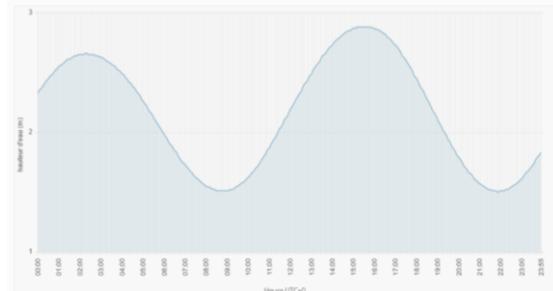
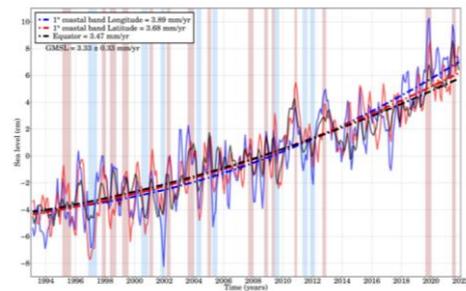
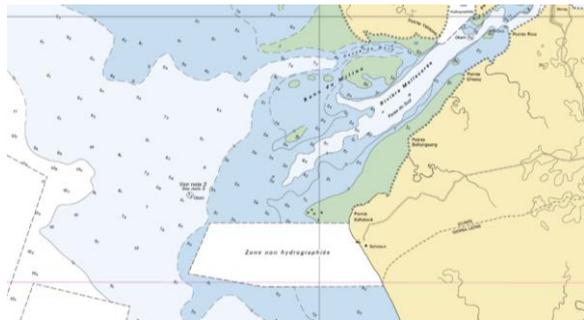
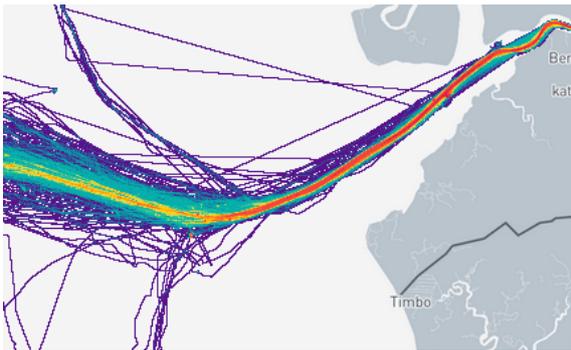
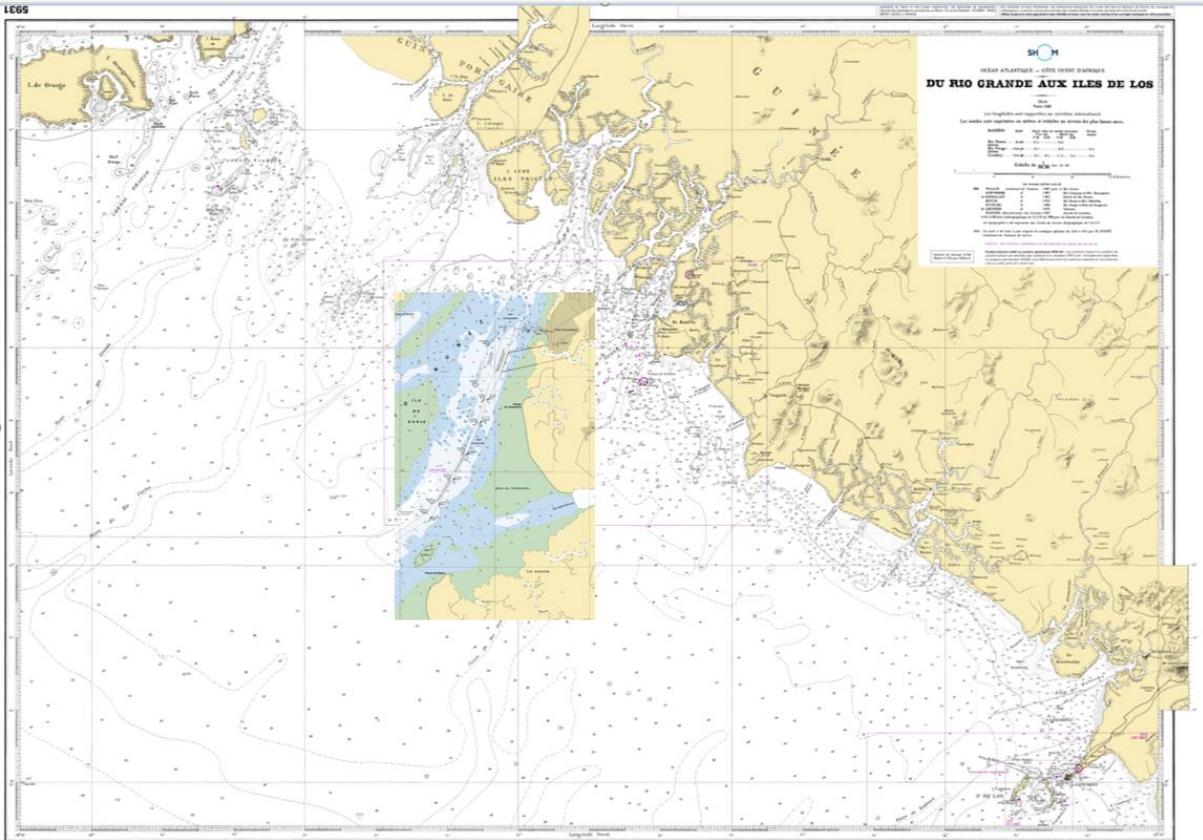


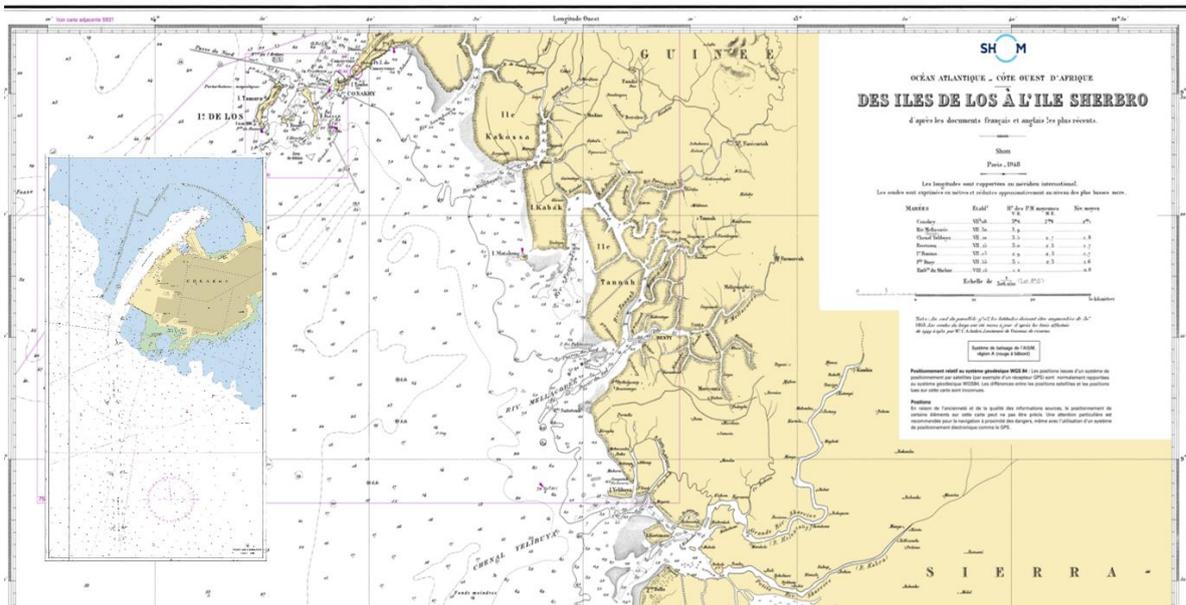


**IHO - Capacity Building  
Work Programme  
Technical Visit in  
Republic of Guinea  
REPORT  
18 – 22 March 2024**





Charts Shom N° 5931 and 7572



Charts Shom N° 5941 and 7574

## Our thanks to :

### Main actors of the Technical Visit:



Port Autonome de Conakry (PAC)



Direction Nationale de la Marine Marchande (DNMM)



Agence de Navigation Maritime (ANAM)



Autorité de Régulation du Transport Fluvio-Maritime (ARTFM)



**MDN**



REPUBLIQUE DE GUINEE  
Ministère de la Défense Nationale

Armée de Mer



Centre National des Sciences Halieutiques de Boussoura



Centre de Recherche Scientifique de Conakry-Rogbanè



Institut Géographique National

### Others stakeholders :



### Others stakeholders :

#### With the participation of:



Délégation de l'Union Européenne

#### With the assistance of:



Service hydrographique et océanographique de la marine (France)



Secrétariat de l'OHI (Monaco)

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## ABSTRACT

Intrinsically, an overhaul seems necessary to restore the scientific, technical and operational foundations for promoting the sea, coastline and estuaries of Guinea. Necessary approach for the renewal of hydrography, physical oceanography and marine cartography of the country. Maritime navigation must always be made safer and more efficient on the 350 km of Guinea's coast, along which there are large ports and where large-tonnage ships operate, including those dedicated to mineral exports.

The challenges, in addition to navigation safety, are economic and environmental. The economic gains from safer and faster navigation, thanks to better hydrographic, oceanographic and cartographic knowledge, are considerable.

The very duration of the Technical Visit, limited to 5 days, will certainly not have allowed everything to be seen and understood. The creation of a permanent visiting team made up of two representatives of the IHO and Guinean executives involved in navigation and relations with the IHO, however, made it possible to identify findings and recommendations which now deserve to be further explored and followed.

It should be noted that these observations are not very different from those already made in other countries in West and Central Africa where such "IHO" technical visits have already taken place and where hydrography is often too little developed outside the limited perimeters of autonomous ports. The hydrography of all other waters under the sovereignty of the country, apart from a few one-off operations, has often not been taken up or even controlled for more than half a century, even though uses at sea, their economic consequences and environmental issues have evolved significantly.

Same findings, same recommendations, same answers to be sought in the sub-region.

This must be integrated into the regional capacity development strategy and will be debated at the next IHO regional seminar in Casablanca at the end of April 2024 on the theme: "20 Years of Capacity Building Actions in EAHC - Assessment and Prospect"

The relay has now passed to the IHO correspondents in Guinea. They are currently at the Autonomous Port of Conakry, it is up to them to surround themselves with skills developed elsewhere to plan and monitor the actions already presented during the summary meeting at the end of the visit.

A roadmap (e.g. extracts from this report) to be written, could launch some actions such as:

- Establish a National Coordination Committee integrating hydrographic, oceanographic and cartographic issues;
- Exchange with the French hydrographic service (Shom) so that the "SOLAS" nautical charts are representative of the real navigation conditions in the waters under Guinean sovereignty;
- Complete the discussions that had been planned with international development agencies to find solutions to the challenges posed.

A rebuild always takes time. Certain actions such as sharing existing information and better mutual knowledge of the Guinean parties concerned by the sea can easily and quickly be implemented. Others are achievable in the medium term, in years, such as the Guinean-French co-production of nautical charts. The next IHO conference in Casablanca next May will present examples of African countries that have had exemplary developments. Guinea will be able to see how to develop itself until it achieves autonomy in hydrography and marine cartography.

## MAIN COMMENTS, RECOMMENDATIONS: addition to the previous summary

Objects	Actions
<p><b>Organize at the national level: the coordination committee. Within Guinea itself, promote profitable organizational and technical exchanges between organizations on subjects of common interest.</b></p>	<ul style="list-style-type: none"> <li>• Hydrography and marine cartography are sovereign activities of interest to many Guinean stakeholders: navigation, environment, scientific research, maritime boundaries, security, etc.</li> <li>• All needs must be progressively satisfied through: <ul style="list-style-type: none"> <li>– Acquisition of data at sea and on the coast (bathymetry, tide, currents, nature of the sea bottom, remote sensing, etc.). Not just ports and their access</li> <li>– Importance of ensuring the long-term archiving (databases) of this multi-use data. And their distribution (web portals)</li> <li>– Realization of products: nautical charts complying with IHO standards, thematic maps such as State Action at Sea, current atlases, tide directory, seabed maps, etc.</li> </ul> </li> <li>• That supposes: <ul style="list-style-type: none"> <li>– To know each other to share objectives</li> <li>– To be efficient in pooling resources (ships at sea, scientific equipment, hydro-oceanographers, etc.)</li> </ul> </li> <li>• The IHO<sup>1</sup> strongly encourages the creation of a Coordination Committee which can be built on the existing one or constituted specifically <ul style="list-style-type: none"> <li>– It will be multidisciplinary (hydrography-oceanography-cartography-aids to navigation) and therefore interministerial – Role: Planning, Prioritization of needs to be satisfied, Definition of roles and provision of resources to stakeholders, budget, etc.</li> <li>– It is suggested to start by ensuring: <ul style="list-style-type: none"> <li>• Presidency by a high authority such as the Maritime Prefect</li> <li>• The secretariat by the representative of Guinea to the IHO: the PAC</li> </ul> </li> </ul> </li> </ul>
<p><b>The roadmap</b></p>	<p>Once formed, this national committee (hydrography, oceanography, marine cartography, aids to navigation) will be able to meet with the following initial tasks:</p>

<sup>1</sup> Référence: <https://iho.int/en/miscellaneous-publications>: « M2 The Need for National Hydrographic Services ».

	<ul style="list-style-type: none"> <li>• Use of this “IHO” report;</li> <li>• It is suggested to translate it into a roadmap with concrete actions such as: <ul style="list-style-type: none"> <li>– The organization of circulation of nautical information</li> <li>– Training needs (hydrography and marine cartography) for all stakeholders concerned</li> <li>– Analysis of possible solutions</li> <li>– Writing letters (training requests) to development agencies as suggested by AFD</li> <li>– Data acquisition programs at sea to resume the bathymetry outside the areas already covered (Ports, mining activities)</li> <li>– Pooling of resources (ships, scientific equipment, tide gauges, specialized personnel, etc.) to be sought</li> <li>– Creation of databases, GIS, etc.</li> </ul> </li> <li>• tasks which will require people to be able to get involved and monitor the progress of the selected actions. Ideally have a dedicated structure such as a national “Hydrographic Service” (this must be a long-term objective)</li> </ul>
<p><b>Organize internationally and join the IHO</b></p>	<ul style="list-style-type: none"> <li>• the Ministry of Transport has expressed interest in joining the IHO;</li> <li>• the membership process in the form of a Verbal Note (<a href="https://iho.int/fr/devenir-etat-membre">https://iho.int/fr/devenir-etat-membre</a>) as well as the amount of the annual subscription (2 shares) were specified in an email to the PAC dated from 03.25.2024</li> </ul>
<p><b>Be present at the regional level</b></p>	<ul style="list-style-type: none"> <li>• Participate in the work of the EAtHC : Eastern Atlantic Hydrographic Commission of the IHO (next in Casablanca: May 1, 2 and 3, 2024)</li> <li>• Register for the seminars (next in Casablanca April 29 and 30, 2024)</li> </ul>
<p><b>Once membership in the IHO has been confirmed, propose Guinean candidates for training offered to Member States by the IHO in hydrography and marine cartography.</b></p>	<p>Consult the IHO Circular Letters regularly at: <a href="https://iho.int/en/circular-letters">https://iho.int/en/circular-letters</a>. In particular those relating to:</p> <ul style="list-style-type: none"> <li>• Category "B" Hydrographic Survey Programme Sponsored by the Republic of Korea</li> <li>• Category “B” Nautical Cartographers Programme, sponsored by the Republic of Korea</li> <li>• IHO - Nippon Foundation Geospatial Marine Analysis and Cartography (GEOMAC) Project, UKHO, Taunton, UK</li> <li>• IHO-IOC-Nippon Foundation / GEBCO Training Project. Graduate certificate in Ocean Mapping</li> </ul>

	<ul style="list-style-type: none"> <li>• Master of Science Programme in Hydrographic Science at the University of Southern Mississippi (USA) Sponsored by the Republic of Korea</li> </ul> <p>In the event of an absence of candidates with the prerequisites (maths, physics, English if applicable) or a registration limit, please note that these are recurring training programs to position for the following year. The IHO approved training courses to be followed are:</p> <ul style="list-style-type: none"> <li>• CAT B Hydro: senior hydrography technicians (priority)</li> <li>• CAT B Carto: senior technicians in marine cartography</li> <li>• CAT A Hydro: hydrographic engineer</li> </ul>
<p><b>Exchange with the French hydrographic service (Shom): so that the nautical charts are representative of real navigation conditions. Updates are imperative (SOLAS obligations)</b></p>	<p>Annex D indicates the “Shom” contact points: in particular Julien CORMERY Nautical Expert - Africa/Indian Ocean: <a href="mailto:julien.cormery@shom.fr">julien.cormery@shom.fr</a></p> <p>Exchanges must be able to be conducted in both directions (it is up to the PAC or any other national organization to ensure that these exchanges are well organized):</p> <ul style="list-style-type: none"> <li>• From Guinea (producers of hydrographic data)→ Shom: sending data (bathymetric surveys, dredging thresholds, tides, new infrastructure, permanent aids to navigation, limits of regulated areas such as fishing, minerals, marine protected areas, etc.), metadata (quality) and information likely to update current nautical charts and sailing direction. These data are used exclusively for updating nautical charts for navigation safety purposes;</li> <li>• From Shom → Guinean organization to be specified: sharing of methods on cartographic processes</li> </ul> <p>Note: It is fundamental that Guinea archives and can disseminate (national database, Internet portal, etc.) all the data previously cited in a lasting manner for shared valorization (multiple-use databases: navigation, hydrography, oceanography, environment, research etc.)</p>
<p><b>Towards a Guinean-French co-production with a perspective of</b> • The autonomy process is long (Morocco for the record) • The first step is to co-produce:<b>autonomy</b></p>	<p>A French cartography (Shom) which must become Guinean (assumes a Guinean Hydrographic Service)</p> <p>Firstly, a Guinean-French charting.</p> <ul style="list-style-type: none"> <li>• The autonomy process is long (Morocco for the record)</li> <li>• The first step is to co-produce: <ul style="list-style-type: none"> <li>– Define a framework for the gradual transfer of skills: Administrative Arrangement (co-production, supply of charts, training). The Shom will provide the PAC with a project. The</li> </ul> </li> </ul>

	<p>idea of such an arrangement was presented to the Minister of Transport who designated his office as focal point on this subject.</p> <ul style="list-style-type: none"> <li>– This requires gradually having, on the Guinean side, hydrographers and marine cartographers involved and operational</li> <li>– The charts can then have IHO/Guinea/France logos</li> </ul>
<p><b>Increase the number of interviews with international development agencies. The meetings that took place with the delegation of the European Union (EU) and the French Development Agency (AFD) should already be followed by Guinean proposals</b></p>	<p>Two institutions were able to be met (too quickly due to lack of time): the delegation of the European Union (DUE) and the French Development Agency (AFD). It is now appropriate, with the support of this report:</p> <ul style="list-style-type: none"> <li>• On the one hand, to explore the possibilities that the two institutions met could offer. This involves structuring proposals for requests for participation in development projects responding to both the needs of the country (e.g. reduction of maritime transport costs) and the strategies of agencies (e.g. environment, poverty reduction)</li> <li>• Please note that it is important to know the projects already in progress to see how to register,</li> <li>• Requests for development assistance may be written in a generic manner to be addressed to all international agencies present in Guinea (these agencies coordinating their actions)</li> </ul>

## OTHERS COMMENTS

Objet	Comments – Recommendations										
<p><b>Maritime Safety Information at Sea (MSI)</b></p>	<ul style="list-style-type: none"> <li>Beyond local (port) notices, concerning the open sea and access to different ports, navigators must receive maritime safety information. This requires the collection of information (all actors combined: navy, shipping companies, fishing, etc.) and its dissemination via NAVAREA II. This could be organized by an instruction of interministerial scope relating to the modalities of the collection and dissemination (urgent, rapid, deferred) of nautical information (MSI: Maritime Safety Information)</li> </ul> <div data-bbox="757 491 1765 1129" style="text-align: center;"> <table border="1" data-bbox="801 571 1608 651"> <thead> <tr> <th>PAYS</th> <th>INSTITUTION</th> <th>TELEPHONE</th> <th>FAX</th> <th>EMAIL</th> </tr> </thead> <tbody> <tr> <td>France</td> <td>Shom Service hydrographique et océanographique de la marine</td> <td>+33 2 56 31 24 24 24 +33 6 24 80 08 92 (spare)</td> <td>+33 2 56 31 24 84</td> <td><a href="mailto:coord.navarea2@shom.fr">coord.navarea2@shom.fr</a> <a href="mailto:coord.navarea2@gmail.com">coord.navarea2@gmail.com</a> (spare)</td> </tr> </tbody> </table> <p data-bbox="801 912 1451 944"><b>La Guinée est dans la zone NAVAREA II: France Shom</b></p> <p data-bbox="801 970 1384 1002">Website: <a href="http://diffusion.shom.fr/navarea-en-vigueur">http://diffusion.shom.fr/navarea-en-vigueur</a></p> </div> <p data-bbox="443 1141 1986 1295">Explanation: Maritime Safety Information (MSI), as defined in International Maritime Organization Resolution A.705(17) and detailed in the joint IHO/IMO/WMO Manual on MSI (IHO Special Publication S-53), consists of the collection and dissemination of navigational and weather warnings, search and rescue information and other urgent safety-related information, including nautical relating to nautical documentation.</p> <p data-bbox="443 1305 1986 1375">The dissemination of these MSI is based on the GMDSS (Global Maritime Distress and Safety System), an international system which uses telecommunications means for search and rescue at sea (SAR) and the prevention of maritime accidents.</p>	PAYS	INSTITUTION	TELEPHONE	FAX	EMAIL	France	Shom Service hydrographique et océanographique de la marine	+33 2 56 31 24 24 24 +33 6 24 80 08 92 (spare)	+33 2 56 31 24 84	<a href="mailto:coord.navarea2@shom.fr">coord.navarea2@shom.fr</a> <a href="mailto:coord.navarea2@gmail.com">coord.navarea2@gmail.com</a> (spare)
PAYS	INSTITUTION	TELEPHONE	FAX	EMAIL							
France	Shom Service hydrographique et océanographique de la marine	+33 2 56 31 24 24 24 +33 6 24 80 08 92 (spare)	+33 2 56 31 24 84	<a href="mailto:coord.navarea2@shom.fr">coord.navarea2@shom.fr</a> <a href="mailto:coord.navarea2@gmail.com">coord.navarea2@gmail.com</a> (spare)							

	In addition, MSI in their broadest sense includes updating navigation charts and other nautical publications (list of lights, radio signal, notice to mariners, etc.). The MSI need an organization (procedures for collecting, transcribing and transmitting information, maintained equipment, trained staff) with a national MSI coordinator in contact with the navigators, the de facto cartographic responsible (France) and NAVAREA II (Shom).
--	---

**Summary of national hydrographic capacity assessment – Table**

IHO	EAtHC	NHC	Phase 1 : Capacity MSI	Phase 2 : Capacity Surveys	Phase 3 : Capacity Charting
NO	YES	NO (1)	NO (2)	YES but very limited to harbours and access (3)	NO (4)

- (1) National Hydrographic Committee (coordination role and national decision).
- (2) Maritime Safety Information. NO for the open sea beyond territorial waters. It therefore remains to put in place an organization to operationalize exchanges with NAVAREA II (France/Shom) and the current producer of charts “SOLAS” for updates (Shom)
- (3) Hydro-oceanographic surveys through data acquisition and archiving (ability to comply with IHO standards not verified)
- (4) NO for Charting to “SOLAS” standards



# INTRODUCTION

## 1 Preparation of the technical visit

The Technical Visit (TV) was planned as part of the IHO capacity development activity program for the year 2024:

- *CBWP 2024: action A-01 - «Technical Visit to Guinea».*

It was initiated in close collaboration with the Guinean participants cited below. The terms of reference for the visit are set out in Annex B.

## 2 Team composition

The visiting team was composed of:

<u>Name</u>	<u>Part</u>
<b>Henri DOLOU</b>	Project manager at Shom (Hydrographic and Oceanographic Service – France) for capacity development in Africa (France under the IHO)
<b>Gabin SOGORB</b>	“IHO” Capacity Building Coordinator for the EAtHC Head of the external relations division of Shom (France under IHO title)
<b>Moustapha BALDE</b>	Technical Director of PAC (Autonomous Port of Conakry) “IHO” focal point for Guinea

Mr Karifala FOFANA in charge of external relations and cooperation at the PAC as well as Mr Ansoumane I CAMARA, also from the PAC, also contributed greatly to the VT.



The Technical Visit team in the presence of the PAC DG  
From left to right: Henri DOLOU (OHI), Mamadou Biro DIALLO (PAC/DG), Gabin SOGORB (OHI), Moustapha BALDE (PAC/DT), Karifala FOFANA (PAC/Cooperation)



On right : Ansoumane I CAMARA of PAC

## PART A – OVERALL ASSESSMENT OF THE SITUATION IN THE REGION

### 3 Effectiveness of the Technical visit

Monitoring actions resulting from written recommendations will make it possible to measure the real effectiveness of the visit in the long term. Progress reports (based on a roadmap to be drawn up by Guinea) could be made during the next EAtHC meetings. It can already be said:

- That it could have been prepared in advance of the visit through exchanges and analyzes of existing reports and texts;
- That the issues of hydrography, oceanography and marine cartography could be addressed in terms of science, navigation and economics;
- That the following appointments (limited to Conakry) could be honoured; Annex E specifies the main authorities encountered):
  1. MT [Ministère des Transports]
  2. MT/PAC [Port Autonome de Conakry]
    - Direction Technique
    - Direction des Ressources Humaines
    - Direction Générale
  3. ALPORT et Inros Lackner
  4. MT/DNMM [Direction Nationale de la Marine Marchande]
  5. MT/ANAM [Agence de Navigation Maritime]
  6. MDN/Préfecture Maritime [Ministère de la Défense Nationale]
  7. MDN/État-Major de l'Armée de Mer
  8. MPEM/CNSHB (+ Ird) [Ministère de la Pêche et de l'Économie Maritime /Centre National des Sciences Halieutiques de Boussoura (+ Institut de recherche pour le développement - France)]
  9. MT/ARTFM [Autorité de Régulation du Transport Fluvio-Maritime]
  10. MESRSI/CERESCOR [Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation / Centre de Recherche Scientifique de Conakry- Rogbanè]
  11. Afd [Agence française de développement]
  12. UE [délégation de l'Union Européenne]

A feedback and recommendations meeting were held on the last day at the PAC.



Due to lack of time, the National Geographic Institute (IGN) could only be consulted after the TV.

It was obviously not possible to see everything. Nevertheless, the PAC endeavored, within the allotted time, to honor the requested appointments.

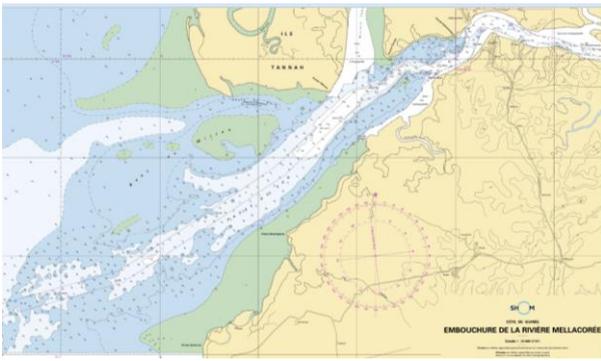
Some meetings (development agencies in particular) did not allow to really delve into the subjects to be discussed. Contacts were nevertheless made to facilitate subsequent meetings by the Guineans themselves.

Reusable communication supports were provided bearing:

- On the issues and governance (institutional context);
- On the current description, in Guinea, of the development (according to IHO standards) of hydrography and marine cartography;
- Finally, on the main lessons learned immediately at the end of the Technical Visit.



**Mellacorée Edition of 1852**



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The discussions were professional and constructive. Recommendations were made. Some of them can be carried out in the short term.

It should be noted that the technical exchanges focused on the obligations of the SOLAS convention (Chapter V) as well as the expected socio-economic benefits. As such, hydrographic investments can generate very substantial or even rapid financial savings, in particular via:

- minimizing dredging operations;
- optimization of ship loading;
- the reception of new vessels with greater capacities but with much more demanding dimensions in terms of navigation constraints;
- more direct navigation routes (cabotage in particular) saving time and fuel.

**4 International and regional cooperation – Defense**

a. [International and Regional Organizations]

OHI/IHO Status	Commission hydrographique régionale de l’OHI	OMI/IMO	AISM/IALA
Non Membre	Membre Associated CHAto/EAtHC	Membre	Membre

b. [Defense and security arrangements]: Subject not discussed during the visit.



## DESCRIPTION OF MARITIME ACTIVITIES

### 8 National Maritime Affairs - Actors

The duration of the visit (5 working days) made it possible to meet important players in the maritime transport chain in Conakry. The Kamsar port (ore export) could not be visited due to lack of time. The interviews focused on the issues associated with hydrography: beyond navigation safety (international commitments – SOLAS), socio-economic performance through port capacities to accommodate ships (including larger ones) , the optimization of their loading (through the depths shown on nautical charts) and the identification of shorter and therefore faster and more economical navigation routes in terms of fuel.

It was recalled that hydrography is an applied science dealing with the measurement and description of the physical elements of the seas and coastal zones. That its mastery necessarily intervenes in coastal protection (coastal development) thus underlining the transversal nature of hydrography (physical oceanography is part of it) and consequently, at the governmental level, its interministerial ambition.

Hydrography and marine cartography concerns all waters under Guinean sovereignty, not just ports and their access from the open sea, the issues are indeed national.

#### 8.1 Main actors

<b>8.1.1 Port Autonome de Conakry (PAC)</b>	
---	---

The port of Conakry is Guinea's main commercial port. It also ensures trade with hinterland countries such as Mali and Burkina Faso.



The PAC is the representative of Guinea to the IHO. This without this country being a member of the organization. Guinea is nevertheless an associate member of the IHO regional commission: the EAtHC (Eastern Atlantic Hydrographic Commission).

In the past, the PAC mastered the hydrography (bathymetry) of the port of Conakry.

For this harbours, he ensured exchanges with the producer of official SOLAS nautical charts: Shom.

This is no longer the case since 2018 (see § ALPORT).

It suits :

- For Conakry, to record the transfer of operational responsibility (25 years as of 2018) for hydrography from the PAC to ALPORT, the Guinean State remaining responsible (as a signatory of international conventions) for the quality of the data allowing the continued updating of official SOLAS nautical charts (currently produced by Shom / France). This responsibility in itself requires qualifications in hydrography to ensure compliance with IHO standards;
- For the rest of the waters under Guinean sovereignty, including all other ports, to clarify the role of the PAC already as Guinea's representative to the IHO and therefore spokesperson for the country in its bodies. Depending on its future scope of responsibility (ports in particular), training needs in hydrography and marine cartography may be expressed.

Regarding hydrography, the “national” issues (not just Conakry, nor Kamsar for that matter) are as follows:

- ).
- The availability and quality (including updating) of national nautical charts (SOLAS obligation). The current provisions (French charts) need to be developed by formalizing them (“IHO” recommendation) within the framework of a Guinea/France Administrative Arrangement (AA). AA to be completed in order - already - to move towards a Guinean-French co-edition of the charts (Guinea, Shom and OHI logos).



- Ideally the creation of a Guinean Hydrographic Service with a national vocation would make it possible to operationally address these issues.
- This creation can take time, it is already suggested to:
  - Establish a national coordinating committee which, beyond hydrography, will be able to extend its mandate to oceanography (physics) and marine cartography. Example: CNHOC for National Committee for Hydrography, Oceanography and Marine Cartography;
  - Give the PAC skills in HOC (Hydrography, Oceanography, Cartography) matters to ensure the functioning of this committee (e.g. secretariat) whose presidency could be ensured by a high authority such as the Maritime Prefect;



### 8.1.2 ALPORT – Groupe Albayrak



In 2018, the Conakry Port Authority and the Albayrak Group of Istanbul agreed to finalize the privatization process of the Port of Conakry. All terminals located within the boundaries of the port authority have been leased to the Albayrak Group for 25 years. In accordance with the concession contract, all rights to the Autonomous Port of Conakry were transferred to the Albayrak Group.



Today, Conakry Port S.A. manages all terminals within the boundaries of the Port Authority and operates the general cargo terminal at the Port of Conakry; serving dry bulk, bulk and general cargo vessels. Container, wet bulk and other dry bulk terminals are operated by third party operators. Conakry Port S.A., as the main contractor, is currently working on a master plan and an expansion investment plan to renew all terminals in accordance with the operational needs and requirements of each terminal within the limits of the port authority.

The terminals:

- General Cargo Terminal – Conakry Port S.A. (ALPORT)
- Container Terminal – Bollore / Conakry Terminal (EGL – CMA CGM)
- Bauxite Terminal – Compagnie de Bauxites Kindia (CBK)
- Aluminium Terminal – Rusal Frigua

Consequences :

It is no longer the PAC which ensures bathymetric controls of the port (neither dredging<sup>2</sup> nor management of navigation aids, nor pilotage). ALPORT has bathymetric means allowing in particular to control dredging operations: dual-frequency single-beam sounder, multi-beam sounder (Reson Seabath 9001), GPS, Hypack software, Hydromagic, digital radar tide gauge



**ALPORT**



**Radar tide recorder**

A civil engineer from ALPORT supervises hydrographic operations. The TV did not allow to meet the operators themselves or check their qualifications. However, it is very unlikely that ALPORT has internationally qualified hydrographers (CAT B FIG-OHI-ACI). Qualification likely to guarantee the quality of hydrographic work and their compliance with international standards to ultimately guarantee the quality of nautical charts.

The company Inros Lackner carries out control operations.

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<sup>2</sup> For the port of Conakry, depths should increase from 10 m to 12 m and finally 14 m

### 8.1.3 Direction Nationale de la Marine Marchande (DNMM)



The National Directorate of the Merchant Marine (under the supervision of the Ministry of Transport) of Guinea is the competent authority for the regulation, surveillance and promotion of the maritime sector in the Republic of Guinea. With its 350 km of coastline, the development and operation of several port infrastructures, the DNMM must ensure compliance with safety and security standards and the preservation of the marine environment.

Among its responsibilities: Collect, process and disseminate information relating to transport and navigation safety.

The DNMM has a Navigation Safety, Port Affairs and Security Division with:

- A Maritime Safety and Security Section which must in particular ensure search, rescue and assistance operations at sea and on waterways;
- Port and Waterways Section whose role is:
  - participate in the development and implementation of port and river infrastructure projects;
  - to examine the files for authorization requests for the construction of port infrastructure, access to territorial waters, dredging and any maritime study in Guinean waters;
  - participate in maritime studies and feasibility studies of port construction projects;
  - to participate in nautical surveys (investigation);
  - participate in rescue and assistance operations at sea;
  - to ensure compliance with navigation rules in ports;
  - to participate in studies relating to maritime and river signaling;
  - to ensure the proper functioning of maritime and river signaling and to draw up reports;
  - to monitor the implementation of the port and river development strategy.

The DNMM also has a Business Division with:

- A cooperation and monitoring section of international conventions whose role is:
  - ensure the implementation and monitoring of conventions, treaties, protocols and agreements in the maritime, river and port sectors;
  - to participate in the ratification procedures of conventions, treaties, protocols and agreements in the maritime, river and port areas;
  - to propose partnership projects with similar institutions;
  - to take any initiative relating to cooperation issues in the maritime, river and port areas

It is indeed a central department attached to the Ministry of Transport. A state role different from a service in charge of hydrographic and cartographic work or a service for the installation and maintenance of navigation aids (Lighthouses and Beacons).

If the DNMM undoubtedly does not need field hydrographic operators, its missions nevertheless deserve to have within it agents who have had basic training as offered, for example, by the AFHy (Association Francophone d'Hydrographie - see the "Training" chapter).

Editor's note: hydrography is based on an entire organization including acquisition of data at sea, their processing and their use in nautical products, in particular official nautical charts (SOLAS) whose distribution and updating is ensured. Hydrography is an activity falling under an operational national

hydrographic service whose contours will need to be clarified for Guinea. Its supervision(s) often fall under the ministries in charge of transport or defense.

Regarding navigation safety, the issues are as follows:

- Implementation of the SOLAS convention (chapter V, rules 9 and 4)
- “IMO”, “IHO”, “IALA” complementarity in international bodies

#### 8.1.4 Agence de Navigation Maritime (ANAM)



We will remember from the meeting at ANAM:

- that it applies international conventions and the Guinean maritime code;
- that it is responsible for aids to navigation (marking). The activity being subcontracted in the absence of resources;
- that it is in contact with IALA (which has its own academy).

#### 8.1.5 Autorité de Régulation du Transport Fluvio-Maritime (ARTFM)



This authority has proven to be an important stakeholder. It is at the interface between the export of minerals (coming from land via rivers and estuaries) and sea vessels.

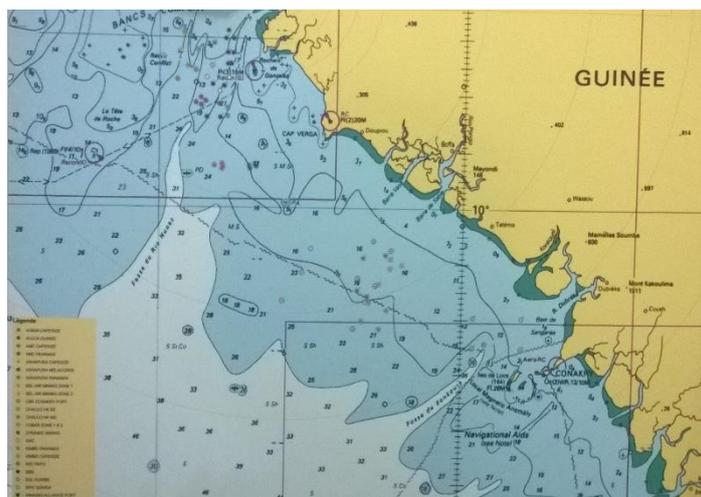
Its mission is to organize and regulate river-sea transport and to monitor it.

As such, it is particularly responsible for setting standards for traffic operations, programming and controlling the movement of ships, floating grids, tugs and platforms in river channels, managing points of contact, anchorages and transshipment areas dedicated to ships.

Participating in environmental protection is also part of its mission.

Its current director was able in the past (1998) to launch the procedure for joining the IHO. However, this was not successful (financial reasons).

Bathymetric checks (predicted tides) are carried out in anchorage areas where minimum depths are required. A lack of trained personnel is reported. The ARTFM plans (Terms of reference drafted) the acquisition of a multi-service ship. This organization produces maps dedicated to its activities against a background of nautical charts.



The importance of management (intersectorality: mines, fishing, marine protected areas) of the maritime space has been noted, hence the importance of delimiting it. Showing the limits on nautical charts is necessary (agreement reported for “B to B” with Shom). The role of “facilitator” of the Maritime Prefect was noted. In terms of training, the needs of this organization are both in hydrography and cartography.

#### 8.1.6 Centre National des Sciences Halieutiques de Boussoura (CNSHB)



There is no development of hydrography, associated physical oceanography and marine cartography itself without involving the main users of the sea (here the fishing issues) and without relying on scientists.

The CNSHB are:

- scientific and technical capacities of the marine environment (including support from the Ird: Research Institute for Development - France);
- means of data acquisition at sea with the ship “*General Lansana Conte*”. Ship offered to Guinea in 2003 (and very recently renovated) by the government of Japan through Japanese cooperation (JICA). This scientific research vessel is a tool in the Guinean EEZ and the West African sub-region;
- these are data including bathymetry (and the ability to exploit them with GIS such as ArcView and manage them in the database in a long-term and shared manner);
- these are common purposes with hydro-oceanography for the integrated management of coastal zones;
- This is also information on regulated areas (fishing, ecosystems to be protected from conflicts of use at sea and estuaries) which can be included on nautical charts to be respected.



Challenges :

- The complementarity of “Oceanography”, “Hydrography”,
- The potential for pooling human (e.g.: oceanographers, data managers, etc.) and material (e.g.: ships, onboard observation systems at sea, etc.) capabilities,
- Shared databases (Geoportals) as part of the opening of public data (open data) to benefit from TIC
- Participation in the CNH (National Committee for Hydrography...Oceanography...Marine cartography)

If there were to be training offers in hydrography (and physical oceanography) there is no doubt that this Center should be able to take advantage of them.



### 8.1.7 Centre de Recherche Scientifique de Conakry-Rogbané (CERESCOR)



What has just been written for CNSHB could be repeated here.

This center is in the reconstruction phase.

There cannot be any development of hydro-oceanography (and therefore all its operational applications, ultimately responses to social and economic issues) without involving the world of research.

Once CERESCOR has regained “colors” then the country will once again be able to benefit from the results of its applied scientific research in the fields of (i) Oceanography (Marine Physics, Hydrochemistry, Hydrometeorology), (ii) Hydrobiology, (iii) Geology & Environment etc.

In its organization, the CNSHB nominally has:

- An OCEANOGRAPHY department responsible for the multidisciplinary study of the physical, chemical and meteorological marine environment for effective development of the living and non-living resources of the continental shelf of Guinea. This department includes three laboratories:
  - Sea physics
  - Hydrochemistry
  - Hydrometeorology
- A Department of GEOLOGY-ENVIRONMENT whose mission is the study of off-shore and on-shore geological formations as well as hydrological products. It includes three laboratories:
  - Marine geology
  - Geophysics
  - Environment
- Finally, a Doctoral School in Oceanography and Marine and Coastal Environment Training programs: Master and Doctorate (Ph.D)

Note: CERESCOR works in close collaboration with the University of Conakry, in particular with the Center for Environmental Studies and Research (CERE) noted for its “pool of skills”.

Climate change is the subject of studies and training in schools in the region financed by Germany. Ocean sciences being taught in Cape Verde (forests and mining in Guinea).

#### 8.1.8 Préfecture maritime (Action de l’État en Mer)



The maritime prefecture is responsible for State Action at Sea, which is managed by an interministerial sea committee and a technical monitoring commission.



The Interministerial Committee for the Sea, the decision-making body for State Action at Sea, is made up of ministers in charge of: National Defense, Fisheries, Transport, Mines, Security and Civil Protection, Foreign Affairs, Environment, Scientific Research, etc. The Maritime Prefect, who provides the secretariat, is one of them.

The missions of the Interministerial Committee for the Sea are:

- To ensure the protection of national interests;
- To address the issues of State Action at Sea;
- To define the orientations of maritime policy in its various national and international aspects;
- To propose priorities for government action in all areas of maritime activity, particularly in terms of use of maritime space, protection of the marine environment, development and sustainable management of marine resources. sea, its soil, its subsoil and the maritime coastline;
- To define the various actions carried out within the framework of State Action at Sea and to take any measure likely to increase the efficiency of the various services participating in this common mission from the point of view of human and material resources;
- To carry out a mission of control, evaluation and foresight in maritime matters.



#### 8.1.9 État- Major de l'Armée de Mer



**MDN**

**RÉPUBLIQUE DE GUINÉE**  
Ministère de la Défense Nationale

The Navy was able to have within its ranks military trained in hydrography (Russia cited).

This is no longer the case.

It does not have dedicated scientific equipment, but has floating units on which portable hydro-oceanographic data acquisition systems can easily be installed.

Its involvement in national hydrography appears potentially rich in already satisfying its own needs. For example, where the Navy wants to patrol but where navigation is risky given insufficient hydrographic knowledge.

It is in terms of complementarity with other Guinean organizations (or companies) that we must also see the Navy position itself by being a force for proposals (e.g. Action or State at Sea framework) in the National Coordination Committee.

### 8.1.10 Institut Géographique National



**Reference:** “Présentation de la Direction et Missions / Presentation of the Management and Missions” note provided by Mr. Amadou Tidiane Dalein DIALLO Deputy Director General of the IGN on 03.31.24

#### **Notes :**

- In addition to knowing its capabilities, products and services, it is interesting to see how IGN has been able to develop over time and with whom. Reference to be taken into account in the context of the study of the future development of Guinean marine cartography.
- The IGN can only be a stakeholder in the development of marine cartography (even if it is quite different from terrestrial cartography).
- It has its place within the framework of the National Consultation Committee to be set up (hydrography, oceanography, cartography).
- The development of hydrography will also be based on techniques which are those of geographical institutes: geodesy, leveling (to be linked to the tide), database, remote sensing, geomatics, etc.

#### **Summary of the note**

##### **Among the missions of the IGN:**

- develop and update the basic cartography of the national territory;
- create, densify, protect geodesic canvas and leveling networks;
- ensure the production of updated maps at variable scales;
- ensure compliance with technical standards in geodesy, cartography and aerial and satellite photography;
- establish partnership relationships with similar organizations and institutions;
- establish conventions, agreements and protocols relating to the areas of competence of the National Geographic Institute;
- strengthen the capacities of actors and stakeholders in the sector.

##### **In particular, it has the following technical divisions:**

- Land Survey Division: national geodetic canvas, leveling networks, standards, topographical and geodetic work, etc.
- Cartography Division: cartography work, implementation and management of the National Geographic Information System, toponymy, etc.
- Aerial Surveys and Satellite Imagery Division: photogrammetry, remote sensing, archiving and backup of digital files,

##### **Historical overview of the work carried out:**

Before 1958: Colonial period (France). Based on a geodetic and leveling network, total coverage at 1:200,000 scale and partial coverage at 1:50,000 scale (74 sheets).

- From 1977 to 1982: Guinea-Japan Cooperation (JICA): aerial photography, geodesy, leveling, 16 topographic maps at 1:50,000.
- In 1982: French Cooperation (IGN France): 18 sheets at a scale of 1/50,000.
- In 1992, a satellite triangulation network was established by DOCAD (land registry office/cadastre).
- From 2012-2016, Guinea-Japan Cooperation: Conakry and surrounding areas (1/5,000). Transfer of know-how for activities carried out in Guinea not for those carried out in Japan: aerotriangulation, restitution, compilation, structuring and symbolization of data.
- From 2015-2016: Improvement of the geodetic network of the Republic of Guinea (mining cadastre).
- From 2017-2018: Guinea-Morocco cooperation (Densification of the geodetic network of Conakry and its surroundings).
- From 2020-2022: Cooperation with JICA: continued transfer of know-how for updating maps: technical training of IGN engineers in geographic information systems (GIS).

**The IGN offers training in the following areas:** topography, geomatics, databases (GIS), remote sensing, satellite location (GNSS).

## 8.2 Coordination: AEM and “National Coordination Committee”

### 8.2.1 State action at sea (AEM)

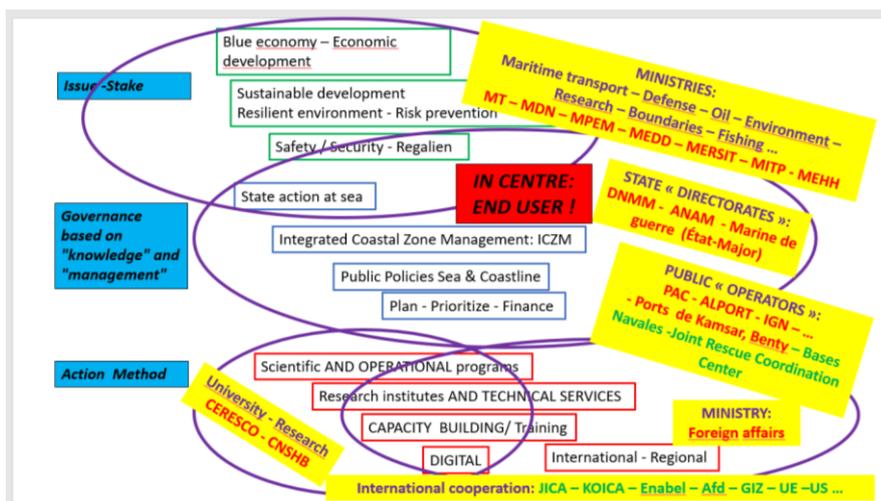
State Action at Sea (AEM) is the responsibility of the Maritime Prefecture.

### 8.2.2 « National Coordination Committee relating to aids to navigation, hydrography, oceanography and marine cartography »

See at the beginning of the report: “MAIN COMMENTS, RECOMMENDATIONS: addition to the previous summary”

PROPOSAL FOR COORDINATION AND CAPACITY DEVELOPMENT / National Coordination/Consultation Committee (Hydrography, Physical Oceanography, Marine Cartography, Aids to Navigation)

- Faced with administrative sectorization, its necessity is recognized: many common needs, shareable skills, resources to pool (through agreements, budgetary compensation if necessary);
- Its multidisciplinary (transport/navigation, coastal environment, safety/security, maritime fishing, research and teaching in oceanography, etc.) and interministerial nature was underlined;
- Note: such a committee does not nevertheless constitute an operational national hydro-ocean-cartographic research, development and production body. Such an operational body is necessary. This is a National Hydrographic Service. The investment necessary for its study and constitution should not be underestimated (status, governance, budget, material and human resources, etc.). The establishment of operational structures and means falls under the “Action/Method” level in the following figure. The subject is obviously up for debate, at an interministerial level, between the stakeholders concerned.



### 8.3 National actors and international cooperation

In the past, international cooperation has been possible in the field of hydrography. In addition to the surveys of France (Shom), for example, the hydrographic survey of Mellacorée was financed by the World Bank.



The Government of the Republic of Guinea had obtained funding from the World Bank group's IDA (International Development Association) as part of the Agricultural Export Promotion Framework Project (PCPEA: Projet Cadre de Promotion des Exportations Agricoles). Part of these funds was intended for the rehabilitation of the river and maritime logistics system on Mellacorée.

The first bathymetric studies were carried out by the French West Africa hydrographic mission in 1938 for the route of the first temporary access channel. They were replaced in 2002 by new modern bathymetric studies of the Mellacorée River from the estuary to the Fandjié wharf.

#### 8.3.1 Agence Française de Développement (AFD)



It was about making contact, up to Guinea to come back with built projects.

To note:

- Afd's activity is built on the basis of the Paris agreements. The promotion of South/South relations (as opposed to North/South) is highlighted;
- Among the subjects of interest: climate change (measurable by tidal observations), coastal erosion, their impacts on populations;
- Also "mobility" in this case transport concerns (duplication of road traffic and the sea);
- Training is also a subject of interest;
- AFD suggests reading about current projects to see how to register.

- The rehabilitation/construction (in co-financing with the World Bank) of 5 artisanal fishing landing sites could already be studied (at least to possibly adapt the nautical charts);
- It also offers to write generic development proposals to be sent to development agencies (not just AFD).

### 8.3.2 Délégation de l'Union Européenne en Guinée (UE)

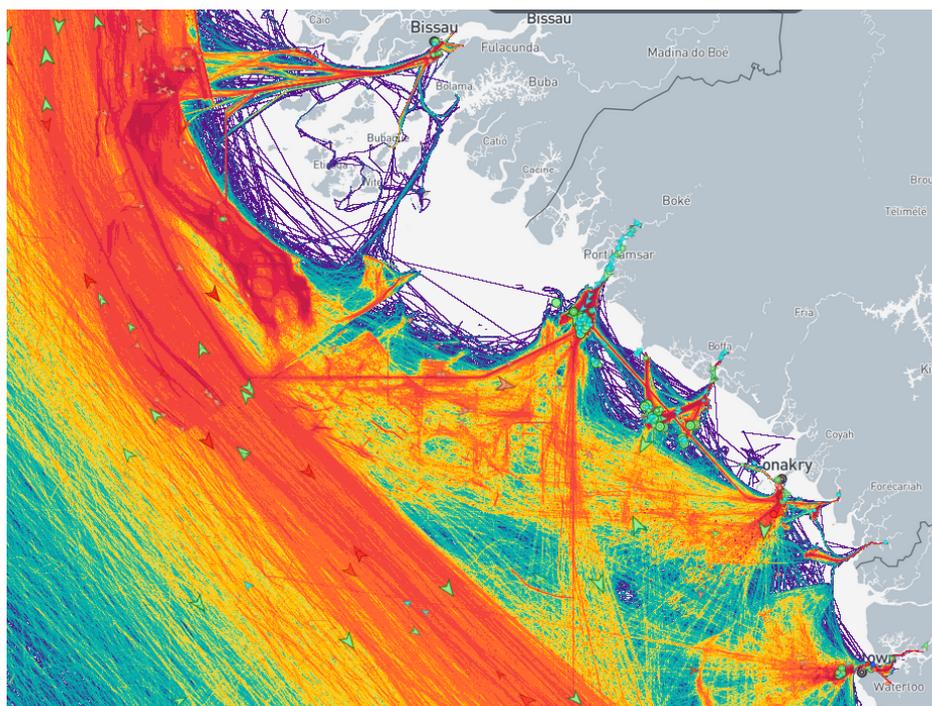


It was also a simple matter of making contact, with Guinea responsible for subsequently resuming dialogue, particularly with the manager in charge of the “transport” sector.

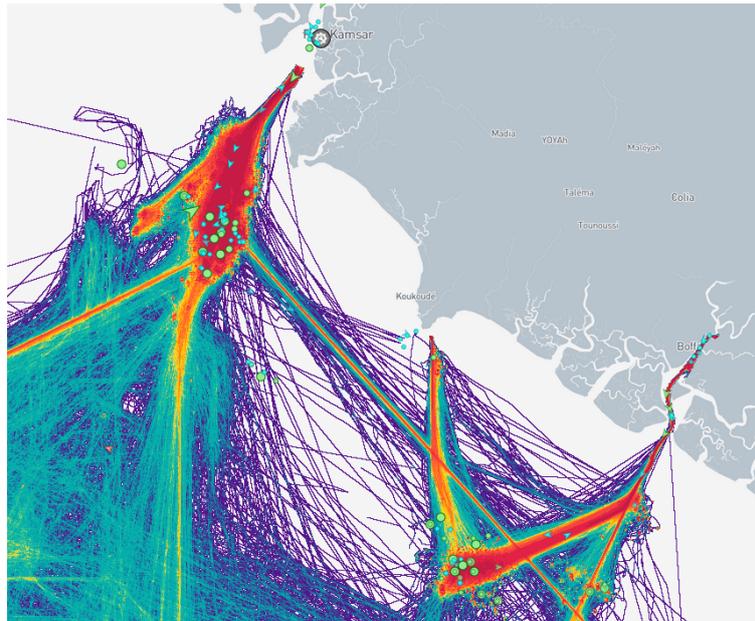
## 9 Maritime trade and traffic – Marine cartography/CATZOC

### 9.1 Maritime traffic

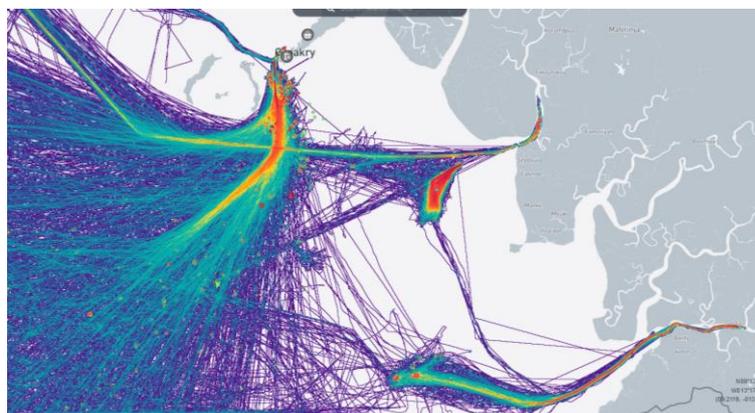
**AIS data (source : <https://www.marinetraffic.com> )**



**General situation of maritime traffic off the coast of Guinea**



**Kamsar – Koundinde - Boffa**



**Conakry – Morebaya - Benty**

## 9.2 Marine cartography/CATZOC

### 9.2.1 Official cartography of Guinea (see Annex F)

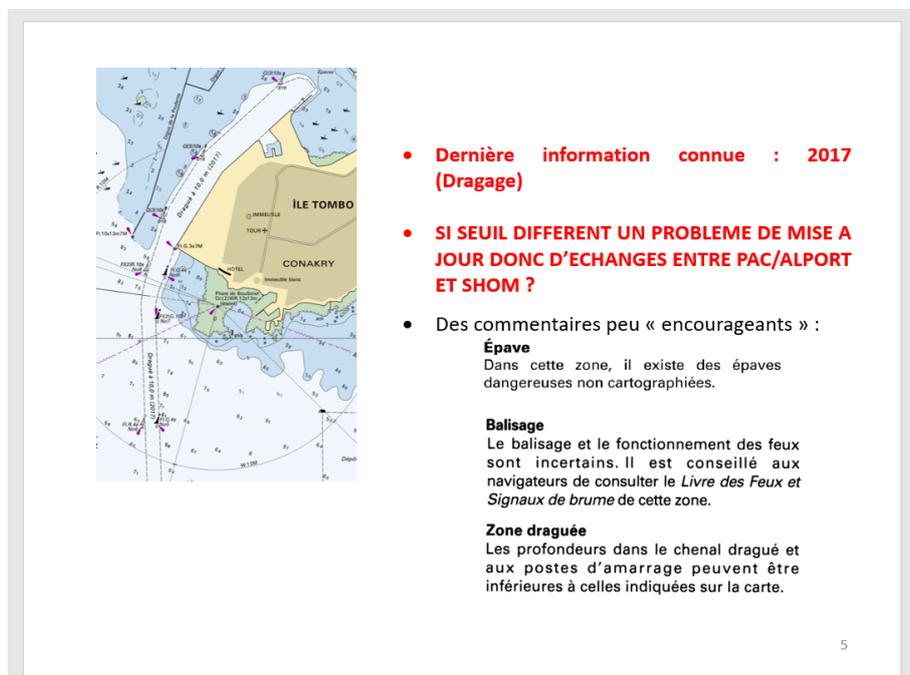
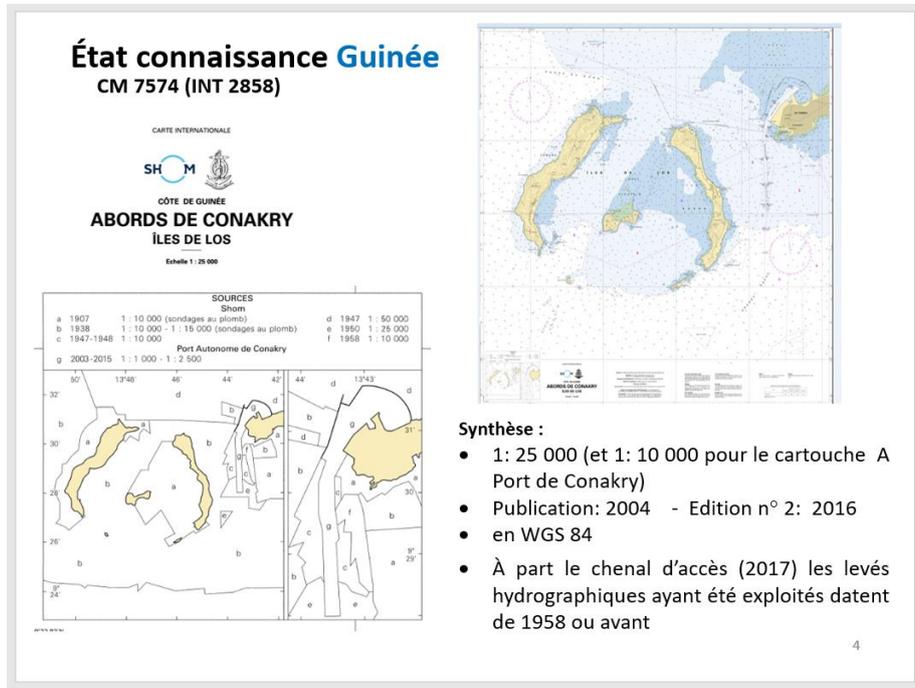
France in fact ensures (pending greater autonomy from Guinea) the function of “Primary Chart Authority” through the production of nautical documentation produced by Shom on Guinean waters. This cartographic responsibility deserves formalization within the framework of an “AA-SOLAS” Administrative Arrangement project between France and Guinea. AA also including a skills transfer training component.

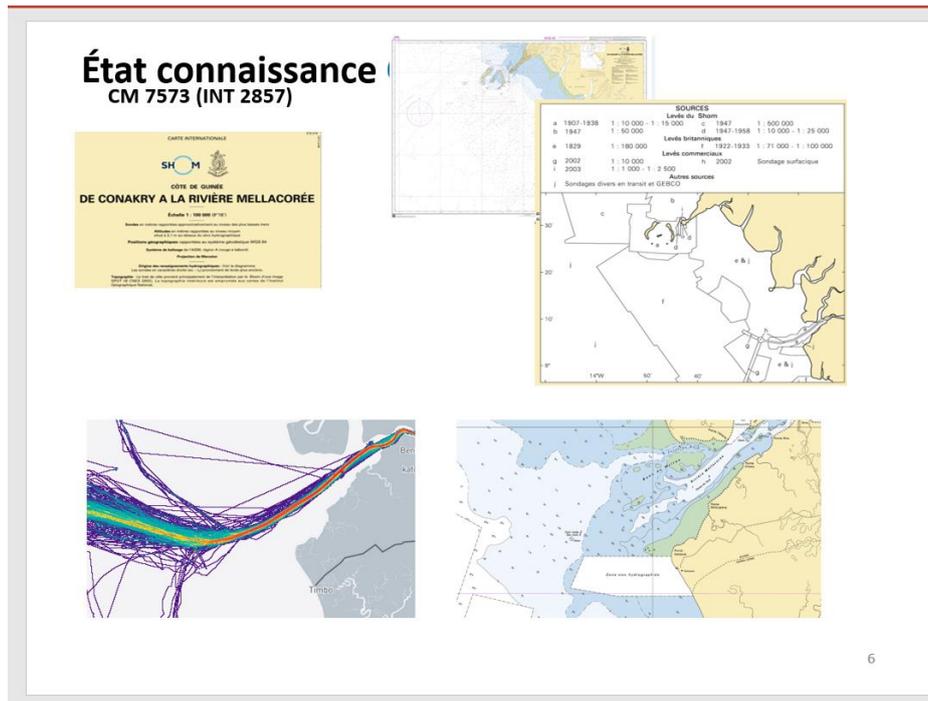
Guinean waters are covered by a consistent set of paper charts, digital rasters in GeoTiff format and electronic navigation charts (ENC). These products cover the most important known navigation needs. The quality of these maps can be assessed through the states of knowledge described in the following chapter.

Concerning maritime navigation (access to ports, waiting and anchorage areas, quays) it fundamentally depends on regular updates of the bathymetry. Updates that are insufficient for two main reasons:

- A lack of exchanges between Guinean organizations or companies and Shom. This can easily be corrected;
- Insufficient hydro-oceanographic data acquisition capacities for all Guinean waters (absence of a national structure such as the Hydrographic Service). This will take time to set up.

## 9.2.2 State of knowledge





Source : <https://iho.int/uploads/user/pubs/cb/c-55/c55.pdf>

Guinea (G)											
Nautical charting / Cartographie marine / Cartografía náutica			Offshore passage			Landfall and Coastal passage			Approaches and Ports		
Coverage of charts published			Navigation au large			Atterissage et navigation côtière			Approches et ports		
Cobertura de cartas publicadas			Passaje offshore			Recalada y Pasaje costero			Aproches y puertos		
100%	Covered by INT or other paper charts meeting S-4 Couvert par des cartes papier INT ou autres conformes S-4 Cubiertas por cartas de papel INT o otras cumpliendo S-4		100	0	100	100	0	100	100	0	100
100%	Covered by RNC meeting S-61 Couvert par des RNC conformes S-61 Cubiertas por RNC cumpliendo S-61		100	100	100	100	100	100	100	100	100
100%	Covered by ENC meeting S-57 Couvert par des ENC conformes S-57 Cubiertas por ENC cumpliendo S-57		100	100	100	100	100	100	100	100	100
100%	Paper charts showing depth in meters Cartas de papel con profundidades en metros		100%			100%			100%		
	Paper charts referenced to a satellite datum Cartas de papel referidas a un datum satelital		100%			100%			100%		
Notes			Data source			Data source			Data source		
Notes			Origen de los datos			Origen de los datos			Origen de los datos		
Notes			Origen de los datos			Origen de los datos			Origen de los datos		
Notes			Origen de los datos			Origen de los datos			Origen de los datos		

Comment :

- An update of the Notes is necessary
- There are areas where hydrographic knowledge is insufficient (very old surveys) or even non-existent (non-hydrographied areas). By correlating this knowledge with current navigation zones (including cabotage) and especially planned ones, it will be possible to conduct a risk analysis and prioritize the hydrographic surveys to be carried out. This is again a subject to be submitted to the coordination committee (navigation aids included).

## 10 Responsibility for navigation safety

On a state and regulatory level, this responsibility falls to the National Directorate of Merchant Marine (DNMM, under the supervision of the Ministry of Transport).

This department (like the Maritime Navigation Agency - ANAM involved in aids to navigation) ensures in particular compliance with the application of the maritime Conventions of the International Maritime Organization (IMO).

## 11 Responsibilities of the defense forces (Armée de Mer)

See the chapter Main actors/Sea Force – Armée de Mer

As part of its responsibilities (including search and rescue) the Navy is concerned with the collection and dissemination of nautical information (Maritime Safety Information MSI). To meet its missions (safety, security, environment) the Navy needs (AEM exercise) nautical documents: nautical charts, current atlases, specific AEM maps (e.g. maritime boundaries).

The potential for national pooling of material capabilities (e.g. ships that can be permanently or occasionally equipped with onboard observation systems at sea, etc.) should be noted.

Its participation in the National Coordination Committee. (National Committee for Hydrography...Oceanography...Marine cartography) is essential.

## 12 Coastal zone management and environmental protection

The subject was not specifically addressed.

The management of marine protected areas necessarily leads to:

- to be managed (e.g. ecological monitoring), to acquire georeferenced data at sea and on the coast (their acquisition and restitution is based on techniques common to hydrography and cartography);
- to record their limits on maps.
- There are coastal management programs in West Africa such as WACA (West Africa Coastal Areas) which have been launched and are now operationally addressing coastal environmental challenges. Guinea is not a party to it (unlike, in the sub-region, Guinea Bissau, Senegal and Ivory Coast). These programs necessarily need marine geophysical data.
- Note that Shom, through a program financed by the FFEM (French Global Environment Fund) was able to digitize historical data from certain West African countries, such as bathymetric maps and minutes bathymetry useful for studies of evolution over time of the coastline (erosion rates).
- This same FFEM was able to support the network of marine protected areas RAMPAO (réseau des aires marines protégées d'Afriques de l'Ouest - network of marine protected areas in West Africa) of which Guinea is a stakeholder.

## C 55 INDICATORS

### 13 Status of hydrographic surveys in the national maritime zone

Source : <https://iho.int/uploads/user/pubs/cb/c-55/c55.pdf>

**Guinea (G)**

Hydrographic surveying / Levés hydrographiques / Levantamientos hidrográficos

Survey coverage Couverture hydrographique Cobertura hidrográfica	Depth < 200m Profondeur < 200m Profundidad < 200m			Depth > 200m Profondeur > 200m Profundidad > 200m		
	<p><span style="color: green;">■</span> Adequately surveyed Correctement hydrographié Adecuadamente levantado</p> <p><span style="color: yellow;">■</span> Re-survey required Nécessitant de nouveaux levés Requiere nuevo levantamiento</p> <p><span style="color: red;">■</span> Never systematically surveyed Jamais hydrographié systématiquement Nunca levantado sistemáticamente</p>	0	4	96	36	0

Notes 1. Data provided by France, courtesy of Guinea.

Note:

- These indicators are only based on the data available to Shom;
- Bathymetric data from USSR surveys (Leningrad Institute?), CNSHB (National Center for Fisheries Sciences of Boussoura), ARTFM (Fluvial-maritime Transport Regulatory Authority), even CERESCO (Scientific Research Center of Conakry) are probably missing
- Would also seek data that may have been acquired as part of oil prospecting or for the study of the extension of the continental shelf;
- As presented in Chapter 9, hydrographic knowledge nevertheless remains particularly weak near the coasts (including non-surveyed areas).

### 14 Collection and circulation of nautical information

It is essentially appropriate for the main observers at sea and along the coast (sea force, ship captains, oceanographic research, Fluvio-maritime Transport Regulatory Authority, etc.) to provide information:

- At NAVAREA II (rapid broadcast of RSM/MSI on Inmarsat);
- To Shom in order to update nautical publications within appropriate deadlines, in particular by notice to mariners. Transmission should be based on a state organization to be put in place;

The information flow must cover:

- marine charts (e.g. new depths, guaranteed dredging thresholds, new quays, new navigation aids, removed wrecks, submarine cables, various maritime boundaries dedicated to the transport of ores, fishing, marine protected areas, etc. ) ;
- nautical publications;
- list of lights;
- tides. The harmonic constants used for predictions must be made more reliable and precise using observations of water heights (a tide gauge is currently in operation at the port of Conakry/ALPORT).

### 15 Hydrographic survey capacity

Resources have been identified at ALPORT (employment reserved for the port of Conakry).

Bathymetric surveys are carried out on Kamsar (mining company).

Generally speaking, the River-Maritime Transport Regulatory Authority carries out bathymetric checks in waiting/transshipment areas.

At the national level, outside of the economic areas mentioned above, no capacity has been identified. It is a subject of substance and sovereignty.

It is possible to develop an initial national capacity at lower cost with a short return on investment. This mainly requires organization (see the National Coordination Committee), ships or launches and financing (estimated at less than €50,000 for basic onboard equipment). This capacity consists of:

- A floating means (ship, boats, inflatables). There are: Navy, River-Maritime Transport Regulatory Authority, Boussoura National Center for Fisheries Sciences;
- an acoustic echo-sounder (single beam sufficient initially);
- a side scan mounted sonar to detect obstructions;
- a GPS location;
- a data acquisition system (PC and specific software);
- a tide gauge and leveling means;
- skills in ship maneuvering (sailors);
- human skills in the acquisition and processing of hydrographic data (hydrographer, geomatician).

Concerning this specific equipment, there are lightweight integrated portable systems (in suitcases that can be moved by car to travel between ports) which are marketed

**Transport**

Valise de transport  
(12 kg / 0,063 m<sup>3</sup>)

PC et sac de transport  
(3 kg / 0,007 m<sup>3</sup>)

**Antenne GNSS**  
(récepteur GNSS et serveur)  
Capacité GNSS :  
GPS, GLONASS,  
GALILEO et BEIDOU  
Poids 0,9 kg

**3 barres en aluminium**  
(3 x 50 cm) et  
**mâchoire de fixation**  
Poids 2 kg

**Boîtier d'alimentation**  
Intégrant une  
batterie NiMH  
14,4V / 4 Ah  
(Autonomie 10 h)  
Poids 1,7 kg

**Sondeur mono-fréquence**  
Fréquence 200 kHz  
Cadence de la mesure 5 Hz  
Profondeur Min/Max : 0,3m / 100  
Poids 2 kg



## 16 Independent nautical chart production capacity – Terrestrial cartography

### Marine cartography

There are no official capacities for producing nautical charts, nor for their updating and dissemination. This is entrusted (currently without formalization) to France (Shom).

### Terrestrial cartography

The time devoted to the Technical Visit did not make it possible to assess the country's own capabilities in terms of civil and military land mapping.

The “Land/Sea” cartographic complementarity (topography of the coast, geodetic networks, leveling/vertical references, toponymy, etc.) is highlighted here.

There are capabilities in terms of location, leveling, databases, geographic information systems, toponymy and geomatics that can be shared.

<p>Regarding civil mapping, the country has a National Geographic Institute (IGN) whose mission is to develop and implement basic mapping projects for the national territory. The National Geographic Institute of Guinea finally offers practical training programs in topography and cartography.</p>	
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### Miscellaneous

- The Japanese International Cooperation Agency (JICA) trained IGN engineers in geographic information systems for updating maps;
- In terms of coastal risk management and more particularly marine submersion (sea surges), hydrographers (sea level: tide, extreme levels/storm surges, developments due to climate change), meteorologists and terrestrial cartographers (Digital Terrain Models ) necessarily cooperate (sharing repositories and georeferenced data)
- There is certainly shareable data in terms of Integrated Coastal Zone Management (ICZM)

## FORMATION

### 17 Basic training for senior hydrographic technicians (and not only!)

This chapter is written to establish training plans: first identify needs, find educational solutions, and implement them. It is recommended to have such plans to then advocate for and obtain targeted training.

Main IHO references:

- <https://iho.int/en/capacity-building-publications>: C-47 (list of approved training courses)
- <https://iho.int/en/standards-and-specifications>: competence standards: S-5A (CAT A Hydrography), S-5B (CAT B Hydrography), S-8B (CAT B Cartography)

The IHO/EAtHC seminar planned for Casablanca on April 29 and 30, 2024 will address the subject.

#### 17.1 Context

Before embarking on a training plan, one must be able to define what he wants and under what conditions: what professions for what jobs (state, operational), in what languages (English, French), at what levels (initial and to be achieved), for what diplomas, at what costs, at what time, with what “sponsors”...

There are training courses:

- **hydrographers** (basically acquiring georeferenced data such as bathymetry and tide which must also be very useful for dredging operations);
- **cartographers** (geomatics);
- more **general** (marine/river sciences and technology) (hydrology, navigation, navigation aids). We may be interested in training from the IMO, UNESCO (IOC) and IALA
- without forgetting the **support professions** (equipment maintenance, IT specialists) and **managers** (including major state departments such as DNMM);

There are initial diploma training courses:

- CATegory B (senior technicians) (main need to master the practice);
- CATegory A (engineers);
- in both cases, very solid initial training is required (maths, physics). A good initial diagnosis is necessary because training means filling a gap between acquired knowledge and the skill objectives to be achieved.

Approved schools (FIG-OHI-ACI) capable of issuing diplomas are in:

- France, UK, Portugal, Spain ;
- India, Japan, Korea, USA ... ;
- May be soon in Nigeria.

There is also continuing training.

There are face-to-face training courses (this is necessary for practice) and E-learning (or both in “hybrid” mode).

There are :

- training (fees) to be paid

- paid training (or scholarships) quite often within the framework of bilateral defense cooperation (France, Spain, Portugal, etc.);
- paid training (or scholarships) within an IHO framework (e.g. from sponsors: Japan, Korea) to which Guinea will be able to apply when Member of the IHO.

There are training courses to share:

- nationally (e.g. land and sea/river mapping, remote sensing) all sectors: state and private (subcontracting);
- regionally with other West and Central African countries, particularly French-speaking ones.

## 17.2 Initial training of hydrographers

This is fundamental: having sufficient quantity and quality of hydrographs at the right time, in the right place and in a sustainable manner.

Guinea, according to the information collected, currently no longer has managers who have had sufficient specific and approved training in hydrography.

Hydrographer training:

- The recommended training is that offered by schools whose programs are approved by the FIG/OHI/ACI (International Federation of Surveyors, International Hydrographic Organization, International Cartographic Association) with Category B (CAT B).
- List of approved programs at: <https://iho.int/en/ibsc-recognized-programmes> . There are many programs in English, French, Portuguese and Spanish languages.
- Concerning the French language, the Shom 2024 training catalog (contacts included) is available at <https://www.shom.fr/fr/nos-activites/formation> . This is a 3rd degree course that is very demanding in terms of initial knowledge for mathematics and physics. It can be followed by young people who already have experience in geomatics, geodesy, physical oceanography or even maritime navigation.
- These training courses will provide sufficient versatility to meet almost all of the skills requirements necessary for data acquisition in the field. On his return to his country, the CAT B hydrographer will be able to train the “hydrographer assistants” that the country needs (“CAT C”).
- The practical training which complements the theoretical training of schools will be, for hydrographers having to specify or conduct dredging operations, appropriately carried out in an organization (e.g. port, river) itself operating dredging and having a service responsible for hydrography.

Note: human investment must be accompanied by an investment in sufficiently recent operational material resources so that trained personnel can immediately put their knowledge into practice after their training.

## 17.3 Initial training of “marine” cartographers

This is also an important objective to achieve but in a second step.

Category B training (CAT B) is then also recommended.

List of approved programs (less numerous than in hydrography) at: <https://iho.int/en/ibsc-recognized-programmes> .

There are several programs in English and one in French (Shom - see the catalog cited above).

## 17.4 Also have “support” and “managerial” skills - Apply

The personnel, once trained, will have to quickly put their theoretical knowledge into practice (school) and then validate their practical qualification after two years: that is to say move on to operational work by conducting surveys used by cartographers or specialists in the maritime or river environment.

The importance of:

- the “Support” function in specific equipment (GPS, echo sounders, tide gauges, etc.): maintenance in operational condition of equipment, IT (software, databases, data distribution portal, webmaster, etc.).
- the “management” function which will be extremely important for globally coordinating at the national level (inter-organizations) the development of hydrography and marine cartography in the country:
  - exhaustiveness of the needs (to be planned) to be satisfied (navigation, coastal development, coastal protection, etc.);
  - Definition of the corresponding products (charts in particular);
  - identification of all stakeholders (public and private) who have an interest in cooperating to benefit (they come together to pool capacities);
  - definition of the production systems to be implemented: hydro-oceanographic, cartographic and support functions (logistics);
  - definition of means of intervention at sea (boats, launches);
  - definition of on-shore infrastructure for data processing and archiving;
  - definition of governance (supervision, contracts of objectives and means therefore financing, agreements);
  - definition of human resource needs in sufficient quantity and quality for all structures and professions combined;
  - Definition of financial needs.

## 18 Continuing training in hydro-oceanography - cartography and related activities (navigation aids, port infrastructure and coastal protection works) – Management

### At the international level in hydrography

There are actually many opportunities and facilities for maintaining your knowledge of hydrography. You still need to know them and be encouraged to follow them. Some possibilities:

- which offers training materials at: <https://iho.int/fr/publications-sur-le-renforcement-des-capacites> . In particular, there is a high-quality hydrography manual;
- who organizes seminars. EAtHC regularly organizes seminars. The next one taking place in Casablanca on April 29 and 30, 2024 (<https://iho.int/en/eastern-atlantic-hc> )
- Shom (<https://www.shom.fr/> ), in addition to the statutory training of its school (CAT B) also offers opportunities to train in tide gauge (<https://www.sonel.org/> );
- AFHy: French-speaking Hydrography Association (<https://www.afhy.fr/> ) where hydro-cartographers of ports and rivers meet in particular.

### Note :

- Also identify E-learning opportunities that will develop, in particular the future IHO E-learning platform (and soon that of Shom) within which training materials will be available.

- There is a need for regional training schools (West and Central Africa) in hydro-oceanography-cartography. It is appropriate to move away from the current situation where there would be no other alternative than to enroll the agents to be trained in hydrography schools outside the African continent. They may be French-speaking or English-speaking. The contacts that the IHO has had so far in West and Central Africa have not really made it possible to identify the structures (schools, academies, etc.) immediately ready to host training for hydrographers and approved cartographers. The following have been identified as potentially being able to accommodate training courses:
  - Two national hydrographic services - capable of offering complete training courses approved by the IHO/ACI/FIG (CAT B) - having recently considerably increased their hydro-oceanographic capacities, namely:
    - Nigeria: the NNHO (Nigerian Navy Hydrographic Office) which has a school in Port Harcourt (NNHS: Nigerian Navy Hydrographic School);
    - Morocco: DHOC (Hydrography, Oceanography and Cartography Division) of the royal Moroccan navy;
  - Two maritime education centers more likely to offer more specialized than approved training, namely:
    - RMU (Regional Maritime University) of Accra (Ghana) ;
    - ARSTM (Académie Régionale des Sciences et Techniques de la Mer) Abidjan (Ivory Coast).

#### **Miscellaneous at national level (Guinea)**

It is very likely that national skills (public, private) were not inventoried sufficiently exhaustively during the Technical Visit, such as:

- qualified surveyors, specialists in remote sensing (a method widely used in hydrography) and GIS (Geographic Information Systems - in support of the previously mentioned professions); (the IGN has resources)
- computer scientists skilled in databases and distribution websites;
- engineers and technicians from engineering companies.

These are transversal skills essential to the development of Guinean hydro-oceanography-cartography which cannot be brought together in a single organization.

These skills will be particularly important within the Coordination Committee.

Participation in IHO meetings and more particularly in EAtHC meetings and seminars allows for exchanges with counterparts from other coastal States of West and Central Africa.

Editors



Henri DOLOU



Gabin SOGORB

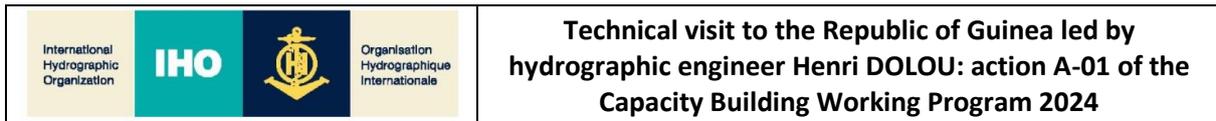
## ANNEXES

### Annex A : Abbreviations

AEM	Action de l'État en Mer <i>State action at sea</i>
AGL	<i>African Global Logistics (CMA-CGM, ex Bolloré)</i>
ALPORT	Conakry Port S.A. <i>affiliated to Albayrak Group</i>
Afd	Agence française de développement
ANAM	Agence de Navigation Maritime
ARTFM	Autorité de Régulation du Transport Fluvio-Maritime
AtoN	<i>Aids to Navigation</i>
CBG	Compagnie des Bauxites de Guinée SA (Pilotage Kamsar)
CBSC	<i>Capacity Building Sub-Committee (IHO)</i> Sous-comité de renforcement des capacités
CBWP	<i>Capacity Building Work Programme (IHO)</i> Programme de travail de renforcement des capacités
CERESCO	Centre de Recherche Scientifique de Conakry-Rogbanè
CNSHB	Centre national des sciences Halieutiques de Boussoura
DNMM	Direction Nationale de la Marine Marchande
EAtHC	<i>Eastern Atlantic Hydrographic Commission (IHO)</i>
CHAto	Commission Hydrographique de l'Atlantique Oriental (OHI)
ECDIS	<i>Electronic Charts Display Information System</i>
EEZ	<i>Exclusive Economic Zone</i>
ENC	<i>Electronic Navigational Chart (sea)</i> Carte électronique de navigation (mer)
GMDSS SMDSM	<i>Global Maritime Distress and Safety System</i> Système Mondial de Détresse et de Sécurité en Mer
IALA AISM	<i>International Association of Marine Aids to Navigation and Lighthouse Authorities</i> Association Internationale de Signalisation Maritime
IGN	Institut Géographique National
IHO OHI	<i>International Hydrographic Organization</i> Organisation Hydrographique Internationale
IMO OMI	<i>International Maritime Organization</i> Organisation Maritime Internationale
IMSAS	<i>IMO Member State Audit Scheme</i>
Ird	Institut de recherche pour le développement (France)
JICA	<i>Japan International Cooperation Agency,</i>
MSI RSM	<i>Maritime Safety Information</i> Renseignement de Sécurité Maritime
MDN	Ministère de la Défense Nationale
MEDD	Ministère de l'Environnement et de Développement Durable
MESRSI	Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation
MT	Ministère des Transports
MPEM	Ministère de la Pêche et de l'Économie Maritime
MITP	Ministère des Infrastructures et des Travaux Publics
MOWCA OMAOC	<i>Maritime Organization of West and Central Africa</i> Organisation Maritime de l'Afrique de l'Ouest et Centrale
MRCC	<i>Maritime Rescue Coordination Centre</i>

<i>MSDI</i>	<i>Maritime Spatial Data Infrastructure</i> Infrastructures de données spatiales maritimes
<i>NAVAREA</i>	<i>NAVigational AREAs (WWNWS)</i> Zones de navigation (SMAN) NAVAREA national coordinator: responsible for dissemination of MSI (RSM)
<i>NC</i> <i>CM</i>	<i>Nautical Charts</i> Carte marine
<i>NHC</i> <i>CNH</i>	<i>National Hydrographic Committee</i> Comité National Hydrographique
<i>NtMs</i>	<i>Notice to Mariners</i> Avis aux navigateurs
<i>PAC</i>	Port Autonome de Conakry
<i>PCA</i>	<i>Primary Charting Authority</i> Autorité cartographique principale
<i>PMAWCA</i> <i>AGPAOC</i>	<i>Port Management Association of West and Central Africa</i> Association de Gestion des Ports d’Afrique de l’Ouest et du Centre
<i>RHC</i> <i>CHR</i>	<i>Regional Hydrographic Commission (EAtHC)</i> Commission Hydrographique Régionale (CHAtO)
Shom	Service hydrographique et océanographique de la marine (France) <i>French Hydrographic and Oceanographic Service</i>
SMAN	Système mondial d’avertissement de navigation <i>Worldwide Navigational Warning Service (WWNWS)</i>
SMDSM	Système mondial de détresse et de sécurité en mer <i>Global Maritime Distress and Safety System (GMDSS)</i>
<i>SOLAS</i>	<i>[United Nations] Convention for the Safety of Life at Sea</i> Convention pour la sauvegarde de la vie humaine en mer
UE	Union Européenne

## Annex B : Terms of reference of the visiting team



### Context

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

In particular, the IHO has decided to promote regional cooperation in West and Central Africa within the framework of EAthC: the Eastern Atlantic Hydrographic Commission.

Concretely, the IHO proposes to conduct a Technical Visit to the Republic of Guinea which is associate member of the EAthC (representation provided by Port Autonome de Conakry). Priority meetings would be given to national actors in charge of maritime navigation safety, hydrography, cartography, the coastal environment and training related to the sea. In general, the blue economy and state action at sea.

### Objectives

The general objectives of technical visits are as follows:

- interviews with the decision-making authorities of the country visited, emphasizing the importance of hydrography for coastal States and therefore the need to include hydrographic and associated marine cartography activities in national plans;
- support for the development of a national system for collection and diffusion of maritime safety information (MSI) integrated within the Worldwide Navigational Warning Service (WWNWS);
- assessment of national capacities in terms of planning and carrying out the collection and use of hydrographic data in order to allow the production and updating of the nautical documentation essential for the safety of navigation and in support of others uses (infrastructure management, environmental protection, development of the blue economy, etc.);
- development of recommendations with the actors of the visited country in order to strengthen these capacities in a long-lasting and sustainable manner;
- preparation of IMO audits (IMSAS) and follow-up of recommendations in connection with hydrographic services;
- promote the emergence of development projects in the field of hydrography and nautical cartography in conjunction with IHO secretariat, IMO and funding agencies in order to obtain the sustainable establishment of capacities.

### Report

A report on the activities and recommendations of the team will be submitted to the president of the Regional Hydrographic Commission after the visits

For IHO, 08 January 2024  
Gabin SOGORB Capacity Building coordinator for EAthC



## Annex C : SOLAS requirements (Chapter V rules 9 and 4)

### Extract of IHO Publication M-2 (Version 3.0.7 – June 2018) “THE NEED FOR A NATIONAL HYDROGRAPHIC SERVICE” International Obligations to Provide Hydrographic Services (SOLAS Chapter V Regulations 9 and 4)

#### SOLAS\_Chapter V

International Obligations to Provide Hydrographic Services

International Convention on the Safety of Life at Sea

In July 2002, a revised Chapter V of the International Convention on the Safety of Life at Sea (SOLAS) entered into force.

**Regulation 9** of SOLAS Chapter V specifies very clearly the hydrographic services which have to be provided by Contracting Governments. The provision of these hydrographic services is, in effect, an obligation for the Contracting Governments under an International Treaty Law

#### SOLAS CHAPTER V - REGULATION 9 Hydrographic Services

1. Contracting Governments undertake to arrange for the collection and compilation of hydrographic data and the publication, dissemination and keeping up to date of all nautical information necessary for safe navigation.
2. In particular, Contracting Governments undertake to co-operate in carrying out, as far as possible, the following nautical and hydrographic services, in the manner most suitable for the purpose of aiding navigation:
  - 2.1. to ensure that hydrographic surveying is carried out, as far as possible, adequate to the requirements of safe navigation;
  - 2.2. to prepare and issue nautical charts, sailing directions, lists of lights, tide tables and other nautical publications, where applicable, satisfying the needs of safe navigation;
  - 2.3. to promulgate notices to mariners in order that nautical charts and publications are kept, as far as possible, up to date; and
  - 2.4. to provide data management arrangements to support these services.
3. Contracting Governments undertake to ensure the greatest possible uniformity in charts and nautical publications and to take into account, whenever possible, relevant international resolutions and recommendations.\*
4. Contracting Governments undertake to co-ordinate their activities to the greatest possible degree in order to ensure that hydrographic and nautical information is made available on a world-wide scale as timely, reliably and unambiguously as possible.

\* Refer to the resolutions and recommendations adopted by the International Hydrographic Organization.

**Regulation 4** of SOLAS Chapter V places an obligation on Contracting Governments to ensure that appropriate navigational warnings are issued.

#### SOLAS V/4 – Navigational Warnings

Each Contracting Government shall take all steps necessary to ensure that, when intelligence of any dangers is received from whatever reliable source, it shall be promptly brought to the knowledge of those concerned and communicated to other interested Governments. \*

\* Refer to the Guidance on the IMO/IHO World-Wide Navigational Warning Service adopted by the Organization by resolution A.706 (17), as amended

## Annex D : Mails List of main contacts - Telephones - Emails

### Annex D-1 : Organisms in République of Guinea

Prénom NOM	Fonction	Tél (+224)	Mail
<b>MT Ministère des Transports</b>			
Ousmane Gaoual DIALLO	Ministre et porte-parole du gouvernement		
Mamadou Saliou DIABY	Secrétaire Général	628 23 83 13 655 29 56 87	<a href="mailto:sg@transports.gov.gn">sg@transports.gov.gn</a> <a href="mailto:sallybady97@gmail.com">sallybady97@gmail.com</a>
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Aboubacar Sidiki DRAME	Directeur de l'Administration et des Ressources Humaines	620 78 52 98	<a href="mailto:as.drame@portconakry.com">as.drame@portconakry.com</a>
Sydouba Soumah	Commandant du port de Conakry		<a href="mailto:smangoua@gmail.com">smangoua@gmail.com</a>
Abdoulaye FOFANA	Commandant adjoint		
Mohamed Lamine TOURET	Directeur de l'Audit Interne et Contrôle de Gestion	620 71 67 05 629 50 75 55	<a href="mailto:Mohamedlamine.touret@portconakry.com">Mohamedlamine.touret@portconakry.com</a>
<b>ALPORT Conakry ALBAYRAK</b>			
Aboubacar Sidiki NABE	Directeur Adjoint / Commandant des Opérations Maritimes	620 46 93 72 625 05 51 63 654 53 89 46	<a href="mailto:aboubacar.nabe@conakryport.com">aboubacar.nabe@conakryport.com</a>
Turgay Suat Ellibes	Directeur des constructions	624 61 73 17	<a href="mailto:turgaysuat.ellibes@alport.com.tr">turgaysuat.ellibes@alport.com.tr</a>
Enver Oguz Aslan			<a href="mailto:Enveroguz.aslan@albayrak.com">Enveroguz.aslan@albayrak.com</a>
<b>Inros Lackner</b>			
Amadou Abubakar	Expert dragage	628 02 61 84 653 54 54 12	<a href="mailto:amadou.abubakar@inros-lackner.de">amadou.abubakar@inros-lackner.de</a>

<b>ANAM</b>		<b>Agence de Navigation Maritime</b>	
Mr Sory CAMARA	Directeur Général	622 10 17 08 656 00 47 56	<a href="mailto:sorysoundou@gmail.com">sorysoundou@gmail.com</a>
KANN AISSATOU	DG/A	628 54 40 78	
KEITA ANSOUMANE KEFING	Chef de division SNM	620 17 61 18	<a href="mailto:Keitakefing78@gmail.com">Keitakefing78@gmail.com</a>
DOUIBATE FREBORY	Chef de division Phare et Balise	628 54 72 74	<a href="mailto:vikemimi@gmail.com">vikemimi@gmail.com</a>
<b>DNMM</b>		<b>Direction Nationale de la Marine Marchande</b>	
			<a href="mailto:dnmm.guinee@gmail.com">dnmm.guinee@gmail.com</a>
Mamoudou DIALLO	Directeur National de la Marine Marchande	628 79 45 52	<a href="mailto:Mamoudou.diallo19@yahoo.fr">Mamoudou.diallo19@yahoo.fr</a>
M. Aly Nabé	Directeur National adjoint		
<b>ARTFM</b>		<b>Autorité de Régulation du Transport Fluvio-Maritime</b>	
		+224 625 00 01 15	<a href="mailto:artfmguinee@gmail.com">artfmguinee@gmail.com</a>
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Aminata SANGARE	DG/A	627 051 501 (336) 95 91 14 84	<a href="mailto:sangareaminata3@gmail.com">sangareaminata3@gmail.com</a>
Mamady CONDE	Directeur des Opérations	628 84 68 15 664 42 50 69	<a href="mailto:mamadytrsp@gmail.com">mamadytrsp@gmail.com</a> <a href="mailto:artfmguinee@gmail.com">artfmguinee@gmail.com</a>
<b>MDN</b>		<b>Ministère de la Défense Nationale</b>	
<b>PREMAR</b>		<b>Préfecture Maritime</b>	
CV <sup>®</sup> Amadou SOW	Préfet Maritime	628 28 24 98	<a href="mailto:prefet@prefecture-maritime.gov.gn">prefet@prefecture-maritime.gov.gn</a> <a href="mailto:sowahmadou92@gmail.com">sowahmadou92@gmail.com</a>
Maurice Yomba Oliano		628 20 25 24	<a href="mailto:omauriceyomba261@gmail.com">omauriceyomba261@gmail.com</a>
Ibrahima Bah	Expert AEM – Chef de quart au COM		
<b>Armée de mer</b>			
Mamadou Yaya DIALLO	Contre-Amiral Chef d'Etat-Major de l'Armée de Mer	621 42 59 44	<a href="mailto:dmamadouyaya85@gmail.com">dmamadouyaya85@gmail.com</a>
Camara	Capitaine de Vaisseau Adjoint		
Emmanuel Jango		622 69 62 04	<a href="mailto:emmanueljeanjacques10@gmail.com">emmanueljeanjacques10@gmail.com</a>
LV Romain Bergeras	Coopérant français Conseiller du Chef d'État-Major de la Marine et du Préfet Maritime	627 45 56 91	<a href="mailto:romain.bergeras@diplomatie.gouv.fr">romain.bergeras@diplomatie.gouv.fr</a> <a href="mailto:consmar.coop@gmail.com">consmar.coop@gmail.com</a>
<b>MESRSI</b>		<b>Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation</b>	
<b>CERESCOR</b>		<b>Centre de Recherche Scientifique de Conakry-Rogbanè</b>	
Pr Alpha Issaga Pallé DIALLO	DG Ph. D.Sc.	628-46-54-10 657-87-34-42	<a href="mailto:alfadjogalle@gmail.com">alfadjogalle@gmail.com</a>

Boubakar SOW		623 31 50 38	
<b>MPEM</b>	<b>Ministère de la Pêche</b>	<b>Et l'Économie</b>	<b>Maritime</b>
<b>CNSHB</b>	<b>Centre National des</b>	<b>Sciences</b>	<b>Halieutiques de Boussoura</b>
Dr. Alkaly Doumbouya	Dr. Alkaly Doumbouya Point de contact administratif (CNSHB)	+224-621 960 436	<a href="mailto:adoumbouyah@gmail.com">adoumbouyah@gmail.com</a>
Dr Mariama DIALLO	DG/A	621 31 00 01	<a href="mailto:adjcnsbh@peche.gov.gn">adjcnsbh@peche.gov.gn</a> <a href="mailto:mariama.dial99@gmail.com">mariama.dial99@gmail.com</a> ?
Mohamed SOUMAH	Chef de service informatique Responsable du système d'information halieutique (Bathy incluse)	622 01 70 85 666 34 94 72	<a href="mailto:Mohamedsoumah2009@gmail.com">Mohamedsoumah2009@gmail.com</a>
Didier JOUFFRE	Chercheur Correspondant Ird en Guinée	(+33) 626 67 89 38 (WhastApp)	<a href="mailto:Didier.jouffre@ird.fr">Didier.jouffre@ird.fr</a>
<b>MITP</b>	<b>Ministère des</b>	<b>Infrastructures</b>	<b>et des Travaux Publics</b>
<b>IGN</b>	<b>Institut</b>	<b>Géographique</b>	<b>National</b>
Amadou Tidiane Dalein DIALLO	DG/A	620 20 18 20	<a href="mailto:atdiallo2017@gmail.com">atdiallo2017@gmail.com</a>

## Annex D-2 : International agencies in Guinea - IHO/secretariat – France

Prénom NOM	Fonction	Tél	Mail
<b>Agences</b>	<b>Internationales</b>	<b>de développement</b>	
<b>Afd</b>	<b>Agence française</b>	<b>de développement</b>	
Jeanne VANUXEM-MILLELIRI	Afd : Directrice de l'agence (non rencontrée)	<a href="tel:+224626268989">(+224) 6 26 26 89 89</a>	<a href="mailto:afdconakry@afd.fr">afdconakry@afd.fr</a>
Sylvain DAMOISEAU	Responsable du Pôle Accord de Paris (Transport, Environnement ...)	626 268 989 625 006 946	<a href="mailto:damoiseaux@afd.fr">damoiseaus@afd.fr</a>
<b>Expertise France</b>			
Nicolas HUET Camayenne,	Expertise France Directeur Pays (non rencontré)	<a href="tel:+224610107995">(+224) 6 10 10 79 95</a>	<a href="mailto:efguinee@expertisefrance.fr">efguinee@expertisefrance.fr</a>
<b>UE</b>	<b>Délégation de l'Union</b>	<b>Européenne</b>	
			<a href="mailto:delegation-guinea-conakry@eeas.europa.eu">delegation-guinea-conakry@eeas.europa.eu</a>
Eduardo MIGUENS DA SILVA FERREIRA JORGE	Chargé de Programmes Section Coopération Equipe Infrastructures	613 582 829	<a href="mailto:eduardo-nuno.miguens-da-silva-ferreira-jorge@eeas.europa.eu">eduardo-nuno.miguens-da-silva-ferreira-jorge@eeas.europa.eu</a>
El-Hadj Salmana Bah	Chargé de programme Section Coopération- Équipe Infrastructures.	620 01 18 01.	<a href="mailto:El-Hadj-Salmana.BAH@eeas.europa.eu">El-Hadj-Salmana.BAH@eeas.europa.eu</a>
SHAND Marie			<a href="mailto:Marie.SHAND@eeas.europa.eu">Marie.SHAND@eeas.europa.eu</a>

<b>Ambassade</b>	<b>France</b>	<b>En Guinée</b>	
LC Karim SAA	Attaché de Défense Près de l'ambassade de France en Guinée et en Sierra Leone	GSM : +(224) 625 25 87 78	<a href="mailto:Karim.saa@diplomatie.gouv.fr">Karim.saa@diplomatie.gouv.fr</a>
<b>OHI</b>	<b>Secrétariat</b>		
John NYBERG	Head Directeur		<a href="mailto:John.nyberg@iho.int">John.nyberg@iho.int</a>
Yves GUILLAM	Assistant Directeur	(+33) 06 15 56 71 38	<a href="mailto:yves.guillam@iho.int">yves.guillam@iho.int</a>
<b>Shom</b>	<b>France</b>	<b>(+33)</b>	
Henri DOLOU	Hydrographe Expert	(0) 6 86 15 14 82	<a href="mailto:henri.dolou@shom.fr">henri.dolou@shom.fr</a>
Pierre-Yves DUPUY	Directeur des missions institutionnelles et des relations internationales	(0) 2 56 31 24 04 (0) 6 38 78 59 55	<a href="mailto:pierre-yves.dupuy@shom.fr">pierre-yves.dupuy@shom.fr</a>
Gabin SOGORB	Coordinateur CB pour CHAtO/EAtHC Chef de la division des relations extérieures	(0) 2 56 31 23 71 / (0) 6 46 31 12 37	<a href="mailto:dmi-rex-d@shom.fr">dmi-rex-d@shom.fr</a> <a href="mailto:gabin.sogorb@shom.fr">gabin.sogorb@shom.fr</a>
Ronan LE ROY	Directeur de l'enseignement de l'école du Shom	(0) 2 56 31 24 09	<a href="mailto:ronan.le.roy@shom.fr">ronan.le.roy@shom.fr</a>
Julien CORMERY	Nautical Expert - Africa/Indian Ocean Information nautique	Tél. : +33 (0)2 56 31 23 06	<a href="mailto:julien.cormery@shom.fr">julien.cormery@shom.fr</a>
Amandine LEFRANCOIS	NAVAREA II	02 56 31 26 09	<a href="mailto:amandine.lefrancois@shom.fr">amandine.lefrancois@shom.fr</a>

## Annex E : Agenda – Events

Mr. Moustapha BALDE, Technical Director of the Autonomous Port of Conakry participated in all the events.

Also very present: Karifala FOFANA (External Relations. Communications Public Relations) and Ansoumane I CAMARA (Dry Ports Coordinator)

Object – Events	Observations
<p align="center"><b>J1 : Monday 18 March 2024</b></p>	<p align="center"><b>Conakry</b></p>
<p>➤ <b>PAC/DT (Port Autonome de Conakry /Direction Technique)</b></p> 	<ul style="list-style-type: none"> <li>○ Moustapha BALDE</li> </ul>
<p>➤ <b>ALPORT et Inros Lackner</b></p> 	<ul style="list-style-type: none"> <li>○ Aboubacar Sidiki NABE</li> <li>○ Turgay Suat Ellibes</li> <li>○ Amadou Abubakar</li> </ul> 
<p>➤ <b>PAC/DRH (Direction des Ressources Humaines)</b></p> 	<ul style="list-style-type: none"> <li>○ Aboubacar Sidiki DRAME</li> </ul>

➤ **PAC/DG (Direction Générale)**



- Mamadou Biro DIALLO

**J2 : Tuesday 19 March 2024**

➤ **DNMM (Direction Nationale de la Marine Marchande)**



- Mamoudou DIALLO (DG)
- M. Aly Nabé (DG/A)

➤ **ANAM (Agence de Navigation Maritime)**



- Mr Sory CAMARA (DG)
- KANN AISSATOU (DG/A)
- DOUBATE FREBORY (Phares et Balises)

➤ **Préfecture Maritime**



- CV<sup>®</sup> Amadou SOW (Préfet maritime)
- LV Romain Bergeras (Coopérant français Conseiller du Préfet Maritime)



➤ **Afd (Agence française de développement)**



- Sylvain DAMOISEAU

➤ **Etat-Major de l'Armée de Mer**



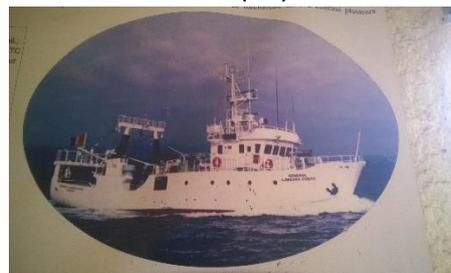
- Mamadou Yaya DIALLO (Contre-Amiral - Chef d'Etat-Major de l'Armée de Mer)
- Camara (Capitaine de Vaisseau Adjoint)
- LV Romain Bergeras (Coopérant français Conseiller du Chef d'État-Major de la Marine)

**J3 : Wednesday 20 March 2024**

➤ **CNSHB (+ Ird) Centre national des sciences Halieutiques de Boussoura (+ Institut de recherche pour le développement - France)**



- Dr Mariama DIALLO (DG/A)
- Dr. Alkaly Doumbouya
- Mohamed SOUMAH (Informatique)
- Didier JOUFFRE (Ird)



➤ **MT (Ministère des Transports)**



- Ousmane Gaoual DIALLO (Ministre)
- Fatoumata Binta BARRY (Cheffe de cabinet)
- Mamadou Saliou DIABY (Secrétaire Général)



**J4 : Thursday 21 March 2024**

➤ **ARFTM (Autorité de Régulation du Transport Fluvio-Maritime)**



- Mamadou DIA (DG)
- Aminata SANGARE (DG/A)
- Mamady CONDE (Directeur des Opérations)



➤ **CERESCOR (Centre de Recherche Scientifique de Conakry- Rogbanè)**



- Pr Alpha Issaga Pallé DIALLO (DG)



**J5 : Friday 22 March 2024**

➤ **Réunion de restitution avec les parties prenantes**



- PAC – CNSHB – ARTFM – Préfecture Maritime – Armée de Mer – CERESCOR



➤ **UE (Délégation de l'Union Européenne)**



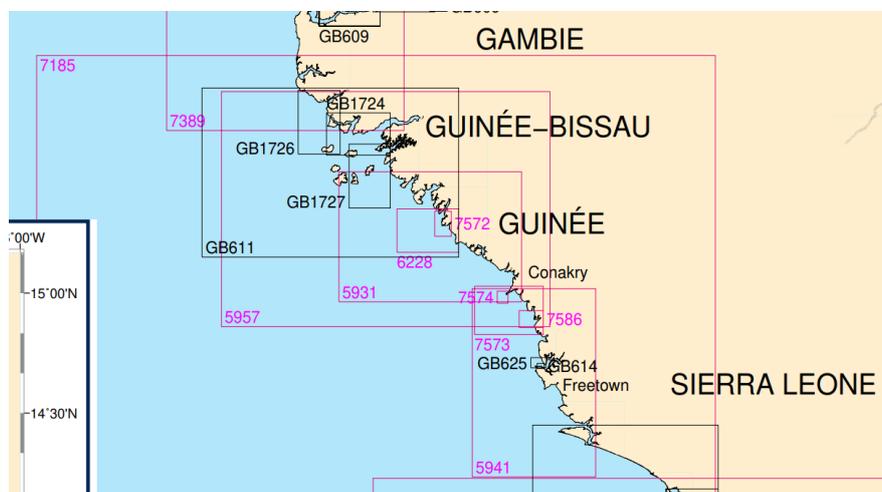
- Sylvain DAMOISEAU

- **The IGN (DG/A M Diallo) was the subject of exchanges by telephone and messaging during the following week**

## Annex F : Marine cartography (paper and electronic)

Sources:

France	<a href="https://diffusion.shom.fr/pro/catalogues">https://diffusion.shom.fr/pro/catalogues</a>
PRIMAR	<a href="https://www.primar.org/#/">https://www.primar.org/#/</a>



### Annex F-1 : General

La région est principalement couverte par les cartes suivantes :

The region is mainly covered by the following charts:

#### Cartes papier / Paper charts

	INT	Titre/Title	Echelle/Scale	dition / Publication
France : 7185	1085	De Cabo Roxo à Monrovia	1 : 1 000 000	1992
France : 5957	NO	Du rio Cacheu aux îles de Los	1 : 547 000	1955

#### Cartes électroniques / ENCs

N° Carte	Titre	Echelle	Catégorie
FR271850	De Cabo Roxo à Monrovia	1 : 700 000	Générale

### Annex F-2 : Côtier / Coastal

La région est principalement couverte par les cartes suivantes :

The region is mainly covered by the following charts:

#### Cartes papier / Paper charts

	INT	Titre/Title	Echelle/Scale	Edition / Publication
France : 5931	NO	Du rio Grande aux îles de Los	1 : 304 000	1955
France : 5941	NO	Des îles de Los à l'île Sherbro	1 : 306 000	1953

#### Cartes électroniques / ENCs

N° Carte	Titre	Echelle	Catégorie
FR359410	Des Îles de Los à la rivière Mellacorée	1 : 180 000	Côtière
GB300601		1 : 180 000	COASTAL

GB300612		1 :180 000	COASTAL
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### Annex F-3: Approches et Ports / Approach and Harbour

La région est principalement couverte par les cartes suivantes :

The region is mainly covered by the following charts:

#### Cartes papier / Paper charts

	INT	Titre/Title	Echelle/Scale	Edition / Publication
France : 6228	NO	Accès au Rio Nunez	1 : 101 400	1961
France : 7573	2857	De Conakry à la Rivière Mellacorée	1 : 100 000	2005
France : 7572	2856	Embouchure du Rio Nunez – Abords de Kamsar	1 : 35 000	2022
		Cartouche : A – Port de Kamsar	1 : 15 000	
France : 7574	2858	Abords de Conakry – Iles de Los		2016
		Cartouche : 1 - Abords de Conakry - Iles de Los	1 : 25 000	
		Cartouche : 2 - A- Port de Conakry	1 : 10 000	
France : 7586	NO	Embouchure de la Rivière Mellacorée	1 : 35 000	2005
		Cartouche : A - Mouillage de Benty	1 : 10 000	

#### Cartes électroniques / ENCs

N° Carte	Titre	Echelle	Catégorie
FR67586A	Mouillage de Benty	1 : 8 000	Amarrage
FR67574A	Port de Conakry	1 : 8 000	Amarrage
FR67572A	Port de Kamsar	1 : 12 000	Amarrage
FR575740	Abords de Conakry - Iles de Los	1 : 22 000	Portuaire
FR575860	Embouchure de la rivière Mellacorée	1 : 22 000	Portuaire
FR475720	Abords de Kamsar	1 : 22 000	Approche
FR475730	De Conakry à la rivière Mellacorée	1 : 90 000	Approche

## Annex G: IHO Contacts (Publication P5 – Annuaire/Yearbook)

### Guinea / Guinée

Country information / Informations sur le pays / Información sobre el país

<b>Declared National Tonnage</b> -Tonnage national déclaré -Tonelaje Nacional Declarado	3 000 tonnes
<b>National day</b> -Fête nationale -Fiesta nacional	2 Octobre
<b>Date ratification IHO Convention</b> -Date ratification Convention OHI -Fecha ratificación Convención OHI	
<b>Remarks on membership</b> -Remarques sur l'adhésion -Comentarios sobre la adhesión	

Last updated : March 2024 Dernière mise à jour : Mars 2024

**Official Representative to IHO (as designated by Member Government)**  
*Représentant officiel à l'OHI (tel que désigné par le Gouvernement Membre)*

### Port Autonome de Conakry (PAC)

Contact information / Informations de contact / Información de contacto

<b>- National Hydrographer or equivalent</b> - Hydrographe national ou équivalent - Hidrógrafo Nacional o equivalente	- Mamadou Biro DIALLO (Directeur Général du PAC) - (+224) 627 27 27 14 - <a href="mailto:Biro.diallo@portconakry.com">Biro.diallo@portconakry.com</a>
<b>- Other point(s) of contact</b> - Autre(s) point(s) de contact - Otros punto(s) de contacto	- Moustapha BALDE (Directeur Technique du PAC) (Point focal OHI) - (+224) 622 694 150 - <a href="mailto:moustapha.balde@portconakry.com">moustapha.balde@portconakry.com</a>
<b>- Other point(s) of contact</b> - Autre(s) point(s) de contact - Otros punto(s) de contacto	- Karifala FOFANA (Relations extérieures, coopération) - (+224) 626 06 08 55 - <a href="mailto:Karifala.fofana@portconakry.com">Karifala.fofana@portconakry.com</a>

Agency information / Information sur l'agence / Información sobre la agencia

<b>Date of establishment</b> -Date de mise en place -Fecha de constitución	1982
<b>- Top level parent organization</b> - Organisme mère - Organización asociada de nivel superior	Ministère des Transports
<b>- Principal functions of the organization or the department</b> - Attributions principales de	- Fonctionnement général du port de Conakry en lien avec les opérateurs (concessionnaires) des différents

<p><b>l'organisme ou du département</b> - Principales funciones de la Organización o el departamento</p>	<p>terminaux : General cargo (ALPORT), container (EGL, CMA-CGM), bauxite (CBK), aluminium (Rusal), halieutique</p> <p>- Relations avec :</p> <ul style="list-style-type: none"> <li>○ la Direction Nationale de la Marine Marchande (DNMM)</li> <li>○ l'Agence de Navigation Maritime (ANAM)</li> <li>○ l'Autorité de Régulation du Transport Fluviomaritime (AFRTM)</li> </ul>
<p>- charts / ENC - cartes / ENC - cartas /ENC</p>	<p>- Production par le Shom (France)</p>

## La Préfecture Maritime

<p>- Top level parent organization - Organisme mère - Organización asociada de nivel superior</p>	<p>Ministère de la Défense Nationale (MDN)</p>
<p>- Point(s) of contact - Point(s) de contact - Punto(s) de contacto</p>	<p>- Amadou SOW (Préfet Maritime) - (+224) 628 28 24 98 - <a href="mailto:prefet@prefecture-maritime.gov.gn">prefet@prefecture-maritime.gov.gn</a></p>
<p>- Principal functions of the organization or the department - Attributions principales de l'organisme ou du département - Principales funciones de la Organización o el departamento</p>	<p>- Action de l'État en Mer (AEM) - Pilotage du Comité Interministériel de la Mer (CIMER) en lien avec le gouvernement, en particulier :</p> <ul style="list-style-type: none"> <li>○ Le Premier-ministre</li> <li>○ Le Ministre de la Défense</li> <li>○ Les autres Ministres : transport, mines, sécurité civile, affaires étrangères, environnement, recherche scientifique</li> </ul>