21st MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE
IHO-CBSC21
Tokyo, Japan, 7-9 June 2023

Paper for the Consideration by CBSC21

USCHC Report

Submitted by:	USCHC CB Coordinator
Executive Summary:	This document provides a summary report of the CB activities at USCHC.
Related Documents:	
Related Projects:	

1. Introduction / Background

USCHC - Canada and United States of America are full members.

The United States and Canada are active participants in the IHO Capacity Building Sub-Committee (CBSC). The United States directly supports the IHO Maritime Safety Information (MSI) training course as well as provides support to nations through on site and remote guidance and advice as they grow their hydrographic capacity.

2. Assessment of Capacity Building Phase Stage of Coastal States

Both Canada and USA are considered to be at Phase 3.

3. Activities completed since CBSC20

-The Empowering Women in Hydrography Project, led by Canadian Hydrographic Service and Fisheries and Oceans Canada, continues with the goal of raising awareness about career opportunities in hydrography, and to increase the number of women in leadership positions. NOAA is hosting an At-Sea Experience again in 2023. The EWH website also hosts an "Initiatives" and a "Portraits" page, both feature USCHC. USCHC would like to encourage all RHCs to develop and sponsor Project Activities or contribute funding to Project Activities sponsored by others. https://iho.int/en/basic-cbsc-ewh

-The Canadian Hydrographic Service (CHS) is advancing work on a new "Community Hydrography" program funded by the renewed Ocean Protection Plan (OPP) initiative. The program aims to engage directly with Indigenous and other coastal communities to enable projects which will see these communities collect bathymetric data, process and manage this data, and to develop specific tools and products such as community maps. A call for proposals was completed in early 2023, with 18 proposals received. To date 3 projects have been funded. There will be another call of interest in 2024, meanwhile CHS will work directly with communities as they deliver their community based projects. CHS is also continuing collaboration with the Canadian Coast Guard and local Arctic communities to install, test, and operate low cost bathymetric (depth) data collection systems onboard vessels operated

by Inuit Peoples. The systems are configured to collect data whenever the vessels are operated, tracking the position and depth while the vessel is transiting community waters that has provided a basis to establish a community hydrography program led by the Canadian Hydrographic Service. CHS is developing basic training packages that can be delivered remotely to inform the use of the systems along with data extraction and transmission processes. CHS hopes to expand this project to 18 Arctic communities equipped with Community Rescue Boats. The resulting data will inform safer marine transportation in the near-shore environment, contribute to knowledge of the marine ecosystems, provide the option for communities to contribute to the Seabed 2030 initiative and provide data to CHS. Communities have also created bathymetric overlays for use with charting apps as many of these locations have very little, or no direct measurements of the depth of the seafloor as they are outside of the proposed low impacting shipping corridors that commercial marine traffic transit. CHS shares their annual Arctic survey plan with the Territorial Governments in the Region to inform communities and receive feedback to identify areas of community interest. This program will continue through 2023.

4. Activities planned for 2023

The activities in Section 3 will continue through 2023.

Hydrographic Training opportunities are available at various institutions in the United States and Canada.

Category A certified hydrographic programs in Canada:
-Geodesy and Geomatics Engineering – Hydrographic Surveying Option, University of New Brunswick
https://www.unb.ca/fredericton/engineering/depts/gge/index.html

Category B certified hydrographic programs in Canada:
-Fisheries and Marine Institute of Memorial University of Newfoundland (MI)
https://www.mi.mun.ca/programsandcourses/programs/oceanmapping/

-Research and Development Center for Coastal and Ocean Mapping (CIDCO). This program combines 9 months of e-learning with 7 weeks of field work in Quebec and begins each year in October. https://www.cidco.ca/en/education-and-training/hydrographic-survey-category-b-course

Schemes:
-International Hydrographer Certification Scheme. System for certifying and recognizing the competency of individuals as hydrographic surveyors in Canada, Association of Canada Lands Surveyors (ACLS) https://www.acls-aatc.ca/offshore-expertise/canadian-hydrographer-certification-program/

Category A certified hydrographic programs in the United States:
-The University of Southern Mississippi (USM). This program qualifies for Security Cooperation assistance.
https://www.usm.edu/marine/hydrographic-science

-The University of New Hampshire (UNH)
https://marine.unh.edu/program/center-coastal-and-ocean-mappingjoint-hydrographic-center

Category B certified hydrographic programs in the United States:
-NGA Category-B Competence Training for Nautical Cartography. NGA continues to work with IIC Technologies to provide training to analysts with a comprehensive 20-week instructor-led course and a six-week final project. Since 2020, the course has been completed virtually in multi-week sessions throughout the course of a year.

-International Hydrographic Management and Engineering Program (IHMEP). This is a six-month program beginning annually in February. The program is offered via Naval Meteorology and Oceanography Command and the Information Warfare Training Group in Gulfport, Mississippi. This program qualifies for Security Cooperation assistance.

Capt. Andrew Armstrong, NOAA (ret.), NOAA co-director of the Joint Hydrographic Center at UNH, is a member of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. As a member of the board, Capt. Armstrong is available to advise institutions on establishing hydrographic training curricula and preparing submissions to the International Board for Category A or Category B recognition. (andy.armstrong@noaa.gov).

5. Challenges faced in the region

None Noted.

6. Achievements and lessons learned

None Noted.

7. Conclusions:

USCHC members continue to support various Capacity Building projects worldwide and are increasing opportunities for training aligned with IHO objectives and goals. USCHC is actively involved with both the e-Learning Centre and the Empowering Women in Hydrography projects.

8. Actions required of CBSC:

The CBSC is invited to

a. Note the report
b. Sponsor and/or fund initiatives in support of the Empowering Women in Hydrography Project
c. Take any action deemed appropriate.

Commander Jennifer Landry, U.S. Navy
USCHC CB Coordinator