

**20TH MEETING OF THE MESO AMERICAN – CARIBBEAN SEA
HYDROGRAPHIC COMMISSION (MACHC20)
Santo Domingo, Dominican Republic – 3-6 December 20189**

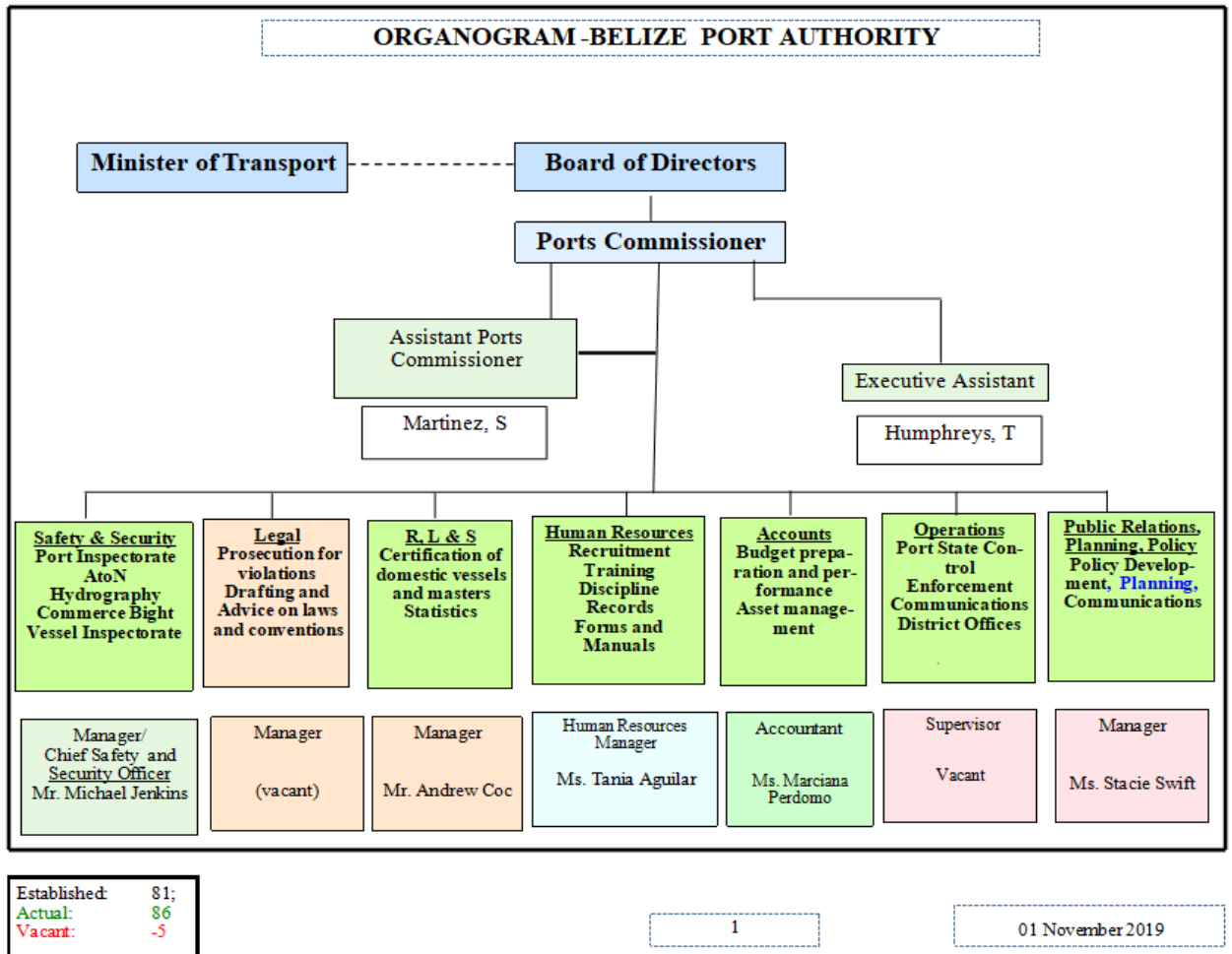
NATIONAL REPORTS FROM BELIZE, CENTRAL AMERICA TO THE MACHC20

References:

- A. IHO Resolution 2/1997 as amended (see doc. C3-04.2A, [Appendix to Annex A](#))
- B. IHO Circular Letter 20/2019, The IHO online form system for responses to Circular Letters and input to IHO Publications (P-5 and C-55): [link](#)
Online system for P-5 (Yearbook): [link](#)
Online system for C-55 (Status of Surveys and Charting Worldwide): [link](#)

Executive summary

- 1. Hydrographic Office / Service:
 - a) Name of the institution: *Belize Port Authority*



- b) Submitted by: Michael Jenkins, Chief Safety and Security Manager, Belize Port Authority.

2. Surveys:

- a) **Coverage of new surveys:** The Belize Port Authority through the CME program was able to conduct surveys in the northern area of Belize from Belize City to the Corozal, Mexico border including San Pedro and Caye Caulker.
- b) **New technologies and /or equipment:** BPA has not acquired any new survey equipment. However, the development of higher resolution mapping by combining LIDAR/Bathymetric surveys with photo imagery which can also produce a 3-D map has been supported by BPA.
- c) **New ships:** There have been no new ships for survey. BPA currently have six (06) vessels that are used for patrols and enforcement.
- d) **Crowdsourced and satellite-derived bathymetry - national policy:** BPA, other Government Ministries and NGOs have signed a MOU with the Ministry of Natural Resources in order to have all spatial data centrally stored within that Government Ministry. This will allow for better database management.
- e) **Challenges and achievements:** The Belize Port Authority is still not in the position to carry out its own hydrographic surveys. The positive outlook is that the country now has private companies that have the acceptable capabilities to provide accurate bathymetric information. These companies are always ready to assist BPA at a much reduced operational cost.

3. New Charts & Updates:

There have been new surveys conducted which has created a new ENC coverage area that include the Belize City Harbour and the Big Creek Port with the newly dredged channel and routing. Chart #1797 - Monkey River to Colson Point is the latest chart update as of 10 January, 2019.

4. New Publications & Updates:

There has not been the dissemination of any new publications or updates for 2019. As expected, the Belize Port Authority will have available a list of lights and aids to navigation for the territorial waters of Belize as a published document in the early part of 2020.

5. MSI:

BPA has a National Maritime Communication Center (NMCC) that is manned 24/7 and is responsible to receive and disseminate all maritime information to the general public and/or the National Coast Guard to initiate a SAR if required.

In 2019, fifteen (15) local notices to mariners were disseminated, two (02) of which were notices sent to NAVAREA IV reporting Bugles Caye Light and the #8 bouy in the Access Channel leading to Port of Belize Ltd.

The notice regarding the #8 bouy light was not priority for navigation since the Belizean pilots would be able to navigate without the notice being published. Again, due to this notice not being a priority, it was questioned if all aids to navigation require reporting when not functioning especially within a pilot compulsory area.

6. Capacity Building:

The Belize Port Authority is in need of increasing its capabilities for conducting hydrographic surveys. It is anticipated that government agencies would be more knowledgeable of the importance for hydrographic surveys to be able to gather new bathymetric data through high level meetings/trainings for internal capability. The Authority's Bilateral Agreement with UKHO has seen great accomplishment over the past few years. This agreement has been proven by the most recent visit and handing over of

data pertaining to the surveys conducted over the past two (02) years by Mr. Ian Davis in October of 2019.

The Belize Port Authority is still actualizing the fact that one day we will be totally capable of conducting, gathering, and processing hydrographic data. The country of Belize seeks much needed assistance from the IMO and the international community to procure new hydrographic equipment and training that goes along with operations of a multibeam system.

7. Oceanographic Activities:

Station	Location	Date of Installation	Data Downloaded
Port of Belize Limited	17.473544N -88.200506W	31-Oct-17	Satellite stored in Met Office Database
Carrie Bow Caye	16.80283N -88.082020W	14-Apr-16	Satellite stored in Met Office Database

Information for each station can be viewed at the links below:

<http://www.ioc-sealevelmonitoring.org/station.php?code=pobe> **Port of Belize**

<http://www.ioc-sealevelmonitoring.org/station.php?code=cabc> **Carrie Bow Caye**

8. Spatial Data Infrastructures:

The past two (02) years has seen significant increase in spatial data information for Belize's Maritime Areas. It is the first time that all survey data has been handed over to the country for storage and ultimate use for developmental purposes.

On 19 April, 2019, the Ministry of Natural Resources launched the Belize National Spatial Data Infrastructure Portal. This will allow for better management of data and decision making as it pertains to survey requirements.

The establishment of this portal has also formed a committee that has met several times since the portal has been established to discuss existing coverage areas and priority surveys that needs to be completed.

9. Innovation:

In 2019, Belize received another working visit from the C-WORKER, an autonomous scientific research vessel. This innovative vessel was able to capture oceanographic and hydrographic data which is now being analysed.

The Belize Port Authority is also looking at ways of increasing the resolution of surveys by combining both Lidar/bathymetric data with photo imagery and ultimately creating a 3-D image of sensitive sea areas.

10. Other Activities:

The Belize Port Authority has not participated in any IHO meetings for 2019. Presently, there is one officer in Suriname attending the Level 1 Aton Manager Course. This is definitely a great addition to the Hydrographic Department.

The Authority along with the Meteorological Department monitors two tide gauge stations which provide real time data.

In October, the Belize Port Authority teamed up with Belize Coastal Zone Management Authority Institute in order to permanently deploy an ocean acidification kit in the general area of the English Caye Channel and Lighthouse.

These tools are all to determine the changes in the maritime environment and to help with preparation for responses to disaster. In 2019, Belize has developed an oil spill contingency plan which recognizes that data gathered is important for modelling of ocean currents and wave action.

The Authority is also continuing to work closely with the National Environmental Appraisal Committee (NEAC) that reviews all developments and provide terms of reference as guidelines for projects to follow.

11. Conclusions:

Over the past two (02) years the country of Belize and Belize Port Authority have benefited greatly from the extensive hydrographic surveys conducted within our territorial waters. It has been the first time that such high resolution imagery has been captured for the northern waters of Belize. Most importantly, the handing over of all survey data, raw and processed, for the ultimate use by our country - Belize.

The main concern for us is not being able to conduct our own hydrographic surveys but with special agreements in place we are able to get order 1 surveys done depending on water depth.

The Belize Port Authority continues to make the changes necessary to become compliant to the mandates set out by the IHO and IMO. We will continue to put our resources into timely gathering and dissemination of nautical information which in turn will reduce navigational risk and increase economic development.

Input to the IHO Publication P-5 (*Yearbook*)

Country: Belize
 Organization: Belize Port Authority

(Please provide the information in English)

Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	Post: Chief Safety and Security Manager Name: Mr. Michael Jenkins Postal address: Mile 4, George Price Highway, P.O. Box 633, Belize City, Belize C.A. Tel: (501)-222-5667/(501)-631-8575 Fax: N/A Email: mjenkins@portauthority.bz
-Head of the Hydrographic Office (if different from the person indicated above) -Directeur du Service Hydrographique (si différent de la personne indiquée ci-dessus) -Director del Servicio Hidrográfico (si diferente de la persona indicada anteriormente)	Post: Ports Commissioner Name: Mrs. Merlene BaileyMartinez Postal address: Mile 4, George Price Highway, P.O. Box 633, Belize City, Belize C.A. Tel: (501)-222-5667/(501)-610-0656 Fax: N/A Email: bzportauth@btl.net
-Other point(s) of contact -Autre(s) point(s) de contact -Otros punto(s) de contacto	Ministry of Transport, Belize
-Web site -site web -sitio web	www.bzportauth@btl.net
Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	Tonnage: 983 registered ships total tonnage 2,952,306.51 Date: data up to August 2019
-National day -Fête nationale -Fiesta nacional	21 September
-Date of establishment and Relevant National Legislation -Date de mise en place et législation nationale pertinente -Fecha de constitución y legislación nacional	July 1980, Belize Port Authority Act Chp 233 revised edition 2003 Harbours and Merchant Shipping Act Chp 234 revised edition 2003

pertinente	
-Date first joined IHO -Date d'adhésion à l'OHI -Fecha de adhesión a la OHI	Associate member 2007
-Date ratification Convention -Date de ratification de la Convention -Fecha de ratificación de la Convención	
-Remarks on membership -Remarques sur l'adhésion -Comentarios sobre la adhesión	The Belize Port Authority is still seeking the financing on an annual basis for the full membership status.
Agency information/ Information sur l'agence/ Información sobre la agencia	
-Top level parent organisation -Organisme mère -Organización asociada de nivel superior	Ministry of Transport
-Principal functions of the organisation or the department -Attribution principales de l'organisme ou du département -Principales funciones de la Organización o departamento	1. MSDI 2. Hydrographic survey 3. Chart updates 4. Maintenance to aids to navigation 5. Domestic vessel safety inspection for Registration and License 6. Port State Control 7. ISPS compliance
-Annual operating budget -Budget annuel -presupuesto anual	1.5 million USD for operation of the Authority
-Total number of staff employed -Effectifs totaux -Número total de personal empleado	79 employees
-Number of INT charts published -Nombres de cartes INT publiées -Número de cartas INT publicadas	1
-Total number of paper charts published-Nombre total de cartes papier	1

publiées-Número total de cartas de papel publicadas				
-Number of ENC cells published -Nombres de cellules ENC publiées -Número de células ENC publicadas	9			
-Number of Other charts -Nombre d'Autres cartes -Número de Otras cartas	5			
-Type of publications produced -Type d'ouvrages produits -Tipo de publicaciones producidas	The Authority's Safety and Security Department is compiling a list of aids to navigation and landmarks for the territorial waters of Belize			
-Detail of surveying vessels/ aircraft -Détail des bâtiments hydrographiques / aéronefs -Detalle de los buques hidrográficos / aeronaves	-Name -Nom -Nombre	-Displacement -Déplacement -Desplazamiento	-Date Launched -Date de mise en service -Fecha de botado	-Number of crew -Nombre de l'équipage -Tripulación
	none			
-Other information of interest -Autres informations utiles -Otra información de interés	A local company, namely, Coastal Science Alliance is hired to make urgent bathymetric checks. The UKHO, CME program has been responsible for all our new surveys and chart updates.			

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)

Country: Belize C.A.

(Please provide the information in English)

C-55 Summary for:				Comments on Charts: Five (05) areas have been recently surveyed and charts have been published for all except for the most recent survey covering the Northern territorial waters of Belize.
Country:	Belize (B)			
Country Iso Code:	BZ-BZE			
Country SubCode:				
INT Region:	B			
Country/Depend:	C			
Last updated:	18/10/2018			
Provided by:	UK			
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys: All areas surveyed were done inside the Barrier Reef system and were done to modern standards and technology. The CME program has just completed surveys covering a large area of our territorial seas. The status of surveys now needs updateing showing how much is left as unsurveyed or no survey.
INT	100	100	100	
RNC	100	100	100	
ENC	100	100	100	
Status of Paper Charts				
Paper charts with depths in meters (%)			100	
Paper charts referenced to a satellite datum (%)			100	
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)	
0-200m	11	10.2	79.8	
> 200m		0.2	99.8	

MSI	Y/N	Comments on MSI:
Local warning	y	All maritime safety information is read off as a Notice to Mariners at the BPA's Maritime communication center VHF radio channel 16. Priority aids to navigation once not working is immediately reported to NAVAREA IV
Coastal warning	y	BPA responsibility
Nav warning	y	BPA responsibility
Port warning	y	BPA responsibility
GMDSS	Y/N	Comments on GMDSS:
Master Plan		
Area A1	y	The Authority still has issues with full coverage in A1. This is due to the dynamic shore line and the numerous

		offshore islands which creates a unique baseline.
Area A2	n	
Area A3	n	
NAVTEX	y	The Belize National Coast Guard provides this coverage
SafetyNet	y	The Belize National Coast Guard provides this coverage

National MSI Self-Assessment

Country: Belize
 Organization: Belize Port Authority

(Please provide the information in English)

1. Maritime Area

The maritime area of Belize includes its internal waters which limit is the Barrier Reef system. The territorial seas and the exclusive economic zone as described in the Belize Maritime Areas act 1992.

2. Operational Points of Contact for the National Coordinator

INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
Belize Port Authority	(501)-222-5667		bzportauth@btl.net

3. GMDSS Master Plan

Operations as it pertain to SAR or casualty at sea is done through the COSPAS SARTSAT system. At the last update the frequency was changed from 121MHz to 406MHz

Equipment Type for Ports and Local Area	Software Version	Date of Up-date
Vertex VXR-9000VC repeater		March 2019
174 MHz duplexer		March 2019
Cospas SARTSAT ELT	-----	-----
Navtex	-----	-----

There were two (02) warnings sent to NAV Area IV in 2019. June 21st Bugles Caye lighthouse on the Turneff Atoll and the #8 floating buoy in the Access channel leading to the King's Pier in Belize City.

Year Y-2		Year Y-1		Year Y	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
01	300Mins	xx	xx.x Mins	xx	xx.x Mins

4. NAVTEX Coverage:

Belize National Coast Guard located right next to the Belize Port Authority headquarters is responsible for receiving and sending messages using the NAVTEX system.

5. Contingency Planning:

The Authority conducts an annual assessment of its hurricane plan and disseminate information to mariners as to location and approved safe havens. All private and Governmental Agencies operate their contingency plan based on the National Emergency Management Organization (NEMO).

6. Capacity Building:

Presently there is one (01) officer attending the level 1 Aton Manager Course in Suriname. This will increase our capacity in this area to two (02) personnel with this specific training.

The Belize Port Authority in 2019 did not participate in any other capacity building training as it relates to Maritime Safety Information.

7. National Maritime Website:

www.portauthority.bz

8. Recommendations:

We require continuous training in MSI deliverables and training in maritime risk assessment.

9. Summary:

The Authority has still not been able to get 100% area coverage and is presently conducting an assessment of the system to see how best the coverage area for VHF radios can be optimized. The loss of communication in certain areas do make it challenging for the AtoN team at time when rectifying aids to navigation that have been reported as malfunctioning. Therefore, with this in mind, a network system has been established whereby other Governmental Agencies and NGO's are responsible to inform the Belize Port Authority of aids not Navigation not working or out of place.