



## IHO Capacity Building Programme

### IHO VISIT TO NIGERIA:

**NNHO: Nigerian Navy Hydrographic Office**

**NNHS: Nigerian Navy Hydrographic School**

- MSI Assessment
- Organization of a seminar
- Training center visit in the perspective of the recognition of a new educational and training programme for hydrographic surveyors – Category “B”

19 – 23 March 2018

### REPORT



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Abbreviations	4
<b>1 - Introduction</b>	<b>4</b>
1.1 Background –Objectives (CBWP)	4
1.2 Composition of Team	5
1.3 Efficacy of the Visit	5
1.4 Preliminary Liaison	6
1.5 Points of Contact.	6
1.6 General presentation of NNHO	6
<b>2 - MSI Organisation – GMDSS - WWNWS</b>	<b>6</b>
<b>3 - Regional awareness seminar on maritime geospatial knowledge (+ Portals – Data management – MSI/telecommunications)</b>	<b>7</b>
3.1 Dates of the seminar (in conjunction with the conference - EAtHC)	7
3.2 Venue and logistics (for both: Radisson Blu Lagos)	7
3.3 IHO/EAtHC circular letter (logistics)	8
3.4 Contribution of IHO for the seminar	8
3.5 Seminar/content Intended programme	8
<b>4 - Training center visit : NNHS (+ ADUN and NNEC)</b>	<b>9</b>
4.1 The NNHS (Port Harcourt)	9
4.2 The ADUN (Ibuso) and NNEC (Sepele)	10
4.3 The visit	11
4.4 Conclusions	11
<b>ANNEX</b>	<b>13</b>
Annex A: List of contacts	13
Annex B: Agenda – Events – Participants - Comment	14
Annex C: Pictures - NNHO (Lagos)	18
Annex D: Pictures - ADUN (Ibuso)	21
Annex E: Pictures - NNHS (Port Harcourt)	22
Annex F : NNHO presentation	26

## Abbreviations

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ADUN	Admiralty University of Nigeria
CBSC	Capacity Building Sub-Committee
EAtHC	Eastern Atlantic Hydrographic Commission
ECOWAS	Economic Community of West African States
GIS	Geographic Information System
GMDSS	Global Maritime Distress and Safety System
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IBSC	International Board on Standards of Competence for Hydrographic Surveyors and
IHO	International Hydrographic Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
MSDI	Maritime Spatial Data Infrastructure
MSI	Maritime Safety Information
NN	Nigerian Navy
NNEC	Nigerian Naval Engineering College
NNHO	Nigerian Navy Hydrographic Office
NNHS	Nigerian Navy Hydrographic School
PCA	Primary Charting Authority
RDC	Republic Democratic of Congo
Shom	Service hydrographique et océanographique de la marine
SOLAS	[United Nations] Convention for the Safety of Life at Sea
UKHO	United Kingdom Hydrographic Office
WACA	West Africa Coastal Areas Management program
WWNWS	Worldwide Navigational Warning Service

## 1 - INTRODUCTION

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### 1.1 Background –Objectives (CBWP)

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The capacity building work programme of the International Hydrographic Organization (IHO) aims to co-ordinate the development of hydrographic surveying and nautical charting for its members For the Eastern Atlantic Hydrographic Commission (EAtHC) (From France to RDC) it has been decided:

- to promote regional co-operation related to capacity-building in West and Central Africa (HydroMWCA project) [CBWP 2018: P-11 “HydroMWCA study follow-up”];
- to assess the potential of national/regional training centers (possible accreditation of the Nigerian Navy Hydrographic School (NNHS) in Port Harcourt to be evaluated) [CBWP 2018: A-01 “Training Center Visits”]
- to study the possibility of organizing a regional awareness seminar on maritime geospatial knowledge. [CBWP 2018: P-04 “Regional awareness seminar on maritime geospatial knowledge”]

All these objectives are to put into perspective with the organization of the next EAtHC conference in Lagos (17 – 19 October 2018).

It has been decided to conduct a visit to Nigeria with people already invested in capacity building and part of Hydrographic offices which have responsibilities in Maritime Safety Information (Shom - NAVAREA II) and Nautical Charts (UKHO). It was an opportunity to discuss on those matters during the visit.

**The final goal was the visit of the NNHS with the perspective of the recognition of their new educational and training programme for hydrographic surveyors – Category “B”**

## 1.2 Composition of Team

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The RHC Visit Team is comprised by:

<u>Name</u>	<u>Role</u>
Henri Dolou	Team Leader Shom (France)
Jeff Bryant	UKHO (United Kingdom)

## 1.3 Efficacy of the Visit

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Thanks to Commodore Chukwuemeka Ebenezer OKAFOR, who accompanied the IHO team during all the week, it was possible to have a broader vision of capabilities of NNHO, NNHS and close stakeholders concerned with educational and training issues.

The visit has been focused on capacity building in the perspective of the recognition of the new educational and training programme for hydrographic surveyors – Category “B”. A new programme that the IHO team considers sufficiently prepared to be pursued for submission in December 2018 for final presentation to the IBSC in 2019 (April).

The possibilities of NNHS affiliated to Admiralty University of Nigeria (ADUN) deserve to be known in the perspective of an enlarged offer of educational and training in hydrography to the civilian community both other governmental agencies related to navigation (inland included) and industry (in support to offshore as an example).

Such a new accredited programme would be open not only to Nigerians but also to all hydrographers in the region (West and Central Africa).

A large communication on this new opportunity will be given in October 2018 during the EAtHC that will take place in Lagos with possibly (thanks to sponsoring of IHO CB programme) the participation of most, if not all African countries from Morocco to RDC.

Taking into account the perspectives of cooperation with other agencies, the team considers that the potential of NNHO deserves to be recognized at the governmental level and suggests for top-level awareness and support, the organization of a visit by the IHO Secretary General to the Nigerian capital.

The meetings were also an opportunity to address (and clarify) the following topics:

- relationship with NAVAREA II (France /Shom) for MSI
- relationship with UK/UKHO for nautical publications

## 1.4 Preliminary Liaison

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The visit was prepared by Henri Dolou (Shom) and Jeff Bryant(UKHO), in close co-ordination with Commander A BappaMahmud (NNHO) and Captain Sunday Daniel Atakpa (NNHS) both under the supervision of Commodore Chukwuemeka Ebenezer OKAFOR (Hydrographer of the Navy, NNHO).

## 1.5 Points of Contact.

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The contacts of the Team Visit are listed in Annex A.

Up-dates to the IHO Yearbook are not necessary (checked during the visit).

## 1.6 General presentation of NNHO

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Information on NNHO is available:

- In Annex F (brief)
- On <https://www.nnho.ng/>

# 2 - MSI ORGANISATION – GMDSS - WNWWS

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### **Introduction:**

Maritime Safety Information (MSI) consists of the promulgation of navigational and meteorological warnings, search and rescue information and other urgent safety-related information, including urgent information related to charts. IHO Publication S-53 - Joint IMO/IHO/WMO Manual on Maritime Safety Information provides detailed information about MSI. In addition MSI in its broadest sense includes navigational chart and publication maintenance.

MSI needs organization (procedures to collect, transcribe and transmit information, maintained equipment, trained staff) with a national MSI coordinator in connection with navigators, the Primary Chart Authority (UK/UKHO) and NAVAREA II (France/Shom).

**For the time being:**

- There is a NNHO organization with:
  - a web portal: <https://www.nnho.ng/Navareallwarnin.html>
  - a Nigerian MSI coordinator: Cdr Mahmud Abubakar FANA: [msi@nnho.ng](mailto:msi@nnho.ng)
- There is no NAVTEX. For ships sailing through Nigerian waters and approaching main harbors or oil installations, SafetyNET (NAVAREA II, France/Shom) possibilities are offered by France and could be used for Coastal Warnings (interim solution in perspective of a direct satellite communication with Inmarsat)
- The relationship with NAVAREA II is operational and will be reinforced next May during the visit in France of the Nigerian MSI coordinator. The visit will take place at the Department "Informations et Ouvrages Nautiques" of Shom; Email: [coord.navarea2@shom.fr](mailto:coord.navarea2@shom.fr) (H24), [coord.navarea2@gmail.com](mailto:coord.navarea2@gmail.com) (spare); Website: <http://diffusion.shom.fr/navarea-en-vigueur>.
- This visit and later the seminar to be organized in Lagos (October 2018) would be opportunities to present and discuss new IT technologies for collection, process and circulation of maritime safety information.

### **3 - REGIONAL AWARENESS SEMINAR ON MARITIME GEOSPATIAL KNOWLEDGE (+ PORTALS – DATA MANAGEMENT – MSI/TELECOMMUNICATIONS)**

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#### **3.1 Dates of the seminar (in conjunction with the conference - EAtHC)**

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- Seminar (2 days): Monday 15 and Tuesday 16 October 2018
- Conference (EAtHC - 3 days): Wednesday 17, Thursday 18 and Friday 19 October 2018

#### **3.2 Venue and logistics (for both: Radisson Blu Lagos)**

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NNHO to take care, during five days of:

- Meeting room (in Radisson Blu)
- Translation (English, French)
- Lunch (in Radisson Blu)
- Coffee break (+ "ice breaker" and "dinner" to be confirmed) (Note: "industry might offer to take care of this: Fugro, Kongberg, Caris, Esri, IIC India, Ocean Wise ...)
- Transfers/transportation (airport/hotels)
- Hotels: 2 hotels will be used
  - Radisson Blu [Special offer is: Standard room: 55 000 Nigerian Naira NGN = 125 € (1€ = 443 NGN March 17), \$ 152]
  - Best Western [Special offer is 28 000 NGN = 64 €, \$ 72) not too far from Radisson Blu but cheaper (will be the hotel to people sponsored for the seminar). A bus will provide transport to and from the Radisson Blu.

**Action : NNHO**

### 3.3 IHO/EAtHC circular letter (logistics)

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A draft EAtHC circular letter has already been prepared by Commander A Bappa Mahmud. It contains important information that will essentially be completed by a registration covering both events taking into account that the participation (limited in budget) to the seminar will be sponsored to non IHO members.

**Action :**

- Preparation of the letter (final draft): Nigeria/NNHO and France/Shom (template of IHO/UKHO for seminars to be exploited)
- Final draft to be discussed with EAtHC Chairman (Spain) and IHO secretariat
- Diffusion : EAtHC Chairman

### 3.4 Contribution of IHO for the seminar

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This contribution comes from the Capacity building Work Programme 2018 (PO-4 ROK), with total of 20 000 € divided as follow:

- 8 000 € to NNHO (meeting room, translation, lunches ...)
- 12 000 € to invited people. This sum:
  - is not intended to people coming from Europe for lectures (Shom, IALA ...). Most of them are expected to assist the conference and will only have to add one or two nights
  - is not intended to IHO member who are usually able to assist the EAtHC
  - but to IHO non members who need the benefit of the seminar and may be more willing to come to both the seminar and the conference with the contribution of IHO. More than 12 people could benefit of this contribution that will cover: flights, hotel and lunch. The people attending the seminar are supposed to stay at the conference (the contribution will cover both the seminar and the conference)
  - It is expected to have more than one person per country to attend both the seminar and the conference but the budget will only cover one person per country.

**Action :**

- France/Shom (agenda, presenter/speakers), Nigeria/NNHO (host, logistics for the venue) and IHO secretariat (flights, hotel)

### 3.5 Seminar/content Intended programme

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The program still needs to be consolidated but will include two main parts:

1. Awareness – the provision of hydrographic services
2. Technical issues of main interest – New IT technologies : MSI – MSDI ...

**Awareness (could be day one)**

- Typical items of awareness : "IHO + partner organizations : IMO and IALA<sup>1</sup> under the UN's 'deliver as one ' banner"

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<sup>1</sup> Jacques Manchard from IALA has indicated that he will participate in the seminar (first or second day)

- Provision of hydrographic services is covered by these organisations. The details of how this is achieved (through maritime safety and hydrography, MSDI, portals, surveys specification, risk assessment, funding ...) could be on day 2.

#### **Technical issues of main interest** (could be day two)

Intended specific subjects are:

- GMDSS, WWNWS, IHO Publication S-53
- Portals and data management/MSDI (Lecture: France and Nigeria who have their own portal to present)
- MSI and telecommunication : Navtex/SafetyNET (Lecture: France and Nigeria)
- Miscellaneous – Information: WACA (West Africa Coastal Areas Management program) project, Survey specification (procurement), Risk assessments, Law of the sea (ABLOS), CBWP 2019 ...
- fundings

#### **Miscellaneous**

- Welcome adress (Commodore Okafor), Keynotes adress/openning speech, Introduction of participants, objectives of seminar, photo ...)
- Presentation papers (slides) and brief CV of speakers to be given to NNHO before the seminar to help for translation
- NNHO intend to invite Nigeria's stakeholders (an opportunity to explain why and how MSI have to be collected and transmitted)

#### **Action (programme, speakers, presentations) :**

- France/Shom with the contribution Nigeria/NNHO

## **4 - TRAINING CENTER VISIT : NNHS (+ ADUN AND NNEC)**

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### **4.1 The NNHS (Port Harcourt)**

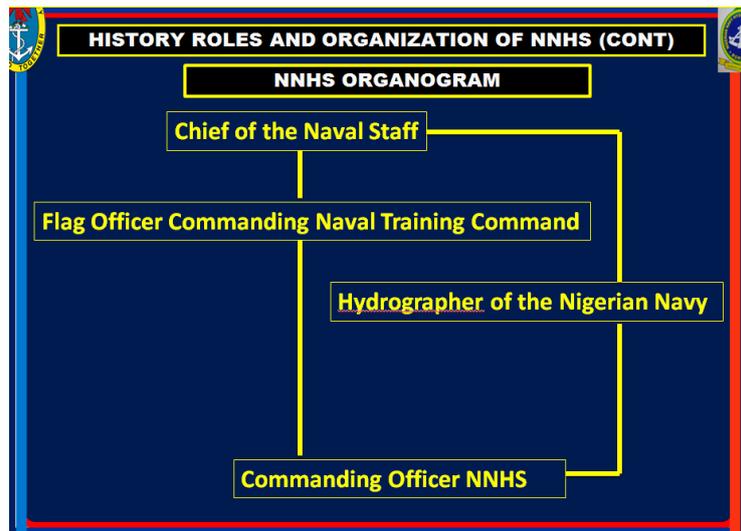
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#### **Presentation by NNHS**

Reference: presentation given on 22th and 23th of March 2018 in Port Harcourt

#### Roles of NNHS:

- Development of national Hydrographic Capacity
- Enhancement of Nigerian Navy Constitutional Role of Nautical Charting
- Promotion of the Teaching and Practice of Hydrography in Nigeria



NNHS is a training hub for Nigerian Navy officers and ratings in:

- Basic H
- Survey Recorder I
- Survey Recorder II
- Survey Recorder III

But:

Higher levels of education and training (Survey Recorder 1 and Basic H) need accreditation to be fully recognized as a valuable formation.

#### **Capacity building team**

The IHO capacity building team has been well informed of relevant information about NNHS.

The two days spent in Port Harcourt have been an opportunity to discuss the feasibility (based on the experience of the team) of the accreditation of a new CAT B Hydrographic surveyor programme.

It was not in the mandate (and even in the capacity) of the team to substitute for analysis and decisions of CBSC, nevertheless this report make it possible to have a good idea of the potentials of NNHS.

## **4.2 The ADUN (Ibuso) and NNEC (Sepele)**

A new maritime university will start academic session in September 2018 : ADUN (Admiralty University of Nigeria) with two campus one in Ibuso the other in Sepele (NNEC: Nigerian Naval Engineering College). Both campuses were visited:

- Welcome by Rear Admiral SA Adebari (GMD/CEO Navy Holdings Limited) and Dr Pavlos Pavlou (Pro-chancellor) at ADUN/Ibuso
- Welcome by Commodore Diri Onyenma at NNEC in Sepele.

The NNHS will be affiliated to ADUN (that may have formations related to marine environment, geomatics, etc).

Information on ADUN is available:

- In Annex D
- On <http://adun.edu.ng/>

## 4.3 The visit

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### What has been done (through communication before and during the visit) ?

- Exchange on IHO publication (IBSC procedures)
  - Standards of Competence for Category "B" Hydrographic Surveyors (Ed. 1.0.1, June 2017) to be download on: [https://www.iho.int/iho\\_pubs/standard/S-5/S-5B\\_Ed1.0.1.pdf](https://www.iho.int/iho_pubs/standard/S-5/S-5B_Ed1.0.1.pdf)
  - Companion document : Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers to be download on: [https://www.iho.int/iho\\_pubs/standard/S-5/S-5\\_S-8-Guidelines-Ed\\_2.0.0.pdf](https://www.iho.int/iho_pubs/standard/S-5/S-5_S-8-Guidelines-Ed_2.0.0.pdf)
  - S-5B Cross Reference Table Template: to be download on: [https://www.iho.int/iho\\_pubs/standard/S-5/S-5B\\_Ed1.0.1-template.docx](https://www.iho.int/iho_pubs/standard/S-5/S-5B_Ed1.0.1-template.docx).
- S-5B Cross Reference test by NNHO
- Communication of examples of programmes by France (CAT B “hydrographic Surveyor”) and United Kingdom (CAT B “nautical cartographer”)
- Visit of NNHS (infrastructures) and presentation of hydrographic equipment. The team have had the opportunity to see equipment needed for training and already expressed some suggestions (compared to the French hydrographic school) for computers, access to Internet, GIS, tides measurements, etc. Annex E offers some pictures that show NNHS is potentially equipped not only for educating but also for Cat B hydrographic project (launch).

## 4.4 Conclusions

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### Some conclusions:

- There is no reason why NNHO could not submit their new programme at the end of 2018 (to look for accreditation in 2019). NNHO is not a new institution: 20 Pre-Basic H Officers and 800 Survey Recorders have already been trained in the past 37 years
- Nigeria (Navy) already has a large number of qualified CAT A and CAT B hydrographic surveyors who could be utilized for the delivery of the educating and training. The team also had the opportunity to meet two specialists in NNHS for land survey/geodesy and meteorology
- NNHO not only conduct surveys (currently with launches, but with a survey vessel soon) but already produce charts and nautical information. This is the guarantee of a complete development (education included) covering all areas of maritime safety but also, as it has been exposed, many applications both civilian and military (one data - many applications)
- NNHS has a unique opportunity to consolidate their new programme (syllabus, project included) during their next routine Basic H course that will start in June 2018. This next course has to be considered as the “prototype” of the new CAT B programme. Feedback on experience from students and trainers will have to be exploited to illustrate some aspects of the formation that could not be addressed by the team for lack of time during the visit. As an example the subject of tides (measurements, datum, geoid, ellipsoid, high precision GPS, levelling, comparison of predictions from different countries, UNECO/IOC opportunities for permanent sea level observatory) could be covered by new and updated material. The feedback from this programme beginning in June undoubtedly deserves to be organized not only to consolidate the future CAT B programme but also to provide evidence that everything is being done to continuously improve the school:
  - involvement of teachers (trainers) in definition of lessons, course materials, exercises
  - involvement of the students (trainees) for feedback

- at the end involvement of those responsible to update the final programme (IBSC) and provide the condition (logistics included) that prove that the process (management) of continuous improvement is in place
- It has been reiterated that NNHS can contribute to educating and training in the region (eventually as a regional English speaking academy affiliated to ADUN). The school could do better if given the needed boost through accreditation and training grants. The Nigerian Navy has a long experience of welcoming military trainees from abroad (Ghana, Togo, The Gambia, Sierra Leone, Cameroon ...), in their military training schools. Based on this long standing experience, it is expected that the Admiralty University of Nigeria will provide the possibilities of an expanded civilian training (including those from other Nigerian institutions or industries involved in safety of navigation, marine environment and last but not least the development with the blue economy)
- UKHO and Shom recommend follow on assistance to the NNHS

Editors

Henri DOLOU and Jeff BRYANT

# ANNEX

## Annex A: List of contacts

Name	Responsibility	Phone	E_mail
<b>Nigerian Navy Hydrographic Office (NNHO) Lagos</b>			
Commodore Chukwuemeka Ebenezer OKAFOR	Hydrographer of the Nigerian Navy DSS psc+ fdc fcis MSc	Tel: +234 08032677567	<a href="mailto:info@nnho.ng">info@nnho.ng</a> <a href="mailto:emyokafor@yahoo.com">emyokafor@yahoo.com</a>
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<b>Nigerian Navy Hydrographic School (NNHS) Port Harcourt</b>			
Captain Sunday Daniel ATAKPA	NNHS: commanding officer Training Center visit to Port Harcourt	+2348178826716 or +2347066446922	<a href="mailto:sundanata@yahoo.com">sundanata@yahoo.com</a> <a href="mailto:atapka.nn1876@navy.mil.ng">atapka.nn1876@navy.mil.ng</a>
<b>Admiralty University of Nigeria (ADUN) Ibusa</b>			
Dr Pavlos PAVLOU	Pro-Chancellor	+ 234 (0) 8066561795	<a href="mailto:pavloupcy@gmail.com">pavloupcy@gmail.com</a>
Rear Admiral SA ADEBARI	GMD/CEO Navy Holdings Limited (NHL)	+ 234 (0) 8138467245	<a href="mailto:segun_adebari@yahoo.co.uk">segun_adebari@yahoo.co.uk</a>

### Addresses:

- NNHO: The Nigeria Navy Hydrographic Office 5, Point Road Apapa, Lagos, Nigeria. Hotlines: +234 809 503 9888 +234 809 503 9777 [<https://www.nnho.ng/>]
- NNHS: Nigerian Navy Hydrographic School Port Harcourt – Nigeria +2348178826716 P.O.Box 74783
- ADUN: Ogwashi-Uku / Ibuso Road Oshimili North Local Government Ibusa, Delat State [[www.adun.edu.org](http://www.adun.edu.org)]

Name	Responsibility	Phone	E_mail
<b>UKHO</b>			
<b>United Kingdom Hydrographic Office</b>			
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## Annex B: Agenda – Events – Participants - Comment

Dates – Time (approx.)	Activities – Events Places	Nigeria Participants	Comment – Input - Output
<b>Day 1: Sunday 18<sup>th</sup> March</b>	<b>Travel: H Dolou</b>		<b>Night in Lagos</b>
20H05	Arrival of H Dolou in Lagos from Amsterdam - AF 8434 (KL 587) Airport reception	Nigeria Navy (NN)	Very well organized escort before and during immigration controls
After customs	Transport from airport to hotel Radisson Blu	NN	Efficient, fast and secure transport. It will be the same during all the visits at any time any places
<b>Day 2: Monday 19th March</b>	<b>Seminar - organisation MSI/NAVAREA II Travel: J Bryant</b>		<b>Night in Lagos</b>
08H00	Transfer from hotel to NNHO	NN	
08h45	Arrival at NNHO		
09H00 – 09H20	Welcome/Brief by the Hydrographer		
Morning	Seminar: “Regional awareness seminar on maritime geospatial knowledge EAtHC”	<ul style="list-style-type: none"> <li>Commodore Okafor</li> <li>Captain Amao (deputy)</li> <li>Commander Mahmud (team coordinator 1 for Seminar/Conference)</li> <li>Commander Fana (MSI) (team coordinator 2 for Seminar/Conference)</li> </ul>	<p><b>INPUT:</b></p> <ul style="list-style-type: none"> <li>CBWP 2018: P-04 (budget)</li> <li>Objectives of the seminar</li> <li>Invitations (people invited should stay for the following EAtHC)</li> <li>Guidelines for hosting an IHO Meeting</li> <li>Example of organization of meeting on IHO Website (RHCs for exemple)</li> <li>NNHO’s Critical Information Requirements</li> </ul> <p><b>OUTPUT:</b></p> <p>Conclusions (logistics for common joint organization with EAtHC) for :</p> <ul style="list-style-type: none"> <li>Shom (Seminar/content)</li> <li>NNHO (host, logistics),</li> <li>IHM (Instituto hidrografico de la Marina; Spain) (Chairman EAtHC)</li> </ul>

Dates – Time (approx.)	Activities – Events Places	Nigeria Participants	Comment – Input - Output
			<ul style="list-style-type: none"> <li>IHO secretariat</li> </ul>
12H00 – 13H30	MSI/NAVAREA II		<ul style="list-style-type: none"> <li>Tour of NNHO MSI Facilities.</li> <li>Comments of NAVAREA II on NG</li> <li>NG organisation: <a href="https://www.nnho.ng/Navareallwarnin.html">https://www.nnho.ng/Navareallwarnin.html</a></li> </ul>
13H30 – 14H30	Lunch	Rock View Restaurant Apapa	
14H30 – 15H30	Visit in FR (NAVAREA II) of Cdr Mahmud Abubakar FANA <sup>2</sup> (NG MSI coordinator)		<b>INPUT:</b> Draft programme (Marc Fromentin from FR)
16H00	Transport from NNHO to hotel	NN	
20H05	Arrival of J Bryant in Lagos from Amsterdam AF 8434 (KL 587) Airport reception	NN	
After customs	Transport from airport to hotel Radisson Blu Hotel	NN	
<b>Day 3: Tuesday 20th March</b>	<b>Seminar Capacity building</b>		<b>Night in Lagos</b>
09H00	Transfer from hotel to NNHO		
10H00 – 13H00	Seminar Capacity Building (HydroMWCA)		<b>INPUT:</b> UKHO experience for seminar
13H00 – 14h00	Lunch	Rock View Restaurant	
14H00 – 17H00	Morning suite Relationship with UKHO (Charts, ENCs) Yearbook		<a href="https://www.iho.int/iho_pubs/periodical/P5YEA/RBOOK_ANNUAIRE.pdf">https://www.iho.int/iho_pubs/periodical/P5YEA/RBOOK_ANNUAIRE.pdf</a> No update to be done for yearbook
17H00	Transfer from NNHO to hotel	NN	

Dates – Time (approx.)	Activities – Events Places	Nigeria Participants	Comment – Input - Output
<b>Day 4:Wednesday 21 th March</b>	<b>Travel from Lagos to Warri Training center visit (ADUN)</b>		<b>Night in Warri Delta State</b>
05H30	Transfer from hotel to Lagos (LOS) airport. Departure of H Dolou, J Bryant and Commodore Okafor	NN	
07H40	Depart LOS Airport onboard ARIK AIR flt W3 630 by 07H40 and arriving Warri Air Port by 08H40		NN Hydrographer in company Flights paid by NNHO
09H00 – 09H30	Breakfast in Warri		
09H30 -17H00	Transfer from Warri to Admiralty University of Nigeria (ADUN) in IBUZO	NN	Advice on how to make the best use of the affiliation to advance Capacity in Hydrography within the West & Central Africa
	Visit of ADUN	<ul style="list-style-type: none"> <li>• Commodore Okafor</li> <li>• Rear Admiral SA Adebari GMD/CEO Navy Holdings Limited</li> <li>• Dr Pavlos Pavlou (ADUN)</li> </ul>	Inspection of Admiralty University, a new maritime university established by the NN for which NNHS is affiliated to.
	Transfer from ADUN to Nigerian Naval Engineering College in SAPELE	NN	
	Visit of Nigerian Naval Engineering College	+ Commodore Diri Onyenma (Nigerian Naval Engineering college)	Presentation of the college (would become the second campus of ADUN)
	Transfer to Hotel in Warri	NN	

<b>Dates – Time (approx.)</b>	<b>Activities – Events Places</b>	<b>Nigeria Participants</b>	<b>Comment – Input - Output</b>
<b>Day 5: Thursday 22th March</b>	<b>Training center visit (NNHS)</b>		<b>Night in Port Harcourt</b>
	Breakfast in Hotel in Warri		
08H00 – 12H00	Transfer from hotel in Warri to Hotel in PHC (Presidential)	NN	NN Hydrographer in company
12H00 - 13H00	Lunch		
13H00 – 13H30	Departure to NNHS	NN	NN Hydrographer in company
13H30 – 16H00	Training center visit	NNHS	+ • Rear Admiral AZ Gambo • Marie-Hélène Predhom: directrice de l’alliance française
16H00 -16H30	Transfer from NNHS to hotel	NN	
<b>Day 6: Friday 23th March</b>	<b>Training center visit (NNHS) Travel</b>		<b>Night in the plane</b>
09H00 -09H30	Transfer from hotel to NNHS	NN	
09H30 – 12H00	Training center visit Conclusions and recommendations	NNHS	+ • Rear Admiral AZ Gambo
12H00 – 13H00	Lunch		
16H00	Transfer to airport Departure of H Dolou and J Bryant at 21H20 Flight AF 513 to Paris (via Abuja)		

<sup>1</sup> MSI training in France/Shom-NAVAREA II: from 14<sup>th</sup> to 20<sup>th</sup> May 2018 in Brest (GMDSS – WWWNWS - NAVAREA – MRCC) May 2018 of Cdr Mahmud Abubakar FANA

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**Annex C: Pictures - NNHO (Lagos)**

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**NNHO – MSI With the man on right who very well know his job**



**Commodore OKAFOR – Henri DOLOU - Commander MAHMUD**

**Jeff BRYANT - Commodore OKAFOR - Cdr FANA**

**NNHO – Charting**



**Captain LK AMAO on right  
NNHO – Charting**



**Launches to be equipped with survey systems in Navy Shipyard**



**NNHO - Lagos**



**Visit team feels good with the hydrographer**

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## Annex D: Pictures - ADUN (Ibuso)

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ADUN : Admiralty University of Nigeria (NNHS will be affiliated)

A Public Private Partnership : (60% Navy, 40% private) under NHL (Navy Holdings Limited) that will have two campus :

1. In Ibuso (photos)
2. in Sapele (in the Nigerian Naval Engineering College) (commanding officer: Commodore Diri-Onyenma)



ADUN (right to left) : Dr Pavlou (Pro-Chancellor of ADUN) presenting the University + Commodore Okafor (NNHO)– Rear Admiral Adebari (NLL)



ADUN (left to right) : Commodore Okafor (NNHO) – Dr Pavlou (Pro-Chancellor of ADUN) – Rear Admiral Adebari (President ADUN and Navy Loldings Limited ) – Jeff Bryant (UKHO) - Henri Dolou (Shom)

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**Annex E: Pictures - NNHS (Port Harcourt)**

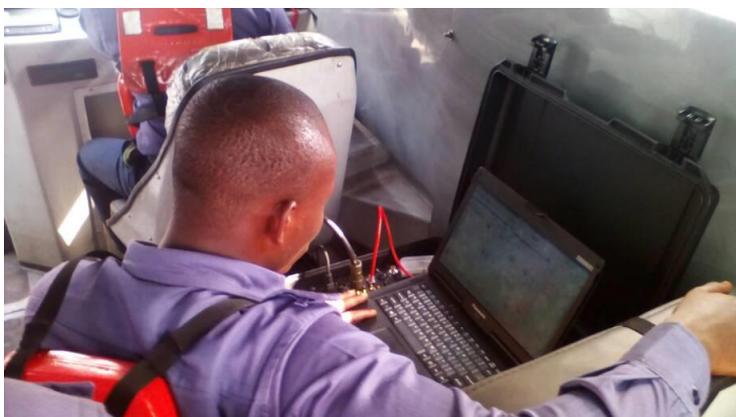
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**NNHS launch in shipyard (IHO team – 2018)**



**NNHS launch on operation (NNHS)**



**Data acquisition (NNHS)**

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**Leveling (NNHS)**



**ADCP**



**Magnetometer**



**Computers**



**Library**



**Classroom: Jeff BRYANT, Commodore OKAFOR, Herni DOLOU, Captain ATAKPA**





**With Rear Admiral AZ GAMBO**



**NNHS officer**



**BRIEF FOR THE VISITING IHO CAPACITY  
BUILDING TEAM TO NIGERIAN NAVY  
HYDROGRAPHIC OFFICE**

21 MAR 18

**APAPA-LAGOS**

## **BRIEF FOR THE VISITING IHO CAPACITY BUILDING TEAM TO NIGERIAN NAVY HYDROGRAPHIC OFFICE**

### **INTRODUCTION**

1. Let me seize this opportunity to once again welcome Mr Henri and Jeff to Nigeria in general and NNHO in particular. I wish you happy stay. This morning I will be briefing you on the historical background and organisation of the NNHD before letting you know our efforts towards achieving the 3 phase IHO strategy for developing hydrographic capacity.

### **Historical Background Of the NNHO**

2. The history of the NNHD dated back to 1956 when the then Nigerian Naval Force was charged with the responsibility of conducting hydrographic survey for the Government among other roles. It was however after the independence in 1960 that the NN was saddled with the responsibility of hydrographic surveying and charting of Nigeria's waters which led to the establishment of the NNHD in the early 70s with the ultimate goal of meeting this statutory role. In order to ensure that the newly established Department develops in accordance with the international best practice, a team of naval officers from the Indian Navy (IN) were seconded to the NNHD on 12 November 1975, with Commander PP Nandi (IN) appointed as the first Hydrographer of the NN. The collaboration between the NNHD and the National Hydrographic Service of India led to the training of the first batch of NN hydrographic personnel that later took over from the Indians. On 31 May 1976, Nigeria joined the International Hydrographic Organization (IHO) in order to demonstrate her commitment to providing accurate hydrographic services for international and local shipping. Further collaboration with the IHO and other Hydrographic Offices like the United Kingdom Hydrographic Office (UKHO), India and the National Oceanic and Atmospheric Administration (NOAA) of the USA among others, led to the training of more NN officers in the field of Hydrography. At present the NNHD has 20 Cat A trained officers, while 19 others are Cat B qualified. This is in addition to over 30 trained officers that have retired

3. The need to further develop the Department led to the acquisition of a number of survey vessels and establishment of the NN Hydrographic School in 1981 to cater for the human capital development of the NN and stakeholders within Nigeria and in the sub-region. The CO NN Hydro School will brief you on the history and activities of the school.

## **Organization**

4. The NNHD is organized into the Hydrographic Office, Hydrographic School and the survey fleet. The Hydrographic Office, headed by the Hydrographer, is in charge of the NNHD and responsible to the Chief of the Naval Staff, through the Chief of Training and Operations on all matters pertaining to defence and civil hydrography in Nigeria. He exercises professional control of the Hydrographic school and the survey vessels for training of personnel and the conduct of surveys respectively.

The principal functions of the department include: Hydrographic/Oceanographic surveys, Charts productions, production of Tidal prediction Tables for Nigerian Ports, coordination of all national hydrographic survey in Nigeria and dissemination of maritime safety to mariners operating within Nigeria's maritime domain and NAVAREA II Region.

## **ACTIVITIES OF THE NNHO IN ACHIEVING THE IHO STRATEGY FOR DEVELOPMENT OF HYDROGRAPHIC CAPACITY**

5. Permit me to take a little moment to acquaint you on how we have fared in achieving IHO capacity building strategy.

### **PHASE 1 – COLLECTION AND DISSEMINATION OF MSI**

6. Prior to 2017, there was neither MSI facility in Nigeria nor any one trained in MSI. The NNHO, as the National Coordinator on MSI has been making frantic efforts to get trained on MSI. This efforts yielded good results in 2017 when, through the assistance of Jeff Bryant, a slot was given to NNHO to participate in a 3 – day workshop on MSI in South Africa. Before this the NN had commenced establishment of MSI portal here at NNHO. Thus, the workshop in South Africa was the icing on the effort the NNHO has been making to achieve phase 1 of the IHO Capacity Building Strategy. This is because, when the officer attended the workshop returned, we organized a 2-week train-the-trainer workshop here at NNHO where the first set of watch keepers to man the MSI facility was trained.

7. On commissioning of the facility late last year, these watch keepers have been manning the facility 24/7. This has been helping us to interact with Breast and UKHO. At the moment, arrangement has been concluded for an officer to conduct a week working visit to NAVAREA II to further develop our competence

on MSI collection and dissemination. As you go round the facility, I would appreciate your advice on how to make it better.

### **PHASE 2 - DEVELOPMENT OF SURVEYING CAPACITY NECESSARY TO CONDUCT BOTH COASTAL AND OFFSHORE SURVEY PROJECTS**

8. In accomplishing Phase 2, the NN has developed reasonable manpower that could survey both ports and port approaches, as well as coastal and offshore waters. At the moment, we have 20 Category A qualified officers, 19 Category B qualified officers, 4 Survey Recorders class 1 qualified and over 350 ratings trained in SR 2 and 3. The available manpower is grossly inadequate considering the extent of our coastal and territorial waters. Regrettably, the economic conditions have made it nearly impossible to send more personnel for overseas training. This is the more reason the NNHO is seeking for accreditation and designation of the NNHS as the regional training centre to boost our manpower capacity. We are counting on your support to achieve this objectives. It is important to note that the Office has conducted survey of some important locations and major creeks in Nigeria for effective naval operations. However, insufficient equipment and lack of survey vessel limits the efforts of the NN to fully develop hydrographic survey capacity, in line with Phase 2 of the IHO Capacity Building Strategy. The Office is presently configuring a boat at Naval Dockyard Limited to conduct surveying operations within the internal waters, which is a priority area for the Government due to security challenges emanating from these areas.

9. On the establishment of facility for database, the newly established server for MSI is configured to serve as data repository facility with space to hold up to 2 Terabyte of data, with provision for expansion in future. Currently, the Office has started collecting bathymetric data from survey companies, which would serve various purposes both to the NN and mariners when fully developed.

### **PHASE 3 - CAPACITY TO PRODUCE PAPER AND ELECTRONIC CHARTS, AS WELL AS NAUTICAL PUBLICATIONS INDEPENDENTLY**

10. The activities involved in Phase 3 include training in chart production, acquisition of nautical charting infrastructure and development of Marine Spatial Data Infrastructure, as well as production of nautical publications. In this regard, the NNHD is yet to achieve up to 30 percent. This is because, the Department has no trained cartographer and is yet to acquire appropriate infrastructure for charting and marine spatial data development.