

Report of the PAME Project Team

August 20, 2024

Submitted by: Jonathan Justi and PAME Project Team (Sonja Bhatia (CA), Evert Flier (NO), Michael Brady (US), Hendrik Stang (DK)).

Executive Summary: This report provides an update on actions and decisions of ARHC13 (2023) with respect to PAME Project Team (PT). Recommendations are offered for consideration by the ARHC for the upcoming 12 months (Sept-Sept).

Reference:

- i) [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](#)
- ii) [ARHC Statutes \(edition 3.0\)](#)
- iii) [ARHC-PAME Memorandum of Understanding](#)
- iv) [ARHC-Arctic Council Joint Statement on Hydrography in the Arctic \(2021\)](#)
- v) [The PAME 2021-2023 \(2023-2025\) Work Plan](#)
- vi) [Caution Required when Using Nautical Charts of Arctic Waters” \(2017\)](#)
- vii) ATCM XLV (Helsinki, Finland (2023) “Report by the International Hydrographic Organization” IP15

BACKGROUND

ARHC13 identified the following actions for PAME PT:

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| ARHC-D12 | ARHC to set up a PAME-Engagement PT, evaluating and assessing further cooperation with PAME and the Arctic Council. |
| ARHC-A23 | ARHC tasks Jonathan Justi (NOAA, USA) to chair the PAME-Engagement PT and invites MS to provide contact details of PT members to Jonathan Justi by Oct 2023, ahead of C7. |
| ARHC-A24 | PAME-Engagement PT to draft ToR and establish a work plan specifying how ARHC may cooperate with PAME and the Arctic Council in the future |
| ARHC-A25 | PAME-Engagement PT to prepare recommendations to c/ARHC prior to potential PAME meeting in 2024 |
| ARHC-A26 | c/ARHC to consider ARHC participation at any upcoming potential PAME meeting notified by c/PAME-Engagement PT. |
| ARHC-A27 | PAME-Engagement PT to report to ARHC14 on their work plan, recommendations, and future collaboration with PAME and the Arctic Council |
| ARHC-A28 | PAME-Engagement PT to liaise with incoming c/ARMSDIWG |

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| ARHC-A29 | The PAME-Engagement PT to evaluate whether the Standing Cautionary Notice could be a joint PAME-ARHC document and to report to ARHC14 for further consideration. |
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This report provides a status on the actions with recommendations, as indicated below.

DISCUSSION

Please see the referenced Attachment as indicated in the Status column for the specific report and recommendations for discussion and action, as appropriate.

| Reference | Status |
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| ARHC-D12 ¹ and A23 ² | The Engagement PT includes: Sonja Bahtia (CA) Hendrik Justus Strang (DK), Evert Flier (NO), Jonathan Justi (USA), and Mike Brady (USA) STATUS: COMPLETED |
| ARHC-A24 ³ | See Attachment 1 (Draft TOR) |
| ARHC-A25 ⁴ | See Attachment 2 and pending outcomes of discussions at ARHC13 |
| ARHC-A26 ⁵ | PAME has not met in 2024 but has scheduled a virtual meeting in November 2024. |
| ARHC-A27 ⁶ | See Attachment 2 (Draft Work Plan) |
| ARHC-A28 ⁷ | PT member Hendrik Justus Stang is in ongoing contact with ARMSDIWG Chair Christian Thellufsen (DK) |
| ARHC-A29 ⁸ | See below |

Additionally, to connect ARHC to the wider IHO community, and in light of challenges shared by both polar regions, there are valuable insights to be drawn from the work of the Hydrographic Commission of Antarctica (HCA). The following section explores actions taken by the HCA that may offer relevant strategies for the ARHC to consider, fostering a bi-polar approach to hydrographic cooperation. The Antarctic region faces governance challenges that may relate to challenges in the Arctic. In this regard, the Hydrographic Commission of Antarctica meets annually and operates within the context of the Antarctic Treaty Consultative Mechanism. (ATCM). (See [Summary Report of HCA-19 and its List of](#)

¹ ARHC to set up a PAME-Engagement PT, evaluating and assessing further cooperation with PAME and the Arctic Council.

² ARHC tasks Jonathan Justi (NOAA, USA) to chair the PAME-Engagement PT and invites MS to provide contact details of PT members to Jonathan Justi by Oct 2023, ahead of C7.

³ PAME-Engagement PT to draft ToR and establish a work plan specifying how ARHC may cooperate with PAME and the Arctic Council in the future

⁴ PAME-Engagement PT to prepare recommendations to c/ARHC prior to potential PAME meeting in 2024

⁵ c/ARHC to consider ARHC participation at any upcoming potential PAME meeting notified by c/PAME-Engagement PT.

⁶ PAME-Engagement PT to report to ARHC14 on their work plan, recommendations, and future collaboration with PAME and the Arctic Council

⁷ PAME-Engagement PT to liaise with incoming c/ARMSDIWG

⁸ The PAME-Engagement PT to evaluate whether the Standing Cautionary Notice could be a joint PAME-ARHC document and to report to ARHC14 for further consideration.

[Decisions and Actions](#)). The latest report of the IHO to ATCM XLV in 2023 in Finland.⁹ Two key actions were identified by the IHO and the HCA:

- Inform on the new S-100 data services and products that will be available in Antarctica in order to stimulate and optimize coordination and production of these S-100 products (Peninsula in particular) among HCA Members.
- Simulate the impact of climate change and consider the possible new areas that will become free of ice, the consequences of which being to reconsider and prioritize the survey plans in the region and make the best use of available assets in the area.

The activities of the HCA are worthy for identifying potential actions which the ARHC may also consider or otherwise pursue in parallel to create bi-polar parallelism in certain topics of mutual interest from a hydrographic perspective> These include such topics as the rollout of the S-100 hydrographic data framework in the region and development of recommendations to certain governance frameworks, such as the Polar Code.

As increased consideration of leveraging, planning and coordinating respective efforts of the HCA and ARHC regarding hydrographic governance in polar environments, the ARHC PAME PT could take an initial lead to identify potential tangible opportunities of common (ARHC-PAME-HCA) interest and report by February 15, 2025 to the ARHC via correspondence. Pending review and guidance from the ARHC, the PT (or other designated group of the ARHC) could support subsequent action. An evaluation could be made-

- 1) is this within the ARHC-PAME PT and HCA purview,
- 2) in which areas is there merit for potential leveraged partnership among ARHC-PAME-HCA
- 3) if so, which is the appropriate body withing ARHC to pursue this and why.

Preliminarily, a) the S-100 data services in polar environments, b) the consideration of impact of climate change on hydrography, and c) the hydrographic considerations with regard to the continued implementation of the IMO Polar Code (2017)¹⁰ are three potential areas of common interest. Additionally, raising awareness of governance in the poles and marine conservation may be additional areas of opportunity. The IHO report to the ATCM, and other key policy related literature, should be identified and consulted further in any review. And the IHO Secretariat should be invited for perspective and, if appropriate, support in the evaluation due to their historical roles in both HCA and ARHC.

⁹ See ATCM XLV (Helsinki, Finland (2023) “Report by the International Hydrographic Organization- Quick overview of matters of interest for the region and some considerations on the impact of climate change and the implementation of the IMO Polar Code Report by the Secretariat of the International Hydrographic Organization as Chair of the IHO Hydrographic Commission on Antarctica”

¹⁰ Note ARHC13 action (ARHC-A22): “ARHC to discuss the IMO Polar Code at ARHC14 with the purpose of identifying a potential for hydrographic, such as S-100, input in a Polar Code update process.”

Lastly, a calendar of events is shared as Attachment 3 for reference.

RECOMMENDATIONS

The ARHC is invited to:

- a) Consider and discuss this report and recommendations
- b) Provide guidance to the PAME PT for the upcoming year.

Terms of Reference ARHC-PAME Project Team

Drafted: August 7, 2024

Ref:

1. Objectives
 - a. Serve as a regular communication channel within ARHC for promoting, vetting, and coordinating engagement with the Arctic Council, primarily with the Protection of the Arctic Marine Environment Working Group but also with other AC Working Groups as appropriate and subject to guidance of the ARHC
 - b. Promote broad awareness of hydrography in the Arctic to the Arctic Council for consideration via reports, joint reports participation in meetings and other
 - c. Support the Joint Statement on the Importance of Hydrography in the Arctic by identifying opportunities and building mutual consensus on actions between ARHC and PAME.
2. Authority
 - a. Statutes (version 3.0) Section 7 paragraph 31 (a) and (b)¹¹
 - b. ARHC13 A-24
3. Procedures
 - a. PT will receive actions at ARHC meetings
 - b. PT will report on delegated actions from ARHC meetings
 - c. Communications among the team will generally be via email
 - d. Generally, PT will communicate with PAME through designated focal points
 - e. PT is expected to operate primarily as a working staff team and
 - f. To facilitate intersessional decision-making, the PT may meet inter-sessionally where circumstances lend themselves.
 - g. The PT will operate fully considering efficient means in decision-making processes of the ARHC and PAME noting the ARHC formally meets generally in the Fall and PAME usually meets twice/year in approximately early Winter and Spring. The PT will have the discretion to promote and facilitate timely decision-making by these bodies to vet and deliberate on collaborative opportunities
4. Composition and Team Lead
 - a. Participation on the team is open to delegated points of contact of the ARHC Full and Associate Members and the IHO Secretariat. Additional participants may be considered and included the PT with the approval of the ARHC at its regular (annual) meeting.

¹¹ 31. Committees, Working Groups, and Project Teams: a) The Commission may set up committees, working groups, or project teams composed of Full Members and Associate Members interested in carrying out particular projects or activities. b) The mandate and the expected duration of these subordinate bodies of the Commission are to be specified in their Terms of Reference which must be adopted by a decision. The Terms of Reference should consider inclusion of anticipated or planned duration of the standing of any subordinate bodies.

- b. Membership will be confirmed at each formal ARHC meeting and be in place for the upcoming year.
- c. An administrative lead may be nominated and confirmed by the ARHC to facilitate communications and engagement with PAME during intersessional periods of the regular ARHC meeting.

Draft Work Plan
for the ARHC-PAME PT to engage with PAME
and explore common interest and joint efforts
2024-2025

REFERENCE: [ARHC-PAME Memorandum of Understanding](#)
[ARHC-Arctic Council Joint Statement on Hydrography in the Arctic \(2021\)](#)
The PAME 2021-2023 () Work Plan

Areas of Promising Engagement

1. MPAs¹² and areas of special environmental significance

The IHO has identified and given special significance to the prospects of S-122 (“Marine Protected Areas”) to the global oceans agenda.¹³ Better electronic depictions of MPAs is of vital importance for navigational safety and marine environmental protection – something S-122 would further. However, the definition of MPA as used by the IHO in establishing S-122 needs to be clarified. At this juncture, it is not clear what IHO intended the term to encompass.

Nevertheless, the ARHC and PAME could work together to begin identifying areas in the Arctic that fall within the IUCN definition of MPA and otherwise are widely acknowledged as MPAs – either by the coastal State that established them or the international organization that designated them. The IMO might be one such international organization, but it is unclear whether any of the protective measures that IMO can approve (e.g., areas-to-be-avoided, MARPOL Special Areas, ship reporting systems, vessel traffic services) qualify as MPAs, either under the phrase as used in S-122 or under the widely-accepted IUCN definition.

PAME has an MPA Expert Group with substantial experience inventorying nationally-established MPAs and look for connectivity among such MPAs.¹⁴ ARHC could work with PAME’s MPA Expert Group to select a few widely-recognized MPAs and use them as for purposes of advancing work on S-122.

RECOMMENDATION:

The ARHC should work with PAME to select a few widely-recognized Arctic MPAs and apply S-122 to those MPAs as a pilot program to identify issues encountered in so doing. ARHC should

¹² For purposes of reference, an MPA is defined as “A clearly defined geographical space recognized, dedicated, and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.” (*source*)

¹³ See for example IHO [Council8-4.2A “IRCC Report to Council”](#) (action “d) Approve modifying the task of MSDIWG regarding S-122 to “MSDIWG to monitor and provide assistance to the S-122 Protected Seas pilot project with specific focus on the High Seas and MPAs adopted by IMO, to demonstrate the benefits of S-122 for nonnavigation purposes”) and the IHO SG report to RHCs on S-122, such as [ARHC13-B1.v2](#).

¹⁴ See for example <https://www.pame.is/index.php/projects/marine-protected-areas> and <https://www.pame.is/projects-new/marine-protected-areas/mpa-highlights/408-pame-mpa-network-toolbox>

also ask the IHO to clarify the meaning of MPA as the term is used in S-122. ARHC could offer to assist in that process based on its experience in the Arctic and its consultations with PAME.

2. *Update “Caution Required when Using Nautical Charts of Arctic Waters” (2017) (“Cautionary Note”)*

The “Cautionary Note” was drafted in 2017 under the inspiration of the Canadian Hydrographic Service with the intent to inform broadly the maritime community of the unique risk and danger posed in navigating the Arctic with then-existing nautical charts. Since then, anecdotal examples have demonstrated the hazards uniquely encountered in polar navigation. The original note was generally promulgated through professional journals and publications. With the elapse of seven years, the note could be up-dated and redistributed with the assistance of PAME.

RECOMMENDATION:

Propose to PAME-II (2024) that PAME and ARHC jointly redesign and republicize an updated “Cautionary Note” with design and messaging to be submitted to ARHC-15 and PAME-II (2025) for anticipated distribution (media channels to be articulated) in late 2025 and 2026. Develop a distribution plan with PAME.

3. *Arctic data*

Hydrographic and related data discoverability and accessibility is an ongoing need for all stakeholders interested in governance of the Arctic marine environment. Data sets are being continually developed- for example the ASTD is adding new data sets as is the hydrographic community and others. For example, the World Ports Index has recently been incorporated into the INtoGIS portal managed by the IHO Secretariat.

The ARHC ARMSDIWG is the focal point for ARHC MSDI engagements and has established relations with the Arctic Spatial Data Infrastructure.

Sharing awareness of new relevant data sets should be communicated with ARHC partners, such as PAME, and vice versa.

RECOMMENDATION:

In the course of its efforts, PAME PT to inform Chair of ARMSDIWG of new data bases and data sources and potential synergies with other databases, such as the PAME ASTD. Leadership lies with the ARMSDIWG.

ARHC OTWG to share shapefiles from the periodic assessments of hydrographic risk with PAME ASTD.

4. *PAME Work Plan*

Every two years, PAME adopts a Work Plan of projects that guide its activities for that two-year period. The [current publicized plan](#) covers the period 2023-2025 and is expected to be updated shortly by PAME. For anticipated purpose of promoting this integration with ARHC, PAME has

shared its work plan activity template that could be used to define such ARHC-PAME collaborative efforts in the upcoming period.

RECOMMENDATION

Contact PAME Point of contact Peter Oppenheimer and explore merits and means to integrate any follow-up ARHC-PAME collaboration within the PAME Work Plan when updated and developed.

5. Directed Annual reporting to PAME

The ARHC generally produces summaries of its annual meetings (RHC minutes) as well as more generally targeted outreach messages (Bulletin and “Year in Review”). Due to the timing and importance of the region, the PAME PT could generate tailored updates to PAME in particular with special focus on issues relevant to the policy, governance, membership and agenda specific to PAME.

The IHO report for the Antarctic is a reference example of such a focused and tailored report. At ARHC13, IHO Secretary-General also recommended (#36.1):

“Take note of HCA’s approach for S-100 governance and production strategies adapted to the specifics of the polar region. It is the view of the Secretariat that a similar concerted regional approach for Arctic waters to establish coordinated regional S-100 based data services is ARHCs most relevant task for the years ahead. The development and formal approval of a strategy addressing these issues is recommended.”

RECOMMENDATION:

ARHC (or IHO Secretariat with assistance of the ARHC) could report annually (by year end or in advance of PAME-II (Fall/Winter) meetings) to PAME to share progress and prospects updates on the rollout of S-100 data services and drivers in the Arctic, progress of SB2030 in the Arctic, Arctic Hydrography Risk Assessment updates, input on polar governance from a hydrographic perspective and other topics.

Events Calendar Related to ARHC and PAME 2024-2025

2024

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| September 4-6 | ARHC14 (Norway) |
| October 15-17 | IHO Council (Monaco) |
| November | PAME II (2024) (Virtual) |

2025

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| January 23-24 | IMO Polar Maritime Meeting (London) |
| January 27-31 | PAME I (2025) |
| June | Our Oceans Decade Conference (Nice, France) |
| June 3-5 | IRCC15 (Monaco) |
| September 8-12 | ARHC15 (proposed, Alaska, USA) |