

PAME MAIN ACHIEVEMENTS

SUMMARY REPORT 2019-2021

MAY 2021



PAME

Protection of the Arctic Marine Environment

THE PAME WORKING GROUP

The Arctic Council Working Group for the Protection of the Arctic Marine Environment (PAME) was established by the Arctic Council Ministers in Nuuk, Greenland, September 1993.

PAME members include National Representatives of the eight Arctic Council States: Canada, Kingdom of Denmark, Finland, Iceland, Norway, Russian Federation, Sweden and United States in addition to six Indigenous groups' organizations, Termed "Permanent Participants". Representatives from several designated Arctic Council Observers also participate in PAME.

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PAME MANDATE

The Protection of the Arctic Marine Environment (PAME) Working Group (WG) is the focal point of the Arctic Council's wide range of activities related to the protection and sustainable use of the Arctic marine environment and provides a unique forum for collaboration.

Its mandate is to:

address marine policy measures and other measures related to the conservation and sustainable use of the Arctic marine and coastal environment in response to environmental change from both land and sea-based activities, including non-emergency pollution prevention control measures such as coordinated strategic plans as well as developing programs, assessments and guidelines, all of which aim to complement or supplement efforts and existing arrangements for the protection and sustainable development of the Arctic marine environment.

SUMMARY OF ACHIEVEMENTS 2019-2021

Over the last two years, PAME's work has proceeded in accordance with its biennial 2019-2021 work plan, as approved by the Arctic Council Ministers in 2019. PAME cooperates with other Arctic Council WGs to contribute to improved efficiency and effectiveness of the Council. Further, PAME works substantively with Arctic inhabitants, including Indigenous peoples and local communities, to collaborate on a wide range of activities and topics on the Arctic marine environment.

As a follow-up to the [Rovaniemi Joint Ministerial Statement](#) 2019 and the [Statement by the Arctic Council Chair](#) (Minister for Foreign Affairs of Finland) on the Occasion of the Eleventh Ministerial meeting of the Arctic Council, PAME has, inter alia, undertaken the following work during the 2019-2021 biennium.

Follow-up to the 2009 AMSA Report and other Shipping Report Recommendations

PAME and its Shipping Expert Group (SEG) advanced a number of projects and initiatives to promote safe and sustainable shipping in the Arctic including:

- Collaboration with multilateral organizations on Arctic-related activities of common interest, i.e.:
 - » Signing in 2020 of a Memorandum of Understanding (MoU) with the Arctic Regional Hydrographic Commission (ARHC) followed by preliminary approval of four ARHC proposed joint PAME-ARHC projects for inclusion in PAME's 2021-2023 work plan designed to support Arctic maritime safety and protection of the Arctic marine environment;
 - » Ongoing communications with the International Maritime Organization (IMO) on shipping issues and developments of interest to both bodies, including with respect to advancing safe and environmentally sound shipping in the Arctic; and,
 - » Participation by PAME in the International Council for the Exploration of the Sea (ICES) WG on Shipping Impacts in the Marine Environment (WGSHIP) to exchange information and identify potential areas of mutual interest and collaboration.
- Convening the [third](#) and [fourth](#) meetings of the Arctic Shipping Best Practice Information Forum (established by PAME in 2017) in support of effective implementation of the IMO's Polar Code, including by means of the Forum's web portal (www.arcticshippingforum.is);



- The development of three [Arctic Shipping Status Reports](#), one on the increase in Arctic shipping from 2013-2019, one on the use of heavy fuel oil (HFO) in the Arctic in 2019, and one comparing shipping traffic in Canada's Northwest Passage in 2013 and 2019;
- The finalization of the Arctic Marine Tourism Report, a trend analysis of tourism vessels in the Arctic with recommendations and next steps, and an overview of Best Practice Guidelines for cruise tourism in the Arctic;
- PAME officially launched the [Arctic Ship Traffic Data \(ASTD\) System](#) in February 2019 and has since granted data access to almost 200 users from multiple entities across Arctic States, Arctic Council Observers, and professional organizations with an interest in safe and sustainable Arctic shipping. PAME will continue to promote and strengthen the ASTD System by adding new data layers and advancing its capabilities.
- In partnership with EPPR, PAME completed a *Compendium of Arctic Shipping Accidents (CASA)* inventorying ship accidents in the Arctic during 2005-2017, which updates the Arctic Marine Shipping Assessment (AMSA) Report's ship accident data and will help to inform decisions to strengthen the safety of Arctic navigation.
- PAME also completed the Phase I Report on *Underwater Noise in the Arctic – Understanding Impacts and Defining Management Solutions* and the report on *Low Impact Shipping Corridors*, which aims to share best practices on existing and ongoing efforts to provide safe and environmentally sound shipping routes across the circumpolar Arctic.
- PAME continued work to help address the Arctic shipping infrastructure deficit by developing draft amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL). Once these amendments are submitted by Arctic States to the IMO and if adopted by the Organization, they will form the basis of an Arctic Regional Arrangement for Port Reception Facilities that will better enable Arctic States to meet their MARPOL obligation to receive wastes generated by ships that may not be discharged into the marine environment. Work will continue in the PAME 2021-2023 work plan on both *Developing a framework for more systematically engaging with Observers on shipping-related matters* and *Developing an overview of Arctic States' and Observer States' interpretation of the Polar Code*.
- PAME also finalized a four-year project to develop proposed updates of the [2009 AMSA Report's 17 Recommendations](#). Those 17 Recommendations are more than a decade old and some were in need of revision to reflect more accurate terminology as well as to identify recommendations that have since come to completion. The AMSA Report and its original 17 Recommendations were approved by Ministers in 2009, the proposed updates, were approved by Ministers at their 2021 meeting.

Protection from Invasive Species

Implementation of the [Arctic Invasive Alien Species Strategy and Action Plan \(ARIAS\)](#) is a joint CAFF (for terrestrial) and PAME (for marine) effort. There were no joint ARIAS implementation projects proposed during the 2019-2021 work plan period, but PAME will, jointly with CAFF, undertake a project on Marine Invasive Alien Species in Arctic Waters during the next biennium. The objective is to improve the knowledge base for work in CAFF and PAME on specific actions in the ARIAS Strategy and Action Plan that focus on the unwanted potential transfer of marine invasive alien species by ships via ballast water (BW) and biofouling (BF) into and within Arctic waters. The project will build upon data from existing databases and published information.

Framework for a Pan-Arctic Network of Marine Protected Areas (MPAs)

PAME and its MPA Expert Group (EG) developed two information briefs of MPAs under change: *Marine Protected Areas in a Changing Arctic and Indigenous Food Security in the Arctic – Implications of a Changing Ocean*. These information briefs were developed in collaboration with PPs and CAFF, as well as with AMAP on climate-related portions. The products leverage and synthesize factual information from work by the Arctic Council and other experts to communicate to decision makers and the public, contribute to cross-WG cooperation on common topics, and contribute to outreach on Arctic Council work.

PAME also completed the *Modelling Arctic Oceanographic Connectivity Technical Report to further develop PAME's Marine Protected Area Network Toolbox*. The model helps the complex process of designing and implementing successful MPAs, facilitating that the species and habitat intended to protect falls within the designated MPA. PAME will continue this work by including the Central Arctic Ocean in the model to better understand this poorly researched area of the Arctic high seas. CAFF, with its Circumpolar Biodiversity Monitoring Program (CBMP) is one collaborator in this work on oceanographic connectivity. PAME further provided an update to the Arctic Protected Areas Indicator Report from 2017.

Ecosystem Approach to Management (EA)

PAME continues to follow national and international EA developments and facilitate the integration of the principles of EA into assessments and management recommendations. This contributes to the follow-up to the recommendations in the [2013 Ecosystem-Based Management in the Arctic Report](#), building on previous work on Large Marine Ecosystems.

The joint EA EG, which originated in PAME, has been a PAME/AMAP/CAFF/SDWG EG since 2011 and coordinates EA activities for these participating Arctic Council WGs. This includes the planning of the 7th EA workshop on Value and Valuation in the Ecosystem Approach that was rescheduled due to COVID and is now planned for 2022. The EA EG also recognizes that many Arctic Council WGs focus on elements of particular relevance for EA, but as these elements benefit from integration, the Arctic Council will only proceed successfully through WG cooperation.



The EA EG established a writing group for finishing the report on Ecological Objectives. This report will describe i) concepts, terminology, and definitions; and ii) experiences from practical application (e.g., EU Marine Strategy Framework Directive, individual countries and others as relevant).

PAME continues to participate in the joint effort by the ICES/North Pacific Marine Science Organization (PICES)/PAME WG on Integrated Ecosystem Assessment (IEA) for the Central Arctic Ocean (WGICA). The EA EG continues its efforts in strengthening communication between its co-chairs and their counterparts in other PAME EGs, including on shipping, as well as in the relevant Arctic Council WG.

Arctic Offshore Resource Exploration and Development

PAME and its Resource Exploration and Development Expert Group (RED EG) followed up on the [Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities \(MEMA\) Part II Report](#) by producing the MEMA Reference Guide, which is designed to highlight good practices for meaningful engagement between proponents of activities in the Arctic and Indigenous peoples and local communities. The MEMA online database is accessible on the PAME homepage at www.memadatabase.is and is publicly available as a resource for those interested in engagement of Arctic Indigenous peoples and local communities.

PAME also completed a report on the *Status of Offshore Oil and Gas Activities and Regulatory Frameworks in the Arctic*. This report provides a compilation of the status on current or planned offshore oil and gas activities, as well as changes to relevant legislation, regulations, and policies over the last 10 years. This information may be used in future Arctic Shipping Status Reports and oil and gas related projects.

Marine Pollution in the Arctic

PAME developed the *Regional Action Plan on Marine Litter in the Arctic* (ML-RAP). It addresses both sea- and land-based activities, focusing on Arctic-specific marine litter sources and pathways, and will play an important role in demonstrating Arctic States' stewardship efforts toward reducing the negative impacts of marine litter to the Arctic marine environment. The ML-RAP contains eight chapters and 59 Strategic Actions in the following eight sections:

1. Reducing Marine Litter Inputs from Fisheries and Aquaculture.
2. Reducing Marine Litter Inputs from Ships and Offshore Structures.
3. Improving Onshore Waste and Wastewater Management.
4. Sustainable Materials [Management] in the Arctic Environment.
5. Cleaning Arctic Coasts.
6. Strengthening Monitoring and Research.
7. Conducting Outreach.
8. International Cooperation.

PAME also launched the first bottle equipped with a GPS transmitter into the Atlantic Ocean from Reykjanes Peninsula, Iceland on 12 September 2019. Called "Plastic in a Bottle", the capsule [simulated how marine litter and plastics travel far distances into and out of Arctic waters](#). The bottle travelled around 7.000 kilometers in 207 days before washing on shore in the Isle of Tiree, Scotland on 6 April 2020.

PAME has collected and posted submissions on marine litter literature of relevance to the Arctic into an online marine litter library [here](#).



Arctic Marine Strategic Plan (AMSP) 2015-2025 Implementation Plan

The PAME Secretariat produced the 3rd AMSP Implementation Report, which records status on relevant AMSP Strategic Actions for the period 2019-2021 and identifies follow-up activities that are reflected in the PAME WP 2021-2023 and other WGs' WPs, as per their respective mandates. The [AMSP Implementation Plan](#) provides a mechanism to systematically track the progress and status of its 40 Strategic Actions with its Tracking Tool Matrix. Each WG provided links between its projects and the relevant strategic actions and listed the status of each project.

A half-day webinar with all Arctic Council WGs dedicated to the AMSP was convened on 1 September 2020.

COORDINATION AND COLLABORATION WITH OTHER ARCTIC COUNCIL WORKING GROUPS

PAME actively pursues cooperation and collaboration with other Arctic Council WGs to contribute to improved efficiency and effectiveness of the Council. PAME collaborated with AMAP and CAFF in the development of the information briefs on MPAs and food security under change and with EPPR and SDWG on shipping activities.

AMAP, CAFF, and SDWG continue to be engaged in the joint EA EG, and PAME continues to make efforts to strengthen the communication between the EA EG co-chairs and relevant Arctic Council WGs.

PAME collaborates closely with CAFF on MPA-related work and implementation of the ARIAS Strategy and Action Plan and collaborated with all Arctic Council WGs on the development of the ML-RAP and the development of the 3rd AMSP implementation Progress Report. All WGs can also access the ASTD System.

COMMUNICATION AND OUTREACH

The lead of PAME's overall communications activities is the PAME Secretariat. PAME develops necessary project-related communications, which include brochures, promotional materials, websites, video production, event hosting, presentations at key events, and press inquiries. PAME participates in relevant international symposia, meetings and other appropriate venues to communicate PAME's activities. PAME's work plan includes information outreach and efforts to increase cooperation and collaboration with international and regional organizations to include the liaising and exchange of information with relevant organizations and programs (e.g., UNEP Regional Seas Programme), and other regional programs. PAME's homepage serves as the main outreach and communication tool (www.pame.is) in addition to PAME's Facebook and Twitter accounts. PAME also collaborates closely with the Arctic Council Secretariat (ACS) communications team in its outreach efforts.

Outputs of PAME's activities for information include, e.g.:

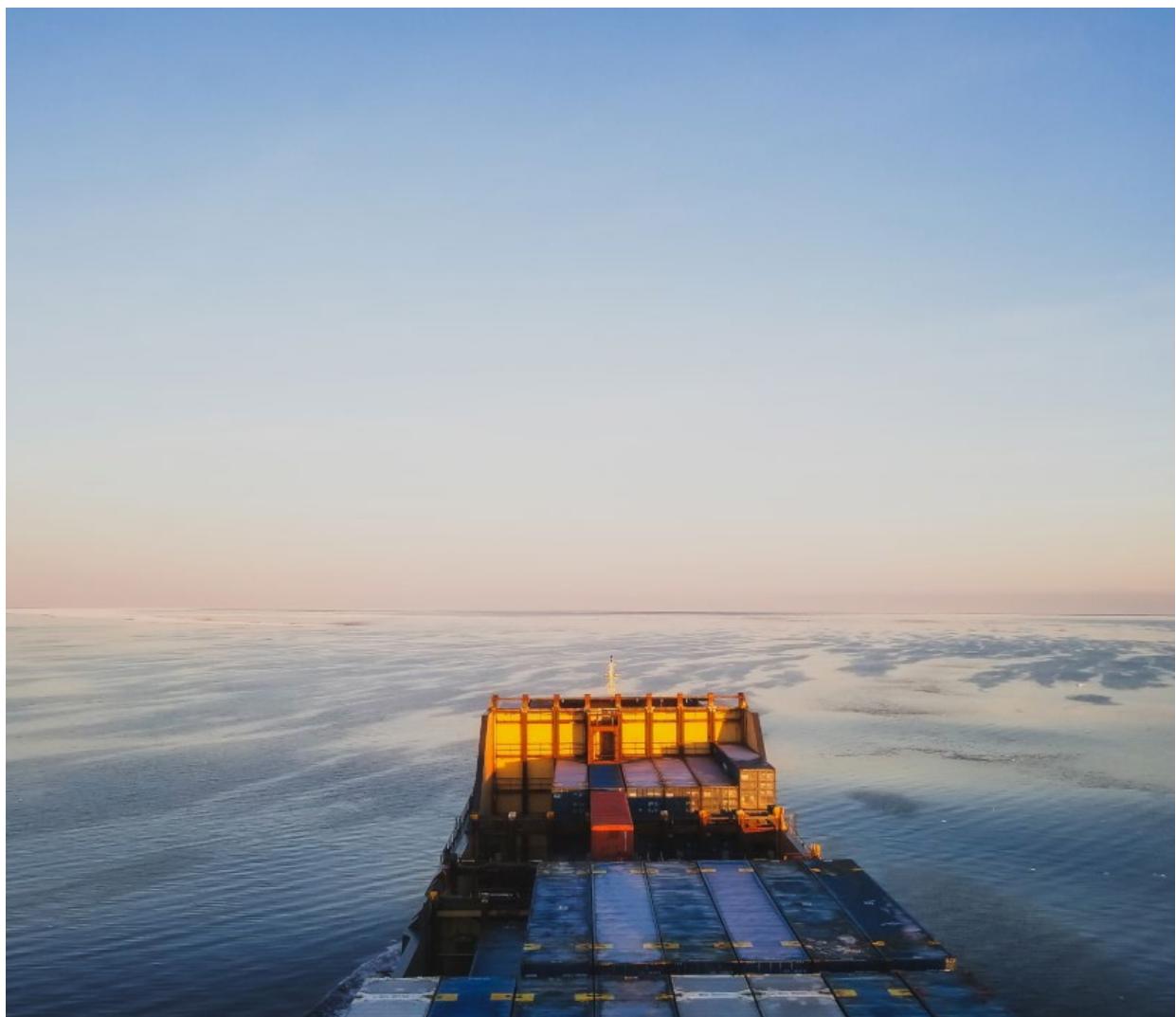
- Arctic Shipping Status Reports;
- Arctic Marine Tourism report and trend analysis information online;
- Underwater Noise maps on the PAME website;
- Arctic Shipping Best Practice Information Forum Web portal;
- Arctic Ship Traffic Data Project Database (ASTD System);
- MPA Information Briefs;
- Plastic in a Bottle;
- Marine Litter Library;
- MEMA database; and,
- Various other communication and outreach products.

ADMINISTRATION

The PAME International Secretariat is based in Akureyri, Iceland. The Secretariat has a staff of three: 1) the Executive Secretary; 2) Executive Assistant; and 3) Project Manager. An administrative budget to cover the operating costs of the Secretariat, including inter alia, salaries, travel costs, and website-related costs, is established for each calendar year, differentiating between project funding and operating costs. As the host country for the International Secretariat, Iceland provides approximately half of the annual country contributions, as decided at the time of the establishment of the PAME Secretariat (1999) and consistent with the approach taken for the operation of the CAFF Secretariat. The remainder of the budget comes from voluntary contributions by the seven other Arctic States (\$30, 000 USD per year). A budget will be presented annually by the Secretariat; the budget and annual voluntary contributions may be evaluated, as needed, to meet Secretariat operations. Arctic States can provide additional finances to separate projects, which will also support the work of the Secretariat. PAME cooperates closely with CAFF to share fixed Secretariat overhead costs.

Finland has chaired, and the United States has co-chaired, the PAME WG during 2019–2021 period. PAME will be chaired by Sweden during the 2021-2023 period. The PAME national HoDs have decided on a set rotation for hosting of PAME meetings and chairing of PAME, which States may elect to amend.

PAME has held four Working Group meetings, one Arctic Marine Tourism workshop, two Arctic Shipping Best Practices Information Forum meetings, in addition to a number of meetings of the PAME EGs during the Icelandic Chairmanship of the Arctic Council.



LIST OF PAME DELIVERABLES TO THE REYKJAVIK 2021 MINISTERIAL MEETING

PAMEs activities for SAO and Ministerial approval (5 activities):

1. Final Report and Proposed Updates to the 2009 Arctic Marine Shipping Assessment (AMSA) Report Recommendations for Ministerial Approval (United States/Canada).
2. Arctic Council-Arctic Regional Hydrographic Commission (ARHC) Joint Policy Statement on Hydrography in the Arctic.
3. Two Information Briefs on Marine Protected Areas (MPAs) under change: (Finland/USA):
 - a. Information Brief on “Marine Protected Areas in a Changing Arctic”; and,
 - b. Information Brief on “Indigenous Food Security in the Arctic - Implications of a Changing Ocean”.
4. Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) Reference Guide (United States/Canada/Aleut International Association (AIA)/Inuit Circumpolar Council (ICC)/Saami Council/Northern Forum).
5. Regional Action Plan on Marine Litter in the Arctic (Iceland, Norway, Sweden, Canada, Finland, Kingdom of Denmark, USA, AIA, OSPAR).

PAMEs activities for SAO and Ministerial welcome (6 activities):

1. Compendium of Arctic Ship Accidents (CASA) Project, Final Report (Joint PAME/EPPR Project) (United States).
2. Underwater Noise Pollution from Shipping in the Arctic - Final Phase I Report (Canada/Germany/World Wildlife Fund (WWF-Arctic)).
3. Report on Arctic State Safe and Low-Impact Marine Corridor Initiatives (Canada/Iceland/AIA).
4. Report on Arctic Marine Tourism: Development in the Arctic and enabling real change (Iceland/Canada/UK).
5. Technical Report on Modelling Arctic Oceanographic Connectivity to further develop PAME’s MPA toolbox (Sweden).
6. 3rd reporting on progress/implementation of the 2015-2025 Arctic Marine Strategic Plan (AMSP).

PAME activities for SAOs and Ministerial information (4 activities):

1. Status Report on the Arctic Shipping Best Practice Information Forum (Iceland/United States/Canada/PAME Secretariat).
2. Three Arctic Shipping Status Reports (USA/PAME Secretariat):
 - a. The Increase in Arctic Shipping 2013-2019;
 - b. Heavy Fuel Oil (HFO) Use by Ships in the Arctic 2019; and,
 - c. Shipping in the Northwest Passage: Comparing 2013 to 2019.
3. Status Report on Offshore Oil and Gas Activities and Regulatory Frameworks in the Arctic (United States).
4. Progress report on the EA-EG 2019-2021 Work (Norway/United States).



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