IHO Capacity Building Programme

TECHNICAL VISIT REPORT

The State of Hydrography and Nautical Charting in the Commonwealth of The Bahamas

29th September – 3rd October 2025

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With thanks to the following organisations in The Bahamas:

THE GOVERNMENT OF THE BAHAMAS
MINISTRY OF FOREIGN AFFAIRS

THE GOVERNMENT OF THE BAHAMAS
BAHAMAS NATIONAL GEOGRAPHIC INFORMATION SYSTEMS

THE GOVERNMENT OF THE BAHAMAS
PORT DEPARTMENT

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OFFICE OF THE ATTORNEY GENERAL
& MINISTRY OF LEGAL AFFAIRS

DEPARTMENT OF
ENVIRONMENTAL
PLANNING &
PROTECTION

Department of Marine Resources

The Bahamas
Maritime Authority

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ABBREVIATIONS

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

EXECUTIVE SUMMARY

The Technical Visit to the Commonwealth of The Bahamas (29 September – 3 October 2025) highlighted both progress and gaps in national hydrographic capacity. The Bahamas has demonstrated a commitment to the implementation of hydrographic services and has recently joined the International Hydrographic Organization (IHO) and established an interim National Hydrographic Committee (NHC). The country remains at an early stage of capability development, with no national survey or chart production capacity, limited Maritime Safety Information (MSI) arrangements, and outdated chart coverage outside of its primary ports. These deficiencies pose risks to navigation, defence operations, environmental protection and compliance with international obligations under SOLAS.

TECHNICAL VISIT

This Technical Visit was approved under the MACHC Capacity Building Programme 2025–2027, following a High-Level Visit in 2024 by the IHO Director. Previous visits in 2006 and 2024 identified similar challenges; this mission assessed the progress made, the current status and provides updated recommendations.

GENERAL AWARENESS IN THE BAHAMAS

The Bahamas is a full member of IMO (since 1976) and IHO (since July 2025). Awareness of SOLAS hydrographic obligations has gained increased attention in recent years, with many stakeholders displaying a good understanding of the need and challenges. Stakeholders expressed a need for support and guidance implementing adequate hydrographic services in The Bahamas.

INTERNATIONAL OBLIGATIONS OF THE BAHAMAS

The Bahamas are very aware of their international obligations under SOLAS. An IMSAS audit in recent years helped to gain traction to address the gaps in the provision of adequate hydrographic services. Efforts to date have been led by the Ministry of Foreign Affairs, which has allowed significant progress to be made in the last 12 months. The Bahamas does need to formalise a lead department for hydrographic matters to progress technical implementation.

CERTIFIED PERSONNEL

There are no certified or experienced hydrographic surveyors or marine cartographers identified within government. There is motivation and relevant technical expertise in GIS, data management and maritime affairs amongst stakeholders, which will form the basis of the developing national capability. The Bahamas should identify motivated and suitable candidates to attend relevant training opportunities offered through the IHO or others.

HYDROGRAPHIC SURVEY & NAUTICAL CARTOGRAPHY CAPABILITY

The Bahamas has no local hydrographic survey or nautical cartography capability. Surveys conducted for infrastructure projects are undertaken by overseas contractors. Nautical cartography requirements are delivered through a Primary Charting Authority, UKHO, but are not formalised in an agreement.

Local maritime safety information is promulgated by the Port Department. No formal GMDSS/NAVAREA arrangements were identified for wider Bahamian waters and mariners on international voyages.

The Bahamas is in the early stages of developing a hydrographic capability and has taken important first steps by joining the IHO and forming an NHC. The Technical Visit thanks stakeholders in The Bahamas for their positive engagement during the Technical Visit and identified the following priority actions:

- Develop a hydrographic services strategy (assign lead department).
- Establish clear responsibility for MSI.
- Build human capacity through training and certification.
- Develop or secure sustainable survey capacity.
- Ensure data sharing with primary charting authority.

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REPORT OF TECHNICAL VISIT TO
THE COMMONWEALTH OF THE BAHAMAS
Date: 29th September – 3rd October 2025

Reference(s):

A. MACHC Capacity Building Work Plan 2025-2027
B. IHO Publication M-2 *The Need of National Hydrographic Services* - Version 3.0.7
C. IHO CB Procedure 9: *Guidelines to Conduct Technical Visits*
D. IHO CB Technical Visit Report 2006
E. IHO High Level Visit Report 2024

Introduction

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

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

This Technical Visit to the Commonwealth of The Bahamas was conducted under the IHO Capacity Building Programme. The Bahamas has recently become a member of the IHO and the main objective of the visit was to review the current status of hydrographic and charting activities in The Bahamas to provide guidance on actions that would enhance its national hydrographic capacity.

1. Background

The decision to undertake a Technical Visit to the Commonwealth of The Bahamas originated from discussions held within the Meso-American and Caribbean Hydrographic Commission (MACHC) and the High-Level Visit by IHO Director Sinapi in April 2024. Funds were allocated as part of the MACHC Capacity Building Programme for a TV to The Bahamas in 2025.

The Technical Visit Team was tasked to deliver a summary of findings and recommendations to the MACHC Chair and the IHO Secretariat. This feedback will serve as an input to the MACHC Capacity Building work plan and guide future IHO or MACHC members assistance to The Bahamas

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2. Composition of the Team

The RHC Technical Visit Team was composed of:

Name	Role
Koen Vanstaen – UK Hydrographic Office Head of Hydrographic Programmes	Co-Team Leader
Robert Wheeler – UK Hydrographic Office Geographical Technical Leader - Americas	Co-Team Leader

Local arrangements for the Technical Visit were kindly handled by the Maritime & Ocean Affairs Bureau of the Ministry of Foreign Affairs of the Commonwealth of The Bahamas. A week long programme of meetings with local stakeholders was organised in support of the Technical Visit. Arrangements had to be rescheduled last-minute due to Tropical Storm Imelda delaying the arrival of the Technical Visit team. Logistic support during the Technical Visit was kindly provided by the Royal Bahamian Defence Force.

PART A - OVERALL ASSESSMENT OF THE SITUATION IN REGION

3. Efficacy of the Technical Visit.

This TV followed on from the High-Level Visit by IHO Director Sinapi in 2024. The TV team were effectively supported by the Government of The Bahamas in the run-up to and during the visit. The agenda provided the TV team the opportunity to meet with a range of stakeholders and explore the status of hydrographic services in The Bahamas. Meetings were held with Directors or Heads of Departments who demonstrated a commitment to improve hydrographic services, collaboration and appreciated the IHO guidance and support on their journey.

The Bahamas is in the early stages of developing its hydrographic services, and this TV happened at a good time to review the progress to date and provide guidance for future development.

4. Cooperative Arrangements and Potential.

a. International organisations

The Commonwealth of The Bahamas is a member of the World Meteorological Organisation since 1973, a full member of the International Maritime Organisation since 1976 and member of the International Organization for Marine Aids to Navigation (IALA) through Affiliate Industrial Membership of its contractor Adolpha Maritime Services. In July 2025 the Commonwealth of The Bahamas became a member of the International Hydrographic Organisation.

b. Regional Organization

The Bahamas attended the MACHC for the first time in 2024 as an observer. The Bahamas intend to attend again in 2025 as a member.

The Bahamas actively participates in several regional organisations, working groups or activities, including for defence, meteorology and data management purposes.

No visits were paid to representatives of these regional organisations.

c. Defence and Security Arrangements.

The Commonwealth of The Bahamas maintains responsibility for its own defence and maritime security through the Royal Bahamas Defence Force (RBDF), established under the Defence Act of 1979. The RBDF operates under the Ministry of National Security.

The RBDF is a maritime-oriented service tasked with defending the sovereignty and territorial integrity of The Bahamas, enforcing laws within its maritime zones, and assisting in disaster response and maritime safety operations.

PART B – THE BAHAMAS ASSESSMENT

5. RHC Involvement.

A High-Level Visit to The Bahamas was undertaken by IHO Director Sinapi in April 2024. The Bahamas attended the Meso American-Caribbean Sea Hydrographic Commission meeting as an observer for the first time in December 2024. In July 2025 The Commonwealth of The Bahamas became the 102nd member of the International Hydrographic Organisation.

6. Preliminary Liaison.

Following the MACHC Capacity Building recommendation and approval for a Technical Assessment Visit to The Commonwealth of The Bahamas, the liaison started in March 2025 between UKHO and the Ministry of Foreign Affairs - Maritime & Ocean Affairs Bureau. A TV Questionnaire was circulated to stakeholders in The Bahamas and returned by 4 entities.

Ms Lam and Ms Thompson were the primary contacts who provided excellent support coordinating the visit.

7. Points of Contact

Based on the meetings with the Ministry of Foreign Affairs, it is recommended that P-5 (Annex E) is updated to better reflect the current status of anticipated responsibilities. The proposed changes are included in Annex E.

It should be noted that the establishment of hydrographic services in The Bahamas is at an early stage and allocation of responsibilities is not finalised. An interim National Hydrographic Committee has recently been established and will need to be formally established, which may impact the P-5 contacts.

DESCRIPTION OF MARITIME ACTIVITIES

8. National Maritime Affairs.

The Commonwealth of The Bahamas is an archipelagic State comprising over 700 islands and cays spread across approximately 260,000 square kilometres of marine area. Its Exclusive Economic Zone (EEZ) far exceeds its landmass, making maritime space the dominant element of national geography, and the country's maritime character is therefore central to its identity, security and development.

The Bahamas lies near major North Atlantic and Caribbean shipping routes, including approaches to the Straits of Florida, giving it considerable strategic maritime importance. The nation has one of the world's largest ship registries through The Bahamas Maritime Authority (BMA).

Marine tourism, including cruise shipping, yachting, and coastal recreation, is a cornerstone of the national economy, generating significant revenue and employment.

The Ministry of Foreign Affairs - Maritime & Ocean Affairs Bureau has a coordinating function with regards to maritime matters. Other important stakeholders when it comes to maritime affairs include the Port Department, Bahamas Maritime Authority, Department of Marine Resources, Department for Environmental Planning and Protection, Department of Meteorology and The Bahamas National Geographic Information Systems Centre.

9. Trade and Maritime Traffic.

The Bahamas' maritime traffic is dominated by cruise and yacht/leisure traffic, container trans-shipment through Grand Bahama/Freeport, bunkering and petroleum storage operations, inter-island/coastal trade and ferries, and small-scale fisheries. The archipelagic nature and shallow Bahama Banks shape routing, pilotage, hydrographic workload and charting requirements across a large EEZ relative to land area.

a. Through Routes

Major through-routes: International shipping transits the Straits of Florida and the Northwest Providence Channel adjacent to Grand Bahama. These channels see high density of deep-draft vessels.

The Bahamas' waters carry both through-traffic and a large number of cruise/yacht transits that interact with international cargo traffic.

b. Trans-shipment

Freeport (Grand Bahama) is the principal trans-shipment/container hub for The Bahamas, with significant container throughput and facilities capable of handling large container ships.

c. Bulk Trades

Petroleum storage, bunkering and liquids terminals are a significant bulk activity at Freeport. The port has multiple offshore jetties and berths for VLCC/ULCC-class calls.

d. Feeder, Coasting and Local Trade

Regular feeder and coasting services operate between the main population and economic centres (New Providence/Nassau, Grand Bahama/Freeport, Abaco, Exuma, Andros, Eleuthera, etc.). These services carry containerised imports, domestic freight, fuel, refrigerated produce and construction materials to outer islands. Local ferry and barge operations are essential for supply chains to outer islands; capacity and frequency are sensitive to seasonal weather and tourism demand.

e. Offshore Supply and Support

Offshore support activity in Bahamian waters is principally related to tanker/terminal operations and bunkering, plus marine services for cruise/yacht sectors. There is not a large domestic offshore oil-and-gas exploration industry.

f. Tourism Cruise Liners

The primary cruise port is located in Nassau (Prince George Wharf/Nassau Cruise Port) and has the highest number of calls and passengers. In recent years the port recorded over 5 million cruise passengers and almost 1,500 port calls. Freeport and several smaller islands also receive calls from regional itineraries, including Bimini, Harbour Island / Spanish Wells, Marsh Harbour (Abaco), George Town (Exuma) and various Exuma cays/anchorages used for day-calls and tendering. Several cruise line companies operate private islands with berthing facilities.

g. Tourism Small Craft

Leisure cruising, yacht visits and marina services are economically important, both for local island economies and for service industries. Nassau, Freeport, Bimini and

the Exumas have significant marina and marina-support services; many private and charter yachts transit the banks and cays. The Bahamas is a frequent destination for large private yachts and mega-yachts.

h. Fisheries

National capture fisheries are dominated by Caribbean spiny lobster and queen conch, with additional small-scale reef and coastal fisheries supplying local markets. The Bahamas enforces its fisheries and EEZ through RBDF. Illegal, unreported and unregulated (IUU) fishing pressure from foreign vessels has been a regional concern, requiring maritime surveillance and enforcement patrols.

i. Other information

1. A number of Marine Protected Areas (MPAs) have been designated in recent years in The Bahamas. These MPAs are managed by different departments. The current MPAs are not charted on official navigational products. This information would highlight these important areas and would help both to protect and to enforce them. The lack of recognition of these areas has meant that efforts are currently underway to mark some of the MPAs with buoys.
2. Dredging for sand takes places within the EEZ of The Bahamas for export (including to the United States).

10.Responsibility for Safety of Navigation.

The responsibility for Safety of Navigation is currently a shared responsibility in The Bahamas. The Technical Visit highlighted that a number of activities are undertaken by departments of the Government of The Bahamas to ensure safe navigation in Bahamian waters. For example, the Bahamas Maritime Authority management of the ship registry and Department of Meteorology marine weather forecasts, are just a two of such good examples. However, there currently is no clear overall lead for Safety of Navigation and evidence of allocation of responsibilities through legislation is lacking in several areas.

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

- Maintenance of channels: The Department for Public Works commissions dredging campaigns in The Bahamas, for example the recent deepening of the port of Nassau to over 14m. The Department for Environmental Planning and Protection issues licences for these works and could be a key player to make relevant data available.
- Removal of wrecks: The Port Department explained their role in signing off which vessels can be declared wrecks in Bahamian territorial waters. The Port Department can direct the removal of wrecks if required.
- Provision and maintenance of Aids to Navigation (AtoN): The Port Department is responsible for the provision and maintenance of Aids to Navigation. A contractor has been appointed to provide this service on behalf of the Port Department: Adolpha Maritime Services (AMS). AMS is an industrial affiliate of IALA.
- Promulgation of Notices to Mariners: The Port Department publishes Notices to Mariners on its website, but are limited in numbers compared to other nations, with no NtMs in 2022-2024. NtMs available on the website did not include NtMs related to hydrographic products and services. Maritime safety information can

be distributed to mariners by the Royal Bahamas Defence Force, and to a lesser extent, the Port Department.

11.Defence Force Responsibilities.

The RBDF operates under the Ministry of National Security, and its roles include:

- Maritime Surveillance and Law Enforcement – monitoring and controlling activities within Bahamian territorial waters and the Exclusive Economic Zone (EEZ), including fisheries protection, anti-smuggling, and immigration control.
- Search and Rescue (SAR) – providing first-response capability in collaboration with The Bahamas Air Sea Rescue Association (BASRA) and international partners.
- Maritime Domain Awareness (MDA) – maintaining situational awareness of vessel movements through coordination with The Bahamas Maritime Authority (BMA) and international partners.
- Disaster Relief and Humanitarian Assistance – supporting civil authorities in hurricane preparedness and response.

In support of their tasks, the RBDF have established a nationwide VHF system with repeater stations across the islands. MSI may be broadcasted, but there are no formal arrangements or procedures in place yet. The system also has radar, AIS and weather monitoring capabilities.

During the Technical Visit meeting with the RBDF the need for improved hydrographic data was clearly articulated by the RBDF Commodore and Captains present at the meeting. Despite collaboration agreements with the US Coast Guard, this cannot be executed as US vessels cannot visit the RBDF Coral Harbour base because of poor charting. RBDF vessels have grounded on several occasions during operations in poorly charted waters. Unlike in other nations, RBDF does operate its vessels in poorly charted waters, but this does come with significant risks. Finally, underwater infrastructure, for example cables, are poorly charted and could have led to cable damage.

12.Coastal Zone Management and Environmental Protection.

The Bahamas has an extensive and expanding network or Marine Protected Areas across the islands. Most of the MPAs are manged by The Bahamas National Trust, a non-governmental organisation supported by the Government of The Bahamas. Four MPAs are managed by the Department for Marine Resources were designated under the Fisheries Act. Other MPAs do not have a responsible party for managing the MPA.

The RBDF does play a role in enforcement of MPAs management measures. However, none of the MPAs in The Bahamas are currently charted. A grounding took place within the Fowl Cays MPA recently. A recent court case against fishers also concluded that fishers are not made adequately aware of the location of MPAs. Buoys will now be installed to address this, but charting of MPAs and use of virtual aids to navigation could also contribute to the solution, especially with some MPAs extending to deeper waters, making the deployment of buoys more challenging.

OUTLINE C 55 ANALYSIS

13.Status of surveys within the National Maritime Zone.

There is no local survey capability within the Government of The Bahamas. Within the private sector it is understood that there is no or limited capability. Hydrographic surveys are undertaken as part of major infrastructure projects and will often involve overseas contractors. In the case of the latter, whilst reports may be submitted to local stakeholders, data is generally not made available in digital format or requested by local officials.

Due to the limited survey activity, outside of the main ports, the data underpinning the charts covering The Bahamas is not up to modern survey standards. Large parts of the charts covering The Bahamas are based on 19th century lead line survey data. The latest version of IHO Publication C-55 indicated that only a very low percentage of the EEZ had been systematically surveyed.

The status of hydrographic surveying within national waters was well understood by stakeholders. The Technical Visit team observed the desire of stakeholders to address this with the support and guidance of the IHO and the wider hydrographic community.

14.Collection and Circulation of Nautical Information.

The collection and circulation of nautical information in The Bahamas is currently ad-hoc. Relevant safety information is mainly shared through local channels (e.g. social media). The Government of The Bahamas does recognise the need to improve its provision of hydrographic services. The Technical Visit team found stakeholders generally keen to engage and review their activities in the context of SOLAS requirements.

All stakeholders recognised the need and benefit of the recently established Hydrographic Committee to improve coordination between stakeholders, recognising that provision of hydrographic services in The Bahamas will be a collective responsibility. Several departments could acquire or have access to relevant nautical information, but there is no clear process for sharing this information with relevant parties.

A Technical Visit report from 2006 suggested that MSI arrangements for Area 3 were in place, possibly through a NAVTEX station in Miami, US. The current visit team was provided no evidence of such arrangement or any other structural arrangement to promulgate safety critical information to mariners across all sea areas. No evidence was found of nautical information being shared with the primary charting authority on a regular basis.

15.Survey Capability.

There currently is no hydrographic survey capability within the Government of The Bahamas. Whereas the Land Surveyors Act (1936) allocated responsibility for hydrography to the Lands and Survey Department, the department currently does not have any capability, experience or resource to undertake this work.

In recognising the need to develop its hydrographic services in line with SOLAS requirements, the Government of The Bahamas is currently exploring how to meet the hydrographic survey requirement. No decision has been taken whether such capability will be developed locally or whether this will be contracted to external parties. Some departments were interested in undertaking surveys to meet their specific operational needs.

In developing a plan to access a survey capability, particular attention will need to be paid to the availability of sufficient financial, human and operational resources to deliver adequate services.

Where hydrographic surveys are currently undertaken in The Bahamas as part of infrastructure developments, the surveys are often conducted by international companies. Whereas reports with survey results are shared with local stakeholders, it appears that in most cases the data required to update nautical charts are not shared with local departments or the primary charting authority.

16.Independent Chart Production Capability.

There is currently no local nautical chart production capability and understanding of chart schemes is developing. No proposals for modification or extension of coverage of INT small scale, large scale and port schemes were proposed. During the meeting with the Bahamas Maritime Administration the Technical Visit team were made aware of the interest to introduce a Traffic Separation Scheme (TSS) (Annex G) in the North West Providence Channel. This is a busy shipping channel and several incidents have occurred in this area. Thinking around this scheme was still in the early stages and would need to progress through the International Maritime Organisation before it can be charted.

Indicative location of a future Traffic Separation Scheme – For illustration purposes only – NOT FOR NAVIGATION

PROPOSALS FOR COORDINATION AND CAPABILITY BUILDING

17.National Hydrographic Committee.

The Government of Bahamas is committed to improving its hydrographic services. In July 2025 The Bahamas became a member of the International Hydrographic Organisation and held its first National Hydrographic Committee meeting as per High Level Visit recommendations. The Bahamas has a tradition of having cross-departmental Committees, some related to maritime matters, but it was decided to establish a new,

focussed committee. Current membership of the NHC includes: Bahamas National Geographic Information Systems Centre (BNGIS), the Attorney General's Office – Maritime Unit, the Port Department, the Bahamas Maritime Authority, the Department for Environmental Protection and Planning, the Royal Bahamas Defence Force and the Ministry of Foreign Affairs (MoFA). Currently, lead organisations are MoFA and BNGIS.

The NHC met for the first time in 2025 and the Technical Visit team were informed that the NHC looks forward to discussing the Technical Visit report at their next meeting.

A key requirement for the NHC will be to agree roles, responsibilities and procedures for engagement between different stakeholders. Whereas in some areas there is a natural lead based on current responsibilities, in other areas, decisions will need to be made on who will lead on new responsibilities (e.g. data collection). The TV team offered to share Terms of Reference to guide the establishment of The Bahamas' NHC.

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

The Bahamas has a number of MSI actors. Whilst there was some evidence of sharing maritime safety information, the TV team identified a number of short-term and longer team proposals related to the sharing between national, regional and international partners.

a. MSI (Navigational Warnings).

There was some evidence that Navigational Warnings are being shared with local mariners and communities. There was limited evidence of Navigational Warnings being shared effectively with mariners on international voyages, between national actors or with international partners (e.g. the PCA of The Bahamas).

The TV team were shown good demonstration of the daily production of marine weather forecasts. Whilst they were published on local websites and social media, there was no routine communication to mariners on international voyages. Marine weather warnings may be shared by the RBDF over its VHF network, but there was no formal arrangement or process in place at present. Considering the nationwide VHF network operated by the RBDF, the TV team would recommend exploring use of this existing network for marine weather forecasts and warning.

The TV team were shown evidence of Notices to Mariners being published by the Port Department. There was some evidence that other known dangers to navigation, e.g. wrecks, were not shared as navigational warnings. RBDF also mentioned that some warnings were shared by their operators using the existing nationwide VHF infrastructure. No evidence on the frequency or reliability of these services was obtained.

The TV team recommends that the NHC nominates an overall MSI Coordinator for The Bahamas, who acts as a focal point for all Maritime Safety Information identified by stakeholders, and ensures this is shared with the appropriate organisations for onward promulgation.

The TV team recommends that the MSI coordinator attends an IHO MSI training course at the earliest opportunity or raises such requirement with the MACHC Capacity Building Coordinator.

The TV team recommends that the RBDF is the lead organisation for promulgation of Maritime Safety Information, as provided by the MSI Coordinator or

Department for Meteorology, via its existing nationwide VHF network

The TV team recommends that the Port Department continues to use its existing website to publish port specific Notices to Mariners. In addition, it is recommended to publishes other Navigational Warnings on its website as recommended by the MSI Coordinator.

The TV team recommends that the Department of Meteorology and The Bahamas' PCA engage further on tidal predictions. Both parties currently provide tide tables for selected locations in The Bahamas and it was not clear whether both outputs are compatible and give mariners the same trustworthy information.

The TV team commends the Port Department for putting in place a contracting framework to maintain Aids to Navigation in The Bahamas, which was reported by stakeholders to work well.

b. Information on Ports and Harbors.

The TV team met with the Port Department of The Bahamas, who are responsible for the management, administration and oversight of local maritime affairs. The Port Department acknowledged that charts do not accurately reflect the current depths and infrastructure available in the ports of The Bahamas.

The responsibility for collating the data regarding ports and harbours, and passing this data on to responsible chart agencies is currently not clear or written into local legislation. From the discussions throughout the technical visit, it was clear that various actors in The Bahamas could fulfil this role, including:

- The Port Department in their oversight role for ports and harbours
- The Ministry of Public Works as commissioning party for major dredging works in the port of Nassau
- The Department of Environmental Planning and Protection as regulator of most activities in The Bahamas
- The Bahamas National GIS Centre as home for all geospatial data in The Bahamas

With the establishment of a National Hydrographic Committee, it will be important to identify the most appropriate lead on this matter, and implement internal arrangements to ensure that the necessary data are supplied in a timely manner for the benefit of the nation and the mariner.

c. GMDSS Status.

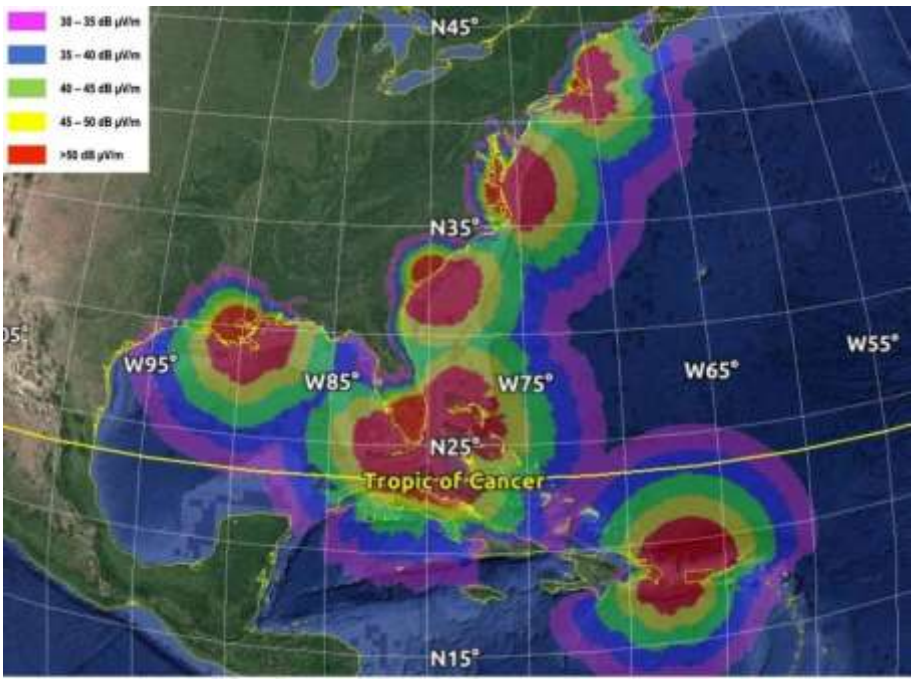
The status of GMDSS in The Bahamas is summarised in Table 1.

Table 1: Status of GMDSS in local waters.

Master Plan	A1 Area	A2 Area	A3 Area	NAVTEX	SafetyNET	Notes
Yes/No	Partial (VHF)	No (MF)	No	No	No	1 to 8

Notes:

1. Nationwide VHF network in place operated by RBDF, clear remit and procedures need to be established.
2. NAVTEX and SafetyNET arrangements may be in place with USA. Such arrangements may seem appropriate but will require formal arrangements to be in place and ensure locally originated warnings are shared with the appropriate instances.
3. No National Plan was presented to the TV team.



Eastern U.S NAVTEX Coverage
(Source: https://www.navcen.uscg.gov/navtex-maritime-safety-broadcasts)

d. Other Services.

The Bahamas Department of Meteorology develops daily marine forecasts and publishes these on its website (https://met.gov.bs/) and its social media channels. In case of severe weather, warnings are also distributed via these channels.

There are currently no formal arrangements in place to broadcast these forecasts via the nationwide VHF network or to vessels on international voyages.

19.Phase 2 Hydrographic Capability: Survey.

There currently is no hydrographic data collection capability in The Bahamas. At this early stage since the establishment of the National Hydrographic Committee, there has been no decision yet whether The Bahamas will opt to contract hydrographic data collection or establish its own data collection capability. The National Hydrographic Committee also hasn't established yet which organisation within the Government of The Bahamas structure will take responsibility for overseeing hydrographic data collection.

The Technical Visit team discussed the options available to the representatives of The Bahamas and the time and resources (human, financial and floating) required to establish an effective data collection service.

Whilst the support from the top-level of Government was widely recognised and acknowledged to have led to the progress to date, some officials consulted during the Technical Visit were unsure or unsighted whether the necessary financial support would be made available to deliver the necessary hydrographic services.

a. Provision of Survey Data.

In absence of a local data collection capability, some hydrographic data are collected as part of infrastructure development contracts by external parties. Currently departments received reports but do receive the data to allow the primary charting authority to update nautical products.

It is recommended that the National Hydrographic Committee appoints a lead organisation to ensure data requirements are set at the project approval stage and all necessary data are received on completion of the works in a suitable digital format. It was explained that the IHO MACHC partners or the primary charting authority can support The Bahamas in defining the requirements for the contractors. The lead organisation should also take responsibility to pass all data received to BNGIS and the primary charting authority.

b. Survey Capability.

There currently is no hydrographic survey capability in The Bahamas. The RBDF has the most extensive fleet of vessels, some of which may be suited for hydrographic survey operations. The RBDF may be a good starting point for supporting the establishment of a survey capability, considering their marine operations expertise and a specific need to improve access to their marine bases. Resourcing of this survey capability may require a collaborative effort as not one organisation in The Bahamas has all the resources to establish an operational survey capability.

The Technical Visit team discussed the training opportunities available to IHO members and opportunities to gain knowledge and support from MACHC colleagues, including the loan of equipment as announced at the last MACHC.

c. Potential for Regional Activity.

The Bahamas has no survey expertise at present to share with regional partners. However, regional partners may be able to support The Bahamas on its journey to establish an effective hydrographic data collection capability. The Bahamas has already reached out to Suriname as current MACHC Chair, which is applauded.

20.Phase 3 Hydrographic Capability: Chart Production

The chart production in The Bahamas is currently undertaken by the UK Hydrographic Office as primary charting authority. This informal arrangement has been in place for many decades, but to date has not been formalised in an agreement between both parties. Demonstration of such agreement may be required for auditing purposes.

The Technical Visit team discussed the issues with the current chart coverage of The Bahamas. In many areas, especially outside ports, the available data to produce charts is scarce. Where data are available, transfer to the primary charting authority could be improved.

The Technical Visit team discussed the IHO Capacity Building Strategy phases with stakeholders. Long term there may be an interest to develop a local chart production capability, but stakeholders recognised that first more progress needs to be made in Phases 0, 1 and 2.

21.Summary of the Assessment of the National Hydrographic Capability

Table 2 summarises the assessment of the national hydrographic capability.

Table 2: Assessment of National Hydrographic Capability.

IHO Member	RHC	NHC	Phase 1 Capacity	Phase 2 Capacity	Phase 3 Capacity	Notes
Yes	Member/Observer (1)	Yes (2)	Partial (3)	No	Yes (4)	1 to 4

Notes:

1. Observer of the MACHC in 2024, Member in 2025
2. Established in 2025, yet to be formally approved by Cabinet. Suitable representation from relevant stakeholders.
3. Limited evidence of navigational warnings being broadcasted; nationwide VHF system in place; some coverage by USA.
4. Delivered by UK Hydrographic Office as Primary Charting Authority. No formal arrangement in place.

PROPOSALS FOR ASSISTANCE

22.Training

The Bahamas are in the initial stages of the development of their hydrographic services. There is a need to gain access to a range of training opportunities.

In the view of the TV team, access to MSI training for the, to be appointed, MSI-coordinator, will be essential in the short term to bring the necessary structure and procedures to the promulgation of maritime safety information.

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

The National Hydrographic Committee is encouraged to attend the MACHC on a regular basis and nominate attendees based on the courses or workshops that may be offered before and after the main MACHC meeting. The Bahamas National Hydrographic Committee should seek to develop a training needs document, with the support of MACHC members or its primary charting authority, and seek support through all available channels including IHO, MACHC and others.

Once a lead and partners have been identified for the development of a hydrographic survey capability, the National Hydrographic Committee is encouraged to nominate candidates to attend accredited CAT A or CAT B hydrographic survey courses announced by the IHO.

23.Equipment.

At this stage it is too early to provide specific advice in relation to equipment procurement. The TV team discussed with stakeholders options to develop a local capability or contract hydrographic surveys to commercial operators. The Bahamas has been made aware of equipment loan options available through MACHC members (UKHO).

The Government of The Bahamas is considering undertaking LiDAR surveys of its land area, and awareness was raised of the opportunity to extend this to include bathymetric LiDAR, which could cover vast areas of shallow waters around The Bahamas archipelago.

24.Funding.

Considering the early stages of development of hydrographic services in The Bahamas, funding will be required to establish these. Whilst the Government of The Bahamas has been supportive of activities to date, the level of financial support allocated to implement adequate hydrographic services is currently not clear. Any external funding available from the IHO or external partners will therefore be beneficial to The Bahamas. The National Hydrographic Committee is encouraged to raise the need to funding with its Government, and use IHO Publication M-2 and cost-benefit analysis from other IHO members to support their case.

The TV team highlighted to members of the National Hydrographic Committee the opportunity to influence training opportunities through the MACHC Capacity Building Committee. The National Hydrographic Committee has been encouraged to consider requirements for submission of proposals in accordance with the CB Procedures 1 and 4.

The Technical Visit team used examples of other IHO members attracting significant external investment in hydrography. In many cases the investment was in a national infrastructure project, but required investment in hydrography to develop the infrastructure. The National Hydrographic Committee is therefore encouraged to be inclusive in its membership, ensuring wider marine and maritime needs are understood and opportunities for the benefit of society as a whole can be pursued.

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

FOLLOW-UP ACTIONS

25. Formalise establishment of the National Hydrographic Committee, lead organisation and roles and responsibilities - Development of a National Hydrographic Strategy

Following the recent establishment of the Bahamas National Hydrographic Committee, it is important to formalise its establishment and appoint a lead agency. This committee is currently coordinated by the Ministry of Foreign Affairs, but an operational lead organisation needs to be nominated.

The NHC should clarify roles and responsibilities of each of the member organisations, as implementing hydrographic services will be a collaborative effort. Agreements should be put in place between the parties to formalise the arrangements.

The NHC is encouraged to invite the IHO or its Primary Charting Authority to support the development of its NHC.

Action: Ministry of Foreign Affairs

26. Develop a National Hydrographic Strategy to implement sustainable hydrographic services in The Bahamas

Whilst the recommendations in the Technical Visit report focus mostly on short-term actions, it will be important for the National Hydrographic Committee to develop a longer-term strategy for endorsement by the Government of The Bahamas. This strategy should align with national strategic and development priorities, and establish whether hydrographic services will be developed locally or be delivered through partners. The strategy should make the case for allocating funding to support hydrographic activities, including human, physical and financial resources.

Action: NHC

27. Appoint Maritime Safety Information coordinator and implement procedures for the effective and timely collection and promulgation of hydrographic information.

The Bahamas has the building blocks in place to ensure Maritime Safety Information reaches all mariners. A MSI coordinator should act as the focal point for the members of the NHC and coordinator communication internally and externally. The MSI coordinator should seek the necessary MSI training and implement procedures to promulgate the information using the existing infrastructure, to the NAVAREA coordinator and to the Primary Charting Authority of The Bahamas.

Action: NHC

28. Empower the BNGIS Centre to collate hydrographic data for The Bahamas and implement procedures for data sharing

Hydrographic information, including bathymetric data and coastal infrastructures, are collected within the waters of The Bahamas, but are not made available to relevant parties. The BNGIS Centre has a national remit for spatial data and seems the natural host to act as the maritime data coordination centre. To ensure all relevant government and private sector data reaches the national data centre, procedures need to be put in place and resources made available for the BNGIS Centre to be adequately resourced to undertake this task.

Action: NHC and BNGIS

29. Assessing hydrographic survey priorities

The National Hydrographic Committee should work with its members to establish priority areas for future hydrographic surveys. These surveys should take into account navigational charting requirement, but also consider wider benefits for environmental, economic or resource management purposes.

These priority survey areas can then be surveyed using a local capability or procured through external providers, in line with the National Hydrographic Strategy.

Action: NHC

30. Identify Capacity Development needs and seek external support

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

The Bahamas should make use of its membership of the IHO to attend relevant training opportunities, initially focussed on MSI and hydrographic surveys.

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

Action: NHC

CONCLUSIONS

31.Cooperative Opportunities.

The Bahamas is in the early stages of the development of its hydrographic services. The current Government has been supportive of the initiative to become an IHO Member and develop hydrographic services. Ongoing cooperation with the IHO and its Member States will be highly valuable as The Bahamas progresses its journey.

The Technical Visit engaged with a wide range of stakeholders and was able to demonstrate how delivering hydrographic services is a collaborative effort. It will be important to support The Bahamas and the hydrographic stakeholder community to continue to work together for the benefit of safe navigation for mariners and the wider marine community.

To ensure ongoing support from Government, The Bahamas is encouraged to play an active role in the international hydrographic community and consider hosting the MACHC meeting in the near future. The Bahamas NHC is also encouraged to share its capacity development needs with the MACHC Capacity Building Committee.

32.National Hydrographic Committee (NHC).

The Technical Visit team were pleased to hear that The Bahamas had already established a National Hydrographic Committee. The Bahamas are taking steps to formalise its establishment and should use this process to raise awareness and gain recognition of the importance of hydrography at a Ministerial level, considering that many of The Bahamas' key economic sector rely heavily on the marine estate.

The NHC should in its development focus on responsibilities, coordination, procedures and defining priorities. As the NHC becomes more established, the formation of working groups could be considered to allow the NHC to focus on strategic matters and sub-groups on operational matters.

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

Recommendations

33.Urgent Actions.

- Identify lead agency for the National Hydrographic Committee of The Bahamas.
- Share any existing hydrographic data and Maritime Safety Information with the national data and MSI coordinator, respectively, for onward sharing with the NAVAREA coordinator and Primary Charting Authority.
- Formalise arrangements between NHC Members and external partners, including Primary Charting Authority.
- Explore opportunities for the NHC community to gain deeper understanding of hydrographic services.

34.RHC Follow up Actions

- Support The Bahamas in raising its awareness for the need of hydrography.
- Support The Bahamas to access capacity development opportunities.
- Identify training opportunities (including on the job training) for Maritime Safety Information training course, introductory hydrographic services courses and Cat 'A' and Cat 'B' Hydrographic survey courses, if appropriate and in line with the longer-term hydrographic services strategy.

35.Follow up Opportunities.

- MACHC26 from 9-12th December 2025 in Niteroi, Brazil.
- IHO Assembly from 19th-23rd April 2026 in Monaco.
- World Hydrography Day, 21st June 2026 to raise awareness amongst local stakeholders.

36.Preparations for Next RHC Conference.

The RHC Chair is advised to take note of this report, provide support as The Bahamas attend their first RHC as IHO Members and support in identifying capacity development opportunities.

DATE	21 November 2025
RHC Technical Visit Co-Team Leader	Koen Vanstaen
SIGNATURE	Koen Vanstaen
RHC Technical Visit Co-Team Leader	Robert Wheeler
SIGNATURE	Robert Wheeler

Annex List:

A. Terms of Reference of the RHC Technical Visit Team
B. Programme for the visit to the Commonwealth of The Bahamas
C. List of Contacts
D. P-5 IHO Yearbook Template update
E. Hydrographic Surveys Coverage
F. Paper Chart and ENC Coverage
G. Traffic Separation Schemes (TSS) overview

DISTRIBUTION: Chair RHC
INFORMATION: IHO Secretariat / visited coastal State

ANNEX A

TERMS OF REFERENCE OF THE RHC TECHNICAL VISIT TEAM

1. The Technical Visit Team, comprising members of the staffs of the Hydrographers of the United Kingdom, led by Koen Vanstaen and Robert Wheeler, are to carry out a visit to the countries which have indicated a willingness to discuss issues of mutual interest in the fields of hydrographic and Maritime Safety Information services.

Preparation

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

Work Objectives

3. The Team is to:

   a. obtain access to decision making levels of government in The Bahamas and liaise with senior officials, emphasizing the importance of hydrography to coastal States and, hence, the need to include hydrographic and associated charting activities within National Plans;

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

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

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

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

Report

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

ANNEX B

PROGRAMME FOR THE VISIT TO THE COMMONWEALTH OF THE BAHAMAS

Detailed Programme for the Technical Assessment Visit of the International Hydrographic Organization (IHO) to the Commonwealth of The Bahamas

Monday, 29th September

11:00 a.m. IHO Representatives will arrive in Nassau, Bahamas.

Venue: Lynden Pindling International Airport Nassau, Bahamas

Tuesday, 30th September

10:00 a.m. IHO Representatives will visit the Bahamas National Geographic Information Systems (BNGIS) Centre to conduct technical assessment.

Venue: BNGIS Centre
Second Floor, The Professional Centre, East Bay Street

10:00 a.m. IHO Representatives will visit the Attorney General's Office and Ministry of Legal Affairs to conduct technical assessment.

Venue: Paul L. Adderley Building, 18 John F. Kennedy Drive

4:00 p.m. IHO Representatives will visit the Royal Bahamas Defence Force Headquarters to conduct technical assessment.

Venue: Defence Headquarters, Orville A. Turnquest Building
John F. Kennedy Drive

Wednesday 1st, October

10:00 a.m. IHO Representatives will visit the Bahamas Maritime Authority to conduct technical assessment.

Venue: Bahamas Maritime Authority First Floor, Shirlaw House
Shirley Street

2:00 p.m. IHO Representatives will visit the Port Department to conduct technical assessment.

Venue: Port Department Shopping Plaza East Bay Street

Thursday, 2nd October

10:00 a.m. IHO Representatives will visit the Department of Marine Resources to conduct technical assessment.

Venue: Department of Marine Resources, East Bay Street

2:00 p.m. IHO Representatives will visit the Department of Meteorology to conduct technical assessment.

Venue: Department of Meteorology, Airport Industrial Park Road

Friday, 3rd October

10:00 a.m. IHO Representatives will visit the Department of Environmental Planning and Protection to conduct technical assessment.

Venue: Department of Environmental Planning and Protection,
First Floor, Charlotte House, Charlotte, and Shirley Street

12:00 p.m. IHO Representatives will visit the Ministry of Foreign Affairs to conduct technical assessment.

Venue: Ministry of Foreign Affairs
Second Floor,Goodman's Bay Corporate Centre

10:10 p.m. IHO Representatives will depart from Nassau, Bahamas.

Venue: Lynden Pindling International Airport Nassau, Bahamas

ANNEX C

LIST OF CONTACTS

For data protection reasons, the contacts details of individuals met during this Technical Visit are not included in this report.
Contact details can be made available on request by the Ministry of Foreign Affairs of the Commonwealth of The Bahamas.

P-5 IHO YEARBOOK – THE BAHAMAS

Current version:

Bahamas (The) / *Bahamas (Les)*

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

Date ratification IHO Convention -Date ratification Convention OHI -Fecha ratificación Convención OHI	07/05/2025

Last updated : July 2025 Dernière mise à jour : juillet 2025 última actualización julio 2025

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

Maritime and Ocean Affairs Bureau
Ministry of Foreign Affairs

Contact information / Informations de contact / Información de contacto

Head of the Hydrographic Office (if different from the person indicated above) -Directeur du service hydrographique (si différent de la personne indiquée ci-dessus) -Jefe del Servicio Hidrográfico (si es diferente de la persona indicada anteriormente)	Head of the Maritime and Ocean Affairs Bureau Ms Kimberley Lam Tel: 1 (242) 356-5956 ext 9548 E-mail: kimberleylam@bahamas.gov.bs
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Agency address: Goodman's Bay Corporate Centre, 309 W. Bay St, Nassau, Bahamas (The)
Note: The Department of Lands and Surveys, P.O. Box N-592, Nassau, Bahamas has responsibility for the collection and preservation of hydrographic data, under the aegis of the Office of the Prime Minister. Such data include tidal readings, hydrographic charts, maintenance of tide gauges, etc.	

Last updated : July 2025 Dernière mise à jour : juillet 2025 última actualización julio 2025

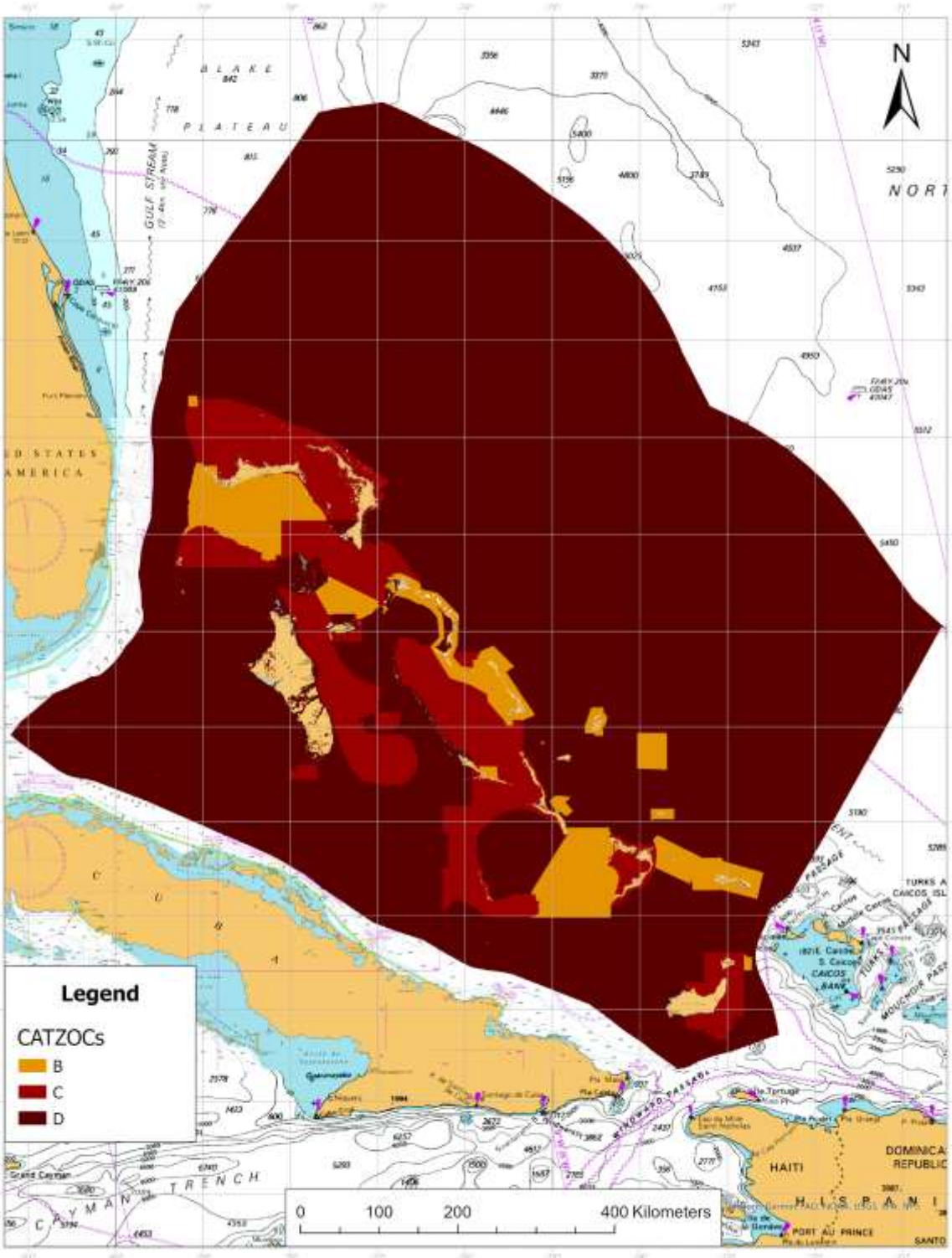
Proposed change:

Head of the Hydrographic Office (if different from the person indicated above) -Directeur du service hydrographique (si différent de la personne indiquée ci-dessus) -Jefe del Servicio Hidrográfico (si es diferente de la persona indicada anteriormente)	Head of the Maritime and Ocean Affairs Bureau Ms Kimberley Lam Tel: 1 (242) 356-5956 ext 9548 E-mail: kimberleylam@bahamas.gov.bs Agency address: Goodman's Bay Corporate Centre, 309 W. Bay St, Nassau, Bahamas (The)
Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de conta	Director Bahamas National Geographic Information Systems (BNGIS) Centre Mr Duane Miller E-mail: duanemiller@bahamas.gov.bs Agency address: 2nd Floor , The Professional Centre, East Bay Street, PO Box N 3040, Nassau, Bahamas (The)

ANNEX E

HYDROGRAPHIC SURVEY AND AIS COVERAGE

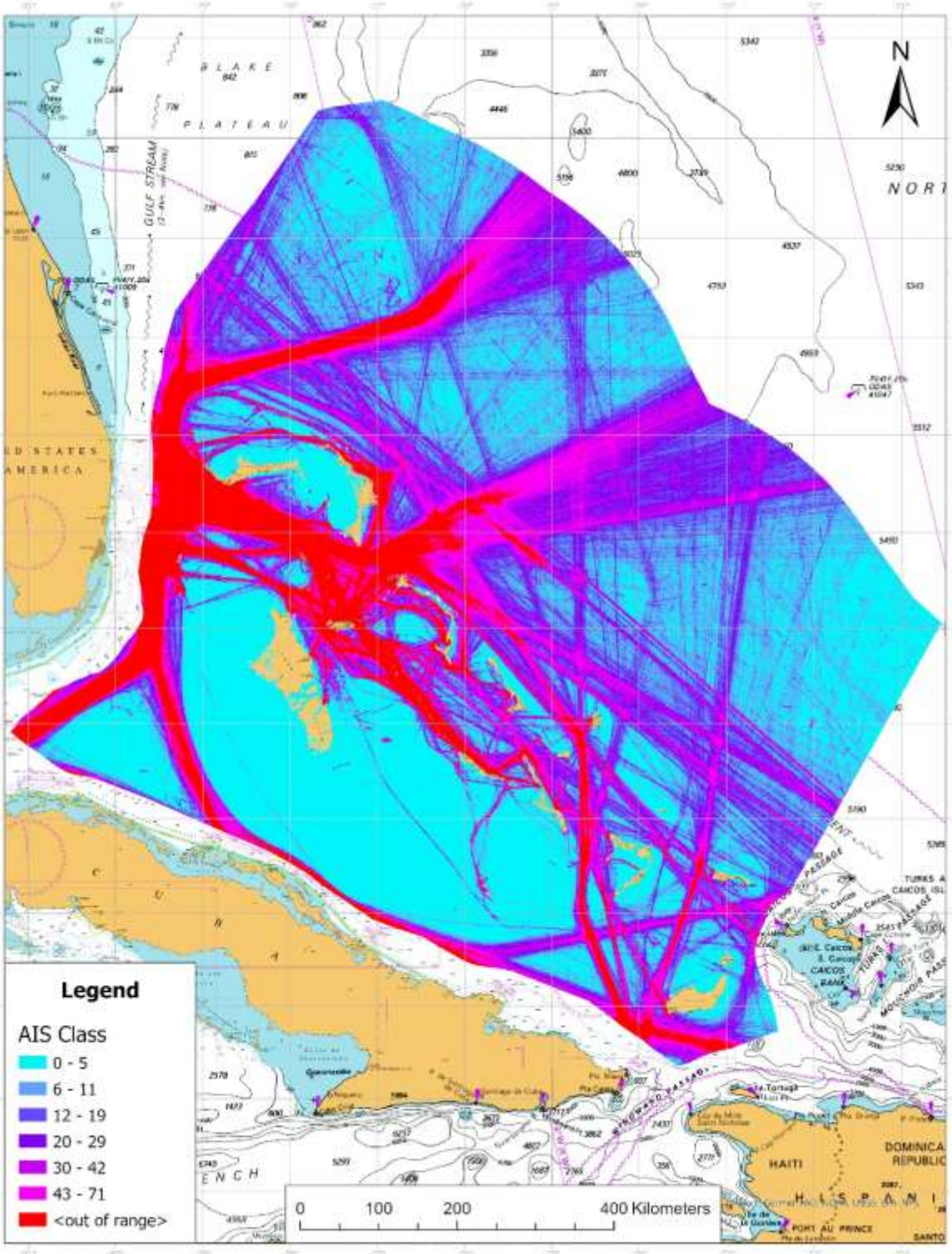
Bahamas - CATZOCs



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

Not for navigation.

Bahamas - AIS Count

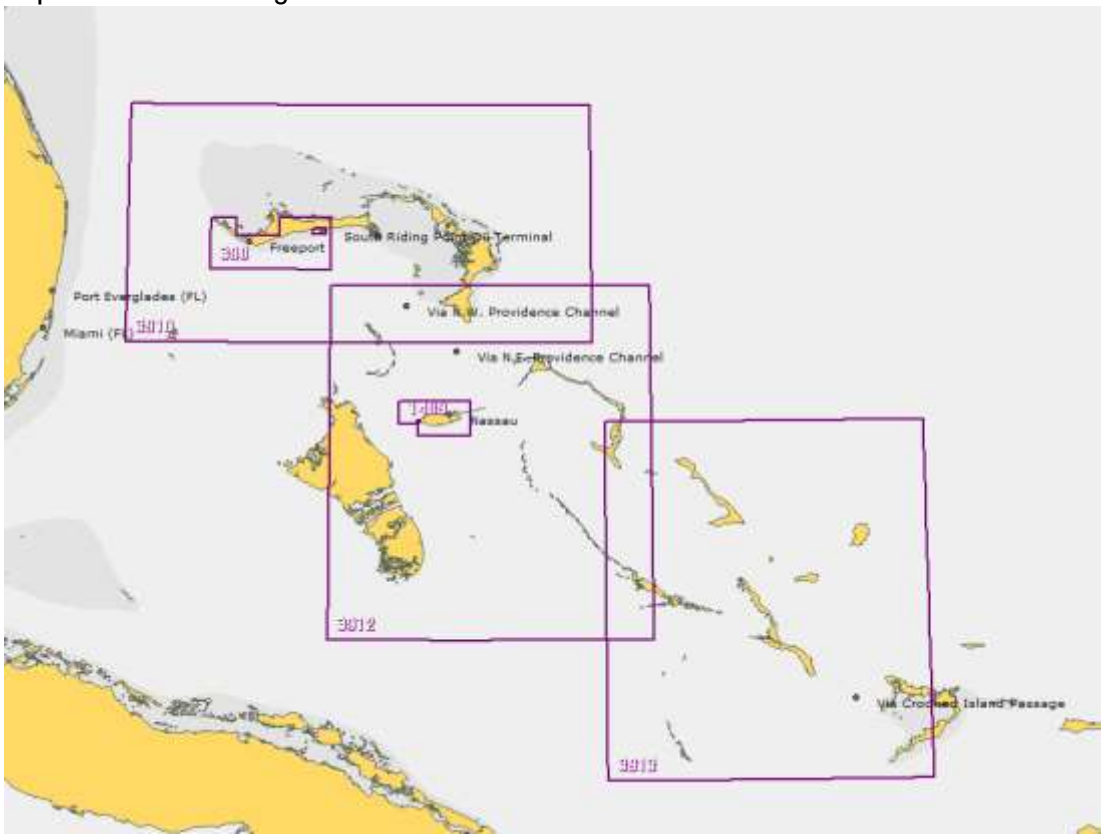


Limits and boundaries are for illustrative purposes. Not prejudicial to delimitation.

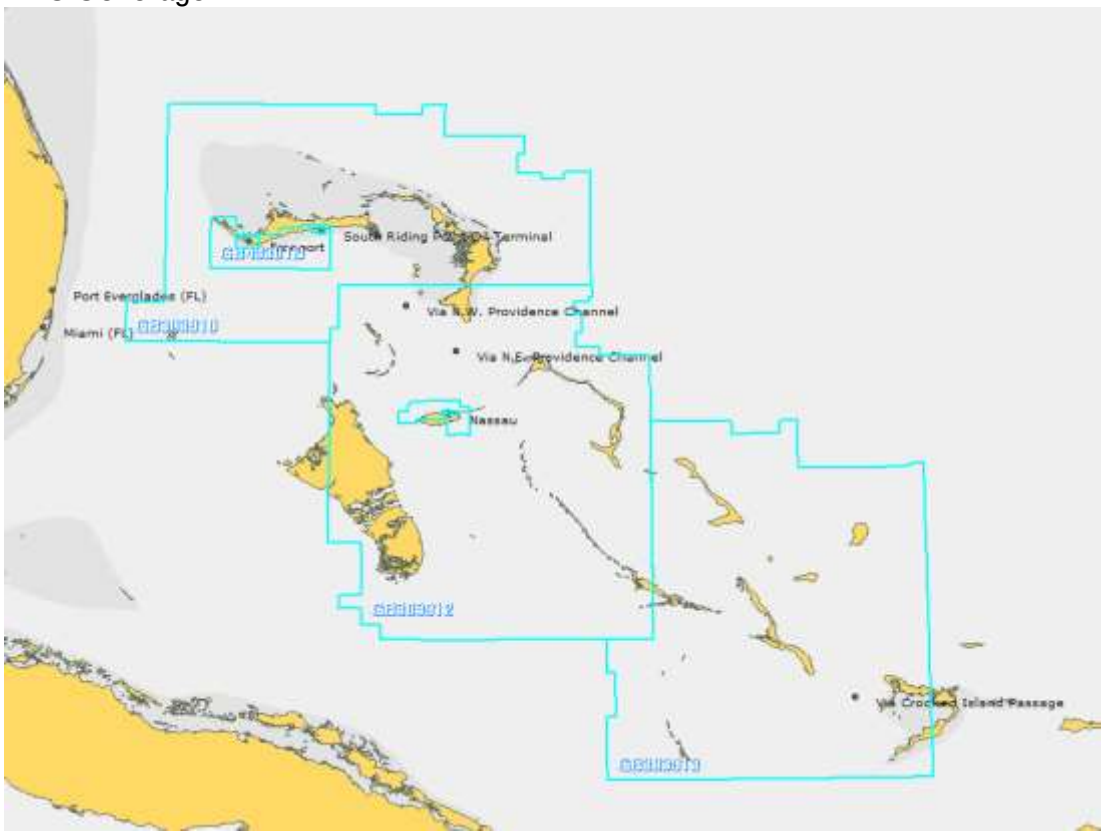
Not for navigation.

PAPER CHART AND ENC COVERAGE

Paper Chart Coverage



ENC Coverage



TRAFFIC SEPARATION SCHEMES (TSS) OVERVIEW

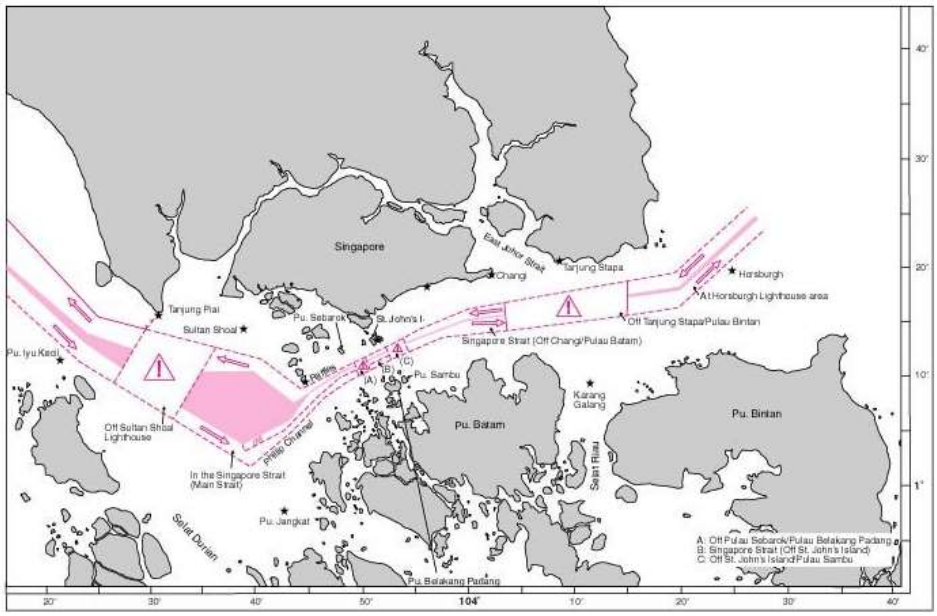
Maritime Traffic Separation Schemes

Traffic separation schemes (TSS) are areas in the sea where navigation of ships is highly regulated. They are designed to create lanes in the water with ships in a specific lane all traveling in the same direction. TSSs are typically created in locations with large numbers of ship movements and vessels traveling in different directions, where there might otherwise be a high risk of collisions.

The International Maritime Organization (IMO) is responsible for establishing TSSs and other ships' routeing systems. These systems have been established in most of the major congested shipping areas of the world, and the number of collisions and groundings has often been dramatically reduced.

The IMO's responsibility for ships' routing is enshrined in SOLAS Chapter V, which recognizes the Organization as the only international body for establishing such systems. The IMO's responsibilities are also determined under the United Nations Convention on Law of The Sea (UNCLOS), which designates IMO as "the competent international organization" in matters of navigational safety, safety of shipping traffic, and marine environmental protection.

Overview of a TSS example: -



Link to IMO Ships Routeing web page: -

Ships' routeing

Link to IMO Template for a future TSS: -

https://wwwcdn.imo.org/localresources/en/OurWork/Safety/Documents/Ships'%20routeing/Template-NCSR%209-X-TSS-Proposal.docx

Note: The Primary Charting Authority can advise, lead or help and support, for a future TSS recommendation.