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SHOM

IHO
International Hydrographic Organization

Training Center visit

Nigeria
2025

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SHOM L'océan en référence

Direction des missions institutionnelles
et des relations internationales
Division relations extérieures

BREST, le 29 Septembre 2025

N°084/Shom/DMI/REX/NP

REPORT

OBJECT : report of the Training Center Visit to Nigeria from August 18th to 22nd, 2025 - regional training courses in hydrography, physical oceanography and marine cartography.

APPENDICES : six (6) appendices.

SUMMARY

Nigeria is an advanced country in all phases of development of hydrography and marine cartography:

1. It is organized, in particular with the NHA (National Hydrographic Agency) at the federal level and with the NNHD (Nigerian Navy Hydrographic Department) at the Navy level, which includes the Naval Hydrographic Office (NHO), the Survey Fleet and the NNHS (Nigerian Navy Hydrographic School).

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www.shom.fr

2. It is operational for the collection and circulation of nautical information (Maritime Safety Information - MSI).
3. It conducts hydrographic surveys using a recent and modern range of means, from shallow to deep waters;
4. It produces and distributes nautical charts and ENCs.

It has capabilities with onshore infrastructure, recent survey ships, state of the art scientific equipment, softwares and human resources. In the EAtHC (IHO Eastern Atlantic Hydrographic Commission) area, this is similar to European countries and Morocco.

A significant difference with European countries: although it does have the first hydrography school in Western Africa (NNHS) since 1981, the training program for hydrographers at this school is not yet recognized by the IBSC (FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers).

This is not a reflection of Nigeria's level of development.

This is not the image of a rapidly developing Africa whose marine economy and mastery of the marine environment need men and women, civilian or military, for jobs in services and industry, nationally and internationally.

This is detrimental to Nigerian students who cannot therefore hope to have an internationally recognized diploma within the country opening the way to these numerous jobs.

This is an obstacle to welcoming English-speaking foreign students to Nigeria, particularly those from West and Central Africa.

However, as the recent IBSC 48 report proves, Nigeria is on the right track to gaining initial recognition, with its "Nautical Cartographers" programme that "could be recognised" at the end of 2025.

But, it still has to prove itself for its "Hydrographic Surveyors" program. The first submission was written in 2018, before having a modern hydrographic and oceanographic survey fleet.

This report proves that Nigeria has modern and recent material capacities and all the human experience to complete its development with also specialized training schools offering diplomas recognized by the international community.

However, it remains to compile files that are demanding in terms of content and form and to submit them to the IBSC.

The compilation of exhaustive files (in hundreds of pages) is an arduous task requiring organization and method.

This was discussed during the meetings in order to share experiences of submitting programs within the framework of EAtHC cooperation.

An initial inventory of the main difficulties that could be encountered was carried out on the basis of exchanges of available information, in particular letters that the IBSC was able to send to Nigeria.

A method (main action of this report) of writing programs was discussed at the end of the training center visit on the theme: « Gap Analysis: Comparing NNHS Program with Standards - Action Planning: Submission Process and Timeline for IBSC Recognition".

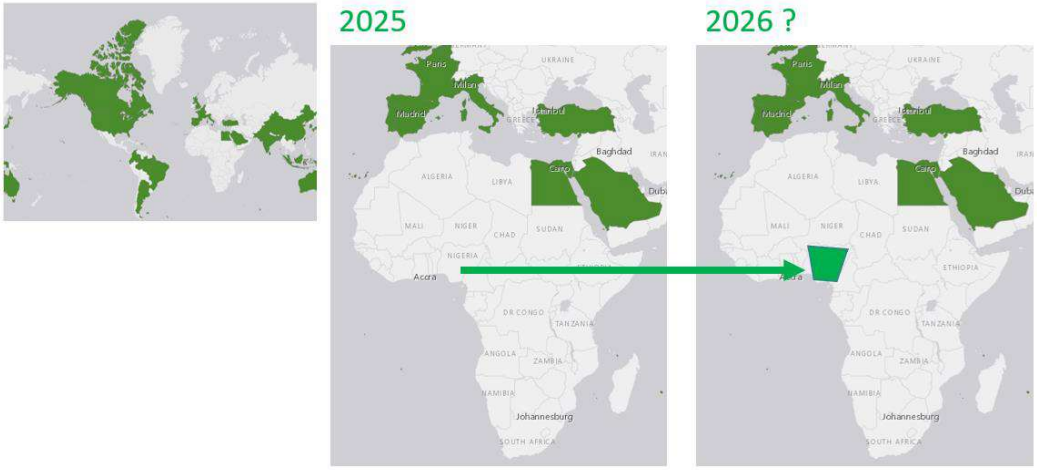
It is possible to complete it by the end of 2025.

This is a rewarding work for Nigerian hydrographers and cartographers, in association with France as a Member of EAtHC and IHO.

Following the success, still to be obtained, from the IBSC, Nigeria will be able to offer in 2026 the first CAT B certified English language courses in hydrography (Port Harcourt) and marine cartography (Lagos) in West and Central Africa.

It changes a lot.

FIG-IHO-ICA IBSC Recognized Programmes:
Hydrographic Surveyors CAT B



Nautical Cartographers CAT B

Notes:

- this has not been studied for other English-speaking African countries (Nigeria being the only country with advanced offers);
- this has not yet been studied for Portuguese-speaking countries either;
- in 2027 or later, 2 other countries - French speaking - (Morocco and Côte d'Ivoire) could also offer IBSC approved Hydrographic Surveyors CAT B training.

Editors :

(with the participation of Captain Yakubu Abubakar KURBA from NNHS and Lieutenant Commander Uchechukwu Kelechi EREGE from NHA)

Captain (retired)
Henri Dolou

Lieutenant Commander Gabin
Sogorb

Many thanks to :
Key players in the Training Center Visit :

Nigerian Navy
(NN)

National Hydrographic Agency – Nigeria
(NHA)

Nigerian Navy Ship (NNS) *LANA*

Nigerian Navy Hydrographic Department (NNHD)

Nigerian Navy Hydrographic School (NNHS)

And:

KNOWLEDGE FOR BLUE PROSPERITY
International Maritime Institute of Nigeria (IMION)

With the support of :

Service hydrographique et océanographique de la marine (France)

Ambassade de France au Nigeria

Secrétariat de l'OHI
(Monaco)

TABLE OF CONTENT

INTRODUCTION

1. Introduction – Programming

The Visit was planned as part of the IHO capacity building activity programme for the year 2025 (CBWP 2025 Action P-05):

- Training Center Visits (TCV) in EAtHC countries
- Phase 2 : Nigeria (Phase 1 was : Côte d'Ivoire)

The visit was also used to address the issue of MSI.

Under the supervision and invitation of Rear Admiral Ayodeji Olumine OLUGBODE (Hydrographer of the Federation – NHA) and Rear Admiral Godfrey Enoch KWETISHE (Director of Hydrography – NNHD), it was organized locally by:

- [Lagos] Lieutenant Commander Uchechukwu Kelechi EREGE (Assistant Director Cartography – NHA)
- [Ports Harcourt] Captain Yakubu Abubakar KURBA (Commanding Officer –NNHS)

Captain Mahmud Abubakar FANA intervened in MSI cases [Lagos].

The terms of reference for the visit are set out in Annex B.

2. Team Members

The permanent visiting team consisted of:

Name	Institution	Role
Gabin SOGORB	IHO (France/Shom)	Capacity building Coordinator of the Eastern Atlantic Hydrographic Commission (EAtHC)
Henri DOLOU	IHO (France/Shom)	Expert Hydrographer

Rear Admiral Godfrey Enoch KWETISHE (NNHD) and Lieutenant Commander Uchechukwu Kelechi EREGE (NHA) participated in all the meetings in Lagos.

Captain Yakubu Abubakar KURBA (NNHS) and all his staff participated in all the meetings in Port Harcourt.



"*This tree was planted by Lt Cdr Sogorb Gabin, FN, Member IHO Training Center Team on 22 August 2025*" NNHS Port Harcourt

"The best time to plant a tree was twenty years ago. The second-best time is now." Proverb

PART A

3. CONTEXT – EFFECTIVENESS OF THE VISIT – RESULTS – FOLLOWING

CONTEXT

As defined in the Terms of Reference (Appendix B) the purpose of the visit was to study how to "Train for jobs in hydrography, physical oceanography and marine cartography in West and Central Africa" through the creation of a "Training Center of Excellence".

Train to meet professional needs to practice professions in industry, services, institutions, etc. Both for public and private jobs, nationally and internationally.

The visit (to an English-speaking country) followed that conducted in Ivory Coast (French-speaking country) in January 2025, the report of which can be viewed at: https://iho.int/en/capacity-building-assessment (2025 - EAtHC/CHAtO : Training Center and International Cooperation Agency Visit)

4. Effectiveness of the visit

- Based on past Technical Visits, Technical Center Visits, and Seminars, it was able to be prepared in detail ahead of the visit through exchanges and analyzes of existing reports and texts (see references in Appendix C)
- Nigeria (NHA, NNHD) was able to obtain all the desired meetings in the Terms of Reference, namely:
  - Nigerian Navy Hydrographic Department (NNHD) in Lagos: Rear Admiral Godfrey Enoch KWETISHE and his team;
  - Nigerian Navy Ship (NNS) *Lana* in Lagos: Captain Oladipo Suleiman GIWA (a former commanding officer of NNHS) and his crew;
  - Nigerian Navy Hydrographic School (NNHS) in Port Harcourt: Captain Yakubu Abubakar KURBA (in charge of "Hydrographic Surveyors" programme) and his team;
  - National Hydrographic Agency (NHA) was represented by Lieutenant Commander Uchechukwu Kelechi EREGE (Assistant Director Cartography – in charge of "Nautical Cartographers" programme);
- A specific meeting related to MSI was conducted with Captain Mahmud Abubakar FANA (a former commanding officer of NNHS);
- Conveniently, the Rear Admiral Godfrey Enoch KWETISHE added to the program a meeting with the Director General of International Maritime Institute of Nigeria (IMION), the Rear Admiral Thaddeus UDOFIA.

5. Results (report)

This report aims to:
- above all, facilitate the preparation of submissions to be presented to IBSC for Nigerian "Hydrographic Surveyors" and "Nautical Cartographers" programmes;
- provide references and a method useful for successful recognition.

6. Following

The Rear Admiral Godfrey Enoch KWETISHE (NNHD) was able to write:

"We look forward to further collaborations and interactions to achieve common goals in hydrographic development in Africa".

Nigeria can count on the EAtHC hydrographers community to contribute to the approval by IBSC of Nigerian "Hydrographic Surveyors" and "Nautical Cartographers" programmes.

Director of Hydrography Rear Admiral Godfrey Enoch KWETISHE (Nigeria – NNHD - NHO) and IHO Capacity Building coordinator for IHO EAtHC Lieutenant Commander Gabin SOGORB (France – Shom)

PART B – NIGERIAN ORGANISATIONS & INSTITUTIONS: MEETINGS

7. INTRODUCTION: NATIONAL HYDROGRAPHIC AGENCY – NIGERIA (NHA – FEDERAL LEVEL) / NIGERIAN NAVY HYDROGRAPHIC OFFICE (NNHO)

Source : https://nha.gov.ng/

ADDRESS 2B, Osun Close, Osun Crescent, Maitama, Abuja

"The National Hydrographic Agency (NHA) was established by an Act of Parliament of the Federal Republic of Nigeria and officially began operations on February 21, 2022. This legislative milestone marked a significant transition, transferring the responsibility for hydrographic and navigational charting matters from the Nigerian Navy Hydrographic Office (NNHO) to the NHA ».

Rear Admiral Ayodeji Olumine OLUGBODE is Hydrographer of the Federation (HOF) and Chief Executive Officer (CEO) of the Agency.

8. Nigerian Navy Hydrographic Department (NNHD)

ADDRESS: 5, Point Road Apapa, Lagos

At NHO
First rank from left: Captain Mahmud Abubakar FANA (NHO) – Captain (Rtd) Henri DOLOU (IHO – France/Shom) - Rear Admiral Godfrey Enoch KWETISHE (NHO) – Lieutenant Commander Gabin SOGORB (IHO – France/Shom) - Captain Oladipo Suleiman GIWA (NNS *Lana*)
Second rank from left: Lieutenant Fatiu Abolarinwa LASISI (NHO)- Lieutenant Commander Uchechukwu Kelechi EREGE (NHA) – Slt - Lieutenant Ijeoma Eunice ORJI (NHO) - … - Commander Ismail Bature GAMBO (NHO)

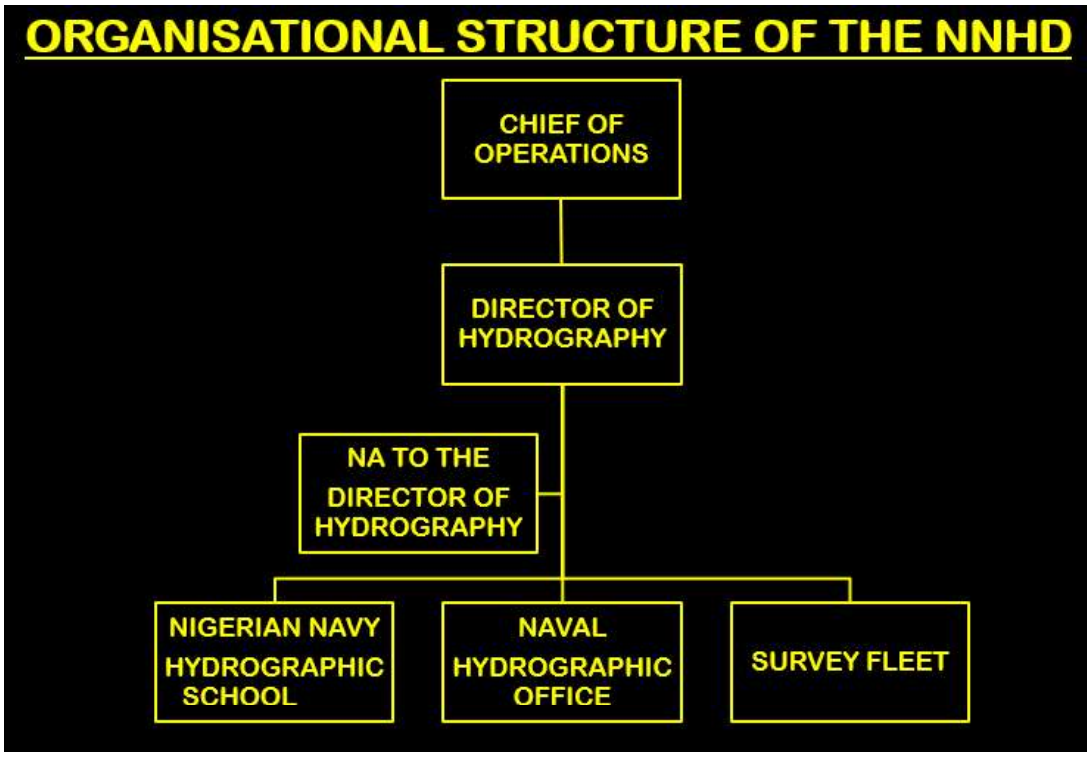
9. NNHD presentation

Sources:

- Presentation of NNHD given on the 18th of August 2025: "BRIEF FOR IHO TRAINING CENTRE VISIT"
- Evaluation, findings of the IHO TCV team (DAY 1)

The Nigerian Navy Hydrographic Department (NNHD), after the establishment of NHA, is now the organism in charge of hydrographic matters within the Nigerian Navy (NN):

- Hydrographic and oceanographic survey policy matters of the Nigerian Navy (NN)
- Superintendence of all land surveying and dredging matters within the NN
- Monitoring of all hydrographic and oceanographic survey and research activities in Nigeria's maritime area in conjunction with the hydrographer of the federation (NHA)
- Liaison with NHA of Nigeria for the purpose of monitoring all hydrographic matters within Nigeria's maritime domain with a view to facilitating national security and maintaining local standards in hydrography



Rear Admiral Godfrey Enoch KWETISHE is the Director of Hydrography of the Nigerian Navy Hydrographic Department in charge of:

- Nigerian Navy Hydrographic School (NNHS) of Port Harcourt
- Naval Hydrographic Office (NHO) of Lagos
- Survey Fleet (NNS *Lana* and *Ochuzo*) based in Lagos

At NHO

10. IHO presentation at NNHD: objectives, establishment of regional training courses

Source: Presentation of IHO given on 18 August 2025: "NIGERIA_TCV_PRESENTATION_DAY-1_NHO_V1"

Objectives of the Visit:

- Terms of Reference (IHO):
  - Specific context of development of Regional Training Centers:
    - Urgent need for training in hydrography and nautical cartography in Africa.
    - Too little African training centers in the EAtHC area.
    - Training outside Africa is neither a sufficient nor a sustainable solution.
  - Objectives:
    - Main objective: study the feasibility and promote training of hydrography, physical oceanography and marine cartography in West and Central Africa.
    - Involves: identifying academic and practical training centers (universities, maritime academies, geographical institutes, hydrographic/Offices-Agencies, etc.) that could potentially meet the needs.
    - Beyond infrastructures, it is a question to brought together: teachers, training materials (including boats and data acquisition and processing equipment), budgets, etc.
    - Solutions to be sought and proposed.

Context :

- A new cycle of Capacity Building begins for the EAtHC region
- After about 20 years of hydrographic actions in the region, the development prospects are now part of a new context where African countries (e.g. Morocco, Nigeria) have reached the capacity level of their European counterparts.
- This was illustrated during the Casablanca seminar of 2024 (EAtHC 18: "20 Years of Capacity Building Actions in EAtHC - Assessment and Prospect").
- This was confirmed and developed during the Training Center Visit (TCV - phase 1 – French speaking) in Côte d'Ivoire last January 2025
- This has to be developed during this TCV in Nigeria (Phase 2 – English speaking)

20 years of Capacity Building in EAtHC: Lessons & Outlook

- New perspectives expressed:
  - "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.

Prospective study relating to the establishment of regional training courses in 2 phases

- Côte d'Ivoire - French speaking (done January 2025)
- Nigeria - English speaking (this report)

Roadmap development: CBSC 24 (2026) – EAtHC (2026) Training Center Goals

- Seminar "Training Centers for hydrography, physical oceanography and cartography in West and Central Africa"
  - Still To be confirmed (Tbc)
  - 2 days seminar (09-10 March 2026) just before next face-to-face 2026 EAtHC 19 conference in Côte d'Ivoire/Tbc (11,12 13 March 2026)
  - Agenda to be determined by countries involved (only Nigeria has an offer in West and Central Africa):
  - Context: objectives, constitution, standards … of Training Centers by IHO/Capacity Building coordinator
  - Solutions [place, language, nationals/foreigners, statute (civilian, military), duration, cost … by countries]:
    - Nigeria/Abuja - Lagos – Port Harcourt (NHA – NNHD - NNHS)
    - Morocco/Casablanca (Tbc DHOC – ISEM/Institut Supérieur d'Études Maritimes)

- Côte d'Ivoire/Abidjan (Tbc - ARSTM)
- Ghana/Accra (Tbc - RMU)

11. Nigerian Navy Ship (NNS) *Lana*

ADDRESS NNS BEECROFT Jetty Apapa, Lagos

On NNS *Lana*
First rank from left: Captain Oladipo Suleiman GIWA (Commanding Officer - NNS *Lana*) - Lieutenant Commander Gabin SOGORB (IHO – France/Shom) - Rear Admiral Godfrey Enoch KWETISHE (NHO) - Captain (Rtd) Henri DOLOU (IHO – France/Shom) – Officer - Lieutenant Commander Uchechukwu Kelechi EREGE (NHA)

12. NNS Lana presentation

Source:

- Presentation of NNHD given on the 19th of August 2025: "BRIEF ON NNS LANA FOR IHO TEAM ON TUE 19 AUG 2025"
- Evaluation, findings of the IHO TCV team (DAY 2)

- NNS LANA is a state-of-the-art hydrographic and oceanographic survey ship with:
  - In hydrography:
    - Positioning System
    - SBES and MBES
    - Side Scan Sonar
    - Sub Bottom Profiler
    - Magnetometer
    - Hull-mounted Sound Velocity Sensor
    - Motion Reference Units (MRU)
    - Digital Theodolite
    - Marine Data Management
    - Transponder
    - Portable Echosounders
    - RTKDynamic positioning System
  - In oceanography:
    - Wet and Dry Laboratory for Sea Water Analysis
    - Sound Velocity Profiler
    - Vessel-mounted ADCP
    - CTD Rossette with 12x Nansen water bottles -
    - Expendable Bathythermograph XBT (2 x launchers)
    - Grab Sampler
    - Turbidity Meter
    - PH Meter
    - Salinometer
    - Multimeter and some chemical reagents
  - A survey launch (surface vehicule) with:
    - Positioning System
    - SBES and MBES
    - Sub Bottom Profiler

- NNS Lana, with his qualified scientific crew (CAT- A and CAT-B), participate to:
  - Practical Training for Students of NNHS
  - Training for M.Sc. Hydrography Students of UNILAG (University of Lagos)

HYDRO SCIENTIST TRAINING

HYDRO SCIENTIST TRAINING

HYDRO SCIENTIST TRAINING

TRAINING FOR BASIC HYDROGRAPHY STUDENTS OF NNHS

TRAINING OF MSC HYDROGRAPHY STUDENTS UNILAG

Visit Team assessment:

The availability of these resources is essential to allow compliance with the IBSC requirements for the S-5B standard, specifically the "Essentials subjects" and the "Comprehensive Final Field Project – CFFP," as explained in the following paragraph.



On NNS Lana

13. IHO presentation on NNS *Lana*: Role of survey ships for the benefit of hydrographic schools

Source: Presentation of IHO given on the 19th of August 2025: "NIGERIA_TCV_PRESENTATION_DAY-2_Lana_V1"

- General observation:
  - hydrography schools do not always have (at the right time, at a reasonable cost) all the necessary means to train their students
  - they may rely on external means
- Survey ships (either for Nigeria: NNS *Lana* and NNS *Ochuzo*) can provide this support to hydrographic schools (that is to say for Nigeria now: NNHS)
  - Launches
  - Data acquisition and processing equipment
  - Experienced operators/teachers, etc
- Role of survey ships in practical training (S-5B standard)
  - laboratory work (if alongside the school)
  - final project work: the CFFP (Comprehensive Final Field Project)

- CFFP (S-5B)
  - Programs must include a supervised and evaluated CFFP with a minimum aggregate period of at least four weeks;
  - The CFFP for Category "B" level shall comprise a comprehensive field survey incorporating different aspects of hydrography in a complex environment with varying sea-floor and oceanographic conditions.
  - Students should undertake:
    - Survey specification and planning
    - Hydrographic and oceanographic measurements using a comprehensive suite of instruments
    - Data processing, quality control and quality assurance
    - Preparation of different type of product deliverables and reports
  - Consideration should be given to involving experienced hydrographers and nautical cartographers

14. Nigerian Navy Hydrographic School (NNHS) – Port Harcourt

ADDRESS: Borikiri Rivers State

At NNHS
First rank from left: NNHS Officer – Captain N MUSA (NNHS Deputy Director) - Captain (Rtd) Henri DOLOU (IHO – France/Shom) - Captain Yakubu Abubakar KURBA (NNHS Director) - Lieutenant Commander Gabin SOGORB (IHO – France/Shom) – NNHS Officer – NNHS Master Warrant Officer

15. NNHS presentation

Sources:

- Presentation of NNHD given on 21 August 2025: "IHO TRAINING CENTER TEAM VISIT TO NNHS AUG 25"
- https://www.nnho.ng/nnhs.php
- Evaluation, findings of the IHO TCV team (DAY 4 and 5)

The Nigerian Navy Hydrographic School is the premier hydrographic training institution in Sub-Saharan Africa, established in 1981.
The institution is saddled with the dual role of:

- training personnel of the Nigerian Navy Hydrographic Department (NNHD)
- and the conduct of hydrographic surveys in support of maritime safety in Nigeria and improve NN operational effectiveness as directed by both the Nigeria Hydrographic Agency (NHA) and Naval Hydrographic Office (NHO).

The professional training carried out by the school include the:

- Officer's Basic Hydrographic Course (BHC): a course which, if proven to be aligned with FIG-IHO-ICA standards (S-5B), could be recognized by the IBSC (CAT B)
- Ratings' Survey Recorder Class II (SR)
- Ratings' Survey Recorder Class III (SR)

The Basic Hydrographic Course is taught by a team of experienced instructors, comprising:

- Internal Instructors: Experienced hydrographic officers and staff with expertise in hydrographic surveying, nautical cartography and related fields.
- External Instructors: Guest lecturers, facilitators and experts from within the NN and renowned institutions/organizations[1], bringing specialized knowledge and industry experience to the classroom.

The school has in its inventory some of the latest hydrographic and oceanographic equipment. Some of the equipment includes MBES, SBES, SSS, ATG, SVP, MRU, current meters, and positioning systems.

[1] Rivers State University (RSU) of Port Harcourt cited: https://www.rsu.edu.ng/

SURVEY EQUIPMENT (CONT)

GNSS BASE

GNSS ROVER

SURVEY EQUIPMENT (CONT)

STARFISH

TOTAL STATION

SURVEY EQUIPMENT (CONT)

SINGLE BEAM ECHO SOUNDER

TRANSDUCER

SURVEY EQUIPMENT (CONT)

AUTOMATIC LEVEL

THEODOLITE TM 1

SURVEY BOAT

Especially for the CFFP, the school can rely NNS *LANA* (as shown before) and NNS *OCHUZO*, where the students gain hands-on experience with state-of-the-art equipment.

Lana

Survey Launch

Ochuzo

16. IHO presentation

Sources:

- Presentation of IHO given on 21 August 2025: "NIGERIA_TCV_PRESENTATION_DAY-4_IBSC-Standards_V1"
- And 22 August 2025: "NIGERIA_TCV_PRESENTATION_DAY-5_Breakout-sessions_V1"

IBSC Standards and Pathways to Recognition:

- References given for standards (https://iho.int/en/standards-and-specifications) and CBSC reports (https://iho.int/en/ibsc)
- IBSC's agenda 2025 -2026
  - **2025**
    - [April] Guidelines for the Implementation of the **Standards** of Competence for Hydrographic Surveyors and Nautical Cartographers - Edition 3.0.0
    - [5 – 16 May] 48th **Meeting** of the FIG/IHO/ICA IBSC for Hydrographic Surveyors and Nautical Cartographers (IBSC48) St. John's, Newfoundland
    - [June] Frequently Asked Questions (FAQ) First Edition -Version 1.0.3
    - [10-14 November] **Intersessional** China (Qingdao)
      - intersessional revision of 9 submissions (possibly NGA S8-B -POSDAC "could be recognized")
      - final revision of the IBSC Standards
    - [to end of November] Board will continue refining the **Standards** (A formal stakeholder consultation will be conducted from early December 2025 through the end of February 2026)
    - [31 December] dead line for new **document submissions** for 49th IBSC Meeting (possibly NGA S5-B)
  - **2026**
    - [Q2] 49th IBSC **Meeting** Kuala Lumpur
    - [From 12 June 2026 (after IRCC18) to 14 August 2026] conduct the Member States approval process **(standards)** via CL.
    - [17 August 2026] Issue the final approved **Standards**
    - TBC] **Intersessional:** Valparaiso (Chile) (TBC)

Gap Analysis: Comparing NNHS Program with Standards - Action Planning: Submission Process and Timeline for IBSC Recognition

- At the heart of the main action that must precede the drafting (amendments for cartography) of new programs to be recognized by the IBSC. A method has been proposed. It will be activated by the end of 2025.
- It consists of exchanging between countries (in this case already Nigeria and France) the programs and letters that the IBSC has been able to write to improve these programs. This involves:
- For **Nigeria** :
  - S5-B: NNHS: "Hydrography Programme"- IBSC reviewed at IBSC 42 in 2019. (revisions requested by the IBSC)
  - S8-B: NHA "Post Hydrographic Survey Data Processing and Cartographic Draughtsmanship" (POSDAC) submitted at IBSC 48 in 2025 (could be recognized at Intersessional 2025)
- For **France:**
  - S5-B: Shom "Advanced Training Course on Hydrography for Petty Officers" [IBSC recognized for 2022-2028]
  - S8-B: Shom "Advanced Training Course in Nautical Cartography" [IBSC recognized for 2023-2029]

- New S8-B: Shom"Advanced Training Course in Nautical Cartography" (revisions requested by the IBSC in 2025)

- Standards, guidelines, FAQ:
  - S-5B First Edition Version1.0.1 – June 2017 still in force
  - S-8B First Edition Version 1.0.0 – September 2017 still in force
  - But new Guidelines and FAQ (2025).
  - But new standards expected in 2026
- Notes: short summary of IBSC comments (collected without distinction from Nigeria and France):
  - Shortcomings often when assessed against "Guidelines" and "FAQ"
  - Sufficient duration (days – weeks) of the Programme
  - Sufficient hour Allocation
  - Existing resources (equipment and software) to be adequate of number of students
  - Submitted programme not a mixture of old standard and the current one
  - Academic level of some element of the programme below that required
  - Each module to provide appropriate phrasing of learning outcomes and references to course material
  - Use of multibeam for the practical's and CFFP is a requirement
  - CFFP to include comprehensive reports as submitted by the students of all systems used (Final Project Documentation)
  - Integration of E-Learning (detail required to understand how digital tools support instruction and student engagement)
  - Assessment Materials - The submission should include sample exams with actual student answers to demonstrate the nature and level of assessment. Each practical must be individually described with objectives, structure, and expected outcomes
  - Cross Reference Table. It must clearly demonstrate how each learning outcome is addressed through the course content, activities and assessments

Challenges:

- Work to be done not to be underestimated.
  - Those who have been implicated: "long, arduous certification process"
  - Often need intersessional review same year
  - Need a "working team". Volume of work of service provider will depend on the involvement of school professors, commanding officer and survey ship crews for assistance/training at sea
- It is not copy/paste of old programmes.
  - It is necessary to start again on solid (application of the standard) and credible bases (adjustment of the means: equipment, manpower)
  - and undoubtedly to make communication

Focus on:

- Duration for a Category "B" programme (submitted programme should be compared to already accredited programmes). Falls under the organization of

school training cycles: write or adapt existing texts. References:https://iho.int/en/ibsc-recognized-programmes

- Current S-5B Standard which should be strictly applied (very constraint!). As already said "copy/paste" of former submission to be avoided
- The availability and use of all hydrographic equipment's (SBES, MBES, GNSS, Tides observatory, Side Scan sonar …) for all practical's and especially the CFFP (Comprehensive Final Field Project: content and expected results). That supposed to be able to prove that such equipment is already those of the school or put at disposal of the school. If it is not the case procurement should be organized
- The availability of adequate human capacity at NNHS
- Formally indicating the availability, for training, of equipped Survey Ships for school's practical works
- Quality management system requirement (take inspiration from ISO 9001 !). This include written procedures for all equipment's on which training exercises (content and results) will be based
- on communication (regional and international relationship): website and articles in a review such as:
  - IHR (https://iho.int/en/international-hydrographic-review)
  - Or Hydro International (https://www.hydro-international.com/)

Others institutions (Institutes, Universities)

The duration of the mission obviously did not allow to meet all the Nigerian stakeholders (ports, rivers, academies, scientific research in the marine environment, etc.) concerned with hydrography, cartography and oceanography.

On the educational side, however, important links have been identified:

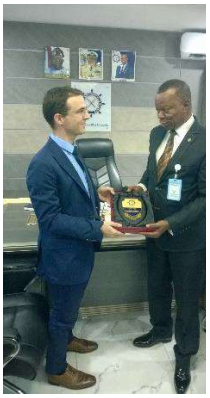
- [Lagos] Between NNS Lana and the University of Lagos (UNILAG) for the practical training of its students for the Master of Science (M.Sc.) in Hydrographic Surveying (non recognized CAT A)

https://unilag.edu.ng/

- [Port Harcourt] Between the NNHS and the Rivers State University of Science and Technology (RSU). RSU has agreed to sign a Memorandum of Understanding (MoU) with the school.

Rivers State University https://www.rsu.edu.ng/

- [Lagos] For the record, a meeting with the Director General of the International Maritime Institute of Nigeria (IMION), the Rear Admiral Thaddeus UDOFIA, was organized in Lagos on 19.08.2025


At IMION

APPENDICES

Appendix A to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
Abbreviations

CBSC	*Capacity Building Sub-Committee (IHO)* Sous-comité de renforcement des capacités (OHI)
CBWP	*Capacity Building Work Programme (IHO)* Programme de travail de renforcement des capacités (OHI)
EAtHC CHAtO	*Eastern Atlantic Hydrographic Commission (IHO)* Commission Hydrographique de l'Atlantique Oriental (OHI)
FIG *IFS*	Fédération Internationale des Géomètres *International Federation of Surveyors*
GMDSS SMDSM	*Global Maritime Distress and Safety System* Système Mondial de Détresse et de Sécurité en Mer
IBSC	*FIG/IHO/ICA International Board on Standards of Competence for Hydrographics Surveyors and Nautical Cartographers*
ICA *ACI*	*International Cartographic Association* Association Cartographique Internationale
IHO OHI	*International Hydrographic Organization* Organisation Hydrographique Internationale
IMION	*International Maritime Institute Of Nigeria*
MOWCA OMAOC	*Maritime Organization of West and Central Africa* Organisation Maritime de l'Afrique de l'Ouest et Centrale
MSI RSM	*Maritime Safety Information* Renseignement de Sécurité Maritime
NAVAREA	*NAVigational AREAs (WWNWS) Zones de navigation (SMAN)* *NAVAREA national coordinator: responsible for dissemination of MSI*
NHC CNH	*National Hydrographic Committee* Comité National Hydrographique
NHA	*National Hydrographic Agency*
NHO	*Naval Hydrographic Office*
NNHD	*Nigerian Navy Hydrographic Department*
NNHO	*Nigerian Navy Hydrographic Office (before NHA)*
NNHS	*Nigerian Navy Hydrographic School*
NN	*Nigerian Navy*
NNS	*Nigerian Navy Ship*
RHC CHR	*Regional Hydrographic Commission (EAtHC)* Commission Hydrographique Régionale (CHAtO)
Shom	Service hydrographique et océanographique de la marine (France) *French Hydrographic and Oceanographic Service*
SMAN	Système mondial d'avertissement de navigation *Worldwide Navigational Warning Service (WWNWS)*
SMDSM	Système mondial de détresse et de sécurité en mer **G***lobal Maritime Distress and Safety System (GMDSS)*
SOLAS	*[United Nations] Convention for the Safety of Life at Sea* Convention pour la sauvegarde de la vie humaine en mer

Appendix B to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
Terms of reference of the visiting team

Appendix B-1 : IHO Terms of reference of the visiting team

International Hydrographic Organization IHO Organisation Hydrographique Internationale	**Training Center Visits (TCV) and International Cooperation Agency Visits (ICAV) in EAtHC countries** **Action P-05 of the Capacity Building Working Program 2025** **Part 2 : Visit in Nigeria**

General context

The IHO Capacity Building Programme aims to coordinate the development of capacities of Member and Associate States in the field of hydrography and nautical cartography in order to meet the objectives of the IHO and the obligations related to Chapter V of the SOLAS Convention and the United Nations Convention on the Law of the Sea.

The stakeholders concerned are those in charge of maritime navigation safety, hydrography, cartography, the coastal environment and training related to the sea. In general, the blue economy (sea, ports, lagoons and rivers) and State Action at the Sea. Regionally, the IHO has decided to promote cooperation in West and Central Africa within the framework of the EAtHC: Eastern Atlantic Hydrographic Commission.

Specific context of development of Regional Training Centers

There is an urgent need for training in hydrography and nautical cartography in Africa. There is too little training centers in the EAtHC area. Training outside Africa is neither a sufficient nor a sustainable solution.

Objectives

The main objective of the visit is to study the feasibility and promote training of hydrography, physical oceanography and marine cartography in West and Central Africa.

This already involves identifying academic and practical training centers (universities, maritime academies, geographical institutes, port technical services, etc.) that could potentially meet the needs. It is then a question, beyond the reception infrastructures, of studying the capacities to be brought together: teachers, training materials (including boats and data acquisition and processing equipment), budgets, etc. Solutions will be sought and proposed.

Visit in Nigeria

This visit follows the one in Côte d'Ivoire (French speaking) done 13-17 January 2025. Given the lead taken by Nigeria in terms of training, the visit may be limited to existing capacities, in particular those of the NNHS (Nigerian Navy Hydrographic School) in Port-Harcourt and those of the survey fleet (as support to training) in Lagos.

Appendix B-2: Specific overview of the Training Center Visit (complement to ToRs)

General context

A new cycle of Capacity Building begins for the EAtHC region (Eastern Atlantic Hydrographic commission: https://iho.int/en/eastern-atlantic-hc). After about twenty years of hydrographic actions in the region (from France to DRC) the development prospects are now part of a new context where African countries (e.g. Morocco, Nigeria) have reached the capacity level of their European counterparts. This was illustrated during the Casablanca seminar of 2024 (EAtHC 18: "20 Years of Capacity Building Actions in EAtHC - Assessment and Prospect").

New perspectives expressed:

- "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".

Skills

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.

Stakeholders to address all of these topics

- overall with the NHA and the NNHD;
- Specifically, with NNS *Lana* and *Ochuso* for Training Hydrographic Practice and Comprehensive Final Field Project of FIG/IHO/ICA standard of competence and the huge challenge (all Hydrographic Offices around the world) of the maintenance of survey platform and equipment's (which may need Capacity Building to);
- Specifically, with the NNHS (Port Harcourt school to highlight), the recognition of training programs according to the standards of the IBSC (FIG/IHO/ICA).

Solutions

Some solutions to fill the gaps between current capacities (Assessment) and those to be achieved could be studied to be quickly implemented in the (short term) perspective of:

- submissions of training programs to the IBSC;
- preparation of the next Capacity Building Sub-committee (CBSC No. 24) in 2026 (e.g. 3 years work plan of EAtHC);
- the seminar backed by the next EAtHC conference No. 19 in March 2026 on the theme: "Training Centers for hydrography, physical oceanography and cartography in West and Central Africa". Seminar expected to take place with significant representation from all countries ranging from the United Kingdom to the DRC.

Appendix C to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
References -Sources

Appendix C-1: Capacity building Sub-Committee (CBSC)

Source : https://iho.int/en/cbsc

Publication	Object	Edition	File name
CBSC23 (2025)	EAtHC CAPACITY BUILDING PLAN FOR 2026-2028 Report + [Presentation]	(Updated April 2025)	CBSC23-08.10C_EAtHC_3-year-Work-Plan + [PRESENTATION]

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

Publication	Object	Edition	File name
Work programme 2025	**Capacity Building Work Programme**	V8	2025CBWP_V8
Work programme 2026	**Capacity Building Work Programme**	V1	2026CBWP_V1-7

Appendix C-2: Reports of Technical and Training Center Visits

Source : https://iho.int/en/capacity-building-assessment

Event	Object	Edition	File name
Training Center Visit	Nigeria	2018	Nigeria_Training Center Visit_2018-April_Report
TCV	Côte d'Ivoire	2025	Cote-Ivoire_Training Center Visit_2025-January_Report

Appendix C-3: Reports of Conferences, Seminars, Workshops

Source : https://iho.int/en/eastern-atlantic-hc

Event	Object	Edition	File name
Conference	National Report	2018	EAtHC15-2018_October_Lagos_Nigeria-Report
	//	2021	EAtHC16_2021_September_Lisbon_Nigeria_Report
	//	2022	EAtHC17_2022_September_Nigeria_Report
Seminar	Geospatial	2018	Seminar_2018_October_Geospatial_Lagos_Report
	NAVAREA	2022	Seminar_2022_Sept_NAVAREA_Mindelo_Report

	20 Years of CB	2024	Seminar_2024-May_20Y-CB_Casablanca_NIGERIA-presentation
	//		Seminar_2024-May_20Y-CB_Casablanca_Report
	//		Seminar_2024_May_Training-offer_France_v1
Workshop	IHO-IALA Hydrography and Marine Aids to Navigation in Africa	2019	Workshop_2019_October_IHO-IALA_Rabat_Report
	S-100	2023	Workshop_2023_November_S-100_VTC_France
	//		Workshop_2023_November_S-100_VTC_Nigeria
	//		Workshop_2023_November_S-100_VTC_Report

Appendix C-4: Standards of competences and Reports (IBSC)

Source (14.07.2025) : https://iho.int/en/standards-and-specifications

Publication	Object	Edition	File name
S-5B	Standards of Competence for Category "B" Hydrographic Surveyors	(Edition 1.0.1, June 2017)	S-5B_Ed1.0.1
S-8B	Standards of Competence for Category "B" Nautical Cartographers	Edition 1.0.0, September 2017	S-8B_Ed1.0.0
Companion documents :			
	Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers	Edition 3.0.0, May 2025)	S-5_S-8-Guidelines-Ed_3.0.0
	Frequently Asked Questions (FAQ)	Edition 1.0.3, June 2025	IBSC_2025_EN_FAQ_v1.0.3

Templates			
	S-5B Cross Reference Table Template		S-5B_Ed1.0.2-template_update
	S-8B Cross Reference Table Template		S-8B_Ed1.0.1-template_update

Miscellaneous : report of IBSC (to IRCC)
Source: https://iho.int/en/ibsc

Event	Object	File name
IBSC47 in 2024	Report to IRCC16	IRCC16-07G_IBSC47_Report_V2-1_2024
IBSC48 in 2025	Report to IRCC17	IRCC17_2025_07G_EN_IBSC48_Report_V2-2_2025

Appendix D to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
Contacts

Appendix D-1: Nigeria (Abuja – Lagos)

First Name NAME	Function	Phone (+234)	Mail
NHA	**National Hydrographic Agency**	**(+234) 809 503 9888 (+234) 809 503 9777**	**info@nha.gov.ng**
Rear Admiral Ayodeji Olumine (AO) OLUGBODE	HOF: Hydrographer of the Federation and CEO: Chief Executive Officer of the Agency	(+234) 803 044 6208	hof@nha.gov.ng a_olugbode@yahoo.co.uk
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LT Tunde Timilehin OGUNKUNLE	Naval Assistant to the Hydrographer of the Federation	+234 703 931 4379	info@nha.gov.ng
NNHD (NHO)	**Nigerian Navy (Naval Hydrographic**	**Hydrographic Office)**	**Department**
R Adm Godfrey Enoch KWETISHE	Director of Hydrography (NNHD)	+234 807 599 3455	kwetishe44@gmailcom
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Ijeoma Eunice (IE) ORJI	Staff Officer 3 Maritime Safety Information – NHA/NHO	+234 816 842 9712	orjiijeoma961@gmail.com
NN/NNS	**Nigerian Navy Ship**	**Lagos NNS Beecroft**	**Jetty Apapa**
Captain Oladipo Suleiman GIWA	Commanding Officer NNS *LANA*	+234 818 981 0094	giwaoladipo@gmail.com
Captain Babatunde Luqman AKANBI	Commanding Officer NNS *OCHUZO*	+234 703 295 2072	babsaristo2@gmail.com
IMION	**International Maritime**	**Institute Of Nigeria**	**Lagos** imion@navy.mil.ng
R Adm Thaddeus UDOFIA	Director General	+234 806 326 6452	

Appendix D-2: Nigeria (Port Harcourt)

First Name NAME	Function	Phone (+234)	Mail
NNHS	**Nigerian Navy Hydrographic School**	**Port Harcourt**	
Captain Yakubu Abubakar KURBA	Commanding officer Director	+234 803 508 7397	yaqubakurba@gmail.com
Captain N MUSA	Executive Officer Deputy Commandant	+234 803 693 3230	
Lt Cdr AG Ajegena			
Lt Cdr LA Adetunji	Finance Officer		
Lt Cdr UA Bultu			
Slt FA Adebayo			
Slt L TITUS	NNHS Liaison Officer	07030279988	
Slt J Ibrahim			
Slt KS Hassan			
Slt J Johuel			
Slt EO Popoola			
Slt PU Manasseh	Instructor		
MWOSR Isuiwe A			
MWORP Osong O			
WOSR Adeyemi DO			

Appendix D-3: France (Abuja – Paris – Brest) – IHO/secretariat (Monaco)

First Name NAME	Function	Phone	Mail
Embassy	**Embassy of the French Republic in Nigeria**		
COL (T) Stéphane USEO	Defense Attaché Cooperation Office for Security and Defence	(+234) 909 677 1863	stephane.useo@intradef.gouv.fr defense-attache.abuja-amba@diplomatie.gouv.fr
Bruno GREMARE	AD Adjoint		
Commander Stéphane CONGUES	Naval adviser	(+234) 818 011 9988	stephane.congues@diplomatie.gouv.fr fr.nga.navy.cooperation@gmail.com
EMM/BRI	**Navy Headquarters Paris**	**Bureau des Relations Internationales**	
Pierre Joachim ANTONA	Chef du module Afrique – Proche-Orient	09 88 68 43 17 (06 79 55 81 14)	Pierre-joachim.antona@intradef.gouv.fr
Shom	**France**	**(+33)**	
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Ronan LE ROY	Directeur de l'enseignement de l'école du Shom	(0) 2 56 31 24 09	ronan.le.roy@shom.fr
Julien CORMERY	Nautical Expert - Africa/Indian Ocean	(0) 2 56 31 23 06	julien.cormery@shom.fr
Jean-Louis TREBAUL	INFONAUT-ZRE	(0) 2 56 31 24 45	jean-louis.trebaul@shom.fr
Amandine LEFRANCOIS	Coordination NAVAREA II	(0) 2 56 31 26 09 (0) 6 24 80 14 91	amandine.lefrancois@shom.fr
OHI	**Secrétariat**		
John NYBERG	Head Directeur	(+ 377) 93 10 81 02	john.nyberg@iho.int dtech@iho.int
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Appendix E to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
Agenda

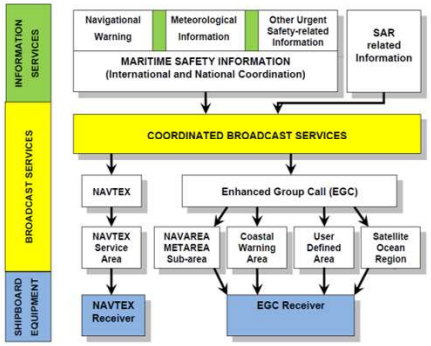
Hours	Dates - Objects – Events	Observations - Places
	Day 1 : Monday 18 August 2025 [Lagos]	
0900 – 1400	1. Welcome Remarks and Introductions 2. NNHO Presentation: Overview of the NNHD, Challenges and Way forward 3. IHO Presentation: "20 Years of Capacity Building in EAtHC: Lessons & Outlook" 4. Strategic Dialogue with NNHO Leadership: National Capacity & Regional Role, MSI Development 5. Tea Break 6. Discussion: Nigeria's Capacity Needs and Role in Upcoming IHO Programs 7. Roadmap Development: CBSC 24 (2026), EAtHC 19 (2026), & Training Centre Goals 8. Lunch Break & Departure	Naval Hydrographic Office Apapa
	Day 2 : Tuesday 19 August 2025 [Lagos]	
0900 - 1400	1. Arrival and Onboarding at NNS LANA 2. Ship Tour and Overview of Hydrographic Operations 3. IHO Presentation 4. Group Photo 5. Tea Break 6. Discussions, Collaborative Opportunities & Recommendations. 7. Lunch Break & Departure	NNS LANA. NNS BEECROFT Jetty Apapa
	Day 3 : Wednesday 20 August 2025 [Lagos – Port Harcourt]	
	Domestic flight from LOS to PHC (Port-Harcourt)	Murtala Mohammed Airport
	Day 4 : Thursday 21 August 2025 [Port Harcourt]	
0900 - 1400	1. Arrival and Introduction 2. Welcome Address by NNHS Commandant 3. Overview of NNHS Curriculum & Instructor Perspectives 4. IHO Presentation: "IBSC Standards and Pathways to Recognition" 5. Tea Break 6. Gap Analysis: Comparing NNHS Program with S-5A/S-5B/S-8B Standards 7. Workshop: Soft Skills Integration – Leadership, Stakeholder Engagement	Nigerian Navy Hydrographic School Borokiri PHC

	8. Action Planning: Submission Process and Timeline for IBSC Recognition 9. Group photograph 10. Lunch Break & Departure	
	Day 5 : Friday 22 August 2025 [Port Harcourt]	
0900 - 1400	1. Arrival and Welcome for Day 2 2. Facility Tour: Labs, Equipment, Classrooms 3. Stakeholder Engagement Session: Instructors, Trainees. 4. Tea Break 5. Breakout Sessions: South–South Cooperation and Training Exchange Ideas 6. Consolidation of Feedback & Key Findings 7. Final Session: Next Steps toward CBSC 24 and EAtHC 19 Preparation 8. Lunch Break & End of Technical Visit	Nigerian Navy Hydrographic School Borokiri PHC

Appendix F to the report N°084/Shom/DMI/REX/NP dated 29/09/2025
GMDSS (Global Maritime Distress and Safety System) – MSI (Maritime Safety Information)

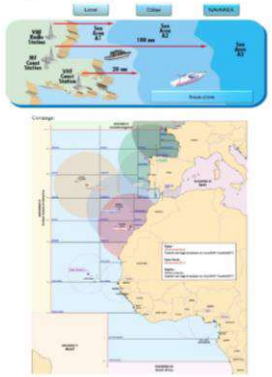
MSI (Maritime Safety Information) Development: Systems

- References : IMO edition "MSC.1/Circ.1310/Rev.2" 24 June 2024
- Part of GMDSS (Global Maritime Distress and Safety System)
- New development : systems
  - *NAVTEX (NAVigational TEleX Messages) → possible enhancement with NAVDAT (Navigational Data)*
  - *EGC (Enhanced Group Call) = Inmarsat/SafetyNET* + Iridium/SafetyCAST



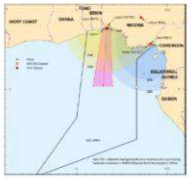
MSI Development: Coastal « AVURNAV » in West and Central Africa - Substitution of NAVTEX by EGC (SafetyNET - SafetyCAST)

- Context:
  - normal and regulatory means of broadcasting coastal warnings is NAVTEX,
  - equipping stations seems to be a financial, technical, organizational and human challenge for many countries (not only Africa).
  - Faced with these difficulties, some countries are tempted to declare their coastal waters in zone A3 and thus broadcast by EGC instead of NAVTEX stations



MSI Development: Coastal « AVURNAV » in Nigeria - Substitution of NAVTEX by EGC (SafetyNET - SafetyCAST)

- Nigeria / Already applied: given the limited number of coastal warnings, until NAVTEX stations are set up or until the country is declared A3, the provisional emission is done by the NAVAREA II coordinator via EGC,
- Emission of coastal warnings from Nigeria can be done by the NAVAREA II zone coordinator according to the following principles:
  - Drafting of coastal warnings by MSI cell of Nigeria in accordance with the MSI manual;
  - Sending coastal warnings by email to the NAVAREA II coordinator;
  - Checks by the NAVAREA II coordinator and integration of warnings into the 04:30 and 16:30 vacations;
  - Technical control of the broadcast by the NAVAREA II coordinator;



MSI Development: Coastal « AVURNAV » in Nigeria - Substitution of NAVTEX by EGC (SafetyNET - SafetyCAST)

- Procedure for declaring a country in zone A3 to the IHO (WWNWS) involves the following steps:
  - Declaration in zone A3: This step includes the definition of a zone (corresponding to EGC coverage), an identification letter (for receiver selection) and the determination of schedules for the vacations. All specialized publications relating to the GMDSS (such as radio signal publications) must be corrected. The receiver (such as Inmarsat) software must be modified to integrate this new zone.
  - Staff training: coordinator must ensure the training of MSI operators.
  - .../...

MSI Development: Coastal « AVURNAV » in Nigeria - Substitution of NAVTEX by EGC (SafetyNET - SafetyCAST)

- Procedure for declaring a country in zone A3 to the IHO (WWNWS) involves the following steps:
  - Emission control : Nigeria will have to equip itself with an Inmarsat C reception chain to control its emissions (= 1 antenna and 1 Furuno receiver, 1 000 Euros). Emission control via SafetyCAST is done via the dedicated platform.
  - Establishment of a Contingency Plan: Preventive measures to be defined in the event of equipment damage (local or external backup, transmissions via NAVAREA II).
  - Obtaining an MSIP (Maritime Safety Information Provider) certificate: obtained from the IHO, the first steps having been completed
  - SafetyNET and SafetyCAST access contract: contract to be entered into directly with Inmarsat and Iridium or through a service provider

MSI Development S-124

- New development : S-100 /S-124
  - **Reference:** http://registry.iho.int/productspec/view.do?idx=218&product_ID=S-124&statusS=5&domainS=ALL&category=product_ID&searchValue=
  - **S-124 :** Navigational Warnings (Edition 2.0.0, March 2025)
  - This specification is developed for creating datasets containing navigational warning information primarily targeting use in ECDIS. Navigational warning means a message containing urgent information relevant to safe navigation broadcast to ships in accordance with SOLAS

MSI development: French PING platform

- Reference :
  - https://www.shom.fr/fr/liste-actualites/ping-la-nouvelle-plateforme-nationale-au-service-de-la-securite-des-navigateurs
  - https://portail.ping-info-nautique.fr/
- A tool that allows for better visualization of danger and regulatory zones in maritime areas for which France is responsible for navigation safety
- Facilitate the visualization of the areas to which the various nautical information applies : navigation warning (AVURNAV), notices to mariners (AVINAV) and spatial regulations of the Maritime Prefectures relating to navigation.
- Version 2 will produce S-124
- Source code: open (within 6 months from July 2025)

Zone sur laquelle porte l'arrêté mentionné ci-dessus visualisée dans PING

MSI Training

- Proposition to be done for CBWP 2027
  - In Africa
  - In English and Français
- S-124 included in context (other training) of S-100 (S-57 / S-101)
- Contacts:
  - Amandine LEFRANCOIS: NAVAREA II Coordinator amandine.lefrancois@shom.fr
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  - Henri DOLOU: Hydrographe henri.dolou@shom.fr