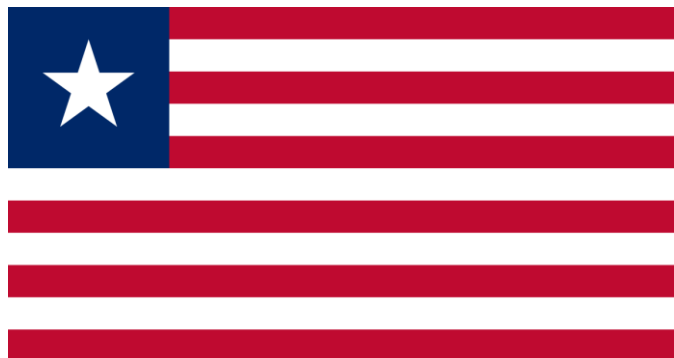


IHO Capacity Building Programme

TECHNICAL VISIT REPORT

The State of Hydrography and Nautical Charting in the Republic of Liberia



14th – 16th January 2026

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With thanks to the following organisations in Liberia:



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ABBREVIATIONS

AtoN	Aids to Navigation
CBSC	IHO Capacity Building Sub-Committee
DGPS	Differential Global Positioning System
ECDIS	Electronic Chart Display and Information System
EEZ	Exclusive Economic Zone
ENC	Electronic Navigational Chart
FIG	Fédération Internationale des Géomètres (International Federation of Surveyors)
GIS	Geographic Information System
GMDSS	Global Maritime Distress and Safety System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HSSC	IHO Hydrographic Services and Standards Committee
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IBSC	International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers
ICA	International Cartographic Association
IHO	International Hydrographic Organization
IOC	Intergovernmental Oceanographic Commission
IMO	International Maritime Organization
IMSAS	IMO Member State Audit Scheme
INT	International
IRRC	IHO Inter-Regional Coordination Committee
LORAN	Long Range Navigation System
MS	Member State
MSDI	Maritime Spatial Data Infrastructure
MSI	Maritime Safety Information
NC	Nautical Charts
NHS	National Hydrographic Service
NHC	National Hydrographic Committee
NHCC	National Hydrographic Coordination Committee
NtMs	Notice to Mariners
PCA	Primary Charting Authority
RENC	Regional ENC Coordinating Centre
RHC	Regional Hydrographic Commission
RNC	Raster Navigational Chart
SOLAS	[United Nations] Convention for the Safety of Life at Sea
TSS	Traffic Separation Scheme
TTW	Territorial Waters
UN	United Nations
UNCLOS	United Nations Convention on Law of the Sea
WMO	World Meteorological Organization
UNGGIM	United Nations Global Geospatial Information Management
WWNWS	World Wide Navigation Warning Service

EXECUTIVE SUMMARY

The Technical Visit to the Republic of Liberia assessed the current status of national hydrographic and nautical charting arrangements, identified strengths and gaps, and provided recommendations to support the progressive development of sustainable hydrographic services in accordance with international obligations.

Liberia has a strong maritime profile internationally through its ship registry and is a Member State of the International Maritime Organization (IMO). The visit identified growing awareness among national stakeholders of the importance of hydrography to the safety of navigation, maritime security, environmental protection, and economic development. However, Liberia remains at an early stage of developing a coordinated national hydrographic capability.

Technical Visit

This Technical Visit was approved under the EAthC Capacity Building Programme and approved for funding in the CBSC 2025 Workplan. The last Technical Visit to Liberia was undertaken in 2016. Progress has been made since that visit and this mission assessed the current status and provided updated recommendations.

General Awareness in Liberia

Liberia is a full member of IMO (since 1959) and is currently not a member of the International Hydrographic Organisation (IHO). The IHO 2016 TAV and recent IMSAS audit have led to increased attention to hydrographic services in recent years, with stakeholders displaying a good understanding of the need and challenges. Stakeholders expressed a need for support and guidance in implementing adequate hydrographic services in Liberia.

International Obligations of Liberia

As the largest ship registry in the world there is a good awareness of SOLAS obligations in Liberia. Liberia had their IMSAS audit in 2024 with some findings related to the provision of hydrographic services. In 2024 the Liberia Maritime Authority (LiMA) was given the mandate to implement Hydrographic Services in accordance with SOLAS. Progress has been made by establishing a National Maritime Committee, including a Sub-committee on Hydrography.

Certified Personnel

There are no certified or experienced hydrographic surveyors or marine cartographers identified within the relevant government agencies in Liberia. There is an ambition to progress the provision of adequate hydrographic services and to develop a national hydrographic capability. Membership of the IHO would provide access to relevant training capacity development opportunities.

Hydrographic Survey & Nautical Cartography Capability

Liberia has no local hydrographic survey or nautical cartography capability. Hydrographic surveys are conducted as part of port dredging operations by overseas contractors. Nautical cartography requirements are delivered through a Primary Charting Authority, the UKHO, formalised in an agreement.

Maritime safety, and marine weather information for the Monrovia area, is promulgated by the Safety of Navigation Department of LiMA and shared with the NAVAREA II coordinator and UKHO. No NAVTEX or SafetyNet systems are in place.

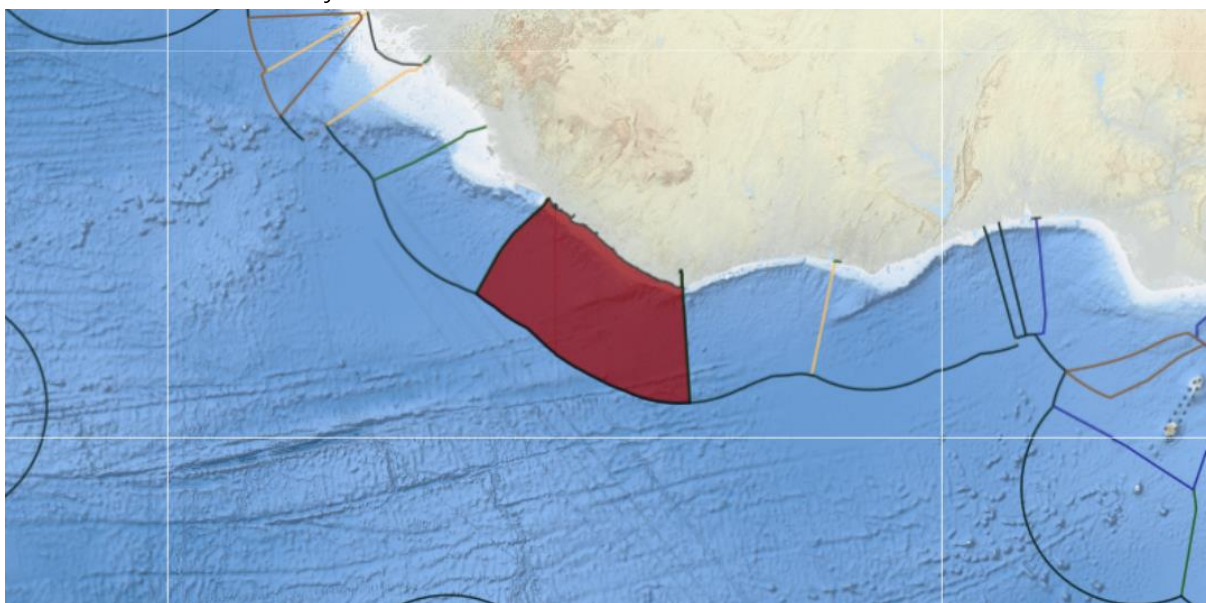
Liberia is in the early stages of developing a hydrographic capability and has taken important first steps by forming its National Maritime Committee and Sub-committee on Hydrography. The Technical Visit team thanks stakeholders in Liberia for their positive engagement during the Technical Visit and identified the following priority actions:

- Develop a hydrographic services strategy and secure ongoing funding.
- Further develop the MSI capability beyond Monrovia.
- Build human capacity through training and certification.
- Develop or secure a sustainable survey capacity.
- Identify priority survey areas of national interest.
- Ensure ongoing data sharing with Primary Charting Authority.

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REPORT OF TECHNICAL VISIT TO THE REPUBLIC OF LIBERIA

Date: 14th – 16th January 2026



Source: <https://www.marineregions.org/eezdetails.php?mrgid=8391&zone=eez> – Flanders Marine Institute (2026): MarineRegions.org. Available online at www.marineregions.org. Consulted on 2026-01-30.

Reference(s):

- A. [EAthC Capacity Building Status Report 2025](#)
- B. [IHO Publication M-2 The Need of National Hydrographic Services – Version 3.0.7](#)
- C. [IHO CB Procedure 9: Guidelines to Conduct Technical Visits](#)
- D. [IHO CB Technical Visit Report 2016](#)

Introduction

The International Hydrographic Organization (IHO) is an intergovernmental technical body established in 1921 with the principal objective of ensuring that the world's seas, oceans, and navigable waters are properly surveyed and charted. The IHO works to promote uniformity in nautical charts and documents, to improve hydrographic data collection, and to foster the widest possible use of hydrographic information.

Technical Visits are a key mechanism by which the IHO provides support to coastal states. These missions are intended to assess national hydrographic and charting capabilities, identify gaps or challenges, and make recommendations for strengthening hydrographic governance and hydrographic services.

This Technical Visit to the Republic of Liberia was conducted under the IHO Capacity Building Programme. The main objective of the visit was to review the status of hydrographic and nautical charting activities in Liberia and to provide guidance on actions that would enhance national hydrographic capacity and compliance with international obligations.

1. Background

The decision to undertake a Technical Visit to the Republic of Liberia was made within the framework of the relevant Regional Hydrographic Commission (RHC) Capacity Building Work Plan. The visit was approved in response to identified needs related to safety of navigation, maritime development, and compliance with SOLAS Chapter V obligations.

The Technical Visit Team was tasked with reporting its findings and recommendations to the RHC Chair and the IHO Secretariat.

2. Composition of the Team

The RHC Technical Visit Team was composed of:

Name	Role
Dr John Nyberg	International Hydrographic Organisation Director
Koen Vanstaen	UK Hydrographic Office Head of Hydrographic Programmes
Nicholas Swadling	UK Hydrographic Office Geographical Technical Lead – Africa

Local arrangements for the Technical Visit were kindly handled by the Liberia Maritime Authority of the Republic of Liberia. A 3-day long programme of meetings with local stakeholders was organised in support of the Technical Visit.

PART A - OVERALL ASSESSMENT OF THE SITUATION IN THE REGION

3. Efficacy of the Technical Visit

The TV team was effectively supported by LiMA in the run-up to and during the visit. The agenda provided the TV team the opportunity to meet with a range of stakeholders and explore the status of hydrographic services in Liberia. Meetings were held with Directors or Heads of Departments who demonstrated a commitment to improve hydrographic services and recognised the benefit of seabed mapping for wider Government delivery.

Liberia is in the early stages of developing its hydrographic services, and this TV happened at a good time to review the progress since the 2016 TV and provide guidance for the next phase of development.

4. Cooperative Arrangements and Potential

a. International organisations

The Republic of Liberia is a Member State of the International Maritime Organization (IMO) and participates in other relevant international and regional maritime frameworks. Liberia's internationally recognised ship registry gives it a prominent role in global maritime affairs. In 2025 Liberia was re-elected to the IMO Council for the period 2026-2027.

Liberia has been a full member of the World Meteorological Organization (WMO) since 1974. Liberia is represented in WMO by its national meteorological service, the Liberia Meteorological Service (LMS). Recent years have seen active cooperation between Liberia and WMO, particularly in: strengthening the early warning system, digital transformation of meteorological services and climate resilience and disaster preparedness initiatives.

Liberia is an associate member of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

Liberia is currently not a member of the International Hydrographic Organisation (IHO). Benefits of IHO membership were expanded upon during the Technical Visit.

b. Regional Organization

Liberia has participated in some of the East Atlantic Regional Hydrographic Commission meetings as an observer. Through its association with the EAtHC Liberia has benefited from some capacity development opportunities, including participation in a Maritime Safety Information training course in Brazil in 2018.

Liberia works closely with regional partners. One such example is the IMO Regional Maritime Rescue Coordination Centre named Monrovia Regional Maritime Rescue Coordination Centre (MRMRCC) based in Monrovia, which covers five West African countries: Guinea, Sierra Leone, Liberia, Cote d'Ivoire and Ghana. A visit was paid to the MRMRCC on the last day of the Technical Visit.

No visits or engagements were held with other regional organisations.

c. Defence and Security Arrangements.

The Liberian National Coast Guard has responsibility for maritime security, law enforcement and search and rescue within its territorial waters and Exclusive Economic Zone (EEZ). The Coastguard was re-established in 2010 and operates under the Ministry of National Defense. The Coast Guard has its main base (Headquarters) on the Bushrod Island in Monrovia, Liberia. It has operational vessels, mainly suited to coastal operations and has qualified divers.

A recent Act put greater emphasis on working with others and assisting in the provision of hydrographic services. However, there are currently no trained hydrographers within the Coast Guard to be able to assist with work in this area, although this is in their 2035 development plan.

PART B – LIBERIA ASSESSMENT

5. RHC Involvement

Liberian officials have attended some of the East Atlantic Hydrographic Commission meetings in recent years as observers. The impression of the Technical Visit Team has been that this has been a positive experience for those involved. The Technical Visit Team informed senior managers during meetings of the importance of ongoing participation at EAthC and the additional benefits IHO membership would present to the Republic of Liberia.

6. Preliminary Liaison

Following the approval for a Technical Assessment Visit to the Republic of Liberia liaison started in autumn 2025 between UKHO and the Liberia Maritime Authority. A TV Questionnaire was shared with and returned by LiMA. Due to availability, all arrangements were concluded in 2025, but the Technical Visit itself took place the second week of 2026.

Ms Cooper and Mr Gayan were the primary contacts who provided excellent support coordinating the visit.

7. Points of Contact

The Liberia section of the IHO Yearbook P-5 was last updated in 2019. Based on the meetings with the Liberia Maritime Authority it became obvious that all Points of Contact have changed. It is recommended that P-5 (Annex D) is updated using the proposed changes included in Annex D.

DESCRIPTION OF MARITIME ACTIVITIES

8. National Maritime Affairs

The Republic of Liberia is a Coastal State located in West Africa, with approximately 580 km of coastline along the Atlantic Ocean. Liberia exercises sovereignty over its Territorial Sea and jurisdiction over an Exclusive Economic Zone (EEZ) that supports international shipping, fisheries, offshore activities, and port operations. The maritime domain is a key enabler of national economic development, trade, food security and maritime security.

Liberia is internationally prominent as the operator of the world's largest ship registry by Gross Tonnage. The Liberia Maritime Authority (LiMA) governs and regulates Liberia's maritime activities, while the Liberian Ship Registry (run by LISCR) operates the vessel registration system under LiMA's authority. While the Flag State function is globally focused, the Government of Liberia also has responsibility for ensuring the safety of navigation and the provision of hydrographic services within its national waters, in accordance with SOLAS Chapter V.

In 2024 LiMA established a National Maritime Committee to coordinate maritime governance in Liberia and involves multiple stakeholders, including the Liberia Maritime Authority, National Port Authority (NPA), National Fisheries and Aquaculture Authority, Ministry of National Defense (including the Coast Guard), Environmental Protection Agency, Liberia Petroleum Refining Company, Ministry of Public Works, Ministry of Finance and Development Planning, Ministry of Foreign Affairs, Ministry of Mines and Energy, Liberia Land Authority, National Oil Company of Liberia (NOCAL), Ministry of Transport, Liberia Meteorological Service and related private companies and industries. Under the National Maritime Committee a Subcommittee on Hydrography has been established to foster collaboration and coordination among stakeholders to review regulations, develop standards and provide guidance on all Hydrography related issues.

9. Trade and Maritime Traffic

Liberian waters lie adjacent to major international shipping routes along the Gulf of Guinea, supporting dense east–west traffic linking Southern Africa, West Africa, Europe, and the Americas. Through-traffic includes container vessels, tankers, bulk carriers, and offshore support vessels transiting near the Liberian coast.

Liberia’s principal commercial ports include:

- Freeport of Monrovia – the main gateway for containerised cargo, general cargo, fuel imports, and humanitarian supplies. It is estimated that 85% of vessels visiting Liberia will go through Monrovia. The port handles the majority of Liberia’s international trade and accommodates deep-draft vessels. The port has recently moved to 24-hour operations in order to build capacity.
- Port of Buchanan – supporting bulk exports, including iron ore, agricultural products, and general cargo.
- Ports of Greenville and Harper – serving regional and coastal trade, fisheries, and smaller-scale commercial activities.

Coastal and domestic maritime traffic includes inter-port cargo movements, fishing vessels, artisanal and semi-industrial craft, offshore supply vessels, and security patrols. Safe access to ports and anchorages is therefore critical to national supply chains and economic resilience.

a. Through Routes

International shipping lines call regularly at Liberia’s major ports, especially the Freeport of Monrovia, which is the principal gateway for global maritime trade into and out of Liberia. The port handles most of the country’s containerised cargo, bulk, break-bulk and tanker traffic. Eight to 12 cargo vessels and tankers typically arrive weekly at Monrovia, highlighting steady maritime traffic linked to West African and global routes.

The Atlantic Ocean maritime corridor off Liberia is part of the main West African shipping routes connecting Europe, the Americas and other African ports, meaning Liberia serves as a waypoint for vessels transiting along the coast.

b. Trans-shipment

Liberia aims to grow trans-shipment activity—where cargo from one ship is transferred to another for onward movement. The Freeport of Monrovia is being positioned as a regional

transshipment hub, leveraging its strategic location and ongoing dredging and expansion to accommodate larger vessels and facilitate cargo redistribution to other West African countries.

c. Bulk Trades

Bulk cargoes are significant in Liberia's maritime trade:

- Iron ore: Shipped mainly through the Port of Buchanan, which was constructed for iron ore export.
- General bulk and break-bulk goods such as minerals, agricultural products, construction materials, machinery, foodstuffs, and fuels are handled at Monrovia and other ports.
- Liquid bulk (oil and petroleum products) is also handled via dedicated jetty facilities at Monrovia.

d. Feeder, Coasting and Local Trade

Smaller coastal vessels, fishing boats, and regional traders operate along Liberia's coast and rivers:

- Coastal feeder traffic links Monrovia with smaller ports such as Greenville and Harper for domestic cargo and regional short sea shipping.
- Local trade includes movement of goods between ports and landing jetties via smaller craft, supporting rural coastal communities and local economies.

e. Offshore Supply and Support

Liberia does not currently have any offshore oil or gas fields. New exploration activities are ongoing and planned. If commercial discoveries are made, this may lead to an expansion of offshore supply services.

Standard marine support services (tugboats, pilotage, navigation services) are available in the Freeport of Monrovia to enable vessel arrivals and departures.

f. Tourism Cruise Liners and small craft

Cruise liner traffic is very limited and infrequent compared with cargo traffic. Similarly, Liberia is not frequently visited by tourism small craft.

g. Fisheries

Fishing is a key coastal activity and source of livelihoods:

- Liberia's marine fisheries include industrial and artisanal fishing, with local fishers using canoes and small vessels operating in coastal waters.
- Offshore fisheries are dominated by foreign fleets, mostly from the EU and Asia, fishing for shrimp and tuna.

Fisheries surveys are undertaken through the National Fisheries & Aquaculture Authority (NaFAA), which does involve a limited amount of depth data collection. Fisheries observers onboard fishing vessels record position and depth information on a regular basis. Occasionally, the Research Vessel Dr. Fridtjof Nansen undertakes fisheries and oceanographic research surveys in Liberian waters and has advanced seabed mapping capabilities.

h. Inland shipping

Inland shipping was prevalent until the mid-20th century along several major rivers. The expansion of road networks and railways led to the decline of inland shipping and all commercial inland shipping has disappeared.

i. Ports

Liberia's main port infrastructure is managed by the National Port Authority, which oversees:

- Freeport of Monrovia – primary deep-water port with container, bulk and tanker berths.
- Port of Buchanan – key bulk commodity port, especially iron ore.
- Port of Greenville and Port of Harper – smaller regional ports with quays usable for local trade.

The National Port Authority (NPA) is a state-owned enterprise of the Government of Liberia responsible for managing, operating, and developing Liberia's public ports.

Siltation is an ongoing challenge, requiring periodic dredging to maintain navigable channels, particularly at Monrovia, and to permit larger vessels to berth safely. Whilst the Technical Visit team was in Liberia, preparations were underway for some emergency dredging works following a couple of near-miss groundings. Marine support services (pilots, tugboats) ensure safe entrance and berthing at Liberia's ports. Challenges were highlighted by the Harbour Master for bringing vessels in the ports of Harper and Greenville, due to only one of the NPAs pilots having the necessary local knowledge. Having up-to-date and modern charting was identified as a way of overcoming this challenge.

10.Responsibility for Safety of Navigation

Overall responsibility for Safety of Navigation is vested in the Liberia Maritime Authority, while operational responsibilities are distributed among several government entities. The Liberia Maritime Authority has taken a leading role covering regulation and coordination. LiMA has a Safety of Navigation Department, which is headed by Captain Gayan. LiMA also leads on Maritime Safety Information and operates a regional IMO MRCC, located at the Liberia Coast Guard Base Bushrod Island, Monrovia.

Based on the meetings held during the Technical Visit, our current understanding of responsibilities is as summarised below.

- Maintenance of channels: Within the port limits the National Port Authority commissions dredging campaigns, including hydrographic surveys. Whilst the Technical Visit team was in Liberia, one such survey was underway to inform upcoming dredging works. Responsibility for berths and terminals lies with its commercial operators. Sharing of hydrographic survey data between commercial operators and the port authority or government entities was described as challenging.
- Provision and maintenance of Aids to Navigation (AtoN): LiMA is the primary national authority for Aids to Navigation across Liberia's territorial waters and EEZ. In 2024, a Notice to Mariners was issued to delete a large number of lights that were no longer operational. In 2025 the National Port Authority commissioned a new leading light for the port of Monrovia, which resulted in a new chart edition.
- Promulgation of Notices to Mariners: LiMA shares relevant information for Notices to Mariners with the UKHO and NAVAREA II coordinator. Local and weather warnings are communicated by the MRMRCC using its VHF infrastructure, which only reaches the 20-30 miles around the Monrovia area.

11. Defence Force Responsibilities

Responsibility for defence in Liberia rests with the Armed Forces of Liberia (AFL) under the authority of the Ministry of National Defense, with overall civilian oversight exercised by the President as Commander-in-Chief. Since the post-conflict restructuring of the security sector in the mid-2000s, Liberia's defence posture has been deliberately modest and defensive in nature, reflecting constitutional constraints, limited resources, and a strategic emphasis on internal stability, territorial integrity, and regional cooperation.

Maritime and naval responsibilities are primarily vested in the Liberian Coast Guard (LCG), which operates as a component of the AFL. The LCG is responsible for safeguarding Liberia's territorial waters and Exclusive Economic Zone (EEZ), enforcing maritime law, supporting port and maritime security, and conducting search and rescue operations. Given Liberia's extensive coastline and large EEZ relative to national capacity, the Coast Guard's role is critical but challenging. Liberia relies on capacity-building partnerships, notably with the United States, for training and equipment.

Recent developments in Liberia have placed a responsibility on the Liberian Coast Guard to assist in the provision of hydrographic services. There are currently no trained hydrographers in the Liberia Coast Guard, but the LCG has access to vessels and staff to support such activity. Developing a hydrographic survey capability is supported by the Chief of Staff and part of the LCG 2035 Development Plan.

12. Coastal Zone Management and Environmental Protection

Liberia's coastline and marine habitats include mangroves, saltmarshes and important coastal habitats for fisheries. Coastal ecosystems provide nursery grounds for fish and support biodiversity, but formal designation of MPAs is limited. The Environmental Protection Agency has had limited marine focus due to limited capability and capacity. The Head of the EPA stressed the importance of improved seabed mapping in Liberia to identify suitable MPAs (a commitment under Liberia's Nationally Determined Contributions – climate action plan) and to undertake sensitivity mapping which it is required to undertake every 3 years. The EPA has no data collection capability and would look at the LGC to work together.

Liberia's coastal regions are vulnerable to erosion, flooding and other natural hazards that can affect port infrastructure and coastal communities. Liberia's National Disaster Management Agency (NDMA) highlighted how coastal erosion was impacting communities and that improved seabed mapping and charts would assist hydrodynamic modelling. The lack of detailed seabed mapping data and a national capability was highlighted by NDMA in response to the sinking of the cargo ship Niko Ivanka in 2021. There was limited information to guide the emergency response activities. The wreck was marked on the chart based on its last known position, but it is unknown whether the wreck is in that exact location.

The Ministry of Mines and Energy used to licence sand and mineral mining along the coast of Liberia. However, this activity is now under a moratorium and limited to inland waters where no shipping activity takes place.

OUTLINE C 55 ANALYSIS

13. Status of surveys within the National Maritime Zone

The Liberia Maritime Authority, as the lead organisation for the provision of hydrographic services, has no survey capability. No hydrographic survey capability exists within the wider Government of Liberia. Within the private sector it is understood that there is no or very limited capability. Hydrographic surveys are undertaken as part of infrastructure or dredging projects and will often involve overseas contractors. Whilst some surveys are undertaken on behalf of the National Port Authority (NPA), others are undertaken on behalf of commercial terminal operators. In the case of the latter, data are not always shared due to commercial interests. The Harbour Master of the NPA is pushing for a central data management function for all port related data to address this. Whilst the Technical Visit team was in Liberia, a pre-dredge hydrographic survey was underway in the port.

Due to the absence of a survey capacity, outside of the ports, no data collection has taken place in recent decades and the data underpinning the charts covering Liberia are therefore not up to modern survey standards. Large parts of the charts covering Liberia are based on lead line surveys over 100 years ago or miscellaneous soundings or lines of soundings. The latest version of IHO Publication C-55 indicated that no systematic surveys had taken place within the EEZ of Liberia.

The Technical Visit team met with the National Oil Company of Liberia (NOCAL) who had access to historic seismic data and were planning new seismic surveys in 2026. These surveys mainly covered deeper waters, where charts are currently based on miscellaneous soundings only. Extracting seabed depth from the seismic surveys could therefore improve the charts in offshore areas. NOCAL is also planning a multibeam echosounder survey of seeps in 2026. Sharing a hydrographic survey specification would benefit wider use of the data. Due to the commercial interests involved in exploration, confidentiality aspects would need to be addressed.

The status of hydrographic surveying within national waters was well understood by stakeholders. The Technical Visit team observed the desire of stakeholders to address this with the support and guidance of the IHO and the wider hydrographic community. The Technical Visit team met with many stakeholders who identified benefits of seabed surveys for wider applications, including identification of Marine Protected Areas, protecting coastal communities, managing offshore activities, search and rescue, fisheries resource management, port operations efficiency, etc.

14. Collection and Circulation of Nautical Information

The collection and circulation of nautical information in Liberia is coordinated through LiMA. LiMA has appointed an MSI Coordinator who is based at the MRM RCC and attended an IHO MSI training course in Brazil in 2018. There is evidence that relevant safety information is mainly shared with UKHO, as Liberia's Primary Charting Authority, and SHOM, as NAVAREA II Coordinator.

There is evidence of changes in nautical information being published through "Notices to Mariners". For example, a large number of coastal lights which had been unlit for a number of years, were removed from charts and publications in 2024 through Notices to Mariners on the instruction of LiMA. There was also good evidence of nautical warnings being published. In 2021 the vessel Niko Ivanka sank 6 miles off the coast of Marshall, Liberia. A Coastal Warning promulgated and was sent to the NAVAREA II Coordinator and PCA contacts.

LiMA operates the IMO Maritime Rescue Coordination Centre from its base at the Liberia Coast Guard Bushrod Island, Monrovia. The MRM RCC has access to vessel monitoring systems, and VHF/MF and satellite communication systems. Daily equipment tests are undertaken and meteorological forecasts are issued twice daily for the port of Monrovia. Information for the weather forecasts is sourced from the meteorological services and online platforms such as Windy.com.

15. Survey Capability

There currently is no hydrographic survey capability within the Government of Liberia and therefore no clear lead department.

Based on the engagements with stakeholders, the Technical Team identified a number of departments that could be involved in hydrographic surveying in Liberia.

- LiMA: As coordinating agency, LiMA could provide staff to support hydrographic surveys in Liberia.
- LCG: The Liberia Coast Guard was identified by various stakeholders as a key player, with access to vessels which could be used to undertake hydrographic surveys. Recently LCG has been given the mandate to assist in undertaking hydrographic surveys.
- NPA: The National Port Authority is the main organization procuring hydrographic survey services in Liberia, with access to vessels and experience operating in the maritime domain. In the short term, NPA may be the biggest benefactor from a national survey capability. In neighboring countries, the development of hydrographic services often started in a port environment.

It is recommended that the National Maritime Committee and its Subcommittee on Hydrography discuss how hydrographic surveys would be best delivered in Liberia and develop a plan accordingly. It should be noted that contracting hydrographic surveys could be a viable option if developing and maintaining a local capability is not considered viable. In developing a survey capability plan, particular attention will need to be paid to the availability of sufficient financial, human and operational resources to deliver adequate services.

The Subcommittee on Hydrography is encouraged to discuss how data sharing between stakeholders in Liberia can be improved. Stakeholder visits identified potentially relevant data holdings at NOCAL (seismic exploration), LPRC, APMT and Arcelor Mittal (terminal operator surveys) and NaFAA (data from Dr Fridtjof Nansen surveys). The subcommittee should explore how data can be shared, data standards can be implemented and ensure data is shared with the PCA for updating nautical products for the benefit of mariners and maritime operators.

16.Independent Chart Production Capability

There is currently no local nautical chart production capability in Liberia. Since the 2016 Technical Visit, a formal agreement between LiMA and UKHO has now been implemented whereby UKHO supports LiMA in meeting some of its hydrographic services obligations through a Primary Charting Authority arrangement.

The Technical Visit in 2016 identified the Department of Lands, Surveys and Cartography as a potential department to take on chart production in future. No meeting was held with this department during the Technical Visit, as it was not known that the department was now no longer part of the Ministry of Mines and Energy.

The Liberia Institute of Statistics and Geo-Information Services (LISGIS) has some geospatial capabilities, but at present is very much limited to the terrestrial environment. LISGIS has limited marine or coastal data.

No proposals for modification or extension of coverage of INT small scale, large scale and port schemes were proposed. However, it was noted by the TV Team that there is not currently any large scale ENC coverage for the Ports of Harper and Greenville and this should be fulfilled by the Primary Charting Authority.

PROPOSALS FOR COORDINATION AND CAPABILITY BUILDING

17.National Hydrographic Committee – Embedding of the structure

The Government of Liberia, through the Liberia Maritime Authority is committed to improving its hydrographic services. The Technical Visit team saw evidence of progress made as a result of the recommendations from the 2016 Technical Visit. LiMA is commended for its leadership as coordinating organisation.

In 2025 a National Maritime Committee was established, including a Subcommittee on Hydrography. It was noted that the NMC was not fully effective yet, with LiMA explaining challenges with stakeholder attendance and high turnover of attendees, slowing progress of the committees. The Technical Visit team recommends that LiMA continues its efforts to operationalise the committee and its subcommittees. Consideration could be given to the composition of the NHC to enhance the effectiveness of NMC meetings by identifying key participants, while interested parties who can contribute usefully are invited as needed, and others are kept informed as appropriate. Ongoing support should be sought from senior officials in each Department.

18.National Hydrographic Committee – Development of a plan

The Technical Visit team recommends that the Subcommittee on Hydrography develops a plan for the implementation of hydrographic services in Liberia. The plan should be ambitious, but realistic, in setting timescales for developing or strengthening the different aspects of hydrographic service requirements. The Technical Visit team suggests a 10-year horizon is adopted.

As part of the development of the plan the Subcommittee on Hydrography should consider lead organisations for the different areas of work. And in particular attention should be paid to identifying sustainable budget lines to maintain the delivery of hydrographic services in accordance with SOLAS obligations.

19.National Hydrographic Committee – Data audit

Recognising that the Technical Visit team identified several organisations with relevant data holdings, the team recommends that the Subcommittee on Hydrography progresses work to undertake a data audit, implements data standards and data sharing arrangements and shares the data with the Primary Charting Authority to update nautical charts and products.

20.Phase 1 Hydrographic Capability: MSI Organisation and GMDSS.

There was good evidence of maritime safety and nautical information sharing presented to the TV team.

j. MSI (Navigational Warnings).

One member of LiMA staff has attended the IHO MSI Training Course in 2018 in Brazil. Evidence of good practice was presented to the Technical Visit team.

The Technical Visit team recommends that Subcommittee on Hydrography considers

sending additional staff on the IHO MSI Training Course to ensure there is resilience within Liberia.

k. GMDSS Status.

The status of GMDSS in Liberia is summarised in Table 1. The Technical Visit team recommends that the Subcommittee on Hydrography explores expanding VHF coverage across the coastal area of Liberia, where lots of vessel operate. Introduction of radio repeater stations was mentioned by the MRM RCC but currently lacks funding to implement.

Table 1: Status of GMDSS in local waters.

A1 Area	A2 Area	A3 Area	NAVTEX	SafetyNET	Notes
Partial (VHF)	Partial (VHF)	No	No	No	1

Notes:

1. VHF/MF station operated by LiMA from Freeport of Monrovia with local coverage only.

l. Other Services.

LiMA shares meteorological information with mariners through twice daily VHF broadcasts. Information is gathered from the Liberia Meteorological Service and free online resources.

It is understood that there are currently no formal arrangements between relevant organisations, which is recommended.

Options to broadcast the forecasts via a nationwide VHF network or to vessels on international voyages should be explored.

2.1.Phase 2 Hydrographic Capability: Survey.

There currently is no hydrographic data collection capability in Liberia. At this early stage since the establishment of the Subcommittee on Hydrography, it appeared that no decision had been made on which organisation should lead on data collection. Several stakeholders suggested a role for the Liberia Coast Guard, supported by LiMA. It is recommended that the Subcommittee on Hydrography, in developing a plan (section 1.8) considers and nominates lead organisations and delivery partners. Such clarity is required to work with development partners in establishing effective hydrographic services and ensuring staff from appropriate organisations are trained and supported.

m. Provision of Survey Data.

In the absence of a local data collection capability, some hydrographic data are already collected by local stakeholders (e.g. NOCAL, NPA and terminal operators). Mechanisms should be established to share data between partners of the National Maritime Committee in the interest of safety of navigation. LiMA should then ensure data are shared with the PCA to update charts and publications.

n. Survey Priorities

The Subcommittee on Hydrography is encouraged to consider priorities for future data collection in Liberia. Whilst there are large swathes of the EEZ that have not been systematically surveyed, the shallower coastal zone should be a higher priority. Even with a well established hydrographic survey capability, it will still take several decades to systematically survey the coastal zone. The Subcommittee on Hydrography is therefore advised to work with stakeholders to identify priority areas. Areas where several stakeholder interests are identified should be prioritised to demonstrate the wider benefit of seabed mapping for society.

o. Survey Capability.

There currently is no hydrographic survey capability in Liberia. The LCG has operational experience and several vessels, some of which may be suited for hydrographic survey operations. Resourcing of this survey capability may require a collaborative effort as not one organisation in Liberia has all the resources to establish an operational survey capability.

The TV team discussed the training opportunities available to IHO members and opportunities to gain knowledge and support from EAtHC and regional colleagues, including the loan of equipment from the PCA.

p. Potential for Regional Activity.

Liberia has no survey expertise at present to share with regional partners. However, regional partners may be able to support Liberia on its journey to establish an effective hydrographic data collection capability. Liberia is strongly encouraged to attend EAtHC meetings to benefit from regional knowledge sharing and peer-to-peer learning opportunities.

22.Phase 3 Hydrographic Capability: Chart Production

There is no capability for chart production in Liberia, and it is currently undertaken by the UK Hydrographic Office as primary charting authority. An informal arrangement had been in place for many decades and was formalised through a Memorandum of Understanding in 2018.

The Technical Visit team discussed the IHO Capacity Building Strategy phases with stakeholders. Long term there may be an interest to develop a local chart production capability, but stakeholders recognised that first more progress needs to be made in Phases 0, 1 and 2. Liberia would need to join the IHO to access Phase 3 Hydrographic Capability (Chart Production) IHO CB training and support.

Sharing of data from Liberia to the PCA is primarily by direct liaison with Director of Safety of Navigation, LiMA and the Geographic and Technical Lead, UKHO. LiMA are encouraged to share frequent updates with the PCA and this should not be limited to critical, Safety of Navigation information. Open dialogue on any hydrography related matters in Liberia

is the primary basis for successfully maintaining navigational products under a PCA relationship.

23. Summary of the Assessment of the National Hydrographic Capability

Table 2 summarises the assessment of the national hydrographic capability.

Table 2: Assessment of National Hydrographic Capability.

IHO Member	RHC	NHC	Phase 1 Capacity	Phase 2 Capacity	Phase 3 Capacity	Notes
No	Observer	Yes (1)	Yes	No	Yes (2)	1 to 2

Notes:

1. Established in 2024.
2. Delivered by UK Hydrographic Office as Primary Charting Authority. Formal arrangement in place.

PROPOSALS FOR ASSISTANCE

24.Training

Progress in the development of hydrographic services in Liberia is limited by hydrographic experience and capability. There is a need to gain access to a range of training opportunities.

The Subcommittee on Hydrography is encouraged to share details of the IHO e-Learning portal with its members. The courses available online will provide a useful basis for members of the committee.

In the view of the TV team, access to MSI training for additional members of the Subcommittee on Hydrography is recommended to strengthen resilience within the community.

As coordinating organisation, LiMA is encouraged to attend the EAthC on a regular basis and nominate attendees based on the courses or workshops that may be offered before and after the main EAthC meeting.

LiMA, in collaboration with the Subcommittee on Hydrography, should investigate becoming a member of the IHO, which provides access to additional training and capacity development opportunities.

Once a lead and partners have been identified for the development of a hydrographic survey capability, the Subcommittee on Hydrography is encouraged to identify suitable candidates to attend accredited CAT A or CAT B hydrographic survey courses offered through IHO membership or wider capacity building initiatives.

25.Equipment.

At this stage it is too early to provide specific advice in relation to equipment procurement.

26.Funding.

Considering the early stages of development of hydrographic services in Liberia, funding will be required to establish these. The Subcommittee on Hydrography should establish a credible and funded plan to deliver sustainable hydrographic services in Liberia. The Subcommittee on Hydrography is encouraged to raise the need for funding with the National Maritime Committee and use IHO Publication M-2 and cost-benefit analysis from other IHO members to support their case.

The Technical Visit team encouraged the Subcommittee on Hydrography to seek opportunities to raise the profile of hydrography with senior government leaders through World Hydrography Day events and consider hosting a future EAtHC meeting in Liberia.

FOLLOW-UP ACTIONS

27. Consolidate membership and activities of the National Hydrographic Committee

The Liberia Maritime Authority has acted upon the recommendations of previous Technical Visit and global best practice by implementing a National Hydrographic Committee as a coordination mechanism. Stakeholders reported that there was a high turnover in attendees to allow progress to be made. LiMA should continue its efforts and regularly hold meetings, progress actions and allocate responsibilities for sub-components of hydrographic services (e.g. hydrographic surveys, MSI, charting, etc).

Action: **Liberia Maritime Authority**

28. Undertake a data audit and create a hydrographic data sharing protocol

During their Technical Visit the team was introduced to a number of stakeholders, some of whom already held hydrographic data or were engaged in the collection of hydrographic data. There are currently no established data sharing protocols in place, which means data are not shared nationally and not shared with Liberia's Primary Charting Authority to benefit all mariners operating in Liberian waters. The National Hydrographic Committee should work together to establish an acceptable data sharing arrangement, including confidentiality and focal points.

Action: **NHC**

29. Develop National Hydrographic Survey Priorities

There is currently no agreed plan of where hydrographic surveys should be undertaken in the interest of safety of navigation or to meet the sustainable development needs of the country. Following the data audit, it is recommended that the National Hydrographic Committee considers a limited number of areas which would benefit from hydrographic surveys. These areas can then be presented to potential funders or be surveyed when opportunities arise.

As part of this action, the recommended operating model for gathering hydrographic data should be considered (in-house, contracted, hybrid), as well as how the activities will be funded.

Action: **NHC**

30. Strengthen and expand Maritime Safety Information capability

One member of LiMA staff has currently attended the IHO MSI training course when it was hosted in Brazil in 2018. The MSI coordinator fulfils his role as required but is a single point of failure. It is recommended that a Deputy MSI Coordinator is nominated and

trained appropriately. Efforts to expand sharing of MSI with local vessels beyond Monrovia should be continued.

Weather information is currently obtained from various sources, including national authorities and free online resources. It is recommended that an MoU is put in place between LiMA and the Liberia Meteorological Service to ensure access to official forecasts and warnings is maintained at all times.

Action: **LiMA**

3 I. Identify Capacity Development needs and seek external support

As Liberia is in the very early stages of the development of its hydrographic services, there is a need to develop and strengthen the understanding and knowledge about hydrographic services, including maritime safety information, survey data collection and nautical charting.

Liberia should seek access to relevant training and funding opportunities. Membership of the IHO should be considered, which will provide access to such training opportunities.

Within the wider hydrographic community, there are opportunities to access support from IHO Members. This can include access to survey loan equipment, training opportunities, technical assistance or advice in relation to external funding. LiMA is encouraged to actively engage with IHO Members at the Regional Hydrographic Commission and other relevant meetings.

Action: **LiMA**

CONCLUSIONS

32.Cooperative Opportunities.

Liberia is in the early stages of the development of its hydrographic services. Since the last Technical Assessment Visit, some progress has been made implementing recommendations. The leadership of the Liberia Maritime Authority has been supportive to develop adequate hydrographic services as required by the SOLAS Convention.

The Technical Visit engaged with a wide range of stakeholders and was able to demonstrate how delivering hydrographic services is a collaborative effort. LiMA has led national coordination and it will be important to continue this coordination and consolidate the work of the National Hydrographic Committee for the benefit of safe navigation for mariners and the wider marine community.

33.National Hydrographic Committee (NHC).

The Technical Visit team were pleased to hear that LiMA had acted on the recommendation of the last Technical Visit and established a National Hydrographic Committee. Whilst a good start has been made, embedding and demonstrating the value and impact of the committee must remain a priority for LiMA.

The NHC is encouraged to address specific needs as identified during the technical visit, including releasing data currently held by stakeholders and identifying future survey priorities. The NHC may want to consider the formation of smaller, focussed working groups.

The NHC should consider whether it would be beneficial to involve IHO or EAHC members in its NHC for guidance and support.

Recommendations

34. Urgent Actions.

- Undertake an audit of existing hydrographic data held by stakeholders in Liberia and share data with PCA for updating products.
- Consolidate ways of working of the National Hydrographic Committee.
- Explore training opportunities for the NHC community to gain deeper understanding of hydrographic services.

35. RHC Follow up Actions

- Share training opportunities (including on the job training) for Maritime Safety Information training course, introductory hydrographic services courses and Cat 'A' and Cat 'B' Hydrographic survey courses, if appropriate and in line with the longer-term hydrographic services strategy.

Implementation / Action Plan

Action	Lead	Timeframe	Output / deliverable
Consolidate membership and ways of working of the National Hydrographic Committee (NHC)	LiMA	0–6 months	Updated ToR, membership list, meeting schedule, and an agreed annual work programme.
Undertake an audit of existing hydrographic and related marine data holdings and establish a hydrographic data sharing protocol	NHC	0–12 months	Data inventory; agreed data standards; data sharing protocol; initial transfer of priority datasets to the PCA.
Develop and agree national hydrographic survey priorities and a delivery model	NHC	6–18 months	Prioritised survey plan (e.g., coastal/port approaches first) and a funding approach to deliver it.
Strengthen and expand Maritime Safety Information (MSI) capability	LiMA	0–12 months	Resilient MSI staffing; documented MSI processes; MoU with LMS; improved dissemination routes.
Identify capacity development needs and seek external support	LiMA	0–24 months	Training plan (MSI, introductory hydrography, Cat A/B candidates identified); requests submitted for CB support.

Action	Lead	Timeframe	Output / deliverable
Ensure ongoing and routine data sharing with the Primary Charting Authority	LiMA	Ongoing	Improved currency of charts, ENCs and nautical publications covering Liberia.

Note: Timeframes are indicative and should be reviewed and refined by the National Hydrographic Committee as part of the national hydrographic services implementation plan.

36.Follow up Opportunities.

- EAtHC from 1st – 3rd July 2026 in Abidjan, Cote D'Ivoire.
- World Hydrography Day, 21st June 2026 to raise awareness amongst local stakeholders.

37.Preparations for Next RHC Conference.

The RHC Chair is advised to take note of this report and support LiMA in identifying capacity development opportunities.

DATE	30 th April 2026
RHC Technical Visit Co-Team Leader	Koen Vanstaen
SIGNATURE	Koen Vanstaen
RHC Technical Visit Co-Team Leader	Nicholas Swadling
SIGNATURE	Nick Swadling

Annex List:

- A. Terms of Reference of the RHC Technical Visit Team
- B. Programme for the visit to the Republic of Liberia
- C. List of Contacts
- D. P-5 IHO Yearbook Template update
- E. Hydrographic Surveys Coverage
- F. Paper Chart and ENC Coverage
- G. Technical Visit Preliminary Questionnaire

DISTRIBUTION: Chair RHC

INFORMATION: IHO Secretariat / visited coastal State

ANNEX A

TERMS OF REFERENCE OF THE RHC TECHNICAL VISIT TEAM

1. The Technical Visit Team, comprising members of the staffs of the International Hydrographic Organization, Director Dr John Nyberg, and staffs of the United Kingdom, led by Koen Vanstaen and Nick Swadling, are to carry out a visit to the countries which have indicated a willingness to discuss issues of mutual interest in the fields of hydrographic and Maritime Safety Information services.

Preparation

2. The members of the Team, and with the assistance of the staffs of Liberia, are to plan the Team visit having obtained access to material available from Liberia and the IHO Secretariat.

Work Objectives

3. The Team is to:
 - a. obtain access to decision making levels of government in Liberia and liaise with senior officials, emphasizing the importance of hydrography to coastal States and, hence, the need to include hydrographic and associated charting activities within National Plans;
 - b. assess the National capacities to plan and execute the collection and rendering of hydrographic data to enable the production of charts and publications both locally and through the supply of data to Hydrographic Offices with international chart folios;
 - c. consider and advise on measures which can be taken to improve the capacity of nations to carry out the above;
 - d. emphasize the basic importance of a national system for the collection of data, such as engineering drawings and local Notices to Mariners, which have an effect on the interests of mariners;
 - e. advise on the assistance to be gained from close liaison with the IHO Secretariat, IMO and funding agencies to enable viable and sustainable capability to be maintained.

Report

4. A Report on the activities and recommendations of the Team is to be submitted to the Chair of the RHC.

ANNEX B

Time VENUE	Activity	Participating Stakeholders	Assessor / Speaker
LiMA HQs DAY ONE			
0800 – 0930	Arrival and Registration of Participants/Breakfast	All	
0930 – 0950	Self-Introduction	All	
0950 – 1020	Welcome and Opening Remarks	All	Cllr. Lighe Com. LIMA
1020 – 1040	IHO remarks	All	IHO Director
1040 – 1110	Group Photo	All	
1110 – 1200	LiMA presentation	All	LiMA
1200 – 1300	IHO presentation	All	IHO Director
1300 – 1400	LUNCH		
1400 – 1430	Hydrographic Governance	All	IHO Technical Team
1430 – 1515	Charting Overview	All	IHO Technical Team
1515 – 1615	Meeting - LiMA	LiMA Technical Team	IHO Director & IHO Technical Team
1630	IHO Director/Commissioner discussion		IHO Director
DAY TWO			
Time & VENUE	Activity	Participating Stakeholders	Assessor / Speaker
900 – 1030 EPA HQs	Meeting - Environmental Protection Agency	Environmental Protection Agency	IHO Director & IHO Technical Team
1050 – 1140 NDMA HQs	Meeting - National Disasters Management Agency	National Disasters Management Agency	IHO Director & IHO Technical Team
1200 – 1300	Meeting - Ministry of Public Works	Ministry of Public Works	IHO Director & IHO

MoPW HQs			Technical Team
1300 - 1400	LUNCH		
MoPW HQs			
1430 - 1600 MoME HQs	Meeting - Ministry of Mines and Energy	Liberian Cartographic Service (LCS) Liberian Hydrological Service Integrated Coastal Zone Management Unit Department of Lands (Survey and Cartography)	IHO Director & IHO Technical Team
DAY THREE			
Time & VENUE	Activity	Participating Stakeholders	Assessor / Speaker
0900 - 0945 LPRC HQs	Meeting - Liberia Petroleum Refining Company (LPRC)	Liberia Petroleum Refining Company (LPRC)	IHO Director & IHO Technical Team
1000 - 1045 NaFAA HQs	Meeting - National Fisheries & Aquaculture Authority (NaFAA)	National Fisheries & Aquaculture Authority (NaFAA)	IHO Director & IHO Technical Team
1115 - 1245 NPA HQs	Meeting - The National Port Authority	National Port Authority	IHO Director & IHO Technical Team
1315 - 1415	LUNCH		
1430 - 1530 LCG HQs	Meeting - The Ministry of National Defense (Liberia Coast Guard)	MoD/Liberia Coast Guard	IHO Director & IHO Technical Team
1530 - 1600 NPA HQs	Closing Meeting at the National Port Authority	All	IHO Director & IHO Technical Team

ANNEX C

LIST OF CONTACTS

For data protection reasons, the contacts details of individuals met during this Technical Visit are not included in this report.

Contact details can be made available on request by the Liberia Maritime Authority.

ANNEX D

P-5 IHO YEARBOOK – LIBERIA

Current version:

Liberia / *Libéria*

Liberia Maritime Authority (LiMA)

Contact information / Informations de contact / Información de contacto

National Hydrographer or equivalent -Hydrographe national ou équivalent -Hidrógrafo Nacional o equivalente	Chief of Maritime Operations and Quality Management Ms Grace Maweaha Vaye E-mail: grace.vaye@lima-liberia.com
Head of the Hydrographic Office (if different from the person indicated above) -Directeur du service hydrographique (si différent de la personne indiquée ci-dessus) -Jefe del Servicio Hidrográfico (si es diferente de la persona indicada anteriormente)	Dr James F. Kollie
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Deputy Commissioner Vessel Registration & Safety, Mr Charles A. Gono E-mail: gblolay@yahoo.com Liberian's Permanent Maritime Representative, Atty. Isaac W. Jackson, Jr. Special postal address: Liberian Permanent Mission - The International Maritime Organization (IMO) - London, United Kingdom

Last updated : January 2019

Dernière mise à jour : janvier 2019

última actualización enero 2019

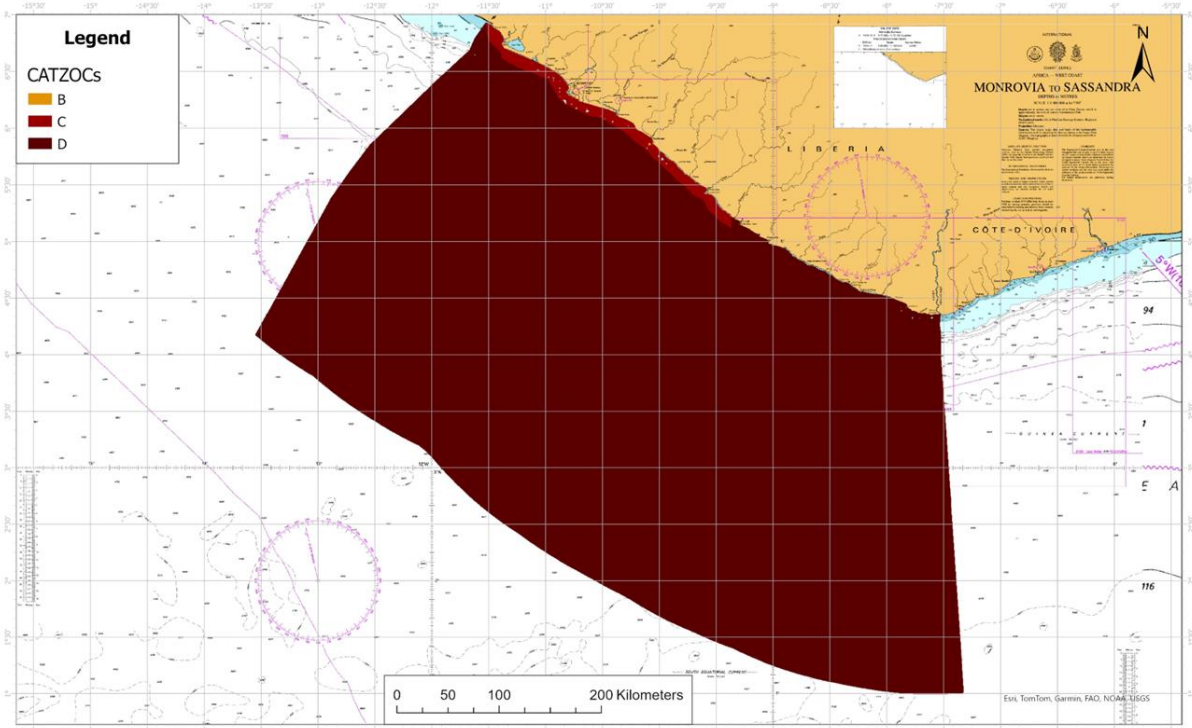
Proposed change:

National Hydrographer or equivalent -Hydrographe national ou équivalent -Hidrógrafo Nacional o equ	Director of Policy, Compliance and International Relations Ms Debbie Porlee Cooper Email: debbie.cooper@lima.gov.lr
Head of the Hydrographic Office (if different from the person indicated above) -Directeur du service hydrographique (si différent de la personne indiquée ci-dessus) -Jefe del Servicio Hidrográfico (si es diferente de la persona indicada anteriormente)	Associate Director, Safety of Navigation Captain Colliyea Gayan Tel: +231 886889738/ +231 770323474 E-mail: darpuju.gayan@lima.gov.lr Agency address: 1948 Maritime Drive Congo Town 1000 Monrovia 10 Liberia P.O. Box 10-9042
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de conta	Deputy Commissioner for Domestic Vessels Registration and Safety Mr John F. Harvey Liberia's Permanent Representative to The International Maritime Organization (IMO) Mr Robert Wilmot Kpadeh

ANNEX E

HYDROGRAPHIC SURVEY AND AIS COVERAGE

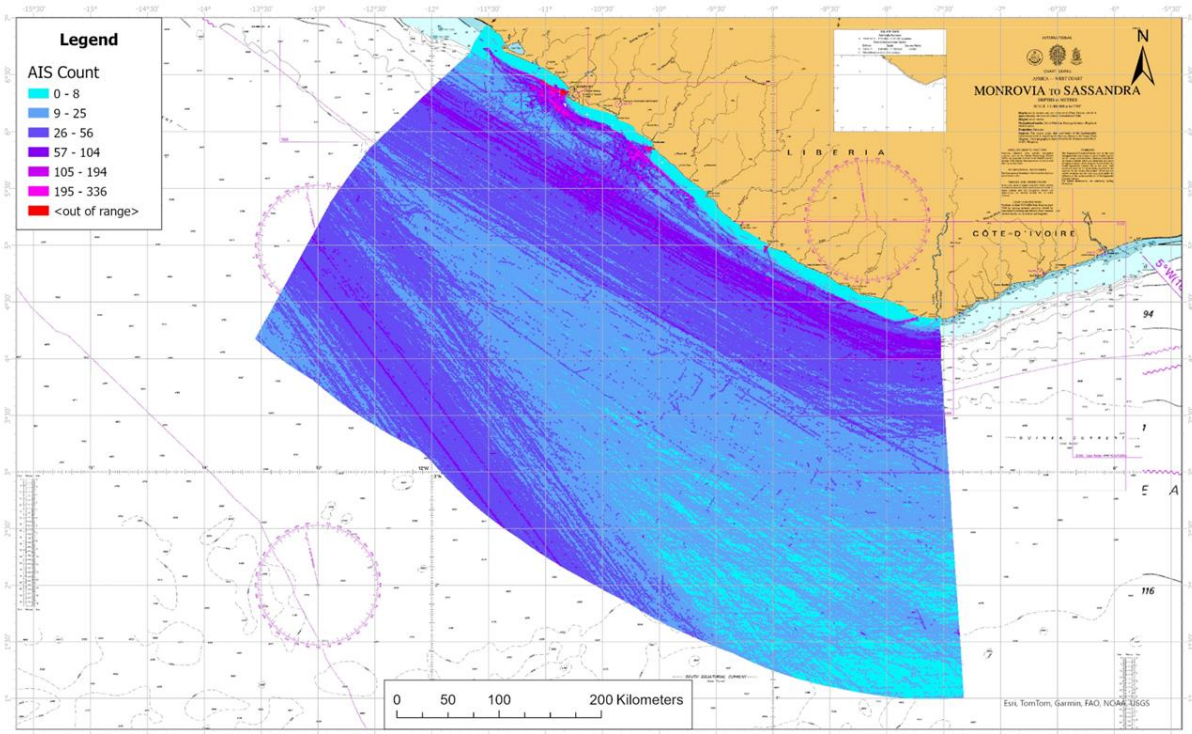
Liberia - CATZOCs 2024



Limits and boundaries are for illustrative purposes. Not prejudicial to delimitation.

Not for navigation.

Liberia - AIS Count 2024



Limits and boundaries are for illustrative purposes. Not prejudicial to delimitation.

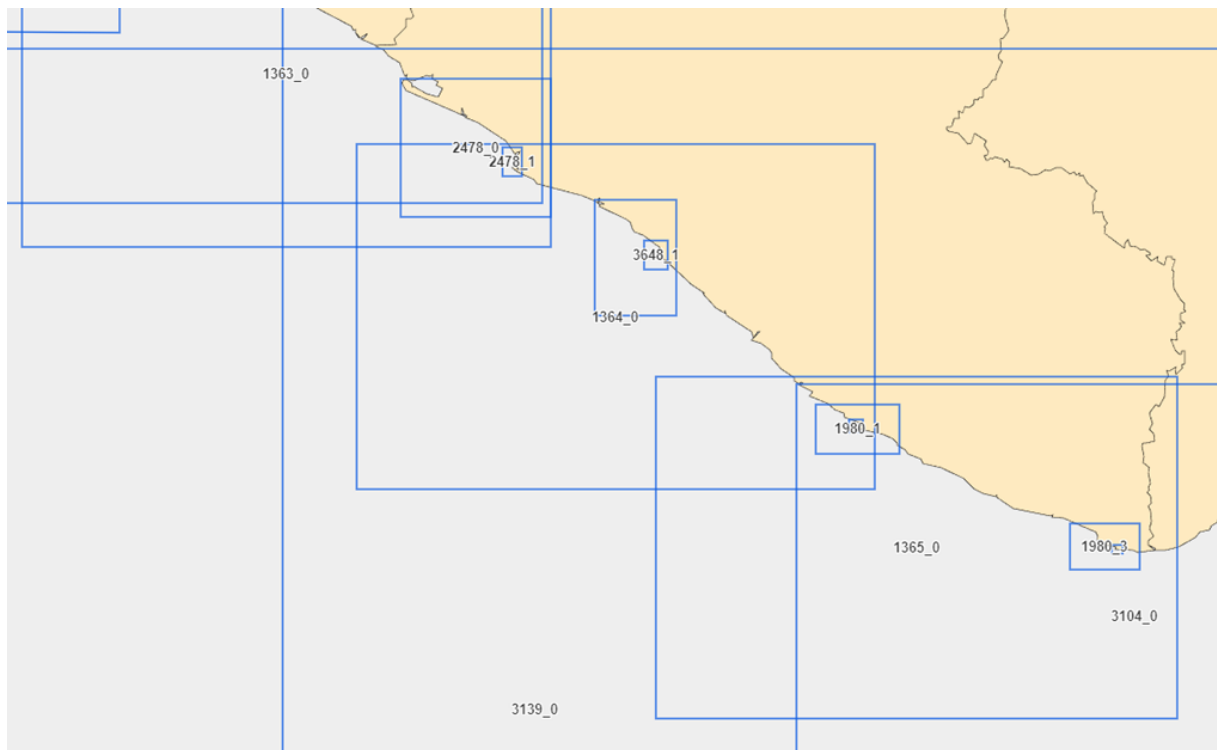
Not for navigation.

ANNEX F

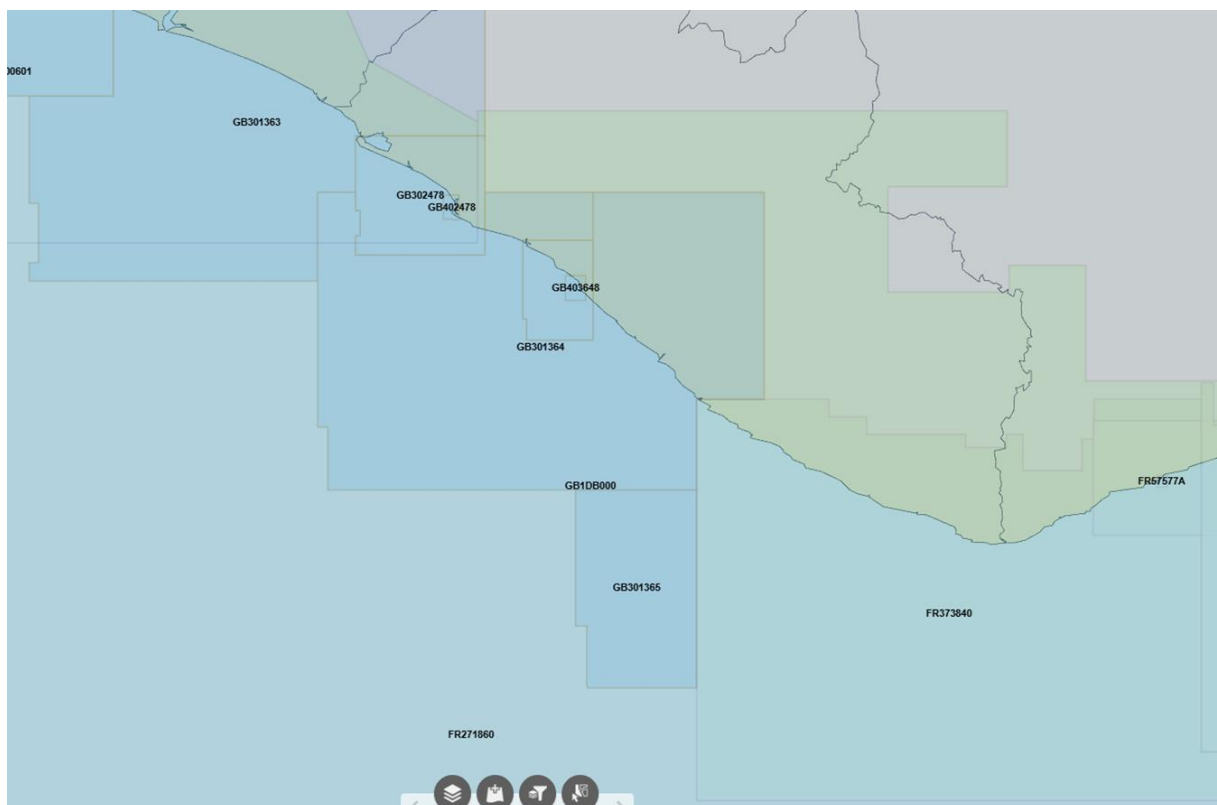
PAPER Chart and ENC Coverage

Paper Chart Coverage

Chart No.	Edition number and date	Title and scale	ENC (S-57)
1363	Ed 1, 28 June 1991	Cape Saint Ann to Monrovia (1:300 000)	GB301363
1364	Ed 1, 5 Mar 1993	Monrovia to Greenville (1:300 000)	GB301364
1365	Ed 1, 5 Mar 1993	Greenville to Harper (1:300 000)	GB301365
1980	Ed 2, 30 Sept 2004	Greenville and Harper with Approaches	
		Approaches to Harper (1:75 000)	
		Harper (1:12 500)	
		Approaches to Greenville (1:100 000)	
		Greenville (1:25 000)	
2478	Ed 3 18/12/2025	Approaches to Monrovia (1:120 000)	GB302478
		Monrovia (1:25 000)	GB402478
3104	Ed 1, 1 Nov 2018	Greenville to Sassandra (1:350 500) INT 2804 (SHOM)	FR373840
3139	Ed 1, 8 Apr 1994	Monrovia to Sassandra (1:1 000 000) INT 2086 (SHOM)	FR271860
1147	Ed 1, 28 Apr 1995	Cabo Roxo to Monrovia (1:1 000 000) INT 1085 (SHOM)	FR271850
3648	Ed 2, 19 Aug 2004	Approaches to Buchanan	
		Approaches to Buchanan (1:100 000)	GB303648
		Buchanan (1:25 000)	GB403648



ENC Coverage



ANNEX G

QUESTIONNAIRE

PRELIMINARY INFORMATION / QUESTIONNAIRE



Technical Visit to: Republic of Liberia

INTRODUCTION

The purpose of an IHO assessment visit is to consider the status of hydrographic services in the country and advise on how the situation can best be improved so the State can meet its international obligations for hydrography and at the same time contribute to safety of life at sea and protection of the marine environment as well as providing long-term improvements in national infrastructure and economic wealth.

The International Convention on the Safety of Life at Sea (SOLAS) places an obligation under international treaty law for all signatory nations, which includes Republic of Liberia, to ensure that appropriate hydrographic services are provided. This means that the government of Liberia is responsible for ensuring that:

- Maritime Safety Information (MSI) is promulgated,
- Hydrographic Surveys are carried out.
- Nautical Charts and other Nautical Publications are prepared and available,
- Nautical Charts and other Nautical Publications are kept up to date,

The United Nations Convention on the Law of the Sea (UNCLOS) and various Resolutions of the UN General Assembly also recognize the importance of hydrography and commit Member States of the UN to recognize their responsibilities for hydrography.

For further information, consult IHO Publication M-2 – *The need for national hydrographic services*, freely available from the Download section of the IHO website (www.iho.int).

Technical Visit to: Republic of Liberia

QUESTIONNAIRE

To assist in making the technical assessment visit successful, please return the following information to:

Head of Delegation: Mr Nicholas Swadling, Geographic and Technical Lead, UK Hydrographic Office

Email: Nicholas.Swadling@ukho.gov.uk

Telephone: +44 (0)1823 483898

Assistant of Delegation: UK Hydrographic Office – TBC

If an answer is not known please insert “NK”

If the question is not applicable, please insert “NA”

1. Details of the Respondent

- Title or rank: [ASSOCIATE DIRECTOR, SAFETY OF NAVIGATION]
- Name: [Darpuju Colliyea Gayan]
- Organization: [Liberia Maritime Authority]
- Geographical Address: Latitude [06° 21.60'], Longitude: [010° 47.40']
- Postal Address: [\[P.O. Box 9042\]](#)
- Email: [\[Darpuju.gayan@lima.gov.lr\]](mailto:Darpuju.gayan@lima.gov.lr)
- Other contact information (Email, fax, etc.): [\[dcgayan@yahoo.com\]](mailto:dcgayan@yahoo.com)

2. Existing Capability

Are the following hydrographic services provided for your country at present (YES/NO/NK)?

If YES, indicate which organization (or third country) is responsible for the service. If the service is provided through a third country, indicate if the responsibilities are defined in a formal agreement and provide the relevant references if possible.

- Maritime Safety Information (MSI)?

Yes – safety of Navigation @LiMA

- Nautical paper charts?

YES – UKHO

There is a formal agreement with UKHO

- Electronic Navigational Charts (ENC)?

YES – UKHO

There is a formal agreement with UKHO

Vessels obtain it through the Internet / use software to update the e-Nautical Publication

- Tide Tables?

Yes

Internet

- Tides/water level measurement?

YES – Ministry of Mines and Energy.

- Hydrographic Surveys?

No

The National Port Authority conducts pre-dredge and post-dredge surveys within the Port limits (2023). But wrecks and obstructions are reported to the UK hydrographic services by vessels and port authorities

- Topography Mapping / Cadastral?

Yes – Ministry of Mines and Energy

- Topographic Surveys?

Yes – Ministry of Mines and Energy

The national mapping agency in Liberia is the Liberian Cartographic Service (LCS) within the Ministry of Mines and Energy. This was established in 1951 and is responsible for geodetic, photogrammetric, topographic, and cartographic surveying and mapping of the country.

- Inland Waterways –

No

What do you suggest improving the situation (will then be discussed during the visit)?

Capacity building

3. Which (if any) departments in your country have personnel with competencies in:
 - hydrographic surveying

No

- nautical charting

No

- geospatial data management

Yes – Ministry of Mines and Energy

- tides /water level measurement

Yes – Ministry of Mines and Energy

- topographic surveying and mapping

Yes – Ministry of Mines and Energy

The national mapping agency in Liberia is the Liberian Cartographic Service (LCS) within the Ministry of Mines and Energy. This was established in 1951 and is responsible for geodetic, photogrammetric, topographic, and cartographic surveying and mapping of the country.

- digital elevation modeling

No

- aerial and/or satellite image processing and mapping

No

4. For each category available in your country, what is the general level of skill of the staff, including qualifications and training history?

Ans: At the Liberian Hydrological Service: Master's, BSc, and training in hydrological data collection and processing.

What do you suggest to improve the situation?

Ans: Provide more opportunities for staff training, as the current number is small. If possible, the training should be followed by providing equipment and software to enhance the present work output and data collection coverage.

5. Is there any equipment/platform (such as ship or aircraft) available in your country for:

- promulgation of Maritime Safety Information (MSI)?

No, however, we promulgate MSI via the internet

- hydrographic surveying?

No

- nautical cartography?

No

- tidal observations?

No

What do you suggest improving the situation?

If applicable and possible, provide details of equipment and software, for example. ships or vessels, echo-sounders; DGPS stations; tide gauges; data acquisition, processing, and management software; cartographic / topographic workstations; GIS tools; etc.

Ans: WE need more capacity building and equipment. Provide more opportunities for staff training, as the current number is small. If possible, the training should be followed by providing equipment and software to enhance the present work output and data collection coverage.

6. Existing Programmes

Is there any awareness at the national level of the status of hydrographic surveys and nautical charting as assessed in IHO Publication C-55? (http://www.iho.int/iho_pubs/CB/C-55/index.html)

Ans: Yes, there is a strong interagency collaboration within the National Maritime Committee, with a Sub-committee on Safety of Navigation, under which the Hydrography Committee is established

Are there any national plans in place for developing hydrography and/or management of the coastal zone?

Ans: **Yes, the formation of a hydrography committee, and** also, the hydrological service at the Ministry of Mines and Energy is doing some works linked to hydrography, for example flow management and river depth, and catchment area data. Also, there is an established unit at the ministry known as the Integrated Coastal Zone Management Unit.

What do you suggest improving the situation?

Ans: More support in the implementation of our Hydrography activities, for example, capacity building, and the provision of equipment

7. International Cooperation

Are there any bilateral or regional arrangements in place to assist in the provision of national hydrographic services?

Ans: Yes, we have an MOU with UKHO (PCA of Liberia)

What do you suggest improving the situation? The training of Hydrographers and cartographers

8. Institutional Framework

Who are the mapping and research agencies that you think should be involved in the establishment or improvement of hydrographic capacity in your country (provide addresses, points of contact, phone, fax, e-mail)?

Ans: Liberian Cartographic Service (LCS), Ministry of Mines and Energy.

9. In your country, what are the organizational and administrative structures that look after:
- maritime transport?

Ans: Liberia Maritime Authority

- inland waterborne transport?

Ans: Liberia Maritime Authority

- mapping?

Ans: Liberian Cartographic Service (LCS), Ministry of Mines and Energy.

- national development and infrastructure?

Ans: Ministry of Public Works and the Ministry of Finance and Development Planning

- prevention of marine disasters (storms, coastal floods, etc.)?

Ans: National Disasters Management Agency and the Environmental Protection Agency, in collaboration with the Ministry of Mines and Energy, and the Ministry of Public Works

- representation at the International Maritime Organization (IMO)?

Ans: Liberia Maritime Authority

- representation at the Intergovernmental Oceanographic Commission (IOC)?

Ans: Environmental Protection Agency of Liberia

- representation at the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

Ans: Liberia Maritime Authority

10. In your country, what are the ministries and other national authorities / administrations / institutions potentially concerned with the provision and use of hydrographic services (provide designation, address, phone, fax, e-mail)?

Ans: Liberia Maritime Authority, National Port Authority, Liberia Coast Guard, Ministry of Mines and Energy, LPRC, NaFAA

11. What do you think is the level of awareness and priority in government and at the higher levels of the administration regarding the importance and value of hydrography to the country?

Ans: The level of awareness and priority is very high as Liberia is a flag, port, and coastal state. To meet her obligations as outlined in the IMO Implementation Instrument (III) code and SOLAS Convention as amended, Liberia needs to provide hydrographic services and aids to navigation to ensure the safety of navigation, protection of the marine environment, and safety of life within Liberia's navigable waters. There's boundary delimitation, a coastal defence program to protect coastal communities from sea erosion, a national disaster management plan, and an oil spill response contingency plan, all in place. All the above cannot be met if the state of the sea is unknown, the condition of the seabed remains unknown, and the sea is not continuously being monitored, or the composition of what lies beneath the sea level remains unknown. There is also a National Maritime Strategy, which has a subcommittee, " Subcommittee on Safety of Navigation."

What do you suggest improving the situation?

Ans: More support in the implementation of our Hydrography activities, for example, capacity building, and the provision of equipment

12. Please describe the nature of any interagency cooperation about hydrography, as you understand it.

Ans: There is a cordial collaboration, the National Maritime Committee, with a Subcommittee on Safety of Navigation, under which the Hydrography Committee is established

Also, there is an interagency cooperation as the National Port Authority and National Oil Company of Liberia collaborate with the Department of Survey and Cartography (DSC), Ministry of Mines and Energy, as regard to gathering information on the topography of the coastlines and hydrographic information of the coastlines and ports. The DSC provides tomography information.

What do you suggest improving the situation?

Ans: More support in the implementation of our Hydrography activities, for example, capacity building, and the provision of equipment it should continuously be raised to a higher level of decision making for more investment in that area. Additionally, the Establishment of a unit that entirely focuses on hydrography activities, which will work in collaboration with all institutions that are linked to hydrography

13. In your opinion, who should be, or is, designated by the government as responsible for the proper provision of hydrographic service in your country (position, address, phone, fax, e-mail)?

Ans: Liberia Maritime Authority, in collaboration with the National Port Authority, Liberia Coast Guard and Ministry of Mines and Energy, will be the appropriate authorities to provide and manage hydrographic services in Liberia. Like many other countries, Hydrographic services are provided by the maritime administration or the coast guard.