



**19th Conference of the IHO Hydrographic Commission on Antarctica (HCA)
Venice, Italy, hybrid, 16 – 18 April 2024
&
HPWG¹, Region M ICCWG² and S-100 Workshop, 15 April 2024**

SUMMARY REPORT

Notes: 1) *All documents considered at the HCA-19 Conference are available on the HCA-19 webpage of the IHO website (<https://iho.int/en/hca19-2024>).*
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-19 agenda and timetable.](#)
B. [List of Decisions and Actions arising from HCA-19.](#)

Introduction

1. The 19th Conference of the IHO Hydrographic Commission on Antarctica was held as a hybrid event, from 16 to 18 April, at the Army Officers Club in Venice, Italy, hosted by the Italian Hydrographic Office (IIM). It was preceded by a technical workshop (HPWG, Region M ICCWG and S-100) on the 15th of April. A video teleconference platform was set up for the duration and operated by contracted IT support.

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. Fifty eight registered delegates from 21 out of 27 Member States³ (Argentina, Australia, Brazil, Chile, China, Colombia, France (including the Deputy Director from the French Polar Institute Paul-Emile Victor -IPEV), Germany (including the Lead of the Seabed 2030 Southern Ocean Regional Centre (SORC), Greece, Italy, Netherlands, Norway, Peru, Poland, Republic of Korea, Russian Federation, Spain, Türkiye, United Kingdom, USA, Venezuela and three Observers (Institute of biochemistry and biophysics - Polish Academy of Sciences⁴, and SCAR). The Chair made a special welcome to the Netherlands, Poland and Türkiye as new HCA members since the 3rd Session of the Assembly.

Opening address - Status report on the actions from HCA-18 -

3. The Chair opened the meeting by reminding the participants of the fundamental principles of the Antarctic Treaty (1959) and the importance for HCA to become

¹ HPWG : HCA Hydrography Priorities Working Group.

² Region M ICCWG : Region M International Charting Coordination Working Group.

³ Apologies received from New Zealand, South Africa and Uruguay. Australia (who registered as face-to-face) participated online.. India was registered but not present.

⁴ Also as Member of COMNAP.

involved in the programmes and actions in relation to the impact of climate change in this specific region.

4. The HCA considered the progress made on the decisions and actions from the previous HCA-18. It was reminded in particular that 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 responsibility. They were also reminded to ensure that bathymetric information contained in their surveys is transmitted to the IHO DCDB (ATCM Resolution No 06/2019).

Interaction with IOC GEBCO/IBCSO/Seabed 2030

5. An update was given by Dr Boris Dorschel, from the Alfred-Wegener Institute (AWI), in his capacity as SORC Lead on the development of the Seabed 2030 and the IBSCO. The Member States were invited to engage with their national marine research institutes to improve their contribution to GEBCO / Seabed 2030. Following this update, the GEBCO Guiding Committee (GGC) Chair, Mr Evert Flier, highlighted the new GEBCO strategy and Governance report, as well as the IHO DCDB data holdings in Antarctica. It was agreed that the IHO in general⁵ should better depict the data flow for making contributions and promote it at high level (ATCM, and others contributing parties) to stimulate the provision of data to the IHO DCDB and metadata survey coverage (planned and existing) and, in return, facilitate the pull-push mode to get a one stop-shop discovery access with an update on an annual basis at least.

IHO liaison with ATCM, SCAR, IAATO, and other partners

6. Since HCA-18 held in 2022 and noting that the HCA Secretary delivered a report at ATCM XLV in Helsinki, Finland in 2023, the HCA Chair informed HCA Members that the ATCM Executive Secretary had been informed by the HCA Secretariat that no IHO report would be provided in 2024 for ATCM XLVI, Kochi, India. Some HCA Members confirmed that they would be present at this very meeting. They were invited to act as HCA ambassadors.
7. A very substantive report was delivered remotely by Dr Chandrika Nath, SCAR representative. The HCA noted the information for a better understanding of future sea level change in Antarctica as well as the announcement of the 5th International Polar Year 2032-2033, to be considered as a possible input to the Revised IHO Strategic Plan. IAATO was thanked for sharing all IAATO reports to ATCM XLV (2023). The IAATO report can be consulted on the HCA webpage as unfortunately Dr Lisa Kelley, IAATO representative, could not attend.
8. The HCA Secretariat noted that COMNAP had been invited to send a representative to the meeting, and that Dariusz Puczko, from the Polish Academy of Sciences, was the designated COMNAP representative to the meeting, as HCA Observer. The HCA Secretariat also reported on the recent correspondence they had with the COMNAP Secretariat which posed questions to COMNAP about the regular, often duplicate,

⁵ GGC Chair in liaison with IHO Secretariat.

hydrographic surveys undertaken by national Antarctic programs and the gaps in data. The HCA Secretariat had also asked about what tools used by COMNAP could be recommended to scientific operators in their activity to fill data gaps. In email reply the COMNAP Secretariat confirmed that the ATCM had agreed Resolution 6 (2019) “Hydrographic Mapping of Antarctic Waters” that recommended that governments ‘give priority to reviewing existing bathymetric data holdings and collecting new bathymetric data in the Antarctic region...including...as appropriate to undertake hydrographic and bathymetric data collection on all their Antarctic voyages, as practicable;’. As the vessels often regularly use the same routes season after season, this resulted in duplicate data and many areas that were not covered by national Antarctic program vessels.

9. The HCA Secretary reminded the importance for HCA to carefully prepare ATCM XLVII (2025), due to Priority Task#9 of the ATCM Multi-Year Strategic Work Plan: the IHO is expected to report on the progress made in the improvement of hydrographic surveys and products in Antarctica. Graphics and maps are expected and a preparation plan for this action is pencilled in the list of decisions and actions from HCA-19. Contribution is expected from GEBCO, Seabed 2023, IBCSO, HPWG and HCA Members in particular.

National HCA Members’ Summary Reports

10. The national reports were provided by those HCA Members who were present and also those connected remotely. These reports were of a high standard and very informative. Once again, the emphasis was on the sharing of all data collected and to providing them either to the IHO DCDB and/or the GEBCO/Seabed 2030, in accordance with the Antarctic Treaty general principles and the HCA statutes.
11. The new assets available or planned, as described in the reports, demonstrated that numerous HCA members are strengthening their engagement in the Antarctic.

Workshop (HPWG, Region M ICCWG, S-100)

12. On the day before the opening of the HCA Conference, Lee Truscott (UKHO), Chair of the Hydrography Priorities Working Group (HPWG) and the Region M International Charting Coordination Working Group (ICCWG), ran a workshop for the participants to have opportunities to share their views on a significant number of technical proposals over the Antarctica Peninsula. Based on the information provided in national reports and multiple bilateral exchanges prior to the Conference, the Chair reported on the survey activities in the region and proposed various options on the evolution of charting schemes (INT charts and ENCs) in the region, aiming to meet user requirements, to avoid duplication between producers and inconsistencies across different products
13. Besides the Peninsula, the HCA Members active in these regions were invited to collate relevant data and provide MSR⁶ information, if any, to the HPWG Chair for subsequent analysis against AIS data in preparation of the next Conference. The

⁶ Maritime Shipping Routes.

members were also requested to supply survey metadata to HCA GIS, through the HPWG chair, or using the IHO online formstack submission process available on the HCA webpage.

14. The HCA Secretariat agreed to liaise with IALA to consider providing their aids to navigations (buoys and beacons) metadata (if any) to the IHO Secretariat for HCA GIS repository.
15. The provisional decisions on both topics (HPWG and Charting Coordination) were captured to be discussed in plenary. The HPWG Chair offered to have VTC meetings as and when required, before the next HCA Conference.
16. Mr Lee Truscott and Ms Laura Caton (UKHO) were commended for their outstanding preparation work on the charting schemes, in the weeks preceding HCA-19.
17. Due to the short remaining time available in the workshop, the HCA Secretariat, with reference to the Action decided at HCA-18 (Action HCA18/41 in particular), provided a short brief on the S-100 Coordination issues in Region M to be discussed in plenary. The new draft List of INT Charts/ENCs/S-1xx Coordinators per Charting Region (inc. Region M) - that had been prepared for the WENDWG-14 meeting in February 2024 - was introduced to the participants (See: www.iho.int > Publications > Standards > S-11 > Part B⁷).

HCA GIS and INTToGIS III

18. The HCA Secretariat provided an update on the development of INTToGIS III. A presentation was given on the structured management plan prepared in liaison with KHOA (Republic of Korea) including the changes of the interface, adding S-100 products and ENDS⁸ (Phase I) and additional data layers and planning the different testing phases before it is commissioned. For the future of INTToGIS III, from 2025 – 2029, this tool is expected to facilitate planning / scheming ENCs, S-100 Products and ENDS by Member States, via a coordinated process within the RHCs. It will also be used to demonstrate the status of S-100 Products and ENDS planning and production to key stakeholders (IMO, CIRM, OEM) in IHO annual reports.
19. As for HCA GIS, another call was made for all data to be submitted along with survey coverage metadata to the IHO Secretariat using the HCA formstack, in particular if this tool is planned to be used more often to report to ATCM.

S-100 in Region M

20. In plenary, following up on the decision made at HCA-18 in 2022 and based on the outcome of the WENDWG-14 meeting in February 2024, the HCA Secretary reported on the way the HCA should handle the coordination of S-100 in Region M and how to

⁷ Under Part B for the time being, to be moved to Part C after HSSC-16 and IRCC-16 meetings, if approved.

⁸ Electronic Navigational Data Services.

consider a new distribution model (including cybersecurity), making easy access for end-users to obtain all S-100 Phase I products and ENDS. It was also recommended that the HCA was to support the S-100 communication strategy towards end-users, manufacturers, IMO, addressing the planning of geographic coverage of S100 based products and data services from 2026.

21. The HCA invited the Region M S-1xx Coordinators to submit a preliminary work plan, per product, to HCA Secretariat by January 2025.

Outcome of the Workshop Report and Way Forward

22. In plenary, the Chair of HPWG and Region M ICCWG reviewed all the proposals discussed during the workshop and the margins of the Conference throughout the week and submitted them for decision.
23. Decisions and actions on Hydrographic Priorities (HPWG) are attached as Appendix 1 to the HCA-19 List of Decisions and Actions, while those related to Charting (Region ICCWG) are attached as Appendix 2.
24. It was reminded that the priority was on ENC coverage and production, from which paper charts can always be derived through bilateral technical data exchange agreements.

Any Other Business – IHO Strategic Plan - Climate Change

25. Regarding the discussions on the strategy for the HCA in the future, the Vice-Chair delivered a report mainly focused on the impact of climate change including a set of proposals (simulation of new ice-free areas which will require surveys⁹, mean-sea level rise, etc.). After a fruitful discussion the HCA agreed to recommend IRCC that the HCA establishes and manages a specific HCA action plan on the subject, led by the Vice-Chair of HCA. As part of this action plan, the HCA Chair invited HCA Members to consider in particular the development of a digital twin of the navigable waters of the *Southern Ocean*, free of charge as far as possible, in the true spirit of the Antarctic Treaty.

Election of Vice Chair

26. The HCA Chair expressed his gratitude to the outgoing Vice Chair, Patrick Dorr (USA) for his six years of service and welcomed Chile (Rear Admiral Arturo Oxley), as the incoming Vice Chair. Chile will serve until the end of the first HCA Conference (2027) after the 4th IHO Assembly (April 2026).

Conclusion

⁹ Possibly as a contribution to the SCAR research project INSTANT.

27. In conclusion, Dr Mathias Jonas, Secretary-General of the IHO and HCA Chair wished to highlight four headlines to describe this very productive workshop and meeting.
- Coordination
 - Collaboration
 - Cooperation
 - Investment
28. The HCA Chair commended both the HPWG Chair, Lee Truscott who was assisted by Laura Caton for their hard work in the run up to this event. Sincere thanks were passed onto the Italian hosts for their heartwarming hospitality. The service provided and the proximity of all necessities was extremely conducive to a successful meeting.
29. Finally, the HCA Chair gave a moving farewell to Mr Yves Guillam – the outgoing HCA Secretary. His exceptional work and his outstanding dedication to the Hydrographic Commission on Antarctica was especially acknowledged and the participants rose to give him a standing ovation.
30. The next HCA 20 meeting will be held in Punta Arenas, Chile, from 2 to 6 December 2025.

IHO Hydrographic Commission on Antarctica (HCA)
19th Conference, Venice, Italy, 16 – 18 April 2024,
and HPWG, Region M and S-100 Workshop on 15 April 2024

AGENDA AND TIMETABLE

Note: all time in UTC+2, CEST.

Monday 15 April	
1100	Meeting Room Arrangements (IIM, IHO Secretariat)
1200-1330	Lunch
	HPWG, Region M ICCWG and S-100 Workshop
1330-1700	Workshop
1800	Antarctic informal gathering and ice-breaker
Tuesday 16 April	HCA-19 – Session 1
0900	<p>1. Opening – Welcome Address by Italian Navy representative– Administrative Arrangements (IIM)</p> <p><i>Docs: HCA19-01A List of Documents HCA19-01B List of Participants HCA19-01C HCA Chair Introduction</i></p>
0920	<p>2.- Approval of Agenda and Timetable – HCA Chair Report</p> <p><i>Docs: HCA19-02A Agenda & Timetable</i></p> <p><i>HCA19-02B HCA Chair Report (Art. 5.3 and 5.4 of the HCA Statutes refer, Decisions A3/17 and A3/19).</i></p>
0930	<p>3.- HCA Membership Status</p> <p><i>Docs: HCA19-03A HCA Membership and Observers List HCA19-03B HCA Statutes in force (since 24 May 2022)</i></p> <p><i>HCA19-03C General Regulations of the IHO (Follow-up Decision A3/17) (IHO Secretariat: implementation in progress).</i></p>
0950	<p>5.- Review of Status of List of Actions resulting from HCA-18</p> <p><i>Docs: HCA19-05A Status of Actions List from the 18th HCA Conference HCA19-05B Summary Report of the 18th HCA Conference</i></p>

1000	<p>7.- HCA activities in relation to the IHO Work Programme</p> <p>7.1 Interaction with IOC GEBCO /IBCSO/Seabed 2030</p> <p><i>Docs: HCA19-07.1A GEBCO/IBCSO 2.0/Seabed 2030 Project Report – Outcome of the Fifth Arctic-Antarctic and North Pacific Mapping Meeting</i></p>
1030-1050	Coffee Break
1050	<p>7.2 HCA National Reports</p> <p><i>Docs: HCA19-07.2A National Summary Reports (Argentina, Australia, Brazil, ...)</i></p>
1200-1330	End Session 1 - Lunch Break – Session 2
1330	<p>7.3 HCA Hydrography Priorities Working Group</p> <p><i>Docs: HCA17-07.3A HPWG Report and Outcome of the Workshop</i></p>
1500-1520	Coffee Break
1520	<p>7.2 HCA National Reports (cont.)</p> <p><i>Docs: HCA19-07.2A National Summary Reports (Argentina, Australia, Brazil, ...)</i></p>
1700	End of Session 2
Wednesday 17 April	HCA-19 – Session 3
0900	<p>6.- ATCM, COMNAP, SCAR, and IAATO</p> <p><i>Docs: HCA19-06.1A IHO Report to ATCM XLV, Helsinki, Finland 2023 and ATCM XLV Report</i></p> <p><i>HCA19-06.1B SCAR activities affecting the IHO</i></p> <p><i>HCA19-06.1C IAATO activities affecting the IHO</i></p> <p><i>HCA19-06.1D HCA Members participation/attendance in ATCM XLVI, Kochi, India, 2024</i></p>
0930	<p>7.5 IHO HCA GIS and INTToGIS III</p> <p><i>Docs: HCA19-07.5A Update on the IHO HCA GIS and INTToGIS III</i></p>
0950	<p>7.2 HCA National Reports (cont.)</p> <p><i>Docs: HCA19-07.2A National Summary Reports (Argentina, Australia, Brazil, ...)</i></p>
1030-1050	Coffee Break

1050	7.4 Region M ICCWG <i>Docs: HCA19-07.4A Region M ICCWG Report and Outcome of the Workshop</i>
1200-1330	End Session 3 - Lunch Break – Session 4
1330	7.6 S-100 in Region M <i>Docs: HCA19-07.6A Coordination, readiness status, outcome of the Workshop, of WENDWG-14.</i>
1500-1520	Coffee Break
1520	7.2 HCA National Reports (cont.) <i>Docs: HCA19-07.2A National Summary Reports (Argentina, Australia, Brazil, ...)</i>
1630	8.- Any Other Business – Preparation of IRCC-16 and C-8 <i>Docs: HCA19-08.1A Open Discussion – Inputs to the next IHO Strategic Plan for Antarctica (Climate Change, etc.) (Decision C7/37 refers)</i>
	End of Session 4
Thursday 18 April	HCA-19 – Session 5
0900	Ad hoc Working Sessions, as appropriate (S-100, HPWG, ICCWG, Seabed Mapping Plans in Region M, etc.), or any other agenda item not known at the time of this letter.
1030-1050	Coffee Break
1050	9.- Election of Vice-Chair <i>Docs: HCA19-09A Election of Vice-Chair (Art. 5.2 of the HCA Statutes refer)</i>
1115	10.- Date and Venue of Next Conferences <i>HCA-20, in November-December 2025 (dates to be confirmed), Punta Arenas, Chile</i> <i>HCA-21, 2027, dates venue to be discussed</i>
1130	11.- Review of the List of Decisions and Actions
1215	12.- Closure – End of Conference
1230	End of Session 5 – End of HCA-19

**19th Conference of the IHO Hydrographic Commission on Antarctica (HCA)
Venice, Italy (hybrid), 15 – 18 April 2024**

LIST OF DECISIONS and ACTIONS FROM HCA-19 including

- Appendix 1: HCA-19 HPWG Report and Decisions and Actions
- Appendix 2: HCA-19 Region M ICCWG Report and Decisions and Actions

(as of 18 April 2024)

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
	1.	Opening – Welcome Address		
HCA19/01		<p>HCA Chair thanked RAdm Massimiliano Nannini, Director of the IIM, for his warm welcome address in presence of the representative of the City of Venice, and Italy for hosting HCA-19 in such a historical and inspiring venue.</p> <p>He also welcomed the three new HCA Members (NL, PL and TR) as well as those Members present in-person in Venice and those attending by VTC.</p>		Decision
HCA19/02		<p>In his opening address, the HCA Chair reminded HCA Members with those fundamental principles of the Antarctic Treaty (1959), fully reflected in the HCA Statutes, for the purpose of the conduct of hydrography in the <i>Southern Ocean</i>. The importance for HCA to get involved in the programmes and actions in relation to the impact of climate change in this specific region was also highlighted.</p>		
	2.	Approval of Agenda and Timetable – HCA Chair Report		
HCA19/03		The HCA approved the agenda and timetable as proposed.		Decision

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
HCA19/04		The HCA noted the HCA Chair report on the IHO activities relevant for HCA since the last Conference. The HCA Chair also thanked Mr Lee Truscott (UKHO), HPWG Chair and Region M ICCWG Coordinator for conducting a fruitful workshop the day before HCA-19 opening.		Decision
	3.	HCA Membership Status and Statutes		
HCA19/05		HCA Members and Observers to provide their updates on the HCA Membership List to the HCA Sec. as appropriate.	Permanent	Last update: 26 February 2024
HCA19/06	03C	Following Decision A3/17, HCA noted that Art. 8(e) of the <i>General Regulations of the IHO</i> (IHO Publication M-1) had been amended accordingly.		Decision
	5.	Review of Status of List of Actions resulting from HCA-18		
HCA19/07 (former HCA18/08, ..., HCA15/07)	05A	HCA agreed that, as a matter of principle, 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 responsibility.	Reminder	Decision
HCA19/08 (former HCA18/09, ..., HCA16/07b)		HCA Members , binded by the Antarctic Treaty ¹⁰ , are encouraged to ensure that bathymetric information contained in their surveys ¹¹ (survey coverage metadata as a minimum) is transmitted to the IHO DCDB (ATCM Resolution No 06/2019, as approved at ATCM XLII).	Permanent	Decision
	6.	ATCM, COMNAP, SCAR, and IAATO		
	6.1	ATCM, SCAR, and IAATO		

¹⁰ Antarctic Treaty, Article II 1.(c) states “scientific observations and results from Antarctica shall be exchanged and made freely available.”

¹¹ Even those motivated by charting upgrades.

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
HCA19/09	6.1A	<p>HCA noted the highlights provided by the HCA Secretariat in the IHO report to ATCM XLV (2023): news areas free of ice, no adequate surveys for safe navigation, new S-100 Products and ENDS to come, and consideration for possible amendments to the IMO Polar Code, if appropriate (in liaison with ARHC).</p> <p>HCA Chair to raise these issues at ARHC-14 and then invite ARHC/HCA Members to consider an action plan for submitting relevant updates to the IMO Polar Code if appropriate.</p>	Sept. 2024	
HCA19/10	6.1A	<p>Regarding the ATCM Multi-Year Strategic Work Plan (See Section 9 in Annex of the ATCM XLV Final Report), HCA Chair to plan the preparation and insertion of a progress report in the IHO Report to ATCM XLVII.</p> <p>HCA Secretariat (supported by Chile, yy, UK) to prepare the annexes of the IHO Report (geographic survey coverage, graphics of products and services, overlays, or link to HCA GIS?).</p>	ATCM XLVII (2025) in Italy? – 3 months	
HCA19/11		<p>HCA agreed to plan a short HCA VTC01 early 2025 in preparation of ATCM XLVII (survey coverage status and plans, progress made since ATCM Resolutions on hydrography).</p>	March 2025	

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
HCA19/12	6.1A	<p>HCA Chair invited HCA Members who plan to participate in ATCM XLVI in Kochi, India, to network and promote HCA activities in social events and side-discussion meetings, and plenary sessions as appropriate.</p> <p>HCA Members are invited in particular to liaise with their heads of delegations to confirm the intention of the IHO to provide an update on the ATCM Multi-Year Strategic Work Plan (Section 9) in 2025 at ATCM XLVII.</p>	<p>ATCM XLVI</p> <p>May 2024</p>	
HCA19/13 (former HCA18/12, ..., HCA16/11)	6.1B, 6.1C	<p>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.</p>	<p>HCA-20, and as appropriate</p>	
HCA19/14	6.1B	<p>HCA commended Dr Chandrika Nath, SCAR representative, for her very comprehensive report and noted the information for a better understanding of future sea level change in Antarctica as well as the announcement of the 5th International Polar Year 2032-2033 IPY).</p> <p>HCA to consider this event as a possible input in the preparation of the IHO Strategic Plan 2027 – 2032 and associated 3-year Work Programmes.</p>	<p>A-4 (- 6 months)</p>	
HCA19/15		<p>By HCA invitation of HCA, Chile, as HCA Member, kindly agreed to represent the HCA at the forthcoming 11th SCAR Open Science Conference, planned in Pucón, Chile.</p>	<p>26-28 August 2024</p>	
HCA19/16		<p>HCA thanked Dr Lisa Kelley, IAATO representative for her continuous support to the IHO.</p>		

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
HCA19/17 (former HCA18/11, ..., HCA15/11)	6.1C	<p>IAATO to check if the new approved guidance on crowd-sourced bathymetry (B-12) can be implemented technically – possibly by exporting from Voyage Data Recorder recordings (experimentation in progress).</p> <p>Norway (as GGC Chair) to engage with IAATO Director of Operations on this matter.</p>	HCA-20	
	7.	HCA activities in relation to the IHO Work Programme		
	7.1	IHO-IOC GEBCO, IBCSO and Seabed 2030		
HCA19/18	7.1A	HCA noted the update on IBCSO version 2 (June 2022) provided by Dr Boris Dorschel (AWI) and the main outcome of the Fifth Arctic-Antarctic and North Pacific Mapping Meeting.		
HCA19/19 (former HCA18/19)	7.1B	Following up on ATCM Resolution 6 (2019), HCA Chair to invite HCA Members to report at HCA-20, as part of their national reports, how they engage with their national marine research institutes to improve their contribution to GEBCO / Seabed 2030. (survey data to be used for charts to be shared with GEBCO, no specific request for process data in charts due).	HCA-20	
HCA19/20	7.1B	<p>HCA noted the GEBCO update provided by the GGC Chair, highlighting the new GEBCO strategy and governance report, as well as the IHO DCDB data holdings in Antarctica.</p> <p>The GGC Chair suggested that the HCA invites the National Hydrographic Offices represented in HCA to participate in the CSB workshop held in April 2024 (IHO CL 14/2024 refers)</p>	To be considered for IHO Report to ATCM-47	

Decision/Action	Agenda Item	Details	Target Date	Status (April 2024)
HCA19/21 (former HCA18/15)		HCA noted the Olex issue and invited Members to contribute to the relevant IHO bodies (CSBWG, DQWG) on this matter.	HCA-20	
HCA19/22		HCA agreed that the IHO (GGC in liaison with IHO Secretariat) should promote (tutorial?) the data flow at high level (ATCM, and others contributing parties,) to stimulate the provision of data to the IHO DCDB and metadata survey coverage (planned and existing) and, in return, facilitate the pull-push mode to get a one stop-shop discovery access on an annual basis.	HCA-20	
	7.2A	National Reports		
HCA19/23		HCA noted the national reports delivered or provided by AR, AU, BR, CL, CN, CO, DE, ES, FR, GB, IT, JP, KR, NL, NO, NZ, PE, PL, RU, TR, US, VE and ZA and commended the HOs for the high quality of the information provided.		Decision
HCA19/24		In accordance with the Antarctic Treaty and HCA Statutes, HCA requested Russian Federation (DNO) to provide the metadata of the survey in Bellingshausen Sea to the HCA Secretariat...	Asap	
HCA19/25		HCA requested Russian Federation (DNO) to consider the provision of the the survey data in Bellingshausen Sea to GEBCO / Seabed 2030.	Asap, if possible by March 2025 (in preparation of ATCM-XLVII)	

	7.3A&B	HCA Hydrography Priorities Working Group		
HCA19/26		<p>Based on the inputs provided in national reports and several bilateral exchanges, the HPWG Chair reported on the survey activities in the region.</p> <p>The HCA welcomed the offer made by the HPWG Chair for VTC meetings, as and when required.</p>	In preparation of HCA-20	
HCA19/27		<p>The HCA approved the new additional complementary survey requirements (outstanding requirements for the Peninsula MSRs) as proposed by the HPWG Chair and provided in Appendix 1 to this List of Decisions and Actions (Doc. HCA19-07.3A refers, Peninsula Survey Plan, including amendments discussed and agreed at the workshop).</p>		
HCA19/28		<p>HPWG Chair to provide the HCA Secretariat with the new agreed Peninsula Survey Plan (as of HCA-19), for publication.</p>	Asap, no later than 30 April 2024	
HCA19/29 (former HCA18/26)		<p>Beyond the Peninsula, HCA Members active in these regions are invited to collate relevant data and provide MSR information if any to the HPWG Chair for subsequent analysis against AIS data in preparation of the next Conference.</p>	<p>September 2025</p> <p>HCA-20</p>	
HCA19/30		<p>HCA Members to supply survey metadata to HCA GIS, through or cc HPWG chair, using the online formstack submission process, keeping HPWG informed.</p>	Permanent	

<p>HCA19/31 (former HCA18/28)</p>		<p>HCA thanked IAATO for the review of regional Aids to Navigation.</p> <p>HCA Members to keep the current list available on the IHO HCA webpage up-to-date.</p> <p>HCA Secretariat to liaise with IALA for them to consider providing their metadata (if any) to the IHO Secretariat for HCA GIS repository.</p>	<p>HCA-20</p> <p>HCA-20</p>	<p>(Existing IALA risk assessment studies in Region M to be investigated)</p>
	<p>7.4A</p>	<p>Region M ICCWG</p>		
<p>HCA19/32</p>		<p>Based on the inputs provided in national reports and several bilateral exchanges, the Region M ICCWG Chair proposed options on the evolution of charting schemes (INT charts and ENC)s in the region.</p> <p>The HCA welcomed the offer made by the Region M ICCWG Chair for VTC meetings, as and when required.</p>	<p>In preparation of HCA-20</p>	
<p>HCA19/33</p>		<p>Based on the outcome of the workshop, the HCA approved the proposed evolution of the charting schemes and the allocation of the production to HCA Members in general.</p> <p>Subsequent decisions are reflected in the updated plan provided in Appendix 2 to this List of Decisions and Actions (Doc. HCA19-07.4A refers, including amendments discussed and agreed at the workshop and in plenary).</p>		<p>Decision</p>

HCA19/34		<p>Region M ICCWG Chair to provide the HCA Secretariat with the new agreed charting scheme (as of HCA-19), for publication.</p> <p>Accordingly, HCA Members to submit these agreed charting plans through INTOGIS iaw S-11 Part B (schemes).</p>	<p>Asap, no later than 30 April 2024</p> <p>May 2024</p>	
HCA19/35		<p>HCA commended Mr Lee Truscott and Ms Laura Caton (UKHO) for their outstanding preparation work on the charting schemes, in the weeks preceding HCA-19.</p>		Decision
HCA19/36 (former HCA18/39)		<p>The HCA reminded the Region M ICCWG recommendations on the general WEND principles/guidelines for the establishment of ENC Schemes in the region:</p> <ul style="list-style-type: none"> - where not ENC first, the INT chart and ENC scheme is aligned. - where producing ENC only, proposal <u>must</u> be circulated to Region M Coordinator in advance for being considered than submitted to HCA for formal approval. - iaw standards in force, all proposals <u>must</u> be designed to avoid overlaps. 	<p>Permanent</p>	
	7.5A	IHO HCA GIS and INTOGIS III		
HCA19/37		<p>HCA noted the report from the IHO Secretariat on HCA GIS and INTOGIS III.</p>		
HCA19/38 (former HCA18/43)		<p>All HCA Members to submit data and survey coverage metadata to IHO Secretariat using HCA submission formstack...</p> <p>... and HCA Secretariat to consider also harversting-type solutions when these data are already available on national portals.</p>	<p>All, Periodic (once a year, June)</p> <p>HCA-20</p>	<p>Any MS volunteering for experimentation?</p>

HCA19/39		HCA welcomed the offer from X, Y, Z to experiment INTOGIS III in Region M in particular, as planned in the development plan of this system.	Mid-September 2024	
	7.6A	S-100 in Region M		
HCA19/40 (former HCA18/40)		Anticipating the outcome of IRCC-14 on the recommendations from the WENDWG regarding the S-100 Implementation Roadmap per region, HCA agreed to establish an HCA S-100 Implementation Working Group (HCA Secretariat leads).		Decision
HCA18/41		<p>Following up on Action WENDWG12/33 (IGIF pathway matrix per S-1xx product, per RHC), HCA agreed on some guiding initial principles and leaders to fill the HCA S-100-IGIF Matrix:</p> <ul style="list-style-type: none"> - S-101: GB (as Region M Charting Coordinator, continuity by S-57 conversion) - S-102: DE (in liaison with AWI, as Seabed 2030 Data Centre/IBCSO) - S-104: US (in its global capacity in ocean modelling) - S-111: US/FR (in its global capacity in ocean modelling) - S-122: EC/DE (making benefits of experience gained in Ecuador and BSHC) - S-124: AR, AU, CL, ZA, NZ (as NAV Coordinators) - S-128: NO/GB (as Operators of PRIMAR/IC-ENC) - S-411 – Ice information: AR/CL/DE 	WENDWG-13/ HCA-19	Reminder
HCA19/41		HCA noted the new draft List of S-100 Coordinators under development (currently under S-11 Part B on the IHO website).	HCA-20 (maintenance at every HCA Conference	

HCA19/42		HCA invited the Region M S-1xx Coordinators (listed above in HCA18/41) to submit an preliminary work plan to HCA Secretariat .	January 2025 in preparation of the IHO Report to ATCM-47(and WENDWG-15) ...then HCA-20	
HCA19/43		The HCA noted the outcome of the WENDWG14 meeting and agreed on the global strategy for S-1xx coordination and production in Region M.	WENDWG-15/HCA-20	
	8.	Any other business – Preparation of IRCC-16 and C-8		
	8.1	Next IHO Strategic Plan for Antarctica (Climate Change, etc.) (Decision C7/37 refers)		
HCA19/44		HCA agreed in general with all the proposed actions identified in the open discussion on the IHO Strategic Plan and Climate Change (Doc. HCA19-08.1A refers).		Decision
HCA19/45		HCA Vice-Chair in liaison with US and HCA Secretariat to manage this specific HCA climate change action plan.	HCA-20	
HCA19/46		HCA Chair to include this proposed HCA Climate Change Action Plan in his report to IRCC-16 as well as the need to improve the relation between IHO activities (and HCA activities) and the UN Ocean Decade projects.	IRCC-16	
	9.	Election of Vice-Chair		

HCA19/47		<p>The HCA thanked Mr Patrick Dorr (NGA, USA) for his six years in service as active HCA Vice-Chair and elected Chile (RAdm Arturo Oxley, Director of SHOA) as new Vice-Chair.</p> <p>Chile will serve until the end of the first HCA Conference after A-4 (2027).</p>		Decision Art. 5.2 of HCA Statutes applies.
	10.	Date and Venue of Next Conferences		
HCA19/48		<p>HCA agreed on the principles that the workshops of HPWG and Region M ICCWG should be arranged as in-person meetings only.</p> <p>HCA also noted the comment from Australia on the value of hybrid meetings.</p>		Decision
HCA19/49		<p>HCA Members welcomed the confirmation of the offer from Chile to host HCA-20 in Punta Arenas, from 2 to 6 December 2025.</p>	HCA-20	Logistic information to be provided at least six months prior to the event.
HCA19/50		<p>HCA welcomed the preliminary offer from Türkiye to consider hosting HCA-21 in April 2027 (dates and venue to be confirmed at the next Conference).</p>	HCA-20	HCA Secretariat suggests no HCA Conference in 2026 due to A-4, VTC in 2026, if appropriate, or side discussion at A-4.
	12.	Closure – End of Conference		
HCA19/51		<p>In conclusion, Dr Mathias Jonas, Secretary-General of the IHO and HCA Chair, thanked all participants for their valuable inputs to the Conference, the Chair of HPWG and Region M ICCWG Coordinator, and the out-going HCA Secretary.</p>		