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**3<sup>rd</sup> MEETING OF THE IHO COUNCIL  
IHO C-3  
Monaco, 15-17 October 2019**

**SUMMARY REPORT  
(Version 23 October 2019)**

*Note: while the 3rd meeting of the IHO Council was conducted according to the timetable, this summary report is in line with the sections of the agenda.*

## **1. OPENING**

### **1.1. Opening remarks and introductions**

*Docs: C3-01A      List of Documents  
C3-01B      List of Participants  
C3-01C      Membership Contact List*

The Secretary-General welcomed members of the Council and noted that 29 Member States were registered, with apologies having been received from South Africa. The absence of India was then noted. He acknowledged the participation of the following 8 Member States who do not have a seat at the Council: Bangladesh, Croatia, Malta, Myanmar, Nigeria, Poland, Portugal and Qatar. In his welcoming remarks he pointed out that the Council is a new instrument in the one hundred-year history of the IHO and was still in a work out mode. The Secretary-General reminded the participants that the Secretariat is the Secretariat of the Organization, not the IHO itself, and has a rather small capacity of 20 staff who also supported three committees, six sub-committees, 13 working groups as well as other projects. He requested the members to be agile, flexible and pragmatic in their discussions. Members should aim to minimize bureaucracy and be self-confident in their ability to take action and get work done, in particular at the eve of the deadline for the submission of proposals to be considered at the 2<sup>nd</sup> session of the Assembly.

### **1.2. Adoption of the Agenda**

*Docs: C3-01.2A Rev1 Agenda  
C3-01.2B Rev2 Timetable*

The Chair of the Council, RDML Shepard Smith (US), noted that the deadline for completion of the report to A-2 was 15 December 2019. A new era was coming to the hydrographic world, with new technological capacities, internal and global governance and the overarching question of sustainability. The 36 Member States present represented nearly 40% of the membership of the IHO

and almost 50% of global tonnage. He called on members to be mutually supportive in embracing a world that would be better, faster and cheaper than could have been imagined. The Council would be called upon to examine the Strategic Plan; the S-100 Roadmap and the promise of a new generation of navigation support services; as well as Governance matters. The Assembly would expect the Council to produce informative reports and recommendations. He drew attention to the timetable and agenda. The agenda had been modified with the removal of the background reports usually considered and with a focus on strategic decisions. The Secretary-General and the Chairs of the HSSC, the IRCC and the SPRWG would present some of the topics on which decisions would be required, many of which were interrelated. The Council would prepare items for consideration by the Assembly that were mature and ready for decision. The agenda and timetable were adopted as proposed.

**Decision C3/01: The Council adopted the agenda and the timetable.**

### 1.3. Administrative arrangements

*Docs: C3-01.3A Useful References – Marked-up Basic Docs (IHO Convention, General Regulations, Assembly ROP, Council ROP)*

The IHO Secretariat invited all members to check the Council membership list and confirm their individual details. He explained the process to prepare the Council summary reports after every half-day session, the timelines and the work of the précis-writers and four rapporteurs kindly appointed by Canada, Sweden and the USA. The IHO Secretariat also explained that some variance in the number of seats allocated to the Member States participants in the meeting was due to their involvement as rapporteurs, interpreters, speakers, or other services as requested.

**Action C3/02: IHO Member States having a seat at the Council to provide the IHO Secretariat with their updates to the IHO Council List of Contacts. (Permanent).**

**Action C3/03: In the Council Circular Letter calling for Council meetings in Monaco, IHO Secretariat to remind that MS may use meeting rooms available at the IHO Headquarters, prior and after the Council meetings sessions. (Permanent).**

### 1.4. Red Book

*Docs: C3-01.4 Red Book*

The Council Chair indicated that he would refer to the Red Book during the course of the meeting as appropriate, as these comments and suggestions were extremely helpful to be considered prior to the event.

**Decision C3/04: The Council Chair commended the IHO Member States who provided comments in time for the preparation of the Red Book.**

## 2. ITEMS REQUESTED BY THE 1<sup>ST</sup> IHO ASSEMBLY

**2.1. Revision of the IHO Strategic Plan (to be considered under Agenda Item 6.1)**

**2.2. Revision of IHO Resolutions 2/2007 (Decision A1/12) (to be considered under Agenda Item 4.1)**

**2.3. Revision of the IHO Resolution 1/2005** (Decision A1/19) (*to be considered under Agenda Item 4.2*)

**2.4. Revision of the IHO Resolution 2/1997** (Decision A1/05) (*to be considered under Agenda Item 4.2*)

### 3. ITEMS REQUESTED BY THE IHO COUNCIL

#### 3.1. Review of the status of Decisions and Actions from C-2

*Doc: C3-03.1A      Status of Decisions and Actions from C-2*

The IHO Secretariat indicated most items and decisions arising from C-2 had been completed. For some pending actions, it was decided that the Council would discuss the proposed revised Rule 12 of the Rules of Procedure under agenda item 3.2. The scope of the WEND would be discussed under agenda item 4.2. Engagement with IMO would be discussed under agenda item 3.6.

**Action C3/05: Secretary-General** to start engaging with the IMO Maritime Safety Division, on an informal basis as appropriate, to update on the current status of the S-100 framework and potential future impact on IMO instruments. (See also C3/13).

#### 3.2. Revision of Rule 12 of the ROP of the Council

*Doc: C3-03.2A      Revision of Rule 12 of the ROP of the Council*

The Chair recalled that the Rules of Procedure of the Council had originally provided for the Chair and the Vice-Chair to be appointed at the first Council meeting in each triennial cycle. However, an *ad hoc* procedure had been introduced before the first Council meeting to enable the Chair and Vice-Chair to be appointed in the inter-sessional period between the Assembly and the Council meeting so that they could prepare to take on their leadership roles and contribute to the preparation of the meeting.

The Secretary-General explained that it was proposed to amend Rule 12 of the Rules of the Procedure of the Council to enable to elect a Chair and Vice-chair by correspondence as soon as the Council has been installed by the Assembly. This led to side-effects to Rules 8 and 11. The proposal was well-received. Canada had made a proposal of amendment in the Red Book concerning the treatment of the Vice-Chair in the event of a tie. This amendment was endorsed.

**Decision and Action C3/06: The Council** endorsed the proposal as provided in Doc. C3-03.2A, to revise Rules 8, 11 and 12 of the Council ROP with the suggestion made by Canada in the Red Book. **IHO Secretariat** to prepare the proposal to A-2 for MS approval accordingly (deadline: 6 December 2019).

#### 3.3. Revision of Articles 12, 15 and 20 of the General Regulations – Medical Fitness of Candidates for Election to the position of Secretary-General or Director and Conditions of service of the Directors

*Doc: C3-03.3A Medical fitness of Candidates for position of Sec Gen and Directors*

The Secretary-General drew attention to the proposal to amend the Articles 12 and 15 of the General Regulations that would extend to the Directors the conditions currently only applied to the Secretary-General. It was further proposed to amend Article 20 of the General Regulations so that candidates for the position of Secretary-General or Director conformed to the same procedures as other staff of the Secretariat with respect to the certification of medical fitness. It was further proposed to amend Article 25 of the General Regulations to ensure continuity in the event that the post of Secretary-General fell vacant between two ordinary sessions of the Assembly.

Some Member States had noted some inconsistencies with other articles, and it was agreed that it was the Council, not the Chair of the Council, that should decide on the interim appointment of a Secretary-General. The proposal was amended accordingly.

The general comment made by the Netherlands in the Red Book questioning the ability of the Council to propose amendments to the General Regulations was addressed and considered as very useful in preparation of the next session of the Assembly.

**Decision C3/07:** Following a point of order made by the Netherlands in the Red Book, noting that the functions of the Assembly are “...to decide on any proposal put to it by any MS, the Council or the Secretary-General...” (Art. V.(e).(viii) of the IHO Convention, **the Council** confirmed that there was no obstacle for the Council to submit amendments/revisions to the General Regulations for the approval by the Assembly as these General Regulations are not part of the IHO Convention (Art XI of the IHO Convention).

However, **the Council** noted that “*Decisions...on amendments to the General Regulations...shall be taken by a 2/3 majority of MS present and voting.*” (Art IX.(d) of the IHO Convention).

**Decision and Action C3/08: The Council** endorsed the proposal as provided in Doc. C3-03.3A for amending the General Regulations to address medical fitness of candidates for election. Amendments to include suggestions made by Canada, France and the Netherlands about Article 25c (appointment by the Council, not by the Chair of the Council) and gender-neutral wording as it is in the initial version (back to “his/her”, not “their” for the time being). **IHO Secretariat** to prepare the proposal to A-2 for MS approval accordingly. (deadline: 6 December 2019).

There were also a request from some Member States that all official documents should be reviewed in order to ensure that all may adopt gender-neutral language. The Chair commented that an overall change to a neutral gender expression is a different issue and proposed these Member States to prepare a proposal to the Assembly.

**Action C3/09: The Council** invited Canada supported by Japan/Netherlands and other IHO Member States if any, to make a submission to be considered at A-2 for the application of gender-neutrality language in the IHO, which should include as a minimum an impact analysis on Basic Documents and IHO Resolutions. (deadline: 6 December 2019).

### 3.4. Consideration of the definition of Hydrographic Interests

Doc: C3-03.4A      Consideration of the definition of Hydrographic interests

Doc: C3-03.4B      Comments by Uruguay supported by Argentina, Brazil (draft proposal) – (including a simulation)

The Secretary-General recalled that, through the former Strategic Planning Working Group (SPWG), the Council had undertaken an extensive review of the Organization, which resulted in the amended Convention of the IHO. The changes included the introduction of a Council, with one third of its membership being determined on the basis of *hydrographic interests*. At present the definition of *hydrographic interest* is measured by national tonnage according to the General Regulations. In the existing General Regulations it is stated that the definition of Hydrographic Interest should be considered at the A-2.

It was proposed, as a first step, to change the General Regulations to remove any requirement for matters to be determined by A-2 and that *hydrographic interests* still should be defined by tonnage. The Council endorsed the proposal put forward by the Secretary-General.

**Decision and Action C3/10:** First, **the Council** agreed to prepare a new proposal for A-2 by which the reconsideration of the definition of hydrographic interests is removed from the General Regulations (Clause (c) of Art. 16).

Explanatory note: clause (c) would become: “*The remaining one-third of ...above. The scale by which...national flag tonnage. The table of....hold a seat on the Council.*”

**IHO Secretariat** to prepare the proposal to A-2 for MS approval accordingly. (deadline: 6 December 2019).

Then, Uruguay introduced a proposal, supported by Argentina and Brazil on an alternative measurement of the definition of *Hydrographic Interests*. The alternative definition considered still national tonnage, but additionally national seaborne trade and other “offer” and “demand” parameters. The proposal was accompanied by a simulation showing how the formula might work in practice and its effect with provisional figures.

A number of Member States commended the extensive work carried out by Uruguay in compiling the proposal while expressing reservations as to the complexity of the system proposed. It was also noted that the Council has not been tasked by the Assembly to reconsider a redefinition of *Hydrographic Interest*. Some Member States acknowledged that the formula proposed by Uruguay, if applied, would significantly modify the membership of the Council.

Several Member States supported the view that *hydrographic interests* was an important matter that merited further consideration by the Assembly and asked Uruguay and the supporting Member States to submit a proposal to the Assembly at A-2 so decisions could be made on the way forward and guidance provided to the Council.

**Decision C3/11:** As already addressed at C-1, **the Council** noted the mixed opinions on the value of the reconsideration of the definition of “hydrographic interests” and confirmed, in accordance with the IHO Convention, that there was no linkage between Council membership (defined in General Regulations) and Assembly voting and dues assessment (Art IX (b) and XIV (a) of the IHO Convention refer).

**Decision and Action C3/12:** **The Council** acknowledged the thorough proposal by Uruguay and invited **Uruguay** and other supporting countries to make a proposal to A-2 on this basis for further consideration by the Assembly. (deadline: 6 December 2019).

### 3.5 Showcase of S-100 based products and test beds

This showcase was considered under Agenda Item 4.1, as part of the HSSC Report as well as under agenda 7.1 for the preparation of the 2<sup>nd</sup> session of the Assembly.

*Doc: C3-04.1B      S-100 showcase*

The Chair of HSSC introduced five presentations by four Member States illustrating the potential of the new S-100-based products and services. He explained that the goal of the showcase was to demonstrate the work that is being carried out towards the implementation of the S-100 framework. Canada provided an overview of pilot projects that are underway for developing dynamic S-100 based products and services. Focus is now on S-102, S-104, and S-111 data. Test beds are being run in key maritime traffic areas such as the Port of Vancouver and the St Lawrence River. Projects include the provision of high-density S-102 data via a cloud-based service. Portable pilot unit (PPU) manufacturers and pilots are also being included in the evaluation of the data and services. The services are tested by river pilots using portable pilot units. Canada is hoping to cooperate further with regional neighbours e.g. USA and the other members of ARHC to develop complementary, non-duplicating products and services.

Norway has developed an S-102 demonstrator and distribution service, a cloud-based S-102 bathymetry data service and a “dual-fuel” service distributor covering both S-57 and S-101. Operational testing included a demonstration of the liner Queen Mary II entering Oslo harbour, which provided more accurate seabed mapping information than even experienced pilots can provide.

The Republic of Korea has developed an S-100 web testing procedure which is interoperable, viewable, user-friendly and open to all users. A sea trial was conducted in August 2019, involving mariners, pilots, data producers and systems developers, with two S-100 test systems installed on the bridge of the vessel and a third in the data analysis room.

The National Oceanic and Atmospheric Administration (NOAA), United States, is developing an open-source process to convert native surface current data to the S-111 format. It provides surface current predictions in one-hour time-slots, 72 hours in advance, which can be used to predict voyage times more accurately, enabling captains to maintain more consistent speeds and thus save fuel. The methodology could potentially be expanded beyond coastal zones to the global ocean level.

The Naval Information Warfare Center (former SPAWAR), United States, has worked on the S-100 Working Group Test Framework to improve the standardization of services. It has developed a viewer, using an open-standard scripting language (Lua) commonly used in videogaming, and an encoded dataset browser compatible with the ISO-8211 standard, which will ensure machine readability for OEMs. The viewer is capable of feature and portrayal catalogue validation.

Summing up, the Chair of HSSC said that future activities include further work on interoperability under S-98, new editions of S-101 (new versions of Ed. 1 in 2020–2021 and Ed. 2.0.0 in 2022) and further refinement of the product specification to enable the transition from S-57 to S-101.

**Decision C3/22: The Council commended the HSSC Chair, the S-100WG Chair, Canada, Norway, ROK and USA for their contribution in the S-100 showcase.**

**Decision C3/51: The Council endorsed the concept of having an S-100 showcase and Seabed 2030 Project presentation to be included in the programme of A-2.**

### 3.6. S-100 Implementation Strategy

*Doc: C3-03.6ARev1 Roadmap for the S100 Implementation Decade - Presentation*

The Secretary-General introduced the discussion of the S-100 Implementation Strategy, indicating the topic was among the most important to be discussed by the Council and carried a mix of emotions by Member States due to the goodness of technology versus the anxiety of implementation timelines. Document C3-03.6ARev1 set out the strategic fields of engagement to develop an accepted roadmap for the *S-100 Implementation Decade*. The main drivers to develop S-100 are further digitization in the shipping industry - for classic and autonomous navigation – and the benefits of “smart hydrography”. The new S-100 will not only improve safety of navigation and shipping in ports, but provide a cyber-secure, easily maintained software foundation that will support creative industry policy. S-101 ENC will become the premium product of hydrographic offices. To start with reasonable coverage, S-101 ENC could be produced by converting S-57 datasets before native production of ENCs in the cartographically enriched S-101 format. The IHO will coordinate with IMO and industry stakeholders concerning the transition to the S-101 ENC production, coverage and use in end user applications. Since the so called “S-mode” for ECDIS is scheduled to be implemented by IMO on new ECDIS from January 2024 onwards this would create a window of opportunity for the S-101 ENC processing capability. The “dual fuel” model of parallel provision of S-57 ENCs and S-101 ENCs after this date for a significant duration would be instrumental for the transition period.

Some key statements were made by the Secretary-General and Member States in support of the roadmap, such as:

- successful S-100 implementation is vital to future success of IHO.
- S-101 ENC provision and other S-100 based data services require production and dissemination harmonization over time.
- S-101 and S-10x capacity building, fostered through RHCs, is critical to implementation success.
- S-100 based services should be considered an important driver for autonomous shipping capability.

The Council agreed that substantial data coverage is necessary for successful adaptation among customers, especially within the shipping industry. It was also noted that there should be a technical and standardized compatibility between S-101 and S-57 during the transition phase for the implementation period to allow for S-57-only ECDIS to meet carriage requirements and remain operational. There should also be a defined sunset for S-57 ENC complaint production.

Inclusion of a detailed plan of action and milestones, along with a strategic narrative, would help for Road Map communication. With emphasis on HOs planning and the importance of an assessment of Capacity Building requirements, it was suggested to include these assessment activities in the IHO Work Programme (under CBSC) for 2020. The meeting underlined the importance of effective implementation since the safety of the mariner was at stake as well as the reputation of the IHO. The Council confirmed the importance of starting engagement with stakeholders and industry in this implementation phase as its success relies on good coordination, cooperation and synchronization established and maintained among different parties.

**Decision and Action C3/13: The Council endorsed the draft roadmap for the provision of S-100 based services presented at C-3, as a first step, noted the important IMO target of January 2024 for**

the implementation of the S-mode so tasked the **Secretary-General** to start engaging with IMO. (Deadline: January 2024). (See Action C3/05 above). (deadline: C-4).

**The Council / HSSC / IRCC Chairs / Secretary-General** supported by subject matter experts as appropriate to maintain this roadmap as an incremental document (including narrative and timelines) on an annual basis taking into account comments made at C-3 (engagement plan, production plan, capacity building) and A-2. (Permanent).

**Action C3/14: The Council** tasked the **HSSC/IRCC/Secretary-General** to align the IHO Work Programmes 1, 2 and 3 for 2021 with this Roadmap. (deadline: HSSC12/IRCC 12 – C-4 (-3 months)).

**Action C3/15: The Council** tasked **HSSC** to examine the consequences of the existence of this version-controlled roadmap, maintained by the Council, and the S-100 Master Plan currently maintained under the leadership of the S-100WG. (deadline: HSSC12 / C-4).

**Action C3/16: Council Chair** report at A-2 on the IHO progress towards the provision of S-100 based services...and to propose the **Assembly** to task the **Council** to maintain the S-100 roadmap on an annual basis as a key priority of the Council activities. (deadline: 6 December 2019 - / C-4).

### 3.7. Interpretation of the ROP 8(i) of the Council and Art. VI(g)(vii) of the IHO Convention

*Doc: C3-03.7A*      Confirmation of the interpretation by the Council that there are no discrepancies between the Convention and the Rules of Procedure of the Council, relating to Member States' proposals to the Council

The Secretary-General recalled that, at C-1, the United Kingdom had raised the possibility that the Council might not be authorized to take action on proposals from Member States or the Secretary-General, but would have to refer any proposed action to the Assembly. Following a thorough legal analysis of the arguments, presented by the United States at C-2, the Council had agreed that there was no conflict between Article VI of the IHO Convention and Rule 8 (i) of its own Rules of Procedure and that, consequently, it had the authority to consider items proposed by Member States or the Secretary-General. A draft proposal to that effect would be submitted to A-2.

The Chair drew attention to further comments on the issue in the Red Book document (C3-1.4A).

Following the suggestion by one participant that the amendment should also include items proposed by the Council itself, other participants said that items were generally proposed by one or more Member States rather than the Council as a whole. It was pointed out that, under Rule 10 (c) of the Rules of Procedure of the Assembly, the latter's agenda included "*all items the inclusion of which has been requested by the Council*", which appeared to cover the case in point.

**Decision and Action C3/17: The Council** endorsed the draft Decision proposed in Doc. C3-03.7A to be submitted to the Assembly for the approval of MS. **IHO Secretariat** to include this revised Resolution in the updated version of M-3. (deadline: 6 December 2019).

## 4. ITEMS REQUESTED BY SUBSIDIARY ORGANS

### 4.1 Report and proposals from HSSC

*Doc: C3-04.1A*      Report and Proposals from HSSC

Doc: C3-04.1B S-100 based products showcase

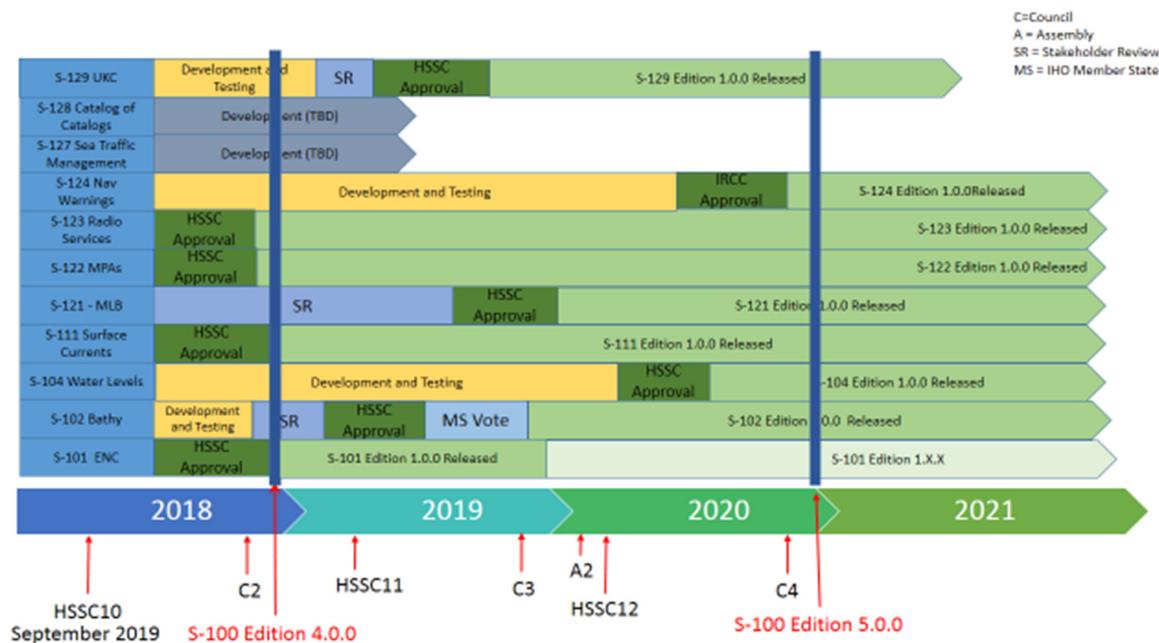
### General

The Chair of HSSC reported on the work of the Committee for the current cycle of the Council and highlighted the prioritized activities both at the strategic and technical level. These included: the development of S-98 (the S-100 interoperability specification); completion of the S-121 product specification; continued S-101 development; consolidated efforts to improve data quality and data quality visualization; and further work on the future of the paper chart. Other areas of advancement include the preparation of a new edition of S-44, the publishing of the Chinese version of the IHO Dictionary and the preparation of an Arabic version, cyber security, and again the harmonization of data quality across S-100 products, a theme of particular significance for autonomous shipping.

At the Committee and working group levels, the HSSC discussed the proposed IHO Strategic Plan. Specific attention was given to the measurability and utility of the strategic performance indicators and the HSSC delivered its feedback to the SPRWG.

All working groups had likewise contributed to the plans for the S-100 implementation decade.

A new S-100 timeline was presented which indicated the processes and steps for the development and approval of the suite of S-100 specifications. “Making the IHO S-100 framework a reality” has been adopted as the unofficial mantra of the HSSC.



There was an active and wide-ranging discussion regarding the future of the paper chart. It is evident that Member States have varying plans concerning paper chart production and provision. Participants called for more work from the NCWG to determine the future role of paper charts, since they were increasingly used only as a backup and to determine the impacts on the INT chart program that this diminished role might provoke. These tasks need to be reflected in the work plans of the working group. It was noted that the outcome of the survey questionnaire regarding the future of the paper chart is now on the NCWG webpage. The NCWG will go through these responses at the next meeting and submit comments/recommendations to HSSC.

**Decision and Action C3/19: The Council** took note of the on-going survey on the Future of the Nautical Paper Chart (outcome to be finalized at NCWG-5 and endorsed at HSSC-12) and provided some initial guidance on the matter. Taking into account the large diversity of Member States situations, **the Council** tasked the **HSSC** to submit draft recommendations at the next Council meeting on the way forward (priorities in follow up activities of production of paper charts from ENC's for instance, subsequent alignment of WGs' programme of work, new simplified standard for paper charts meeting functional requirements, future of INT Chart concept, etc.). (deadline: HSSC12 / C-4).

**Action C3/20:** Considering the timelines between A-2, HSSC-12 and IRCC-12 meetings in 2020 and the countdown for submission of reports and proposals to C-4, **the Council** invited **HSSC and IRCC Chairs** to prepare their 2020 meeting minutes with the view that they will be used/submitted directly as reports and proposals to be considered at C-4. (deadline: July 2020).

**Decision: C3/21: The Council** commended the HSSC and its Working Groups/Project Teams for their work and contribution in the development of the S-100 Implementation Strategy and the Performance Indicators applicable to the Revised Strategic Plan.

*Revision of IHO Resolutions as requested by the Assembly (agenda item 2.2)*

IHO Director Kampfer highlighted the changes to the IHO Resolution 2/2007 as reported by IHO CL 46/2019.

**Decision and Action C3/18 :** **The Council** noted the adoption of the revision of IHO Resolution 2/2007 as amended - *Principles and Procedures for Developing IHO Standards and Conducting Changes* (IHO CL 46/2019 refers). **IHO Secretariat** to include this revised Resolution in the updated version of M-3 which will be made available prior to A-2. (deadline: A-2).

## 4.2 Report and proposals from IRCC

Doc: C3-04.2A *Report and Proposals from IRCC*

Doc: C3-04.2B *Comment by Secretary-General on Annex B to the IRCC Report C3-04.2A*

### *General*

The IRCC Chair presented a report of the Committee's activities with particular emphasis on the continued need for Capacity Building; the ongoing work of an amended assignment for the WENDWG to also encompass the future S-100 products; Maritime Safety Information (MSI); Crowdsourced bathymetry; Project Seabed 2030; and Marine Spatial Data Infrastructure (MSDI). It was encouraging to note the improvements in developing countries, introduced slowly but surely in recent years, as a result of capacity building. Considerations on the status of the Seabed 2030 Project in terms of the coverage of the current GEBCO grid meeting Seabed 2030 requirements (6%) were given in order to raise the awareness of the challenge to reach 100 % in 2030. The IRCC Chair thanked Denmark for pursuing progress in the area of marine spatial data infrastructure (MSDI) and especially the e-learning material on MSDI funded by Denmark. IRCC acknowledged the work of the IHO Project Team on implementation of UN-GGIM Shared Guiding Principles.

*Revision of IHO Resolutions as requested by the Assembly (agenda items 2.2, 2.3 and 2.4)*

It was noted that the IHO Resolution 2/2007 as amended, which also impacts the IRCC activities, would facilitate the working groups and project teams in developing S-100 based products and enable the IHO to maintain a high-level of control on changes to standards and specifications (See Decision C3/18).

The amended IHO Resolution 2/1997, regarding the cooperation between the IHO and the RHCs, was finalized and endorsed. The IRCC also submitted the draft amendments to IHO Resolution 1/2005 on IHO Response to Disasters. As a related issue, possible synergies with MapAction, a humanitarian mapping charity will be explored. MapAction co-operates with the United Nations and other NGOs.

**Decision and Action C3/18 :** The Council noted the adoption of the revision of IHO Resolution 2/2007 as amended - *Principles and Procedures for Developing IHO Standards and Conducting Changes* (IHO CL 46/2019 refers). **IHO Secretariat** to include this revised Resolution in the updated version of M-3 which will be made available prior to A-2. (deadline: A-2).

**Decision and Action C3/23:** The Council endorsed the proposed amendments to the IHO Resolution 2/1997 as amended, including editorial corrections proposed by Brazil in the Red Book and suggestions from Colombia. **IHO Secretariat** to submit the Council's proposal to A-2 for Member States approval. (deadline: 6 December 2019).

**Decision and Action C3/28:** The Council endorsed the proposed amendments to the IHO Resolution 1/2005 as amended, including editorial corrections proposed by Brazil in the Red Book. **IHO Secretariat** to submit the Council's proposal to A-2 for Member States approval. (deadline: 6 December 2019).

*Crowdsourced Bathymetry*

Some Member States and the Secretary-General commented on Crowdsourced Bathymetry (CSB) that this concept has a close connection to the Seabed 2030 Project and that CSB is a precondition to reach the goals of coverage in the Seabed 2030 Project. It was suggested that IRCC supported by the RHCs should manage a data workflow through the IHO DCDB within the Seabed 2030 Project and GEBCO.

**Action C3/26:** The Council took note of the outcome of IHO CL 11/2019 (IHO CL 47/2019 and encouraged **Member States** to review their respective national position and inform the IHO Secretariat and update as necessary. (Permanent).

**Action C3/27:** With regard to crowdsourced bathymetry, **the Council** encouraged the **IRCC** to set up a pro-active management and monitoring procedure of the dataflow between stakeholders involved in crowdsourced bathymetry notably as part of the support provided to the GEBCO Seabed 2030 Project. (deadline: IRCC-12).

*Capacity Building Fund (CB Fund)*

The Chair of the IRCC presented a proposal on the minimum resources needed to support a sustainable level of capacity building activities. Under the strategic direction 4.4 of the 2017 IHO Strategic Plan, the CBSC was tasked with better supporting the needs of Member States, especially those developing their capabilities regarding MSI, hydrographic surveying, nautical charting and marine spatial data infrastructure (MSDI). Capacity building activities are funded through IHO's regular budget and by

external donations. The external funding from the Republic of Korea was especially recognized. The Capacity Building Sub-Committee (CBSC) is concerned that it would not be able to maintain its capacity building commitments. The Council was therefore requested to guarantee a minimum of €300 000 to the IHO Capacity Building Fund.

The Chair noted that there had been several comments in the Red Book concerning the current item. Many Member States expressed support for capacity building but pointed out that it would be difficult to solve via an increased budget at the present time. They suggested that funds should continue to be sought from other sources, such as the World Bank Group. Other Member States indicated their willingness to continue to make in-kind contributions. Some Member States requested that analysis of the CBSC budget and cost breakdowns should be provided.

The CBSC Chair commented that the Sub Committee understands that this is a complicated issue, but it is obvious that there are much more needs than funds available. Many Member States have joined the IHO mainly for the possibilities to be able to use the CB funds. There is within the strategy to support transition to the S-100 but the funds can only now supports very basic items.

The Secretary-General noted that the overall amount available for capacity building and related projects would be determined following an examination of the agenda items on the IHO Budget for 2020 and the IHO Work Programme and Budget for 2021-2023. The amounts devoted to capacity building has actually increased significantly in recent years. The Council was fulfilling the wishes of the Assembly by increasing the resources devoted to capacity building, but the Secretary-General did not see a way to find the guaranteed sum of €300 000 requested by the CBSC within the IHO Budget amount available.

This issue was addressed again, later during the meeting, after considerations on the IHO Budget made under agenda items 5.3 and 5.4., the discussion in relation to the funding of CB activities leading to Action C3/45 (see paragraph 5.4).

**Decision C3/24: The Council** recognized the ongoing need for capacity building but declined to endorse the proposal for a guaranteed minimum level of IHO CB fund due to the need to reconsider all budget items together.

**Action C3/25: The Council** invited the IRCC to instruct the CBSC to develop a system of performance indicators to measure, under the conduct of the CBSC and in accordance with the Revised Strategic Plan, the effectiveness and efficiency of CB activities. This system should be oriented by the expected effects of CB support, not on the achievement of the CB activities. (deadline: C-4).

**Decision C3/30: The Council** commended the CB Coordinators for their work.

#### *Worldwide Electronic Navigation Services (WENS)*

The introduction to this report was given by the IRCC Chair. He noted that this report is from a drafting group set up under the WENDWG in support of Council actions C2/30 and C2/31 in order to gather feedback and analyse the proposed WENS principles. The Vice Chair of the WENDWG delivered the report, which, to the greatest extent possible, incorporated the comments received.

The WENS approach is an update to the WEND Principles that shifts it, "from a pure ENC focus to one that represents a more comprehensive suite of S-100 based services...". The desired end-state is to ensure that all navigation products and services are available at any time and world-wide. This implies that there is a distribution or dissemination element to the principles.

The report acknowledges that while there is a desire, logic, and need to move in this direction i.e. from WEND to WENS, there is still more work to be done. This work includes ensuring WENS is consistent with the draft IHO Strategic Plan and the S-100 Implementation Roadmap, and related that the governance of WENS development is specified. It was agreed that any implementation of these principles would require a transition period. It was reiterated that these principles are guidelines and are not mandatory, however adopting them will be beneficial for all stakeholders in the long run and they do mirror the UN-GGIM principles. It was also noted that adoption and the continuing implementation of the WEND principles has been largely successful.

Participants were shown a graphic of the WENS path to approval. The Council was asked to acknowledge that the tasks assigned to WENDWG regards the WENS report be considered complete.

While the report does not have any specific recommendations or requests of the Council, the Council Chair drew attention to further comments on the issue in the Red Book document (C3-01.4A). Council also agreed that IRCC should direct the WENDWG drafting group to continue work and consider developing WENS TOR and ROPs.

In discussion, it was suggested that there be a distinction made between SOLAS and non-SOLAS requirements. In terms of continuing the development of the WENS, it was also noted and acknowledged that HSSC must be part of the process.

The United Kingdom suggested that given the breadth and potential expense of S1xx products and services beyond the realm of WEND and the need for inclusivity, that the principles should ideally be generated from a clean sheet acknowledging that elements of WEND principles may still be relevant.

There was general support for the WENS principles approach and at the same time recognition that S-100 goes well beyond navigation and other approaches such as the Integrated Geospatial Information Framework (IGIF) of UN-GGIM could also be considered.

The Vice Chair of the WENDWG thanked everyone for their contributions and the working group will work towards obtaining C-4 endorsement. He will also explore options for a more distinctive sounding acronym for 'WENS'.

**Decision C3/32: The Council** agreed on the proposal from IRCC that the transition from WEND to WENS was needed and approved the principles to expand the remit of the WENDWG scope to include "WENS" concept (S-1xx products) and that the WENDWG liaise with HSSC and its WGs as appropriate.

**Action C3/33: The Council** invited the IRCC to instruct the WENDWG to draft new TORs accordingly and to submit draft WENS Principles (new draft IHO Resolution) consistent with the S-100 Roadmap to the endorsement of IRCC. (deadline: WENDWG-10/IRCC12).

**IRCC** to submit these new WENS Principles (new draft IHO Resolution) to the endorsement of the Council prior to the approval of Member States. (deadline: C-4 (-3 months)).

**Decision C3/34: The Council** agreed that it was more appropriate to keep the current *WEND Principles* and their *Guidelines for Implementation* in M-3 as they are, for the time being at least until the “sunset” of S-57 ENC production.

**Action C3/35: Council Chair** to include a progress report on the transition for WEND to WENS in his report to A-2. (deadline: A-2).

In his report, the IRCC Chair made also reference to the RENCs and to the achievements of the IBSC.

**Decision C3/29: The Council** commended the RENCs for the ongoing support to ENC producers and user communities and the EAHC Regional ENC Coordination Centre (RECC) for its progress in establishing its operations.

**Decision C3/31: The Council** commended the IBSC for the work done in particular with the delivery of the new companion document *Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers* (Ed. 2.1.0 - May 2019).

## 5. IHO ANNUAL WORK PROGRAMME AND BUDGET

### 5.1. Review of the Current Financial Status of the IHO

*Docs: C3-05.1A      Monthly Financial Reporting Statement (September 2019)*

The Secretary-General reviewed the current financial status of the Organization. Almost 90% of Member State contributions due in 2019 had been received. One Member State owed its contributions for both 2017 and 2018 and potentially faced suspension from the Organization. Four Member States owed their contributions for 2018; however, 15 Member States had paid in advance for 2020.

Thanks to a policy of conservative financial management and savings made in operational costs, a surplus of 5.6% was expected in the 2019 budget.

**Decision C3/36: The Council** noted the information provided on the current financial status.

### 5.2. Proposed IHO Work Programme for 2020

*Doc: C3-05.2A      Proposed IHO Work Programme for 2020*

The Secretary-General briefly reviewed the highlights of IHO’s work in 2019. He introduced the proposed work programme for 2020, based on the third year of the 3-year programme approved by A-1 and covering the three programme elements of corporate affairs, hydrographic services and standards and interregional coordination and support. The priorities for the 2020 programme might be adjusted after the adoption of the Revised Strategic Plan, expected at A-2, but can be considered as identical to the ones given at C-2.

The Chair drew attention to further comments on the work programme in the Red Book document (C3 1.4A).

While appreciating the wide-ranging scope and relevance of the proposed work programme,

participants found the document too long and detailed. It was difficult to link the proposed activities with the Council's identified priorities.

The Secretary-General acknowledged the detailed nature of the work programme. However, that level of detail was necessary if the Secretariat were to plan and cost its work accurately and be accountable for the results.

The following key priorities of the IHO Work Programme 2019-2020 are summarized as follows:

Corporate Affairs	Hydrographic Services and Standards	Inter-Regional Cooperation and Support
<ul style="list-style-type: none"> <li>Facilitate the technical and operational arrangements of the S-100 implementation based on C-3 discussions.</li> <li>Promote the joint approach of DCDB, GEBCO and Seabed 2030 in collaboration with IOC.</li> <li>Intensify engagement within the framework of the UN Nations to foster the use of marine geoinformation on the basis of the IHO Standardization framework and regional/national contributions of the IHO Member states.</li> <li>Enhance the visibility of the IHO through digital centrality of communication including incorporation of the Secretariat's GIS-services.</li> <li>Continue preparations of the upcoming Centenary celebrations of IHO.</li> </ul>	<ul style="list-style-type: none"> <li>Develop an S-100 Interoperability Specification</li> <li>Develop all the components needed to make S-101 a reality</li> <li>Develop S-121 Product Spec for Maritime Limits and Boundaries</li> <li>Consolidation and clarification of standards in relation to ECDIS/ENC</li> <li>Future of Nautical Paper Chart</li> <li>Consider data quality aspects in an appropriate and harmonized way for all S-100 based product spec.</li> <li>Prepare Ed. 6.0.0 of S-44</li> </ul>	<ul style="list-style-type: none"> <li>Increase in the provision of capacity building requests and follow up activities by existing and new IHO member states</li> <li>Implementation of Crowd Sourced Bathymetry Activities</li> <li>Implementation of Seabed 2030 Project</li> <li>Development of Marine Spatial Data Infrastructures activities</li> <li>Transition from WEND to WENS Concept</li> </ul>

**Decision C3/37: The Council** approved the key priorities identified by the IHO Secretary-General, the HSSC Chair and the IRCC Chair and approved the IHO Work Programme for 2020.

**Action C3/38: IHO Secretariat** to issue an IHO CL making the IHO Work Programme 2020 as approved by the Council available to the IHO Member States. (Permanent).

The Secretary-General proposed that the theme for World Hydrography Day in 2020 should be "*Hydrography – enabling autonomous technologies*".

Following the discussion of a number of alternative suggestions, including S-100 implementation and the United Nations Decade of Ocean Science for Sustainable Development 2021–2030, the Chair recalled that the selection of the theme for World Hydrography Day had been delegated to the Secretary-General and suggested that his choice should be respected.

**Decision and Action C3/39: The Council** noted the proposed theme for the 2020 World Hydrography Day by the Secretary-General "*Hydrography - enabling autonomous technologies*". **IHO Secretariat** to circulate the theme for 2020 to the Member States by IHO CL. (Deadline: 15 Nov. 2019).

### 5.3. Proposed IHO Budget for 2020

Doc: C3-05.3      A      Proposed IHO Budget for 2020      Presentation

Doc: C3-05.3B Comment by Secretary-General on the comment submitted by The Netherlands

The Secretary-General, introducing the item, said that the proposed budget estimates for 2020 were based on the third year of the 3-year budget estimates approved by A-1, adjusted to take into account an increase of approximately 75% in health insurance premiums for current and retired staff following an enforced change in insurance provider. The budget estimates for 2020 remained balanced, with an expected surplus of approximately 0.05% of the real budget by the end of the year. Many small savings had been made in administrative costs, the Internal Retirement Fund had been reduced by €40,000 and the provision for arrears in payment by Member States had been reduced by €30,000. The budget for travel costs had been reduced by €60,000 by reducing Secretariat attendance at external meetings, increasing the use of videoconferencing and encouraging working groups to hold their meetings in Monaco. Funding for the Capacity Building Fund had been increased by €44,000 to match the accumulated Special Project Fund at a level of approximately €135,000 for each fund.

The Chair drew attention to further comments on the 2020 budget in the Red Book document (C3 1.4A).

**Decision C3/40:** Noting the impact of medical reimbursement on the IHO budget and acknowledging the measures taken and planned by the Secretary-General, **the Council** approved the proposed IHO budget for 2020.

**Decision C3/41:** **The Council** took note of the offsets of the increases in health insurance premiums, in particular the reduction of travel expenses and the follow-up consequences.

**Decision C3/42:** **The Council** took note of the allocations made to the Capacity Building Fund and the Special Projects Fund.

#### 5.4. Proposed IHO 3-year Work Programme and Budget

Doc: C3-05.4A Preparation of IHO Work Programme and Budget for 2021-2023

Annex A and Annex B

Presentation

The Secretary-General introduced the proposed work programme and budget for 2021–2023, based on the Strategic Plan approved by A-1. Cross-references to the draft Revised Strategic Plan were included in a separate column. The Secretariat recommended that the three elements of the current work programme should be retained after the adoption of the Revised Strategic Plan.

The Chair drew attention to further comments on the proposed 3-year work programme and budget in the Red Book document (C3-01.4A refers).

Participants said that the proposed work programme should specify tasks that were measurable and clearly linked to the stated targets and relevant elements of the Strategic Plan, while also identifying new tasks required to realize new strategic priorities and tasks that could not easily be assigned to a particular target, such as certain Secretariat functions. It might be possible, for instance, to produce different views of the same data to meet the needs of the Secretariat, the Council and the Assembly. The proposed transition between the existing Strategic Plan and the future Revised Strategic Plan should be indicated for each task. More emphasis should be placed on e-navigation and autonomous technologies.

The United Kingdom committed to providing personnel support, on-site or remotely, for a revision of the work programme to align it with the Revised Strategic Plan, assuming that the latter was adopted at A-2 as scheduled.

The Secretary-General introduced the proposed budget estimates for the 3-year budget, based on the proposed annual budget estimates for 2020, with no allowance made for increased income from the accession of new Member States or increases in Member State contributions. The Council would approve each year's budget at its annual session, adjusted in the light of developments over the previous year.

Some participants indicated their willingness to contemplate an increase in Member State contributions of between 1% and 5% in view of the large and unexpected increase in health insurance costs. Others noted that unexpected costs were likely to arise every year for one reason or another and could not be justified in every budget. In every case, internal cost savings should be sought, as the Secretary-General had already done.

The Secretary-General said that, while increased Member State contributions and thus an increase in the budget would naturally be very welcome, non-earmarked funding (i.e. funding not specifically allocated to capacity-building, for example) was the most useful.

**Decision and Action C3/43:** The Council endorsed the proposed 3-year IHO Work Programme and agreed to keep the current structure of the Work Programme under the Revised Strategic Plan to facilitate the operational work and implementation by the Secretariat.

**IHO Secretariat** to submit the proposal to A-2 for Member States approval accordingly (deadline: 6 December 2019).

**Action C3/44:** Noting the comments made by some Council Members, **IHO Secretariat**, kindly supported by the United Kingdom, to table and submit a focused version of the Work Programme 2021-2023 aligned with the Revised Strategic Plan when/if the latter is approved at A-2. (deadline: C-4 -3 months).

**Decision and Action C3/45:** The Council endorsed the proposed 3-year Budget estimate to be submitted for the approval of MS at A-2, but invited the **Secretary-General** to develop an alternative option for a 3-year Budget with a general increase of x % per year of MS' contribution share from 2021 until 2023, supported by arguments justifying this increase and also balanced by evidence of efficiency saving measures (deadline: 15 December 2019).

## 6. IHO STRATEGIC PLAN REVIEW

### 6.1. Review of the Strategic Plan

*Doc: C3-06.1A      Report and Proposals from the Strategic Plan Review Working Group*

*Draft Revised Strategic Plan 2021 - 2026 version 2.2 cor2 - 17 Oct*

*Draft TORs of the SPRWG version 3*

*Introduction*

As an introduction to the discussions about the Revised Strategic Plan, the Chair invited the Secretary-General, the HSSC Chair and the IRCC Chair to provide their initial views on the strategic priorities of the IHO Work Programme.

The Secretary-General expressed that the Work Programme was constructed along three main pillars including Corporate Affairs, which covers the provision of Secretariat services and the management and fostering of relations with intergovernmental and other international organizations. The S-100 Road Map is the key issue for the future relevance of the Organization, enabling it to set milestones, timelines and strategies to liaise with relevant actors, including industry and IMO. Seabed 2030 and its interrelation to the established structures of DCDB and GEBCO allow the IHO to improve its visibility. The IHO's association with the greater process of ocean governance, including environmental change and ocean pollution is important. The United Nations Sustainable Development Goals were gaining increasing political relevance and the IHO should ally itself more closely to the process. The IHO has a long history, having been one of the earliest intergovernmental organizations, and it had effectively contributed to multilateralism while remaining relatively small. He praised those Member States who had seconded staff to work at the IHO: in-kind contributions are a key element for the Organization.

The HSSC Chair drew attention to the strategic issues considered in the IHO Programme-2: Standards and Services. Over the previous two years, the IHO and the maritime community has lived through a period of transformation in terms of hydrographic standards and services. New products have been developed to consolidate the safety of navigation and the whole approach to the entire hydrographic world has changed. The main task of the HSSC is to revise IHO's Strategic Plan, define a Road Map for S-100 implementation in the next decade and modulate and adjust the three IHO programmes in order to translate the new Strategic Goals and targets into activities and tasks achievable by the IHO subordinate committees.

The IRCC Chair identified capacity building as key to closing the knowledge and technological skills gaps among RHCs. The Committee is restructuring its disaster response in order to be more proactive and effective. Efforts are underway to standardize the different modus operandi among the regional hydrographic offices.

**Decision C3/46: The Council noted the items of strategic nature raised by the Secretary-General, the HSSC Chair and the IRCC Chair.**

*Report of SPRWG and discussion on the Revised Strategic Plan:*

The SPRWG initially met in January to draft the Strategic Plan and Strategic Performance Indicators (SPI). A Report and draft Strategic Plan was submitted to the Council in July 2019. The draft Strategic Plan is designed as a portable tool without reference and contains an overview of IHO and Member States' hydrographic activities and three Strategic Goals (SG) encompassing eight Targets for 2021-2026. SG 1 encompasses evolving hydrographic support for safety of navigation;

SG 2 involves increasing the use of hydrographic data for the benefit of society;

SG 3 covers participation in international initiatives related to sustainable use of the ocean.

The Revised Strategic Plan was presented by the Chair of the SPRWG on the 1st day of the Council meeting giving time to incorporate new elements raised during the course of the meeting when addressing, among others, the S-100 Implementation Decade, the Future of the Nautical Paper Chart,

Seabed 2030. Following informal discussions between SPRWG and other members of the Council, the Chair of SPRWG presented an amended<sup>1</sup> draft version of the Revised Strategic Plan at the end of the meeting which gave the Council the possibility to define the way forward for its submission to the Assembly for approval.

The meeting also agreed on the way forward to ensure the continuation of the work of the SPRWG, pending amendments to its TORs and ROPs, from A-2 to the first meeting of the Council after A-2 (C-4).

**Decision and Action C3/47: The Council** endorsed the proposed Revised Strategic Plan (version 2.2). **IHO Secretariat** to submit the proposal to A-2 for Member States approval. (deadline: 6 December).

**Decision and Action C3/48a: Council Chair** supported by **SPRWG Chair** to submit the Revised Strategic Plan at A-2 for Member State approval. (deadline: A-2 (15 December 2019) ...and to propose the **Assembly** to task the **Secretary-General** to align the 2021 and 3-year IHO Work Programme with the Revised Strategic Plan, for endorsement/approval at C-4 if necessary. (deadline: July 2020 – C-4 (-3 months))

**Decision and Action C3/48b: The Council** welcomed the offer from the **US** to prepare, as an example, a draft pamphlet transcription of the proposed Revised Strategic Plan (deadline: A-2).

**Decision and Action C3/49:** In order to develop methods of calculation of the SPIs after A-2, **The Council** amended the TORs and ROPs of the SPRWG and endorsed them. **Council Chair** to submit these new TORs and ROPs to the approval of the Assembly<sup>2</sup>. **SPRWG** to submit SPIs and corresponding calculation methods to the **Council** for endorsement, then for approval by Member States by IHO CL. (deadline: C-4 (-3 months) / November 2020).

## 7. OTHER ITEMS PROPOSED BY A MEMBER STATE OR BY THE SECRETARY-GENERAL

### 7.1. Preparation of the 2<sup>nd</sup> Session of the IHO Assembly

*Doc. C3-07.1A*

*Presentation*

Director Iptes and Assistant Director Alberto Costa Neves reviewed the arrangements for the 2<sup>nd</sup> Session of the IHO Assembly, to be held in Monaco from 20 to 24 April 2020. The Finance Committee would meet on the afternoon of 20 April, and the formal opening ceremony would take place on the morning of 21 April, in the presence of His Serene Highness Prince Albert II of Monaco.

The provisional agenda would be circulated by 21 October 2019, and reports and other documents by 21 February 2020. Proposals from the Council, Member States and the Secretary-General should be submitted by 15 December 2019, and comments on those proposals by 15 January 2020. The Red Book would be circulated in February 2020.

<sup>1</sup> Post-meeting note: The details of the amendments are available in the e-SPRWG Letter 06/2019 available on the SPRWG webpage.

<sup>2</sup> Note: See IHO CL 20/2018 and 66/2017 as useful references.

The Secretary-General described the varied programme of social and side events, including Member State and industry exhibitions, the S-100 showcase and ship visits.

The US announced that it was preparing a “Science on a Sphere®” exhibition at the Monaco Yacht Club<sup>3</sup>, and invited other Member States to provide datasets and National Hydrographer photographs for inclusion in the exhibition.

**Decision C3/50: The Council** noted the objectives and provisional programme of A-2, including the half-day session on IHO-100.

**Decision C3/51: The Council** endorsed the concept of having an S-100 showcase and Seabed 2030 Project presentation to be included in the programme of A-2.

## **7.2. Proposal to establish an “IHO Innovation and Technology Laboratory” supported by, and situated in Singapore.**

*Doc C3-07.2A      Innovation and Technology Laboratory - Presentation*

Singapore introduced its proposal to set up, host and finance an IHO innovation and technology laboratory. The proposed laboratory would facilitate research or investigative projects and/or test-bedding in the field on behalf of Member States, IHO bodies or other stakeholders; create knowledge for standard-setting; and promote a multidisciplinary, collaborative environment under the guidance of a governing board chaired by the IHO Secretary-General or his representative and including representatives of Member States. The cost of the required workspace and human resources, estimated at US\$ 163,000 per annum, would be borne entirely by Singapore. It was proposed that the laboratory should be finally approved by A-3, and it would therefore not be set up until 2022.

Participants expressed their warm appreciation for the generous offer made by Singapore, acknowledging that it could fill a gap in long-term planning and innovation, which were often difficult for national hydrographic offices overwhelmed by immediate demands. They asked, however, for more details of the proposed governance structure for the new laboratory, expressing concerns about its relationship with HSSC and the regional ENC coordinating centres (RENCs), and the potential involvement of academia and the private sector. Comments in the Redbook were also acknowledged.

The Secretary-General noted that the laboratory might be placed in a new governance structure, called the “IHO Technology and Innovation Network” or similar, with two other subsidiary bodies with an unconventional status, namely the Data Centre for Digital Bathymetry (DCDB), and the IHO Geospatial Information Registry, which both were governed by a Memorandum of Understanding. IHO’s role would be to coordinate the work of the laboratory with that of other IHO bodies, for instance through the Chair of HSSC. He noted that the proposed laboratory was intended to work on issues related to shipping, in addition to hydrography proper, and was therefore not fully aligned with the IHO work plan. Its creation would, however, need to be reflected in the Strategic Plan.

Singapore said that the laboratory would provide an opportunity to direct the work of the private sector towards the strategic goals of IHO, potentially under the guidance of HSSC. Detailed governance plans had not yet been drawn up, pending the input of the Council.

**Decision C3/52: The Council** commended **Singapore** for this initiative and generous offer, and recognized the need to accelerate innovation in our fields of endeavour.

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<sup>3</sup> Post meeting note : On Friday 18 October, the IHO Secretariat got the information from the Yacht Club of Monaco that the exhibition room was not available anymore for the “Science on a Sphere” exhibition.

**Decision C3/53:** In general, **the Council** supported the principles for the establishment of an IHO Innovation & Technology Lab noting that innovation & technology should therefore also be reflected in the proposed Revised Strategic Plan.

**Action C3/54:** **The Council** invited **Singapore** supported by volunteer drafters of the Council to consider the possibility of submitting a proposal to the Assembly at A-2 for further consideration, based on the principles explained at C-3, but including terms of reference, a draft business plan and providing clarification on the governance with respect to the IHO relationship (HSCC, RENCs, etc.). (deadline: 15 December 2019).

### 7.3. Application of ISO9001:2015 Quality Management Principles to the IHO Structure

*Doc. C3-07.3A      Application of ISO9001:2015 Quality Management Principles to the IHO Structure that entered into force on 6 November 2016 - Presentation*

*Doc. C3-07.3B      Comments by Secretary-General on Proposal in Doc. C3-07.3A*

Netherlands proposed that the application of ISO quality management principles to the IHO management structure would be a suitable theme for the Council during the intersessional period between A-2 and A-3.

The Secretary-General suggested that any review should be postponed until more experience had been gained under the relatively recently adopted Assembly/Council structure. The implementation of the Revised Strategic Plan or the S-100 framework were potential themes of more immediate relevance.

Participants agreed that the suggestion of a review was premature, but acknowledged the value of applying ISO quality management principles in IHO's work, as most national hydrographic offices already did in their own operations. It was agreed that effective implementation of the Revised Strategic Plan was the most appropriate theme for the next intersessional period.

**Decision C3/55a:** **The Council** noted the proposals of the Netherlands for a theme for the 2020-2023 cycle of the Council.

**Action C3/55b:** **The Council Chair** to report at A-2 on the main theme that the Council should address from C-4 to A-3 being "the effective implementation of the Revised Strategic Plan", keeping in mind to apply the principles of ISO 9001 for. (deadline: A-2).

### 7.4. Preparations for the triennium of IHO centenary celebrations (IHO-100)

*Doc. C3-07.4A      Preparations for the triennium of IHO centenary celebrations (IHO-100) - Presentation.*

The Secretary-General described the series of prestigious events organized to celebrate the 100<sup>th</sup> anniversary of the foundation of IHO in 1921. The commemoration had begun in 2019, the 100<sup>th</sup> anniversary of the inaugural International Hydrographic Conference in London, with an exhibition of historical charts of the Mediterranean Sea at the Monaco Yacht Club and an international symposium on a historical approach to measurement and protection of the oceans. A half-day special session on IHO-100 would take place during A-2. In 2021, a prestigious peak event would be held in collaboration with the Oceanographic Institute of Monaco on World Hydrography Day, 21 June. The

13<sup>th</sup> session of IRCC would be held back-to-back with the event. A prestige book was to be published, with the generous in-kind support of Germany.

**Decision C3/56: The Council** commended the Secretary-General for his work and endorsed the proposals made for the celebrations (planned activities, evolving associated costs as decided at C-1, identify in-kind contributions) and noted the peak event on 21 June 2021 in Monaco as well as the progress report of the IHO-100 Prestige Book.

## 8. NEXT MEETING

8.1 The Chair highlighted the proposed dates for C-4 as 20-22 October 2020.

**Decision C3/57: The Council** agreed to hold C-4 in Monaco, at the IHO Secretariat, from 20 to 22 October 2020.

## 9. ANY OTHER BUSINESS

**9.1** The Chair presented the Secretary-General with a rare copy of an IHO publication for the IHO library: Special Publication No 39, *Radio Aids to Maritime Navigation and Hydrography*, issued in 1956.

**9.2** On behalf of SAIHC, the issue on the recognition of additional satellite service providers was raised and the challenges of increased costs which it had introduced. The Secretariat explained the background to the uncertainty caused by amendments to the wording in the revised ToRs for the IMO Enhanced Group Call (EGC) Coordinating Panel at MSC 101. He articulated the view of the Chair of the IMO EGC Coordinating Panel and the Chair of the WNWNS-SC that NAVAREAs, METAREAs and RCCs should sign contracts with all recognized mobile satellite service providers in their sea area. If this caused a concern, he indicated the action which should be taken by individual authorities in addressing these concerns at the IMO. It was noted that the concerns therefore remained and needed to be addressed.

**Decision and Action C3/58: The Council** noted the information provided by the United Kingdom by delegation of the SAIHC Chair on the possible increasing costs in the activities of NAVAREA Coordinators...

...and encouraged **Member States** to support the IHO (WWNWS-SC) paper at NCSR-7 in January 2020 (See also IHO CL 50/2019, para. 8). (deadline: NCSR-7).

**9.3** The Secretary-General indicated that more responses from Member States were required for IHO CL 33/2019 for MS to indicate in which RHC Member States wished to be counted for the Council.

**Action C3/59: The Council** noted the reminder made by the Secretary-General to respond to IHO CL 33/2019 (declaration for the allocation of seats by RHCs): (deadline 20 October 2019)

## 10. REVIEW OF ACTIONS AND DECISIONS OF THE MEETING

The Assistant Secretary went through the identified actions, providing brief comments and explanations for each action and decision.

With regard to the Future of Nautical Paper Chart, the Chair of HSSC suggested the final aim of the NCWG would be the generation of draft guidance for submission to HSSC and subsequently Council. The Chair suggested simply for HSSC to report to Council on the way forward.

The Chair noted that the HSSC and IRCC lists of key priorities would be captured in the outcome summary report of the meeting.

## **11. CLOSURE OF THE MEETING**

Norway recognized Bruno Frachon (France), chair of SPRWG, for his lengthy contribution of work to the IHO and for leadership of SHOM. The Chair recognized Luigi Sinapi (Italy) for his work over the Council cycle and his leadership of HSSC and IIM. The United Kingdom recognized Parry Oei (Singapore) for his work as Chair of IRCC, the first IHO Assembly, and his leadership of hydrography in Singapore and the East Asian region.

The Secretary-General asked for the Secretariat to be associated with the comments about Bruno Frachon, Luigi Sinapi and Parry Oei. The Secretary-General also congratulated all the delegates on bringing the Council into being and making it a valuable body of the IHO. He highlighted the efforts made by the whole Secretariat's staff to make the conduct of the Council so smooth and efficient.

USA recognized Luiz Palmer, Vice-Chair of the Council, for his work in Brazil and the MACHC.

Germany thanked the Chair for his work in establishing the Council, bringing it into being, and building it into a significant and effective body within the IHO structure.

The Chair thanked the delegates for all their efforts and work in addressing the tasks undertaken by the Council.