



# PAME WORK PLAN

## 2011-2013

**PAME**  
Protection of the Arctic Marine Environment



ARCTIC COUNCIL

# PAME Work Plan 2011 - 2013

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## Preface

The purpose of the PAME Work Plan is to provide a framework for PAME's work related to the protection of the Arctic marine environment for the period of 2011 – 2013.

PAME's Working Group activities are based on its 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 action programs, assessments and guidelines, complementing existing legal arrangements.

The PAME Working Group provides a unique forum for collaboration on a wide range of Arctic marine environment issues and consists of National Representatives from

the Arctic Council states responsible for its work in their respective countries and Permanent Participants organizations representing Arctic indigenous peoples. Additionally, the Arctic Council working groups, accredited observers and other relevant organizations contribute to the on-going work of the PAME Working Group.

The PAME Working Group 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 countries and is supported by an International Secretariat. PAME reports to the Senior Arctic Officials, and through them, to the Ministers of the Arctic Council that meets every two years. PAME's work plan is approved by the Ministers.

## Introduction

The PAME Work Plan 2011 – 2013 was developed according to: PAME's mandate; priorities identified by the Arctic Council Chairmanship; direction provided in Ministerial declarations; and the Arctic Marine Strategic Plan (2004) which outlines the overall direction of the Arctic Council for the protection of the Arctic marine environment. The Work Plan is therefore structured around the three objectives from the AMSP followed by a set of specific actions which in some instances represent a continuation of ongoing activities.

Scientific research carried out in the Arctic region is greatly increasing the knowledge base in relation to the extent of the

changes, the drivers of change and anticipated consequences for ecosystems and human activities in the Arctic. Existing and emerging challenges to the health of the Arctic marine environment warrant a more integrated ecosystem based approach to address future needs related to shipping, oil and gas development, fisheries, coastal zone development, and other ocean related activities. PAME Working Group activities have been aimed at implementation of the Arctic Marine Strategic Plan (AMSP) and policy follow up to the scientific and other assessments of the Arctic Council.





# Projects and Activities

## **OBJECTIVE I:**

**Improve knowledge and respond to emerging knowledge of the Arctic marine environment**

## **BACKGROUND**

Arctic marine activities are likely to expand as a result of increased resource demand and improved marine access. This increased activity will increase risks to the environment and its ecological processes. In this regard the Arctic Council encourages the development of suitable national

and international regulations and measures to reduce the risk and the potential negative impacts of shipping and other activities in Arctic waters. In addition, development of appropriate infrastructure is encouraged in order to support safe shipping in the Arctic.



## ACTIONS:

Agreed follow-up of AMSA recommendations divides the AMSA recommendations into the following three categories:

- Actions to be followed up/implemented by PAME are recommendations **I(A), I(B)**, I(C), **I(D), II(D)** and **II(G)**.
- Actions to be followed up/implemented by other Arctic Council working groups are AMSA recommendations I(E), II(C), II(F) and III(C). The PAME Chair to communicate this to the relevant working groups chairs for their consideration and for the recommendations to be included in either their respective current or future work programme.
- Actions to be followed up within national implementation processes/policies with possible future requests for reporting on national activities, if needed, are AMSA recommendations **II(A), II(B)**, II(E), II(H), III(A), III(B) and III(D)

### 1. Follow-up of AMSA Recommendations

Actions	Activities	Lead(s)
<b>I(B) – IMO Measures for Arctic Shipping</b> (actions 1 and 2)	Work is underway in IMO to develop a mandatory Polar Code.	<b>Denmark</b>
<b>I(B) – IMO Measures for Arctic Shipping</b> (action 3) <u>Phase II of the Heavy fuel in the Arctic project</u>	The aim is to forward draft recommendation(s) to the Arctic Council in the Spring of 2013 for action by member governments regarding possible additional or supplemental international actions or regulations for the purpose of mitigating or minimizing the risks associated with the use or carriage of HFO in the Arctic Ocean.  <u>Refer to Annex 1 of the project plan for Phase II HFO project.</u>	<b>Norway</b> <b>US</b> <b>Russian Federation</b>
<b>I(D) – Strengthening Passenger Ship Safety in Arctic Waters</b> (action 1)	Monitor and support IMO initiatives to strengthen passenger vessel safety.	<b>Denmark</b> <b>US</b>
<b>I(D) – Strengthening Passenger Ship Safety</b> (action 2)	Take actions to encourage the Arctic cruise tourism industry to adopt new, or update existing, best practices for operations in the Arctic.	<b>Denmark</b> <b>US</b>
<b>II(G) – Addressing Impacts on Marine Mammals</b>	PAME to invite AMAP and CAFF to assess the effects on marine mammals due to ship noise, disturbance and strikes in Arctic waters, taking note of relevant documents by organizations such as IMO, IWC, ASCOBAN and NAMMCO.	<b>PAME Chair</b>
<b>II(A) – Survey of Arctic Indigenous Marine Use</b> <b>II(B) – Engagement with Arctic Communities</b>	Develop activities under the themes identified in the scoping paper on Arctic Indigenous Marine Use Survey Process as prepared by AIA and Saami Council.	<b>AIA</b> <b>Saami Council</b>

Actions **I(A), I(B), I(D), II(D), II(G), II(A)** and **II(B)** refer to those follow-up recommendations included in this version



<p><b>II (D) -Specially Designated Arctic Marine Areas:</b> <i>That the Arctic states should, taking into account the special characteristics of the Arctic marine environment, explore the need for internationally designated areas for the purpose of environmental protection in regions of the Arctic Ocean</i></p>	<p>PAME to review final II (C) report. Subsequent actions to be considered by PAME.  <u>Refer to Annex 2 for the project plan on II(D) and its activities.</u></p>	<p><b>Finland Norway Russian Federation US</b></p>
<p><b>AMSA implementation progress report</b></p>	<p>Update the status of the AMSA implementation progress report for submission to the 2013 Ministerial meeting of the Arctic Council.</p>	<p><b>Canada Finland US</b></p>
<p><b>2. Follow up on the Arctic Offshore Oil and Gas Guidelines (2009)</b></p>		
<p><b>Actions</b></p>	<p><b>Activities</b></p>	<p><b>Lead(s)</b></p>
<p><b>1) Health, Safety and Environmental (HSE) Management Systems and the Use of Best Operating Practices for Offshore Arctic Oil and Gas Drilling Activities—A Report and Guidelines</b></p> <p><u>Refer to Annex 3 for the HSE project plan</u></p>	<p>(i) Develop and approve TOR for project and circulate for review.</p> <p>(ii) Begin compilation and comparison of existing Arctic HSE Management systems and best operating practices (possibly as product of the MRE Web-based Informational Resource project).</p> <p>(iii) Hold an open workshop on Arctic HSE Management Systems and Best Operating Practices.</p> <p>(iv) First Draft Report (and Guidelines if agreed).</p> <p>(v) Final Report and Guidelines delivered to the PAME Working Group, SAOs and Ministers for approval.</p>	<p><b>US</b></p>
<p><b>2) Arctic Oil and Gas Management, Regulation and Enforcement a Legal Regime Web-Based Information Resource</b></p> <p><u>Refer to Annex 4 for the MRE project plan</u></p>	<p>(i) Form a contact group to agree on project plan defining website format and content, and to contribute relevant information.</p> <p>(ii) 2) Work with Secretariat to incorporate this information as part of website or new web portal and promote the results.</p>	<p><b>US</b></p>





## OBJECTIVE II:

**Determine the adequacy of applicable international/regional commitments and promote their implementation and compliance**

## BACKGROUND

Increasing human activity in the Arctic Ocean and activities in new areas pose challenges to its health and warrants an ecosystem approach to integrated ocean management to maximize environmental protection and sustainable use of the marine environment including related to shipping, oil and gas development, fisheries, coastal zone development, and other ocean-related activities. The Arctic Council has an opportunity to provide international leadership on the global sustainable development agenda through adoption of the ecosystem based approach to management of the Arctic marine environment, consistent with existing legal framework.

## ACTIONS:

Actions	Activities	Lead(s)
1) <i>Arctic Ocean Review (AOR) Phase II</i>	<p>Phase II will follow-up on the information collected in Phase I by analyzing potential gaps in global and regional instruments and measures to identify opportunities and, accordingly, make recommendations for the protection and sustainable use of the Arctic marine environment.</p> <p>A final AOR Report with Recommendations will be submitted to Arctic Council Ministers in 2013 for approval.</p> <p><u>Refer to Annex 5 for the work plan on the AOR Phase II</u></p>	<p><b>Canada</b> <b>Iceland</b> <b>Norway</b> <b>Russian Federation</b> <b>US</b></p>
2) <i>Update the status of the Arctic Marine Strategic Plan (AMSP 2004)</i>	<p><u>Phase I (2011-2013):</u> The PAME led EA Expert Group to contribute input to the development of the AMSP Phase I 2011-2013 scoping process. The delivery from AMSP Phase I should include a suggested outline for a future AMSP to be submitted to the respective working groups for consideration.</p> <p><u>Refer to Annex 6 for the work plan on updating AMSP</u></p>	<p><b>Norway</b> <b>US</b></p>



<p><b>3) Ecosystem approach to management (7.4 in the AMSP)</b></p>	<ul style="list-style-type: none"> <li>(i) Complete the revision of the working map of Arctic LMEs for consideration at PAME II-2011.</li> <li>(ii) Prepare an inventory of existing or planned reports relevant to ecosystem status reporting based on the information compiled at the workshop and additional information supplied by members of the expert group.</li> <li>(iii) Plan the further development of ecosystem status reports for the various LMEs.</li> <li>(iv) Identify possible arrangements for cost-effective integration of monitoring and assessment that draw upon existing national and international programs (e.g. by AMAP and CAFF) and form an integral component of the ecosystem approach to management of the Arctic LMEs.</li> <li>(v) Review methods and progress in determining ecological objectives for species and habitats that can serve as a part of the management objectives for the ecosystem approach to management of Arctic LMEs.</li> <li>(vi) Refer to AMSP action Item 2) above.</li> </ul>	<p><b>Norway US</b></p>
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## OBJECTIVE III:

**Facilitate partnerships, programmes and technical cooperation and support communication and outreach both within and outside the Arctic Council.**

### BACKGROUND:

There is a need to continue coordinating work with other working groups of the Arctic Council, regional and international organizations and programmes, local authorities and indigenous organizations in an effort to promote capacity building, sharing of information on the state of the Arctic marine environment

### ACTIONS:

Actions	Activities	Lead
<p><b>1) Information outreach and efforts to increase cooperation and collaboration with international/regional organizations.</b></p> <p><i>(From section 7.5.2 in the AMSP)</i></p>	<p>(i) Liaise and exchange information with relevant organizations and programs (e.g. UNEP Regional Seas Programme) regions, and other regional programs.</p> <p>(ii) Contribute as appropriate to the 2011 GPA Intergovernmental Review, to report on PAME's 2009 update of its Regional Programme of Action for the Arctic (RPA).</p>	<p><b>PAME Chair/Secretariat</b></p> <p><b>PAME Chair/Secretariat</b></p>
<p><b>2) Build the capacity and engagement of indigenous communities and other Arctic inhabitants.</b></p> <p><i>(From section 7.6 in the AMSP)</i></p>	<p>Development and implementation of communication products and activities to support understanding of and involvement in PAME activities such as through:</p> <ul style="list-style-type: none"> <li>○ PAME homepage</li> <li>○ Brochures and posters</li> <li>○ Providing our information to other organizations for posting on their websites.</li> </ul> <p>Encourage activities and proposals from Permanent Participants.</p>	<p><b>PAME Chair/Secretariat</b></p> <p><b>Permanent Participants</b></p>
<p><b>3) Collaborations with Arctic Council Working Groups</b></p>	<p>Review work plans of other AC WGs to identify areas for cooperation and respond accordingly.</p>	<p><b>All</b></p>



# Annex 1 - Project Plan for Phase II on the Heavy Fuel Oil (HFO) in the Arctic

## Background

The AMSA Report was approved by the Ministerial Meeting of the Arctic Council in April 2009 in Tromsø, Norway. Recommendation I (B), in the AMSA report states:

*“That the Arctic states, in recognition of the unique environmental and navigational conditions in the Arctic, decide to cooperatively support efforts at the International Maritime Organization to strengthen, harmonize and regularly update international standards for vessels operating in the Arctic. These efforts include: --Support the updating and mandatory application of relevant parts of the **Guidelines for Ships Operating in Arctic Ice-covered Waters (Arctic Guidelines)**; and, -- Drawing from IMO instruments, in particular the Arctic Guidelines, augment global IMO ship safety and pollution prevention conventions with specific mandatory requirements or other provisions for ship construction, design, equipment, crewing, training and operations, aimed at safety and protection of the Arctic environment.”*

In the Tromsø 2009 Declaration of the Arctic Council the Ministers representing the eight Arctic States:

***Encourage[d]** active cooperation within the International Maritime Organization (IMO) on development of relevant measures to reduce the environmental impacts of shipping in Arctic waters, and*

***Urge[d]** that the ongoing work in the IMO to update the Guidelines for Ships Operating in Arctic Ice-Covered Waters be completed, application of its relevant parts be made mandatory, and global IMO ship safety and pollution prevention conventions be augmented with specific mandatory requirements or other provisions for ship construction, design, equipment, crewing, training, and operations, aimed at safety and protection of the Arctic environment,*



PAME members at the PAME-I 2010 meeting in Copenhagen agreed to undertake Phase I of a project to:

- identify and compile existing information on actual use or carriage of HFO by vessels in the Arctic (including an assessment of current and forecast HFO use and carriage within the Arctic marine transportation system);
  - identify and compile existing information on the risks of spills related to such use or carriage;
  - identify and compile information on the risks and potential effects on the Arctic marine and coastal environment from spills of HFO from ships; and
  - summarize the status of existing risk mitigation strategies and international regulations to reduce the identified risks and potential effects.
- In addition to the risk of oil spills from vessels, the use of HFO as fuel produces air emissions, including black carbon. This should also be looked into by the analysis.

The Phase I report *Heavy fuel oil in the Arctic, by Det Norske Veritas* delivered to PAME-I 2011 indicates that most ships above 5000 tonnes in size, carry HFO on board for use. Regarding coastal shipping traffic, fishing vessels etc, ships below 1000 tonnes does not use HFO, and the number of ships between 1000 and 5000 tonnes using HFO is limited (22 of 426).<sup>2</sup>

Based on the results of the Phase I report, it is recommended that PAME further discuss and explore, in a Phase II of the project, both use and carriage of HFO in the Arctic Ocean and whether new measures leading to a reduction of the probability of HFO spills from ships operating in the Arctic should be developed and, if so, the nature of such measures.

<sup>2</sup> Please refer to Annex i to this document and the Veritas report to PAME I-2011

The aim for such a project is to reach consensus on a recommendation for action by member governments to be forwarded to the Arctic Council in spring 2013.

## Aim of phase II

To forward draft recommendation(s) to the Arctic Council in the Spring of 2013 for action by member governments regarding possible additional or supplemental international actions or regulations for the purpose of mitigating or minimizing the risk associated with the use or carriage of HFO in the Arctic Ocean.

## Means

- 1) The report from Phase I of the HFO project (reference to be inserted later);
- 2) Options for continued work: remind member governments of applicable existing international regulations and the need for fair and effective implementation and enforcement of such regulations designed to (i) prevent vessel incidents that may lead to an HFO spill, (ii) prevent an HFO spill in the event of a vessel incident; and (iii) mitigate the adverse effects from any HFO spill that does occur as the result of a vessel incident; and
- 3) Plenary discussions in PAME based on the above in order to reach a consensus and an agreed way forward, including possible draft recommendation(s) to the Ministerial Meeting of the Arctic Council for action by member governments.



## Work plan 2011-2012

	What and whom	When
1)	Leads to work out draft project plan for phase II	By 15 January
2)	Discuss and agree on project plan for phase II	At PAME-I-2011
3)	Leads with the assistance of the contact group to develop detailed work plan, ToR, and assignment of consultants for the supplementary study to explore possible options, such as amendments to existing, or the need to develop new IMO regulations for the purpose of preventing vessel accidents or preventing HFO spills in the event of accidents in the Arctic Ocean, or mitigate the adverse effects from any HFO spill that does occur as the result of a vessel incident in the Arctic Ocean(Leads and contact group) <sup>3</sup>	Between PAME – 1 and II-2011
4)	Leads to prepare the 1 <sup>st</sup> PAME plenary discussion on possible international actions based on the draft study referred to above (Leads and the Contact Group <sup>3</sup> )	15 August 2011
5)	PAME II 2011 to have a first presentation of the study and a thorough plenary discussion of international actions	PAME-II-2011
6)	Finalize the study referred to in (3) above (Leads, and contact group <sup>3</sup> )	15 January 2012
7)	Prepare a draft report and submit to PAME-I-2012 for consideration (leads)	15 January 2012
8)	Discuss the draft report and, if possible, agree at PAME in 2012 to one or more consensus draft recommendation(s) to be submitted to the Ministerial Meeting of the Arctic Council for action by member governments	PAME 2012
9)	If PAME in the course of 2012 agrees to one or more consensus draft recommendations, submit it (or them) in 2013 to Ministerial Meeting of the Arctic Council s for action by member governments.	Spring 2013

<sup>3</sup> Pending the budget situation this might include a consultant, in which case some editing may be needed.



## Annex i: Summary of HFO investigation

The investigation carried out by Veritas regarding use and carriage of Heavy Fuel Oil in Arctic waters covers all ships in Arctic waters in the period August – November 2010.

The vessels operating in the Arctic region are dominated in number by the fishing vessels – followed by a diverse group of vessels within the category “Other activities” such

as service ships and research vessels, in addition to local community support vessels (cargo) and passengers vessels. The table below shows the number of vessels within each category and size group that have been in the Arctic region in the period August-November 2010. The numbers in brackets represents the vessels operating on HFO as bunkers within each category and size group

	< 1000 GT	1000 - 4999	5000 - 9999	10000 - 24999	25000 - 49999	50000- 99999	> 100000	All
<b>Oil tankers</b>	0	19(1)	9(5)	8(5)	7(7)	1(1)	0	<b>44(19)</b>
<b>Chemical and product</b>	1	11(4)	5(5)	9(9)	1(1)	0	0	<b>27(19)</b>
<b>Gas tankers</b>	0	0	0	0	0		1(1)	<b>1(1)</b>
<b>Bulk carries</b>	0	2	1	23(23)	26(26)	0	0	<b>52(49)</b>
<b>Container vessels</b>	0	0	5(5)	7(7)	0	0	0	<b>12(12)</b>
<b>General cargo</b>	6	69(5)	19(10)	11(8)	1(1)	0	0	<b>106(24)</b>
<b>Reefers</b>	1	24(6)	13(12)	5(5)	0	0	0	<b>43(23)</b>
<b>Ro Ro vessels</b>	1	1	2	1	0	0	0	<b>5(0)</b>
<b>Passenger</b>	3	13(1)	6(6)	9(9)	8(8)	4(4)	1(1)	<b>44(29)</b>
<b>Other offshore vessels</b>	3	1(1)	1	1(1)	0	0	0	<b>6(2)</b>
<b>Offshore supply vessels</b>	6	18	6	0	0	0	0	<b>30(0)</b>
<b>Other activities</b>	110	58	12(1)	19(6)	1(1)	0	0	<b>200(8)</b>
<b>Fishing vessels</b>	159	211(4)	13	1	0	0	0	<b>384(4)</b>
<b>Sum total</b>	290	426(22)	91(44)	84(71)	44(44)	5(5)	2(2)	<b>954(190)</b>

The findings regarding carriage of HFO into or out of Arctic is less conclusive in this initial study (please refer to the full Veritas report).

Of the table it is apparent that use of HFO varies with ship size and that for ships above 5000 tonnes use of HFO is common.



# Annex 2 – Project Plan for AMSA Recommendation II(D) on Specially Designated Arctic Marine Areas

Development of proposal(s) for internationally designated areas, for the purpose of environmental protection from shipping in the Arctic.

## Areas beyond national jurisdiction

(As a follow up of recommendation II (D) in the AMSA report.)

### 1. Introduction

The Arctic Marine Shipping Assessment (AMSA) report was approved by the ministerial meeting of Arctic Council in April 2009 in Tromsø, Norway. In the Tromsø 2009 declaration the Ministers of the Arctic Council agreed to:

*Encourage active cooperation within the International Maritime Organization (IMO) on development of relevant measures to reduce the environmental impacts of shipping in Arctic waters.*

AMSA Report recommendation II (D) calls on PAME member governments to explore internationally designated areas for the purpose of environmental protection from shipping in

one or more regions of the Arctic Ocean. This may be done through the adoption at IMO of appropriate designations, consistent with international law, such as MARPOL “Special Areas”, MARPOL Emission Control Areas (ECAs), Particularly Sensitive Sea Areas (PSSAs), and associated protective measures (APMs) (refer to Annex a).

### 2. Background

Recommendation II (C) in the AMSA report states:

*That the Arctic states should identify areas of heightened ecological and cultural significance in light of changing*





*climate conditions and increasing multiple marine use and, where appropriate, should encourage implementation of measures to protect these areas from the impacts of Arctic marine shipping, in coordination with all stakeholders and consistent with international law<sup>4</sup>.*

Recommendation II (D) in the AMSA report states:

*That the Arctic states should, taking into account the special characteristics of the Arctic marine environment, explore the need for internationally designated areas for the purpose of environmental protection in regions of the Arctic Ocean.*

In the record of decisions and follow-up actions from PAME-II 2010 in Washington, D.C., member governments agreed to the following with respect to AMSA Recommendations II (C) and II (D):

*II (C) – Welcome the information from AMAP/CAFF/SDWG on the progress on the follow-up of II (C) on the identification of areas of heightened ecological and cultural significance, and look forward to the final<sup>5</sup> report to be presented to PAME-I 2011.*

*II (D) – Welcome the offer from Norway to take a lead in proposing a project on the implementation of II (D) for the discussion at PAME-I 2011, and invite other countries to co-lead the work with the view to present a proposal to the Arctic Council Ministers in 2011 for their consideration and possible inclusion in the PAME Work Plan 2011-2013.*

A draft report on Recommendation II (C) was submitted to PAME-I 2011 and a final report is expected before the end of 2011.

The II (C) report may contain information on areas of heightened ecological and cultural significance that may need protection from adverse impacts from shipping, both within national jurisdiction and in marine areas beyond national jurisdiction. This project is focused on areas beyond national jurisdiction in the Arctic.

Based on the final II(C) report and any information obtained

<sup>4</sup> The second part of this recommendation is followed up through IID.

<sup>5</sup> A draft report was submitted to PAME-I 2011

with respect to II(A), PAME will consider initiating one or more projects to implement recommendation II (D) on possible Arctic Council recommendation for internationally designated Arctic areas for the purpose of environmental protection from shipping impacts.

### 3. Objective

PAME, taking into account the special characteristics of the Arctic marine environment, will explore the need for internationally designated areas for the purpose of environmental protection from the adverse impacts of shipping in the Arctic.

Based on identified needs and consequences, PAME to develop draft proposals for areas of enhanced protection consistent with international law that member governments may consider for action at IMO. This could be done through the use of appropriate tools, such as the designation of MARPOL Special Areas, MARPOL Emission Control Areas (ECAs), and/or the identification of Particularly Sensitive Sea Areas (PSSA), including associated protective measures.

### 4. Project management

The project will be co-led by Norway, the United States, Finland and Russia. The project will be carried out with the assistance of a contact group.

### 5. Outcomes

Based on identified needs and consequences, draft proposals will be developed for areas of enhanced protection that PAME may recommend to member governments to consider for action at IMO.

If agreed by PAME, draft proposals for the designation of one or more MARPOL Special Areas or the identification of one or more Particularly Sensitive Sea Areas will be developed, consistent with relevant IMO criteria, for further consideration by the SAOs.

### 6. Scope

The project will be a compilation and assessment of existing knowledge and experience. There may be a need for a co-lead member government to engage an



external consultant for this project. In addition to the environmental considerations following recommendation II (C), technical information on traffic patterns and on possible associated protective measures is needed and an analysis of consequences.

## 7. Work plan

February 2011 Establishment of contact group

Spring 2011 – intersessional agreement by the leads with the assistance of the contact group on a detailed work plan

PAME-II 2011 to review status report and approve draft work plan and draft ToR.

PAME-I 2012 – PAME to review final II (C) report. Subsequent actions to be considered by PAME.

## 8. Budget

A co-lead member government may engage a consultant to assist with this project and will bear all relevant expenses. Each Arctic Council state will bear the costs of their own participation.

## Annex a - AMSA recommendations II(C) and II(D) and possible protective measures of the IMO.

AMSA recommendations	Follow-up Required at the global, regional or national level	Method of Follow-up by PAME (as per PAME I-2009)	Status on Progress Fall 2010
<b>II. Protecting Arctic People and the Environment</b>			
<p><b>C. Areas of Heightened Ecological and Cultural Significance:</b> That the Arctic states should identify areas of heightened ecological and cultural significance in light of changing climate conditions and increasing multiple marine use and, where appropriate, should encourage implementation of measures to protect these areas from the impacts of Arctic marine shipping, in coordination with all stakeholders and consistent with international law.</p>	<p>1) Identify areas of heightened ecological and cultural significance in light of changing climate conditions and increasing multiple marine use; and,</p> <p>2) Where appropriate, encourage the implementation of measures to protect these areas from the impacts of Arctic marine shipping, in coordination with all stakeholders and consistent with international law.</p>	<p>PAME to approach AMAP and CAFF and ask for their advice regarding identification of areas of heightened ecological and cultural significance-</p>	<p>Both AMAP and CAFF have agreed to make follow up on AMSA recommendation II(C) a priority and to work in cooperation with SDWG. Norway and U.S. have agreed to be co-leads for AMAP and Canada and Denmark/Greenland for CAFF. Canada and Norway are contributing financially and all co-leads are providing CORE drafters.</p>
<p><b>D. Specially Designated Arctic Marine Areas:</b> That the Arctic states should, taking into account the special characteristics of the Arctic marine environment, explore the need for internationally designated areas for the purpose of environmental protection in regions of the Arctic Ocean.</p>	<p>Explore the need for internationally designated areas for the purpose of environmental protection in regions of the Arctic Ocean.</p> <p>This could be done through the use of appropriate tools, such as “Special Areas” or Particularly Sensitive Sea Areas (PSSA) designation through the IMO and consistent with the existing international legal framework in the Arctic.</p>	<p>Based on C and other sources of information PAME to encourage co-operation and the development of common or shared proposals to the extent possible among Arctic states for submission to IMO.</p> <p><i>Denmark and/or Norway may co-lead</i></p>	<p>II(D) - Denmark will inform on progress at the PAME II-2010 meeting, including the outcomes of the meeting of environmental ministers in Greenland in 9-11 June 2010, and propose the way forward in the PAME Working Group including confirmation of its possible lead country role.</p>



*MARPOL Special Area (SA):*

A set of criteria in each of the following categories has to be satisfied in order for an area to be given Special Area status: oceanographic conditions, ecological conditions and vessel traffic characteristics. The requirements of a Special Area designation can only become effective when adequate reception facilities are provided for ships in accordance with the provisions of MARPOL 73/78.

*Particularly Sensitive Sea Area (PSSA):*

In order for an area to become designated as a PSSA, the area should meet at least one of a number of criteria listed in the following three categories: ecological criteria; social, cultural, and economic criteria; and scientific and educational criteria. In addition to meeting at least one of the above mentioned criteria, the recognized attributes of the area should be at risk from international shipping activities and an Associated Protective Measure (APM) must be available that can address that risk.

The criteria and procedure for applying for a SA or PSSA status for a marine area are described in IMO Assembly resolutions A22/Res.927 and A24/Res.982.

*Emission Control Area (ECA):*

Emission Control Areas are designed to prevent, reduce, and control air pollution from emissions from ships and their adverse impacts on land and sea areas. The ECA proposal process includes detailed information on the land and sea areas at risk, the meteorological conditions in the area, the nature of ship traffic, the geographical extent of the proposed area, the economic considerations of reducing emissions in the area, a description of the control measures already in place, and an assessment that emissions from ships are contributing to air pollution in the area including their impacts on ecosystems, productivity, human health, water quality, and etc. The criteria for applying for an ECA are outlined in MARPOL Annex VI Appendix III.



# Annex 3 - Project Plan on Health, Safety and Environmental (HSE) Management Systems and the Use of Best Operating Practices for Offshore Arctic Oil and Gas Drilling Activities

## Health, Safety and Environmental Management Systems and the Use of Best Operating Practices for Offshore Arctic Oil and Gas Drilling Activities—A Report and Guidelines

In the wake of two recent major offshore oil spills due to blowouts, it is clear that health safety and environmental management systems in offshore operations and the use of best practices in this regard are critical to protecting human health and safety and, therefore, the environment.

This proposal is for a comparison of existing Arctic health, safety and environmental management systems, and best practices requirements for offshore drilling operations and possibly developing a corresponding set of expanded guidance for Arctic States beyond what is already in the Arctic Offshore Oil and Gas Guidelines, 2009. The project proposal will be brought to PAME I-2012 for further consideration and direction.

This will allow for consideration of important changes now taking place in Arctic countries' management, regulatory and enforcement regimes and the results of the many

investigations into these recent blowouts, which are still underway.

### I. Background

Most Arctic countries now or will soon have some form of requirement for industry to implement and employ management systems that address the safety and health of personnel, protection of the environment, and the use of best practices for offshore drilling operations. Although these systems focus attention on the influences that human behavior and organization have on accidents, they vary to differing degrees across the Arctic in emphasis, application, and enforcement as reflected in their various names such as EMS (Environmental Management System), HSEMS (Health and Safety and Environmental Management System) or SEMS (Safety and Environmental Management System).



Given the international nature of the Arctic oil and gas industry, it is important to have an understanding of what the different HSE systems are, including critical elements, how an operator must comply, implementation, how are contractors addressed, monitoring, and enforcement, among other things. A comparison of Arctic States requirements and systems may give the regulators and global operators a better understanding of what the different HSE/management systems are across the Arctic nations, and could provide a Guideline document explaining the differences and similarities across Arctic States and emphasizing common practices and possible needs for better understanding of their:

- policy and strategic objectives;
- organization, resources and documentation;
- risk evaluation (including hazards analysis) and risk management;
- planning;
- implementation and monitoring; and
- auditing and review.

The Arctic Council's Arctic Offshore Oil and Gas Guidelines 2009, offer general guidance on these important and related issues in Section 5, Safety and Environmental Management (pp 25-29); Section 6 Operating Practices (pp 31-41); Section 7 Emergencies (pp 43-47), ANNEX B - Definition of Practices and Techniques (pp 79-80), ANNEX F - Environmental Risk Analysis Flow Diagram (p 88), and ANNEX G - Company Safety, Environmental Policies and Objective (p 89). However, in light of the initial findings of the U.S. National Academy of Engineering and National Research Council on the Deepwater Horizon disaster that best practices were not followed and risk assessment was flawed, and the preliminary findings of the Presidential Commission on the Deepwater Horizon Oil Spill that there was not a "safety culture" aboard the rig, it is suggested that this aspect of the AOOGG be evaluated and possibly elevated to a separate set of Guidance for Arctic Operations to accompany the comparison of systems report outlined above.

## II. Key Objective(s)

This project proposal would meet key objectives and recommendations enumerated in a number of Arctic Council documents such as the Arctic Marine Strategic Plan, the

PAME Work Plan, the Oil and Gas Assessment, and the Arctic Offshore Oil and Gas Guidelines.

1. The consideration of existing and possible development of more comprehensive Guidance on HSE Management System and Best Practices, and Risk Management are important to implementing the AMSP, as summarized in the following "Strategic Actions" passages:

*7.2.3 it is recommended that the adequacy of Arctic Council guidelines related to the prevention of environmental impacts of oil and gas activities be examined in light of the Council's OGA, and at*

*7.2.6 where it is recommended that the Council identify potential areas, as appropriate, where new guidelines and codes of practice for the marine environment are needed.*

2. The development of more comprehensive Guidance on HSE Management System and Best Practices, and Risk Management would also address a key Objective and Action identified in the **PAME Work Plan 2009-2011**:

### Objective I

"Improve knowledge and respond to emerging knowledge of the Arctic marine environment"

Recommended **Action Number 2** is to "Follow up on the Arctic Offshore Oil and Gas Guidelines (2009)."

3. Such Guidance would also fulfill Recommendations of the Oil and Gas Assessment and expand on guidance in the Arctic Offshore Oil and Gas Guidelines as appropriate and needed.

Relevant Recommendations of the AMAP Report Arctic Oil and Gas Activities, 2007.

### *Managing Oil and Gas Development*

#### **Laws and regulations**

Recommends that laws and regulations should, periodically reviewed and evaluated and where necessary strengthened and rigorously enforced.

#### **Laws and regulations**

Recommends the required use best industry and



international standards in combination with clear and flexible management systems and regulations, which are reviewed regularly for effectiveness, adequacy, proper application, and to accommodate changes in technology.

#### **Laws and regulations**

Recommends the use of risk assessments that are rigorously applied.

#### **Technology and practices**

Recommends the adoption by the oil and gas industry of the best Arctic technology and practices currently available in all phases of oil and gas activity.

#### **Spill Prevention and Response**

Recommends that actions should be evaluated and applied to reduce risks of marine and terrestrial oil spills, especially aiming to prevent the occurrence of marine spills in the presence of sea ice.

#### **Spill Prevention and Response**

Recommends that emergency preparedness should be of the highest levels, and include training of crews to operate and maintain equipment, and conducting regular (and unscheduled) response drills.

The A00GG 2009 recommended:

#### 1.5 Potential Effects of Oil and Gas Activities on Environment and Society

##### ***Natural environment***

Good and transparent governance, comprehensive but responsive regulatory regimes, and the use of international standards and practices coupled with evolving advances in technology and best practices have lessened the effects of oil and gas activities over time, including those in the offshore. But risks may arise as conditions change or new areas are explored and developed and evidence also shows that accidents will happen and best practices will not always be followed. Governments should continue to ensure that best practices, including oil spill response mechanisms, are in place before activities begin.

The A00GG states at Section 5 Safety and Environmental Management, that “an important management tool to

assist the operator in meeting the regulatory objectives is eliminating unsafe behavior, and achieving continual improvement in safety and pollution prevention practices is defining and communicating a culture focus on safety and environmental performance to the workforce and ensuring that they are fully motivated to implement it through a management system. “

### **III. Proposed Project Scope**

Explore the need for a comparison of existing HSE Management systems employed by Arctic States for offshore oil and gas drilling operations and expand the Arctic Offshore Oil and Gas Guidelines on HSE Management Systems including Risk Management and Best Operational Practices as necessary.

Elements of comparison for the Arctic States offshore drilling management systems could include:

- policy and strategic objectives;
- organization, resources and documentation;
- risk evaluation and risk management;
- hazards analysis;
- planning;
- implementation and monitoring; and
- auditing and review.

As a result of the comparison above, wider and updated guidance could be developed for the use of these management systems and best operating practices in regards to:

- Mandatory and Voluntary Health Safety and Environmental Management Systems
- Risk Management criteria
- Best Operating Practices for Well Control and Spill Prevention
- Training, Testing, Certification, and Drills
- Compliance and monitoring/auditing techniques and protocols

### **IV. Proposed Main Components and Implementation**

1. Develop a draft outline and implementation plan.
2. Conduct a survey and compilation of Arctic States requirements and guidance for Health, Safety and Environmental



Management systems and operating practices for offshore oil and gas drilling operations.

3. Conduct an Arctic Workshop on HSE Management Systems including Risk Management and associated operating practices focusing on the comparison of systems and practices and identifying common elements and important differences.
4. Determine whether there is a need to expand and refocus the Guidelines now contained in the AOOGG 2009, for HSE Management Systems, Best Operating Practices and Risk Assessments and ascertain the most needed elements for expansion.
5. Draft guidelines developed.
6. Deliver Guidelines by 2013.

#### **Possible List of Tasks/Activities**

1. Develop Project Outline
2. PAME through country experts confer with Arctic oil and gas regulators through the Arctic Council, International Regulators Forum, OSPAR and others as appropriate, Industry associations such as Oil and Gas Producers International, International Association of Drilling Contractors, American Petroleum Institute, Canadian Association of Petroleum Producers, and others to make a compilation and comparison of the different systems and practices
3. PAME, in cooperation with other partners, hold a workshop on these issues to identify commonalities and differences in existing systems and practices and areas of that may need expansion in the existing guidance provided in the AOOGG, 2009.
4. Begin drafting of Report and Guidelines w/meetings on the side of PAME meetings and via correspondence.
5. Circulate Draft for review

6. Deliver final Report and updated Guidelines for Health, Safety, and Environment management systems and best operating practices for offshore drilling activities to PAME, SAOs and the Arctic Ministers.

#### **Possible Timeline and Major Milestones**

- **February 2011:** Discuss the proposal and the need for a comparison of HSE Management systems and best practices.
- Develop TOR for project and circulate for review (PAME I-2012).
- Approval of Project Plan
- Begin compilation and comparison of existing Arctic HSE Management systems and best operating practices (possibly as product of the MRE Web-based Informational Resource project).
- Hold an open workshop on Arctic HSE Management Systems and Best Operating Practices
- First Draft Report (and Guidelines if agreed)
- Final Report and Guidelines delivered to the PAME Working Group, SAOs and Ministers for approval

#### **Budget**

TBD

### **V. Main outcomes**

Report to the PAME Working Group 2013-2014.

### **VI. Project Team Structure /Lead Countries**

- US Lead and co-lead and PAME contact group.



# Annex 4 - Project Plan on Arctic Oil and Gas Management, Regulation and Enforcement (MRE) a Legal Regime Web-Based Information Resource

This project would bring together the most comprehensive and accessible database and web-linked information resource for Arctic countries' Management, Regulation and Enforcement (MRE) systems for offshore oil and gas activities. A central web-based information resource for Arctic national MRE information is needed for all potential users including regulators, resource managers, industry, NGO's, indigenous people, and interested public and one which the Arctic Council can achieve.

With changes in both the possible accessibility of Arctic marine oil and gas resources and the changes occurring in management, regulatory, and enforcement structures of Arctic nations in the wake of two recent major offshore well blowouts, the need for Arctic countries and their stakeholders to share their experiences and practices in order to best manage, regulate, monitor and enforce the international industry in its offshore Arctic operations has been highlighted. A major step is sharing their MRE systems and regimes.

The Arctic Council *Arctic Offshore Oil and Gas Guidelines (AOOGG)* contain a large amount of primarily web-based

information resources for Arctic States' MRE systems and regimes for offshore oil and gas activities in its reference and bibliography section. However, this information has particularly become out-of-date after major regulatory changes in Arctic countries' MRE structures, most notably the United States, which has formed new bureaus to take over the work of the Minerals Management Service (MMS).

The Arctic Council assessment "*Oil and Gas Activities in the Arctic-Effects and Potential Effects*" (*OGA*) contains perhaps the most comprehensive information in one place for each countries management, regulatory, and enforcement regimes. However, the authors of the *OGA* found it difficult to locate all of the pertinent government data, statistics, and information on the regulations and furthermore it found that these web sites were not well-organized within each country. Therefore, the authors recommended that the Arctic Council take on a project to consolidate this information into a web-based information resource, which will hold, in a single place, the legal measures, documents, regulations, standards, required practices, enforcement measures and results, as well as, other vital information on each Arctic Nations MRE systems





and regimes governing offshore oil and gas activities. This will be accomplished by tapping the Arctic national experts to provide and update the information.

The OGA recommends at **Chapter 7.3.2**, in the section on **Lack of information for assessment** under *Standards and regulations Recommendation 13*.

Given the large volume of detailed national regulatory laws, standards, guidelines, and procedures for oil and gas activities in force in the Arctic countries, it is recommended that a compilation be made by the Arctic Council and its working groups and periodically updated.

This project can be complementary to the periodic updating of the AOOGG and can subsume the EIA web-based reference sources for countries' reports and practices on Environmental Impact Assessments. As opposed to static sources of information such as the AOOGG and OGA, this web resource can be updated easily and regularly to keep the information current and can be modified as a result of comments and feedback that users can post directly on the web page.

## II. Key Objective(s)

### Objective I

Update the AOOGG, 2009 **References/Bibliography** section and follow-up and implement **Recommendation 13** of the OGA, which calls for the Arctic Council to compile *national regulatory laws, standards, guidelines, and procedures for oil and gas activities in force in the Arctic countries*.

This project will also facilitate implementation of other recommendations of the OGA found in **Chapter 7** such as:

**R2:** Recommends countries require the use of best practices and this would be facilitated by information gathering and web-based resources.

**R3:** Recommends Arctic countries establish a mechanism for sharing experiences, and should coordinate and cooperate on their methods of risk and impact assessments and management of the oil and gas industry.

**R6:** Recommends better reporting procedures be developed by Arctic countries for disclosing quantities of waste from Arctic oil and gas activities and the treatment of such waste.

**R24:** Recommends an exchange of information and experiences among the Arctic countries to facilitate better use and streamlining of the production of EIA/EISs as well as of pan-Arctic assessments.

**R27:** Recommends that future socio-economic effects studies include a compilation of Arctic oil- and gas-related socioeconomic statistics on a circumpolar basis

### Objective II

- The MRE web-based information resource is intended to provide easily and regularly updatable web-based information and data (for e.g. documents, websites, relevant fora, networks, etc.).
- Demonstrates and profiles Arctic States' stewardship efforts related to offshore oil and gas activities.
- The MRE web-based information resource will facilitate the sharing of current information on best practices from different states and allow better communication in the management, regulation and enforcement of Arctic offshore oil and gas operations and allow all stakeholders easy access to this information.
- It is a systematic way to outreach to Arctic Council Working Groups, Permanent Participants, observers and other stakeholders.

## III. Scope

A comprehensive web-based information resource with documents, links and relevant fora, networks etc. on offshore oil and gas management, regulation and enforcement.

- Laws, Regulations, Notices, Rules, and Guidance and Management system documents,
- Science and Technical Reports,
- Monitoring methods and results,
- Inspection/enforcement procedures and results,
- Accident and incident reporting,
- Statistics for discharge types and amounts, waste handling, etc.
- And other information



## IV. Main Components and Implementation

The OGA and the AOOGG, which have a considerable number links to pertinent national web sites, can serve as a starting point the project. PAME experts through the ccontact group will provide updated information for their countries and, if deemed appropriate, contacts with the International Regulators Forum may assist in the compilation of the database.

**1) Secretariat Capacity:** to receive information and post materials on PAME web site.

**2) Technical Capacity:** capability of current PAME site to take on information resource function (may need outside technical support).

**3) Define Niche** – who is the target audience / end user? (Information content, design, etc.)

**4) Building Awareness** – Arctic countries through their PAME representatives promote the MRE information resource to potential users; possible link with the International Regulators Forum.

### Proposed Timeline and Major Milestones

- February 15-17, 2011: Formal Discussion of the need for MRE web-based information resource and formation of a contact group within PAME to develop the project outline, determine the format, subject areas and content and to provide information to populate the web portal.
- March 31, 2011: Develop Project outline, format, subject areas and content and send out for review

- April 30, 2011: Receive comments from national experts, PPs, NGOs and Working Groups
- May, 31 2011: Based on the subject areas agreed upon, request countries through the contact group and a general call-for-information to provide information updates, references, documents, and web sources for specific information types, starting, as a basis, with the relevant OGA Chapter 2 and associated appendices sections and the AOOGG, 2009 References/Bibliography section.
- July 31, 2011: Countries and others supply requested information for their jurisdictions
- September 30, 2011: Draft MRE Web-based Information Resource posted for review on the PAME website (or other).
- November 30, 2011: Comments received and final web page developed
- December 31, 2011 Final Draft MREWIR posted for approval
- January 31, 2012 Final (living document) posted to the web.

### Budget

Funded through existing contributions to Secretariat and In-Kind

## V. Main outcomes

A decision on whether to develop MRE information resource and determination of next steps.

## VI. Project Team Structure/Lead Countries

US Lead, and Oil and Gas Contact Group within PAME and Secretariat if it proceeds to Project.





# Annex 5 – Project Plan for the AOR Phase II

*The Arctic Ocean Review (AOR) is a multi-phased project that will result in a review of the global and regional measures that are in place for the protection of the Arctic marine environment, and options to address any gaps or weaknesses. This project will address both sea and land-based activities influencing the state of the Arctic marine environment, and will result in a phase I report on existing measures (2011) and a final report with recommendations (2013) for endorsement by the Arctic Council Ministers.*

## **1. Introduction**

The Arctic marine environment is subject to increasing pressures, resulting from climate change and pollution on the one hand, and from economic activities on the other. The Arctic Council is at the forefront of these emerging issues through the development of various in-depth reports and assessments, such as the State of the Arctic Environment Report, Arctic Climate Impact Assessment, Arctic Marine Shipping Assessment, and Arctic Oil and Gas Assessment among others. Because of the work of the Arctic Council,

the pressures to the Arctic marine environment can be better understood and are higher on the international agenda than in recent years. It is therefore timely to undertake a review of global and regional measures (voluntary and mandatory) that are relevant to the conservation and sustainable use of the Arctic marine environment, as well as activities of the Arctic Council in order to clearly demonstrate Arctic states' stewardship efforts to the global community.

The AOR is encouraged by:

- The Arctic Marine Strategic Plan, adopted by the Arctic Council in 2004, provides the foundation for both the Arctic Council and PAME's mission and objectives. It specifically requires PAME to "Periodically review the status and adequacy of international/regional agreements and standards that have application in the Arctic marine environment, new scientific knowledge of emerging substances of concern, and analyze the applicability of a regional seas agreement to the Arctic" (Strategic Action 7.3.4).



- The common objectives and priorities for the Norwegian, Danish and Swedish chairmanships of the Arctic Council (2006-2013) has given high priority to the theme of integrated management, as well as ensuring a sustainable and ecosystem-based approach to resource development in the Arctic.
- Objective II of the PAME Work Plan 2011-2013 asks PAME to “Determine the adequacy of applicable international/ regional commitments and promote their implementation and compliance”.
- Commitments by the global community to sustainable development and protection of marine biodiversity and the marine environment through the application of the ecosystem approach and integrated coastal and ocean management.

## 2. Objectives

The overall objective of the AOR is to provide guidance to Arctic Council Ministers as a means to strengthen governance in the Arctic through a cooperative, coordinated, and integrated approach to the management of Arctic marine environment. The AOR will also play an important role in demonstrating Arctic States’ stewardship efforts in the Arctic.

To recap, the Phase I and II objectives are as follows:

### Phase I Objectives (2009-2011):

- Compile information on global and regional measures that are relevant to the conservation and sustainable use of the Arctic marine environment;
- Survey the status and trends in the Arctic marine environment in cooperation with other working groups of the Arctic Council;
- Disseminate compiled information through communication products/tools, and conduct outreach to both communicate efforts and obtain input;
- Prepare a compilation document that will review global and regional measures that are relevant to the conservation and sustainable use of the Arctic marine environment and identify and highlight potential weaknesses. (This document will form the basis of discussion for the technical workshop); and,
- Develop a status report for Arctic Council Ministers.

### Phase II Objectives (2011-2013):

- Take into account major new developments;
- Analyze potential opportunities in global and regional instruments and measures to achieving environmental, economic and socio-cultural outcomes;
- Outline options to address potential opportunities to strengthen the conservation and sustainable use of the Arctic marine environment; and,
- Produce a final AOR Report to Arctic Council Ministers that will: summarize opportunities to strengthen global and regional instruments and measures for management of the Arctic marine environment; outline options to address these opportunities; and, make agreed recommendations to help ensure a healthy and productive Arctic marine environment in light of current and emerging trends.

## 3. Phase I Deliverables

Phase I deliverables include convening an experts workshop (Fall 2010) that addressed the status of the Arctic marine environment and the potential weaknesses and/or impediments identified through reviewing global and regional measures that are relevant to the conservation and sustainable use of the Arctic marine environment. The outcomes of this workshop, was presented in an AOR Summary Workshop report for the Senior Arctic Officials Meeting (Fall 2010).

In addition to finalizing an AOR Phase I report, the project leads also developed several communication products to demonstrate the Arctic Council’s stewardship efforts including an AOR brochure, Outreach/Communication Strategy, and website.

## 4. Scope and Approach

The AOR will not initiate a new assessment, but will produce a report on the global and regional measures in place for the conservation and sustainable use of the Arctic marine environment. The report will also include recent and ongoing activities of the Arctic Council. It may be necessary for the lead countries to revisit the scope and approach at a later date and whether the activities of other organizations need to be included.



## Phase II (2011 – 2013)

This phase will analyze the information collected in Phase I with an emphasis on areas where the Arctic Council can effectively add value to the existing mechanisms of governance for the Arctic marine environment. An important question here is how the members of the Arctic Council can further develop and build on existing mechanisms that have proven to be effective.

## **5. Project Management**

The AOR is led by Canada, Iceland, Norway, Russia, and the United States. Project leadership will be provided by lead countries' Heads of Delegation (HoD) to whom a Project Manager will report (see project structure - Annex A).

PAME HoD will be asked to confirm points of contact within their respective governments to form the Project Expert Group. This expert group will contribute to the organization of the technical workshop and international conference, and the production of various documents and solicit input from Permanent Participants and other Arctic Council Working Groups.

## **6. Outcomes**

### Phase II (2011 – 2013)

The weaknesses, challenges and opportunities in existing global and regional instruments and measures (voluntary and mandatory) which were identified in phase I (see report), will in phase II be analyzed in order to address the question how the members of the Arctic Council can further develop and build on existing mechanisms that have proven to be effective to solve these issues.

As a first step consultants will be approached to prepare theme-based papers which will contain an analysis of the information contained in phase I. Theme-based workshops will be arranged, as necessary.

These papers, in addition to the phase I report will be the basis for an international conferences/workshops with the aim to further discuss potential ways to strengthen instruments and measures in 2012

The Phase II report will be based on the outcomes of the phase I report, the theme-based papers and the results of the international conferences/workshops. It will integrate this analysis with the objective of producing recommendations that outline opportunities for the Arctic Council to improve current mechanisms for the conservation and sustainable use of the Arctic marine environment.

A final AOR Report will be presented for endorsement at the Arctic Council Ministers meeting in 2013, which will include advice and guidance for policy makers.

## **7. Main Components, Timeline and Major Milestones**

### Phase II (2011-2013): Analysis of information and Reporting to the Arctic Council

The second phase of this project will follow-up on the information collected in Phase I by analyzing potential opportunities in global and regional measures in place for the conservation and sustainable use of the Arctic marine environment, including Arctic Council activities, and outline options to address these opportunities.

The major deliverable for Phase II will be a final report to Arctic Council Ministers that will summarize potential opportunities and the options to address them, as well as recommendations for endorsement by Arctic Council Ministers to help ensure a healthy, productive and safe Arctic marine environment in light of current and emerging trends.

1. Conduct an analysis of the information from the Phase I report to determine opportunities to strengthen:
  - a. Instruments and measures
  - b. Existing legislation, policy and guidelines; and
  - c. Develop new mechanisms as appropriate.
2. Prioritize opportunities in order of importance, to the extent possible, according to the degree of potential impact to the Arctic marine environment (includes the immediacy of occurrence, magnitude of impact, etc.)
3. Outline options to address opportunities
4. Provide advice to the Arctic Council Ministers.



## 8. Financial Considerations

Consistent with the over-all Arctic Council approach, the AOR will be financed through voluntary contributions from member states, Furthermore, the Nordic Council of Ministers has agreed to fund parts of Phase II during the year 2011.

The proposed stepwise approach with SAO approval required for each phase will facilitate financial planning and budgets.

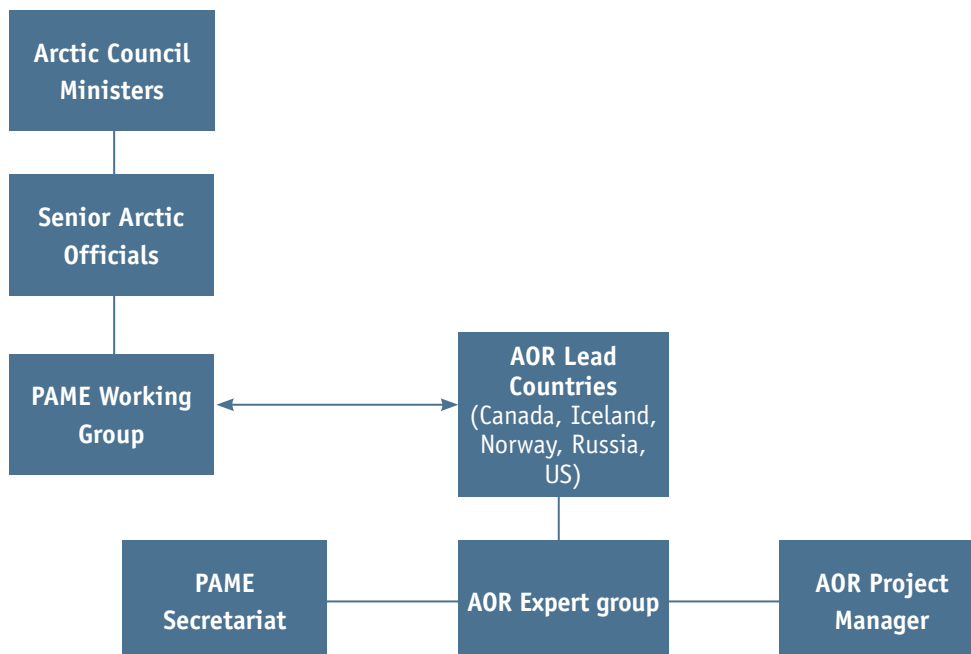
Arctic country participation will be through in-kind support. The cost for Permanent Participants to participate will need to be determined in consultation with them. The PAME Secretariat will provide administrative support from its normal annual budget.

Budget for Phase II (2011-2013) (TBC)

All Items to be worked out in details in the beginning of Phase II

ACTION / ITEM	Responsibility	COST (Approx.) *cost in USD
Overall project coordination and research	Project Manger and Project Assistant	
Communication and Outreach	PAME Secretariat and lead countries	
Technical workshop	Iceland (TBC)	
Printing and layout of the Phase II report.	PAME Secretariat and lead countries	
Support for Permanent Participants to participate in the project and workshops.	TBC	
<b>TOTAL</b>		<b>\$(TBC)</b>

### Annex A: Project Management Structure



Project Contact List (To be updated):

<b>Project Co-Leads</b>  <i>*Co-leads will designate contact person to the Project Manager</i>	
<b>PAME Secretariat</b>	
<b>Project Manager</b>	
<b>Project Assistant</b>	
<b>Project Expert Group</b>	





## Annex B: Arctic Ocean Review – Objectives and Major Milestones – 2011- 2013

- Step:
1. Conduct an analysis of the information from the Phase I report to determine opportunities to strengthen:
    - a. Instruments and measures
    - b. Existing legislation, policy and guidelines; and
    - c. Develop new mechanisms as appropriate.
  2. Prioritize opportunities in order of importance, to the extent possible, according to the degree of potential impact to the Arctic marine environment (includes the immediacy of occurrence, magnitude of impact, etc.)
  3. Outline options to address opportunities
  4. Provide advice to the Arctic Council Ministers.

2011						
	January	February	March	April	May	June
<b>Phase II (P2)</b>	P2: Final Work plan	P2: Work plan Approval by PAME	P2: Work plan Approval by SAO		P2: Work plan Approval by AC Ministerial	<b>P2: 1st Draft of TOC</b>
2011						
	July	August	September	October	November	December
Meetings	<b>Leads Meeting:</b> - Discuss TOC - Int'l Conference/ expert workshops		<b>PAME II – 2011 AOR Conference</b>		<b>SAO MEETING</b>	
Reports			Report on TOC and Outline to PAME	<b>Summary Reports</b> - PAME II	- Progress Report to SAO (AOR P2, PAME)	
Milestones		- Commence drafting Report Outline and Content		- Outreach to AC Working Groups and PPs - Conduct Step 1	- Conduct Step 1	- Final Step 1 - Start Step 2
2012						
	January	February	March	April	May	June
Meetings		<b>PAME I - 2012</b>	<b>SAO MEETING</b>		<b>AC Ministerial</b>	
Reports	- Progress Report to PAME/SAO		<b>Summary Report</b> - PAME I, AOR P2		<b>Summary Report</b> - PAME I, AOR P2	



Milestones	- Conduct Step 2	- Final Step 2 - Start Step 3	- Final Step 3 - Start Draft of Phase II Report	- Draft Phase II Report	- Draft Phase II Report	- Draft Phase II Report
2012						
	July	August	September	October	November	December
Meetings	<b>Leads Meeting</b> - Review Content for Step 1,2 Content		<b>PAME II - 2012</b>		<b>SAO MEETING</b>	<b>Leads Meeting</b> - Final Draft for review
Reports			- Report to PAME on Progress	<b>Summary Report</b> - PAME WG input to AOR		
Milestones	- Draft Phase II Report - Outreach to AC Working Groups and PPs	- Outreach to AC Working Groups and PPs - 1st Full Draft of AOR P2	- Revise based on outreach comments - Start Step 4	- 2nd Full Draft of AOR P2 - Outreach to AC Working Groups and PPs - Final Step 4	- 3rd Full Draft of AOR P2	
2013						
	January	February	March	April	May	June
Meetings		<b>PAME I - 2013</b>	<b>SAO MEETING</b>		<b>AC Minsisterial</b>	
Reports						
Milestones	Revisions of Final Draft by Author	AOR Phase II Report for endorsement by PAME WG	AOR Phase II Report for endorsement by SAO		AOR Phase II Report for endorsement by AC Mins.	





# Annex 6 – Project Plan on Updating the AMSP (2004)

*Recognizing the increased emphasis on the ecosystem approach to management (and integrated ocean management) as the foundation of the Arctic Councils' work and the essential need to apply the ecosystem approach to manage Arctic marine-related issues. In this regard PAME has agreed to invite all Arctic Council working groups working on marine-related issues to participate in the PAME led EA Expert Group on the ecosystem approach to management according to its terms of reference.*

## Review of the Arctic Marine Strategic Plan (2004)

### Background:

The Arctic Marine Strategic Plan (AMSP) was adopted by the Arctic Council in 2004. It contains objectives for the management of the Arctic marine environment with related strategic actions. The Arctic Marine Strategic Plan was developed in response to the recognition that

*"...existing and emerging activities in the Arctic warrant a more coordinated and integrated strategic approach to address the challenges of the Arctic coastal and marine environment..."*

Since the AMSP was adopted in 2004, the Arctic marine environment has been subject to increasing pressures from climate change, economic activities and pollution. The Arctic Council is at the forefront of responses to these emerging issues through the development of in-depth reports and assessments, such as the State of the Arctic Environment Report, the Arctic Climate Impact Assessment (ACIA), the Arctic Marine Shipping Assessment (AMSA), the Arctic Oil and Gas Assessment (AOGA), and ongoing work such as the Arctic Biodiversity Assessment (ABA) and the Arctic Ocean Review.



The working groups of the Arctic Council AMAP, PAME, CAFF, EPPR and SDWG indicate that most strategic actions of the AMSP have been completed or are progressing according to plan, to be concluded within this or the next workplan period (as per Annex I).

The Implementation section in the AMSP states that:

*“...PAME, in collaboration with all Arctic Council subsidiary bodies, will lead a review of the Strategic Plan by 2010, or another date specified by the Council, to determine its adequacy in light of the results of ongoing assessments and national and regional reporting.”*

Therefore, it is timely for the PAME Working Group, in cooperation with the other Arctic Council working groups, to update and expand, as relevant, the AMSP (2004) to secure that the future marine management of the Arctic marine environment is coordinated between the working groups, with the objective of effective implementation of integrated ocean management through an ecosystem-based approach. This should also include a review of how relevant measures are being implemented.

#### **The Overall Goal:**

The overall goals of the the AMSP strive for:

- The Arctic marine environment to be managed using an integrated, ecosystem approach to management.
- Cumulative environmental effects not to exceed a level at which structure, functioning and productivity of ecosystems and biodiversity are maintained.

Based on this there is a need to update and expand, as relevant, the AMSP (2004) to secure that the future management of the Arctic marine environment is coordinated between the working groups, based on ecosystem-based approach, and that results are effectively implemented.

This will ensure that marine-related activities in the different working groups collectively work towards integration in assessing impacts on the Arctic marine environment and addressing key pressures. This will facilitate the development of policy recommendations.

Integrated approaches will contribute to better informed decisions on sustainable development and environmental protection in the Arctic, benefitting Arctic ecosystems and its residents, in particularly indigenous people.

#### **Rationale:**

The stewardship of the Arctic marine environment is of particular importance to the Arctic States. Since the AMSP was adopted in 2004, the Arctic marine environment has been, and will continue to be subject to increasing pressures from climate change, economic activities and pollution.

Most of the strategic actions in the AMSP have been accomplished, or are in the process of being finalized. Through the review of the AMSP the Arctic Council will take the leadership in the development of integrated marine management for the Arctic marine environment.

The update of the AMSP will provide the building blocks towards more coordinated and integrated approaches and support policy decisions at the local, national, regional and at the international levels.

A revision of the AMSP supports the common objectives and priorities for the Norwegian, Danish and Swedish chairmanships of the Arctic Council (2006-2013), in particular the theme of integrated management, and supports a sustainable and ecosystem-based approach to resource development in the Arctic marine environment.

It also responds to commitments by the global community to sustainable development and protection of marine biodiversity and the marine environment through the application of the ecosystem approach and integrated coastal and ocean management.

#### **Principles to be followed:**

1. Framework - The application of an integrated, coordinated ecosystem based approach to management.
2. Relevant and timely - Topics must meet the needs of users in a timely fashion, in particular those from decision-makers and northern residents, particularly indigenous people.



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**Partnerships**

PAME-I 2011 decided to invite all Arctic Council working groups working on marine-related issues, Permanent Participants (PPs) and observers to participate in a PAME led Expert Group on Ecosystem Approach to Management (EA). As the review of the AMSP is seen as an activity at the Arctic Council level, this group will also be asked to contribute to the review of the AMSP.

**Approach:**

This work is proposed to be accomplished in the following two phases:

**Phase I (2011-2013):** The PAME led EA Expert Group will

carry out a scoping process addressing collective needs, priorities and contributions and how these issues can be integrated into an updated AMSP. The delivery from AMSP Phase I should include a suggested outline for a future AMSP to be submitted to the respective working groups for consideration.

Confirmed Co-leads: Norway and US

**Phase II (2013-2015):** Further develop the AMSP based on Phase I and outcomes from other relevant Arctic Council assessments/projects/monitoring programs, emerging trends, pressures and priorities. Develop new strategic actions within the framework of integrated ocean management. Submit the AMSP for adoption by the Arctic Council Ministers in 2015.





# PAME

Protection of the Arctic Marine Environment

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