AMSA Recommendations and their Implementation plans

by

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SCPAR-meeting

Helsinki, 19th November 2009
Arctic Council
Arctic Marine Shipping Assessment (AMSA)

Reykjavik Declaration, 4th Ministerial (Nov 2004)

“Request PAME to conduct a comprehensive Arctic marine shipping assessment as outlined in the AMSP under the guidance of Canada, Finland, and the United States as lead countries and in collaboration with the EPPR working group and other working groups of the Arctic Council and Permanent Participants as relevant.”
Is the ice cap recovering?
Arctic Council, PAME-led Arctic Marine Shipping Assessment

- Lead Countries: Canada, Finland, and USA
- Key Countries & Regions: Norway & Russia (Norwegian-Barents-Kara seas), Iceland, Denmark-Greenland-Faroe Islands, Sweden
- Electronic Survey Questionnaire; Data Collection for 2004 from the Arctic States
- Inclusive Participation: Member States, Permanent Participants, Council Working Groups; Council Observers; Shipping Industry; Ship Classification Societies; Research Organizations; Others

- ~ Key Challenge: Many Non-Arctic Stakeholders
Arctic Marine Vessel Activity ~ AMSA Ship Types

- Tankers ~ Bulk Carriers
- Container Ships ~ Tug-Barge Combinations
- Fishing Vessels ~ Ferries ~ Passenger Vessels/Cruise Ships
- Research Vessels ~ Offshore Supply Vessels
- Icebreakers (Government & Commercial) ~ Others
Marine Operations in the Arctic in 2004

[Map showing fishing vessel days per year and Arctic vessel traffic in 2004.]

Fishing Vessel Days per Year per Large Marine Ecosystem and Arctic Vessel Traffic 2004

Arctic Vessel Traffic Number of Trips

- 1 - 10
- 11 - 20
- 21 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- Greater than 200

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Accidents in the Arctic

Data collected within

AMSA 2004
Scenarios on the Future of Arctic Marine Navigation in 2050

**Arctic Race**
High demand and unstable governance set the stage for a “no holds barred” rush for Arctic wealth and resources.

**Arctic Saga**
High demand and stable governance lead to a healthy rate of development that includes concern for preservation of Arctic ecosystems and cultures.

**Polar Lows**
Low demand and unstable governance bring a murky and under-developed future for the Arctic.

**Polar Preserve**
Low demand and stable governance slow development in the region while introducing an extensive eco-preserve with stringent “no-shipping zones”.

AMSA/GBN Scenarios Workshops ~ April & July 2007
The Future of Arctic Marine Navigation in 2050
AMSA Report

Arctic Ministers’ Approval 29 April 2009 – Negotiated Text

Arctic Council
Arctic Marine Shipping Assessment 2009 Report

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  Climate & Sea Ice
- History
- Governance
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- Environmental Impacts
- Infrastructure

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AMSA Recommedation Themes

Enhancing Arctic Marine Safety

- Arctic State Linkages
- IMO Measures
- Uniformity of Governance
- Passenger Ships
- SAR Agreement

Protecting Arctic People and the Environment

- Indigenous Use
- Community Engagement
- Invasive Species
- Special Marine Areas
- Oil Spill Prevention
- Marine Mammal Impacts
- Air Emissions

Building the Arctic Marine Infrastructure

- Infrastructure Deficit
- Arctic Marine Traffic System
- Environmental Response Capacity
- Hydrographic, Met & Ocean Data

AMSA RECOMMENDATIONS ~ THEMES
Approve the Arctic Marine Shipping Assessment (AMSA) 2009 Report including its recommendations on enhancing Arctic marine safety, protecting Arctic people and environment and building Arctic marine infrastructure and request Senior Arctic Officials (SAOs) to develop appropriate follow up actions,

Note that increased marine access and navigation in the Arctic Ocean calls for development and implementation of suitable national and international regulations, where appropriate, to advance the safety of Arctic marine shipping, including marine pollution prevention, reduce accident risk, and facilitate effective emergency response,

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

Urge 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
Actions agreed within PAME

- Actions to be followed up/implemented by PAME as identified in the AMSA Matrix 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 program.
- 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).
Matrix for AMSA follow-up

<table>
<thead>
<tr>
<th>AMSA Recommendations</th>
<th>Follow-up Required at the global, regional or national level</th>
<th>Method of Follow-up by PAME</th>
</tr>
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</table>

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## I) Enhancing Arctic Marine Safety

### A. Linking with International Organizations:

That the Arctic states decide to, on a case by case basis, identify areas of common interest and develop unified positions and approaches with respect to international organizations such as: the International Maritime Organization (IMO), the International Hydrographic Organization (IHO), the World Meteorological Organization (WMO) and the International Maritime Satellite Organization (IMSO) to advance the safety of Arctic marine shipping; and encourage meetings, as appropriate, of member state national maritime safety organizations to coordinate, harmonize and enhance the implementation of the Arctic maritime regulatory framework.

Cooperate as appropriate in the:
- International Maritime Organization (IMO);
- International Hydrographic Organization (IHO);
- World Meteorological Organization (WMO);
- International Maritime Satellite Organization (IMSO);
- Any other relevant organization.

PAME to identify areas of common interest and develop to the extent possible unified positions and approaches to improve the Arctic maritime regulatory framework.
I) Enhancing Arctic Marine Safety

B. IMO Measures for Arctic Shipping:
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 the 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.

1) Update and as appropriate make mandatory the Guidelines for Ships Operating in Arctic Ice-covered Waters, 2) Augment global IMO ship safety and pollution prevention conventions with specific mandatory requirements, or other provisions, aimed at safety and protection of the Arctic environment.
3) Especially consider the identification of environmental risks and options for, avoiding or minimizing those risks regarding the use and carriage of heavy fuel oil, aiming at establishment of appropriate international regulations.

1) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states 2) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states 3) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states
Canada, Denmark and Norway preliminarily indicated lead country roles.
## I) Enhancing Arctic Marine Safety

### C. Uniformity of Arctic Shipping Governance:

That the Arctic states should explore the possible harmonization of Arctic marine shipping regulatory regimes within their own jurisdiction and uniform Arctic safety and environmental protection regulatory regimes, consistent with UNCLOS, that could provide a basis for protection measures in regions of the central Arctic Ocean beyond coastal state jurisdiction for consideration by the IMO.

| Explore the possible harmonization of Arctic marine shipping regulatory regimes and uniform Arctic safety and environmental protection regulatory regimes, consistent with UNCLOS, that could provide a basis for protection measures in regions of the central Arctic Ocean beyond coastal state jurisdiction for consideration by the IMO. | PAME to initiate a process or processes to explore this further. Legal discussion to be accompanied by technical discussions as appropriate. Arctic states to provide appropriate legal and technical expertise. | No lead identified at this stage |

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I) Enhancing Arctic Marine Safety

| D. Strengthening Passenger Ship Safety in Arctic Waters: That the Arctic states should support the application of the IMO’s Enhanced Contingency Planning Guidance for Passenger Ships Operating in Areas Remote from SAR Facilities, given the extreme challenges associated with rescue operations in the remote and cold Arctic region; and strongly encourage cruise ship operators to develop, implement and share their own best practices for operating in such conditions, including consideration of measures such as timing voyages so that other ships are within rescue distance in case of emergency. | 1) Support the application of the IMO’s Enhanced Contingency Planning Guidance for Passenger Ships Operating in Areas Remote from SAR Facilities; 2) Strongly encourage tour operators to develop, implement and share their own best practices for operating in such conditions. | PAME to invite maritime safety authorities to participate in this discussion and encourage them to identify possible measures to increase passenger ship safety in Arctic waters. PAME to identify lead country(ies) Identify increased safety through appropriate IMO measures, lead countries should be encouraged to bring proposals to the appropriate bodies of IMO, and to report progress and outcome to PAME as appropriate. |

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## I) Enhancing Arctic Marine Safety

### E. Arctic Search and Rescue (SAR) Instrument:
That the Arctic states decide to support developing and implementing a comprehensive, multi-national Arctic Search and Rescue (SAR) instrument, including aeronautical and maritime SAR, among the eight Arctic nations and, if appropriate, with other interested parties in recognition of the remoteness and limited resources in the region.

<table>
<thead>
<tr>
<th>Establishment of a task force to develop and complete negotiation by the next Ministerial meeting in 2011 of an international instrument on cooperation on search and rescue operations in the Arctic</th>
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| PAME to contribute to the Arctic Council SAR task force and EPPR as appropriate. |

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### II. Protecting Arctic People and the Environment

#### A. Survey of Arctic Indigenous Marine Use:
That the Arctic states should consider conducting surveys on Arctic marine use by indigenous communities where gaps are identified to collect information for establishing up-to-date baseline data to assess the impacts from Arctic shipping activities.

1. Consider conducting surveys on Arctic marine use by indigenous communities; and,
2. Where gaps are identified, collect information for establishing up-to-date baseline data to assess the impacts from Arctic shipping activities.

PAME to encourage national governments, in collaboration with PPs, to implement this recommendation as it relates to their country.

PAME to follow up with SDWG and CAFF to consider options for the Arctic Council to carry out activities to implement this recommendation.
### B. Engagement with Arctic Communities:

That the Arctic states decide to determine if effective communication mechanisms exist to ensure engagement of their Arctic coastal communities and, where there are none, to develop their own mechanisms to engage and coordinate with the shipping industry, relevant economic activities and Arctic communities (in particular during the planning phase of a new marine activity) to increase benefits and help reduce the impacts from shipping.

1) Determine if effective communication mechanisms exist with Arctic coastal communities; and,

2) Where there are none, develop mechanisms to engage and coordinate with the shipping industry, relevant economic activities and Arctic communities (in particular during the planning phase of a new marine activity) to increase benefits and help reduce the impacts from shipping.

This is national responsibility and no follow up is required by PAME.
## II. Protecting Arctic People and the Environment

### C. Areas of Heightened Ecological and Cultural Significance:

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,

1. Identify areas of heightened ecological and cultural significance in light of changing climate conditions and increasing multiple marine use; and,

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.

PAME to approach AMAP and CAFF and ask for their advice regarding identification of areas of heightened ecological and cultural significance.
II. Protecting Arctic People and the Environment

D. Specially Designated Arctic Marine Areas:
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.

Explore the need for internationally designated areas for the purpose of environmental protection in regions of the Arctic Ocean. 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.

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.

Denmark and/or Norway may co-lead
## II. Protecting Arctic People and the Environment

### E. Protection from Invasive Species:
That the Arctic states should consider ratification of the IMO International Convention for the Control and Management of Ships Ballast Water and Sediments, as soon as practical.

Arctic states should also assess the risk of introducing invasive species through ballast water and other means so that adequate prevention measures can be implemented in waters under their jurisdiction.

| 1) Consider ratification of the IMO International Convention for the Control and Management of Ships Ballast Water and Sediments, as soon as practical; and, |
| 2) Assess the risk of introducing invasive species through ballast water and other means so that adequate prevention measures can be implemented in waters under Arctic States’ jurisdiction. |
| This is national responsibility and no follow up is required by PAME |

PAME to follow up on this recommendation through the AOR (Arctic Ocean Review)
## II. Protecting Arctic People and the Environment

<table>
<thead>
<tr>
<th>F. Oil Spill Prevention:</th>
<th>Enhance the mutual cooperation in the field of oil spill prevention and, in collaboration with industry, support research and technology transfer to prevent release of oil into Arctic waters for environmental protection.</th>
<th>Responsible for follow up: EPPR</th>
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<tbody>
<tr>
<td>That the Arctic states decide to <strong>enhance the mutual cooperation in the field of oil spill prevention</strong> and, in collaboration with industry, support research and technology transfer to prevent release of oil into Arctic waters, since prevention of oil spills is the highest priority in the Arctic for environmental protection.</td>
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</table>
II. Protecting Arctic People and the Environment

| G. Addressing Impacts on Marine Mammals: | 1) Engage with relevant international organizations to further assess the effects on marine mammals due to ship noise, disturbance and strikes in Arctic waters; and, |
|                                           | 2) Consider, where needed, to work with the IMO in developing and implementing mitigation strategies. |
|                                           | PAME to approach AMAP and CAFF to achieve their further assessment of the effects on marine mammals due to ship noise, disturbance and strikes in Arctic waters, and where needed work within IMO to develop and implement mitigation strategies through the use of lead countries |
II. Protecting Arctic People and the Environment

<table>
<thead>
<tr>
<th>H. Reducing Air Emissions:</th>
<th>Support the development of improved practices and innovative technologies for ships in port and at sea to help reduce current and future emissions of greenhouse gases (GHGs), Nitrogen Oxides (NOx), Sulfur Oxides (SOx) and Particulate Matter (PM), taking into account the relevant IMO regulations.</th>
<th>The follow up would be through industry, national governments and international organizations, e.g. IMO.</th>
</tr>
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<tbody>
<tr>
<td>That the Arctic states decide to <strong>support the development of improved practices and innovative technologies for ships in port and at sea to help reduce current and future emissions of greenhouse gases (GHGs), Nitrogen Oxides (NOx), Sulfur Oxides (SOx) and Particulate Matter (PM), taking into account the relevant IMO regulations.</strong></td>
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### III. Building the Arctic Marine Infrastructure

#### A. Addressing the Infrastructure Deficit:

That the Arctic states should **recognize that improvements in Arctic marine infrastructure are needed** to enhance safety and environmental protection in support of sustainable development. Examples of infrastructure where critical improvements are needed include:

- Ice navigation training;
- Navigational charts;
- Communications systems;
- Port services, including reception facilities for ship-generated waste;
- Accurate and timely ice information (ice centers);
- Places of refuge; and,
- Icebreakers to assist in response.

Recognize that improvements in Arctic marine infrastructure are needed to enhance safety and environmental protection in support of sustainable development, including:

- Ice navigation training;
- Navigational charts;
- Communications systems;
- Port services, including reception facilities for ship-generated waste;
- Accurate and timely ice information (ice centers);
- Places of refuge; and,
- Icebreakers to assist in response.

<table>
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<tr>
<th>National follow up point.</th>
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### III. Building the Arctic Marine Infrastructure

#### B. Arctic Marine Traffic System: That the Arctic states should support continued development of a comprehensive Arctic marine traffic awareness system to improve monitoring and tracking of marine activity, to enhance data sharing in near real-time, and to augment vessel management service in order to reduce the risk of incidents, facilitate response and provide awareness of potential user conflict. The Arctic states should encourage shipping companies to cooperate in the improvement and development of national monitoring systems.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Details</th>
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<tbody>
<tr>
<td>1) Support continued development of a comprehensive Arctic marine traffic awareness system to improve monitoring and tracking of marine activity; enhance data sharing in near real-time; and, augment vessel management service in order to reduce the risk of incidents, facilitate response and provide awareness of potential user conflict.</td>
<td>PAME to encourage its member states to implement this recommendation.</td>
</tr>
<tr>
<td>2) Encourage shipping companies to cooperate in the improvement and development of national monitoring systems.</td>
<td></td>
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</table>
### C. Circumpolar Environmental Response Capacity:
That the Arctic states decide to continue to develop circumpolar environmental pollution response capabilities that are critical to protecting the unique Arctic ecosystem. This can be accomplished, for example, through circumpolar cooperation and agreement(s), as well as regional bilateral capacity agreements.

| Continue to develop circumpolar environmental pollution response capabilities. |
| Primary responsibility is: the EPPR. |
| PAME to consider this recommendation in the AOR project. |
### III. Building the Arctic Marine Infrastructure

**D. Investing in Hydrographic, Meteorological and Oceanographic Data:**

<table>
<thead>
<tr>
<th>Significant improvement of data and information for safe navigation in Arctic waters.</th>
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<tbody>
<tr>
<td>That the Arctic states should significantly improve, where appropriate, the level of and access to data and information in support of safe navigation and voyage planning in Arctic waters. This would entail increased efforts for:</td>
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<tr>
<td>- <strong>hydrographic surveys</strong> to bring Arctic navigation charts up to a level acceptable to support current and future safe navigation; and systems to support real time acquisition, analysis and transfer of meteorological, oceanographic, sea ice and iceberg information.</td>
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National responsibility.
Author’s comments

• PAME’s power in the implementation process is weak

• Actions are needed from the Member States
  – Policy development
  – Administrations responsible for IMO and other regulatory work

• Engagement of other interest groups
  – Arctic inhabitants
  – Industry
  – Research institutions