

17th Conference of the IHO Hydrographic Commission on Antarctica (HCA)
14 June 2021
and
HCA Participation in the XLIII Antarctic Treaty Consultative Meeting,
Paris, France
18 June 2021

SUMMARY REPORT

- Notes:**
- 1) *All documents considered at the HCA-17 Conference are available on the HCA-17 webpage of the IHO website (<https://iho.int/en/hca17-2021>).*
 - 2) *For the sake of efficiency and simplicity, this summary report presents an expanded version of the [bulletin report](#) that was made available just after the Conference.*

- Annexes:**
- A. *HCA-17 agenda and timetable.*
 - B. *List of Decisions and Actions arising from HCA-17.*

Introduction

1. Initially planned in Paris, back-to-back with the XLIII Antarctic Treaty Consultative Meeting (ATCM XLIII), the 17th Conference of the IHO Hydrographic Commission on Antarctica was held in virtual format (VTC) on 14 June 2021 in one session for 3 hours. The HCA Chair and Secretary participated in the plenary VTC meeting of the ATCM XLIII (Working Group 2) on 18 June 2021.

Participation

2. The Conference was chaired by Dr Mathias Jonas, Secretary-General of the IHO, supported by Assistant Director Yves Guillam, HCA Secretary and Ms Caroline Fontanili (IHO Secretariat), as rapporteur. Forty-one delegates from 16 Member States out of 24 (Argentina, Australia, Brazil, Chile, China, France, Germany, India, Italy, Republic of Korea, Norway, South Africa, Spain, Uruguay, United Kingdom, USA) and one subject matter expert (GEBCO IBCSO Project Representative), attended the meeting. Mr Patrick Dorr (NGA, USA) was re-elected as Vice-Chair.

Status report on the actions from HCA-16 - HCA Statutes

3. The Chair opened the meeting explaining the objectives of this bespoke virtual Conference with a shortened agenda (See Annex A), keeping in mind the goal to be able to meet in person in 2022, in conjunction with ATCM XLIV, to progress some important topics that cannot be discussed in depth in a remote format. National reports had not been requested for HCA-17.
4. The Conference considered the progress made on the decisions and actions from the previous Conferences and HCA-16 in particular, some of them, still pending

implementation or completion, were slightly amended and wording improved. This was the case for the action encouraging HCA Members to contribute to the IHO DCDB with survey data as a direct application of the Antarctic Treaty, Article II 1. (c) which states that “*scientific observations and results from Antarctica shall be exchanged and made freely available*”.

5. The US recommended to consider this Article of the Antarctic Treaty system as an incentive to amend the current HCA Statutes. Complementary reasons for the revision of the Statutes were presented to the participants such as the need:
 - a. to address the recommendations in the IHO Resolution 2/1997 as amended by the 2nd Session of the IHO Assembly;
 - b. to incorporate the last ATCM Resolution 6 (2019) on hydrography;
 - c. to address some components of the IHO Strategic Plan 2021-26;
 - d. to incorporate some former decisions and permanent actions into the Statutes;
 - e. to resolve some decision making possible inconsistencies;
 - f. to consider the timeline of conferences and meetings and the use of VTC;
 - g. to discuss the leadership status (Vice-Chair mandate extended to 3 years).
6. It was also noted that the IHO General Regulations (Article 8.e) might need to be reconsidered once the amendments to the Statutes of the HCA are approved, as the wording for membership in General Regulations is currently limited to Member States contributing to “*...INT Chart Coverage of Region M*” while the objectives of the HCA have a much wider scope.
7. HCA Members were invited to provide their comments on the proposed changes in order to adopt a finalized version at HCA-18 in 2022.

GEBCO IBCSO

8. An update on the development of the GEBCO IBCSO 2.0 was provided by Ms Laura Hehemann (AWI)¹. Following a call made at HCA-16 reinforced by e-HCA Letter 01/2021 dated 23 February 2021, France, Japan and South Africa were thanked for the provision of their data to support the project. The Conference took note that the GEBCO Polar Grid of IBCSO 2.0 in polar projection is nearing completion, with a resolution of 500 m, and a coverage extended to 50°S (60°S for IBCSO 1.0). The strategy for “*mapping the gaps*” in this area was also presented in the Powerpoint report. Due to technical communication issues, it was not possible to have an exchange with the presenter.

Update from the Hydrographic Priorities Working Group (HPWG) – Status of INT Charts and ENC Production

9. Mr Lee Truscott (UKHO), Chair of the HCA Hydrographic Priorities Working Group (HPWG) and Chart Coordinator for Region M, provided an outstanding review of the adequacy of the Maritime Shipping Routes in the Peninsula and a compilation of the updates received from Members on INT charts and ENC production. The format of the Conference did not allow an in-depth discussion on the proposals. Although principles were agreed to modify some corridors to better match traffic density AIS data, it was also suggested to consider the new Global Maritime Traffic Density Service in development by the US (NGA) to assess the MSR. This world-wide GMTDS, covering Antarctica as well, is planned to be included in INTGIS II layers in the near future in addition to the already existing EMODnet traffic density layer.

¹ AWI: Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research.

10. The HCA Secretariat thanked the HPWG Chair for the provision of the MSR in GIS-type format. They will be made available to all HCA Members within the IHO GIS/HCA/Quantarctica infrastructure.
11. HCA Members and ENC Producer countries in particular agreed that an in-presence HPWG meeting was necessary prior to HCA-18 to consider all the work and proposals made by the Chair so consolidated recommendations can be submitted for final approval at the Conference plenary.
12. During the review of pending actions related to the nautical charting coverage of Deception Island, the HCA noted the statement made by Argentina:
 - a. thanking Brazil, Germany, Spain, and United Kingdom for their cooperation (data provision for new Ed. of INT 9120) and particularly to the Region M Coordinator for his guidance and to the UK/US for their coordination;
 - b. proposing the simultaneous production of INT 9120 and equivalent UB4 ENC of Deception Island as a possible solution to solve pending issues and avoid duplication.
13. Noting the upcoming development of S-100 Services (experimental, then operational) and the requirements for the implementation of the S-100 Roadmap, the HCA Chair informed HCA Members his intention to report at IRCC-13 (22 – 24 June 2021), that the role and workload of Charting Regions Coordinators (HPWG Chair and Region M here, Region X ICCWG there) may need to be reconsidered and harmonized in RHCs in the near future.
14. Following the presentation on MSRs, the HCA Secretariat pointed out the existence of the new Strategic Performance Indicator SPI 1.2.2² of the IHO Strategic Plan 2021-2026 and informed HCA Members that the HPWG work, through MSR and analysis of CATZOC values, could be very supportive to automatically measure this indicator for the HCA. However, harmonization rules and adoption of a metric across RHCs are necessary beforehand, under IRCC umbrella. The HCA Chair indicated his intention to report at IRCC-13 on this matter which is also related to the evolution of the C-55 metric and its geographic/regional segmentation.

HCA Participation in ATCM XLIII

15. The Conference occurred in conjunction with the XLIII Antarctic Treaty Consultative Meeting where the IHO was invited, on Friday 18 June, to present its report to ATCM (Information Paper Nr 4). In accordance with ATCM Resolutions 5 (2008), 5 (2014) and 6 (2019), the HCA Chair stated that the IHO stands ready to support the implementation by the ATCM of these Resolutions, based on geographic and thematic priorities to be provided by ATCM to the IHO. The report, supported by Argentina, Chile and the US was noted by the ATCM.

Any Other Business

16. The HCA Chair informed the participants that the recent publication of an article³ in National Geographic recognizing the name “Southern Ocean” was noted by the IHO

² SPI 1.2.2 Percentage of navigationally significant areas (e.g. charted traffic separation schemes, anchorages, channels) for which the adequacy of the hydrographic knowledge is assessed through the use of appropriate quality indicators (2026:100%).

³ <https://www.nationalgeographic.com/environment/article/theres-a-new-ocean-now-can-you-name-all-five-southern-ocean>.

Secretariat. Related requests by media were provided with an explanation on how this name had been discussed in the course of the historic reviewing of S-23⁴. By means of this statement it was also pointed out that IHO itself is not a naming authority and has no mandate to denominate the name “Southern Ocean” to the area.

Conclusion

17. Despite the VTC format, the HCA Chair thanked the delegates for their active participation and contribution in the Conference. The List of Decisions and Actions is provided in Annex B.
18. Noting that the 3rd Session of the IHO Assembly will take place in April 2023, the Chair proposed that the 18th Conference of the IHO Hydrographic Commission on Antarctica be held in 2022, and the 19th Conference in 2024. The 18th Conference is planned to be arranged in conjunction with ATCM XLIV 2022 which is expected to take place in Berlin, Germany from 23 May to 2 June 2022 (*to be confirmed*).

⁴ The IHO is not itself a naming authority. The current edition of the IHO’s Publication for the Limits of Oceans and Seas (S-23) was published in 1953 (3rd edition) and does not include the term "Southern Ocean" (See page 4).

The Antarctic or Southern Ocean has been omitted from this publication as the majority of opinions received since the issue of the 2nd Edition in 1937 are to the effect that there exists no real justification for applying the term Ocean to this body of water, the northern limits of which are difficult to lay down owing to their seasonal change. The limits of the Atlantic, Pacific and Indian Oceans have therefore been extended South to the Antarctic Continent.

Hydrographic Offices who issue separate publications dealing with this area are therefore left to decide their own northern limits. (Great Britain uses the Latitude of 55° South).

Although this name to designate the southern waters of this hemisphere was included in the 2nd edition of the IHO Publication for the Limits of Oceans and Seas published in 1937, the majority of opinions from Member States received after this were not in favour to this inclusion. In short: the "Southern Ocean" became an official ocean in 1937, but lost its official status in 1953. It is however recognized that GEBCO does use IBCSO for “International Bathymetric Chart of the Southern Ocean”.

**IHO Hydrographic Commission on Antarctica (HCA)
17th Conference, Video Teleconference (VTC), 14 June 2021**

AGENDA AND TIMETABLE

Monday 14 June (UTC+2, CEST)	HCA-17
1245	Join the meeting: https://global.gotomeeting.com/join/912159205
1300	1. Opening – Welcome Address <i>Docs: HCA17-01A List of Documents HCA17-01B List of Participants HCA17-01C HCA Chair Introduction</i>
1310	2.- Approval of Agenda and Timetable <i>Docs: HCA17-02A Agenda & Timetable</i>
1315	4.- Election of Vice-Chair <i>Docs: HCA17-04A Election of Vice-Chair</i>
1320	3.- HCA Membership Status <i>Docs: HCA17-03A HCA Membership and Observers List HCA17-03B HCA Statutes in force HCA17-03C Proposed Amendments to HCA Statutes</i>
1400	5.- Review of Status of List of Actions resulting from HCA-16 <i>Docs: HCA17-05A Status of Actions List from the 16th HCA Conference HCA17-05B Minutes of the 16th HCA Conference</i>
1410	7.- HCA activities in relation to the IHO Work Programme 7.1 Interaction with IOC GEBCO /IBCSO/Seabed 2030 <i>Docs: HCA17-07.1A GEBCO/IBCSO 2.0/Seabed 2030 Project Report</i>
1430	Break
1450	7.2 HCA Hydrography Priorities Working Group <i>Docs: HCA17-07.2A HPWG Update HCA17-07.2B Revised Survey Plan and Short List HCA17-07.2C INT Charts and ENC's Schemes and Production Status for Region M</i>
	7.3 HCA National Reports <i>Skipped</i>

1510	7.5 Global Maritime Density Service (GMTDS) <i>Doc: HCA17-07.5A GMTDS</i>
1520	6.- IHO and ATCM <i>Docs: HCA17-06.1A IHO Report to ATCM XLIII</i> <i>HCA17-06.1B Note #5 from the ATCM XLIII Secretariat</i> <i>HCA17-06.1C IHO Participation/attendance in the virtual ATCM XLIII</i> <i>(to be discussed)</i>
1540	8.- Any Other Business – Preparation of IRCC-13 and C-5
1545	9.- Date and Venue of Next Conferences <i>HCA-18, in conjunction with ATCM XLIV, Berlin, Germany (2022) (to be discussed)</i>
1550	10.- Review of the Decisions and Actions List
1600	11.- Closure – End of Conference
End of HCA-17	

LIST OF DECISIONS and ACTIONS FROM HCA-17
(as of 14 June 2021)

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
	1.	Opening – Welcome Address		
	2.	Approval of Agenda and Timetable		
HCA17/01		HCA Members approved the agenda and timetable.		Decision
	3.	HCA Membership Status and Statutes		
HCA17/02		HCA Members and Observers to provide their updates on the HCA Membership List to the HCA Sec. as appropriate.	Permanent	
HCA17/03		<p>Noting the various concerns, comments and pending discussion points, HCA Members to provide their comments/views/inputs to HCA Secretariat on the proposed revised Statutes (Doc. HCA17-03C refers).</p> <p>HCA Secretariat (supported by Vice-Chair) to submit a new proposal for amendments to the Statutes to HCA Members based on the current version of the Statutes in force and taking into account outcome of the discussion and comments on proposal made at HCA-17.</p>	<p>30 September 2021</p> <p>HCA-18 (with views to propose amendments on General Regulations at C-6 for A-3 if appropriate)</p>	
	4.	Election of Vice-Chair		
HCA17/04		Mr Patrick Dorr (NGA, USA) was re-elected as HCA Vice-Chair.		Decision
	5.	Review of Status of List of Actions resulting from HCA-16		

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
HCA17/05 (former HCA16/06, HCA15/07)		HCA agreed that, as a matter of principles, the current producer nations in Antarctica should be encouraged to consider the future production and distribution of S-100 based products for Antarctica, in their areas of charting responsibilities.		Decision
HCA17/06		Once WEND100 Principles are approved by IHO Member States together with Guidelines for their Implementation and Guidelines for S-101 ENC Scheming, HCA Secretariat in liaison with Region M Chart Coordinator to make a proposal on the organization in HCA for the coordination of the implementation of S-101 ENC Schemes and other S-100 Services.	HCA-19 (2024)	
HCA17/07 (former HCA16/07b)		HCA Members , binded by the Antarctic Treaty ⁵ , are encouraged to ensure that bathymetric information contained in their surveys is transmitted to the IHO DCDB (new ATCM Resolution No 06/2019, as approved at ATCM XLII).	Permanent	Decision
HCA17/08 (former HCA16/08, HCA15/11)		IAATO to check if the new approved guidance on crowd-sourced bathymetry (B-12) can be implemented technically – possibly by export from Voyage Data Recorder recordings (experimentation in progress).	HCA-18	
HCA17/09 (former HCA16/09, HCA15/14)		HCA Chair (in liaison with ARHC Members) to monitor the preparation of the messages in support of the use of low frequency multibeam echosounders (follow-up action in relation to the United Nations theme “ <i>anthropogenic underwater noise reduction</i> ”).	HCA-18	Action in progress in ARHC (CA leads)
HCA17/10 (former HCA16/18)		HCA Secretary provided a composite report of the actual CATZOC values in Antarctica... ...and invited HCA Members to re-assess and allocate CATZOC values in existing Unassessed areas where possible (Source: M_QUAL data from RENCs, as of 13 May 2021).	HCA-18	

⁵ Antarctic Treaty, Article II 1.(c) states “*scientific observations and results from Antarctica shall be exchanged and made freely available.*”

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
HCA17/11 (former HCA16/17, HCA15/33)		Noting the benefits that can be made from CATZOC values in HCA ENC's for risk assessment purposes, HCA agreed to keep the C-55 geographic segmentation in Antarctica as it is, for the time being.	Permanent	Decision
	6.	IHO and ATCM		
	6.1	IHO Report to ATCM XLIII		
HCA17/12		HCA Chair to consider using some examples of Peninsula MSR ⁶ Review in the IHO report to ATCM XLIV.	March 2022	
HCA17/13		HCA agreed on the key messages and proposals made to ATCM XLIII in the IHO Report.		Decision
HCA17/14 (former HCA16/11)		Noting that pro-active actions are necessary to have "IHO activities" in their agenda meetings, HCA Chair (ideally represented by HCA Member according to the host country/region) to consider the possibility of participating regularly in ATCM, COMNAP, SCAR and IAATO meetings. .	HCA-18, and as appropriate	
HCA17/15		HCA noted that HCA Chair is registered in ATCM XLIII to participate in the virtual session planned on 18 June 2021, when the IHO Report (Information Paper) will eventually be considered by ATCM.		
	7.	HCA activities in relation to the IHO Work Programme		
	7.1	Interaction with IHO-IOC GEBSCO / IBCSO		
HCA17/16 (former HCA16/14, HCA15/22)		HCA Chair expressed his gratitude to HCA Members who provided existing survey coverage metadata to IHO Sec. and to the GEBSCO IBCSO Project Leader (Dr Boris Dorschel, AWI).		Decision
HCA17/17		HCA noted the progress report on the development of IBCSO 2.0 by the GEBSCO representative (Doc. HCA17-07.1A refers).		

⁶ Maritime Shipping Routes.

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
HCA17/18 (former HCA16/15)		HCA to assess/monitor the effectiveness of the data flow processes between Seabed 2030 Data Centres and the IHO DCDB.	HCA-18	
	7.2A&B	HCA Hydrography Priorities Working Group		
HCA17/19		HCA took note of the report and agreed on the principles proposed by the HPWG Chair (Doc. HCA17-07.2A refers) to modify some MSR with final cross-check of modifications to be made against the last NGA GMTDS data, once available (US, HPWG Chair) and invite COMNAP and IAATO to comment on the resulting proposals. HCA Members to provide any outstanding updates to incorporate in the report.	HCA-18 (update report)	Decision
HCA17/20		HCA Secretariat thanked the HPWG Chair for the provision of the updated MSRs to be used in GIS (2 versions to be made available: “historical” version (June 2016) derived from graphics, proposed amended version (June 2021). HCA Secretariat to make them ⁷ available to all HCA Members in the IHO GIS/HCA/Quantarctica infrastructure.	Asap/HCA-18	
	7.2C	INT Charts and ENC Scheming and Production		
HCA17/21 (former HCA16/20, HCA15/25, HCA14/17)		AR, CL, ES, GB (lead as Region M Chart Coordinator), with the assistance of the IHO Secretariat if deemed necessary, to circulate to HCA Members a case study describing the different technical options and associated data exchange procedures available for the long term, aiming to ensure a consistent, unique and maintained charting coverage (both INT charts and ENCs) of Deception Island. Outcome to be considered as best practices for other areas.	Region M Meeting prior to HCA-18	

⁷ Note from HCA Secretary: To be considered after IRCC13 after harmonization across all RHCs, as a possible useful (HCA) metric/tool for the new SPI 1.2.2 and the automated calculation of the indicator using CATZOC values.

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
HCA17/22 (former HCA16/21)		Meanwhile, and during this case study phase (see Action HCA17/20 above), HCA urges the different producers of charts covering Deception Island (AR, CL, ES, GB) to establish a robust technical procedure iaw S-4 and S-11, to exchange <u>data</u> that are relevant for safe navigation in this area, and report to the HCA Chair/Secretary on the progress made in the development of this procedure.	HCA-18	
HCA17/23		<i>Left blank intentionally</i>		
HCA17/24	7.5	HCA noted the US presentation on Global Maritime Traffic Density Service (GMTDS).		
	8.	Any other business – Preparation of IRCC-13 and C-5		
HCA17/25		HCA Chair informed the participants that the recent publication of an article ⁸ in <i>National Geographic</i> recognizing the naming Southern Ocean was noted by the IHO Secretariat. Related requests by media were responded with explanations on how this name has been discussed in the course of the historic reviewing of S-23 ⁹ . By means of this statement it was also pointed out that IHO itself is not a naming authority and has no mandate to denominate the “Southern Ocean” to the area.		Information
	9.	Date and Venue of Next Conferences		
HCA17/26		Noting that ATCM XLIV (2022) is likely to be in Berlin (Germany) and the importance to have a face-to-face meeting, HCA-18 is planned in Germany (to be confirmed) during the same period of the ATCM meeting, with an extra day for a meeting of the HPWG and Region M Coordination, prior to the plenary.		Decision

⁸ <https://www.nationalgeographic.com/environment/article/theres-a-new-ocean-now-can-you-name-all-five-southern-ocean>

⁹ Note from the IHO Secretariat: the IHO is not itself a naming authority. The current edition of the IHO’s Publication for the Limits of Oceans and Seas (S-23) was published in 1953 (3rd edition) and does not include the term "Southern Ocean". Although this name to designate the southern waters of this hemisphere was included in the 2nd edition of the IHO Publication for the Limits of Oceans and Seas published in 1937, the majority of opinions from Member States received after this were not in favour to this inclusion. In short: the "Southern Ocean" became an official ocean in 1937, but lost its official status in 1953. It is however recognized that GEBSCO does use IBCSO for “International Bathymetric Chart of the Southern Ocean.

Decision/Action	Agenda Item	Details	Target Date	Status (June 2021)
HCA17/27		HCA Members to consider the possibility of hosting HCA-19 in 2024 and report to the HCA Secretariat at HCA-18.	HCA-18	