# PAME I-2019: Agenda 10.2(b)

# PAME 2019-2021 Work Plan-longer version (29 Jan)

**Note: This longer version is a standalone document with all approved project plans annexed.**

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# PREFACE

PAME focuses on the marine agenda of the Arctic Council and provides a unique forum for collaboration on a wide range of activities directed towards the protection and sustainable use of the Arctic marine environment.

PAME‘s activities are based on its mandate 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 for the protection and sustainable development of the Arctic marine environment.

PAME provides a unique forum for collaboration on a wide range of Arctic marine environment issues and consists of representatives from the Arctic states, who are responsible for its work in their respective countries, and representatives of Permanent Participant organizations on behalf of Arctic indigenous peoples. Additionally, the other Arctic subsidiary bodies, accredited observers and other Arctic stakeholders contribute to the ongoing work of PAME.

PAME generally meets twice a year to assess progress and advance its work. PAME is headed by a Chair and Vice-Chair, which rotate among the Arctic States and are supported by a Secretariat based in Iceland. PAME reports to the Senior Arctic Officials (SAOs), and through them, to the Ministers of the Arctic Council who meet every two years. PAME’s work plan is approved by the SAOs and the Ministers.

# INTRODUCTION

The PAME Work Plan 2019-2021 was developed according to:

* PAME’s mandate;
* priorities identified and recommendations made in reports and arrangements developed by or negotiated in Arctic Council subsidiary bodies that are approved by the SAOs and Arctic Ministers;
* direction provided in Ministerial declarations;
* follow-up on recommendations from Arctic Council projects and the Arctic Marine Strategic Plan (2015-2025), which outlines the overall direction of the Arctic Council for the protection of the Arctic marine environment, in addition to policy follow up to the scientific and other relevant assessments of the Arctic Council.

# PROJECTS AND ACTIVITIES

Additional project proposals may be developed within the scope of this work plan between 2019-2021, subject to confirmed lead/co-lead commitment and financing.

**AMSP Goal 1: *Improve knowledge of the Arctic marine environment, and continue to monitor and assess the current and future impacts on Arctic marine ecosystems.***

**BACKGROUND**:

There is increasing demand for reliable and pertinent information in the Arctic context, which will increase as the region undergoes more development with increased human activities and climatic changes.

The Arctic Council has proven to be an important provider of scientific-based assessments, taking into account traditional and local knowledge. Informed policy decisions depend on improved understanding of the Arctic marine environment and drivers of change, attained through accurate, accessible and foundational scientific data, such as topographic, hydrographic, oceanographic and meteorological information, and other marine spatial data, as well as traditional and local knowledge.

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| **Arctic Marine Shipping** |
| Project/activity | Description | Lead(s) and partners |
| **Black carbon mitigation measures from shipping in the Arctic:** Fuel and Exhaust Gas Treatment for Marine Diesel Engines – Summary Report*(Annex I)* | The objective of this project is to strengthen harmonization and foster dialogue and cooperation between the Arctic Council member states, Permanent Participants and Arctic Council Observers on research on various fuel and exhaust gas treatment methods as possible means by which to reduce the amount of harmful gases emitted by vessel engines. | *Iceland, others?* |
| **Arctic Shipping Status Reports***(Annex II)* | The project will utilize the Arctic Shipping Traffic Database (ASTD) System to develop a user-friendly, illustrative informational factsheets online on Arctic shipping through e.g. the producing of a number of Story maps to highlight interesting aspects of Arctic shipping activities – or by other means to be decided by the project team. | *Norway (tbc), USA (tbc)**PAME Secretariat* |
| **Environmental toxicity and fate of light and intermediate fuel when spilled in cold waters***(Annex III)* | The objective of the project is to gather knowledge and describe reasons for the large variation in environmental toxicity of light and intermediate fuel oil. This is a joint project proposal between PAME and EPPR.  | *Norway**Working group partner: EPPR (joint project)* |
| **Arctic Marine Tourism: Shipping analysis and Site specific guidelines** *(Annex IV)* | The overarching objective is to gather knowledge on the status, trends and challenges in Arctic marine tourism and assess the need for best practices guidelines in support of existing site- specific guidelines.This project will contribute to the following [Arctic Marine Tourism Project – Best Practice Guidelines document (AMTP 2015)](https://pame.is/images/03_Projects/Arctic_Marine_Shipping/Arctic_Marine_Tourism_Project/AMTP_Best_Practice_Guidelines.pdf) recommendations:* Compile a publicly available repository of circum-Arctic marine tourism information.
* Develop a standardized framework for, and encourage the preparation of, site-specific guidelines for near-shore and coastal areas of the Arctic visited by passengers of marine tourism vessels and pleasure craft.
 | *Iceland, others (TBC)* |
| **PAME-ARHC Memorandum of Understanding***(Annex V)* | The objective is to formalize the relationship between PAME and ARHC through a non-binding memorandum of understanding (MOU) would encourage more frequent exchanges of information. The objective of such an MOU would be to foster greater communication between the two organizations and enhance coordination on projects of mutual interest. Though the MOU would not be legally binding, it would allow each body to leverage the expertise of the other in order to develop a unified strategy for improving hydrographic charts and surveys in the Arctic. | *USA, Canada* |
| **Underwater Noise in the Arctic – Understanding Impacts and Defining Management Solutions - Phase I** *(Annex VI)* | Using information from the PAME’s Arctic Ship Traffic Data (ASTD) project, and in collaboration with CAFF as appropriate, to:* Obtain a better understanding of, and estimate the current underwater noise emissions) or ‘noiseprint’) from shipping in the Arctic.
* Identify hotspots of overlap between underwater noise from shipping and ecologically and culturally significant habitats.
* Based on the results obtained, and recognizing the limitations inherent to high-level analyses, define and communicate (including to international regulators) possible management options to reduce the impact of underwater noise from shipping in the Arctic. Expert input and traditional knowledge will be used to inform any such options.
 | Canada, WWF |
| **Compendium of Shipping Accidents in the Arctic (CASA): Follow-up***(Continuation-under development)* | The objective is to develop a compendium of shipping accidents in the Arctic for the period 2005-2017 to update the database of shipping accidents in the Arctic contained in the 2009 Arctic Marine Shipping Assessment (AMSA) Report and provide information useful to considering measures that might be pursued to reduce the risk of accidents. The project has been presented at recent PAME meetings, and will be pursued further, and its results incorporated to the Arctic Ship Traffic Database (ASTD). | USAWorking group partner: EPPR (joint project) |
| **Collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO***Continued from previous work plan.* | The project will collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions. | *USA, AIA, CCU**Working group partner: SDWG* |
| **Collect and summarize information on Arctic State safe and low-impact marine corridor initiatives***Continued from previous work plan.* | Collect and summarize information on Arctic State safe and low-impact marine corridor initiatives and programs and contribute to enhanced marine navigation safety with a view to submitting a final report to PAME | *Canada, Iceland, AIA* |
| **A framework for more systematically engaging with Observers on shipping related matters***Continued from previous work plan.* | The objective of the project is to develop an approach/framework for more systematically engaging with Observer States on PAME’s shipping-related work and identify opportunities for Observer States to contribute to and/or support such work. Identify options for leveraging Observer State interest and expertise.PAME aims to hold one or more workshops during the two-year biennium with Observers to advance this project.  | *USA, Republic of Korea, Italy, Poland* |
| **AMSA recommendation update refresh***Continued from previous work plan.* | Continue the development and updating of shipping priorities and recommendations under the three themes of the 2009 Arctic Marine Shipping Assessment (AMSA) Report (Enhancing Arctic Marine Safety; Protecting Arctic People and the Environment; and Building the Arctic Marine Infrastructure). | *USA, Canada* |
| **Arctic Ship Traffic Data***Continued from previous work plan.* | Update, administer and further develop the Arctic Ship Traffic Database. The database setup has been completed but will be updated and developed as per instructions from the ASTD Expert Group by the Norwegian Coastal Administration, and administered by the PAME Secretariat. That includes the overseeing of the annual funds for ASTD, and other roles according to the *Cooperative Agreement among the Arctic States Regarding Arctic Ship Traffic Data Sharing (2017).* | *USA, Norway**PAME Secretariat* |
| **Arctic Shipping Best Practice Information Forum***Continued from previous work plan.* | Convene annual meetings of stakeholders and continue the development and expansion of the Forum’s web portal ([arcticshippingforum.is](https://pame.is/arcticshippingforum#part-ia-safety-measures)). The web-portal includes links to key information related to the IMO’s Polar Code and serves as a resource hub of information, guidance and guidelines that aid decision makers involved in Arctic maritime navigation and those affected by maritime operations related to the Polar Code. This is in accordance with the ToR for the Arctic Shipping Best Practices Forum (2017). | *Iceland, USA, Canada* |
| **Invasive Species** |
| Project/activity | Description | Lead(s) and partners |
| **Implementation Plan for the ARIAS Strategy and Action Plan** *Continued from previous work plan.* | PAME and CAFF have established a Joint ARIAS (Arctic Invasive Alien Species Strategy and Action Plan) Implementation Coordinating Group (ICG) and approved the Terms of Reference for the ICG with the aim to guide implementation of ARIAS and provide recommendations regarding potential implementation actions and progress on areas of interest to the CAFF and/or PAME Working Groups. Any joint projects will need to be approved by both the CAFF and PAME (for marine) and by CAFF (for terrestrial). | *Implementation Coordination Group (CG) co-led by CAFF and PAME)* |
| **Arctic Marine Pollution** |
| Project/activity | Description | Lead(s) and partners |
| **Regional Action Plan on Marine Litter***Annex VI* | To develop a Regional Action Plan on Marine Litter in the Arctic (RAP-ML) addressing both sea and land-based activities, focusing on Arctic-specific marine litter sources and pathways, which will play an important role in demonstrating Arctic States’ stewardship efforts towards reducing the negative impacts of marine litter, including microplastics, to the Arctic marine environment. The RAP-ML may be updated in subsequent bienniums to address new and emerging information and priorities; therefore the structure needs to be realistic and adaptable.Collaboratation with other Arctic Council working groups working on marine litter activities, and others as relevant to marine litter in the Arctic to ensure that this work is adaquetly reflected in the first version of the Regional Action Plan.The development of outreach and communication material will continue as a part of the project. | *Iceland, Norway, Sweden, Canada (TBC), USA (TBC), AIA (tbc) and OSPAR)**Collaboration with other working groups* |
| **Strategic Documents** |
| *Project/activity* | *Description* | *Lead(s) and partners* |
| ***AMSP Implementation Status Report 2019-2021*** | To track progress on implementation of the AMSP forty strategic actions and develop an AMSP Implementation Status Report in collaboration with other Arctic Council working groups for the period 2019-2021 for submission to the Arctic Council Ministerial meeting in 2021. | *PAME HoDs, PAME Secretariat* |

**AMSP: GOAL 2
*Conserve and protect ecosystem function and marine biodiversity to enhance resilience and the provision of ecosystem services.***

**BACKGROUND**:

Arctic marine ecosystems are under increasing pressure from multiple stressors including climate change, ocean acidification, long-range pollution, invasive species and increased human activities. These stressors, individual and cumulative, pose a challenge to the health and sustained viability of Arctic marine ecosystems. Stressors often exacerbate one another, leading to amplified cumulative impacts. Adding to that is the complex and trans-boundary nature of those stressors, which means that solutions often will require international and regional co-operation.

Arctic ecosystem services are of local, regional and global importance. Taking an ecosystem approach to management (EA) can enhance the resilience of marine and coastal biodiversity and help to safeguard marine ecosystems and their functions, allowing people to continue to benefit from the services that flow from healthy ecosystems.

PAME’s overall objective is to continue to integrate the ecosystem approach into assessments and management recommendations through follow-up to the 2013 EBM marine-related recommendations, taking into account previous work on Large Marine Ecosystems (LMEs), and new and ongoing EA activities of cross-cutting nature.

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| **Ecosystem Approach to Management** |
| *Project/activity* | *Description* | *Lead(s) and partners* |
| **Convening of the 2nd International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic in Bergen, Norway 2019** | The title of the conference is: *The Ecosystem Approach to Management of Arctic Marine Ecosystems: Integrating information at different scales in the framework of EA implementation*Topics to be addressed include areas of heightened ecological and cultural significance (e.g. EBSAs); Marine Protected Areas (MPAs); local co-management arrangements; Traditional and Indigenous Ecological Knowledge; community monitoring; and other aspects as developed by a conference planning group. While the focus is on EA implementation in the Arctic, the topic of scale integration is general and universal.  | *USA, Norway in close collaboration with the EA expert group* |
| **7th EA Workshop** | To convene the 7th EA workshop in 2020 with focus on element No. 5 of the EA framework: Value the cultural, social, and economic goods and services produced by the ecosystem. | *USA, Norway in close collaboration with the EA expert group* |
| **Ecological objectives** | Report on developments in defining or setting ecological quality objectives in the context of EA implementation in national and international processes. | *USA, Norway in close collaboration with the EA expert group* |
| **Integrated Ecosystem Assessment (IEA) of the Central Arctic Ocean***(ongoing cross-cutting initiative in cooperation with ICES/PICES and EA expert group)* | Continue emphasis on development of Integrated Ecosystem Assessment (IEA). Continue to report on developments within ICES/PICES/PAME Working Group on Integrated Ecosystem Assessment (WGICA) as well as other ICES activities on IEA, the meetings of scientific experts on fish stocks in the central Arctic Ocean, and any other relevant activities, e.g., in the U.S. NOAA IEA program. | *USA, Norway**Collaboration with ICES/PICES* |
| **Marine Protected Areas** |
| *Project/activity* | *Description* | *Lead(s) and partners* |
| **Modelling Arctic oceanographic connectivity to further develop PAME’s MPA toolbox** | Ongoing climate change may facilitate increased access to the Arctic region, and potential new economic opportunities, but may also bring potential threats to the Arctic marine and coastal environments. These changes could benefit from more integrated approaches to Arctic marine management, including the consideration of MPA networks design to aid in the sustainable use of the Arctic environment.The modelling of Arctic oceanographic connectivity will support further development of PAME’s MPA toolbox. It will require close collaboration with CAFF and is considered a multiyear and iterative project based on best available baseline data, incorporating new data and studies by the Arctic Council, the Arctic States and others, as relevant. | Sweden |
| **Arctic Protected and Important Areas** | CAFF and PAME will work jointly work towards updating the 2017 Arctic Protected Areas Indicator Report (API) to incorporate newly protected areas established since 2017. In addition the API is being compared with the data for the Arctic contained within the ProtectedPlanet database - managed by the United Nations Environment World Conservation Monitoring Centre. The purpose of this comparison is to determine differences between the two databases and update each database accordingly. | *TBC*/PAME and CAFF Secretariats |
| **Factsheet series on Arctic climate change impacts***(1st work package)* | develop the 1st thematic factsheet on Arctic climate change impacts on MPAs and indigenous people’s lives. The aim is to leverage and synthesize factual information from the Arctic Council’s work in a layman’s format to communicate to decision makers and the public; to contribute to cross-working groups cooperation on common topics; and contribute to the outreach aspect of the Arctic Council and ensuring close collaboration with the Arctic Council Secretariat.  | *Finland, USA* |
| **MPA Toolbox: Expansion** *(continuation from previous work plan)* | The project will continue enhancing PAME’s work on a Pan-Arctic Network of Marine Protected Areas and contribute to some of the near-term actions listed in the Framework for a Pan-Arctic Network of MPAs and the AMSP strategic action 7.2.10. | *Finland, Sweden, USA.MPA Expert Group Partners: CAFF, WWF, CCU* |

**AMSP: GOAL 3
*Promote safe and sustainable use of the marine environment, taking into account cumulative environmental impacts.***

**BACKGROUND**

Improved access to the Arctic, national and regional priorities, and growing global demand for natural resources are driving an increase in resource extraction, shipping activities, and interest in living marine resources. Safe and sustainable use of living and non-living marine resources should be promoted in a manner that maintains the structure of eco-systems, their functions and productivity, applies EBM and provides economic opportunity. There is substantial potential for economic development in the Arctic that will benefit both local communities as well as the Arctic states.

Pollution in the Arctic marine environment comes primarily from sources outside the region. Impacts from increased economic activities inside the region can, combined with impacts from climate change, ocean acidification and long range pollution, produce cumulative impacts that put strain on these ecosystems. Mining, oil and gas activities, shipping, Arctic settlements, legacy sites such as military bases and mines, and land-based activities, are current and potential sources of marine pollution within the Arctic.

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| ***Resource Exploration and Development*** |
| *Project/activity* | *Description* | *Lead(s) and partners* |
| **MEMA Information handbook** | To develop an Information handbook or a reference guide as a practical tool for engagement with indigenous peoples and local communities as a follow-up to the *Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) project.* | *USA, Canada in close collaboration with the REDEG expert group)**Working group partner: SDWG (TBC)* |
| **Guidance on Engagement of Indigenous Peoples in Offshore Oil and Gas**  | The guidance for industry and government engagement in offshore oil and gas activities dates to the first Arctic Offshore Oil and Gas Guidelines over 20 years ago in 1997. These recommendations were ground breaking for the Arctic Council. Since then, we have come to a better understanding of this important aspect of regulating and managing activities. In addition, the MEMA project has provided background on meaningful engagement and good practices. There are 29 Recommendations for engaging Indigenous Peoples and local communities from the AOOGG 2009. | *USA, Canada in close collaboration with the REDEG expert group)* |
| **Guidance on Non-Emergency Operations, Monitoring, and Decommissioning/Site Clearance** | In response to the call for a periodic review of the guidance contained in the 2009 Arctic Offshore Oil and Gas Guidelines, recognizing that the EPPR has the mandate for the emergency topics covered in the 2009 AOOGG, and further recognizing the new Arctic Offshore Regulator Forum and their focus on operational issues. The PAME Resource Exploration and Development Expert Group (REDEG) determined that updating sections (4) Environmental Monitoring, (5.2) Compliance Monitoring, (6.1) Waste Management, (6.2) Use and Discharge of Chemicals, (6.3) Emissions to Air, and Decommissioning and Site Clearance (8.0) could be a useful objective. | *USA, Canada in close collaboration with the REDEG expert group)* |
| **Follow-up on the Framework Plan on Oil Pollution Prevention (FP-OPP)** | EPPR, in cooperation with PAME, will continue to report on the status of implementation of the FP-OPP. The Status Report on implementation identifies follow-up activities that support the objectives in the Framework Plan. The report will include input from other Arctic Council working groups and relevant stakeholders capturing activities that are already taking place. | *USA, Canada in clos collaboration with the Shipping Experts Group**Working group partner: EPPR* |

**AMSP: GOAL 4
*Enhance the economic, social and cultural well-being of Arctic inhabitants, including Arctic Indigenous Peoples and strengthen their capacity to adapt to changes in the Arctic marine environment.***

**BACKGROUND:**

The health, well-being, and adaptability of Arctic indigenous peoples and local communities are closely linked to the health of the marine ecosystems upon which they rely for food, commerce and cultural needs. Changes to marine ecosystems resulting from global climate change, the introduction of contaminants from outside the region, and other stressors can affect both the access to traditional foods and the quality of that food for indigenous peoples and local communities. It is likely that those living a traditional lifestyle will be most vulnerable to human health impacts from climate change related issues.

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| **Capacity building, information outreach and collaboration** |
| *Project/activity* | *Description* | *Lead(s) and partners* |
| **Capacity building, information outreach and collaboration** | 1. Strengthen information outreach and cooperation and collaboration with international/regional organizations and to build the capacity and engagement of indigenous communities and other Arctic inhabitants.
2. Liaise and exchange information with relevant organizations and programs (e.g. UNEP Regional Seas Programme), and other regional programs.
3. Encourage activities and proposals from Permanent Participants.
4. Strive for the development of outreach and communication efforts and plans for PAME’s activities (e.g. through updates on the PAME homepage, brochures, roll-up stands, other communication material)
 | *PAME Chair/Secretariat* |

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# Annex II: XXX

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