

PAME SUMMARY REPORT 2011-2013 ACTIVITIES

KOPRI
극지연구소

8th Arctic Council Ministerial Meeting

15th of May 2013, Kiruna, Sweden

PAME
Protection of the Arctic Marine Environment



ARCTIC COUNCIL



The PAME Programme

The programme for the Protection of the Arctic Marine Environment (PAME) was established by the Arctic Council Ministers in Nuuk, Greenland, September 1993 with the mandate to address policy and non-emergency pollution prevention and control measures related to the protection of the Arctic marine environment from both land and sea-based activities. These measures include coordinated strategic actions, programs, assessments and guidelines, complementing existing international arrangements.

PAME members include National Representatives of the 8 Arctic Council States: Canada, Denmark (including Faroe Islands and Greenland), Finland, Iceland, Norway, Russian Federation, Sweden and United States. Indigenous groups' organizations, termed „Permanent Participants“ also participate in PAME, as well as representatives from several observer countries and organizations. Thus, PAME provides a unique forum for collaboration on a wide range of activities directed towards protection of the Arctic marine environment.

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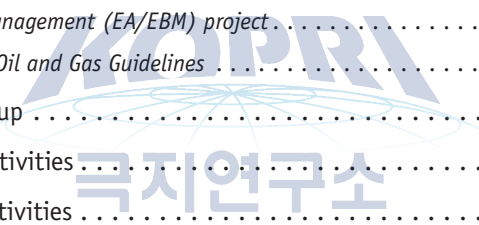
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Table of Contents

I. PAMEs Mandate	4
II. Direction from Nuuk 2011 Ministerial Declaration.	4
III. Main Achievements of PAME during the 2011-2013 Period	4
<i>Follow-up of the Arctic Marine Shipping Assessment Report (AMSA 2009)</i>	5
<i>Arctic Ocean Review Project (AOR)</i>	6
<i>Ecosystem-based Approach to Management (EA/EBM) project</i>	7
<i>Follow up on the 2009 Offshore Oil and Gas Guidelines</i>	7
IV. Implementation and follow-up	8
V. Cross-cutting projects and activities	8
VI. Support for international activities	9
VII. Communication and outreach	9
VIII. Administration	9
IX. PAME Deliverables for the 2013 Ministerial Meeting	10
Annex I – Summary of Progress PAME II-2011	11
Annex II – Summary of Progress PAME I-2012	14
Annex III – Summary of Progress PAME II-2012	16
Annex IV – Summary of Progress PAME I-2013	18



I. PAMEs Mandate

The PAME Working Group was established by the Arctic Council Ministers in Nuuk, Greenland in September 1993. PAMEs mandate is to address policy and other measures related to the protection of the Arctic marine and coastal environment from both land and sea-based activities. These measures include coordinated strategic actions, programmes, reports, assessments and guidelines, complementing existing international and regional arrangements.

PAME members include National Representatives of the 8 Arctic Council States: Canada, Denmark (including Faroe Islands and Greenland), Finland, Iceland, Norway, Russian Federation, Sweden and United States. Indigenous groups' organizations, termed „Permanent Participants“ also participate in PAME, as well as representatives from several observer countries and organizations.

PAME cooperates actively with the other Arctic Council Working Groups in an effort to contribute to improved efficiency and effectiveness of the Arctic Council, and the participation of indigenous peoples and other Arctic residents is fully recognized, thus providing a unique forum for collaboration on a wide range of activities directed towards protection of the Arctic marine environment.

II. Direction from Nuuk 2011 Ministerial Declaration

PAME works in accordance with specific references from the 2011 Nuuk Declaration and based on priorities identified by the Arctic Council with reference to the following paragraphs:

- ✓ Decide that the Arctic Council should continue to work towards solutions to address emerging challenges in the Arctic utilizing a wide range of approaches,
- ✓ Decide to establish an expert group on Arctic ecosystem-based management (EBM) for the Arctic environment to recommend further activities in this filed for possible consideration by the SAOs before the end of the Swedish chairmanship.
- ✓ Decide to establish a Task Force, reporting to the SAOs, to develop an international instrument on Arctic marine oil pollution preparedness and response, and call for the Emergency Prevention, Preparedness and Response (EPPR) and other relevant working groups to develop recommendations and/or best practices in the prevention of marine oil pollution.
- ✓ Urge the completion as soon as possible of work at the International Maritime Organization to develop a mandatory polar code for ships.
- ✓ Welcome the progress achieved with the Arctic Ocean Review (AOR) project which considers existing global and regional measures that are relevant for the Arctic marine environment, and look forward to the delivery of the final report of the AOR project in 2013, in particular the options and opportunities for strengthening global and regional efforts for the conservation and sustainable use of the Arctic marine environment.
- ✓ Adopt the recommendations in the SAO Report to Ministers and instruct SAOs to review and adjust, if needed, the mandates of the Arctic Council working groups and task forces and their work plans for 2011-2013.

III. Main Achievements of PAME during the 2011-2013 Period

PAMEs work over the last two years has proceeded in accordance with relevant actions identified in the Arctic Marine Strategic Plan (AMSP 2004) and as identified and agreed to in PAMEs biennial work plan as approved by the Arctic Council including implementation of follow-up on actions of the Arctic Marine Shipping Assessment (AMSA), and policy follow-up to the scientific and other assessments of the Arctic Council.

Follow-up of the Arctic Marine Shipping Assessment Report (AMSA 2009)

PAME is following up the recommendations from the AMSA 2009 Report and prepared an AMSA 2011-2013 Progress Implementation Report reflecting the progress on all 17 AMSA recommendations promoting the safety and environmental awareness of current and future Arctic shipping activity. The recommendations are aligned under three themes: Enhancing Arctic Marine Safety; Protecting Arctic People and the Environment; and Building the Arctic Marine Infrastructure. The AMSA 2011-2013 Progress Implementation Report notes that significant and ongoing progress is being made in implementing the recommendations.

Arctic Council Member's State representatives with expertise in shipping (in particular with respect to the work of the International Maritime Organization (IMO)) have been invited to meetings of PAME in an effort to support and promote the continuum of relevant work within the Arctic Council and IMO. There has been a significant increase in participation and collaboration on relevant measures to reduce the environmental impacts of shipping in Arctic waters.

Recommendation I(A) – Linking to Other International Organizations: PAME continues to monitor, and as necessary or appropriate, to report on developments with respect to Arctic initiatives, actions, or activities of other international and regional organizations including the IMO, the International Mobile Satellite Organization (IMSO), the World Meteorological Organization (WMO), the Arctic Regional Hydrographic Council (ARHC), the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), and the International Whaling Commission.

Recommendation I(B) – IMO Measures for Arctic Shipping: As it relates to the IMO Polar Code: PAME continues to support the expeditious development of the mandatory IMO Polar Code noting the extension of the proposed completion date to 2014, and has invited all PAME member governments to ensure that their IMO delegations have all relevant scientific environmental data, in particularly the data from the AMSA Recommendation II(C) Report for their consideration. The environmental chapter is an essential part of the Polar Code and its timely completion and the significance of PAME's work is recognized. PAME has urged Permanent Participants, observers, and other interested parties to timely share with their respective member government IMO representatives, data that will aid in the further development of the Polar Code.

Mitigating Environmental Risks Associated with the Use and Carriage by Vessels of Heavy Fuel Oil (HFO) in the Arctic - Phase II Project continues to move forward, with a contract issued to Det Norske Veritas(DNV) for completion of a final report to be submitted to the PAME I-2014 (Spring 2014) meeting. It is expected that the report will identify and recommend for member government consideration measures that could be pursued at the IMO and perhaps elsewhere to mitigate the risks associated with the use and carriage by vessels of HFO in the Arctic.

Recommendation I(D) – Strengthening Passenger Ship Safety in Arctic Waters: Work is ongoing at IMO on several initiatives to improve passenger ship safety and PAME continues to monitor and as appropriate support these developments. Two PAME member governments compiled a list of existing international, national, industry and NGO best practices standards related to safe and environmentally sound passenger ship operations in Arctic waters (with a report submitted to the IMO in 2011) and PAME has strongly encouraged the cruise ship industry to adopt, implement, share and improve best practices for such operations. PAME has invited representatives from the Association of Arctic Expedition Cruise Operators (AECO) and the Cruise Lines International Associations (CLIA) to present their respective views and information on these topics at PAME meetings.

PAME continues to strongly encourage the passenger ship industry to augment existing and/or develop new best practices for operations in the Arctic to enhance safety and environmental protection. With a view to learning about the relevance of shipping insurance influencing safe operation of passenger ships in the Arctic, PAME heard from a representative of the shipping insurance industry (International P & I Group) on factors that go into setting insurance premiums for Arctic cruises. PAME is also actively exploring options for increasing maritime domain awareness for safety and environmental protection purposes through the identification of national systems for monitoring and tracking vessel traffic in the Arctic as well mechanisms for increased sharing information generated by such systems among PAME governments. A representative of exactEarth, a Canadian-based provider of satellite-based ship traffic information, also made a presentation to PAME.

Recommendation II(C) – Areas of Heightened Ecological and Cultural Significance: AMAP, CAFF and SDWG submitted the final draft AMSA II(C) Report identifying areas of heightened ecological and cultural significance within the Arctic to the PAME I-2013 meeting for its consideration and use.

Recommendation II(D) – Specially Designated Marine Areas: PAME member governments finalized a tender to retain a consultant to prepare a report under AMSA Recommendation II(D) that will, based on the II(C) Report, make recommendations for measures to protect one or more regions within the high seas portions of the Arctic Ocean from international shipping activities. Based on this information, PAME member governments will then consider whether to pursue protection measures individually or jointly at the IMO.

PAME also continues to encourage member governments to update and keep current information in IMO's Global Integrated Shipping Information System (GISIS) database on their port waste reception facilities and through their respective national standards organization to assist the International Organization for Standardization (ISO) with the development of international standards specifically addressing the unique technical challenges related to Arctic shipping.

Recommendation II(G) – Addressing Shipping Impacts on Marine Mammals: PAME received from a member government detailed information on the work of IMO, the International Organization for Standardization (ISO), and the International Whaling Commission related to impacts of shipping on marine mammals along with options for a number of initiatives that may be pursued to mitigate or reduce the adverse impacts on marine mammals of ship strikes and underwater noise incidentally generated by commercial shipping.

Recommendation II(H) – Reducing Air Emissions: The World Wildlife Foundation, IUCN, and the Circumpolar Conservation Union have submitted to PAME information on IMO's work related to black carbon, in particular as it relates to the Arctic. Information gathered as part of the HFO Phase II Report described previously may contribute to a better understanding of the role Arctic shipping plays in black carbon emissions.

AMSA III(A) – Addressing the Infrastructure Deficit: A paper on the World Meteorological Organization's Voluntary Observing Ship (VOS) Scheme was submitted for PAME's consideration. The VOS Scheme is an international arrangement by which ships plying the various oceans and seas of the world are recruited by National Meteorological Services to take and transmit meteorological and oceanographic observations that aid in safe and environmentally sound navigation. PAME has encouraged member governments and industry associations to increase their level of participation in the World Meteorological Organization's VOS Scheme and promote participation by vessels flying their flag. Letters have been sent to the shipping industry (e.g., International Chamber of Shipping, Cruise Lines International Association, Baltic and International Maritime Council (BIMCO), and AECO) to encourage participation by their members in the VOS Scheme. The PAME Secretariat has also posted information on the VOS Scheme to the PAME Web site. PAME has received information on the Arctic Maritime and Aviation Transportation and Infrastructure Initiative (AMATII) project and has proposed to provide information on Arctic port waste reception facilities for inclusion in the project.

AMSA III(B) – Arctic Marine Traffic Systems: PAME is actively exploring options for increasing real time or near real-time Arctic maritime domain awareness through the identification of national systems for monitoring and tracking vessel traffic in the Arctic. Such information can be used to increase safe and environmentally sound Arctic shipping. Member governments have submitted information to PAME on such systems as well as how such information may be made available to other member governments. Seven member governments already participate in the Maritime Safety and Security Information System, an internet-based system through which ship and shore-based Automated Identification System (AIS) information is shared. A representative of exactEarth, a commercial provider of satellite-based ship traffic information, also made a presentation to PAME on how such information can support maritime domain awareness and Arctic marine traffic systems.

Arctic Ocean Review Project (AOR)

The overall objective of the Arctic Ocean Review (AOR) is to provide guidance to Arctic Council Ministers on strengthening governance in the Arctic through a cooperative, coordinated, and integrated approach to the management of the Arctic marine environment. The AOR will also play an important role in demonstrating Arctic States' stewardship

efforts in this area. The AOR is not a new assessment, but will produce a review of the status and trends of pressures on the arctic marine environment, an analysis of the relevant instruments, and in this final phase of the AOR, options to strengthen the conservation and sustainable use of the Arctic marine environment.

Three Expert Workshops have been convened in support of the development of the AOR Report and workshop summary reports prepared to record the range of views discussed, including those that may be outside the Terms of Reference for the AOR project, but could be further considered for future work by the Arctic Council, as relevant. The final agreed AOR Phase II Report, including its recommendations went through weekly teleconferences during the months of Nov 2012-Apr 2013.

Ecosystem-based Approach to Management (EA/EBM) project

PAME continued to advance the work towards implementation of the ecosystem approach to assessment and management by taking into account the previous work on the Large Marine Ecosystems (LMEs) and the summary of Observed Best Practices for Ecosystem-based Ocean Management (as a part of the 2009 Best Practices in Ecosystem Based Oceans Management in the Arctic project) and the work of the EBM Task Force.

- ✓ One workshop was held in 2012 which focused on the issue of integrated assessment of the conditions (status, trends and impacts) of LMEs in the Arctic. The workshop participants agreed that the Arctic LMEs were the primary units and scale for applying the EA to management of arctic marine ecosystems. The workshop participants also noted that integrated assessment is a core element of the EA to management and that the need for such assessments is primarily at the scale of regional ecosystems (LMEs) where they form an essential component of the scientific work needed to support the EA to management.
- ✓ PAME representatives have also participated in the work of the EbM Expert Group to ensure synergies with the EA work of PAME. PAME has prepared a concept paper on the Ecosystem Approach to Management to the Arctic Council and a short brochure on the EA based on the concept paper. Furthermore PAME approved the revisions to the map of 17 Arctic LMEs and supporting text on the boundary issues.
- ✓ The next EA workshop will be held in June 2013 to discuss data management, availability, integration, and communications as essential to implement the ecosystem approach to management. Arctic Council working groups working on marine-related issues will take an active involvement in its planning.

Follow up on the 2009 Offshore Oil and Gas Guidelines

Health, Safety and Environmental Management Systems for Offshore Arctic Oil and Gas Operations (HSE): The failure of HSE Management System elements was a contributing factor in the Deepwater Horizon disaster and other major accidents. The project started in March 2012 with a compilation of HSE Management Systems used by Arctic States and included in the Arctic Offshore Oil and Gas Guidelines of 2009. Selected common elements were examined in an Arctic context. Two expert workshops were held to gather information on its project development. The HSE Management Systems Workshop in June 2012 was coordinated with the EPPR/RP3 workshop. A Safety Culture workshop was held in September 2012 which explored common root causes for major industrial systems failure accidents.

Arctic Oil and Gas Management, Regulation and Enforcement Web-Based Information Resource project (MRE): The website will provide indexed access to specific information on national websites related to management, regulation, and enforcement of Arctic offshore oil and gas activities. The website will include background documents from the HSE project and workshop reports. The website is to be launched in May 2013 and will be periodically updated.

IV. Implementation and follow-up

Revise the Arctic Marine Strategic Plan of 2004 (AMSP): Several specific PAME activities have aimed at implementing the AMSP 2004 and the Arctic Climate Impact Assessment (ACIA). AMAP, CAFF, EPPR and SDWG have responded to the status of the AMSP strategic actions which show that all strategic actions have been completed or are progressing according to plan and are expected to conclude within the next work plan period. Based on this, PAME, in cooperation with other Arctic Council working groups, will initiate a consultative process to revise the AMSP 2004. A new and revised AMSP will be produced for adoption by the Arctic Council in 2015.

Arctic Ocean Review (AOR): The AOR is a direct follow-up to the AMSP, which recommends states “periodically review of the status and adequacy of international/regional agreements and standards that apply in the Arctic marine environment, and new scientific knowledge of emerging substances of concern...” In addition the AMSP suggests that states regularly consider commitments by the global community to sustainable development and protection of marine biodiversity and the marine environment through application of the ecosystem approach and integrated coastal and ocean management. PAME will initiate a process to follow-up on the AOR during the 2013-2015 period and implement the relevant recommendations, as directed by the SAOs.

Follow-up of the Arctic Marine Shipping Assessment of 2009 (AMSA): PAME continues to follow up on the recommendations from the AMSA 2009 report and has prepared an AMSA 2011-2013 implementation progress report reflecting the status and progress on all 17 recommendations promoting safety and environmental awareness of current and future Arctic shipping activity at national, Arctic, regional, and international levels, as relevant. The report highlights the significant progress being made in implementing these recommendations.

Ecosystem-based Approach to Management (EA/EBM): PAME continues to advance the work towards implementation of the ecosystem approach to assessment and management (see above).

V. Cross-cutting projects and activities

PAME continues to actively communicate with other Arctic Council working groups on the need to collaborate on related projects to ensure synergies. AMAP, CAFF, EPPR and SDWG have participated at PAME’s meetings.

EPPR has provided an update on relevant AMSA follow-up including AMSA II(F) – Oil Spill Prevention as it relates to update on the recommended practices for Arctic oil spill prevention project (RP3) and on AMSA III (C) – Circumpolar Environmental Response Capacity Safety Systems in Implementation of Economic and Infrastructural Projects. Furthermore, the PAME Oil and Gas contact group has collaborated with the EPPR on the RP3 project and the HSE project to ensure synergies with both efforts.

AMAP, CAFF and SDWG have worked on the AMSA follow-up for recommendations II(C) on Areas of Heightened Ecological and Cultural Significance. Representatives from all working groups were invited to participate in the two AOR workshops during the Phase II process (September 2011 - September 2012) in an effort to give opportunity for all working groups to provide input.

AMAP, CAFF and SDWG who are engaged in marine-related issues have been invited to participate in the PAME-led Ecosystem Approach (EA) expert group and will jointly work on the planning of its spring 2013 workshop. PAME has been actively involved in the work of the EBM Expert Group to ensure synergies with PAMEs work on this issue.

PAME seek contributions from other Arctic Council working groups engaged in marine-related issues on a new AMSP as per PAMEs work plan 2013-2015. Such a consultative process will start with a scoping workshop with relevant experts.

VI. Support for international activities

Since the approval of the AMSA 2009 Report, PAME has invited expert organisations to meetings as a mean of outreach and information sharing of relevance to the AMSA follow-up activities. These include:

- ✓ *AMSA I(D) – Strengthening Passenger Ship Safety in Arctic Waters*: presentation on Best Practices for Arctic Cruise Tourism by Cruise Lines International Associations.
- ✓ *AMSA I(D) – Strengthening Passenger Ship Safety in Arctic Waters*.
 - *Presentation on Environmentally friendly, safe and responsible expedition cruise tourism in the Arctic*: practices and industry standards by Association of Arctic Expedition Cruise Operators (AECO).
 - *Presentation on how members address voyage planning (including possible contingencies) and coordinate with each other and with shore-based administrations*: by Arctic Expedition Cruise Operations (AECO).
- ✓ *AMSA I(B) and I(D) – IMO Polar Code and initiatives to improve Arctic passenger ship safety*: presentation by the shipping insurance industry on factors that go into setting insurance premiums for Arctic cruises by International Group of P&I Clubs.
- ✓ *AMSA III (B) – Arctic Marine Traffic Systems*: presentation on Automated Identification System (AIS), Long Range Identification and Tracking of ships (LRIT) and/or similar ones that may be deployed by Arctic States by Satellite Based Monitoring Service, European Maritime Safety Agency.
- ✓ *AMSA II(D) - Specially Designated Arctic Marine Areas*: presentation on “Satellite AIS Capabilities in the Arctic” by ExactEarth, Automatic Identification System.
- ✓ *AMSA III (B)*: to AMSA including their initiatives and views regarding IMO’s Polar Code, areas of heightened ecological and cultural significance, invasive species, oil spill prevention, ship strikes, underwater noise, air emissions, and marine traffic awareness systems by Baltic and International Maritime Council’s (BIMCO).

VII. 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, and presentations. PAME participates in relevant international symposia, meetings and other appropriate venues to communicate PAMEs activities. PAME’s work plan include information outreach and efforts to increase cooperation and collaboration with international and regional organisations to include the liaising and exchange of information with relevant organizations and programs (e.g. UNEP Regional Seas Programme), and other regional programs. PAME will develop a communication plan in line with the Arctic Council’s communication strategy. PAME’s homepage serves as the main outreach and communication tool (www.pame.is).

VIII. Administration

The PAME International Secretariat is located in Akureyri, Iceland. The Secretariat has a staff of three (1) the Executive Secretary; (2) Executive Assistant and (3) Project officer. Both Iceland and the United States have chaired the PAME Working Group during 2011–2013. At the Kiruna Ministerial Iceland will take over the Chairmanship and the United States will become Vice-Chair. PAME has held four working group meetings, two AOR Expert Workshops, one Ecosystem Approach Workshop, one Health Safety and Environmental Management Systems Workshop, and one Safety Culture Expert Workshop during the Swedish Chairmanship of the Arctic Council. A Ministerial agreement (1997) provides the framework for country contributions to the operation of the PAME Secretariat. PAME cooperates closely with CAFF to share fixed secretariat overhead costs.

IX. PAME Deliverables for the 2013 Ministerial Meeting

- ✓ AOR Final Report including Recommendations
- ✓ AMSA 2013 Progress Report on implementation of the AMSA 2009 Recommendations
- ✓ HSE workshop reports (HSE and Safety culture workshops) and communication piece on the MRE website up and running
- ✓ Revised LME map with explanatory text
- ✓ PAME 2013-2015 Work Plan



Annex I – Summary of Progress PAME II-2011

PAME held its working group meeting (PAME II-2011) in Reykjavik, Iceland, 21-23 September 2011 with 60 participants. This meeting was held back-to-back with the AOR Phase II Workshop 20-21 September 2011. Below is a summary of developments and main decisions from the last PAME meeting.

Arctic Marine Shipping Assessment follow-up activities

AMSA I(B) – Polar Code: PAME continues to strongly support work at the IMO on the Polar Code and urges governments to work as expeditiously as possible to complete that work. In the interim, PAME reminds the shipping industry of existing IMO guidance applicable to Arctic ship operations.

PAME recommends that its member governments explore preparation and joint submission of a paper to the IMO that emphasizes the importance of the completion of the Polar Code to the Arctic Council Member States.

AMSA I(D) – Passenger Ship Safety: Strongly encourage the cruise ship industry to to augment existing and/or develop new best practices for operations in the Arctic to enhance safety and environmental protection.

To the extent that pollution prevention and passenger ship safety are linked, invite EPPR to inform PAME I-2012 on how their work could help to support implementation of AMSA Recommendation I(D).

Direct the PAME Chair/Secretariat to invite a member of the shipping insurance industry to make a presentation at PAME-I 2012 on factors that go into setting insurance premiums for Arctic cruises.

AMSA I(B) – The Heavy Fuel Oil (HFO) in the Arctic Project – Phase II: PAME agrees to proposed revisions to the HFO Phase II Work Plan 2011-2012. PAME agrees that the co-leads are given the task of managing the selected consultant, with input from the contact group, and that Norway, as the contract manager, serve as the coordinator and the main point of contact for this project. The project description and Terms of Reference are to be developed with input from the contact group.

AMSA I(B) co-leads explore opportunities to use the information collected within the HFO study to be accessible in the www.arcticdata.is database.

AMSA II(C) – Areas of Heightened Ecological and Cultural Significance: Note the status report on the progress of follow-up of AMSA II(C) by AMAP/CAFF/SDWG and look forward to the final draft report which will provide the necessary information to start AMSA II(D).

Request that the PAME Chair/Secretariat to communicate with SDWG regarding the inclusion of “cultural significance” information to help ensure the successful completion of the II(C) process.

PAME agreed that areas of cultural significance being identified under II(C) could include underwater cultural heritage such as shipwreck information.

AMSA II(D) – Specially Designated Arctic Marine Areas: PAME supports the revised work plan and the draft Terms of Reference which will be further developed intersessionally by the AMSA II(D) contact group, for submission to the PAME I-2012 for possible modification and endorsement.

AMSA III(B) – Arctic Marine Traffic Systems: Direct the PAME Secretariat to invite an appropriate expert in vessel traffic monitoring and information systems (e.g., from the European Maritime Safety Agency - EMSA) to make a presentation on Automated Identification System (AIS), Long Range Identification and Tracking of ships (LRIT), and/or similar ship monitoring/tracking systems that are or may be deployed by Arctic countries to support implementation of III(B).

PAME Chair to invite member governments to submit to PAME I-2012 meeting information on existing national vessel traffic monitoring and tracking systems.

Welcome the information from EPPR on their follow-up activities on AMSA Recommendations II(F) and III(C), and invite EPPR to inform on progress to PAME I-2012.

Welcome the information from the Russian Federation on established Marine Rescue Coordination Subcenter (MRCC) in Tiksi which operates during the summer navigation period, as well as the oil spill combating exercise "Arctic 2011" which was held in the water area of the port of Tiksi in August 2011.

Follow up on the 2009 Offshore Oil and Gas Guidelines

The Meeting noted the status report on the Health, Safety and Environmental Management Systems for Offshore Arctic Oil and Gas Operations project (HSE) and look forward to further details on the proposed workshop in 2012.

The Meeting agreed to the revised timeline for the Arctic Oil and Gas Management, Regulation and Enforcement (MRE) a Legal Regime Web-Based Information Resource project.

The PAME oil and gas contact group will further develop the website format and content, and supply information to be included for the MRE project in accordance with the revised timeline.

The oil and gas contact group to explore PAME contributions (The 2009 Offshore Oil and Gas Guidelines and the HSE project) to the SAO task force as it relates to development of recommendations and/or best practices in the prevention of marine oil pollution.

Arctic Ocean Review Project (AOR)

The AOR is a multi-phased project that is reviewing global and regional measures that are in place for the conservation and sustainable use of the Arctic marine environment, and is analyzing options for strengthening the conservation and sustainable use of the Arctic marine environment. The overall objective of the AOR is to provide guidance to Arctic Council Ministers as a means to support strong governance in the Arctic through a cooperative, coordinated and integrated approach to the management of activities in the Arctic marine environment.

The AOR Expert Workshop was convened in Reykjavik, Iceland 20-21 September (back-to-back with the PAME II-2011 meeting 21-23 September) in support of the development of the AOR Report which will be submitted to the 2013 Arctic Council Ministerial meeting along with other PAME documents. The objective of the workshop was to contribute to the development of the AOR through a *theme-based* approach, building on the outcomes of AOR Phase I taking into account major new developments or relevant findings. The workshop focused in particular on potential opportunities and options to strengthen global and regional instruments and measures, and the human dimension component.

The workshop was structured around the following themes and Human Dimension considerations were incorporated into the following respective themes:

Session I: Arctic Marine Science

Session II: Arctic Pollutant Sources

Session III: Living Marine Resources

Session IV: Offshore Oil and Gas

Session V: Shipping

Session VI: Integrated Ocean Management/Ecosystem Based Management

The workshop provided an overview of the key issues as presented within a thematic approach that provided the basis for developing the AOR Phase II Report. The presentations represented an advanced understanding of Arctic issues including the human dimension, and provided several key ideas which will form the advice provided to Arctic Council ministers.

Ecosystem Approach

- ✓ PAME Chair to send a letter inviting Arctic Council working groups working on marine-related issues (AMAP, CAFF and SDWG) to participate in the PAME-led Ecosystem Approach (EA) Expert Group on the ecosystem approach to management.
- ✓ Co-leads to update the Terms of Reference and the work plan of the EA Expert Group to reflect its expansion and 2011-2013 work plan items, taking into account the Arctic Council Ecosystem Expert group activities. This update to be sent to the new PAME-led EA Expert Group for review and comments.
- ✓ Norway as one of the EA co-leads (Norway and USA) to prepare a concept paper that summarizes previous discussions and agreements on concepts and terminology related to ecosystem approach to management for discussion within the Ecosystem Approach Expert Group for submission to the PAME I-2012 meeting. The concept paper will be used to prepare a short brochure on the EA. Draft will be submitted for consideration and agreement at the PAME I-2012 meeting.
- ✓ Co-leads to submit the revised LME map to the PAME I-2012 meeting.
- ✓ The co-leads, in cooperation with the PAME-led EA Expert Group, to convene a workshop back-to-back with the next PAME meeting to include the following main agenda items: (1) facilitate exchange of information on the development of ecosystem status reports; (2) identify possible arrangements and integration of monitoring and assessment; and (3) identify possible elements to the development of the AMSP Phase I 2011-2013 scoping process.
- ✓ Await further information on the operational aspect of the new expert group on Arctic ecosystem-based approach to management as per the 2011 Nuuk Declaration in an effort to clarify possible linkages and cooperation with the PAME-led EA expert group



Annex II – Summary of Progress PAME I-2012

PAME convened its working group meeting (PAME I-2012) in Stockholm, Sweden, 26-27 March; back-to-back with the Workshop on Ecosystem Approach to Management (EA) 22-23 March 2012 and the SAO meeting 28-29 March. Below is a summary of developments since the last PAME meeting.

Arctic Marine Shipping Assessment follow-up activities

AMSA I(B) – Polar Code: PAME continues to strongly support work at the IMO on the Polar Code, including through the compilation and development of information (e.g., on HFO fuel use and carriage) that may assist and inform preparation of the Polar Code.

AMSA I(D) – Passenger Ship Safety: A representative from the shipping insurance industry has agreed to give a presentation at the PAME I-2012 meeting to inform PAME members about the role of marine insurance and its contribution to the protection of the Arctic marine environment. This includes the role the marine insurance can play in helping to strengthen ship safety and environmental protection in the Arctic to include developments, trends and directions in the marine insurance industry since issuance of the 2009 AMSA Report.

See also the discussion below on AMSA III(B) and Arctic Marine Traffic Systems.

AMSA I(B) – The Heavy Fuel Oil (HFO) in the Arctic Project – Phase II: Further development of a project description and Terms of Reference for the HFO Phase II project is ongoing, with discussions focusing on the scope of the project, which is looking at the use and carriage of heavy grade fuel oil in the Arctic.

AMSA II(C) – Areas of Heightened Ecological and Cultural Significance: The project co-leads have submitted a progress report and 4th draft of the AMSA II(C) Report for use in developing the AMSA II(D) project at PAME I 2012. This draft only contains information on areas of heightened ecological significance within the Arctic. Information on areas of heightened cultural significance was omitted from the 4th draft as such information was deemed inadequate at this stage and additional time is needed to allow SDWG and others to contribute more information.

The 4th draft AMSA II(C) Report has been circulated for national review and comment, with a deadline of April 20 for the submission of corrections and/or new information. The co-leads estimate that the ecological part of the report will be edited and published for delivery to PAME by the 1st of July 2012.

PAME Chair has communicated to SDWG Chair the need for relevant input from SDWG on “cultural significance” to help ensure the successful completion of the II(C) process.

AMSA II(D) – Specially Designated Arctic Marine Areas: The AMSA II(D) co-leads have had preliminary discussions on the project scope and will ramp up this work at PAME I-2012 based on the 4th draft of AMSA II(C) report taking into account that it is currently being reviewed by countries and that the “cultural significance” portion of the report will be made available at a later stage.

AMSA III(B) – Arctic Marine Traffic Systems: An expert in vessel traffic monitoring and information systems from the European Maritime Safety Agency (EMSA) will make a presentation on Automated Identification System (AIS), Long Range Identification and Tracking of ships (LRIT), and/or similar ship monitoring/tracking systems that are or may be deployed by Arctic countries to support implementation of III(B). Arctic Council member governments are in the progress of submitting information on their respective national vessel traffic monitoring and tracking systems for discussion at the PAME I-2012 meeting.

Follow up on the 2009 Offshore Oil and Gas Guidelines

The Oil and Gas Contact Group has made good progress in compiling and organizing the project on Arctic Oil and Gas Management, Regulation and Enforcement (MRE) a Legal Regime Web-Based Information Resource project. All countries

have some websites and documents listed and linked under the various relevant headings and currently the PAME Secretariat is formatting the content and developing the website as per directions and contributions from member countries.

The Health, Safety and Environmental Management Systems for Offshore Arctic Oil and Gas Operations project (HSE) has started and communications have been with EPPR to ensure synergies and collaboration with the Best Practices for Prevention of Marine Pollution project (BPP). The PAME Oil and Gas contact group is in the process of considering the agenda for an HSEMS workshop in connection with the BPP workshop in Iceland in June 2012. Coordination of issues to be covered is underway with EPPR.

Arctic Ocean Review Project (AOR) Project

The AOR project has progressed into Phase II of its timeline. To date, the AOR Co-Leads have agreed to a Table of Contents which includes 7 Chapters (science, oil and gas, shipping, pollution, living marine resources, ecosystem based management, and human dimension).

The AOR Co-Leads have confirmed 2 lead authors and individual chapter authors for the final report, which will be delivered to Arctic Council Ministers. Upcoming events include an AOR Conference/Workshop to be convened in Canada in September 2012 back-to-back with the PAME II-2012 meeting.

Ecosystem Approach

Arctic Council working groups working on marine-related issues (AMAP, CAFF and SDWG) have been invited to participate in the PAME-led Ecosystem Approach (EA) Expert Group on the ecosystem approach to management.

The co-leads, in cooperation with the PAME-led EA Expert Group will convene an Ecosystem Approach to Management (EA) workshop 22-23 March 2012 in Stockholm (back-to-back with the PAME I-2012 meeting (26-27 March 2012)). Details on the outcome and reporting will be distributed and posted on the PAME homepage when available.

PAME will participate in the next meeting of Ecosystem-based Management (EBM) Expert Group, April 16-18 in Gothenburg to present PAME's ecosystem work (past and present) of relevance and to ensure that such a work be fully taking into account in the work of the EBM Expert Group

PAME Administration

PAME delegations strive to include their respective IMO experts in their delegations to the PAME I-2012 meeting for, in particular the AMSA agenda items.

Annex III – Summary of Progress PAME II-2012

The biannual meeting of the PAME Working Group and two associated expert workshops were convened in Halifax, Nova Scotia, Canada from September 16–20, 2012, and organized as follows:

- ✓ Safety Culture Expert Workshop (September 16) – an expert workshop aimed at improving the safety culture associated with offshore oil and gas operations – separate 2 pager
- ✓ Arctic Ocean Review (AOR) Expert Workshop (September 17–18) – a one and a half day expert workshop to review and develop a report that will provide advice on how to strengthen the conservation and sustainable use of the arctic marine environment – separate 2 pager
- ✓ PAME II-2012 Working Group Meeting (September 18-20) – attended by about 60 participants, representing the Arctic Council and structured around the PAME Work Plan 2011-2013 activities with the aim to agree on timeline/milestones of actions and activities in time for the 2013 Ministerial. Furthermore, this meeting started compiling a list of potential activities/projects for possible inclusion into the PAME Work Plan 2013-2015.

Below is a summary of developments since the last PAME meeting.

Arctic Marine Shipping Assessment follow-up activities

PAME discussed a range of AMSA follow-up activities which included linkages with International Organizations and the meeting was informed on Arctic-relevant activities of International Mobile Sattelite Organization (IMSO), World Meteorological Organization (WMO) and the IMO developments on mandatory Polar Code. PAME agreed to continue to monitor, and as necessary or appropriate, report on developments with respect to Arctic initiatives, actions, or activities of other international organizations as a follow-up to AMSA I(A) – Linking with International Organizations

The Heavy Fuel in the Arctic (HFO) Phase II Project (co-leads Norway/Russia/U.S.) has been delayed and a revised timeline was agreed with the submission of the final product at the PAME II-2013 (Fall 2013)

PAME was informed that the final AMSA II(C) Report on Areas of Heightened Ecological and Cultural Significance (AMAP/CAFF/SDWG) would be ready by end of December 2012. Consequently the schedule for finalizing the AMSA II(D) Project on Specially Designated Marine Areas (co-leads: Finland/Norway/Russia/USA) has been delayed and a revised timeline was agreed to.

PAME encouraged member governments to update and keep current information in IMO's GISIS database on their port waste reception facilities and through their respective national standards organization to assist the International Organization for Standardization (ISO) with the development of international standards specifically addressing the unique technical challenges related to Arctic shipping.

EPPR provided update on relevant AMSA follow-up including AMSA II(F) – Oil Spill Prevention as it relates to Update on the Recommended Practices for Arctic Oil Spill Prevention Project (RP3) and on AMSA III (C) – Circumpolar Environmental Response Capacity Safety Systems in Implementation of Economic and Infrastructural Projects.

A Summary of paper on the World Meteorological Organization's Voluntary Observing Ship (VOS) Scheme was introduced and PAME agreed to invite the shipping industry (e.g., International Chamber of Shipping, Cruise Lines International Association, Baltic and International Maritime Council (BIMCO), and AECO) to encourage participation by their members in the VOS Scheme as a follow-up to AMSA II(A) – Addressing the Infrastructure Deficit.

Russia informed the meeting on a new Federal Law on navigation on the water of the Northern Sea Route (NSR) adopted by the Parliament of the Russian federation on 3 July 2012 and signed by the President of the Russian Federation on 28 July 2012.

PAME agreed to a schedule for completing the final draft 2013 AMSA Progress Implementation Report (co-leads: Canada/Finland/USA) for consideration at PAME I-2013.

Follow up on the 2009 Offshore Oil and Gas Guidelines

PAME participants welcomed the progress on the following two oil and gas projects:

- ✓ Arctic Oil and Gas Management, Regulation and Enforcement Regulatory Regime Web-Based Information Resource project (MRE) and further development of its website.
- ✓ Health, Safety and Environmental Management Systems for Offshore Arctic Oil and Gas Operations project (HSE) including the compilation and comparison of Arctic countries HSE Management Systems requirements and formulation of a list of critical HSE elements in Arctic operations and result of investigations of the Deepwater Horizon accident. PAME agreed to a time schedule for the Oil and Gas Contact Group to conclude on the HSE project in Oct/Nov 2013

Arctic Ocean Review Project (AOR)

PAME members were requested to provide inputs to the AOR process in a timely manner as per the timeline noting in particular the need for countries and PPs active participation during the intergovernmental review process which will take place through weekly teleconferences during the months of Nov-Jan to ensure a timely submission to SAOs and the 2013 Ministerial meeting.

Ecosystem Approach

PAME will circulate again the draft concept paper on the Ecosystem Approach to Management to the Arctic Council EBM Experts Group to ensure synergies with both groups. PAME agreed that a short brochure on the EA based on the concept paper to be finalized in consultation with the EA PAME-led Expert Group and submitted for consideration and agreement at the PAME I-2013 meeting. Furthermore the revisions to the map of 17 Arctic LMEs will be finalized by 20th of December.

PAME plans to convene an expert EA workshop in spring 2013 to discuss data management, availability, integration, and communications as essential to implement the ecosystem approach to management.

Update the status of the Arctic Marine Strategic Plan (AMSP)

The Meeting noted direct relevance to a number of deliverables for the 2013 Arctic Council that should be taken into account in this work and the need to adjust the timeline to ensure that full account is taken of such inputs.

The Meeting took note of revised timeline with the proposed next steps, including intersessional work leading up to the PAME I-2013 meeting, to expand on process, approach and timeline and initiate the communication and collaboration with other Arctic Council working groups. The co-leads plan to finalize the updating of the AMSP for a possible the Deputy Ministerial meeting in May 2014, if so planned by the Arctic Council.

PAME Work Plan 2013-2015

PAME discussed the 1st draft template for the PAME 2013-2015 Work Plan which will be updated based on the discussions at this meeting and the compiled list of potential activities/projects for possible inclusion into the PAME Work Plan 2013-2015. The meeting agreed to a timeline to finalize the work plan with particular attention to the submission to the Arctic Council process by the 4th of December deadline as provided by the Arctic Council Chairmanship.

Annex IV – Summary of Progress PAME I-2013

The biannual meeting of the PAME Working Group was convened in Rovaniemi, Finland from 12-14 February 2012. Below is a summary of developments since the last PAME meeting.

Arctic Marine Shipping Assessment follow-up activities: PAME discussed a range of AMSA follow-up activities which included linkages with International Organizations. PAME decided to invite a representative from the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) to make a presentation on the Association's Arctic related activities. Furthermore, the United States will submit a paper to the next PAME meeting on the International Organization for Standardization (ISO) work related to protection of the Arctic marine environment.

PAME encouraged member governments to continue and intensify their collaboration with respect to development of the mandatory Polar Code and one or more member governments will be submitting a paper to the next PAEM meeting providing an update on its status.

As a follow-up to AMSA I (D) – Strengthening Passenger Ship Safety in Arctic Waters the Association of Arctic Expedition Cruise Operators (AECO) provided a presentation on how its members address voyage planning and coordinate with each other and with shore-based administrations. PAME continues to support ongoing dialogue with the passenger vessel industry, including development of lessons learned repository that includes input from AECO and other stakeholders as well as the exchange of information related to the development or augmentation of best practices.

As a follow-up to AMSA II(A) – Survey of Arctic Indigenous Marine Use, AIA was invited to submit a progress report on its project on building marine based subsistence mapping capacity in Arctic coastal communities. PAME also encourages member governments to share with AIA information or methodologies relevant to the project.

PAME acknowledged the AMSA II (C) Report on Areas of Heightened Ecological and Cultural Significance as submitted by AMAP, CAFF and SDWG. A few technical issues remain to be resolved and experts from Canada and Norway will work towards resolving these issues prior to the March 2013 SAO meeting

PAME agreed to the convening of an AMSA II(C)/AMSA II (D) – Specially Designated Arctic Marine Areas bridging workshop to be held in conjunction with the EA and AMSP workshops in June 2013. Russia and the United States will be preparing a paper on the possibility of the concept of regional arrangements for port reception facilities in the Arctic for the next PAME meeting and the United States will prepare an up to date report of all existing GISIS-reported port waste reception facilities for the Arctic region.

PAME will communicate with AMAP and CAFF on sharing of information on their current work with respect to AMSA II (G) – International Measures Related to Impacts of Shipping on Marine Mammals. The United States will inform PAME on the work of the US Cetacean Density and Distribution Mapping Working Group related to the Group's current work to create an online portal to access information on cetacean density, distribution, and biologically important areas.

As a follow-up AMSA II (H) – Reducing Air Emissions, governments were invited to submit reports on implementation of Chapter 4, MARPOL Annex VI, related to the Energy Efficiency Design Index (EEDI) and greenhouse gas emissions. PAME supports ongoing work at IMO on Black Carbon and encourages continued scientific research related to Black Carbon emissions including with respect to a technical definition of Black Carbon and appropriate measurement methods and control measures.

The follow-up of AMSA III (A) – Addressing the Infrastructure Deficit included information from the Institute of the North on the AMATII Project and member governments were invited to identify and submit information to help fill gaps and suggest additional categories of information that may warrant inclusion in the AMATII database. WWF informed the meeting about the ArkGIS project.

The follow-up of AMSA III (B) – Arctic Marine Traffic Systems: included a representative from the Baltic and International Maritime Council's (BIMCO) who informed the meeting about their shipping interests and activities as they relate to AMSA. An expert from Taksha University will be invited to next PAME meeting to inform PAME about how shore based and satellite AIS capabilities may be linked together for greater Arctic maritime awareness. Furthermore, representative

of the World Meteorological Organization's Executive Council Panel of Experts on Polar Observations, Research and Services (EC PORS) will be invited to inform PAME on its work related to Arctic maritime safety service information and products (e.g. ice) as a follow-up to AMSA III (D) - Investing in Hydrographic, Meteorological and Oceanographic Data

Arctic Ocean Review Project (AOR): PAME welcomed the draft AOR Report (version 9th of Feb 2013) and the Meeting considered the full range of possible actions and developed a working paper with 25 candidate recommendations. These will be taken into account during the completion of the final Chapter 9 on Conclusions and Recommendations, along with the Executive Summary and Fishery Section of Chapter 4 (Living Marine Resources) over the next month.

Ecosystem Approach: PAME welcomed the final draft version of the EA concept paper which will be edited and published as a PAME report. An EA brochure which is based on the concept paper will be published prior to the 2013 Arctic Council Ministerial meeting as a deliverable. PAME welcomed the revised map of Arctic Large Marine Ecosystems (LMEs), pending some final comments, and agreed to forward the revised LME map, including the supporting explanatory text on the revised LME boundaries, to the SAOs and the 2013 Ministerial meeting for their approval.

Follow up on the 2009 Offshore Oil and Gas Guidelines: It was agreed to strengthen PAME's Oil and Gas Contact Group to finalize the Health, Safety and Environmental Management Systems for Arctic Offshore Oil and Gas Operations (HSE Project) project by late 2013/early 2014 and the Arctic Oil and Gas Management, Regulation and Enforcement Web-Based Information Resource (MRE Project) by 1st of May 2013. The website will be updated yearly 2 weeks prior to the time of the PAME I meetings or as necessary.

Revising the Arctic Marine Strategic Plan (AMSP 2004): PAME will start the revision of AMSP by convening a scoping workshop in June, 2013 in Reykjavik, Iceland. The aim of this workshop is to get input from other Arctic Council working groups and, as relevant, stakeholders.

PAME Work Plan 2013-2015: The Meeting agreed to the Final draft PAME 2013-2015 Work Plan with outstanding issues to be finalized intersessionally and/or through SAOs guidance. PAME will establish an expert group to intersessionally work on refining the concept paper for the proposed Framework for an Arctic MPA Network.

PAME Deliverables for the 2013 Ministerial: PAME agreed to the input to the SAO Report to Ministers and the final deliverables to the 2013 Ministerial to include the following:

- ✓ AOR Report including Recommendations
- ✓ AMSA 2011-2013 implementation progress report
- ✓ HSE and Safety Culture Workshop reports and launch of the MRE website up and running
- ✓ Revised Arctic LME map with explanatory text and the EA brochure
- ✓ PAME 2013-2015 Work Plan

PAME Administration: The Meeting welcomed the offer by Iceland/Hugi Olafsson to chair the PAME Working Group during the Canadian Chairmanship of the Arctic Council. The PAME vice-chair over the next two year period is Elizabeth McLanahan from the United States. The next PAME meeting (PAME II-2013) will be hosted by the Southern Scientific Centre of the Russian Academy of Sciences (SSC RAS) in Rostov-on-Don, during the period of 10 Sep-10 Oct 2013 (TBD).

PAME's 3 Workshops to be convened the week of 10-14 June 2013, Reykjavik, Iceland: Invitations will be extended to the Arctic Council member states, PPs, working groups experts, and other experts as relevant and include: 1st Scoping workshop for the revision of the 2004 Arctic Marine Strategic Plan; AMSA II(C)/AMSA II(D)-PSSA bridging and scoping workshop with the aim to consider IMO measures for areas of heightened ecological significance, and 3rd Ecosystem Approach to Management workshop on data management, availability, integration, and communications as essential to implement the ecosystem approach to management.



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