

**Executive Summary**

[TO BE WRITTEN]

**Status on Implementation of the  
AMSA Report Recommendations  
For the Period March 2013-March 2015**

**Status of Progress on Recommendations<sup>1</sup>**

**THEME I – Enhancing Arctic Marine Safety**

**I(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.”*

| Lead State and Partners | Status of Recommendation I(A)  |
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| PAME, IALA and ICES     | At PAME’s invitation, representatives of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) and the International Council for the Exploration of the Sea (ICES) made presentations at PAME meetings that focused on areas of common interest and opportunities for collaboration and cooperation. In fall 2014, IALA submitted a paper to PAME proposing specific areas for collaboration and cooperation, [which were approved at PAME II-2014. These included .....] |
| PAME and the ARHC       | PAME and the Arctic Regional Hydrographic Commission continued to focus on areas of common interest, in particular on surveying and charting in the Arctic Region. At PAME’s invitation, the ARHC submitted information on the status of the extent of Arctic nautical   |

<sup>1</sup> Neither this Report nor the information it contains constitutes an assessment by any PAME member government of the consistency with international law, including the Law of the Sea Convention, of domestic laws, regulations, or other measures or resolutions identified or referenced herein.

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| <p>PAME (with Sweden as lead), IMO and WM</p> <p>Finland</p> | <p>charting, made a presentation on the subject at PAME II-2014, and is working to update Arctic charting information.</p> <p>With the IMO and the World Maritime University, PAME agreed to co-sponsor and support the development of an international conference on “Safe and Sustainable Shipping in a Changing Arctic Environment.”</p> <p>Finland submitted an information paper (MSC 93/INF.12) to the IMO’s Marine Safety Committee to inform the Committee of the outcome of the Workshop on Safe Ship Operations in the Arctic Ocean, held at IMO Headquarters on 28 February 2014.</p> |
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**I(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.”*

| Lead State and Partners  | Status of Recommendation I(B)  |
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| <p>PAME</p> <p>PAME (Norway, Russian Federation and USA as co-leads)</p> | <p>PAME continued to monitor IMO’s development of a mandatory code for ships operating in polar waters (Polar Code) and through its Records of Decision encouraged member governments to intensify their collaboration with respect to the finalization of the Polar Code.</p> <p>PAME completed Phase II of a multi-year project to identify risks associated with vessel use and carriage of heavy fuel oil (HFO) in the Arctic,</p> |

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| <p>PAME (with Norway, Finland, Russian Federation and USA as co-leads) and IMO</p> | <p>possible effects on the environment of an HFO spill, and options for minimizing those risks. Based on the final HFO Phase II Report, PAME considered recommendations put forward in a consultant’s report for its member governments to consider pursuing at IMO.</p> <p>At PAME’s invitation, representative of IMO Secretariat attended a WS in Reykjavik in June 2013 to give a talk and guidance on how IMO measures (MARPOL Special Areas and PSSA’s) could be used to protect marine environment in the Arctic High Seas.</p> |
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**I(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.”*

| Lead State and Partners  | Status of Recommendation I(C)  |
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| PAME   | PAME initiated the development of follow-up actions for the marine operation and shipping recommendations contained in the AOR Final Report approved at the 2013 Arctic Ministerial Meeting.   |
| PAME (USA, Russia Canada, Finland, Greenland (Denmark) and Norway) | PAME member governments] developed a draft format and outline for a regional reception facilities plan relevant to the Arctic based on applicable IMO guidelines for consideration by Arctic States.   |
| Arctic States  | In 2014, Arctic States formed the Arctic Coast Guard Forum (ACGF). The objective of the ACGF is to discuss coordination of exercises, strengthen relationships, and share best practices. It intends to compliment the Arctic Council with chairmanship of the ACGF to reside with the rotating chairmanship of the AC. An executive level meeting took place in September 2014 to approve the Terms of Reference and issue a joint statement. |

**I(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.”*

| Lead State and Partners  | Status of Recommendation I(D)   |
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| <p>PAME (with Canada &amp; USA as co-leads)</p> <p>Norway, United States, Kingdom of Denmark and Greenland</p> <p>Alaska (USA)</p> <p>AECO</p> | <p>PAME’s Arctic Marine Tourism Project (AMTP) developed draft best practices for Arctic ship-based tourism to advance sustainable economic development and environmental conservation. The draft best practices, submitted for adoption by Arctic Ministers in 2015, were the product of two international workshops and input from a diverse cross-section of Arctic stakeholders, including other Arctic Council Working Groups, industry, native and local communities, local and regional governments, and academia.</p> <p>Member governments submitted information papers to PAME I-2014 on their domestic rules and policies pertaining to Arctic cruise tourism as background and context for the AMTP.</p> <p>The Alaska Department of Environmental Conservation, Commercial Passenger Vessel Environmental Compliance (CPVEC) Program, or Cruise Ship Program, intends to issue a general permit for marine discharges of treated sewage, treated gray water, and other treated wastewater from large commercial passenger vessels operating in Alaska.</p> <p>The Secretary General of the Association of Arctic Expedition Cruise Operators (AECO) made a presentation to PAME on how its members address voyage planning (including possible contingencies) and coordinate with each other and with shore-based administrations.</p> |

**I(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.”*

| Lead State and Partners | Status of Recommendation I(E)   |
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| Denmark                 | Greenland hosted SAR exercises in 2013 in the Greenland Sea. The exercise was both an open sea search operation and an in-fiord cruise ship rescue and evacuation operation, building on lessons learned from the previous year’s SAR exercise. |

**THEME II – Protecting Arctic People and the Environment**

**II(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.”*

| Lead State and Partners | Status of Recommendation II(A)   |
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| AIA                     | The Aleut International Association (AIA) made a presentation to PAME-II 2013 on “Arctic Marine Subsistence Use Mapping: Tools for Communities” project and subsequently submitted a paper for PAME’s consideration during PAME-I 2014 with the same title which was published in the Fall of 2013.  |
| USA                     | Several recent BOEM funded Research Studies completed or underway: <ul style="list-style-type: none"> <li>•The Study of Sharing Networks to Assess the Vulnerabilities of Local Communities to Oil and Gas Development Impacts in Arctic Alaska 2007 – 2013. (subsistence, Wainwright, Kaktovik, Venetie, Iñupiat)</li> <li>•Social Indicators in Coastal Alaska: Arctic Communities 2011-2012 (cultural, health, climate, subsistence)</li> <li>•Continuation of Impact Assessment for Cross</li> </ul> |

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|  | <p>Island Whaling Activities - Beaufort Sea 2008-2013 (Iñupiat, Nuiqsut, bowhead whale, subsistence, migration, hunting)</p> <ul style="list-style-type: none"> <li>•Subsistence Use and Knowledge of Salmon in Barrow and Nuiqsut 2009-2013 (Inupiat, fishing, traditional knowledge)</li> <li>•Aggregate Effects Research &amp; Environmental Mitigation Monitoring of Oil Operations in the Vicinity of Nuiqsut 2009-2013 (Iñupiat, Nuiqsut, oil, gas, subsistence, harvest, mitigation)</li> <li>•Dispersal Patterns and Summer Ocean Distribution of Adult Dolly Varden from the Wulik River, Alaska, using Satellite Tags. 2012-2013 (fish, distribution, migration, subsistence,)</li> <li>•Traditional Knowledge Implementation: Accessing Arctic Community Panels of Subject Matter Experts FY 2015</li> </ul> <p>Subsistence Mapping of Wainwright, Point Lay, Point Hope, and Atqasuk. FY 2015</p> |
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**II(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.”*

| Lead State and Partners | Status of Recommendation II(B)  |
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| Canada                  | Canada submitted a paper to PAME I-2014 on industry engagement with Arctic communities in which the experience of Fednav Ltd. and Petro-Nav were highlighted. |

**II(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, 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.”*

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| Lead State and Partners  | Status of Recommendation II(C)   |
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| <p>PAME</p> <p>Convention on Biological Diversity (CBD) in collaboration with Finland and Arctic Council CAFF WG</p> | <p>PAME received and acknowledged the valuable contributions of the information contained in the report prepared by AMAP, CAFF, and SDWG identifying areas of heightened ecological and cultural significance.</p> <p>In March 2014, CBD held a workshop in Helsinki, Finland in collaboration with the Arctic Council CAFF WG that considered Ecologically or Biologically Significant Marine Areas (ESBAs) in the Arctic Region. The final workshop report concluded with a recommendation to submit 11 EBSA candidates to the CBD SBSSTA18. Two of these are located in the areas beyond national jurisdiction “The marginal ice zone and the seasonal ice-cover over the deep Arctic Ocean” and “Multi-year ice of the Central Arctic Ocean” and nine in the territorial waters of the Russian Federation. The final report is available at <a href="http://www.cbd.int/doc/?meeting=EBSAWS-2014-01">http://www.cbd.int/doc/?meeting=EBSAWS-2014-01</a>.</p> |

**II(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.”*

| Lead State and Partners  | Status of Recommendation II(D)   |
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| <p>PAME</p> <p>PAME (Norway, Finland, Russian Federation and USA as co-leads) aided by DNV</p> | <p>Based on the final AMSA II(D) report commissioned by PAME on options for international protections for the high seas of the Central Arctic, PAME member governments decided to .....</p> <p>At PAME’s request, Det Norske Veritas (DNV), submitted a report on specially designated Arctic high seas marine areas to PAME I- 2014. The report explores the need for protection of the high seas area and describes the traffic volume and vulnerability of the area. The report also reviews potentially available IMO measures suited to protect the vulnerable areas. Based on the Report, PAME decided to.....</p> |

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| Oceana | Christopher Krenz of Oceana presented a paper to PAME II-2013 on mapping ecologically important sea areas in the Arctic. PAME adopted a ROD inviting Oceana to submit its final paper to PAME when published.   |
| PAME   | <p><b>MPA Concept Paper/Project?</b></p> <p>The role of the pan-Arctic MPA network, composed of individual Arctic State MPA networks, is to protect and restore marine biodiversity, ecosystem function and special natural features, and preserve cultural heritage resources. This non-binding framework sets out a common vision for international cooperation in MPA network establishment and management, based on international best practices and previous Arctic Council initiatives. It aims to support the efforts of Arctic States to develop their MPA networks and chart a course for future collaborative planning, management and actions for the conservation and protection of the Arctic marine environment</p> |

**II(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 such as biofouling so that adequate prevention measures can be implemented in waters under their jurisdiction.”*

| Lead State and Partners | Status of Recommendation II(E)   |
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| Arctic States           | <p>As of 28 July 2014, 40 States representing 30.25 % of the world tonnage have ratified the <i>Ballast Water Management Convention</i>. Canada, Sweden, Norway, the Russian Federation, and Denmark are parties to the Convention.</p>  |
| IMO                     | <p>At the 65<sup>th</sup> meeting of IMO’s Marine Environmental Protection Committee (13 to 17 May 2013), Member States approved the Guidance for evaluating the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Resolution MEPC.207(62)). In June 2013 Member States were invited to bring the circular</p> |



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| <p>USA</p> | <p>to the attention of all parties concerned. IMO’s Strategic Plan for the Organization (2012 to 2017) contains 13-key strategic directions. Thematic priorities established by various IMO committees for the 2014-2015 biennium include "Strengthening national and regional capacity and fostering regional cooperation for the ratification and effective implementation .... of the BWM Convention and of the ships' biofouling guidelines".</p> <p>USA is undertaking the following steps with respect to the Implementation Plan for its National Strategy for Arctic Region (issued January 2014). Objective: Develop, implement, and maintain an international invasive species prevention and management plan. Next steps in this process include:</p> <ul style="list-style-type: none"> <li>• Identify and assess invasive species pathways, risks, and ecosystem and economic impacts to the Arctic region by the end of 2015.</li> <li>• Establish baseline conditions, prepare an early detection and rapid response plan to reduce the threat of invasive species, and gather information regarding effective management options by the end of 2015.</li> <li>• Develop a comprehensive invasive species prevention, control, and management plan in accordance with existing requirements by the end of 2017.</li> <li>• Initiate implementation of invasive species prevention and management plans through extensive consultation with stakeholders by the end of 2019.</li> <li>• Explore becoming party to the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (2004) in consideration of existing domestic regulations and standards by the end of 2014.</li> </ul> |
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**II(F). Oil Spill Prevention**

*“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 highest priority in the Arctic for environmental protection.”*

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| Lead State and Partners | Status of Recommendation II(F)  |
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| PAME                    | PAME monitored and supported efforts of the Arctic Council Task Force on Arctic Marine Oil Pollution Prevention regarding shipping related aspects.   |
| PAME                    | PAME completed the report <i>AOOGG: Systems Safety Management and Safety Culture</i> which deals with preventing offshore oil and gas disasters and contains management systems recommendations for the full scope of operations including vessels operated by or for the industry. |
| EPPR                    | EPPR presented on the RP3 Summary Report and Recommendations and opportunities for future cooperation. Both working groups continue to collaborate where relevant.  |

**II(G). Addressing Impacts on Marine Mammals**

*“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.”*

| Lead State and Partners | Status of Recommendation II(G)   |
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| USA                     | USA submitted a paper and made a presentation at PAME II-2013 on CetSound and CetMap which are web-accessible tools for comparing the location of underwater sound fields to the known distributions of whales to help in evaluating the impacts of human-induced noise on cetacean species. As follow-up, PAME member governments submitted to the USA points of contact for the exchange of information related to cetacean density and distribution information and the impact of underwater noise on marine animals. |
| IMO                     | In 2014, the IMO adopted voluntary guidelines to reduce underwater noise generated by commercial ships. The guidelines recognize that shipping noise can have short-term and long-term impacts on marine life; call for measurement of shipping noise according to objective ISO standards; identify computational models for determining effective  |

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| <p>International Whaling Commission</p> | <p>quieting measures; provide guidance for designing quieter ships and for reducing noise from existing ships, especially from propeller cavitation; and advise owners and operators on how to minimize noise through ship operations and maintenance, such as by polishing ship propellers to remove fouling and surface roughness.</p> <p>In March, 2014, the IWC held a "Workshop on Impacts of Increased Marine Activities on Cetaceans in the Arctic". This workshop focused on the increasing shipping and oil and gas activities. The recommendations of the workshop will be considered by the Commission during its September 2014 meeting. Priority recommendations outlined in the workshop report include:</p> <ul style="list-style-type: none"> <li>• Having a standing IWC agenda item on the Arctic;</li> <li>• Increased co-operation with the Arctic Council by the Secretariat, starting in May 2015;</li> <li>• Increased co-operation with the IMO with respect to mitigation measures for threats to cetaceans and increased awareness of the issue of ship strikes and this importance of the IWC global ship strikes database;</li> <li>• Increased co-operation with stakeholders; and</li> <li>• Requesting the Scientific Committee to undertake a number of actions related to Arctic research.</li> </ul> <p>The final workshop report (IWC/65/Rep07-Rev1) is available at <a href="https://archive.iwc.int/pages/view.php?ref=3485">https://archive.iwc.int/pages/view.php?ref=3485</a>.</p> <p>Building upon the CetSound work mentioned above, USA and European States planned a workshop which was held in April 2014 in Leiden, the Netherlands, "Predicting sound fields—Global soundscape modelling to inform management of cetaceans and anthropogenic noise." This workshop was sponsored in part by the IWC. Workshop participants discussed regional and ocean-basin scale underwater sound field mapping techniques to provide support for decision makers seeking to characterize, monitor, and manage the potential impacts of chronic or cumulative anthropogenic noise on marine animals. The workshop produced a meeting report that includes recommendations directed to sponsoring international organizations and/or their science advisory groups to support the</p> |
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|  | <p>development and implementation of soundscape modelling and mapping tools needed to make informed management decisions. The report (SC/65b/Rep03) was presented to the 2014 meeting of the IWC’s Scientific Committee and is available at <a href="https://events.iwc.int/index.php/scientific/SC65B/aper/viewFile/802/870/SC-65b-Rep03rev.pdf">https://events.iwc.int/index.php/scientific/SC65B/aper/viewFile/802/870/SC-65b-Rep03rev.pdf</a>.</p> |
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**II(H). Reducing Air Emissions**

*“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.”*

| Lead State and Partners | Status of Recommendation II(H)   |
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| PAME                    | PAME monitored and supported efforts by the Arctic Council Task Force on Black Carbon and Methane and encouraged continued research at IMO on Black Carbon emissions, with respect to a technical definition of Black Carbon and appropriate methods and control measures. |
| Norway                  | Norway submitted an update to PAME I-2014 on IMO’s work with respect to black carbon.  |

**THEME III – Building the Arctic Marine Infrastructure**

**III(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.”*

| Lead State and Partners                                 | Status of Recommendation III(A)  |
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| PAME  | PAME invited member governments to identify and submit information to help fill gaps and suggest additional categories of information that may warrant inclusion in the Arctic Maritime and Aviation Transportation Infrastructure Initiative (AMATII) database.   |
| PAME and Arctic Regional Hydrographic Commission (ARHC) | See entry under Recommendation I(A)  |
| USA, Canada, Iceland, Norway, Sweden                    | These six Arctic States submitted an information paper (NCSR 1/27/3, 25 April 2014) to the 1 <sup>st</sup> session of the IMO’s Sub-Committee on Navigation, Communications and Search and Rescue providing information on the World Meteorological Organization (WMO) Voluntary Observing Ship (VOS) Scheme in the Arctic and encouraging increased participation in the VOS Scheme by all flag States. |
| USA   | USA submitted a paper to PAME II-2013? on IMO’s Global Integrated Shipping Information System (GISIS) database and the Arctic Marine and Aviation Transportation Infrastructure Initiative (AMATII) database, requesting the PAME Secretariat to bring it to the attention of SDWG for appropriate action.   |
| USA   | Under the U.S. National Strategy for the Arctic Region Implementation Plan, the Committee on the Marine Transportation System (CMTS) was tasked with “Prepar[ing] for Increased Activity in the Marine Domain.” CMTS efforts consist of three phases: 1) Complete a 10-year projection of maritime activity in the Arctic region by the end  |

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|  | <p>of 2014; 2) Deliver a 10-year prioritization framework to coordinate the phased development of Federal infrastructure identified through a government validated needs assessment by the end of 2015; 3) Develop recommendations for pursuing Federal public-private partnerships in support of the needs assessment and identified prioritized activities by the end of 2015.</p> |
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**III(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.”*

| Lead State and Partners       | Status of Recommendation III(B)   |
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| USA                           | USA submitted a detailed information paper to PAME II-2013 identifying and graphically depicting all IMO-approved routing and reporting systems in the Arctic region  |
| Norway, Canada                | Norway and Canada submitted information on their present and planned satellite (AIS, radar and optical) and shore-based AIS capabilities to PAME I-2014.  |
| USA                           | In July 2013, the U.S. Committee on the Marine Transportation System submitted a report to the President entitled <a href="#"><u>U.S. Arctic Marine Transportation System: Overview and Priorities for Action</u></a> calling for near- and long-term action to improve the U.S. Arctic marine transportation system to address anticipated increases in vessel traffic in the U.S. Arctic. |
| Canada, Norway [and Denmark?] | Canada, Norway (and Denmark??) submitted papers to PAME I-2014 on the effectiveness of their routing and reporting measures in the Arctic region.   |
| BIMCO                         | BIMCO made a presentation to PAME I-2013 on BIMCO’s shipping interests and activities as they relate to the Arctic and the AMSA Report.   |

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| Taksha University | Prof. Guy George Thomas (Taksha University) made a presentation on “Collaboration in Space for International Global Maritime Awareness: Stepping Stones to Arctic Surveillance” at PAME II-2013. |
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**III(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.”*

| Lead State and Partners | Status of Recommendation III(C)  |
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| USA/Russian Federation  | Continued coordination, under the Russia-US Joint Contingency Plan, to enhance oil pollution preparedness and response in light of increasing vessel traffic and resource extraction, including conducting either a joint response seminar or exercise by the end of 2015  |
| USA/Canada              | Continued cooperation between the USA and Canada to implement Canada-U.S. Joint Contingency Plan for oil spills in the Beaufort Sea, an ongoing program of joint exercises.  |
| USA                     | For the National Ocean Policy Implementation Plan, the Alaska Regional Response Team is developed an Arctic Logistics Concept of Operations (CONOP) Overview of Project. The purpose of the project was to: Develop a concept of logistics for a Spill of National Significance (SONS) in the Arctic that considers the limited capabilities of the region, the challenges of time and distance, industry needs and Tribal considerations that supports the National Incident Commander and Federal On-scene Coordinator in ensuring a coordinated and effective response. This logistics framework should identify federal government requirements, sources of supply, interagency resource ordering processes, deployment and demobilization strategies. |

**III(D). Investing in Hydrographic, Meteorological and Oceanographic Data**

*“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*

| Lead State and Partners   | Status of Recommendation III(D)     |
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| PAME and Arctic Regional Hydrographic Commission (ARHC)/International Hydrographic Organization (IHO) | See entry under Recommendation I(A) |

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