1. Nigeria is a littoral nation with a coastline of about 840 km and a network of over 3000 interconnecting rivers and creeks. It also has an Exclusive Economic Zone of about 62,000 Square nautical miles. The Nigerian Navy (NN) is the agency statutorily charged with the responsibility of hydrographic surveying and nautical charting of Nigerian waters. This mandate is discharged through the Nigerian Navy Hydrographic Office (NNHO). In this regard, the NNHO corporates closely with the Nigerian Ports Authority (NPA) and Nigerian Maritime Administration and Safety Agency (NIMASA) who also have mandates for hydrographic surveying within their various areas of responsibility.

2. During the period under review, Nigeria has made appreciable efforts to improve on her hydrographic surveying capacity and capability. This report will give highlights of Nigerian hydrographic organisations and their activities.

**HYDROGRAPHIC ORGANISATIONS**

3. **Nigerian Navy Hydrographic Office.** The NNHO has overall superintendence of Hydrographic and oceanographic surveys in Nigerian water up to the limits of the EEZ. The office is headed by the Hydrographer of the Nigerian Navy who acts as the sole National authority on hydrographic, charting and tidal matter. He represents the Federal Government of Nigeria in international bodies and forums on hydrographic and oceanographic matter. The Hydrographer is assisted by two deputy directors and a number of staff officers. The organogram of the NNHO is as shown below.
Figure 1. Organogram of NNHO

4. **Nigerian Ports Authority.** The NPA Hydrographic and Dredging Department is responsible for all hydrographic survey and dredging operations within the perimeters of Nigerian ports. They are also responsible for the establishment and maintenance of all aids to navigation within the ports. These duties are performed through a number of joint venture agreements with some channel management companies.

5. **Nigerian Maritime Administration and Safety Agency.** The Hydrographic Survey Services Unit of NIMASA was established in 2005 to provide hydrographic services in areas pertinent to national maritime safety administration. This mandate is executed through a collaboration with the NNHO. The Unit is headed by an officer of the NN and operates under the direct supervision of the Executive Director of Maritime Safety and Shipping Development.

**SURVEYS**

6. **Coverage of New Surveys.** NPA in conjunction with its Joint Venture Partners, Lagos Channel Management and Bonny Channel Management companies carry our regular hydrographic survey and maintenance dredging of the Lagos and Bonny Channels. Also parts of
Apapa harbour were surveyed by the NNHO in collaboration with the Norwegian Survey Team as part of the African Wind Programme during the 2013 Africa Partnership Station. Furthermore, bottom profiling surveys were carried out at the approaches to Lagos by NIMASA in conjunction with Messrs TAMTAM Projects Limited. The survey was carried out to better assess the existence of guyots and other forms of navigational hazards around the Lagos Harbour Entrances. Other minor surveys carried out during the period under review include surveys of Naval Ordinance Depot and Ibeche beach.

7. **New Hydrographic Equipment.** The NNHO recently acquired some hydrographic equipment. These include an Echo track CVM Dual Frequency Echosounder, Digi bar Sound velocity Profiler, HYPACK and CARIS Software. Also, NIMASA acquired a set of STARFISH 450 SSS equipment and HYPACK Survey tools and dredging management applications. Other equipment and software acquired by NIMASA include a TRIMBLE GPS 560 and CARIS Suite Application software. Furthermore, the Unit is in the process of acquiring an Atlas Deso 35 Echosounder, a Phaser Multi-Purpose Copier / Chart Printer and a Portal V-SAT Data Telemetric Equipment.

8. **Survey Boat.** The NNHO has also secured the use of a NN patrol boat as a vessel-of-opportunity for hydrographic survey pending the acquisition of a dedicated hydrographic vessel for the office. This would help to enhance the survey capability of the office in the interim and ensure that nautical charts are based on sufficient and current information for safe surface navigation.

**MARITIME SAFETY INFORMATION**

9. Maritime Safety Information (MSI) is managed by the Hydro Unit in NIMASA. The Unit has built a facility to accommodate its MSI infrastructure. The MSI Portal is scheduled to come on-stream in 2015. NIMASA MSI is peculiar in its design as it has capacity to serve as a hub for hydrographic surveys planning as well as a take-off point for survey projects. This infrastructure will also serve as an MSI data collation and dissemination centre for the country.
CAPACITY BUILDING

10. The Nigerian Navy has continuously trained its officers and men both locally and in foreign institutions. The Nigerian Navy Hydrographic School (NNHS) offers only the Survey Recorder (SR) courses namely: SR III and SR II courses. However, the NN has initiated efforts to commence a Pre Basic Hydrographic Course at the School as a precursor to an IHO accredited Basic Hydrographic Course.

11. Some of the hydrographic training achievements during the period under review include:

   a. A Navy officer from the NNHO is undergoing a Cat ‘A’ Masters in Hydrographic Surveying course in the University of Southern Mississippi as part of the Republic of Korea Capacity Building Project.

   b. Five Navy officers are attending the Officers’ Long Course Hydrography in India.

   c. Five Navy officers are undergoing the Basic Hydrographic Surveying Course at the Bangladesh Navy Hydrographic School.

   d. A staff of NIMASA was recently trained in CARIS HIPS and SIP (7.0) / CARIS Bathydata BASE.

   e. Two person from the NNHO are billed to attend the Multibeam Sonar Training Course in Singapore later this year.

   f. Two Navy officers are attending a post graduate diploma course in Geographic Information System at the Federal School of Survey Oyo, Nigeria.

12. In spite of the progress made in hydrographic training, the NNHO still lacks nautical cartographers and oceanographers. Accordingly, it is open to any training opportunity in these area. Other areas of professional deficiency are in database management and GIS.
CONCLUSION

13. Nigeria has made appreciable improvement in her survey capability and capacity during the period under review. Maintenance surveys have been carried out regularly in the Lagos and Bonny Channels. Also various survey equipment and software have been acquired. Furthermore, a number of officers are currently undergoing various CB programmes in hydrography. Despite the progress made so far, the NNHO still lacks nautical cartographers, oceanographers and database managers.