

COUNTRY REPORT: NIGERIA

INTRODUCTION.

1. RHC Involvement. Nigeria is a member of the IHO and participates in the EAHC and attended the most recent Regional Conference. A National Report is not produced. Nigeria has enjoyed a good working relationship with the UKHO in the past, however, this was interrupted by the period of military rule and has yet to be fully re-established at all levels.
2. Preliminary Liaison. The Nigerian Navy Hydrographic Office (NNHO) coordinated the visit programme. In preparation for the visit all main stakeholders in hydrographic surveying were invited to form a Technical Working Group (TWG). These bodies included:
 - Nigerian Ports Authority (NPA)
 - Nigerian Inland Waterways Authority (NIWA)
 - National Maritime Authority (NMA)*
 - Government Inspectors of Shipping (GIS)*
 - Master Mariners Association*In the process of merging to form the National Maritime Safety Administration Authority (NMSAA)

The formation of a TWG prior to the WAAT visit clearly demonstrated Nigeria's resolve to raise awareness of the importance of hydrographic matters and to create a new national focus group to revitalise hydrographic surveying within the country. The main objective of the TWG is to develop a National Hydrographic Commission which would bring together all these agencies under a central umbrella organisation to improve coordination of hydrographic activity and circulation of hydrographic information. The WAAT visit provided the opportunity to raise this issue with the relevant ministries at the highest level and to discuss the details with stakeholders at the working level. It was clear to the team that all of the agencies involved were dissatisfied with the current situation and that significant improvements could be made by making better use of the existing human and material resources. This report will summarise the team's observations and make recommendations, noting that the work of the TWG should continue until it has accomplished its main objective.

3. Points of Contact. The IHO yearbook entry was updated during the visit. The entry for staff employed should be replaced with the following details:

Staff Officer Hydro (Administration):	Cdr RO OMIGIE
Staff Officer (Nautical Cartography):	Lt Cdr AO ADESINA
Staff Officer (Hydro Surveys):	Lt Cdr MM CHUKWU
Staff Officer (Tides):	Lt Cdr M SALEH
Officer-in-Charge Hydrographic School:	Lt Cdr AZ MUAZU

Whilst the NN Hydrographer remains the national Hydrographer, other agencies represented in the TWG are either engaged in hydrographic surveying or have a need for hydrographic services.

DESCRIPTION OF MARITIME ACTIVITIES.

4. National Maritime Affairs. Nigeria has a population of over 120 million and a growing economy fueled by the exploitation of hydrocarbons. The maritime sphere plays a vital role in this growth. Over 80% of Nigeria's trade is conducted by sea. Southern Nigeria is dominated by the combined delta area of the Niger and Benue river systems which provide extensive inland waterways and numerous inland ports. Oil and Gas products are extracted both onshore and offshore. It is estimated that 80% of Nigeria's oil and gas production will be located offshore by 2010. Income

from exported crude and refined oil products is estimated to have generated some \$300 billion earnings over the last 25 years.

5. Nigeria does not have any natural harbours on the coast, all of the ports have been developed inside the vast system of river tributaries of the Niger-Benue delta. Congestion is a problem at most ports, where there is no space for expansion on the network of islands and increasing pressure on land access routes due to high traffic density and poor road networks. Although the inland waterway system is extensive it suffers from heavy siltation and continuous maintenance dredging is needed to keep routes open. The coastal ports act as transshipment points between ocean, coastal and inland routes. The WAAT was only able to visit Lagos and witnessed a very busy scene with many ships working alongside, berths being upgraded, and plenty of economic activity taking place in the immediate port area.
6. Offshore oil and gas fields under production are mainly concentrated in the Eastern area off Port Harcourt. Several major pipelines come ashore, however there is a recent trend towards the introduction of Offshore Production, Storage and Offloading Vessels (OPSOV).
7. Trade and Maritime Traffic. The major ports are Lagos and Port Harcourt, with numerous other ports and terminals serving the oil industry and coastal trade.
8. Through Routes. Nigeria serves as regional hub for trade between West African countries in the Gulf of Guinea. Inland waterway routes also extend into Cameroon and Benin.
9. Transshipment. Lagos and Port Harcourt serve as the major hub ports between the sea and inland waterway and road traffic routes. Container traffic mostly arrives at Lagos.
10. Bulk Trades. The main dry bulk import is cement. Refined petroleum products are shipped from Warri and Okrika and received in Lagos. There are several crude oil terminals in the eastern part of Nigeria, headed by Qua Iboe, Forcados and Bonny.
11. Feeder, Coasting and Local Trade. Considerable trade and passenger traffic is moved by sea and inland waterway within and beyond Nigeria, however many routes could not be used due to lack of dredging and reliable hydrographic information. It was reported that congestion on the road and rail links out of the major ports would be eased if more traffic could be switched to these waterways.
12. Offshore Supply and Support. Oil exploration and production platforms are numerous in the offshore areas. The recent introduction of FPSO/FSOs is a cause for concern due to their large size – up to 300,000 tons and capable of holding 2.5 million barrels of crude oil. The position and safety zones of these moored vessels need to be well promulgated and understood by mariners. This aspect was commented upon by the National Maritime Safety Administration Authority during the WAAT visit, and has been a spur to making headway with the development of GMDSS in Nigeria.
13. Tourism - Cruise Liners and Small Craft. There is no significant cruise-line traffic, however, plenty of passenger traffic between Nigeria and other West African states takes place – often in vessels overloaded and not designed for this purpose.
14. Fisheries. Most Nigerian fishing is limited to artisanal fisheries on the coast and inland waterways. Offshore fishing is carried out by licensed foreign vessels. Anecdotal evidence suggested control or policing over the offshore fishing activity was limited.
15. Responsibility for Safety of Navigation. Responsibility for safety of navigation is divided between the ministries of Defence and Transport, and between different departments within the Ministry of Transport. From the mariner's perspective, safety should be seamless and fully provided for in all areas of the maritime environment. A vital element of the WAAT visit was to explore this aspect with all the relevant authorities around the same table. The areas of

responsibility for each individual authority, together with comments arising from the discussions are as follows:

16. Nigerian Navy Hydrographic Office (NNHO). NNHO has responsibility for ensuring the provision of hydrographic services throughout Nigerian waters. This includes the production of Tide Tables and circulation of Notice to Mariners (these are issued through Chief of Training and Naval Operations). The NNHO approves all requests for mineral exploration, production or pipeline activities such as offshore surveys, rig moves and pipeline lays. (The WAAT noted that NPA and NIWA also reported they provided such permissions for activity within their areas of jurisdiction). Besides giving permissions, the NNHO also embarks in vessels conducting offshore surveys in order to ensure their activities are in accordance with agreed terms. Although charged with the responsibility for conducting hydrographic surveys in Nigerian waters, the NNHO has neither the ships nor equipment to be able to do so at present. NNHO also has responsibility for maintaining a wrecks database. The NNHO is the official point of contact with the UKHO which currently acts as the primary producer of charts of Nigerian waters and is therefore reliant on Nigeria for the supply of updating information.
17. The Nigerian Port Authority (NPA). NPA has responsibility for the maintenance of channels, provision and maintenance of nav aids, and the promulgation of local Notices to Mariners (NtMs) within the designated NPA limits. These limits normally extend from the fairway buoy to the limit of port areas, however there appeared to be some overlap with NIWA where port facilities were developed in creeks that were not officially under NPA jurisdiction. This emphasized the need for close co-operation between the two authorities to ensure that provision of hydrographic support for safe navigation was not neglected in such cases.
18. National Inland Waterways Authority (NIWA) has responsibility for the safety of navigation on the inland rivers, tributaries, creeks and lagoons where they are not otherwise under the jurisdiction of the NPA.
19. National Maritime Authority (NMA) and the Government Inspector of Shipping (GIS) is in the process of merging to form the Nigeria Maritime Safety Administration Authority (NMSAA) and has responsibility for overall Maritime Safety matters and the implementation of international shipping regulations. The NMSAA are, amongst other things, actively involved in developing national capability in Search and Rescue (SAR) and pollution monitoring and control. To support these programmes the WAAT was updated on plans to procure the necessary communications equipment and training to set up GMDSS with a A2 capacity in Nigerian waters. More details of the planned SAR capability are given elsewhere in this report. NMSAA are also actively investigating setting up a Vessel Traffic Management Scheme to improve safety in Nigerian waters. GIS is the appointed receiver of wrecks and has responsibility for identification and recovery of wrecks. It was noted that GIS had produced a recent catalogue of the many wrecks that exist in Nigeria (well over 200 are located in the Lagos area). The NNHO are responsible for maintaining a wreck database and promulgating NtMs as well as informing the responsible charting authority where appropriate.
20. Defence Force Responsibilities. The NN has responsibility for carrying out patrols in support of fishery protection and operations to counter illegal trafficking; however, the capability was reported to be severely limited and rarely employed. Likewise there is no significant NN capability to engage in SAR operations. The NN does have requirements for improved hydrographic data to support naval operations but no specific plans have been made. It was clear from the meeting with the Minister of Defence (Navy) that funding of hydrography within the NN had been curtailed during the years of military rule and the investment needed to revitalize the capability for effective management of a national hydrographic service would not be found from entirely within the defence budget. The NN has a consultant (Mr Tony Hicks) investigating alternative ways of generating revenues from the maritime sector to fund 'hydrographic support services'. This innovative approach may improve the current situation, but should not be taken in isolation of the wider need to place all responsibilities under a central body that is properly funded to carry out its national role.

21. Coastal Zone Management and Environmental Protection. The WAAT were informed about severe problems of coastal erosion to the east of the entrance to Lagos, where the sandy foreshore has receded inland as much as 2 kilometres in the last 30 years. This has reportedly been caused by the construction of Lagos breakwater to protect the port entrance. Efforts to date have failed to halt the erosion process which now threatens roads and property. The effects are proving to be very costly and demonstrate the importance of understanding marine processes in sensitive coastal regions. Anecdotal evidence suggested that there is insufficient understanding or control of potentially damaging activities (such as removal of sand, or building of breakwaters) in coastal regions. Pollution due to crude oil spills was also reported to be a problem, particularly where pipelines or storage tanks have been deliberately tampered with. Many of the wrecks in shallow water were said to be sunken barges used in illegal oil transfers. This matter was of particular concern to the Minister of Transport. He also considers it a priority to open up inland waterways in order to relieve congestion on the national road network.

CAPACITY ANALYSIS.

22. Status of surveys within the National Maritime Zone. Charting in Territorial Waters generally relies upon leadline surveys of 150 years ago, with some later lead-line surveys prior to 1950s and a few more modern surveys during the 1950s. Only major port approaches have received attention since 1960. Outside territorial waters the remaining EEZ has not been systematically surveyed; charts rely upon sparse miscellaneous passage soundings. It is probable that not all offshore installations and pipelines are correctly charted and certain that many wrecks remain uncharted.
23. Considerable amounts of offshore survey data have been collected by commercial oil companies during exploration, drilling and pipeline operations. It was reported that whilst the survey data was legally available to the Nigerian Government it was rarely received in a form that could be interpreted for the purpose of updating bathymetric charts. The NNHO does not have the technical means or expertise to extract bathymetric data from these survey records and consequently has approved the conduct of surveys without insisting on receiving the results. This is thought to be a potential source of data worthy of renewed investigation. Accurate details, in particular positions, of offshore works in progress and permanent installations and pipelines should be considered essential. A more co-operative approach with the commercial survey companies should be pursued, fully explaining the national requirement for charting information and the advantage to oil companies in promulgating accurate positions to avoid damage to their installations.
24. Collection and Circulation of Nautical Information. This crucial process was in need of review and reorganization. NPA have responsibility for local NtMs which affect the port areas whilst NNHO are responsible for regional NtMs and passing such information back to the UKHO if wider promulgation or charting action is required. Information on wrecks and offshore activity by oil companies is supposed to be collated by the NNHO, but it was generally acknowledged that not all dangers to navigation were necessarily promulgated to mariners and that more information should be passed to the UKHO for charting action. It was agreed that NNHO should be more proactive in its role as focal point for the collection and circulation of nautical information and it should strengthen its links with the UKHO to ensure that published information reflects the actual situation the mariner is likely to find in Nigerian waters. As part of this role the NNHO should maintain information databases on wrecks, offshore structures and pipelines, tidal information, lists of lights and radio signal stations. This will require close co-ordination with other agencies that have responsibilities in these areas.
25. NPA have been more active in providing updates to nautical information within the port areas to the UKHO for charting action, although in the recent past this flow of information has reduced.
26. Survey Capability. The NNHO does not possess a survey capability and has not conducted any survey work for several years. In the absence of any capability the WAAT found there was no planning or prioritization of the national civil or defence survey requirement. This is required as a first step prior to deciding what survey work should be carried out and by what means (the choice

might vary between the use of national surveying resources or the use of contracts with commercial survey companies). The training school and equipment was not visited but was reported to be in a state of neglect due to lack of funds.

27. On the other hand NPA have a proven capability to conduct survey work on a planned basis, using trained and enthusiastic personnel. The WAAT visited the NPA offices and saw the equipment store and cartographic office. A limited amount of modern DGPS equipment, interfaced with digital echo-sounder is used to conduct survey work. Survey sheets covering Apapa in Lagos were produced in 1999-2000 and similar survey work had recently been completed at Calabar and Port Harcourt. Local charts had been produced from this data and were available for local sale. The NPA survey vessel HRV ARGUNGU is refitting at present, but lack of funds had delayed completion of the work. The vessel was seen in a floating dock at Apapa dockyard, where it has been for the last 4 months. It is due to be towed to a foreign port for completion of refitting, subject to funding. NPA make use of smaller harbour launches with portable equipment embarked to conduct routine survey work within the port areas.
28. NIWA have a pressing need to survey the inland waterway system in order to prioritize plans for dredging operations and carry out checks on post dredge surveys. Despite having trained surveyors they lack funding for equipment. NMSAA are a relatively well-funded national authority who need hydrographic expertise to ensure positions of wrecks and offshore activities are properly fixed and promulgated and that MSI is properly collected and distributed.
29. Independent Chart Production Capability. NPA are actively developing the ability to produce local port charts based on their own surveys. The WAAT were briefed on the difficulties that had been encountered by the local cartographer in converting survey data points into sounding characters for chart display using non-cartographic software. One of the locally produced charts had been briefly examined by the UKHO prior to the WAAT visit and a number of questions were relayed to the NPA survey department. It is hoped that a closer relationship with the UKHO on cartographic matters will assist NPA in their endeavours. Although NPA offer their charts for local sale it was suggested that the information should also be reflected on the published Admiralty charts that are available world-wide and updated weekly. The exchange of data with UKHO under a bi-lateral arrangement should be actively considered.

PROPOSALS FOR CO-ORDINATION AND CAPABILITY BUILDING.

30. National Hydrographic Committee. The WAAT found consensus at both ministerial and local level that a national body should be formed to bring together all the current stakeholders in hydrography. The aim would be to ensure that the Government of Nigeria met its international obligations under SOLAS and developed hydrographic services to meet national and regional requirements. The terms of reference should include proposals for recovery of revenues as a means of funding these services. Draft terms of reference were discussed during the WAAT visit. During these discussions it became clear that Maritime Safety covered a number of aspects other than hydrography, such as SAR and Oil Spill Response. In order to maintain the focus on the requirements under SOLAS Chapter V, Regulation 9, the TWG agreed the need for a NHC that would be specifically responsible for overseeing hydrographic services.
31. MSI Organisation and GMDSS. The collection and circulation of nautical information was recognised as being only part of the broader need for MSI which should include promulgation of meteorological and distress information. The current organization for distributing MSI mainly relies on local port authorities and does not have a central 'clearing house' for navigation warnings. At present there is no SAR organisation, however NMSAA are mentioned below.
 - a. MSI (Navigational Warnings). Local warnings were generated by Harbour Masters for transmission on VHF to ships in the area. It was understood the offshore industry had many unofficial means of passing information which largely by-passed the local organizations. France, as NAVAREA II co-ordinator noted that absolutely no MSI had been received for transmission on SafetyNet. It was clear that much could be done to improve the MSI organization by better co-operation between NNHO, NPA and NMSAA

at the working level, and initiating contact with the NAVAREA II co-ordinator. The larger vessels operating with dangerous cargoes in Nigerian waters should be able to expect to receive MSI, even if it is only via INMARSAT.

- b. Information on Ports and Harbours. Local NtMs are distributed by NPA. More permanent information is passed to UKHO for charting action. There was no up to date handbook available on the ports and harbours of Nigeria. This would be a useful addition to assist mariners. It was noted that the Admiralty Sailing Directions were in the process of being updated and the UKHO would be able to include the latest information and photographic views if they were supplied.
- c. GMDSS Status. NMSAA gave a brief summary of current plans to develop SAR and pollution control capabilities. This will involve the setting up of a GMDSS and INMARSATC network for a Maritime Regional Co-ordination Centre in Lagos and 3 RCCs at Warri, Port Harcourt and Oron. This project will make a significant improvement to the current situation, although it was emphasized that MSI is only as good as the organization that produces the information. The WAAT advised NMSAA to keep IMO fully informed of these plans, which are related to recommendations made at the Florence Conference in 2000. Nigeria should update information in the IMO Master Plan and the Admiralty List of Radio Signals (Volume V).

32. Hydrographic Capability. The overall lack of hydrographic capability in Nigeria appears to be due to under-funding. During the WAAT visit government ministers were sensitized to the issue. Funding for hydrographic capability and services should come more from revenues gathered from the beneficiaries of nautical information. The situation would be improved by taking many of the NNHO responsibilities out of the Defence area and into a national body responsible for hydrographic services. In doing so it could be that the existing expertise within the NNHO could be employed in the staff officer role at the core of a national hydrographic service. Whatever way forward is chosen it was observed that a re-organisation of resources could make a significant improvement to the current situation. As a minimum, better co-ordination is needed between the existing agencies, some of which have equipment, but lack training, and others who have trained staff but lack equipment and funding.

- a. Provision of Survey Data. A key proposal was to revitalize the flow of information needed for updating the published charts of Nigerian waters. Subject to the possibility of a bi-lateral agreement, NPA agreed to the release of recent surveys carried out in Lagos, Port Harcourt and Calabar. The NNHO undertook to provide updated lists of offshore platforms, rigs and pipelines, plus wreck information – none of this information was readily available at the time of the WAAT visit.
- b. Survey Capability. NPA possess a proven ability to undertake and process surveys. Although their survey vessel is currently being refitted there is no obstacle to using portable equipment on craft of opportunity to continue with surveys within the port areas. The NNHO reported that the offshore survey vessel NNS LANA was no longer fit for the task and neither were the survey boats at Port Harcourt. Likewise all equipment was reported to be too old or defective to be of any use. Hence, there seemed to be no survey capability to undertake tasks outside of the port areas such as checking positions of offshore installations, monitoring the coastline and fixing wrecks. There must, however, be a wealth of commercial position-fixing systems (DGPS) and survey equipments being used in support of the oil and gas industry. Greater collaboration with industry might pay dividends in this respect.
- c. Chart Production. NPA have produced a series of harbour charts which are offered for local sale. Whilst not fully conforming to IHO standards, these charts represent a considerable achievement by a small unit. It was not possible to assess the way in which survey data had been collected and processed, however the UKHO would be able to offer a full appraisal process if requested. It was recommended that the information should also be reflected on the published Admiralty charts that are available world-wide and updated weekly. It was further recommended to set up a bi-lateral agreement with the UKHO covering the exchange of information. With such an agreement the UKHO could provide advice, training and technical support to NPA in exchange for survey data.

33. Potential for Regional Activity. At this stage of development in hydrographic services there appeared to little potential for regional collaboration, except in the provision of a regional DGPS system. It was recommended to take commercial advice on what was already being provided to industry in this respect.

PROPOSALS FOR ASSISTANCE.

34. Training. NNHO has several trained hydrographic surveyors, but the lack of practical surveying experience means that skills will fade. A training needs assessment should be carried out in order to clarify who needs what training to perform which tasks in the re-ordered organisation of the future. A Category A trained officer will almost certainly be needed in order to get to grips with defining national hydrographic requirements (both civil and defence requirements) and prioritizing the work so that sensible equipment procurement decisions can be made. UKHO is currently sponsoring a NN officer on a 3 year degree course at Plymouth university, but his return to Nigeria will not be until 2005. A place on the Category A course at the UK Royal Naval Hydrographic School might be available in the next financial year if a suitable candidate can be nominated. The US also offer a Category A course for international students. Separately, the NNHO has recently trained an officer on the nautical cartography course at the IMA Trieste. His skills should be a useful addition to the national hydrographic effort and must be put to good use if they are not to fade.
35. NPA are in need of an additional trained surveyor (IHO Category B) who can assist with the quantity of field work needed to monitor and update hydrographic information in the main Nigerian ports. The US course was suggested as the most appropriate option if a suitable candidate can be identified. There is also a need for cartographic training for the person currently employed in the NPA cartographic Office. UKHO might be able to provide such training within the context of a bi-lateral agreement.
36. NMSAA reported a lack of qualified personnel to provide advice on positioning techniques and transformations. The NNHO should be able to loan expertise and the UKHO would be available to give specialist advice to help resolve problems. It may be desirable for the NMSAA to qualify their own personnel, but the immediate solution might be found in sharing existing knowledge between NNHO and NMSAA. Details of all available training courses were left by the WAAT with the NNHO.
37. Equipment. NNHO reported having no modern surveying equipment and none was seen during the visit. The WAAT made the observation that for certain surveying tasks a lot can be done with very little equipment – particularly such tasks as checking of navigational aids and updating Sailing Directions. The addition of a simple GPS receiver enables the positioning of wrecks, plotting of coastline and surveying beaches. For greater accuracy a DGPS receiver is needed, but these can be hired for specific tasks. For monitoring the position of offshore installations and activity it would be advantageous to discuss equipment plans with the oil industry, drawing on their experience and possibly seeking a collaborative solution. It was reported that a consultant was investigating ways of financing an equipment budget from shipping revenues. The WAAT advised that any new equipment should meet the needs of national survey requirement – it may be that several small units would be much more appropriate than a single large offshore vessel.
38. Funding. During discussions with the WAAT it became very clear that funding has been a major difficulty for the NNHO during and since the years of military rule. This was recognized at Ministerial level and must be addressed if the NNHO is to be able to make a significant contribution to the national hydrographic effort. Given the importance of the maritime sector to the Nigerian economy and the wealth generated by maritime activities, it should be possible to fund the much needed provision of hydrographic services. These services are essential for maritime safety and the development of maritime trade. These arguments were well understood by the Ministers of Defence (Navy) and Transport – it is now vital to take the necessary steps to place funding where it is needed to develop a national hydrographic service. This may require the

transfer of funds between different government departments or more imaginative ways of raising revenues to fund hydrographic activities. The WAAT drew attention to the information in IHO Paper M-2 and noted that the IHB and other members of the RHC would be available to provide further advice.

FOLLOW UP ACTIONS.

39. Encouragement of Formation of a NHC, Development of a National Hydrographic Strategy, and RHC Membership. The proposal to form a NHC was endorsed by all the members of the Technical Working Group and also received a positive response from the Ministers of Defence (Navy) and Transport. Nigeria should forge ahead with the proposal and form a NHC, drawing on the draft terms of reference that were discussed during the WAAT visit. This will bring together all the interested parties so that the hydrographic requirements of the nation can be addressed in one forum. The IHB and UKHO are willing to assist in the process of defining a hydrographic strategy for the future charting and maritime safety in Nigeria.

Action: Nigeria, IHB and UKHO

40. Encouragement of Effective and Timely Collection and Promulgation of Hydrographic Information.

- a. As discussed during the WAAT visit, Nigeria should forward the latest information on: all uncharted wrecks that pose a danger to navigation; the position of offshore installations, FPSO/FSOs and pipelines; the status of lighthouses and floating navigational marks. Most of this data must already exist and needs to be incorporated onto the published Admiralty charts. UKHO will take appropriate charting action on receipt of the information from the NNHO.

Action: Nigeria (NNHO/NMSAA/NPA)¹

- b. NPA agreed to forward to UKHO copies of the latest surveys completed in Lagos, Port Harcourt and Calabar. If NPA agree, this could be done in the context of a bi-lateral arrangement with UKHO. UKHO will then incorporate the data into Admiralty charts and publish new editions. It is hoped that regular updates on hydrographic information, including the results of dredging surveys can be provided to the UKHO in the future.

Action: Nigeria (NPA) and UKHO

- c. Nigeria should establish a link with the NAVAREA II Coordinator at EPSHOM (Brest) and take advantage of the offer to provide MSI for broadcast on SafetyNET to vessels in Nigerian waters.

Action: Nigeria, NAVAREA II Co-ordinator (France)

- d. The IMO and sub-regional group members should be kept fully informed of developments in GMDSS and SAR operations in line with the recommendation of the IMO Conference in Florence, 2000.

Action: Nigeria (NMSAA)

41. Encouragement of Development of Hydrographic Capability. The development of a more effective and national hydrographic capability under a NHC will need to draw on experience and advice from established HOs within the RHC and the IHB.

- a. The UKHO should consider providing advice or sending an expert team to Nigeria for a short period to assist with setting up a national hydrographic office.

Action: UKHO

- b. Nigeria should draw on the advice provided in IHO publication M2 (National Maritime Policies and Hydrographic Services) as well as expert advice from the IHB.

Action: Nigeria and IHB

¹ Details of several positions of Offshore FPSO/FSOs, confirmed by a joint NMA/NNHO team, were received by UKHO for NtM and charting action soon after the WAAT visit.

- c. When considering investment in a national DGPS system, Nigeria should investigate the potential for a regional solution, taking advice from the oil industry who must already have systems in place.

Action: Nigeria

- d. Nigeria should endeavour to recover more hydrographic information from the activities of commercial companies in the offshore industry. This information should be archived, together with all other national hydrographic information, and forwarded to the UKHO where appropriate, for improving the accuracy of published charts.

Action: Nigeria