strategy**

The IHO CB Strategy aims to provide strategic guidance for IHO capacity building to ensure the optimum contribution to safety of life at sea, to the protection of the environment, and to national economic development.

##### **IHO CB Work Programme**

The IHO CB Work Programme (CBWP) is the instrument describing the annual priorities for the execution of the CB Activities (technical visits, education programs, trainings, workshops and other agreed actions).

#### 2.4.1.2 Capacity Building Sub Committee

**Reference :** <https://iho.int/fr/cbcs>

##### **Objectives**

Continuously assess the status of hydrographic surveying, nautical charting and maritime safety information worldwide, establish and maintain close relationships with national agencies and international organizations, which may provide funding or other support for developing countries, cooperate with Regional Hydrographic Commissions in the assessment of needs, in raising awareness on the importance of hydrography and in the provision of education and training

### 2.4.2 Technical Visits (2003-2023).

#### **Summary and remarks:**

- All African countries have benefited from Technical Visits after 2003 except: Equatorial Guinea and Sao Tome and Principe (listed in CBWP 2024)

	A	B	C
1		EAtHC / CHAtO	
2		Coastal State/Territory	Last TV
3		France	N/R
4		Spain	N/R
5		Portugal	N/R
6		Benin	2003, 2022
7		Cabo Verde	2003, 2017
8		Cameroon	2011 - 2019 (training center visit)
9		Congo	2003, 2021
10		Democratic Republic of the Congo	2024
11		Côte d'Ivoire	2021
12		Gabon	2003, 2012, 2019 (training center visit)
13		Gambia	2017, 2019
14		Ghana	2003 - 2019
15		Guinea	2002, 2024
16		Guinea-Bissau	2003, 2012, 2024
17		Equatorial Guinea	2003
18		Liberia	2016
19		Morocco	2023
20		Mauritania	2003, 2023
21		Nigeria	2003, 2018 (training center visit)
22		Sao Tome and Principe	NEVER
23		Senegal	2003, 2022
24		Sierra Leone	2003, 2023
25		Togo	2020
26		Angola	2018

Note: In 2002 and 2003, under the aegis of the IHO, expert missions in hydrography and marine cartography were carried out in the majority of countries in West-Central Africa. These missions were called WAAT: West Africa Action Team.

### 2.4.3 Seminar (2003-2023).

Source : <https://iho.int/en/technical-cooperation-and-training>

Technical Workshops, Seminars, Short Courses and Long Course (not exhaustive)

Année / Year Pays / Country	Objet /Object
2024 (29 – 30 April 2024) Maroc (Casablanca)	« 20 ans de renforcement des capacités dans la région CHAtO : Bilan et Perspectives » “20 Years of Capacity Building Actions in EAtHC Assessment and Prospect”
2022 (26 – 27 September) Cabo Verde (Mindelo)	Regional Awareness Seminar: “Working with NAVAREA II and your Primary Charting Authority”
2019 (21 – 24 Octobre) Maroc (Rabat)	AIMS – OHI : Atelier de travail relative à l’hydrographie et les aides à la navigation en Afrique IALA – IHO: Capacity building workshop on hydrography and marine aids to navigation in Africa
2018 (15 - 16 October) Nigeria (Lagos)	Regional Awareness Seminar on Maritime Geospatial Knowledge “The provision of hydrographic services” & “New IT technologies: MSI & MSDI”
2017	E-learning experimentation (MSI)



2015-2016 Ivory Coast, Ghana	HydroMOWCA (HydroMAOC) project. A regional approach to improve marine environmental knowledge in Western and central Africa
2014	MSI Regional Workshop, for EAtHC Members
2013 (23-25 Septembre) Mauritania	Séminaire régional d'information sur la sécurité de la navigation Regional information seminar on navigation safety Nouakchott (IMO – IALA - IHO)
2012 Ivory Coast	2-weeks Regional Training Course on Hydrographic Survey and Introduction to Chart Production (Africa) (ARSTM Abidjan)
2011 Ghana	Regional training hydrographic survey
2009 Ghana	MSI Course

### 3 Training offers

Reference (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-02.1\_Dev-hydro-carto\_2003-2023

#### Introduction:

This chapter mainly addresses the institutional information of EAtHC countries.

It consists of extracts from the references indicated (IHO website).

The panorama of these training offers should change in the coming years if (especially) regional courses (West and Central Africa) are finally put in place.

#### Training :

The specific capacities of these schools from an “educational” and “logistical” point of view are not detailed.

- From an educational point of view it is easy to know their programs as long as they respect the FIG/OHI/ACI standards such as can be consulted on: « <https://iho.int/en/standards-and-specifications> » (standards CAT A et CAT B pour « Hydrographic Surveyors / S-5» et « Nautical Cartographers / S-8 »)



- From a logistical (organizational) point of view, this report does not give the requirements imposed on schools. However, they are the ones who can be the most difficult to get. It will depend :
  - the type of structures to which the training is supported: existing hydrographic or cartographic service, port with hydrography department, maritime academy, higher education dedicated to earth and marine sciences, private industry, etc<sup>3</sup>;

<sup>3</sup> If regional training centers are created and these essentially offer theoretical lessons, then it will be necessary to back them up with a structure already having a "hydrography" department and therefore equipment (boats, specific acquisition equipment and data processing) and qualified hydrographers. In Ivory Coast, this would for example be the case for the ARSTM (Regional Academy of Marine Sciences and Techniques) which would be linked to the PAA (Autonomous Port of Abidjan).

- the availability of teachers trained in marine sciences and techniques (lagoons, rivers, lakes): internal or external to the school (which could be linked to a higher education structure), national and international, etc.;
- obviously methods of financing logistical and educational costs including those of teachers (Origins: State, International Organizations, sponsors, employers, students, etc.);
- the number of students per year and their geographical origin (frequency of training, boarding school, etc.).

### 3.1 Spain

Reference (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-4.1\_Training-offer\_Spain

Certification	Hydrography CAT A	Hydrography CAT B	Cartography CAT B
<b>Duration</b>	10 months	10 months	
<b>Periodicity</b>	Every year. September: online. October – June: in person	Every year. September, online. October – June, in person	

- Place : Spain / Cadiz : ESHIDRO
- Language: Spanish
- Contact: Escuela de Hidrografía «Alejandro Malaspina» Tél. +34 956 59 93 98 - [eshidro@fn.mde.es](mailto:eshidro@fn.mde.es)
- Fees: Yes, € depending on bilateral agreements.
- Scholarships:
  - Within the framework of Spanish International Cooperation Programme In The Field Of Military Education (PCIMEM): Yes
  - Under the IHO Capacity Building: No.

### 3.2 France

Référence (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-4.1\_Training-offer\_France

Certification	Hydrography CAT A	Hydrography CAT B	Cartography CAT B
<b>Duration</b>	<ul style="list-style-type: none"> <li>• 3-year syllabus for BSc</li> <li>• 2-year program for 1st-year Master's graduate</li> </ul>	10 months	9 months
<b>Periodicity</b>	Every year. September-June	Every year. September – May	Not every year
	Brest ENSTA Bretagne French/ English	Brest Shom French	Brest Shom French

Shom

- Contact: École du Shom Tél. 02 56 31 24 09 - [drh-for-eco@shom.fr](mailto:drh-for-eco@shom.fr)
- Fees: Yes (Hydrography: 10 300 €, Cartography: 9 000 €) depending on student status
  - scholarships within the framework of French cooperation: Yes (mostly “Defense”)
  - scholarships under the IHO Capacity Building (Japan, Korea ...) : No
- Référence: <https://www.shom.fr/fr/nos-activites/formation>

ENSTA Bretagne

- Fees: Yes depending on student status
  - scholarships within the framework of French cooperation: Yes (mostly “Defense”)
  - scholarships under the IHO Capacity Building (Japan, Korea...) : No
- Reference: <https://www.ensta-bretagne.fr/fr/hydrographie-oceanographie>

Divers

- Shom: continuing education, E\_learning project
- AFHy (Association Francophone d’Hydrographie): with Shom and ENSTA Bretagne

### 3.3 Nigeria

Reference (<https://iho.int/en/eathc18-2024>) : no

Extract of Nigeria testimony (Référence (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-2.3\_Testimony\_NIGERIA)

- Basic hydrography course for officers, survey recorder III and II for ratings
- Currently working towards accreditation of the basic hydrography course by the IHO

### 3.4 Portugal

Référence (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-4.1\_Training-offer\_Portugal

Certification	Hydrography CAT A	Hydrography CAT B	Cartography CAT B
Duration	12 months	11 months	
Periodicity	Every 2 years.	Every 2 years.	

- Place : Portugal / Lisbon
- Language: portuguese
- Contact: Hydrographic and Oceanographic School - eho.dir@hidrografico.pt
- Fees: Yes, € depending on bilateral agreements.
- Scholarships:
  - Within Portuguese Cooperation Yes
  - Under the IHO Capacity Building: No.

Divers:

- MSI online courses
- Onjob training and Interships

### 3.5 United Kingdom

Référence (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-4.1\_Training-offer\_UKHO

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1157475/UKHO\\_International\\_Training\\_Academy\\_Brochure\\_23.05.V04.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1157475/UKHO_International_Training_Academy_Brochure_23.05.V04.pdf)

Certification	Cartography CAT B GEOMAC IHO Nippon Foundation	Cartography CAT B GEOMAC UKHO	
Duration	24 weeks	24 weeks	
Periodicity	Once per year	Once per year	

<b>Costs ( Scholarships)</b>	7 funded places offered to IHO Member States	£30K (inclusive)	
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- Place : UK/ Taunton
- Language: English
- Contact: UKHO International Training Academy [InternationalTraining@ukho.gov.uk](mailto:InternationalTraining@ukho.gov.uk)

Divers:

- online courses
- survey training
- governance courses
- other UK education providers: University of Plymouth, University of Central London, Royal Navy at Devonport

### 3.6 IHO: General information on training offers for Member countries

The IHO Circular Letters available at: <https://iho.int/en/circular-letters> provide information on the training offered in IHO Member countries:

- Category "B" Hydrographic Survey Programme Sponsored by the Republic of Korea
- Category "B" Nautical Cartographers Programme, sponsored by the Republic of Korea
- IHO - Nippon Foundation Geospatial Marine Analysis and Cartography (GEOMAC) Project, UKHO, Taunton, UK
- IHO-IOC-Nippon Foundation / GEBCO Training Project. Graduate certificate in Ocean Mapping
- Master of Science Programme in Hydrographic Science at the University of Southern Mississippi (USA) Sponsored by the Republic of Korea

In the event of an absence of candidates with the prerequisites (maths, physics, English if applicable) or a registration limit, please note that these are recurring training programs to position for the following year.

### 3.7 Outside EAtHC

This is not addressed in this report.

It is nevertheless important to keep in mind the institutional training offered by other countries outside EAtHC such as: India, Italy, Brazil, etc.

### 3.8 Industry

This is also not addressed in this report.

Only a presentation made during the EAtHC18 conference by IIC Technologies is cited here:

Reference (<https://iho.int/en/eathc18-2024>) : EAtHC18\_2024\_08.5A\_EN\_IIC\_Technologies\_Training and Hydrographic Certification-2

IIC Technologies of which the Academy offers two CAT B training courses, one in hydrography and the other in marine cartography.

- [hydrographicsurveyor@iicacademy.com](mailto:hydrographicsurveyor@iicacademy.com)
- [nauticalcartographer@iicacademy.com](mailto:nauticalcartographer@iicacademy.com)

Furthermore, equipment suppliers often accompany their training services with employment.



## 4 Workshops

Référence : Référence (<https://iho.int/en/eathc18-2024>) : SEMINAR\_2024-2.5\_Org-séminaire

### 4.1 Introduction - Context

Enjeux	Challenges
Économie bleue – Développement économique	Blue economy – Economic development
Aménagement durable Environnement résilient - Prévention risques	Sustainable development Resilient environment - Risk prevention
Sécurité/Sûreté - Régalien	Safety / Security - Regalien
<b>Gouvernance fondée sur la « connaissance » et le « management »</b>	<b>Governance based on "knowledge" and "management"</b>
Action de l'État en Mer: AEM	State action at sea
Gestion Intégrée des Zones Côtières: GIZC	Integrated Coastal Zone Management: ICZM
Politiques Publiques Mer & Littoral: PPML	Public Policies Sea & Coastline
Planifier – Prioriser - Financer	Plan - Prioritize - Finance
Action Méthode	Action Method
Programmes scientifiques ET OPÉRATIONNELS	Scientific AND OPERATIONAL programs
Instituts recherche ET SERVICES TECHNIQUES	Research institutes AND TECHNICAL SERVICES
Développement CAPACITÉS /Formations	CAPACITY BUILDING/ Training
NUMÉRIQUE International – Régional	DIGITAL International – Regional

It's about:

- To properly integrate economic, security and environmental issues: sea, coastal, lagoons, rivers, lakes;
- To clearly identify the material capacities to face these challenges: ships, launches, hydrographic and oceanographic acquisition and processing equipment, cartographic infrastructures;
- Ultimately, nothing without human capabilities: men and women trained in all professions;
- Including two specific professions: hydrographer and marine cartographer to be trained in approved schools;
- To recognize the cruel lack of specialized schools in Africa.

#### What to do at the IHO international level?

References:

<https://iho.int/en/miscellaneous-2> (Strategy)

<https://iho.int/en/capacity-building-and-technical-cooperation> (Capacity Building Work programme)

We don't start from nothing. In terms of capacity development, it already exists (it is therefore possible to act on it) at the IHO level:

- A strategy;
- An annual program.

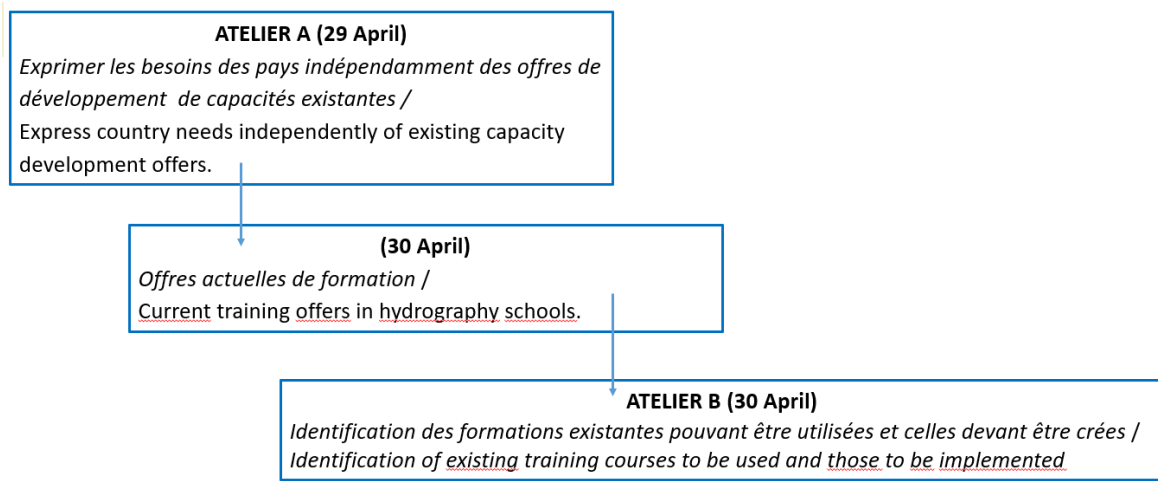
### What to do at the EAtHC regional level?

Already try to be a source of suggestions to complement existing training offers. It is up to the capacity building coordinator for the EAtHC to take this into account to:

- prepare the upcoming three-year regional program;
- even amend the IHO strategy at least in its regional specificities.

## 4.2 Organization of workshops

Methodology based on the most shared languages: English, French, Portuguese



### What are we talking about in terms of capacity development?

- **What:** training, equipment, organizational and cooperation advice, funding, etc
- **Regarding training more specifically:**
  - **Subjects:** nautical information, surveys, cartography;
  - **Without forgetting:** environment, risk management, blue economy;
  - **Areas:** coastal, offshore, ports, lagoons, rivers, lakes;
  - **Related and transversal subjects:** data management (bases, Internet portals, etc.), geomatics, acquisitions and maintenance of equipment (electronics, IT, etc.)
  - **Where:** outside Africa, Africa (absence of approved schools);
  - **In what language?**
  - **How?** (face to face – E-learning – hybrid);
  - **What levels of training:** operator, senior technician (B), engineer (A), scientific research;
  - **What professions:** hydrographers, cartographers, electronics engineers, computer scientists, managers;
  - ... **with what money!**

## 4.3 Workshop results – Expressions of needs

1. Not just oceans: lagoons, rivers, lakes.
2. At the “Governance<sup>4</sup>” – “Organization” – “Management” level:

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<sup>4</sup> This notion of governance could be introduced (phase 0) in the latest version of the capacity development strategy (ver05.6 – 2021-04-20)

- a. Know how to create (legislative, regulatory, operational context, etc.) a National Hydrographic Service<sup>5</sup> (in addition to port structures). Knowing how to communicate to achieve this (“popularization” of a science and technique which should not remain a matter for specialists).
  - b. Guidance / training on how to convince (socio-economic issues, environment, security, sovereignty, etc.) national and international decision-makers, and development agencies, on how to engage in an encompassing approach: this is required to fund the acquisition of infrastructure, ships and embarkations, hardware and software acquisition, processing and archiving of data, human capacities, etc.
  - c. Know how to create a National Hydrographic Committee (NHC) and lead it. Know how to use references such as the IHO M2.
  - d. Know how to prioritize actions (e.g. survey areas based on risks and understanding how to use a risk model).
  - e. Know how to understand status of surveying and charting in your country’s waters using tools such as C-55.
  - f. Knowing how to pool<sup>6</sup> and share knowledge and operational resources at the national<sup>7</sup> and international level<sup>8</sup>.
  - g. Know how to write and defend a funding request (ie: international organizations). Identify existing programs to apply to.
  - h. Know how to identify existing capacity (using IHO CB Model) and then phase training and the provision of equipment accordingly.
3. At the “nautical and material resources” level:
    - a. Know how to specify (specifications) the purchase of equipment to obtain the desired quality/price ratio [training of buyers, ability to analyze technical and financial offers]. Define the basic equipment to start a hydrographic activity.
    - b. Also think about oceanography equipment (swell, current measurement, etc.). Connection with competent experts or industrialists to go further in data analysis.
    - c. Know how to ensure that equipment is maintained in operational condition (human resources and dedicated budgets). Know how to diagnose breakdowns. Know how to organize with remote equipment suppliers.
    - d. Know how to create conditions for reusing equipment from other countries.
    - e. Knowing how to create the conditions for pooling existing resources at the national and regional level.

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<sup>5</sup> One country has expressed this in particular: Mauritania

<sup>6</sup> Cameroon's model consists at the national level of creating a real synergy of action by relying mainly on port administrations (leading players in hydrography and possessing financial means), which beyond already having a good understanding of hydrographic needs generally have minimum equipment (Hydrographic launches, Tide Gauge, human resources, etc.) already in place which can be used to meet national needs. This has the advantage of avoiding coming up against the often-mentioned lack of resources from the start and allowing very quickly to have a capacity for action which is certainly embryonic but effective and which would be supplemented subsequently.

<sup>7</sup> The Technical Visits carried out in the region (<https://iho.int/en/capacity-building-assessment>), since they identify all the stakeholders involved in marine sciences and techniques, make it possible to appreciate all the potential for human (teaching capacity included) and material sharing

<sup>8</sup> Cameroon proposes to create the conditions (mechanisms) so that developing countries can, within the framework of regional experience sharing, define (and publicize) the themes that are useful to them.

- f. Promote technical days for the presentation of equipment<sup>9</sup> where users and suppliers of hardware solutions can exchange ideas.
- g. Requirement to increase awareness and knowledge of technical terminology and acronyms within the hydrographic field (e.g. S-100, C-55, MSDI, GEBCO etc)
- 4. In terms of hydrographic surveys and data (beyond CAT A or B training in hydrography):
  - a. Deepen the use of equipment already available to an organization by external professionals (excluding equipment manufacturers) offering shared experience.
  - b. Know how to have tide gauge infrastructures and operate them (processing of hydrographic surveys, harmonic analyzes for predictions).
  - c. Know the advantages and limitations of SDB (Satellite Derived Bathymetry) and Lidar.
  - d. Know how to prescribe (subcontract) hydrographic surveys and control them.
- 5. In terms of databases and cartography:
  - a. Know how to archive and share data. In particular (but not only) with the PCA (Primary Chart Authority) (understand the “data requirements”)
  - b. Identification and sharing of MSI with Local marine stakeholders, NAVAREA Coordinator and PCA.
- 6. In terms of the training itself:
  - a. They must have diplomas (CAT A and B) (hydrography and marine cartography). In addition, a need for continuing training is also expressed.
  - b. And accessible in terms of: proximity, costs, duration, language. This joins the “Regional Centers of Excellence” in different languages also discussed during the EAHC18 conference (e.g. by Morocco).
  - c. Take into account that many staff, unable to follow specialized training, learn “on the job”. Training needs can only be in addition to acquired experience (to be valued in the course)
  - d. Conversely, they may above all have a need for practical training in addition to theoretical training acquired elsewhere (the latter being progressively facilitated by E\_learning).
  - e. Know how to select and prepare candidates for CAT B and A training (prerequisites including languages).
  - f. Master the administrative aspects of training abroad (diplomatic aspects included).
  - g. See how to balance training offers which may favor the military more than civilians.
  - h. The need for training in the use of specific equipment and software relevant to an organisation (i.e. a surveyor needs to be trained to use the equipment that they use in their own organisation).
- 7. Miscellaneous
  - a. Know how and where to acquire nautical documents<sup>10</sup>

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<sup>9</sup> For example, the AFHy (Association Francophone d’Hydrographie) annually organizes such days where users and suppliers of material solutions can meet [<https://www.afhy.fr/afhy-lassociation-francophone-dhydrographie>]

<sup>10</sup> Technical Visits often confirm this need. It is not uncommon to encounter organizations with nautical or cartographic information that do not have nautical charts, which reduces their ability to communicate with the chart producer (PCA).

Note: these expressions of need are quite diverse. Each country has its specificities. Within the same country, organizations with a national vocation (State) are distinguished from those with port responsibilities (public service delegation). As is the case in advanced countries. If there are “common denominators” to necessarily be sought, this cannot exclude case by case.

Editors



Henri DOLOU



Gabin SOGORB

## ANNEXES

### Annex A : Abréviations/ Abreviations

ACI ICA	Association cartographique internationale <i>International Cartographic Association</i>
AFHy	Association francophone d'hydrographie (France)
AGPAOC PMAWCA	Association de Gestion des Ports de l'Afrique de l'Ouest et du Centre <i>Port Management Association of West and Central Africa</i>
AMN	<i>Agência Marítima Nacional (Angola)</i>
APGP	<i>Administração dos Portos da Guiné-Bissau</i>
APN	Autorité Portuaire Nationale (Cameroun)
ARSTM	Académie Régionale des Sciences et Techniques de la Mer (Côte d'Ivoire)
ARTFM	Autorité de Régulation du Transport Fluvio-Maritime (Guinea)
CBSC	<i>Capacity Building Sub-Committee (IHO)</i> Sous-comité de renforcement des capacités (OHI)
CBWP	<i>Capacity Building Work Programme (IHO)</i> Programme de travail de renforcement des capacités (OHI)
COI IOC (UNESCO)	Commission Océanographique Intergouvernementale <i>Intergovernmental Oceanographic Commission</i> De l'UNESCO ( <i>United Nations Educational, Scientific and cultural Organization</i> ) (Organisation des Nations Unies pour l'éducation, la science et la culture)
CHNO	Centre National d'Hydrographie et d'Océanographie] (Marine Nationale du Cameroun)
DHOC	Division Hydrographie, Océanographie et Cartographie de la Marine Royale (Maroc)
DMVN	Direction de la Marine et des Voies navigables (RD Congo)
EAtHC CHAtO	<i>Eastern Atlantic Hydrographic Commission (IHO)</i> Commission Hydrographique de l'Atlantique orientale (OHI)
EEZ ZEE	<i>Exclusive Economic Zone</i> Zone Economique Exclusive
ENC	<i>Electronic Navigational Chart</i>
FIG	Fédération Internationale des Géomètres <i>International Federation of Surveyors</i>
GMA	<i>Ghana Maritime Authority</i>
GPHA	<i>Ghana Ports and Harbours Authority</i>
GMDSS SMDSM	<i>Global Maritime Distress and Safety System</i> Système Mondial de Détresse et de Sécurité en Mer
GPA	Gambia Port Authority
GPM	Gabon Port Management
IALA AISM	<i>International Association of Marine Aids to Navigation and Lighthouse Authorities</i> Association Internationale de Signalisation Maritime
IBSC	FIG/IHO/ICA <i>International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers</i>
IC-ENC	<i>International Centre for Electronic Navigational Charts</i>
IHM	<i>Instituto Hidrográfico de la Marina (Spain)</i>
IHPT	<i>Instituto Hidrográfico Portugal</i>
IHO OHI	<i>International Hydrographic Organization</i> Organisation Hydrographique Internationale
IMO OMI	<i>International Maritime Organization</i> Organisation Maritime Internationale
IMP	<i>Instituto Marítimo Portuario (Cabo Verde et Guinea-Bissau)</i>
MR	<i>Marine Nationale (Armée nationale Mauritanienne)</i>

<i>MRCC</i>	<i>Maritime Rescue Coordination Centre</i>
<i>MSDI</i>	<i>Maritime Spatial Data Infrastructure</i> Infrastructures de données spatiales maritimes
<i>MSI</i> <i>RSM</i>	<i>Maritime Safety Information</i> Renseignement de Sécurité Maritime
<i>MTACMM</i>	Ministère des transports, de l'aviation civile et de la marine marchande (Congo)
<i>NC</i> <i>CM</i>	<i>Nautical Charts</i> Carte marine
<i>NHA</i>	Nigerian Hydrographic Agency
<i>NNHO</i>	Nigeria Navy Hydrographic Office
<i>NHC</i>	National Hydrographic Committee
<i>NNHS</i>	Nigeria Navy Hydrographic School
<i>NtMs</i>	<i>Notice to Mariners</i> Avis aux navigateurs
<i>OMAOC</i> <i>MOWCA</i>	Organisation Maritime de l'Afrique de l'Ouest et Centrale <i>Maritime Organization of West and Central Africa</i>
<i>OMI</i> <i>IMO</i>	Organisation Maritime internationale International Maritime Organization
<i>OMM</i> <i>WMO</i>	Organisation météorologique mondiale <i>World Meteorological Organization</i>
<i>PAA</i>	Port Autonome d'Abidjan (Côte d'Ivoire)
<i>PAC</i>	Port Autonome de Conakry (Guinea)
<i>PAC</i>	Port Autonome de Cotonou (Bénin)
<i>PAD</i>	Port Autonome de Douala (Cameroun)
<i>PAL</i>	Port Autonome de Lomé (Togo)
<i>PAPN</i>	Port Autonome de Pointe-Noire (Congo)
<i>PCA</i>	<i>Primary Charting Authority</i> Autorité cartographique principale
<i>PRIMAR</i>	<i>International collaboration for electronic navigational chart (ENC)</i>
<i>RHC</i> <i>CHR</i>	<i>Regional Hydrographic Commission (EAtHC)</i> Commission Hydrographique Régionale (CHaTO)
<i>RMU</i>	<i>Regional Maritime University (Accra - Ghana)</i>
<i>Shom</i>	Service hydrographique et océanographique de la marine (France)
<i>SLMA</i>	<i>Sierra Leone Maritime Administration</i>
<i>SMAN</i>	Système mondial d'avertissement de navigation <i>Worldwide Navigational Warning Service (WWNWS)</i>
<i>SMDSM</i>	Système mondial de détresse et de sécurité en mer <i>Global Maritime Distress and Safety System (GMDSS)</i>
<i>SSM</i>	Service de Signalisation Maritime (Gabon)
<i>SSMS</i>	Service de Sécurité Maritime du Sénégal
<i>SOLAS</i>	<i>[United Nations] Convention for the Safety of Life at Sea</i> Convention pour la sauvegarde de la vie humaine en mer
<i>UNCLOS</i>	<i>United Nations Convention on the Law of the Sea</i>
<i>UKHO</i>	<i>United Kingdom Hydrographic Office</i>
<i>WAAT</i>	<i>West Africa Action Team</i>
<i>WWNWS</i>	<i>Worldwide Navigation Warning Service</i>



## Annex B : List of main contacts -Telephones – Mails

### Annex B-1 : Organizers and speakers

Pays	Organisation	First name (Prénom)	SURNAME (NOM)	Email	Tel
United Kingdom_1	UKHO	Nathanael	KNAPP	<a href="mailto:Nathanael.Knapp@UKHO.gov.uk">Nathanael.Knapp@UKHO.gov.uk</a>	44 (0)7435 545769
United Kingdom_2	UKHO	Nicholas	SWADDLING	<a href="mailto:nicholas.swadling@ukho.gov.uk">nicholas.swadling@ukho.gov.uk</a>	44 (0)1823 483898
France_1	Shom	Laurent	KERLEGUER	<a href="mailto:laurent.kerleguer@shom.fr">laurent.kerleguer@shom.fr</a>	(33) (0) 2 56 31 25 10
France_2	Shom	Gabin	SOGORB	<a href="mailto:gabin.sogorb@shom.fr">gabin.sogorb@shom.fr</a>	(33) (0) 6 03 20 13 77
France_3	Shom	Henri	DOLOU	<a href="mailto:henri.dolou@shom.fr">henri.dolou@shom.fr</a>	(33) (0) 6 86 15 14 82
France_4	Shom	Pierre-Yves	DUPUY	<a href="mailto:pierre-yves.dupuy@shom.fr">pierre-yves.dupuy@shom.fr</a>	(33) (0) 6 38 78 59 55
Spain_1	IHM	Salvador	ESPINOSA GLEZ-LLANOS	<a href="mailto:ihmesp@fn.mde.es">ihmesp@fn.mde.es</a>	
Spain_2	IHM	Luis Javier	Gomez Saavedra	<a href="mailto:lgomsaa@fn.mde.es">lgomsaa@fn.mde.es</a>	
Portugal_1	IHPT	João Paulo	DELGADO VICENTE	<a href="mailto:dt.dir@hidrografico.pt">dt.dir@hidrografico.pt</a>	(351 210 943 055) (351 918537747)
Portugal_2	IHPT	Paula	SANCHES	<a href="mailto:paula.sanches@hidrografico.pt">paula.sanches@hidrografico.pt</a>	(351) 210 943 060
Morocco	MR	Khalid	LOUDIYI	<a href="mailto:adjaffairmar-mr@far.ma">adjaffairmar-mr@far.ma</a>	(212) 612 48 93 16
Morocco	DHOC	Mostafa	TAFRHY	<a href="mailto:dhoc-cdiv-mr@far.ma">dhoc-cdiv-mr@far.ma</a>	663 470 889
Morocco	DHOC	Abderrahim	KOUTKHTOU	<a href="mailto:abderrahim.mho@gmail.com">abderrahim.mho@gmail.com</a>	650 91 37 55
Morocco	DHOC	Abdallah	HADOU	<a href="mailto:abdellah.hadou@gmail.com">abdellah.hadou@gmail.com</a>	664 154 099
Morocco	DHOC	Amine	AMRI	<a href="mailto:amri.amine90@gmail.com">amri.amine90@gmail.com</a>	671 23 13 84
Morocco	DHOC	Ayoub	BELLATMANI A	<a href="mailto:dhoc-cdiv-mr@far.ma">dhoc-cdiv-mr@far.ma</a>	620696163
Morocco	DHOC	Mehdi	LATNI	<a href="mailto:latni.mehdi@gmail.com">latni.mehdi@gmail.com</a>	661499574
OHI_1	OHI-SEC	John	NYBERB	<a href="mailto:John.nyberg@iho.int">John.nyberg@iho.int</a>	

## Annex B-2 : Africa outside Morocco

Pays	Organisation	First name (Prénom)	SURNAME (NOM)	Email	Tel
Cabo Verde_1	IMP	Raúl Jorge	Vitória Soulé	<a href="mailto:Raul.Soule@imp.cv">Raul.Soule@imp.cv</a>	(238) 9927740
Cabo Verde_2	IMP	Seidi	P. Silva dos Santos	<a href="mailto:seidi.santos@imp.cv">seidi.santos@imp.cv</a>	(238) 232 43 42
Mauritanie_1	MN	Kaourou	COULIBALY	<a href="mailto:Kismakaourou@gmail.com">Kismakaourou@gmail.com</a>	(222) 27 10 40 37
Sénégal_1	PAD/SSMS	Ibrahima	CISSOKHO	<a href="mailto:ibrahima.cissokho@portdakar.sn">ibrahima.cissokho@portdakar.sn</a>	(221) 77 529 72 79
Gambie_1	GPA	Dominic	CORREA	<a href="mailto:dcorrea@gambiaports.gm">dcorrea@gambiaports.gm</a>	(220)9962853
Guinée Bissau_1	APGB	Alberto	TIPOTE	<a href="mailto:albertipote@gmail.com">albertipote@gmail.com</a>	(245) 966 786 707
Guinée Bissau_2	IMP	Rui	DA SILVA	<a href="mailto:ruimirna@gmail.com">ruimirna@gmail.com</a>	
Guinée Bissau_3	IMP	Gualdino Afonso	TE	<a href="mailto:gualdinoafonsote@hotmail.com">gualdinoafonsote@hotmail.com</a>	
Guinée_1	PAC	Moustapha	BALDE	<a href="mailto:moustodaye@yahoo.fr">moustodaye@yahoo.fr</a> - <a href="mailto:moustapha.balde@portconakry.com">moustapha.balde@portconakry.com</a>	(224) 622694150
Guinée_2	PAC	Karifala	FOFANA	<a href="mailto:Karifala.fofana@portconakry.com">Karifala.fofana@portconakry.com</a>	626 06 08 55
Guinée_3	PAC	Ansoumane I	CAMARA	<a href="mailto:ansoucamara1983@gmail.com">ansoucamara1983@gmail.com</a>	620 47 87 02
Guinée_4	ARTFM	Mamady	CONDE	<a href="mailto:artfmguiinee@gmail.com">artfmguiinee@gmail.com</a>	628 84 68 15
Sierra Leone	SLM	Ibrahim	L H Wurie	<a href="mailto:wu1078@yahoo.co.uk">wu1078@yahoo.co.uk</a>	232(76) 312315
Liberia				-	
Côte d'Ivoire_1	PAA	Seydou	SANGARE	<a href="mailto:seysangare@yahoo.fr">seysangare@yahoo.fr</a>	(225) 05 26 77 34
Côte d'Ivoire_2	PAA	Zeguella	FOFANA	<a href="mailto:zeguelafofana@gmail.com">zeguelafofana@gmail.com</a>	(225)0779567742
Ghana_1	GMA	Marilyn	EGHAN	<a href="mailto:marilyn.eghan@ghanamari.time.org">marilyn.eghan@ghanamari.time.org</a>	(233)271823283
Ghana_2	GPHA	Isaac Koranteng	YIRENKYI	<a href="mailto:ykoranteng@ghanaports.gov.gh">ykoranteng@ghanaports.gov.gh</a>	(233) (0) 545761735
Togo_1	PAL	Piyalo Abire	BILABINA EPSE d'ALMEIDA	<a href="mailto:jojo_blez@yahoo.fr">jojo_blez@yahoo.fr</a>	(228) 90 07 49 64
Togo_2	PAL	Komi Edem	AZIAMADIA	<a href="mailto:Azek_ing@yahoo.fr">Azek_ing@yahoo.fr</a>	
Bénin_1	PAC	Fatimatou	MAMA SAMBO	<a href="mailto:fmamasambo@pac.bj">fmamasambo@pac.bj</a> - <a href="mailto:fatousambo@yahoo.fr">fatousambo@yahoo.fr</a>	(229) 90 25 75 41
Bénin_2	PAC	Sourou Bernadin	AGBOKIN	<a href="mailto:SBAGBOKIN@pac.bj">SBAGBOKIN@pac.bj</a>	(229) 90 25 77 07
Bénin_3	PAC	Charles-Bennett	FAYOMI	<a href="mailto:CFAYOMI@pac.bj">CFAYOMI@pac.bj</a>	90 25 78 28 / 21 36 45 16
Nigeria				-	

Cameroun _1	PAD (Dragage)	Idriss	BEYE	<a href="mailto:idriss.beye@pad.cm">idriss.beye@pad.cm</a> <a href="mailto:idrissbeye@yahoo.fr">idrissbeye@yahoo.fr</a>	(237) 650-590- 216//690-315-099
Cameroun _2	PAD	Kevin	BIKADAL BIBEKI	<a href="mailto:Kevin.BIKADALBIBEKI@pad.cm">Kevin.BIKADALBIBEKI@pad.cm</a>	
Cameroun _3	PAD/Hydro	Ulrich	LANGOUL	<a href="mailto:ulrich.langoul@pad.cm">ulrich.langoul@pad.cm</a>	
Cameroun _4	CNHO	Jean	LACMATA	<a href="mailto:cnho.cameroon@gmail.com">cnho.cameroon@gmail.com</a> <a href="mailto:laquejohn@yahoo.fr">m - laquejohn@yahoo.fr</a>	
Cameroun _5	CNHO	Monick Serge	AKAMBA	<a href="mailto:cnho.cameroon@gmail.com">cnho.cameroon@gmail.com</a> <a href="mailto:akamba.cnho@gmail.com">m akamba.cnho@gmail.com</a>	
Cameroun _6	Ministère Transports	Lancri	NJILLA	-	
Cameroun _7	APN	Marie Christelle	FOE AMBANI	-	
Cameroun _8	APN	Grâce	NDONGHO	<a href="mailto:pad@pad.cm">pad@pad.cm</a>	
Guinée Equatorial e				-	
Sao Tomé e principe				-	
Gabon_1	SSM	Hilarion	ONE	<a href="mailto:onhil70@yahoo.fr">onhil70@yahoo.fr</a>	(241) 066972479
Gabon_2	GPM	Bertrand Roger	LELE	<a href="mailto:blele@gpmgabon.com">blele@gpmgabon.com</a> et <a href="mailto:lelebertrand8@gmail.com">lelebertrand8@gmail.com</a>	(241) 062868913
Congo_1	PAPN	Winther Grenier	TCHISSAMBOU AMBANA	<a href="mailto:ambanawinther@gmail.com">ambanawinther@gmail.com</a>	(242) 06 622 97 39
Congo_2	Ministère transports	Jean Marc Stanislas	BIMBI	<a href="mailto:jmarcmbimbi@gmail.com">jmarcmbimbi@gmail.com</a>	(242) 0644 0885 4
RDC_1	DMVN	Patrick	MUSITUMBU ITAKALA	<a href="mailto:patrickmusitumbu2@gmail.com">patrickmusitumbu2@gmail.com</a>	(243) 896 062 812

## Annex B-3 : International Organizations

Organisations Internationales	First name (Prénom)	SURNAME (NOM)	Email	Tel
IALA	Latifa	OUMOZOUNE	<a href="mailto:latifa.oumouzoune@iala-aism.org">latifa.oumouzoune@iala-aism.org</a>	(33) (6) 43 13 12 91
MOWCA (IMO)	Paul	ADALIKWU	<a href="mailto:infos@omaoc.org">infos@omaoc.org</a> - <a href="mailto:padliku@yahoo.com">padliku@yahoo.com</a>	(225) 05 05 784 771
	Mariko	MAMADOU	<a href="mailto:mamadoumariko@hotmail.com">mamadoumariko@hotmail.com</a>	(225) 07 07 86 86 08
PRIMAR	Hans Christoffer	LAURITZEN	<a href="mailto:hans.christoffer.lauritzen@kartverket.no">hans.christoffer.lauritzen@kartverket.no</a>	(47) 92684543
IC-ENC	James	HARPER	<a href="mailto:james.harper@ic-enc.org">james.harper@ic-enc.org</a>	+44 (0)1823 483414

## Annex B-4 : Industry

Industrie	First name (Prénom)	SURNAME (NOM)	Email	Tel
Fugro	Hamza	MAZIH	<a href="mailto:h.mazih@fugro.com">h.mazih@fugro.com</a>	
Kongsberg	Øystein	Aasbø	<a href="mailto:Oystein.Aasbo@km.kongsberg.com">Oystein.Aasbo@km.kongsberg.com</a> ;	(47) 93 23 19 86
Exail	Calixte	GÉNIN	<a href="mailto:calixte.genin@exail.com">calixte.genin@exail.com</a>	<b>(33) 6 33 58 00 62</b>
Teledyne CARIS	Juan	CARBALLINI	<a href="mailto:Juan.Carballini@Teledyne.com">Juan.Carballini@Teledyne.com</a>	<b>(31) 6 5717 6413</b>
ESRI	Rafael	PONCE	<a href="mailto:rponce@esri.com">rponce@esri.com</a>	<b>(1) 9097932853</b>
SevenCs	Alexander	Kramer	<a href="mailto:alexander.kramer@sevencs.com">alexander.kramer@sevencs.com</a>	<b>(491) 727915995</b>
IIC Technologies	Derrick	PEYTON	<a href="mailto:derrick.peyton@iictechnologies.com">derrick.peyton@iictechnologies.com</a>	

## Annex C : Programme - Presentations of the séminaire – Internet links

« 20 ans de renforcement des capacités dans la région CHAtO : Bilan et Perspectives »

“20 Years of Capacity Building Actions in EAtHC Assessment and Prospect”

IHO: <https://iho.int/>

IRCC (inter-regional coordination committee) : <https://iho.int/en/ircc>

RHCs (regional hydrographic commissions) : <https://iho.int/en/rhcs>

EAtHC (eastern atlantic hc) : <https://iho.int/en/eastern-atlantic-hc>

**EAtHC18 (2024)** : <https://iho.int/en/eathc18-2024>

Lundi 29 avril 2024 – Jour 1 / Monday 29 April 2024 - Day 1				References of presentation on: <a href="https://iho.int/en/eathc18-2024">https://iho.int/en/eathc18-2024</a>
08.30	01	Accueil et Enregistrement/ <i>Welcome and- Registry</i>	Host country	[Ou Chapitres à consulter] [Or chapters to consult]
09.00	01.1	<b>Ouverture officielle du séminaire / <i>Official Opening of seminar</i></b> Discours Inauguraux / <i>Opening speeches</i>  Remarques préliminaires (objectifs) du coordonnateur de développement de capacités de l’OHI pour la CHAtO / <i>Opening remarks (objectives) by IHO capacity building coordinator for EAtHC</i>	Host country IHO representative EAtHC chair  EAtHC CB coordinator	
		<b>Détails organisationnels / <i>Organisational issues</i></b>		
09.30	02	<b>Bilan du renforcement des capacités / <i>CB Assessment</i></b>		
	02.1	Le développement de l’hydrographie et la cartographie marine dans la CHAtO (2003-2023) : comités nationaux, services hydrographiques, appartenance OHI, associés CHAtO, coopérations régionales et internationales ... / <i>The development of hydrography and marine cartography in the EAtHC (2003-2023): national committees, hydrographic services, IHO membership, regional and international cooperation, etc.</i>	EAtHC CB coordinator	EAtHC18-SEM-02.1 <a href="#">Development of hydrography and marine cartography 2003-2024</a>
	02.2	Témoignage 1 : Maroc / Testimony 1 : Morocco	Morocco/DHOC	EAtHC18-SEM-02.2

				<a href="#">Testimony Morocco</a>
	02.3	Témoignage 2 : Nigeria / Testimony 2 : Nigeria	EAtHC CB coordinator on behalf of Nigeria/NNHO	EAtHC18-SEM-02.3 <a href="#">Testimony Nigeria</a>
<b>10.30</b>		<b>Pause-café – Coffee break</b>		
		<b>Photo de groupe / Group photo</b> <b>Visite de stands /Visit of the stands</b>		
<b>12.15</b>		<b>Pause déjeuner – Lunch break</b>		
<b>14.15</b>	02.4	Revue des activités de renforcement des capacités au sein de l’OHI (2003-2023). Rôle du CBSC, Visites Techniques, Séminaires, Informations générales sur les offres de formation / <i>Review of CB activities within the IHO (2003 – 2023): Role of the CBSC, Technical Visits, Seminars, General information on training offers via the IHO</i>	EAtHC CB coordinator	EAtHC18-SEM-02.4 <a href="#">Review of CB activities</a>
	02.5	Organisation des 3 ateliers afin d’exprimer les besoins des pays. Constitution des groupes, désignations de « modérateurs », description du retour attendu / <i>Organization of 3 workshops to express country needs: constitution, designation of “moderators”, expected feedback</i>	EAtHC CB coordinator Contribution FR/Shom, GB/UKHO, PT/IHPT	EAtHC18-SEM-02.5 <a href="#">Organization of the seminar - Organisation du séminaire</a>
<b>15.15</b>	<b>3.0</b>	<b>Ateliers en petits groupes / Workshops in small groups</b>		
	03.1	Atelier N° 1-A: langue anglaise / Workshop No. 1-A: English language	Modérateur « anglais » <i>Moderator “English”</i>	
	03.2	Atelier N° 2-A: langue française / Workshop No. 2-A: French language	Modérateur « français » <i>Moderator “French”</i>	
	03.3	Atelier N° 3-A: langue portugaise / Workshop No. 3-A Portuguese	Modérateur « portugais » <i>Moderator “Portuguese”</i>	
<b>16.00</b>		<b>Pause-café – Coffee break</b>		
<b>16.30</b>		<b>Restitution / Restitution</b>		

	03.4	Restitution commune des 3 ateliers / Joint restitution of the 3 workshops	Les 3 modérateurs <i>The 3 moderators</i>	
<b>17.15</b>	<b>Fin du jour 1 / End of Day 1s</b>			
<b>Mardi 30 avril 2024 – Jour 2 / Tuesday 30 Aril 2024 - Day 2</b>				
<b>08.30</b>		<b>Accueil / Welcome</b>	<b>Host country</b>	
<b>09.00</b>	<b>4.0</b>	<b>Offres actuelles de formation / Current training offers in hydrography schools</b>		
	4.1	Espagne / <i>Spain</i>	ES	EAtHC18-SEM-04.1 <a href="#">Current Training Offer - Spain</a>
	4.2	France / <i>France</i>	FR	EAtHC18-SEM-04.2 <a href="#">Current Training Offer - France</a>
	4.3	Nigéria / <i>Nigeria</i>	Excusé / <i>excuse</i>	
	4.4	Portugal / <i>Portugal</i>	PT	EAtHC18-SEM-04.4 <a href="#">Current Training Offer - Portugal</a>
	4.5	Royaume Uni / <i>United Kingdom</i>	GB	EAtHC18-SEM-04.5 <a href="#">Current Training Offer - United Kingdom</a>
<b>11.00</b>		<b>Pause-café – Coffee break</b>		
<b>11.20</b>	<b>5.0</b>	<b>Reprise des ateliers en petits groupes. Identification des formations existantes pouvant être utilisées et celles devant être créés / <i>Resumption of Workshops in small groups - Identification of existing training courses to be used and those to be implemented</i></b>		
	05.1	Atelier N° 1-B : langue anglaise / Workshop No. 1-B: English language	Modérateur « anglais » <i>Moderator "English"</i>	
	05.2	Atelier N° 2-B : langue française / Workshop No. 2-B: French language	Modérateur « français » <i>Moderator "French"</i>	
	05.3	Atelier N° 3-B : langue portugaise / Workshop No. 3-B Portuguese	Modérateur « portugais »	



			Moderator « Portuguese »	
12.30		<b>Pause déjeuner – Lunch break</b>		
14.15	5.4	<b>Restitution commune des 3 ateliers / Joint restitution of the 3 workshops</b>	<b>Les 3 modérateurs The 3 moderators</b>	Chapitre “Ateliers” Chapter “workshop”
15.45		<b>Pause-café – Coffee break</b>		
16.05	06.0	<b>Conclusions / Conclusions</b>		
	06.1	Résumé des actions à mettre en œuvre en particulier pour l’établissement d’un projet de programme triennuel pour le renforcement des capacités (2025, 2026, 2027 incluant la CHAtO19 et son séminaire) / <i>Summary of the main actions to be carried out in particular for the draft three-year “CB” work plan 2025 - 2026 (EAtHC 19 including seminar) – 2027</i>	EAtHC CB coordinator	Chapitre “Ateliers” Chapter “workshop”
	06.2	Tour de table / Round table		
	06.3	Clôture / Closing remarks	EAtHC CB coordinator	
17.15	<b>Fin du jour 2 et séminaire / End of Day 2 and seminar</b>			

**Annex D : Photos**

**Annex D-1 : Testimony of Morocco and Nigeria**



**Maroc/Morocco  
Amine AMRI**

**Nigeria  
Gabin SOGORB (on behalf Nigeria absent)**

**Annex D-2 : Presentation of existing training courses**



**Royaume-Uni /United Kingdom  
Nathanael KNAPP**

**France  
Gabin SOGORB**



**Espagne / Spain  
Luis Javier ESPINOSA GLEZ-LLANOS**

**Portugal  
Paula SANCHES**



**IIC Technologies Derrick PEYTON**

### Annex D-3 : Workshops

		
<b>Royaume-Uni /United Kingdom</b> <b>Nathanael KNAPP</b>	<b>France</b> <b>Gabin SOGORB</b>	<b>Portugal</b> <b>Paula SANCHES</b>


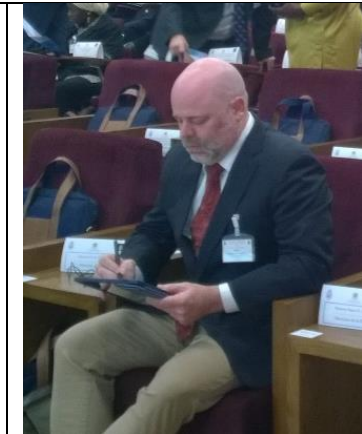

### Annex D-4 : They also participated

Some photos are taken during the conference (national reports)

De gauche à droite : from left to right



De gauche à droite : Côte d'Ivoire (Zeguella FOFANA) – Bénin (Fatimatou MAMA SAMBO) – Togo (Piyalo Abire BILABINA EPSE d'ALMEIDA, Edem AZIAMADIA)

		
<b>France</b> <b>Pierre-Yves DUPUY</b>	<b>OHI</b> <b>John Nyberg</b>	<b>Espagne</b> <b>Salvador ESPINOSA GLEZ-LLANOS</b>





**De gauche à droite : Cabo Verde (Seidi P. Silva dos Santos, Raúl Jorge Vitória Soulé) - Maroc (Khalid LOUDIYI au premier plan), Cameroun (Jean LACMATA au micro) Portugal (João Paulo DELGADO VICENTE, Paula SANCHES) , France (Gabin SOGORB)**





De gauche à droite : Maroc (Mostafa TAFRHY) – OHI (John Nyberg) – Maroc (Khalid LOUDIYI)



Premier rang de gauche à droite : Bénin (Charles-Bennett FAYOMI, Fatimatou MAMA SAMBO) – Togo (Piyalo Abire BILABINA EPSE d'ALMEIDA)  
Deuxième rang de gauche à droite : Sénégal, (Ibrahima CISSOKHO) – Togo (Komi Edem AZIAMADIA)



De gauche à droite : Guinea Bissau ( ? , Alberto TIPOTE au micro), The Gambia (Dominic CORREA)



Gabon  
Hilarion ONE, Bertrand Roger LELE







Ghana  
Isaac Koranteng YIRENKYI



Les deux Congo  
Patrick MUSITUMBU ITAKALA, Winther Grenier TCHISSAMBOU AMBANA



			
<b>Mauritanie</b> <b>Kaourou</b> <b>COULIBALY</b>	<b>Cameroun</b> <b>Monick Serge AKAMBA</b>	<b>Cabo Verde</b> <b>Raúl Jorge Vitória</b> <b>Soulé</b>	<b>RD Congo</b> <b>Patrick MUSITUMBU</b> <b>ITAKALA</b>

			
<b>Cote d'Ivoire</b> <b>Seydou SANGARE</b>	<b>Sierra Leone</b> <b>Ibrahim L H Wurie</b>	<b>Bénin</b> <b>Fatimatou MAMA</b> <b>SAMBO</b>	<b>Gabon</b> <b>Bertrand Roger LELE</b>

	
<b>Premier rang de gauche à droite : Bénin</b> <b>(Fatimatou MAMA SAMBO, Sourou Bernadin</b> <b>AGBOKIN, Charles-Bennett FAYOMI, )</b> <b>Deuxième rang de gauche à droite : Guinée</b> <b>(Moustapha BALDE, ?, Ansoumane I CAMARA)</b>	<b>Au pupitre : Ghana (Marilyn EGHAN)</b>