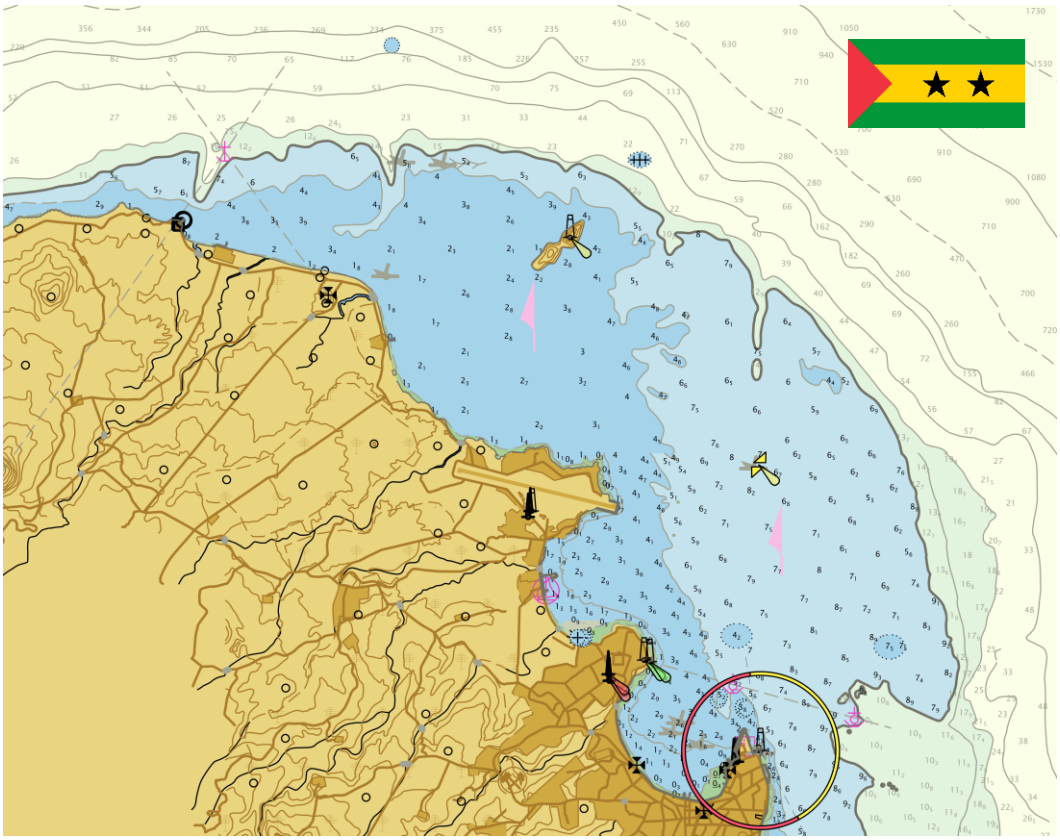
IHO Capacity Building Programme

TECHNICAL VISIT REPORT

The Situation of Hydrography and Nautical Charting In the Democratic Republic São Tomé and Príncipe



Date: 10-14 March 2025

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ABBREVIATIONS

AAMA	The Association of African Maritime Administration
ADCP	Acoustic Doppler Current Profiler
AtoN	Aids to Navigation
CB	Capacity Building
CD	Chart Datum
CN	Nautical Chart
DSC	Digital selective calling
CPLP	Community of Portuguese Speaking Countries
DGPS	Differential Global Positioning System
EAtHC	Eastern Atlantic Hydrographic Commission
EEZ	Exclusive Economic Zone
ENC	Electronic Nautical Chart
EU	European Union
GMDSS	Global Maritime Distress and Safety System
GNSS	Global Navigation Satellite System
GoG	Gulf of Guinea
GoGIN	The Gulf of Guinea Interregional Network
HS	Hydrographic Service
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IHO	International Hydrographic Organization
IHPT	Portuguese Hydrographic Institute
IMO	International Maritime Organization
IMAP	Instituto Marítimo Portuário (Maritime and Ports Institution)
IMSAS	IMO Member State Audit Scheme
ISPS	International Ship and Port Facility Security
JDZ	Joint Development Zone
MOC	Maritime Operations Center
MOWCA	African Maritime Safety and Security Agency
MSI	Maritime Safety Information
NC	Nautical Charts
NHS	National Hydrographic Service
NHC	National Hydrographic Committee
PA	Protected Areas
PCA	Primary Charting Authority
PDCP	Portuguese Defence Cooperation Program
RENC	Regional ENC Coordinating Centre
RHC	Regional Hydrographic Commission
SAM	Maritime Authority System
SHOM	Service Hydrographique et Océanographique de la Marine
SOLAS	[United Nations] Convention for the Safety of Life at Sea
STP	Democratic Republic of Sao Tomé and Príncipe
STP CG	Democratic Republic of Sao Tomé and Príncipe Coast Guard
TV	Technical Visit
UNCLOS	United Nations Convention on Law of the Sea
USD	United States Dollars

USA	United States of America

EXECUTIVE SUMMARY

The main purpose of the Technical Visit (TV) to the Democratic Republic of São Tomé and Príncipe (STP) was to determine the structure of the various Ministries related to maritime affairs and the institutions in their hierarchy, how they related to each other and their level of understanding of their responsibilities regarding SOLAS. in particular MSI and hydrographic data collection.

The Maritime Port Institute (IMAP), which operates under the auspices of the Ministry of Infrastructure and Natural Resources of STP, has the competence to regulate maritime transport activities, piloting, towing, parking, and mooring in ports, ensuring navigability conditions within its jurisdictional waters, as well as pollution prevention, response and maritime protection.

The STP Coast Guard (STP CG), which operates under the auspices of the Ministry of Defence and Internal Order, has the competence of maritime signaling and MSI.

Currently, there is no National Hydrographic Service or equivalent organization. During the technical visit, it was suggested that a Joint Maritime Committee (National Hydrographic Committee) be set up between various organizations that share interests, competences and capabilities in matters relating to maritime affairs, to cover maritime and safety of navigation issues. This suggestion stems from the recognition by all parties of the significant issues concerning their obligations in terms of safety of navigation and the importance of the sustainable development of maritime activities for the country's economy and security.

STP has no hydrographic or marine cartographic capabilities at present and rely on the Portuguese Hydrographic Institute (IHPT) to help them meet some of SOLAS Chapter V Safety of Navigation obligations. To cover this undertaking, a formal agreement is currently in place since 1989 foreseeing that the IHPT provides training and advisory services to STP for the development of actions related to marine sciences and technologies, carrying out training activities within the scope of navigation safety, hydrography, hydrographic cartography, and oceanography.

For STP be able to develop a fully capable Hydrographic Service (HS) a significant investment in training and general capacity implementation is needed. As first priority, the focus must be to meet IHO-CB strategy, Phase 0 (Governance) and Phase 1 (MSI) by providing staff training and stablish formal MSI procedure.

Recommendations are included in this Report.

TECHNICAL VISIT

As STP does not have an institution responsible for MSI or hydrography, and this matter seems to be unmindful at high political level, IHPT proposed IHO the establishment of a TV with awareness purpose. Following this, IHO has mandated IHPT, with the approval of STP authorities, to conduct a TV. The mission was carried out by two representatives from IHPT that conducted an assessment to the responsibilities and legal competencies of local institutions in the maritime domain, hydrographic capacities, adequacy and effectiveness of the system for delivering Aids to Navigation and to their current MSI organization. The IHO Capacity Building Program founded the TV of the two representatives from IHPT with 7000€.

GENERAL AWARENESS IN THE COASTAL STATE

STP is a member of International Maritime Organization (IMO) (1990) and United Nations Convention on the Law of the Sea (UNCLOS) (1999) but are not members of IALA and IHO. STP is a signatory to the Convention for the Safety of Life at Sea (SOLAS) and are aware of their responsibilities under the SOLAS Convention.

All stakeholder recognized that the lack of modern hydrographic data in STP has had a significant operational and economic impact. Evidence includes increased insurance rates incurred by shipping companies operating in its waters; limitations on export and import capacity; increased risk for coastal fishing communities combined with a lack of knowledge of natural habitats and reports of numerous vessel groundings.

An IMO Member State Audit Scheme (IMSAS) audit took place in 2018, and the next one is expected to occur later this year (2025).

IHO/RHC MEMBERSHIP OF REPLUBIC OF SÃO TOMÉ AND PRÍNCIPE

STP is an observer of EAtHC/CHAtO. During the TV, STP authorities showed great interest and commitment to become a member to the IHO in the short term. In the meantime, it was highly recommended that STP sign the EAtHC statutes becoming an associated member of this Commission.

INTERNATIONAL OBLIGATION OF SÃO TOMÉ AND PRÍNCIPE

STP authorities are aware of their international obligations and are very committed and willing to fulfill them. They will need considerable assistance in setting up a National Hydrographic Service (or equivalent), designing a national hydrographic program, defining priorities for data collection, training, and acquiring the necessary equipment comply with phases 0, 1 and 2 of the IHO-CB.

At present, IMAP/ STP CG depends on the support provided by STP Primary Charting Authority (PCA) (IHPT) and the NAVAREA II Coordinator (SHOM).

CERTIFIED PERSONNEL

From discussions it was determined that there are no certified personnel in the following fields:

- MSI specialists
- Marine cartographers
- Marine GIS experts

There is one person trained in hydrography, but he has not carried out this activity since completing the course.

HYDROGRAPHIC SURVEY & NAUTICAL CARTOGRAPHY CAPABILITY

Capacity to carry out hydrographic surveys: There is no indication of the existence of capacity to carry out hydrographic surveys by STP government organizations, no individuals trained in hydrographic surveys, nor any kind of survey equipment were identified. Therefore, in terms of government organizations, there is currently no seabed mapping capability. The most recent surveys in Ana Chaves Bay were conducted by IHPT teams with Portuguese hydrographic vessels.

Capacity to produce Nautical Cartography: No capability was identified. STP relies on the support of its PCA, IHPT, on the production and updating of nautical charts.

MSI RESPONSIBILITY

There is no official MSI capability in STP, but the need for it is generally understood. This capability is being developed by the STP CG with the support of the Portuguese Defence Cooperation Program (PDCP) and some procedures are already in place but the procedures for disseminating the relevant data are not yet consolidated. Local Warnings are generated and appear to be transmitted to vessels directly prior to arrival.

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REPORT OF TECHNICAL VISIT TO DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍNCIPE
10-14 MARCH 2025

Reference(s):

A. IHO CB Working Plan 2025
B. IHO Publication M-2 *The Need of National Hydrographic Services* - Version 3.0.7
C. IHO CB Procedure 9: *Guidelines to Conduct Technical Visits*

Introduction

The TV to STP focused mainly on determining the structure of the various Ministries related to maritime affairs and the institutions in their hierarchy, how they relate to each other and their level of understanding of their responsibilities regarding SOLAS, in particular MSI and hydrographic data collection.

1. Background

As STP does not have an institution responsible for MSI or hydrography matters and this seems to be unmindful at high political level, IHPT proposed to IHO the establishment of a TV with awareness purpose. STP representatives agreed with the importance of it and, in 2025, funds were allocated in the OHI-CB Work Programme and IHPT offered to carry out the TV.

2. Composition of the Team

The EAtHC TV Team is composed by:

Name	**Role**
Commander – João Delgado Vicente – IHPT – Technical Director	IHPT Lead
Lieutenant – Rui Jorge Faria Pinheiro – IHPT –Hydrographer	IHPT Assistant

Local contacts and logistic support were ensured in conjunction with IMAP and the Portuguese Defence Cooperation Program (PDCP) Delegation in STP. Travel, accommodation, and other administrative needs were handled by IHPT.

All social events and meetings with high-ranking officials, military authorities, foreign delegations, maritime sector institutions, business groups, and local associations were also ensured by the Portuguese Embassy, the PDCP Delegation in STP or by IMAP.
A special thanks to the Portuguese Embassy and the PDCP Delegation in STP for all the support given to the TV team, which was fundamental to its success.

PART A - OVERALL ASSESSMENT OF THE SITUATION IN REGION

3. Efficacy of the Technical Visit.

This visit reflected the STP understanding of the importance it attributes/gives to hydrography, navigational safety, and maritime security issues. The team members were received at the highest political level, notably with the Minister of Defence and Internal Order, Minister of Environment Youth and Sustainable Tourism, Minister of Infrastructures and Natural Resources and Minister of Agriculture, Fisheries and Rural Development (Figures 1 to 4). They also met with all relevant institutions for politics, maritime affairs and local maritime agents, operating in the main ports (Figures 5 to 12).

Figure 1 - Meeting with the Minister of Defence and Internal Order

Figure 2 - Meeting with the Minister of Environment Youth and Sustainable Tourism

Figure 3 – Meeting with the Minister of Infrastructures and Natural Resources

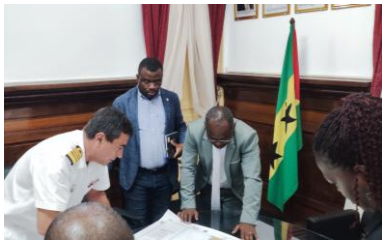


Figure 4 - Meeting with the Minister of Agriculture, Fisheries and Rural Development

Figure 5 - Meeting with the Director of IMAP

Figure 6 - Meeting with the Director of ENAPORT

Figure 7 - Meeting with the STP CG Commander

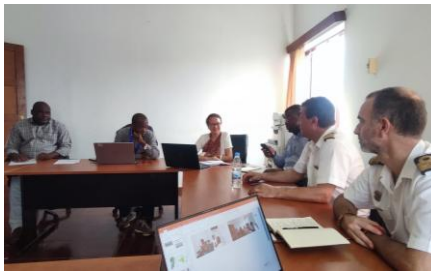


Figure 8 - Meeting with the Director of INM

Figure 9 – Visit to a light house in Lagoa Azul

Figure 10 - Meeting with local associations

Figure 10 - Interview with local media during visit to INM

Figure 11 - Final presentation to the Stakeholders

With this visit, it was possible to verify that some existing maritime traffic control capabilities and navigation warnings dissemination can be leveraged for different purposes if there is synergy among institutions. This fact was mentioned several times by the IHPT team to the highest representatives of the maritime sectors. IMAP is now more aware of these facts and is keen to receive continued help and advice.

4. Cooperative Arrangements and Potential.

a. International Organizations

STP is a member state of the Gulf of Guinea (GoG) Commission which constitutes a framework of consultation among the countries of the GoG for cooperation and development, as well as for the prevention, management and resolution of conflicts that may arise from the delimitation of borders and the economic and commercial exploitation of natural resources within the territorial boundaries, particularly in the overlapping Exclusive Economic Zones (EEZ) of member States. It constitutes a permanent institutional framework for cooperation amongst the countries bordering the GoG in order to defend their common interest and promote peace and socio-economic development on the basis of dialogue, consensus, ties of friendship, solidarity and fraternity.

b. Regional Organizations

STP is a member of, or, affiliated to the following regional organizations:

African Maritime Safety and Security Agency (MOWCA) – purpose is to ensure the subregion has a cost-effective shipping service, high on safety and low on pollution.

The Association of African Maritime Administration (AAMA) - the coordinating body for Maritime Administrations in Africa. Its aim is to promote the development of Africa's maritime regulatory and maritime environment, encouraging harmonization for greater competitiveness on a global basis, promote the sharing of best practices among Africa's Maritime Administrations in order to enable the growth of the African maritime sector and enhancement of continental collaboration to build consensus on issues of common interests in the maritime sector.

The Gulf of Guinea Interregional Network (GoGIN) project - focused on supporting the fight against piracy in the most critical area. Within this framework, the project mainly deployed education and training activities. YARIS (Yaoundé Architecture Regional Information System) became operational. From then on, GoGIN has focused its activities on the deployment of the platform and its technical and operational appropriation by its users.

c. Defence and Security Arrangements.

A visit was conducted to the STP CG has a Maritime Operations Center (COM) (Figure 13) which has the following capabilities:

- VHF and HF communications.
- Connection to YARIS Regional Maritime Security Centre for West Africa (CRESMAO).
- Costal Radar and Regional Maritime Awareness Capability (RMAC) monitoring system, provided by the African Partnership Station of the United States Navy (Figure 14);
- AIS satellite information (Seavision) (Figure 14).

STP CG benefits from several programs and projects such as PDCP and United States Navy Cooperation Program.

The STP CG may have key roles in coordination, especially of Maritime Safety Information (MSI) broadcast and Search and Rescue (SAR) components of GMDSS. Also, in Hydrography the STP CG could create a Hydrographic Team which, in coordination with the IMAP, ENAPORT and the INM, could guarantee the execution of hydrographic surveys essential for the safety of navigation.

Figure 13 – STP CG Maritime Operations Center

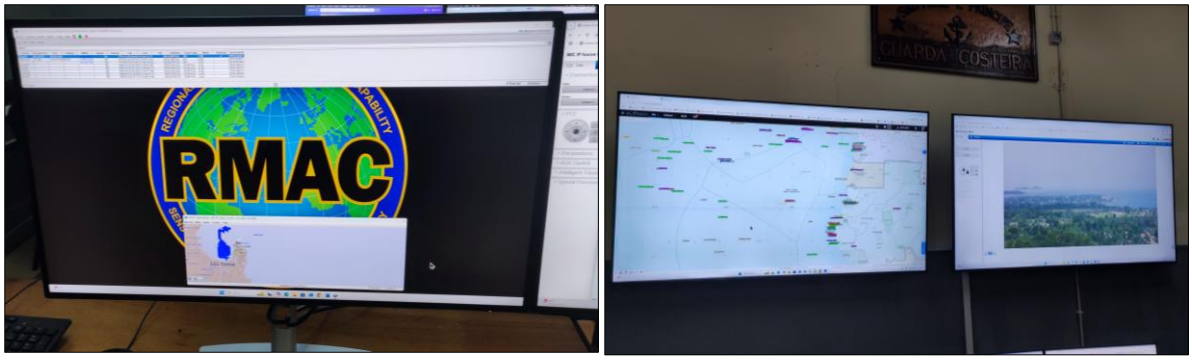


Figure 14 - RMAC (left), AIS (rigth)

In terms of Maritime Safety Information (MSI), there is significant potential to meet SOLAS obligations concerning Chapter V of the convention. The STP Coast Guard has a maritime situational room, the Maritime Operations Center (COM), equipped with almost all the necessary systems and capable of operating 24/7. This capability has been developed through a defence cooperation agreement with Portugal and United States of America (USA).
It is believed that with the installation of a NAVTEX station and the strengthening of defence cooperation for the establishment and full operationalization of the COM, STP could, within a few years, become a leading example and reference in Africa in terms of MSI, following the successful model already implemented with the Aids to Navigation (AtoN).

PART B – DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍNCIPE ASSESSMENT

5. RHC Involvement.

STP is not currently an IHO member, but is an Observer Member for the EAtHC, subscribed for the EAtHC17 (Mindelo, Cabo Verde) and the EAtHC18 (Casa Blanca, Morocco) but did not attended. The last known participation was in the EAtHC16 (Lisbon, Portugal).
Prior to this TV, they´ve also been present in the 1st and 2nd Hydrography Conference of the Community of Portuguese speaking Countries (CPLP), which took place in Lisbon (Portugal) in 2022 and in São Vicente Island (Cabo Verde) in 2024, respectively.

6. Preliminary Liaison.

Following the EAtHC Capacity Building recommendation and approval for a Technical Assessment Visit to São Tomé and Príncipe, the initial liaison started between IHPT and IMAP, which is the focal point identified in the IHO P5 publication. The IMAP Director General, Dr. Charles Neto, was identified has the responsible for all arrangements of the TV.

7. Points of Contact.

Concerning IHO publication P5, no update is necessary. Despite the limited knowledge concerning hydrography and MSI, and the absence of institutional or political plans to develop hydrographic capabilities, IMAP identifies and recognizes itself as the key institution in this matter.

The contact points for the TV are listed in Annex D.

DESCRIPTION OF MARITIME ACTIVITIES

8. National Maritime Affairs.

Regarding National Maritime Affairs, four main stakeholders were identified:

- IMAP - aims to coordinate, regulate, and administratively, technically, and economically oversee port activities, maritime transport, and the maritime public domain. In this capacity, it serves as the Maritime and Port Authority throughout the national territory. Within its various competencies is included the competence to regulate maritime transport activities, piloting, towing, parking, and mooring in ports, ensuring navigability conditions within its jurisdictional waters, as well as pollution prevention, response and maritime protection.
- Empresa Nacional de Administração dos Portos de São Tomé e Príncipe (ENAPORT) – under the Ministry of Infrastructure and Natural Resources, manages, administers, and develop public ports and areas of the maritime public domain within their area of operation; Ensuring the provision of services related to the operation of ports; promote the elaboration of studies, plans, and projects for maritime and coastal works; promote the construction, acquisition, and maintenance of maritime and land structures and floating and land-based equipment of ports, as well as the conservation, signaling, buoyage, and dredging of their bottoms and respective access channels, within their area of operation.
- Instituto Nacional de Meteorologia (INM) - established in 1950 and currently part of the Ministry of Infrastructure and Natural Resources, is responsible for meteorology and geophysics, providing weather data for air and maritime navigation. INM operates 9 observation stations across two islands, two of them equipped with tide gauges (Figure 15). Is also responsible for 1 oceanographic buoy, offered by IHPT in 2021 under a cooperation protocol (Figure 16) and an Acoustic Doppler Current Profiler (ADCP) (Figure 17). It also issues a daily weather forecast bulletin to provide up-to-date weather information for the public and authorities. This institute as a key capacity to contribute significantly to Maritime Safety Information (MSI) by providing essential meteorological, geophysical, and astronomical data for maritime navigation supporting safer and more efficient navigation, ensuring better planning and risk management at sea.
- STP Coast Guard – under the Ministry of Defence and Internal Order is responsible to protect and enforce maritime laws and regulations, ensure maritime safety and security, conduct search and rescue operations, and safeguard coastal and marine environments STP CG. Plays a key role regarding to the obligations of the Chapter 5 of SOLAS convention.
- Ministry of Agriculture, Fisheries and Rural Development - relies on the Directorate of Fisheries and Aquaculture (DPA), a key service responsible for implementing government policies related to the monitoring, control, and supervision of fishing activities in waters under national sovereignty and jurisdiction. This stakeholder plays a crucial role in supporting the monitoring of maritime traffic and securing international funds for investment in the maritime sector.
- Ministry of Environment Youth and Sustainable Tourism - plays a key role in conserving marine biodiversity and promoting sustainable ocean resources. As the government's primary point of contact, it collaborates with a project funded by a group of non-governmental organizations dedicated to establishing a network of marine protected areas.

Figure 15 – Tide Gauges

Figure 16 – Spotter buoy

Figure 17 - ADCP

9. Trade and Maritime Traffic.

a. Through Routes.

There are no significant shipping routes passing through STP waters, only small regional routes within the GoG, with a notable concentration of traffic related to activities at Libreville's Port Owendo (Gabon) (Figure 18).

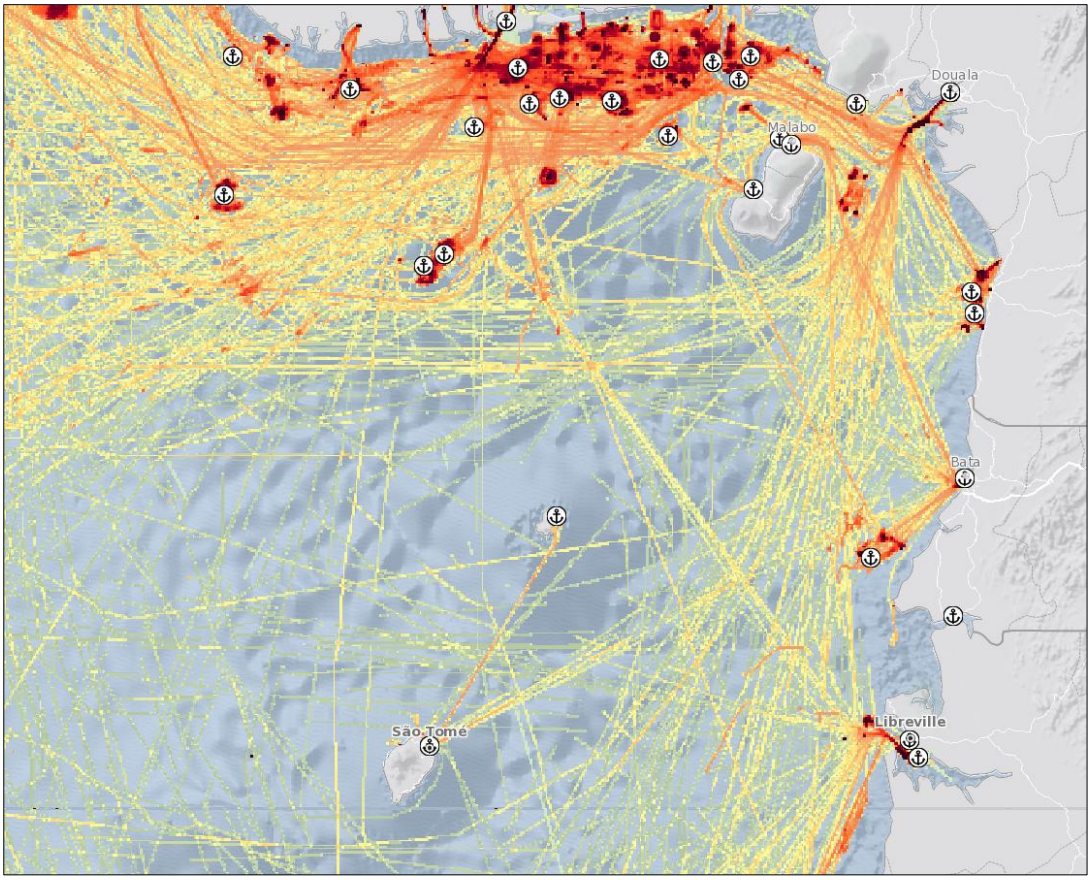


Figure 18 – Representation of STP's coast main through routes

b. Trans-shipment.

There are three significant ports in STP. São Tomé Port (Ana Chaves Bay) is the most important, handling all imports and exports of the country, an important route can be observed between São Tomé port and Equatorial Guinea (Bata). Neves anchorage plays a key role in fuel imports, while Santo António Port (Príncipe Island), along with São

Tomé Port, facilitates cargo and passenger exchange between the two islands. Currently, there is no significant traffic density, and the ship's entry and exit route is mostly the same (Figure 19), which benefits the safety of navigation as it facilitates the work of pilots and captains of merchant ships.

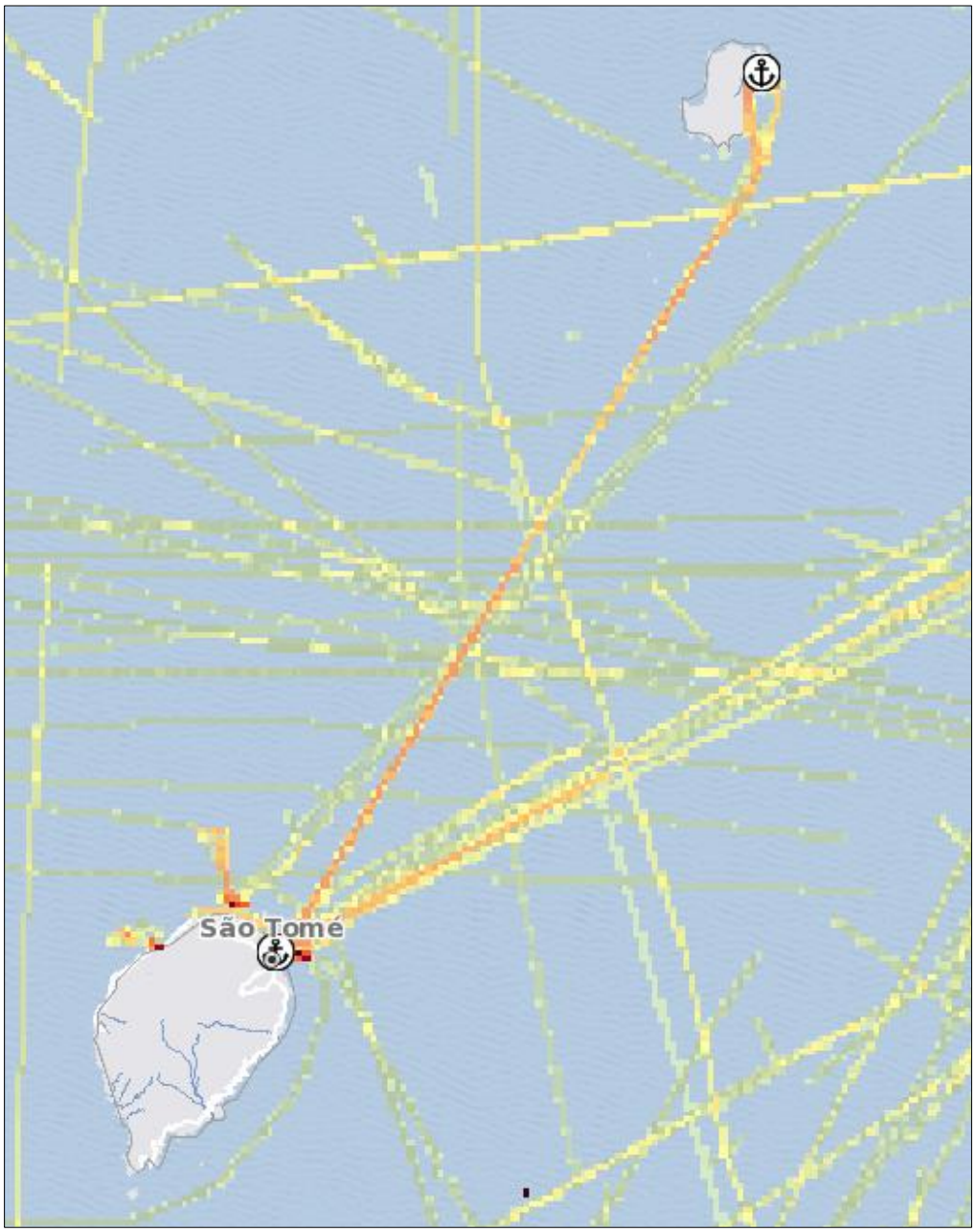


Figure 19 - Representation of STP's ports traffic

During the TV it was mentioned that there were plans to establish a deep-water port in Fernão Dias (Figure 20) since the current main port, São Tomé, does not provide sufficient depth for the safe operation of vessels with a draught exceeding three meters. This plan was in progress until the most recent change of government in early 2025.

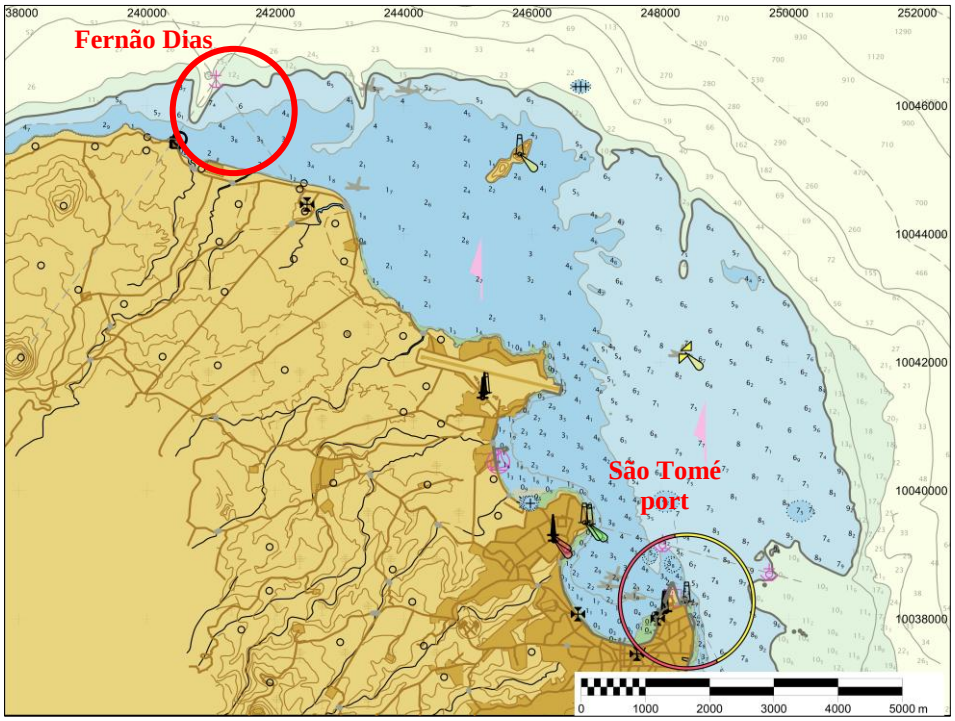


Figure 20 – Desired location of the new deep water port in Fernão Dias

Due to commercial trade demands, São Tomé port is operating beyond its safety limits and capacity. The commercial trade is supported by two distinct types of operations. Larger ships anchor approximately one nautical mile away from the commercial pier, with the connection between the ship and pier maintained via barges (Figure 21). The other type of operation involves smaller ships with lower capacity and draught, which risk operating with insufficient or even no keel clearance (Figure 22).

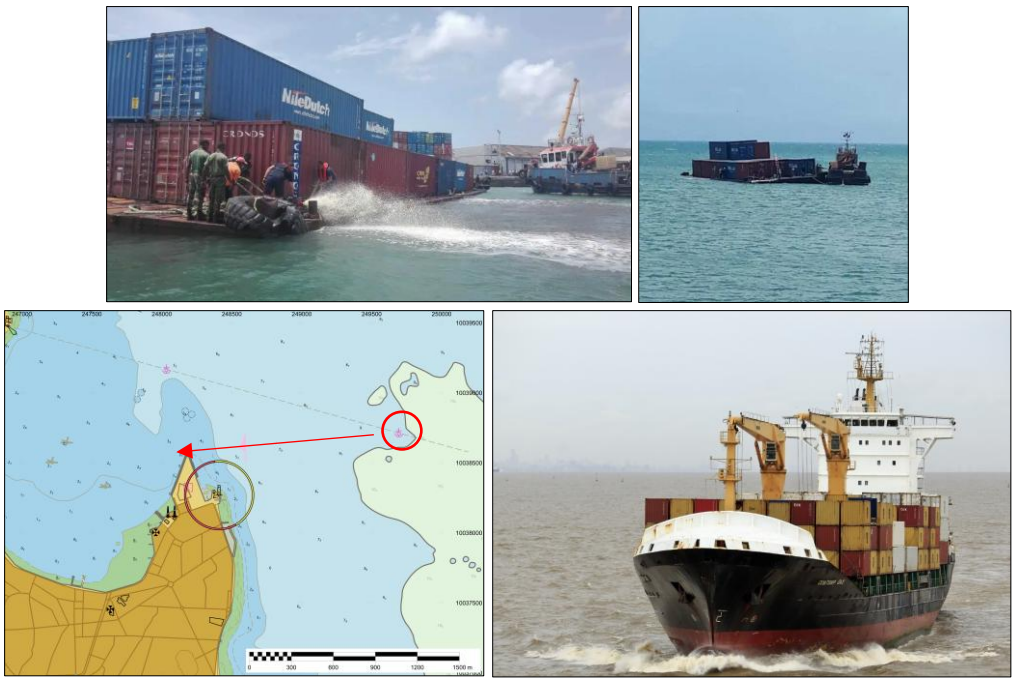


Figure 21 – Container operations between the anchorage and commercial pier at the port of São Tomé.

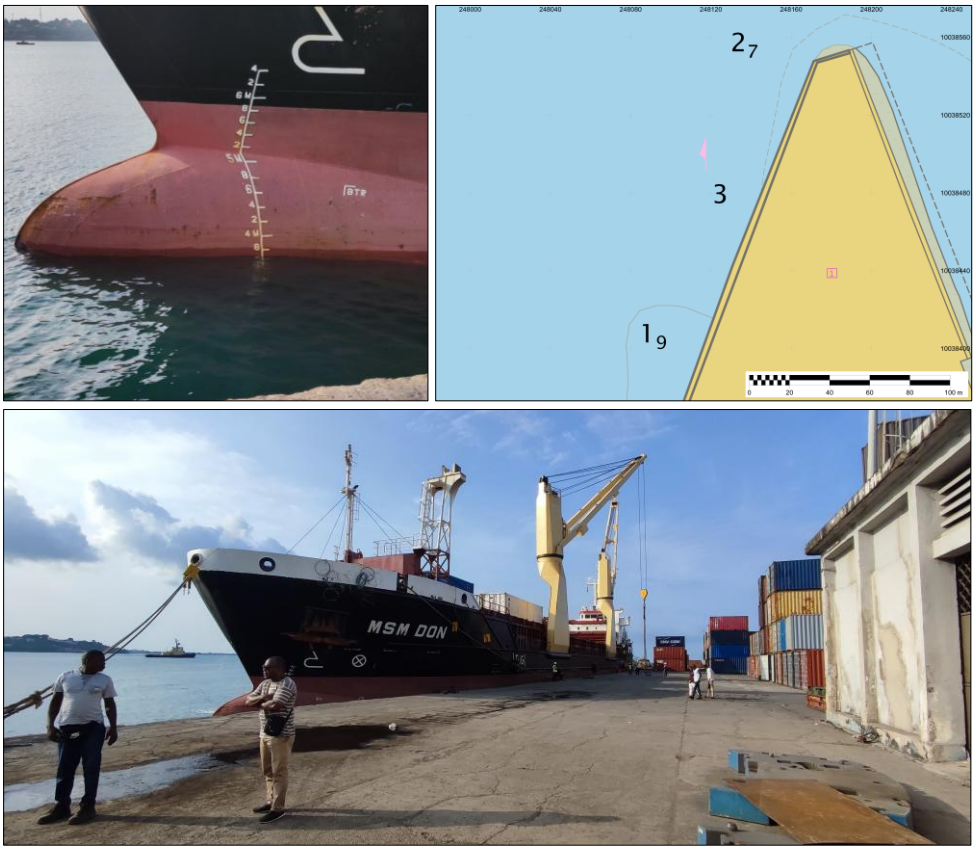


Figure 22 – MSM DON operating with low keel clearance at the port of São Tomé.

The fuel import operation in Rosema bay (Neves) is also made under high levels of risk due to vessel's proximity to coast line. Local authorities and shipping agents reported constant difficulties in the anchoring maneuver every time the island is replenished. (Figure 23).

Figure 23 – Tankers moored nearshore in Rosema Bay (Neves).

c. Other vessel activities

Occasional increases in traffic are observed during specific periods, likely linked to natural resource exploration and research activities (Figure 24).

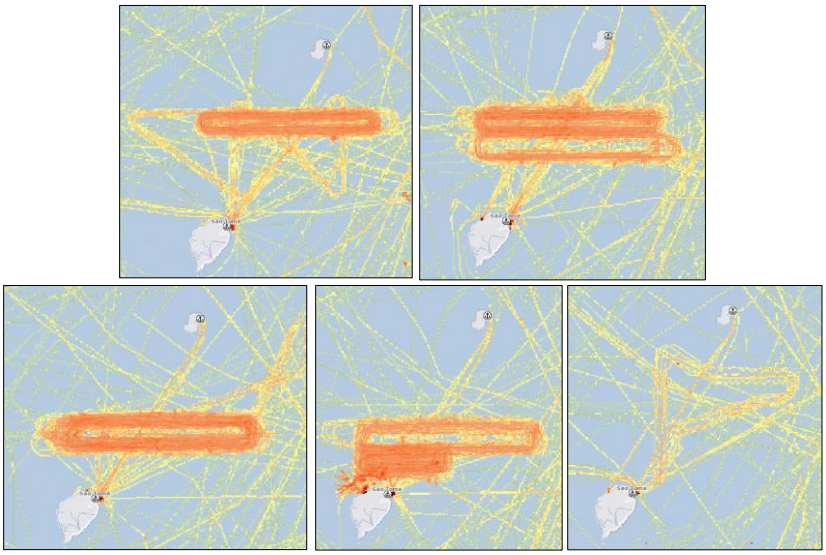


Figure 24 – Unusual traffic intensification in STP's EEZ (April, May, June, July and August 2023).

d. Bulk Trades.

For bulk trades, the Port of São Tomé is the only one capable of receiving ships for this purpose. The export of palm oil and cocoa are the main sources of revenue for the trade balance of STP. In 2021 these were the volume of trades registered.

Table 1 - Trade balance of STP
(Source: Office of Strategy and Studies of the Portuguese Republic - Economy and Sea)

Group of products	Value of exports (thousands of Euros)	Value of imports (thousands of Euros)
Total	**16 209**	**140 554**
Agri-food	15 369	48 981
Energetic	3	27 612
Chemical	61	13 210
Wood, cork, and paper	4	2 176
Textiles and clothes	17	5 062
Footwear, skins, and hides	3	1 069
Ores and metals	109	10 714
Machines, appliances, and parts	173	17 266
Land transportation equipment and parts	36	8 684
Aircraft, vessels, and parts	387	28
Diverse finished products	47	5 752

e. Feeder, Coasting and Local Trade.

Local traffic consists of mainly very small craft (Figures 25 and 26), and ferries (Figures 27 and 28).

Figure 25 - Example of very small crafts in Neves

Figure 26 - Example of a very small craft

Figure 27 – Example of a local ferry

Figure 28 – Example of a local ferry

f. Offshore Supply and Support.

STP has a petroleum sector. In 2001, a Joint Development Zone (JDZ) with Nigeria was established, and in 2009, the country began efforts to promote exploration within its Exclusive Economic Zone (EEZ). Although no production has been recorded so far, the country has already benefited from over 78 million United State Dollars (USD) in cash payments and several millions in social projects funded through exploration contracts (São Tomé e Príncipe 4th ITIE Report by PWC in 31th December 2017).

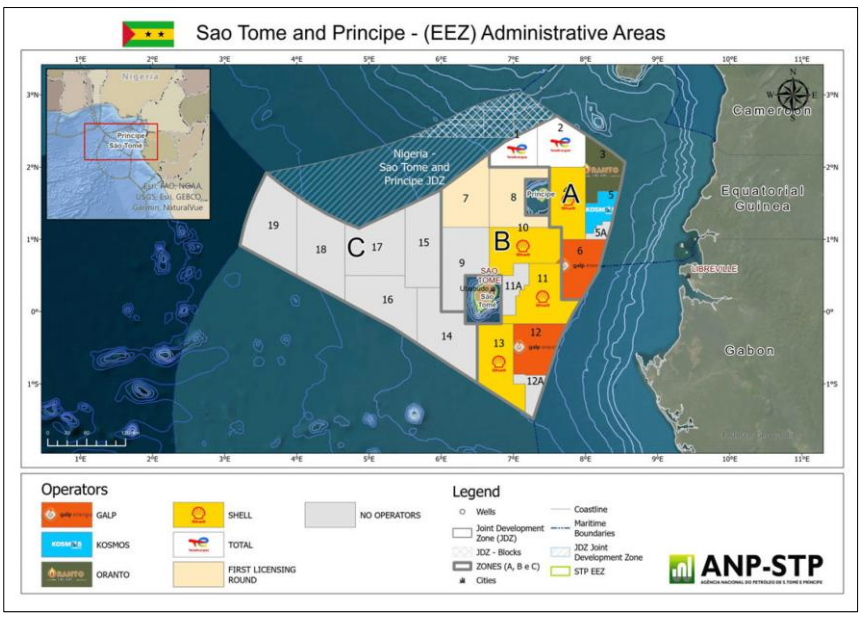


Figure 29 – Exploration contracts in the different blocks of STP EEZ

Due to oil exploration activities and related surveys, several published documents

confirm the existence of high quality hydrographic data covering a significant portion of STP's EEZ. During the TV local authorities were sensitized about the importance of this data, highlighting its potential use in charting proposes to enhance navigation safety in national waters.

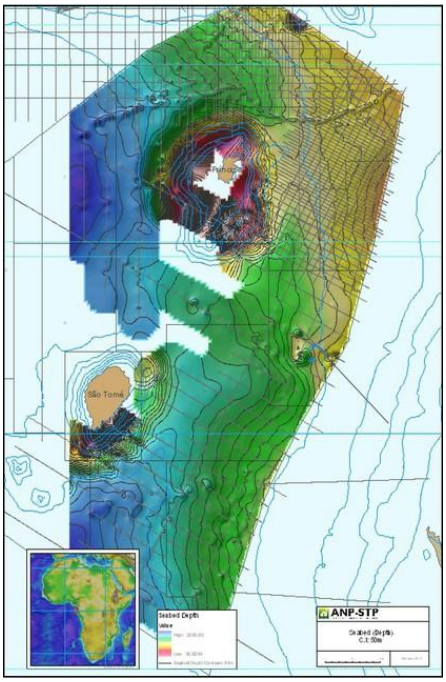


Figure 30 – Public hydrographic information about the STP EEZ (Agência Nacional do Petróleo (ANP) - SPT)

g. Tourism Cruise Liners.

Although it currently represents only a small portion of national tourism, there is a growing market for cruise ships visiting the STP archipelago. In 2023, three cruise ships were recorded, accounting for approximately 6.5% of the country's total tourist arrivals. Currently, the following cruise lines operate routes with stops in STP: the American companies *Norwegian Cruise Line, Oceania Cruises, Regent Seven Seas Cruises* and *Plantours Kreuzfahrten*, the Monaco-based *Silversea* and the German companies *Phoenix Reisen* and *Hapag-Lloyd Cruises*. Due to the lack of a pier capable of accommodating these ships, passenger transfers are conducted between anchorages and small piers using support boats.

Figure 31 – Cruise liner's tourism in STP

h. Tourism Small Craft.

There is a small market for coastal tourist trips that has an economic impact on local communities. These tours are operated by small fiberglass boats that provide sightseeing excursions and connection between the two main islands and their surrounding islets, as well as supporting diving and spearfishing activities.

Figure 32 - Example of tourism small crafts

i. Fisheries.

STP territorial waters extend to the outer limits of the archipelago, which define the baseline beyond which extends an EEZ of 200 miles, covering 160 000 km2. The continental shelf represents 1 455 km2. This geographical configuration and humid tropical climate provide conditions for significant fisheries productivity, dominated by pelagic species.

STP has a fishing fleet of about 2 240 vessels, with 90% being artisanal and 10% semi-industrial. Artisanal fishing is mainly carried out with simple wooden canoes or canoes with masts, while semi-industrial fishing uses motorized fiberglass vessels equipped with purse seines. The sector employs approximately 4 100 fishermen and 2 800 fish vendors, playing a crucial role in the economy and food security of the country.

The annual fish catch ranges between 9 730 and 11 700 tons, with an estimated potential of 29 000 tons per year within the Exclusive Economic Zone (EEZ). Fishing primarily targets coastal pelagic fish, such as tuna, skipjack, blue runner, and flying fish. The main fishing gear includes hooks and lines, drifting gillnets, and purse seines.

The table below presents the average annual catch of each species of coastal pelagic fish by different types of artisanal fishing gear (2020-2021 data):

Table 2 - Average annual catch of each species of coastal pelagic fish captured by different types of artisanal fishing gear (2020-2021)
(Source: Forum for Economic and Trade Cooperation between China and Portuguese-speaking Countries (Macau))

Catch (tons/year)	Blue Runner	Bigeyes Scad	ScadsNei	Fulufulu tunas	Balao halfbeak	Skipjacktuna	Flying fishes	Other	Total
Hooks and lines	1587	460	46	554	0	17	18	5011	7693
Drifting gillnets	23	16	0	1	0	0	1608	50	1698
Hand nets	0	0	0	24	0	3	1000	396	1423
Purse seines	41	31	151	1701	1192	0	3	842	3961
Total	1651	507	198	2279	1192	20	2630	6300	14776

Industrial fishing in the country is underdeveloped and relies on European Union (EU) vessels, which catch tuna under an agreement with the local government. Between 2019 and 2024, 16 Spanish and 12 French vessels operated with purse seines, while 5 Spanish and 1 Portuguese vessels used longline fishing. A new agreement was negotiated in the first trimester of 2025 and for the next four years 32 EU fishing vessels will operate in STP waters under this agreement.

Since this agreement involves fishing vessel's fuel replenishment in STP, concerns about hydrographic information have arisen. According to the latest survey conducted in 2014, São Tomé Port has a minimum depth of 3 meters relative to the chart datum (CD), which is tight for offshore fishing vessels. Additionally, anchoring operations in

Neves are considered very risky, as reported by local authorities. The last edition of the Enseada da Rosema (Neves) nautical chart remotes to 1959.

Figure 33 - Fishermen landing in Ana Chaves bay

Figure 34 - Typical small vessels for artisanal fishing

10. Responsibility for Safety of Navigation.

According to STP Decree-Law 3 of 1989, from an operational standpoint, ENAPORT is responsible for implement measures that promote safety of life at sea, provide pilotage and towing services, ensure appropriate maritime infrastructure and signaling, provide services related to the operation of ports under its jurisdiction within its operating area. This includes assisting vessels and ensuring the safety of navigation, promote the construction, acquisition, and maintenance of maritime works and port infrastructure, as well as the preservation, signaling, buoying.

Decree-Law 32 of 2007, which establishes the IMAP under the Ministry of Public Works and Infrastructure, defines it as the regulatory body for all matters concerning navigation safety and maritime security. With the decree-law 4 of 2010, IMAP earn the responsibility of certification and oversight of regulations from major international maritime organizations as IMO SOLAS convention and the International Ship and Port Facility Security (ISPS) Code. The IMAP is also responsible to maintain the navigability of waterways and ship maneuvering areas as well as ensuring the provision of pilotage and towing services.

Despite some competences looking coincident until here, decree law 03 of 2018 stablished the Maritime Authority System (SAM) and with him the interoperability between organizations with capacities and responsibilities in this field was stablished. Regarding navigation safety and maritime security aspects, STP CG preforms now a key role concerning SOLAS Chapter V.

11. Coast Guard Responsibilities.

Considering that CG is one of the main stakeholders in the use of the sea and waterways, a visit was made to the CG (Figures 35 and 36). As member of the SAM, CG main responsibilities includes monitoring and combating illegal fishing and drug trafficking, as well as search and rescue at sea.
The team was received by the Commander of STP CG, who expressed concern over the country's lack of hydrographic capabilities. Considering the complexity of it, he enhanced the importance of stablishing goals in this matter.

Figure 35 – Metting with the STP CG Commander

Figure 36 - Visit to the STP CG COM

It was observed during the technical inspection, and also through the analyses of the Portuguese Navy's Lighthouse Direction report about STP field missions, that STP AtoN are pretty well conserved and maintained. The most part of the signalling is operational with its infrastructures clean and well painted. Only one lighthouse and a buy's light are temporarily off however, the situation is well reported and two navigational warnings are active. This achieve comes from the efforts that the PDCP have been made, since 1993, allocation funds, sensitizing and working together in the field with STP CG militaries (Figures 37 to 42). IHPT is now committed to making all information about AtoN (identification, characteristics, and location) available on its open web portal, IH+ (available at https://geomar.hidrografico.pt).

Figure 347- Lighthouse of Lagoa Azul

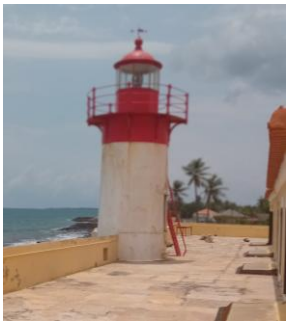


Figure 38 - Lighthouse of Ilhéu Rei

Figure 39 - Lighthouse of Santo António (Príncipe)

Figure 40 - Lighthouse of Ilhéu do Bombom

Figure 41 - Lighthouse of Ilhéu das Cabras

Figure 42 - Lighthouses of Ilhéu das Rolas

12. Coastal Zone Management and Environmental Protection.

STP has the desire to establish, in short term, a group of marine protected areas. A project sponsored by Non-Governmental Organizations (NGO) is ongoing with the main objective of implement 8 marine protected areas. The project is guided under a participatory management policy where the NGOs cooperate directly with the various directions under the ministries. A proposal for a decree-law implementing the areas and its restrictions was already delivered to the government but, as realized during the TV, no hydrographic survey data was used or collected to support this project. More information about this project can be consulted in: https://www.rede-ampstp.com/.

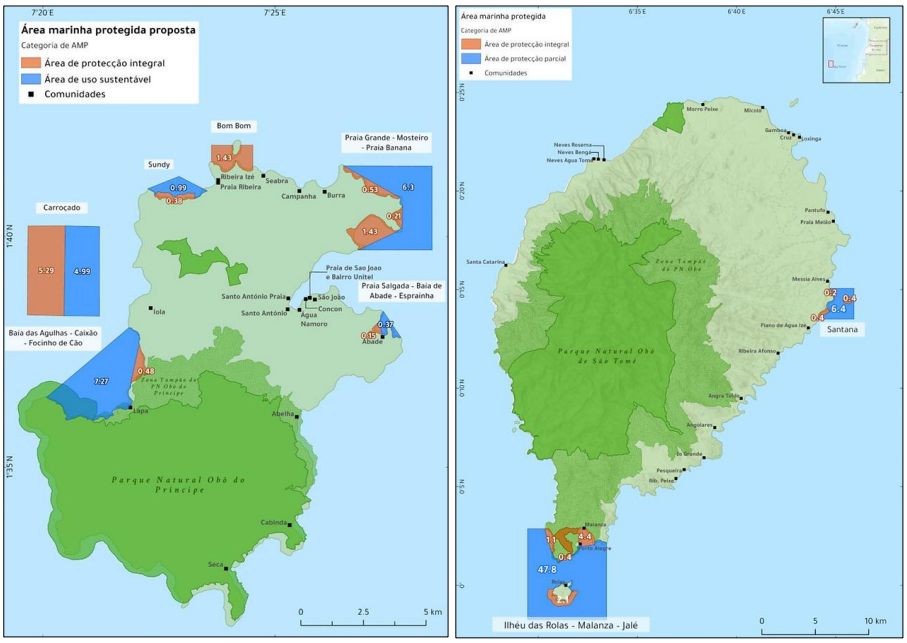


Figure 43 – Proposed marine protected areas in Príncipe Island (left) and São Tomé Island (right)

OUTLINE C 55 ANALYSIS

13. Status of surveys within the National Maritime Zone.

Regarding C 55 indicators about hydrographic surveys, Figure 44 shows the situation reported in 2022.

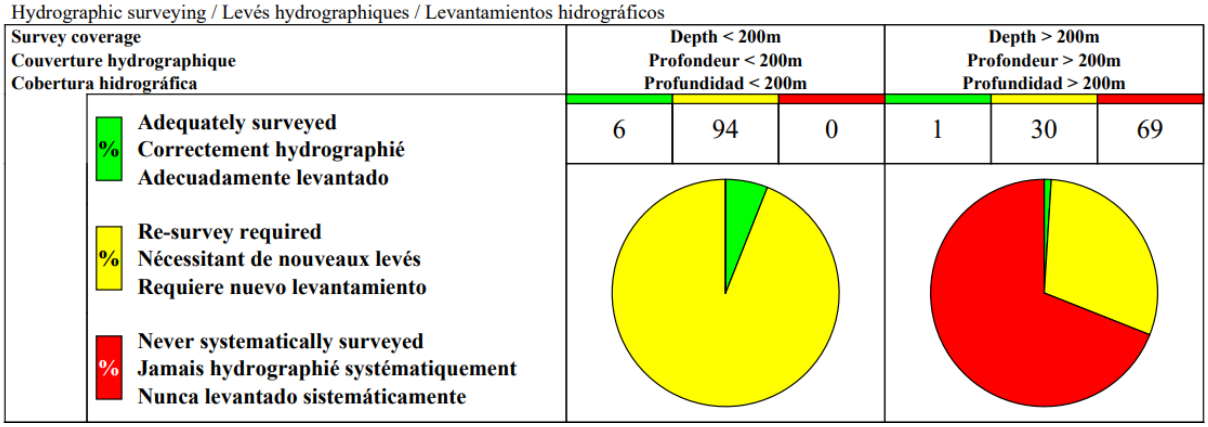


Figure 44 - C55 indicators about hydrographic surveys in STP

Most of the hydrographic/bathymetric data held within the STP EEZ dates back decades, based on surveys carried out by Portugal, mostly using single beam or leadline.
IHPT has carried out several surveys, the most recent of which in 2014 covering Ana Chaves bay and Fernão Dias pier access with a single-beam echosounder (Figure 45) and in 2016 the northeast coast of Sao Tomé and some specific locations of Ana Chaves bay with multibeam.

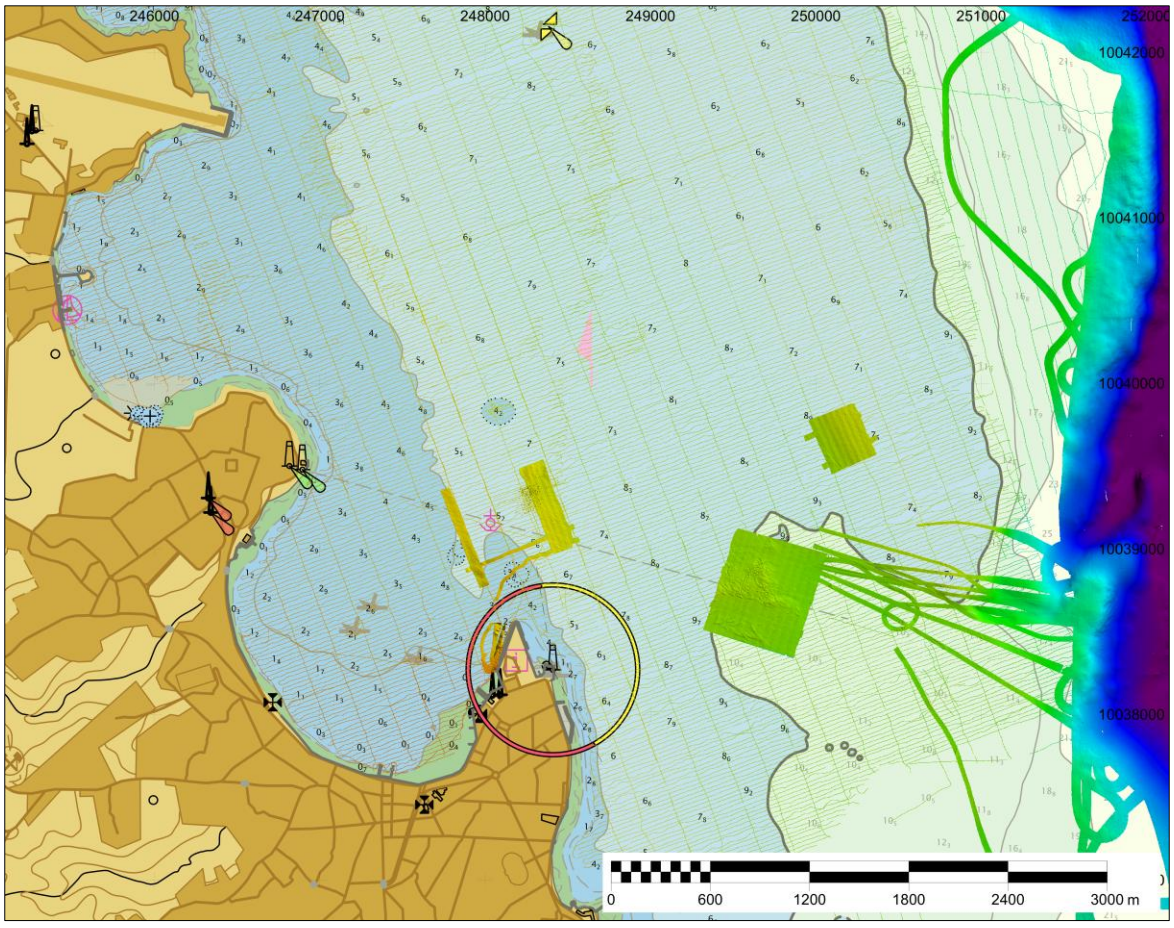


Figure 45 – Single-beam (2014) and multibeam (2016) surveys conducted by IHPT at Ana Chaves Bay.

Considering the importance of Sao Tomé port to the logistic support and economy of the country, constant update of this hydrographic information data it's crucial. Updated tide predictions as well as high resolution and full coverage bathymetry between commercial pier and 10 meter's depth should be stablished as a priority considering the mitigation of the risk of the low keel clearance ship's operations.
The same logic is applied to Príncipe Island considering that the small island sustentation also depends on maritime transportation. This island's situation becomes even more critical considering the nautical chart hydrographic information's age (1959) and survey method and also the fact that is assumed that ships enter Santo António bay in high tide and stay settled in the bottom during the low tide's presence in pier.
As already refereed before, Rosema bay also share the same hydrographic needs considering the kind of operation and manoeuvre oil tankers perform in there and its importance for fuel replenishment of the island.

14. Collection and Circulation of Nautical Information.

It was confirmed during the TV that, although not being directly defined in his statutes, as the entity responsible for navigability, security and maintenance of the waterways, IMAP is the institution responsible for promoting hydrographic surveys and the production and updating nautical cartography.
It was recommended to STP that, whenever its authorities become aware of the existence of hydrographic data or hydrographic surveys carried out by private companies or foreign organisations, they should request them and its metadata (for proper understanding, evaluation, use and attribution of ownership) and share it with the PCA (in this case the IHPT). This should be an ongoing task and a STP contact point should be designated to send this data to the PCA (IHPT).
Owners of this data should recognize they hold a degree of liability if dangers to navigation are evident within the data, but the data has not been appropriately shared with authorities and mariners.

15. Survey Capability.

There was no indication of any current capacity to undertake hydrographic surveys within STP Government organizations, and the individual that was identified with education in hydrographic surveying have not practiced the activity since completing their training. No formal hydrographic survey equipment or vessel was identified.

16. Chart Production Capability.

Capacity to produce Nautical Cartography: No capability was identified. Nautical cartography coverage relies on the support of its PCA (IHPT).

PROPOSALS FOR COORDINATION AND CAPABILITY BUILDING

17. National Hydrographic Committee.

STP does not have a National Hydrographic Committee and there are no government organizations with a deep hydrographic background. Therefore, it is recommended that the STP creates a National Hydrographic Committee. This was recommended by the team since, during the TV, several stakeholders were identified, with installed capacities that can contribute to ensuring that the STP fully fulfils all the national activities specified for phase 0 of the IHO's CB strategy. This joint effort should be initiated by the authorities at the highest level, namely the Ministry of Infrastructures and Natural Resources and the Ministry of Defense and Internal Order. Both ministers have shown understanding the importance of this effort and have expressed their intention to implement it.

18. Phase 1 Hydrographic Capability: MSI Organization, GMDSS.

a. **MSI** (Maritime Safety Information).
The dissemination of Navigational Warnings (NW), has been guaranteed by the CG through the consultancy of the PDCP that has been watchful and tries to implement this procedure. For the time being, NW have only been transmitted daily by radio and sent to the PCA (IHPT) which in turn sends them to the NAVAREA coordinator (SHOM), It is intended that efforts will be made to ensure that STP CG achieves complete independence from the procedure in the future. Considering the equipment capacity that STP CG COM already has and also the consultancy opportunity from the PDCP, efforts are suggested to equip STP CG with a long range NAVTEX transmission station. Taking the advantage of the key location in GoG and also from the Portuguese consultancy this could be an opportunity to increase drastically the safety of navigation in the region and give the opportunity to STP become in MSI, as well as in maritime signaling, a reference in Africa.

b. Information on Ports and Harbors.
Throughout the meetings with the Ministers and Port Administration, the Team reiterated the need to collect and disseminate important navigational data to mitigate potential illegal actions and to reduce the insurance premiums for shipping using STP waters and ports, and therefore the reduction of costs and possibly time alongside. The early sharing of plans and coordinates of new developments to the PCA (IHPT) will also enable the navigational charts and products to be updated in a timely manner.

c. GMDSS Status.

Table 3 - Status of GMDSS in local waters.

Master Plan	A1 Area	A2 Area	A3 Area	NAVTEX	SafetyNET	Notes
No	No (VHF)	No (MF)	No	No	No	1

Notes:

1. Despite having operational VHF and MF/HF radios and antennas, operator's qualifications must be improved, organization and procedures must be stablished so a permanent watching with Digital selective calling (DSC) capability being guaranteed. Those capacities must be extended to Príncipe Island.

19. Phase 2 Hydrographic Capability: Survey.

All stakeholders related to maritime and port affairs, blue economy, navigation safety, among others, are aware of the importance of hydrography and the existence of a hydrographic service. Throughout the various meetings, representatives of the organizations expressed that this is a matter of utmost importance. However, decisions and funding for the establishment of hydrographic capacity would have to come from the political power.
For this purpose, the team emphasized the importance of having trained personnel. As STP official language is Portuguese, the TV team mentioned that hydrographic courses are available at IHPT, taught in that language.

a. Provision of Survey Data.
There is a continuing requirement on the STP Government organizations to ensure that any hydrographic survey data collected is passed to the PCA (IHPT). They should also consider adding a clause to any license agreements with exploration companies indicating bathymetric data should be provided to STP for onward transmission to the PCA (IHPT).

b. Survey Capability.
Due to the scale of the deficit of modern data and the cross sectoral demand for better mapping, STP should work to build a domestic capacity to undertake hydrographic surveys. This capacity should reside within the maritime administration, namely IMAP, or, alternatively, in the Coast Guard. This last solution would have the advantages of being easier to support within the framework of Defense Cooperation between Portugal and STP, and also because the Coast Guard has some small vessels and ribs and personnel with sea training.
In the long scope, data should be acquired, processed, and validated locally before supply to the PCA (IHPT).

c. Potential for Regional Activity.
STP has no capacity to assist other States in the region.

20. Phase 3 Hydrographic Capability: Chart Production.

There is no capability for nautical chart production and /or maintenance. Potential capability is likely to be many years away and would need the development of a dedicated team and proper facilities.
An extensive training programme and purchase of the necessary equipment would need to be costed and added to the relevant budgets. STP would need to join the IHO to access Phase 3 via IHO-CB training and support.

21. Summary of the Assessment of the National Hydrographic Capability

Table 4: Assessment of National Hydrographic Capability.

IHO Member	RHC	NHC	Phase 1 Capacity	Phase 2 Capacity	Phase 3 Capacity	Notes
No	EAtHC Observer	No	No	No	No	

PROPOSALS FOR ASSISTANCE

22. Training

Although the IHO-CB strategy focuses primarily on building MSI capacity, it appears that STP could simultaneously initiate training and education of personnel in hydrography. Whether in the field of safety of navigation or hydrography, there is suitable training available in Portuguese language, and in other languages on West African Countries.
Once STP completes its IHO membership, more IHO-CB support opportunities may become available.

23. Equipment.

Since there is no existing national hydrographic service or a defined strategy for hydrography and navigation safety, it would be premature to address issues related to equipment specifications. However, once a diagnosis of STP's status in this matter is conducted and a course of action or strategy is identified, IHPT can provide technical assistance in selecting equipment, survey platforms or training to follow.

24. Funding.

In the future, a national hydrographic strategy should highlight areas where funding is required. STP Government funding should be requested, and applications made to other worldwide sources (e.g. World Bank) for specific projects. Guidance and applications for IHO Capacity Building courses and training should be made through the EAtHC-CB Coordinator.

FOLLOW-UP RECOMMENDATIONS

Number	Recommendation	Action Owner	Completed
01/2025	Sign EAtCH statutes to become an Associated Member	IMAP on behalf of Ministry of Infrastructures and Natural Resources	
02/2025	Complete IHO membership to have access to more IHO Capacity Building support opportunities	IMAP on behalf of Ministry of Infrastructures and Natural Resources	
03/2025	Consider creating a National Hydrographic Coordinating Committee to cover the safety of navigation involving all actors and stakeholders (see Publication M-2, " The Need for National Hydrographic Services" (https://iho.int/uploads/user/pubs/misc/M-2_3.0.7_E_21072024.pdf)	IMAP on behalf of Ministry of Infrastructures and Natural Resources	
04/2025	Perform a comprehensive diagnosis regarding the capabilities of all maritime sector institutions in STP in terms of: 1. Infrastructure and equipment to collect and circulate maritime safety information. 2. Communication with NAVAREA Coordinator for MSI broadcast. 3. Communication with PCA for nautical charts updating. 4. Existence of a National Structure to prevention or mitigation of consequences of marine disasters or climate change. 5. Survey capacity (personnel, equipment, suitable vessels)	IMAP / Coast Guard	
05/2025	Immediately after diagnosis, communicate with NAVAREA coordinator (SHOM) and PCA (IHPT) relevant and urgent information regarding navigational safety warnings and nautical charts updating.	IMAP / Coast Guard	
06/2025	Establish a strategic plan for hydrography that includes the following: 1. Training and certification of 2 persons in hydrography and MSI. 2. Implementing a maritime safety information publishing and dissemination service 3. Together with the PCA (IHPT), define a plan for hydrographic surveys by priorities, based on risk analysis, stakeholder inputs, and the review of STP cartographic plan. 4. Promote the execution of a hydrographic survey campaign, carried out by a highly trained team, with the participation of technicians from STP, preferably already with a course in hydrography.	IMAP, IHPT	

07/2025	To conduct a survey of all data resulting from hydrographic surveys that may have been carried out by private operators or other States and get access to all data. Henceforth, the authorities of STP shall ensure that future hydrographic survey data acquired within the maritime areas under their jurisdiction, are delivered to the designated focal point and shared with the PCA (IHPT) for charting updates.	IMAP, IHPT	
08/2025	Identify a package of portable equipment to provide a basic hydrographic capability	IMAP with support of IHPT	
09/2025	Share with STP the plan of hydrography courses	IHPT	
10/2025	To forward the limits and details of marine protected areas to their PCA (IHPT) for possible inclusion in the relevant navigational products	IMAP supported by Ministry of Environment Youth and Sustainable Tourism	
11/2025	Provide any modern tidal data collected to the PCA (IHPT) to improve the current harmonic constants used in Tidal publications.	IMAP, INM	
12/2025	Review relevant pages of the ADMIRALTY List of Radio Signals (ALRS) publication and contact NAVAREA II coordinator (coord.navarea2@shom.fr) and the PCA (IHPT) with any updated contact details and changes.	IMAP with support of IHPT	
13/2025	IMAP and the PCA (IHPT) to maintain lines of communication.	IMAP/IHPT	
14/2025	To consider another visit two years after this report to monitor progress.	EAtHC Chair and CB Coordinator	
15/2025	Continuity in participation in the EAtHC and Community of Portuguese Language Countries (CPLP) Hydrography Conferences	IMAP, EAtHC Chair	

25. Urgent Actions.

a. Perform a comprehensive diagnosis regarding the capabilities of all maritime sector institutions in STP in terms of:
    1. Infrastructure and equipment to collect and circulate maritime safety information.
    2. Communication with NAVAREA Coordinator for MSI broadcast.
    3. Communication with PCA for nautical charts updating.
    4. Existence of a National Structure to prevention or mitigation of consequences of marine disasters or climate change.
b. Immediately after diagnosis, communicate with NAVAREA coordinator (SHOM) and PCA (IHPT) relevant and urgent information about safety of navigation in STP waters for MSI broadcast and nautical charts updating.

26. Follow up Opportunities.

EAtHC-CB Coordinator to consider another visit two years after this report to monitor progress and the PCA (IHPT) to consider a bilateral meeting regarding the recommendations from this TV in the upcoming CPLP Hydrography Conference.

CONCLUSIONS

27. Cooperative Opportunities.

IMAP will require considerable advice and support over the coming years. EAtHC Chair and IHO Secretariat are encouraged to make contact at the earliest opportunity to keep the momentum generated by this visit. Attendance at future EAtHC Conferences and Seminars will allow the relevant maritime authorities in STP to develop contacts in the region and hopefully these may be able to assist in their development. IMAP and the IHPT should also maintain formal relations.

28. National Hydrographic Committees (NHCs).

STP has not yet formed an NHC. Contacts established at the highest political level have been beneficial in this regard, as it was possible to convey this recommendation to the holders of decision makers with interest in maritime affairs. Several actors have been identified who could contribute to such an organization, and there seems to be a positive understanding regarding the importance of this joint effort.

DATE	**30 March 2025**
RHC Technical Visit Team Leader	**IHPT Technical Director, representing IHO, Mr João Paulo Delgado Vicente**
SIGNATURE	Assinado por: **João Paulo Delgado Vicente** Num. de Identificação: 09902201

Annex List:

A. Terms of Reference of the RHC Technical Visit Team.
B. Summary of Events
C. Preliminary Agenda
D. List of Contacts
E. NHS Organization Template
F. Hydrographic Surveys Coverage
G. PCA Chart and ENC Coverage
H. Coastal State Trade and Maritime Traffic
I. NAUTICAL CARTOGRAPHY COVERAGE IN STP – ANALYSIS

DISTRIBUTION: Chair EAtHC RHC

INFORMATION: IHO Secretariat / IMAP / IHPT / IALA

Annex A

TERMS OF REFERENCE OF THE RHC TECHNICAL VISIT TEAM

1. The Technical Visit Team, comprising members of the staffs of the Portuguese Hydrographic Institute (IHPT), led by Mr João Delgado Vicente, are to carry out a visit to the countries which have indicated a willingness to discuss issues of mutual interest in the fields of Maritime Safety Information (MSI) and hydrography.

Preparation

2. The team members, under the guidance of the head and with the assistance of IHPT technical staff, prepared and planned the team's TV, having had access to the material available at the OHI Secretariat and the information provided by the IMAP.

Work Objectives

Note: If the Technical Visit Team has more than one area of activity e.g. MSI and hydrography, separate headings should be used. The following example covers hydrographic work.

3. The Team is to:

    a. Obtain access to decision making levels of government and liaise with senior officials, emphasizing the importance of hydrography and navigation safety to coastal States and, hence, the need to include hydrographic and associated charting activities within National Plans.

    b. Assess the National capacities to plan and execute the collection and rendering of hydrographic data to enable the production of charts and publications both locally and through the supply of data to Hydrographic Offices with international chart folios.

    c. Consider and advise on measures which can be taken to improve the capacity of nations to carry out the above.

    d. Emphasize the basic importance of a national system for the collection of data, such as engineering drawings and local Notices to Mariners, which have an effect on the interests of mariners.

    e. Advise on the assistance to be gained from close liaison with the IHO Secretariat, IMO and funding agencies to enable viable and sustainable capability to be maintained.

Report

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

Annex B

SUMMARY OF EVENTS FOR THE VISIT TO SÃO TOMÉ AND PRÍNCIPE

Day	Time	Event	Local	Notes
Sun 9 Mar	20:00	Arrival in São Tomé	Airport	Host: Portuguese Defence Attaché PDCP delegation Transfer to hotel (Hotel Pestana Miramar) by the Defence Attaché.
Mon 10 Mar	10:00	Presentation of greetings to the Portuguese Defence Attaché	Portuguese Embassy	Colonel Jaime Ribeiro da Cunha (Defence attaché) and Frigate captain Pedro Martins (Technical director of the PDCP's project nº2)
	11:00	Meeting with IMAP direction and visit to the departments	IMAP Office	Dr. Charles Neto (Director General)
	15:00	Meeting with ENAPORT direction and visit to São Tomé commercial pier	ENAPORT Office	Dr. Hamilton Afonso (Director General)
Tue 11 Mar	09:00-10:00	Meeting with Minister of Defence and Internal Order	Ministry of Defence and Internal Order	Brigadier general Horácio Castro da Trindade de Sousa.
	10:00 - 11:30	Meeting with Coast Guard Commander and visit to the Coast Guard Maritime Operations Center and infrastructures	Coast Guard	Colonel Armindo Pinho da Fonseca e Silva Rodrigues
	11:30 - 12:00	Visit to São Sebastião lighthouse and level benchmarks	São Sebastião stronghold	São Tomé Island Vertical reference
	14:00-1800	Visit to port of Neves and Lagoa Azul lighthouse	Neves Lagoa Azul	Inspector Bruno Graça (IMAP)
Wed 12 Mar	09:00 – 11:00	Meeting with the Minister of Environment Youth and Sustainable Tourism	Ministry of Environment Youth and Sustainable Tourism	Dra. Nilda Borges da Mata
	15:00 - 17:00	Meeting with the Minister of Infrastructures and Natural Resources	Ministry of Infrastructures and Natural Resources	Dr. Nelson Cardoso
Thu 13 Mar	09:00 - 10:00	Meeting with the Minister of Agriculture, Fisheries and Rural development	Ministry of Agriculture, Fisheries and Rural	Dr. Nilton Garrido
	10:00 - 10:20	Press Conference		Mr João Paulo Delgado Vicente
	10:30 – 10:50	Press Conference	Instituto Nacional	Mr João Paulo Delgado Vicente

	10:50 - 12:00	Meeting with the direction of Instituto Nacional de Meteorologia	de Meteorologia	Dr. Aristómenes Nascimento (Technical director)
	12:10-12:45	Presentation of greetings to the Portuguese Embassy	Portuguese Embassy	Dr. António Caetano (Deputy Head of Mission)
	15:00-16:30	Meeting with local agencies and organizations	Ministry of Infrastructures and Natural Resources	Hull Blyth (shipping agency) MARAPA (NGA) Direção das Pescas (Fisheries Authority) ENCO (fuel company) Supermaritime (shipping agency) Direção do ambiente e ação climática (state environment agency) IMAP
Fri 14 Mar	10:00 - 12:00	Final Press Conference	Portuguese Cultural Centre	IMAP ENAPORT INM STP CG Fisheries Authority PDCP delegation Portuguese Embassy Representatives of all ministries visited STP Media
Sat 15 Mar	20:00	Depart from São Tomé	Airport	Accompany to the airport: PDCP delegation

Annex C

PRELIMINARY AGENDA

Day	Time	Event
Sun 9 Mar	17:00	Arrival in São Tomé
Mon 10 Mar	10:00-11:00	Presentations of greetings to Portuguese Defence Attaché, PDCP delegation and Portuguese Embassy
	11:00-12:00	Visit to IMAP
	12:00-13:00	Visit to ENAPORT
Tue 11 Mar	10:00 - 12:00	Visit to Ministry of Defense and Internal Order Visit to STP Coast Guard
	14:00 - 17:00	Visit to São Sebastião Ligthouse Visit to Ana Chaves bay
Wed 12 Mar	09:00 - 12:00	Meeting with the Minister of Environment Youth and Sustainable Tourism
	14:00-17:00	Minister of Infrastructures and Natural Resources
Thu 13 Mar	09:00 - 10:30	Meeting with the Minister of Agriculture, Fisheries and Rural Development
	10:30 - 12:00	Visit to INM
	14:00 – 17:00	Meeting with local agencies, fisheries associations and fisheries authorities.
Fri 14 Mar	10:00 - 12:00	Final presentation to the stakeholders
Sat 15 Mar	20:00	Depart from São Tomé

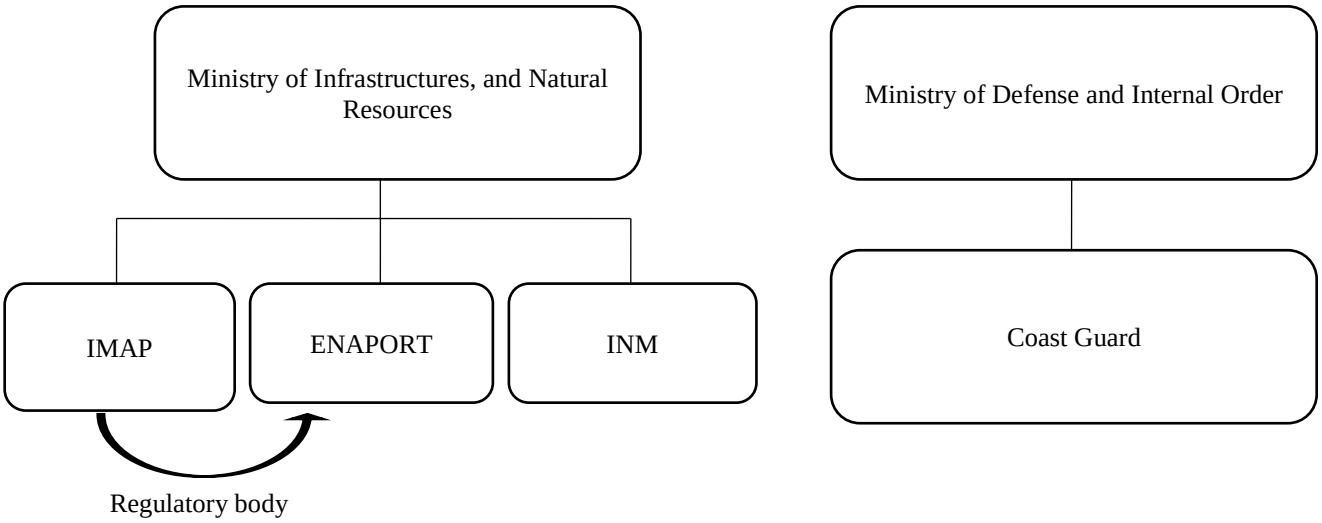
Annex D

LIST OF CONTACTS

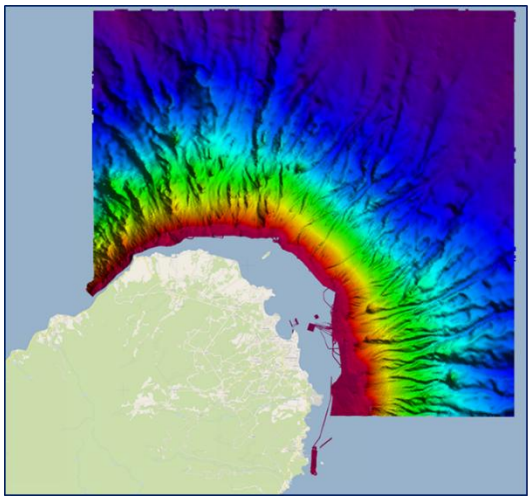
ENAPORT	Diretor General	**Dr. Hamilton Afonso Fernandes Sousa** Phone: 00239 991 88 48 Email 1: hamilton.sousa@enaport.st Email 2: hamilketty@hotmail.com
Instituto Marítimo Portuário (IMAP)	Diretor General	**Dr. Charles Neto** Phone: 00239 9905547 Email 1: charlesgen_81@hotmail.com Email 2: imapstp@gmail.com
Instituto Nacional de Meteorologia (INM)	Technical Director	**Eng. Anselmo Xavier Fernandes** Phone 1: 00239 2221975 Phone 2:9830388 Email: axavierfernandes66@gmail.com
Ministry of Defense and Internal Order	Minister's Office Director	**Dra. Lassalete Neto** Phone: 00239 9920682 Email: lassaleteneto6783@gmail.com
Coast Guard Commander	Chief of the Commander's Office	**1TEN Jimmy Tiny** Phone: 00239 9897820 Email: aspjimmy82@gmail.com
Harbours Master	Captain	**1TEN Vitalina Cruz** Phone: 00239 9921133 Email: vitalinalo34@outlook.com
Ministry of Infrastructures and Natural Resources	Minister's Office Director	**Dra. Kylsa Trovoada** Phone: 00239 9832609 Email: kylsatrovoada15@hotmail.com
Ministry of Agriculture, Fisheries and Rural Development	Minister's Office Director	**Dra. Leyvagna Nascimento** Phone: 00239 9048014 Email: novaleyve@hotmail.com
Ministry of Environment Youth and Sustainable Tourism	Minister's Office Director	**Dr. Carlos Lopes** Phone: 00239 9806003 Email: lopesocarlos@gmail.com

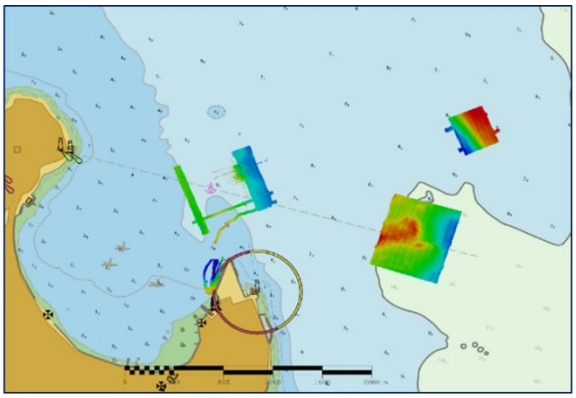
Annex E

NHS ORGANIZATION TEMPLATE

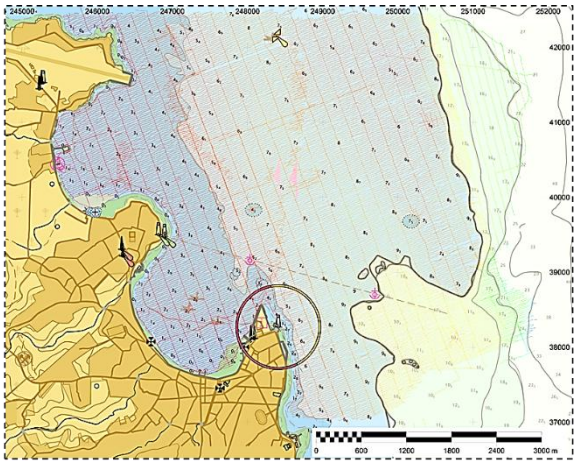


IHPT HYDROGRAPHIC SURVEYS COVERAGE

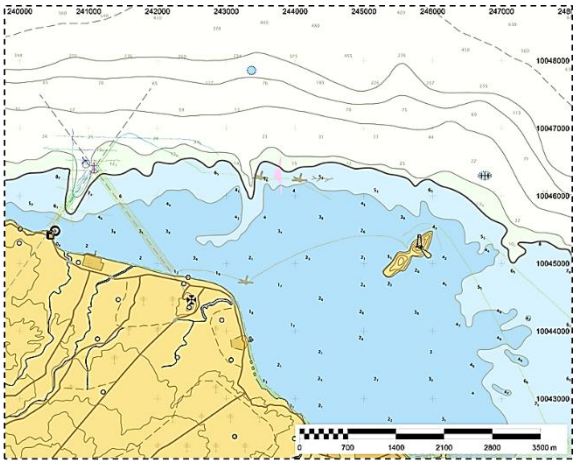




2016 - IHPT Hydrographic Survey: STP Northeast coast (left), multi-beam S44 Order 2 and Ana Chaves Bay (up)

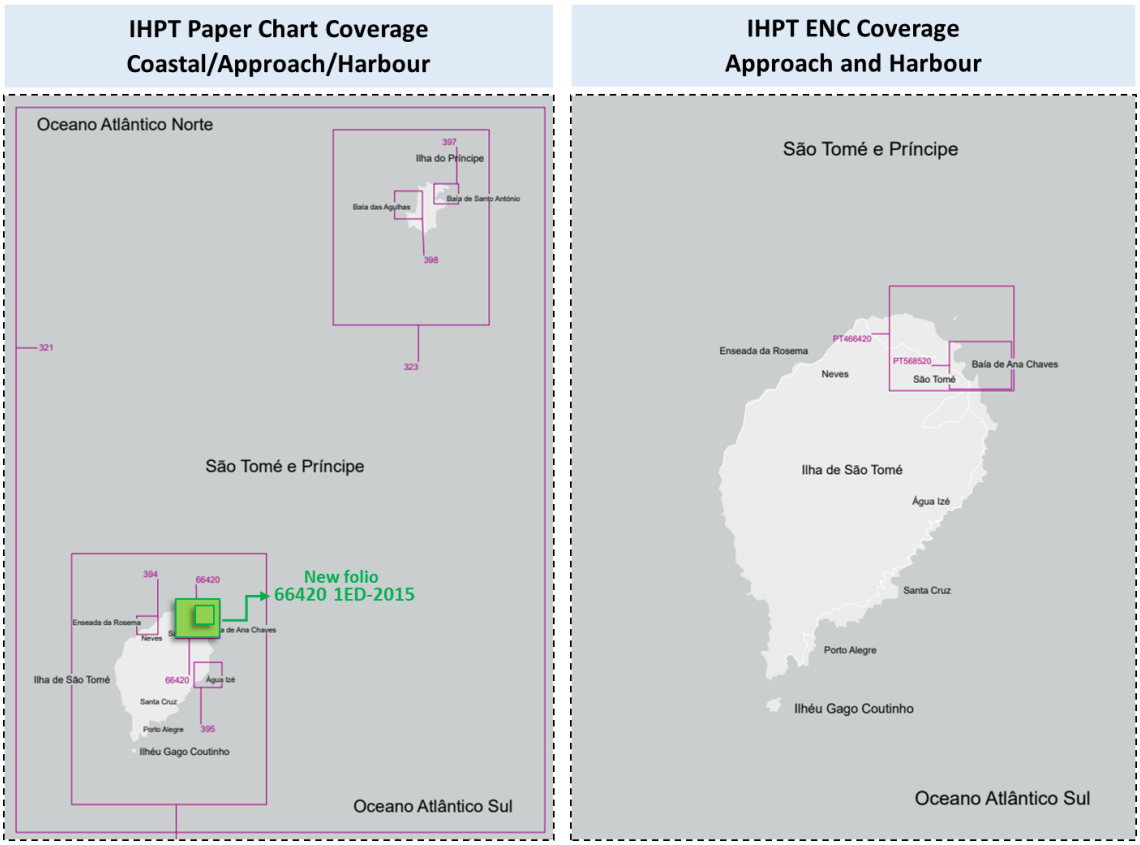


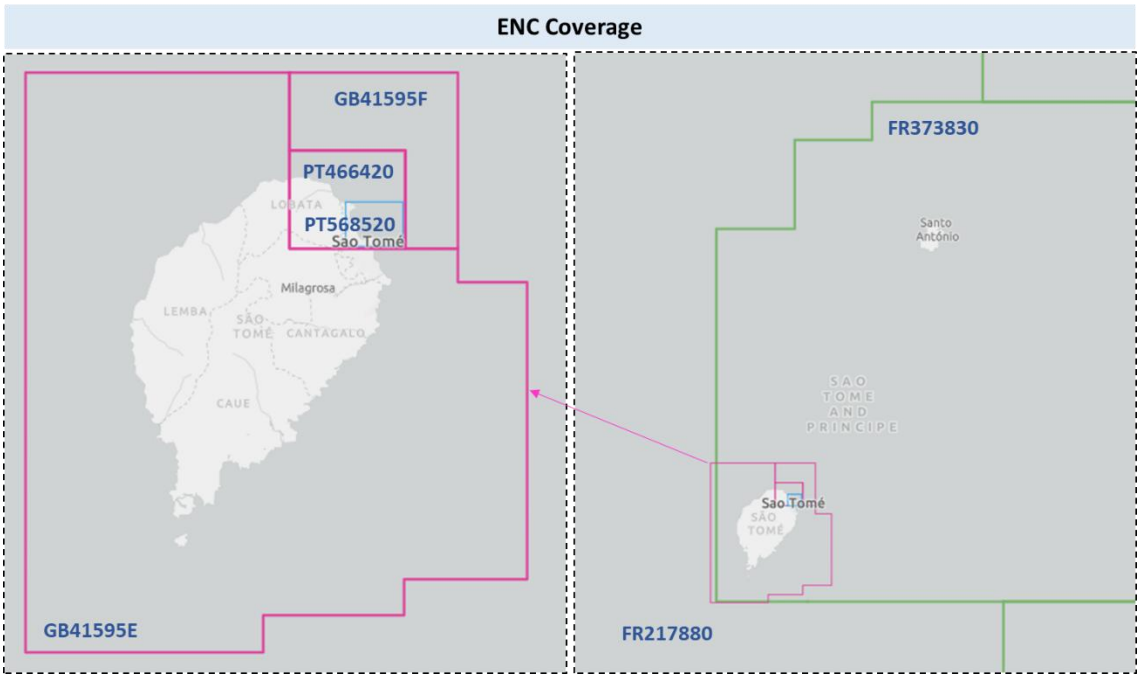
2014 - IHPT Hydrographic Survey: Ana Chaves Bay, single-beam S44 Order 1b



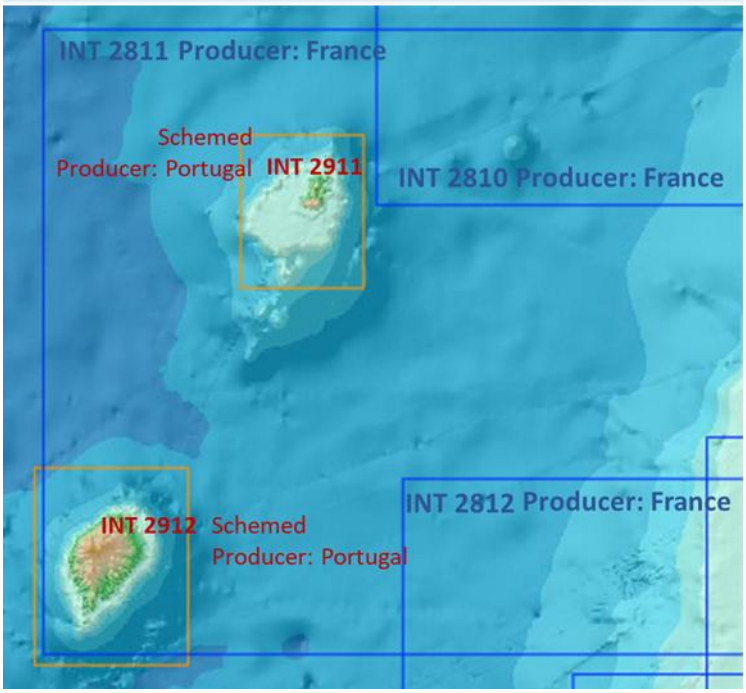
2014 - IHPT Hydrographic Survey: Fernão Dias, single-beam S44 Order 1b

PAPER CHART AND ENC COVERAGE

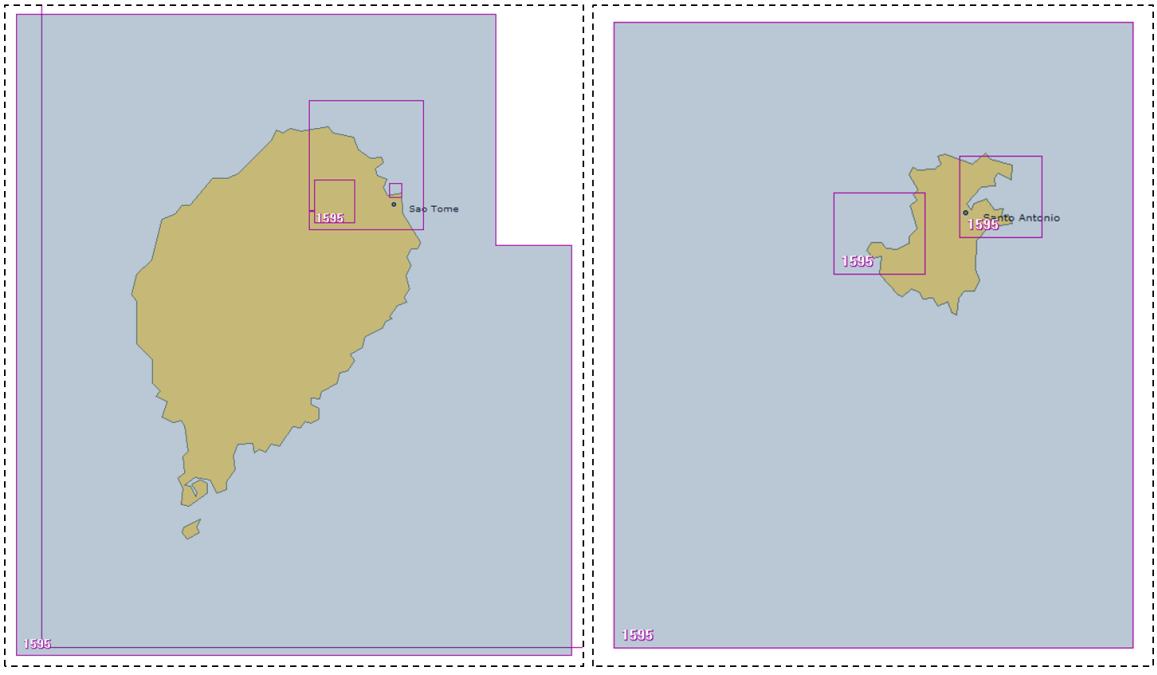




INT Coverage



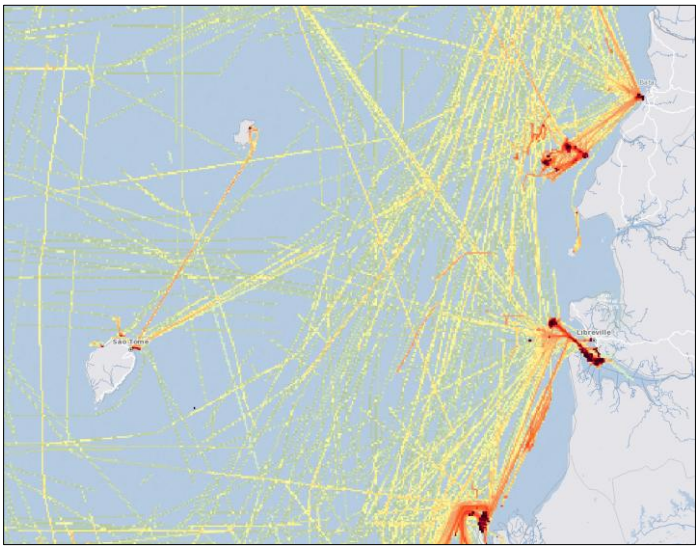
Admiralty Paper Chart Coverage



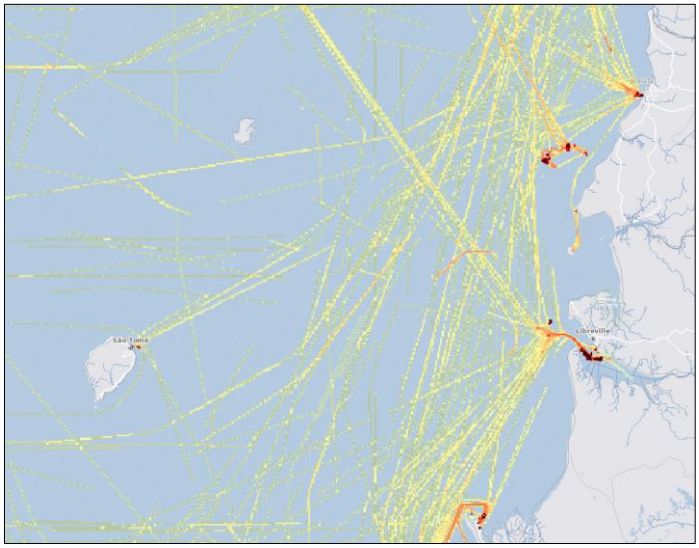
Annex H

COASTAL STATE TRAFFIC AND MARITIME TRADE

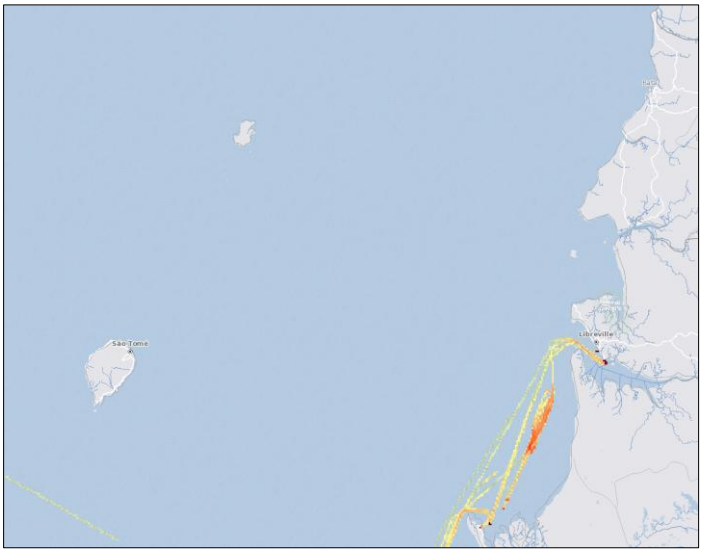
September 2024



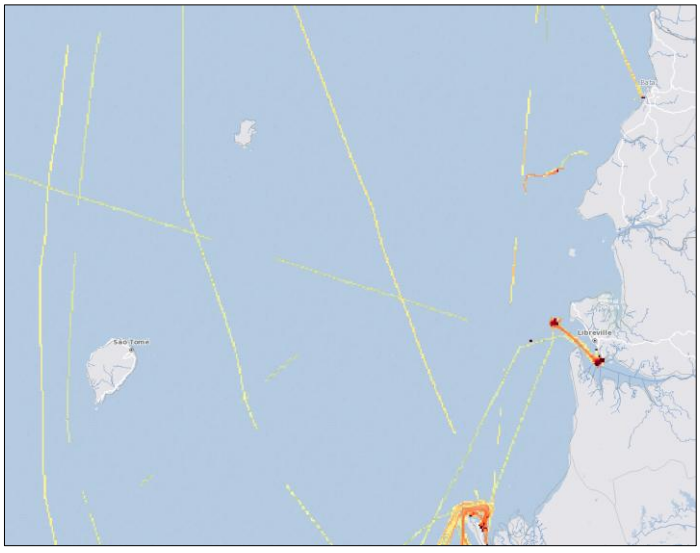
Total Traffic



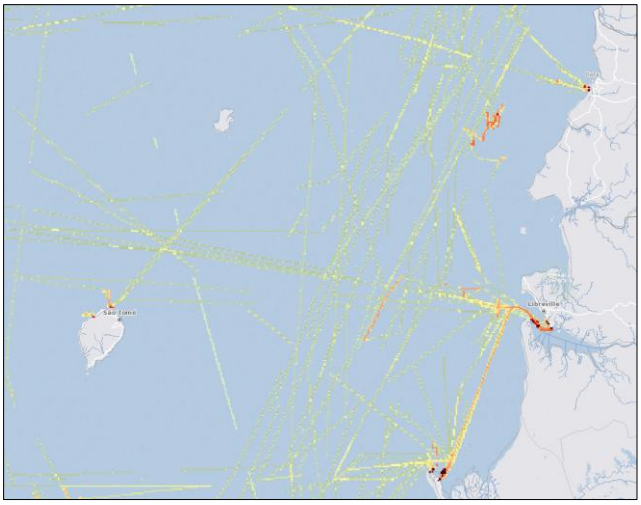
Cargo Ships



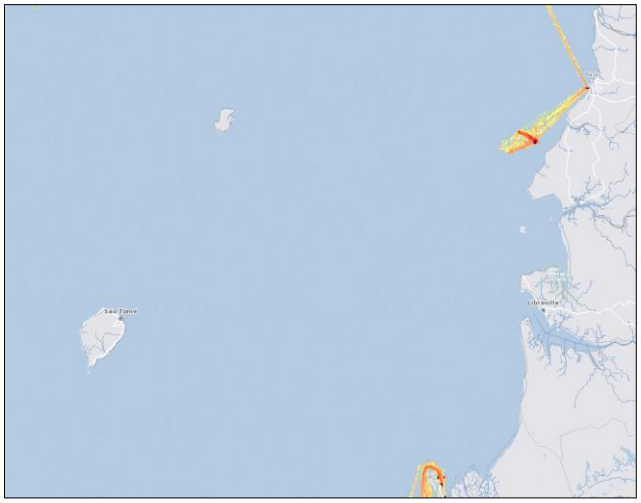
Fishing Vessels



Service Ships

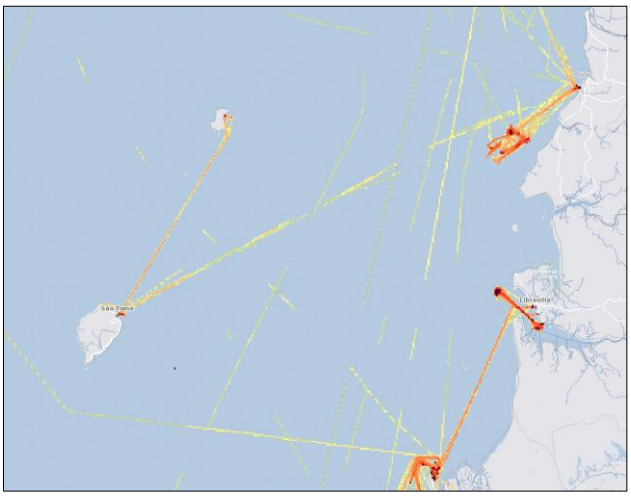


Tankers



Passanger Ships

Non-Commercial Ships



All others

Annex I

NAUTICAL CARTOGRAPHY COVERAGE IN STP – ANALYSIS

1. Nautical Cartography coverage in STP

The coverage of nautical cartography in the territory of STP, is currently a mix of paper chart folios established before 1970, from the International folio and ENCs produced by Portugal, United Kingdom and France.
This situation presents a number of problems regarding the timeliness of information, geodetic references, the updating of existing maps (paper and ENCs) and compliance with current standards, namely:

- The existent systematic coverage represented in charts is prior to 1974;
- Cartographic folios are inadequate in relation to the international regulations in force and those that will be implemented in the near future;
- Inadequate Cartographic coverage in relation to the evolution of port infrastructures and current needs identified during TV STP;
- Nautical cartography in its paper (CN) and electronic (ENC) expression with information that is not up to date.

This leads to the need to collect data and reformulate/re-scheme the folios, as well as for awareness-raising local governments and institutions to address these issues.

2. Atual coverage and needs.

The cartographic coverage in force, published by the IHPT, comprises 7 paper charts from the old folio established before the 1970s (harbour, approach and coastal series), 2 ENC (Approach and Harbour) and respective new paper chart published in 2015 in accordance with current rules regarding format, numbering, framing and symbolic representation.
During the TV, 2 locations were identified with urgent need for new updated charts: Vila Neves – Enseada da Rosema (São Tomé Island) and Baía de Santo António (Príncipe Island):

- Vila Neves – Enseada da Rosema, São Tomé Island
  Chart 394 (1/10 000), 1st ED 1959 – Hydrographic plan based on the survey carried out in 1958 by MHAST;
- Baía de Santo António, Príncipe Island
  Chart 397 (1/10 000), 1st ED 1961, R 1966 - Hydrographic plan based on the survey carried out in 1960 by MHAST

It was also identified the need for a chart that could cover the connection between the two Islands and another to represent the STP EEZ.

3. New coverage - Propose

To update and modernize the coverage:

- STP chart folios (paper and ENC) needs to be reformulated;
- New charts needs to be schemed, at least:
  - ❖ Harbour and Approach series – to cover the needs for São Tomé Port, Baía da Rosema and Baía de Santo António
  - ❖ Coastal series – one to cover the connection between Islands and represents the STP Territorial Sea;
  - ❖ Oceanic series – one that represents STP EEZ
- Charts from the folios established before 1970 to be canceled.