



BARBADOS NATIONAL REPORT

TO THE

14TH MEETING OF THE

MESO-AMERICA AND CARIBBEAN
HYDROGRAPHIC COMMISSION

PHILLIPSBURG ,ST. MAARTENS

9TH – 13TH DECEMBER 2013

HYDROGRAPHIC OFFICE:

• Establishment

Barbados is an associated member of Meso-America and Caribbean Sea Hydrographic Commission (MACHC). A National Hydrographic Committee (NHC) was established 2008, constituted of members from key governmental agencies, including the International Transport Department, Ministry of Foreign Affairs and Foreign Trade, Coastal Zone Management Unit (CZMU), Environmental Protection Department (EPD), Lands and Surveys Department, Town and Country Planning Office (TCPO), Fisheries Department, Telecommunication, Barbados Coast Guard (BCG) of the Barbados Defence Force, Barbados Port Inc.(BPI) and the Shipping Association of Barbados (SAB)

Terms of reference for the National Hydrographic Committee (NHC) were developed based on the framework provided by the International Hydrographic Bureau (IHB).

The CZMU has over the years informally undertaken the responsibility for hydrographic surveying as part of the regulatory planning protocol. However the establishment of a dedicated hydrographic office or having that mandate assigned officially to a department would require careful planning in the longer term and proposals made to our political directorate for the acceptance of such recommendations. CZMU will remain that focal point until that choice is made.

2. SURVEYS:

Coverage of new surveys

No large scale surveys were conducted in Barbados over the past year. However, several small surveys carried out included:

- a) Routine investigative surveys in the main boating channel in the marina at Port St. Charles;
- b) US Navy surveyed Bridgetown Harbour, Carlisle Bay and the surrounding area north of the Harbour (See Fleet Survey Report);
- c) Surveys for the main boating channel for the Port Ferdinand Marina currently under construction; and
- d) Baseline surveys for the BPI "Sugar Point Cruise Ship Pier" development

The Coastal Zone Management Unit has schedule several nearshore hydrographic surveys at various locations predominately along the south and west coast of Barbados. The purpose will be to gather data to aid in the monitoring of existing offshore coastal engineering structures as well as to collect baseline data fronting waterfront improvement projects that have been or are currently being implemented by the Unit.

In addition, in the early part of 2014, CZMU through a consulting firm will be conducting comprehensive LIDAR surveys over the entire island of Barbados. The LIDAR mapping will be carried out in four (4) zones:

- (i) The topographic mapping for a 2 kilometer swath inland from the shoreline around the entire island of Barbados, would be carried out to a 1x1 meter grid resolution;
- (ii) for the remainder of the island, the topographic mapping should be carried out to a 5x5 meter grid resolution;
- (iii) from the shoreline out to approximately 100 meters offshore, the bathymetric mapping should be carried out to a 2x2 meter grid resolution; and
- (iv) Out to the 40 meter water depth contour, it would be carried out to a 5x5 meter grid resolution.

The intensity of the grid resolution is highly cost dependent and will be refined at the time of negotiation

There have been recent inconsistencies in the manner to which the Barbados Marine Live Firing Area is been reported. To that end it is anticipated that the BPI would approach UK Hydrographic Office (UKHO) for assistance in charting the Barbados Coast Guard Live Firing Areas consistent with the required international standards. It is further anticipated that this can take place in the first quarter of 2014.

New technologies and /or equipment

The CZMU has improved its hydrographic survey capacity by continuing to benefit from annual updates of the latest edition of Hypack Software Suite maintained by way of an annual service contract.

New ships

Currently Barbados has no vessels dedicated to carrying out hydrographic survey work. Given the potential for an increase in hydrographic activities around Barbados, it is necessary that serious consideration be given to the acquisition of a multipurpose research vessel that is stable enough for nearshore operations as well as open water conditions on the West and East coasts.

3. CHARTS AND PUBLICATIONS:

a. Charts

Charts for Barbados are produced by the UKHO. The BPI provides new data as it becomes available for chart updating. Paper charts for Barbados were recently updated. Chart Numbers 502, 2484 and INT1043

b. Publications

New publications

- No update on new publications is available at this time.

Updated publications

- Information for updating of hydrographic publications is routinely dispatched to the UKHO.

4. MSI

Existing infrastructure for transmission

Barbados Port Inc. (BPI) issue Notices to Mariners locally and via NAVAREA 4 to the WNNWS for broadcast. The BCG broadcast marine weather reports via marine VHF channel 14 and 16 daily at 0700, 1300 and sunset.

New infrastructure in accordance with GMDSS Master Plan

Barbados is now Global Maritime Distress and Safety System (GMDSS) Sea Area A1 and A2 Compliant in accordance with the Policy on Global Maritime Distress and Safety System (GMDSS) as set out in the master plan for Barbados. The Government of Barbados has recently established a Shore-based facility at the HMBS PELICAN Barbados Coast Guard Base 8PO/ 8PZ at Spring Garden, St. Michael, with recent upgrades to become fully GMDSS compliant for Sea Area A1 and A2. The Barbados Coast Guard has been mandated to operate this Coast Station and is responsible for all the SAR, MSI, and GMDSS functions.

Information on the Barbados Master Plan and policy with regards to the GMDSS can be found at the following website;

www.telecoms.gov.bb/Documents/Policies/PDF/Gmdsspolicyaugust.pdf

5. CAPACITY BUILDING

Offer of and/or demand for Capacity Building

CZMU continues to experience some degree of difficulty in programming hydrographic survey activities due to the lack of a dedicated survey vessel. This remain a challenge but the hope is that an upsurge in survey activity will be bought to bare with the coming onstream of the Coastal Risk Assessment Management Project (CRMP) in 2014 being executed by the CZMU.

Training received, needed, offered

No local or international training in the field of hydrography were attended by committee members during the reporting period. However some members of the NHC benefitted from a local Oil Spill Training Exercise (Tare1) held at the Barbados Port Inc. The objectives of the exercise were to (i) test the local emergency response plan and resources, (ii) to practice the interface between BPI, Esso personnel and the various responsible Government departments that are involved in the oil spill response procedures.

During the upcoming year, Barbados will appreciate offers to attend courses in the area of cartography and Electronic Charting (ENC).

Status of national, bilateral, multilateral or regional development projects with hydrographic component. (In progress, planned, under evaluation or study)

The Town and Country Development Planning Office (TCDPO) have responsibility for granting approvals to all forms of physical development projects in Barbados both onshore and in the marine environment. Currently TCDPO is processing applications to carryout development within the Bridgetown Port and its environs that have some hydrographic requirements to them. These are as follows:

Application 1631/09/2012A (Barbados Port Inc.) - Construction of cruise ship piers and terminal buildings on reclaimed land at Princess Alice Highway.

Application 0012/01/2013A (Barbados Port Inc.) - Relocation of a sewage outfall at Princess Alice Highway

Application 0446/03/2012(Barbados Tourism Investment) - Construction of Marina at Pier Head, Bridgetown.

These projects are at very advanced stage in the planning process and may very well come on stream sometime in 2014/15.

6. C-55 LATEST UPDATE

Barbados provides the information to UKHO for the updating of the C-55 database on a needs basis.

These data are current.

7. OCEANOGRAPHIC ACTIVITIES

GEBCO/IBC's Activities - Nil

Tide Gauge Installation

- The CZMU installed a state of the art Sea Level Rise Monitoring Station at Port St. Charles Marina located along the western tip of the island in St. Peter, one year ago. Plans are in place to make the data available online in real-time. In addition, sites are already identified to establish a tide gauge network to include our south, east and north coast. However, it is proposed that this will be implemented on a phased basis.

Current Meters

- At present CZMU has a network of eight (8) S4DW wave recorder/current meters deployed along our south-east, south, and west coast of Barbados. Data are available on request directly from the CZMU.
- Two additional NORTEK AWAC Acoustic Doppler Current Profilers were purchased within the reporting period, and will most likely be deployed on the north and south-east coast in the coming months.

Reef Temperature Monitoring

- Currently CZMU monitors water temperature at four (4) bank reefs and four (4) fringe reefs along the south and west coast of Barbados, using HOBO H8 Temperature Loggers.
- The CZMU continues to monitor the water quality over the bank and fringe reefs using the HYDROLAB Water Quality Multipurpose Probe on a quarterly basis.

8. CONCLUSIONS

The inter-departmental awareness of activities relating to hydrographic work, MSI, other maritime and coastal related projects in Barbados are now being facilitated much better with the oversight by the NHC which conducts bi-annual meetings with the key committee members.

The need for a dedicated vessel so that critical nearshore survey work can be carried out more efficiently will continue to be articulated by the CZMU.

In keeping with international standards the marine area designated for live firing will be charted with the assistance of the UKHO and it is anticipated that this will take place in the first quarter of 2014. This will ensure that notices been disseminated to Mariners are consistent both in terms of location but also with depiction.

It was also touted by committee members that a Hydrographic Desk be established within the International Transport Department under the Ministry of Tourism and International Transport to oversee the day to day operations of hydrographic related complaints and other planning matters that may potentially impact the development of hydrography in Barbados. This idea would have to have legitimate buy-in from our political directorate in order to be realized.

In closing, the BPI as part of their 10 years Master Plan includes works within the Deep Water Harbour and Shallow Draught areas, and the Sugar Point Cruise Ship pier development. Also identified is a Lighthouse redevelopment initiative where the BPI is proposing the restoration of all lighthouses and associated surrounding land on the island. Once restored it is anticipated that these will be used as major tourist attraction sites given the significant and historic nature of each of the four lighthouses on the island.