

## Matrix for AMSA follow-up

### Identified measures in the AMSA-report and method of follow up

AMSA Recommendations	Follow-up Required at the global, regional or national level	Method of Follow-up by PAME
<b>I) Enhancing Arctic Marine Safety</b>		
<p><b>A. Linking with International Organizations:</b> 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.</p>	<p>Cooperate as appropriate in the:</p> <ul style="list-style-type: none"> <li>• International Maritime Organization (IMO);</li> <li>• International Hydrographic Organization (IHO);</li> <li>• World Meteorological Organization (WMO);</li> <li>• International Maritime Satellite Organization (IMSO and,)</li> <li>• Any other relevant organization.</li> </ul>	<p>PAME to identify areas of common interest and develop to the extent possible unified positions and approaches to improve the Arctic maritime regulatory framework.</p>

<p><b>B. IMO Measures for Arctic Shipping:</b> 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:</p> <p>---Support the updating and the mandatory application of relevant parts of the <i>Guidelines for Ships Operating in Arctic Ice-covered Waters</i> (Arctic Guidelines); and,</p> <p>---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.</p>	<p>1) Update and as appropriate make mandatory the <i>Guidelines for Ships Operating in Arctic Ice-covered Waters</i>,</p> <p>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.</p> <p>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.</p>	<p>1) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states</p> <p>2) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states</p> <p>3) PAME to encourage co-operation and the development of unified positions to the extent possible among Arctic states</p> <p><i>Canada, Denmark and Norway preliminarily indicated lead country roles.</i></p>
<p><b>C. Uniformity of Arctic Shipping Governance:</b> 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</p>	<p>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</p>	<p>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-</p>

<p>protection measures in regions of the central Arctic Ocean beyond coastal state jurisdiction for consideration by the IMO.</p>	<p>consideration by the IMO.</p>	
<p><b>D. Strengthening Passenger Ship Safety in Arctic Waters:</b> That the Arctic states should support the application of the IMO’s <i>Enhanced Contingency Planning Guidance for Passenger Ships Operating in Areas Remote from SAR Facilities</i>, 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.</p>	<p>1) Support the application of the IMO’s <i>Enhanced Contingency Planning Guidance for Passenger Ships Operating in Areas Remote from SAR Facilities</i>; and,  2) Strongly encourage tour operators to develop, implement and share their own best practices for operating in such conditions.</p>	<p>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.</p>
<p><b>E. Arctic Search and Rescue (SAR) Instrument:</b> 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.</p>	<p>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</p>	<p>PAME to contribute to the Arctic Council SAR task force and EPPR as appropriate.</p>

<b>II. Protecting Arctic People and the Environment</b>		
<p><b>A. Survey of Arctic Indigenous Marine Use:</b> 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.</p>	<p>1) Consider conducting surveys on Arctic marine use by indigenous communities; and,</p> <p>2) Where gaps are identified, collect information for establishing up-to-date baseline data to assess the impacts from Arctic shipping activities</p>	<p>PAME to encourage national governments, in collaboration with PPs, to implement this recommendation as it relates to their country.</p> <p>PAME to follow up with SDWG and CAFF to consider options for the Arctic Council to carry out activities to implement this recommendation.</p>
<p><b>B. Engagement with Arctic Communities:</b> 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.</p>	<p>1) Determine if effective communication mechanisms exist with Arctic coastal communities; and,</p> <p>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.</p>	<p>This is national responsibility and no follow up is required by PAME.</p>
<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</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</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>areas from the impacts of Arctic marine shipping, in coordination with all stakeholders and consistent with international law.</p>	<p>stakeholders and consistent with international law.</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><b>E. Protection from Invasive Species:</b> That the Arctic states should consider ratification of the IMO <i>International Convention for the Control and Management of Ships Ballast Water and Sediments</i>, 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.</p>	<p>1) Consider ratification of the IMO <i>International Convention for the Control and Management of Ships Ballast Water and Sediments</i>, as soon as practical; and,</p> <p>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.</p>	<p>This is national responsibility and no follow up is required by PAME</p> <p>PAME to follow up on this recommendation through the AOR</p>
<p><b>F. Oil Spill Prevention:</b> That the Arctic states decide to 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, since prevention of oil spills is the</p>	<p>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.</p>	<p>Responsible for follow up: EPPR</p>

<p>highest priority in the Arctic for environmental protection.</p>		
<p><b>G. Addressing Impacts on Marine Mammals:</b> That the Arctic states decide to engage with relevant international organizations to further assess the effects on marine mammals due to ship noise, disturbance and strikes in Arctic waters; and consider, where needed, to work with the IMO in developing and implementing mitigation strategies.</p>	<p>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.</p>	<p>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,</p>
<p><b>H. Reducing Air Emissions:</b> That the Arctic states decide to 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.</p>	<p>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.</p>	<p>The follow up would be through industry, national governments and international organizations, e.g. IMO.</p>

III. Building the Arctic Marine Infrastructure		
<p><b>A. Addressing the Infrastructure Deficit:</b> 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.</p>	<p>Recognize that improvements in Arctic marine infrastructure are needed to enhance safety and environmental protection in support of sustainable development, including:</p> <ul style="list-style-type: none"> <li>• ice navigation training;</li> <li>• navigational charts;</li> <li>• communications systems;</li> <li>• port services, including reception facilities for ship-generated waste;</li> <li>• accurate and timely ice information (ice centers);</li> <li>• places of refuge; and,</li> <li>• Icebreakers to assist in response.</li> </ul>	<p>National follow up point.</p>
<p><b>B. Arctic Marine Traffic System:</b> 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.</p>	<p>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.</p> <p>2) Encourage shipping companies to cooperate in the improvement and development of national monitoring systems.</p>	<p>PAME to encourage its member states to implement this recommendation.</p>

	systems.	
<p><b>C. Circumpolar Environmental Response Capacity:</b> 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.</p>	Continue to develop circumpolar environmental pollution response capabilities.	Primary responsibility is: the EPPR. PAME to consider this recommendation in the AOR project.
<p><b>D. Investing in Hydrographic, Meteorological and Oceanographic Data:</b> 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: hydrographic surveys 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.</p>	Significantly improve, where appropriate, the level of and access to data and information in support of safe navigation and voyage planning in Arctic waters.	National responsibility.