



**17th MEETING OF THE IHO CAPACITY BUILDING SUB-COMMITTEE
IHO-CBSC17
Genoa, Italy, 29-31 May 2019**

REPORT

1. Opening Remarks, Introductions and Administrative Arrangements

Docs: CBSC17-01A List of Documents (Chair)
CBSC17-01B List of Participants (Chair)
CBSC17-01C CBSC Membership (Chair)
CBSC17-01D ToR and RoP (Chair)
CBSC17-01E ToR for the CB Coordinators (Chair)

The 17th meeting of the IHO Capacity Building Sub-Committee (CBSC) took place in Genoa, Italy, hosted by the Hydrographic Institute of the Italian Navy (IIM) from 29 to 31 May 2019. The meeting was chaired by Mr Thomas Dehling, Chair of the CBSC who opened the meeting and invited the Italian National Hydrographer, RAdm Luigi Sinapi, to express his welcome speech. He welcomed participants to Genoa (*La Superba*) and highlighted the importance of Capacity Building (CB) to contribute to the knowledge in the field of Hydrography, leading to the Blue Growth of a riparian State. Maritime domain stakeholders show an increasing demand for hydrographic data to keep up with the evolution of requirements for navigation, for the management of marine environment and for all other activities connected to the sea.

Director Mustafa Iptes expressed the gratitude of the IHO Secretariat for the hosts and their efforts to organize such a meeting. He also stressed the importance of the CBSC as a strategic objective of the IHO and wished the Chair, Members, CB Coordinators and Observers a very fruitful meeting.

The Chair invited participants to introduce themselves due to the presence of many that are attending a CBSC meeting for the first time. He also expressed the important contribution of former CBSC Member Mr Jeff Bryant (UK) whose work was recognized with the UKHO's Alexander Dalrymple Award in a parallel event of the 2nd Meeting of the IHO Council.

The hosts provided logistic guidance and information about the meeting and the visits to be conducted to the *Lanterna*, Genoa's lighthouse and emblem, and to the IIM.

2. Approval of Agenda

Doc: CBSC17-02 Agenda and Timetable (Chair)

Participants were invited to comment the agenda and timetable in case updates were necessary. The agenda was subsequently adopted.

3. Matters arising from Minutes of CBSC16 Meeting

Docs: CBSC17-03A Minutes of CBSC16 (Chair)
CBSC17-03B Status of Action List from CBSC16 (Secretary)

Chair invited participants to comment the CBSC16 Minutes and to provide updates to the List of Actions from CBSC16. The Minutes were approved and the List of Actions was updated.

Decision 1: to approve the Minutes and list of actions from CBSC16.

4. Reports by the Chair and the IHO Secretariat

Docs: CBSC17-04A Report by the Chair (Chair)
CBSC17-04B Report by the IHO Secretariat (Secretary)

Chair highlighted the effectiveness of the revised IHO CB Strategy in regulating and promoting the progress of the CB work. The revision process of the of IHO Strategic Plan will probably have an impact in the CB Strategy. He noted that CB played an important part at 2nd Council meeting in London in 2018 and that the work of the CBSC is appreciated and seen as one of the major strategic endeavors of the IHO.

The overall status of the CB Fund was presented by the Chair, indicating that funds have been growing but are less than needed. This deficit in funds requires strict application of the CB Strategy and CB regulations. For the execution of the 2019 CBWP there is roughly 800.000 €, including the contributions from NF and ROK. It is also important to attract donor organizations and comprehensive projects are necessary.

Chair noted with appreciation the contribution of ROK in cooperation with the IHO Secretariat to the development of the CB Management tool, important to efficiently manage the CBWP. He expressed gratitude to ROK for the generous contribution to 543,500 € (398,982 € for the 2019 CBWP). The PMB9 meeting decided the allocation of funds. The generous contribution from the Nippon Foundation of Japan was highlighted as a major factor in the success of CB since 2009.

The annual joint CB meeting of IHO, IMO, IOC, WMO, IALA, FIG and IAEA and IMPA was reported, held at the International Maritime Pilot Association (IMPA) headquarters in London in November 2018. Important news was that the cooperation with the IMO has improved and a joint project has been drafted in order to seek funding. He also highlighted the work of the Procedure 9 drafting group on Technical Visits and of the Review of C-55 Project Team.

Report from the IHO Secretariat was provided by the IHO Director. He reported on new IHO Member States Bulgaria and Guyana and on potential applications from Albania, Solomon Is. and Lebanon. He also noted that Democratic Republic of Congo, Syria and Serbia are suspended.

IHO Director reported on the outcomes of the IHO Assembly and Council, the actions on publicity and outreach, the celebration of the World Hydrography Day 2019 (Hydrographic information driving marine knowledge), the International Hydrographic Review and the progress made in the Secretariat's infrastructure.

5. Regional Assessment of CB Activities

5.1 Reports of the Regional Hydrographic Commissions (RHC)

<i>Docs: CBSC17-05.1A</i>	<i>NSHC Report</i>
<i>CBSC17-05.1B</i>	<i>MBSHC Report</i>
<i>CBSC17-05.1C</i>	<i>BSHC Report</i>
<i>CBSC17-05.1D</i>	<i>USCHC Report</i>
<i>CBSC17-05.1E</i>	<i>EAHC Report</i>
<i>CBSC17-05.1F</i>	<i>EAtHC Report</i>
<i>CBSC17-05.1G</i>	<i>SEPRHC Report</i>
<i>CBSC17-05.1H</i>	<i>SWPHC Report</i>
<i>CBSC17-05.1I</i>	<i>MACHC Report</i>
<i>CBSC17-05.1J</i>	<i>SAIHC Report</i>
<i>CBSC17-05.1K</i>	<i>NIOHC Report</i>
<i>CBSC17-05.1L</i>	<i>RSAHC Report</i>
<i>CBSC17-05.1M</i>	<i>SWAtHC Report</i>

Chair invited RHC Members and CB Coordinators to provide an update on the status of surveys, charts and MSI (C-55), report on visits (high-level, technical and follow-up) and report on courses, workshops and seminars.

a) CBSC17-05.1B NSHC Report

The Representative gave an oral report explaining on how funds are given to support countries in need by national donor agencies, and the importance of these funds.

b) CBSC17-05.1B MBSHC Report

The Representative reported the CB activities completed in 2018 (technical visit to Georgia, Workshop on MSI, Port and Shallow Water Survey Course). The plans for 2019, with a follow up visit to Lebanon, the ENC Validation and workshop on Law of the Sea. He highlighted the MBSHC Region countries benefit significantly from CB Activities, and lately, focus and requirements have drifted to long courses, mostly Category "B" hydrography and Category "B" cartography. The remaining short course requests, on the other hand, have switched to Phases 2 and 3. He highlighted the cooperation between the IHO Member States and non-Member States that exists in the region and is intended to continue.

Norway provided update on the high-level visit to Albania that was canceled due to the lack of commitment of the government for the visit. Albania that is now fully equipped for surveying and producing their ENCs. Concerns exist on the sustainability as the leadership changes and on the lack of awareness on the importance of hydrography for the economic infrastructure. Spain informed the meeting on the support offered in the region for countries in need with scholarships for Hydrographic Courses at Category "A" and "B" levels.

Action 1: MBSHC CB Coordinator to amend the report (doc. CBSC17-05.1B) in coordination with and taking into consideration the contributions from France, Italy, Norway and Spain (deadline: June 2019).

c) CBSC17-05.1C BSHC Report

The Representative gave an oral report on how funds are provided in the region and explained that Member States may apply to trainings under the CBWP for activities with a general call via circular letter.

d) CBSC17-05.1D USCHC Report

The report was introduced by the Representative who highlighted the Chart Adequacy Workshops organized by the USA providing training for professional cartographers and hydrographers on all the techniques for assessing nautical chart using different data systems. USCHC Members continue to support various CB projects worldwide and are seeking to increase opportunities for trainings.

e) CBSC17-05.1E EAHC Report

The Representative introduced the report, presenting the roles of the Training, Research and Development Center (TRDC) and its Board of Directors (BoD) to systematically and sustainably build training courses in the East Asia region, to review and provide feedback of CB activities. He reported the CB activities completed in 2018 (Use of GNSS for Tide Correction for Survey in Indonesia, Cartographic Production Workshop in China and the Hydrographic South East Asia - Hydro SEA Conference and Exhibition in Malaysia).

The plans for 2019 include an MSI Course combined with an MSI Management Workshop in Indonesia, a follow up high-level visit to Cambodia, a risk assessment for hydrographic surveys and charting management for the safety of navigation in Brunei Darussalam.

f) CBSC17-05.1F EAHC Report

The Representative introduced the report and presented the CB activities completed in 2018, and highlighted the support provided by the CB funds, allowed a broad attendance at the Hydrographic

Awareness Seminar that preceded the 15th EAtHC Conference. African countries would have been much underrepresented at the EAtHC conference without the support to the seminar. The organization of a seminar/workshop before the plenary conference is considered a key in the region where most coastal States are not Members of the IHO.

He noted that hydrographic capacity development in the EAtHC region remains a real challenge, with most of the Central and Western African (WCA) coastal States lacking hydrographic infrastructure and relying on other States to provide hydrographic services and fulfill their SOLAS obligations.

CB support has helped Nigeria and Morocco to considerably develop their hydrographic capacities. Both countries can play a key role by sharing their experience and providing training and education opportunities to other coastal States in the sub-region. The two States and Cameroon are the three IHO Member States among the 18 coastal States in the WCA sub-region.

Secretary stressed that Nigeria is a success story as the CB efforts since 2003 have proved effective enabling the country to produce charts, implement its MSI Portal and the development of a Category "B" hydrographic course is ongoing. Nigeria requested to be invited to participate in French courses and activities as country has French speaking personnel.

Chair informed that he will be part of the German delegation that will visit Gabon later in 2019 as hydrographic is part of the cooperation agreement between both countries.

g) CBSC17-05.1G SEPRHC Report

The Representative introduced the report and presented the main CB activities completed since the last meeting, including the non-IHO activities, and the plans for the 2020 period. She also reported the privilege to have Panama as Observer State, considering the increase of maritime activities.

She reported the approach to improve the relationship with other stakeholders looking into synergies and potential financial sources, given the need to promote the hydrographic development in the region. She also noted that CB activities sponsored by IHO and organized by the SEPRHC are fundamentals for the maritime development of the region.

h) CBSC17-05.1H SWPHC Report

The Representative of the region introduced the report and explained the challenges with Pacific Island Countries and Territories (PICTs) who are geographically remote and fragmented. They face a major development challenge in achieving safe, reliable, and efficient connectivity within the region and with the rest of the world. The maritime sector plays a key role in supporting economic growth and development in PICTs by facilitating trade and commerce and by improving people's ability to travel for health, education, employment, and to interact with other communities.

The Representative presented the activities completed in 2018 and the plans for 2019. The strategy of preceding SWPHC meetings with a CB workshop has proved very beneficial, with the February 2019 workshop and meeting attended by approximately 50 people, the large majority were from PICTs, many self-funded. All participants were extremely active and contributed to collective and own knowledge of hydrography.

SWPHC, in collaboration with other international, regional and bi-lateral partners, is committed to carrying forward hydrographic, nautical cartographic and capacity building activities in close alignment with IHO objectives and goals.

Decision 2: to note the value and effectiveness of preceding SWPHC meetings with CB related workshops.

Decision 3: to note SWPHC's commitment in carrying forward hydrographic, nautical cartographic and capacity building activities in close alignment with IHO objectives and goals

The meeting was informed that the NAVAREA Coordinators from Australia and New Zealand are not part of the respective national hydrographic offices but both the Australian Hydrographic Office (AHO) and Land Information New Zealand (LINZ) engage with the coordinators to deliver MSI training and are committed to improve MSI services in the region.

i) CBSC17-05.1I MACHC Report

The Representative of the region introduced the report and presented a brief characterization of the region with some challenges such as the rise in the number of all types of vessels in this area, the Hurricane season impacting infrastructure and the blue economy. She also explained how the subsea volcanic activity in the area impacted shipping in 2018 with an exclusion zone being introduced off Grenada in the shipping route from St. Vincent and Grenada. The meeting was informed that few of the Small Islands Developing States (SIDS) are IHO Members and they require assistance in developing hydrographic governance often having little hydrographic infrastructure of their own. The meeting noted that the above challenges combined with the age and reliability of survey data in the area adds to the risk of transiting the region and highlights the need for well-coordinated capacity building in the area.

On a positive side, she noted that Guyana recently became the 90th IHO Member State. She also explained how the MACHC is expanding its partnerships with other regional organizations to collaborate on capacity building. Organizations such as IO-CARIBE and the Central American Marine Transportation Commission (COCATRAM) are co-sponsoring proposed CB activities for the region to support hydrographic surveying and improve regional early warning systems. To assist in identifying activities of common interest the MACHC is developing a calendar of training opportunities offered by Member States, regional organizations and private sector partners.

j) CBSC17-05.1J SAIHC Report

The Representative of the region introduced the activities completed since the last meeting and the activities planned for 2019. The region has a number of challenges and communication is often limited with few opportunities for engagement, highlighting the value of the hydrographic awareness seminars. Environmental challenges such as the recent cyclones hinders development and impacts hydrography.

She explained that capacity building support in the region is vitally important and is assisted by Member States supporting the development of the hydrographic services of developing States. The meeting received with pleasure the information that Seychelles became the 88th Member State of the IHO.

k) CBSC17-05.1K NIOHC Report

The Representative of the region introduced the report and presented the results of the activities conducted since the last meeting and the activities planned for 2019. She presented the background of the Indian Ocean, that provides major sea routes connecting the Middle East, Africa, and East Asia with Europe and the Americas. One of the most significant challenges the NIOHC faces is engaging with the Red Sea maritime States, some of whom remain very difficult to communicate with. Much work is required in building and developing sustainable hydrographic services in these States. Very few of these Red Sea states are IHO Member States so don't qualify for the higher-level training opportunities.

Greater engagement from the Red Sea, Gulf of Aden maritime States was gained through the provision of CB funding for participation at the hydrographic awareness seminar which preceded the 2019 NIOHC meeting. Previous experience has proved that funding the attendance of Associate and Observer nations not only guarantees attendance but also showcases the importance of regional hydrography and how all coastal States have a part to play, irrespective of size. Participants found attendance beneficial and the seminar helped them to gain greater understanding of their roles and responsibilities as coastal States. The Indian and UK Government's contribution to regional capacity building has augmented the IHO's efforts and undoubtedly improved both the education and data

gathering regionally.

l) CBSC17-05.1L RSAHC Report

The Representative of the region introduced the report and presented the Persian Gulf as one of the most strategic waterways in the world due to its importance in global oil transportation. This region contains about 55 to 68% of the world's oil reserves, and more than 40% of world total natural gas reserves. Depths in the Persian Gulf are comparatively shallow and deep-draught tankers may have to navigate for a considerable distance with little water beneath their keels. For these reasons, it is crucial that SOLAS contracting Governments undertake hydrographic surveys as and when required and that they arrange for the compilation and publication of hydrographic data.

Through the CB Coordinator for this region, most of the Member States have announced their training needs for the next three years. In this manner, all Member States of RSAHC could be trained at various levels, in order to ensure a much-needed capability on hydrography and nautical cartography, promote familiarity with the methods of conducting hydrographic surveys, and improve safety of navigation through enhanced navigational products. It's important to consider safety of navigation in our regional waters as the region's first priority.

In order to encourage the involvement of all the Member States in the RSA region, and have better achievement in CB programs, the CB Coordinator is working to have excellent and effective means of communication between all Member States. He acknowledged the IHO Secretariat strong supports for joint CB submissions to promote cooperation between the neighbor RHCs and cost-effective use of the limited CB funds.

m) CBSC17-05.1M SWAtHC Report

Secretary, on behalf of the CB Coordinator, introduced the report and presented the main achievements in the region, the development of a regional Cartographic Plan, the establishment of a Planning Commission to coordinate INT Charts and ENC production and the acceptance of Paraguay and Bolivia (recently accepted) as Associate Members.

The meeting was informed on the results of the activities conducted since the last meeting, the activities planned for 2019 - 2020 and the challenges faced in the region. All activities conducted in recent years greatly contributed to improve the practical and theoretical skills developed by Latin American hydrographers and nautical cartographers in performing hydrographic activities.

Decision 4: to note the reports under agenda item 5.1

5.2 Update and closure of the 2018 CBWP

Doc: CBSC17-05.2 Closed 2018 CBWP

The participants noted the 2018 CBWP and no additional input was provided. The meeting then decided:

Decision 5: to approve and close the 2018 CBWP.

6. Regional or other projects for CB

*Docs: CBSC17-06A Risk Assessment at SWPHC (SWPHC)
CBSC17-06B Risk Assessment in the GCR (MACHC)
CBSC17-06C CME Project (UK)
CBSC17-06D EAHC-TRDC (EAHC)
CBSC17-06E HydroMOWCA Project (EAtHC)
CBSC17-06F FOCAHIMECA (MACHC, Mexico)
CBSC17-06G Italian CB Activities (Italy)
CBSC17-06H SDB Training (EOMAP)*

Reports and presentations on ongoing/new developments in regional or other projects (Maximum 20 minutes each).

a) CBSC17-06A PRNI (NZ)

New Zealand introduced the Pacific Regional Navigation Initiative (PRNI), initiated in 2015 with a 5-year programme of works. It is a partnership with the Ministry of Foreign Affairs and Trade (MFAT), Land Information New Zealand (LINZ) and the Pacific Community (SPC). It focus on navigation-related aspects of maritime safety and builds on the success of a previous programme to conduct risk assessments in Vanuatu, Tonga and Cook Islands. The programme continues to 2021 and continuation is under investigation.

b) CBSC17-06B Risk Assessment in the GCR (MACHC)

The Department of Geomatics Engineering and Land Management at the University of the West Indies, Trinidad and Tobago, is conducting an Economic Assessment of Risks in Maritime Navigation across the Greater Caribbean Region (GCR). The aim is to determine the risks in maritime navigation across the Caribbean, the costs associated with potential maritime accidents and mitigation measures which could be implemented to prevent these accidents.

c) CBSC17-06C CME Project (UK)

The UK Government Funded Commonwealth Marine Economies Programme focus on initiatives to promote economic growth and prosperity, a cross government programme using the expertise of several agencies. The main targets are the SIDS within the Caribbean and Pacific Oceans, with local projects enabled in conjunction with the target States, combining capacity building and knowledge transfer. It aims at enabling countries to better realize the potential of their blue economies in a sustainable manner.

d) CBSC17-06D EAHC-TRDC (EAHC)

The Training, Research and Development Center (TRDC) aims at resolving the technology gap between each IHO Member States with trainings provided in a sustainable manner. The TRDC website is being improved to provide training material and e-learning contents systematically with easy and convenient access. The TRDC is dedicated to coordinate, plan and organize CB activities for the EAHC and IHO and welcomes inputs from members of the CBSC, IHO Member States, CB Coordinators and training participants.

e) CBSC17-06E HydroMOWCA Project (EAHC)

The HydroMOWCA Project was suspended and no input was provided.

f) CBSC17-06F FOCAHIMECA (MACHC, Mexico)

The Project for Strengthening Hydrographic Capacities in Mesoamerica and the Caribbean Sea (FOCAHIMECA) was established by the Mexican Navy in cooperation with the Mexican Agency of International Cooperation for the Development (AMEXCID) in 2015. The objectives of the project are to integrate training programs on hydrographic technical matters, identify sources of financing and the management of financial resources to promote the acquisition and / or construction of vessels and hydrographic equipment. It also aims at organizing training events, scheduled in coordination with international organizations with hydrographic and maritime competence. Since 2015 several participants from the MACHC region received support from Mexico.

g) CBSC17-06G Italian CB Activities (Italy)

The Italian Navy Hydrographic Institute has established several capacity building activities in support of developing nations through training courses and projects. It includes high-level courses like the Hydrographic Surveyor Category "A" Course and intermediate courses like the Hydrographic

Surveyors Category "B". In the past years, foreign student from Albania, Algeria, Ecuador, Egypt, Lebanon, Libya, Mauritania, Morocco and Tunisia benefited from the Italian support through bilateral agreements. It also includes on the job training performed with Italian survey vessels and boats. Italy also provides support for projects that have benefited Lebanon, Albania (with Norway), Montenegro, Libya and Qatar.

h) CBSC17-06H SDB Training (EOMAP)

EOMAP presented a brief history of Satellite Derived Bathymetry (SDB) and the evolution of the technology since the 1970s, including the work done by hydrographic offices and the engagement of industry and academy. The work done in Tonga was presented, a survey combining SDB, acoustic and Lidar techniques. The roles of SDB both for mapping and reconnaissance were described and the quality assurance and control were introduced. The development of best practices and standards was highlighted, and the participants were informed on the capacity building activities available at EOMAP.

i) CBSC17-06I JICA (Japan)

The meeting was informed that the Japan International Cooperation Agency (JICA) has been conducting a 6-month training course for hydrographic surveyors of developing countries in Japan every year since 1971 in cooperation with the Hydrographic and Oceanographic Department, Japan Coast Guard (JHOD). This course is recognized by the FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) at Category "B" level. All expenses incurred to participate in the training course are covered by JICA, including tuition fees, return air ticket, accommodations and *per diem*. Call for applicants for the course is conducted around March in the designated countries through diplomatic channels with the Government of Japan. The following actions and decision were agreed:

Action 2: Japan to provide additional information to the CB Coordinators on the Japan International Cooperation Agency (JICA) programme (deadline: June 2019).

Action 3: CB Coordinators to consider extra-programmes in their work plans and invite countries in their regions to respond to the questionnaire presented in doc. CBSC17-06I (deadline: July 2019).

Decision 6: to note reports and presentations under agenda item 6 and the efforts of the CB Coordinators in identifying and coordinating regional and national projects that contribute to the IHO CB Programme.

7. Outcomes of the 2nd meeting of the IHO Council and the Strategic Issues of the CBSC

Docs: CBSC17-07A IHO Capacity Building Strategy (Chair)

CBSC17-07B Decisions and Actions from C-2 (Secretary)

The meeting considered the IHO CB Strategy and the way ahead for the CB Strategy, including the development of projects to seek donor funds, the measures of success of the CB Programme. The outcome of C-2 was also considered.

a) Strategy:

As highlighted by the Chair in its report, the ongoing review of the IHO Strategic Plan is likely to impact the IHO CB Strategy, in particular in terms of the performance indicators. The meeting addressed the need to focus on e-learning and a number of questions were raised in terms on what does the CBSC want to achieve with e-learning (awareness, technical, etc.), what is the audience and how to proceed. In particular, participants considered the need to define e-learning and blended-learning and to estimate the associated costs for its development, infrastructure, maintenance and tutors.

The meeting concluded that there is a need to find the right balance of presence and e-learning (the so-called blended learning), that practical exercises and presence courses have an important role

for networking. The meeting also noted that resources are needed for developing, maintaining and delivering e-learning. E-learning can also play a role in minimizing the lack of trainers on a regional basis, providing capacity in remote areas that wouldn't otherwise receive training.

b) Decisions and actions from C-2

Chair stressed the main outcomes of the 2nd Meeting of the Council related with the CBSC Work Programme. Of particular importance is the review of the IHO Strategic Plan and branding and how it impacts the CB activities. The meeting agreed:

Decision 7: to create a Drafting Group composed of New Zealand, Nigeria, Norway, Republic of Korea, United States, Chair (lead), Vice-Chair and Secretary, to draft a proposal on the way ahead with performance indicators in the scope of the revision of the IHO Strategic Plan.

Action 4: Drafting Group on Performance Indicators to draft a proposal on the way ahead with performance indicators in the scope of the revision of the IHO Strategic Plan (deadline: August 2019).

8. Operational issues of the CBSC

8.1 Draft CB Procedures 9

Doc: CBSC17-08.1 Draft CB Procedure 9 on Technical Visits (Secretariat)

Vice-Chair and Secretary introduced the draft CB Procedures 9 on Technical Visits. Nigeria suggested aligning this procedure to the IMO IMSAS Manual, whose Annex is related to the provision of hydrographic services, and New Zealand pointed out the need to consider a template for follow up visits and technical implementation visits. The meeting also considered the time frames involved with technical visits and agreed on the follow decisions and actions:

Decision 8: to adopt the amendments proposed in doc. CBSC17-08.1, including the time frames of two weeks for the interim report (mainly for the recommendations) and two months for the final report.

Decision 9: New Zealand to be part of the Drafting Group on Procedure 9 and to support the development of a draft template for the implementation visits to be incorporated in a future revision of the CB Procedure 9 (deadline: June 2019).

Action 5: Drafting Group on Procedure 9 to incorporate the time frames of two weeks for the interim report (mainly for the recommendations) and two months for the final report (deadline: August 2019).

Action 6: Drafting Group on Procedure 9 to further develop the CB Procedure 9 including a template for implementation visits and report back to CBSC (deadline: CBSC18).

Action 7: Secretary to publish the amended CB Procedure 9 in the IHO website when received from the Drafting Group (deadline: August 2019).

8.2 CB Management System update

Doc: CBSC17-08.2 CB Management System update (Secretariat)

ROK and Secretary reported on the status of development of the CB Management System and the intention to have the system ready for the input of the submissions from RHCs to the CBSC18.

Decision 10: to acknowledge the work done by the Republic of Korea on the development of the CB Management System (CBMS) to support the work of the CBSC.

8.3 C-55 Status and Developments

Doc: CBSC17-08.3A C-55 Status and Developments (Secretariat)
CBSC17-08.3B C-55 Limitations and Recommendations (C-55RPT Chair)

a) IHO Sec Status

Secretary updated the meeting on the status of C-55 Status of Hydrographic Surveying and Nautical Charting Worldwide (and current developments using the IHO Country Information System and the Geographical Information System (CIS/GIS). The systems are updated regularly by Member States and Primary Charting Authorities. During May 2019 a consistency analysis of C-55 database was conducted and several inconsistencies were identified for survey data, in particular to ensure that the percentages of the three categories sum up to 100%, both for shallow waters (less than 200m) and deep waters (more than 200m). The meeting agreed on the following actions:

Action 8: CB Coordinators to engage with Member States and the Primary Charting Authorities to update C-55 regularly (Permanent).

Action 9: IHO Secretariat to separate the survey reports from C-55 in three areas: shallower than 200m (without inland waters), deeper than 200m (without inland waters) and inland waters (all depths) (deadline: CBSC18).

b) C-55 limitations and recommendations

The C-55 Review Project Team (C-55RPT) reported on the findings on the limitations and recommendations for improving C-55, with CATZOC in use for the short-term approach. The meeting considered the potential of GEBCO and Seabed 2030 for displaying the lack of coverage in waters beyond national jurisdiction. The discussion on the reference depth for shallow and deep water led to the continuation of the 200m in the short term. In the long term this reference may be reconsidered. The following decisions and actions were agreed:

Decision 11: to endorse the use of CATZOC to generate inputs to C-55 as presented in the paper from UK and France (doc. [CBSC16-08.3B](#)) as the short-term solution to improve consistency in C-55.

Decision 12: to approve the continuation of the C-55RPT under the existing Terms of Reference.

Action 10: Chair to request the IRCC to invite the RHCs to encourage Member States to use CATZOC to generate the input for C-55 in a consistent and harmonized way (reference doc. [CBSC16-08.3B](#)) (deadline: IRCC11).

Action 11: C-55RPT to propose and define the scope for future work using CATZOC in a GIS environment and the differentiation of uses as the future of C-55, engaging with the DQWG (deadline: CBSC18).

Action 12: Chair to investigate with the HSSC/DQWG and RHCs the way forward based on the findings of the C-55RPT (deadline: IRCC12 and HSSC12).

8.4 Performance Indicators and Statistics

Doc: CBSC17-08.4A Performance Indicators and Statistics (Chair)
CBSC17-08.4B Analysis of the Chart Project (Secretary)

Chair and Secretary presented the Performance Indicators and relevant statistics related to CB (doc. CBSC17-08.4A). These Performance Indicators may be changed due to the ongoing review of the IHO Strategic Plan once approved.

Secretary introduced doc. CBSC17-08.4B, informing the meeting on the progress measurement of a capacity building activity, the IHO-Nippon Foundation CHART project, using quantitative analysis using the IHO C-55 database. The study suggests a general improvement of world charting coverage and the significant contribution of the CHART project Alumni to their countries compared to countries that did not received such cartographic education. The meeting noted the report and considered that future work could be done with C-55 for measuring progress in other CB Activities.

8.5 National Hydrographic (Coordinating) Committee (NHC/NHCC)

Doc: CBSC17-08.5 Legislation model for NHC/NHCC (Secretary)

Secretary reported that not enough feedback was received to produce examples of legislation or a legislation model for the establishment of the National Hydrographic (Coordinating) Committee (NHC/NHCC). Among the participants, Iran (Islamic Republic of) informing the creation of such committee involving several agencies in the country. The following was agreed:

Action 13: CB Coordinators to reach National Hydrographic Committee (NHC) legal documents, terms of reference and guidance documents for the establishment and operation of a NHC and inform the Secretary (deadline: November 2019).

Action 14: Secretary to report the best practices and guidance for the establishment and operation of a NHC to the CBSC (deadline: CBSC18).

8.6 Review of the 3-year RHC Work Plans 2018-2020

<i>Docs: CBSC17-08.6A</i>	<i>MBSHC 3-year Work Plan</i>
<i>CBSC17-08.6B</i>	<i>EAHC 3-year Work Plan</i>
<i>CBSC17-08.6C</i>	<i>EAtHC 3-year Work Plan</i>
<i>CBSC17-08.6D</i>	<i>SEPRHC 3-year Work Plan</i>
<i>CBSC17-08.6E</i>	<i>SWPHC 3-year Work Plan</i>
<i>CBSC17-08.6F</i>	<i>MACHC 3-year Work Plan</i>
<i>CBSC17-08.6G</i>	<i>SAIHC 3-year Work Plan</i>
<i>CBSC17-08.6H</i>	<i>NIOHC 3-year Work Plan</i>
<i>CBSC17-08.6I</i>	<i>RSAHC 3-year Work Plan</i>
<i>CBSC17-08.6J</i>	<i>SWAtHC 3-year Work Plan</i>

Chair invited the CB Coordinators to provide the updates of the 3-year Work Plans of each RHC. The meeting agreed on the importance to have such plan and that the 3-year period refers to the intersessional period between consecutive IHO Assemblies, same as the IHO Work Programme. The 3-year plan is to be based on the 4A cycle described in the CB Strategy and it does not prevent RHCs to have a longer planning.

Decision 13: to note the reports under agenda item 8.

9. CB Management

9.1 Update of the 2019 CBWP

Doc: CBSC17-09.1 Updated 2019 CBWP (Secretary)

Chair invited participants to provide updates and feedback to the 2019 CBWP. The updates and discussions led to the following decisions and actions:

Decision 14: to change activity A-08 of the 2019 CBWP from a TV to a HV/TV.

Action 15: EAHC CB Coordinator to liaise with the IHO Secretariat to coordinate any possible follow on visit to Cambodia (deadline: October 2019).

Decision 15: to approve an extraordinary TV to Iran for 2019 as activity P-12 of the 2019 CBWP.

Decision 16: to remove P23, P27, P29, P-30 from 2019 CBWP

Decision 17: to cancel the following activities from the 2019 CBWP: P-05 (2 600 €), P-06 (2 600 €), P-13 (2 400 €), P-17 (2 400 €), P-18 (24 876 €), P-19 (18 200 €) and P-34 (23 050 €), a total of 76 126 €.

Decision 18: to approve the 2019 Updated CBWP (Annex NNN)

Action 16: Secretary to implement Decisions CBSC17/14, 15, 16 and 17 (deadline: June 2019).

An updated version of the 2019 CBWP was produced during the meeting (**Annex A**).

9.2 Finance Report

Doc: CBSC17-09.2 Finance Report (Secretary)

Secretary introduced the finance report. Participants considered aspects related to funding agencies:

- Previous visits from the IHO Secretariat to the World Bank
- Possibility of using CB Fund for sponsoring projects in accordance with the IHO CB Strategy
- Joint forces with other International Organizations (e.g. the joint project for Bangladesh)
- Liaise with the IMO Representatives to raise awareness of the need for joint approaches
- National engagement for national and regional projects

Decision 19: to approve the Finance Report (doc. CBSC17-09.2).

9.3 Management Plan

Doc: CBSC17-09.3 Draft 2020 CB Management Plan (Secretary)

Secretary introduced the 2020 CB Management Plan. The meeting considered several aspects of the requests, in order to improve the coordination among regions. The meeting noted with thanks the offer from Spain to provide instructors to the MSI trainings for Spanish-speaking countries. The following actions were agreed:

Action 17: SEPRHC CB Coordinator to review costs of the MSI workshop, submitted to 2020 (deadline: June 2019).

Action 18: SEPRHC CB Coordinator to coordinate the MSI workshop with the WWNWS-SC Chair and consider the offer from Spain to provide an instructor (deadline: June 2019).

The meeting was informed on the need for non-IHO Member States to engage with the IMO where countries in need can request needs assessment visits for safety of navigation (SOLAS Chapter V). Secretary explained that in general IMO will invite the IHO and IALA to nominate consultants and experts (at no cost for the IHO), to help these countries in need. Meeting also considered the benefits of combining the technical visits to Madagascar and Comoros. The following was agreed:

Action 19: SAIHC CB Coordinator to consider combining the TV to Madagascar and to Comoros and report to the CBSC Chair and Secretary (deadline: June 2019).

Action 20: NIOHC CB Coordinator to consider inviting Somalia to request a needs assessment visit to the IMO regarding SOLAS Chapter V (deadline: June 2019).

Decision 20: to approve the CB Management Plan for 2020 with the possibility of amendments from Actions CBSC17/17 and 19.

Action 21: Secretary to amend the CB Management Plan for 2020 pending the information provided from Actions CBSC17/17 and 19 (deadline: June 2019).

Participants debated on the balance between the investment in awareness and MSI and the needs of more advanced courses on hydrography and nautical cartography, the provision of deliverables from the beneficiaries and the domestic issues of donor countries. There was general agreement that all CB activities need to be aligned with the long-term objective of the IHO CB Strategy:

To enable all states which have navigable waters to achieve Phase 1 of development (i.e. timely collection and promulgation of hydrographic information for their national waters), and to develop a national plan to put in place appropriate elements of Phases 2 and 3 or alternative cooperative regional or bilateral arrangements.

Action 22: CB Coordinators to contact Member States in their regions to report national efforts that contribute to the CB Programme (including an estimation of the financial value) to the Secretary (deadline: December 2019, Permanent).

Action 23: Secretary to compile the inputs from Action CBSC17/22 and report back to the CBSC (deadline: CBSC18).

Consideration was given for the CB Fund to have a regular flow of finance resources and eventually to have a formal proposal to increase the annual fees of Member States. The meeting tasked the Chair to:

Action 24: Chair to investigate the possibility of a formal proposal to increase the share of the annual contributions of the IHO Member States in order to increase the annual input from the IHO Budget in a stable and sustainable way (deadline: IRCC11).

The meeting considered the need to develop material for the capacity building outreach. The development of a movie and a presentation for Capacity Building was considered in order to communicate CB to the stakeholders outside the Hydrographic Community.

Decision 21: to establish a Project Team on Outreach with Norway (lead), Nigeria, Republic of Korea, South Africa, Chair, Vice-Chair and Secretary to define the way ahead for the outreach of CB activities in order to increase the visibility of work done and the achievements.

Action 25: CBSC Members to gather photographs and other promotional material and forward them to the Secretary (deadline: CBSC18).

Action 26: Project Team on Outreach (PTOutreach) to draft the way ahead for promoting and increasing the visibility of work done and the achievements (deadline: CBSC18).

Other topics were considered by the participants, like training for trainers (TFT), how to keep track of trainees (list of students) and how to attract more self-funded students to the courses.

Action 27: IHO Secretariat to issue a circular letter on the outcomes of CBSC17, including an invitation to Member States to consider participating in existing activities in other RHCs with their own resources (deadline: June 2019).

Annex B presents the approved 2020 CB Management Plan.

9.4 Adoption of the 2020 CBWP

Doc: CBSC17-09.4 Adopted 2020 CBWP (Secretary)

Following the approval of the 2020 CBMP, the 2020 CBWP (*Doc. CBSC17-09.4*) was drafted during the meeting. The following was agreed by the meeting:

Decision 22: to approve the 2020 CBWP.

Action 28: Secretary to publish the 2020 CBWP (deadline: June 2019).

The final version of the 2020 CBWP is presented in **Annex C** to this report.

10. Report from the CBSC to the IRCC11 Meeting

Chair introduced the key points to be reported to the IRCC11 meeting that was considered and endorsed by the meeting as:

- Status of the CBWP and the CB Fund, acknowledge the contribution from nations, funding agencies, other organizations
- Figures of the CB Fund and the Updated 2019 and Adopted 2020 CBWP
- Joint CB efforts with other organizations
- Developments on C-55 (short and long terms)
- New CB Procedure 9 on Technical Visits
- Plans for the outreach
- Strategic aspects, development of the IHO Strategic Plan, PI, e-learning
- Dates and venues for the next meetings

Action 29: Chair to report the key aspects of CB to the IRCC (deadline: IRCC11).

11. Any other business

No other business was presented to the CBSC.

12. Next CBSC Meetings (venue and date)

Chair invited participants to confirm the dates and venues for CBSC18, CBSC19 and CBSC20 and CBSC21. The following decision and actions were agreed:

Decision 23: to hold the next meetings as follows:

CBSC18: 27-29 May 2020 in Gdansk, Poland (pending confirmation)

CBSC19: 14-16 June 2021 in Monaco, with the CB/IBSC Stakeholders Seminar on 17-18 June

CBSC20: May / June 2022 – Ecuador (pending confirmation)

CBSC21: May/June 2023 - Japan (pending confirmation)

Action 30: Chair to address Ecuador to consider having the CBSC20 meeting in 2022 (deadline: June 2019).

Action 31: Chair to address Japan to consider having the CBSC21 meeting in 2023 (deadline: June 2019).

13. Review of the List of Actions and Decisions

Doc: CBSC17-13 Draft list of actions and decisions from CBSC17 (Secretary)

Secretary presented the draft list of actions decisions of CBSC17 drafted during the meeting, subsequently reviewed by the participants (Doc. CBSC17-13).

Decision 24: to approve the draft list of actions and decisions (doc. CBSC17-13).

The final List of Actions and List of Decisions are presented as **Annex D** and **Annex E** to this report.

14. Closure

Chair closed the meeting at 13h45, after acknowledging the work of those who contributed to the meeting.