

Arctic Marine Strategic Plan; Implementation Progress Report; 2015-2017

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Protection of the Arctic Marine Environment (PAME)

Arctic Council Secretariat

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Arctic Marine Strategic Plan

IMPLEMENTATION PROGRESS REPORT 2015-2017

WORKING DOCUMENT, VERSION 10 FEBRUARY

PAME agreed to the following process/timeline to finalize the 1st AMSP Implementation Report for submission to SAOs and Ministers for information.

- Feb 10: Revised draft version submitted to SAOs for information.
- March-April: Revised based on comments to include links to reports/activities (as relevant) and circulate final draft to PAME, including proposed layout.
- April-May: preparation for release of the document i.e. final layout and printing.

The Arctic Marine Strategic Plan

The Arctic Council's *Arctic Marine Strategic Plan 2015-2025 (AMSP)* was approved in April 2015 at the 9th ministerial meeting in Iqaluit, Canada. It provides a framework to guide its actions to protect Arctic marine and coastal ecosystems and to promote sustainable development.

This Strategic Plan addresses both short-term and long-term challenges and opportunities, through forty Strategic Actions comprised under four Strategic Goals:

- **Goal 1:** Improve knowledge of the Arctic marine environment, and continue to monitor and assess current and future impacts on Arctic marine ecosystems.
- **Goal 2:** Conserve and protect ecosystem function and marine biodiversity to enhance resilience and the provision of ecosystem services.
- **Goal 3:** Promote safe and sustainable use of the marine environment, taking into account cumulative environmental impacts.
- **Goal 4:** Enhance the economic, social and cultural well-being of Arctic inhabitants, including Arctic indigenous peoples and strengthen their capacity to adapt to changes in the Arctic marine environment.

AMSP Implementation plan

The AMSP Implementation Plan was approved at PAME I-2016 meeting. The aim is to provide a structured approach that tracks follow-up activities (new and ongoing) of its forty strategic actions over the next 10 years among the Arctic Council working groups with overall guidance from the SAOs. This progress report enlists progress of the Arctic Council Working Groups. It is intended to be a living document, updated regularly for an overview of work by the Arctic Council.

TRACKING PROGRESS OF STRATEGIC ACTIONS – matrix

No.	Strategic Action	Follow up/Implementation
Goal 1: Improve knowledge of the Arctic marine environment, and continue to monitor and assess current and future impacts on Arctic marine ecosystems.		
7.1.1	<p><i>Strengthen scientific cooperation and joint monitoring among the Arctic states, and with other states, organizations and stakeholders involved in Arctic research or traditional and local knowledge,-with a focus on prioritizing research issues, filling knowledge gaps, and developing mechanisms to share and exchange observational data.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Arctic Ship Traffic Data project (ASTD): A proposed system for maritime traffic analysis <hr/> <p>SDWG</p> <ul style="list-style-type: none"> ✓ SDWG’s SECEG participation in MEMA ✓ Arctic Adaptation Exchange Portal ✓ Arctic EIA <hr/> <p>AMAP</p> <ul style="list-style-type: none"> ✓ Through the AMAP monitoring programme and SAON <hr/> <p>EPPR</p> <ul style="list-style-type: none"> ✓ Arctic Oil Spill Response Technology Workshop <hr/> <p>CAFF</p> <p>Implementing the recommendations of the Arctic Biodiversity Assessment (ABA) contains a range of actions which respond to many of the AMSP strategic actions, including but not limited to:</p> <ul style="list-style-type: none"> ✓ Implementation of the Circumpolar Marine Biodiversity Monitoring Plan ✓ Development of the Coastal Biodiversity Monitoring Plan ✓ The State of the Arctic Marine Biodiversity Report (SAMBR) ✓ Arctic Biodiversity Data Service (ABDS) ✓ CAFFs cooperation with the Arctic Spatial Data Infrastructure (SDI) ✓ A report on Traditional Knowledge and Wisdom: Changes in the North American Arctic and the involvement of northern communities ✓ TK holders in the development of the CBMP Arctic Coastal Biodiversity Monitoring Plan.
7.1.2	<p><i>Improve, synthesize, and respond to emerging knowledge across all disciplines and sectors to include government, academic and industry information, and traditional and local knowledge.</i></p>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ ECONOR III ✓ Arctic Renewable Energy Atlas (AREA) <hr/> <p>AMAP</p> <ul style="list-style-type: none"> ✓ Through the AMAP Monitoring Programme. This is the ambition of AACAA. <hr/> <p>EPPR</p> <ul style="list-style-type: none"> ✓ Conditions on Oil Spill Circumpolar Response Viability Analysis

No.	Strategic Action	Follow up/Implementation
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Numerous recommendations and actions from the Arctic Biodiversity Assessment. To promote the conservation and sustainable use of Arctic biodiversity through dialogue among scientists, policy-makers, government officials, industry, civil society and indigenous peoples. The second Congress is scheduled for 2018, Finland. Also see points under 7.1.1
7.1.3	<p><i>Improve the understanding of cumulative impacts on marine ecosystems from multiple human activity-induced stressors such as climate change, ocean acidification, local and long range transported pollution (land and sea-based), marine litter, noise, eutrophication, biomass overharvesting, invasive alien species and other threats.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Status of EA implementation Report (EA-EG) ✓ Arctic Invasive Alien Species Strategy and Action plan (ARIAS) in collaboration with CAFF <p>SDWG</p> <ul style="list-style-type: none"> ✓ One Health ✓ Arctic EIA <p>AMAP</p> <ul style="list-style-type: none"> ✓ This is the ambition of AACA. It is supported by the AMAP Monitoring Programme and assessment activities like AOA. <p>ACAP</p> <ul style="list-style-type: none"> ✓ Phase out of ozone-depleting and fluorinated greenhouse gases at one of the fish and seafood processing factories of the Murmansk Oblast ✓ Pilot project for reducing CO2 and black carbon emissions on the rivers of the Arctic zone of the Russian Federation <p>CAFF</p> <ul style="list-style-type: none"> ✓ Numerous recommendations and actions from the Arctic Biodiversity Assessment. ✓ Arctic Invasive Alien Species Strategy and Action plan (ARIAS) ✓ The State of the Arctic Marine Biodiversity Report from CAFFs CBMP
7.1.4	<p><i>Improve the predictive capacity and develop a common understanding of the likely future impacts of climate change and other emerging threats, such as ocean acidification.</i></p>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA <p>AMAP</p> <ul style="list-style-type: none"> ✓ This is the ambition of AACA. It is supported by the AMAP Monitoring Programme and assessment activities like AOA <p>CAFF</p> <ul style="list-style-type: none"> ✓ Numerous recommendations and actions from the Arctic Biodiversity Assessment. ✓ CAFFs cooperation with the Arctic Spatial Data Infrastructure (SDI)

No.	Strategic Action	Follow up/Implementation
7.1.5	<i>Enhance local involvement in the collection of information and monitoring of the marine environment including by using traditional and local knowledge in the work of the Arctic Council.</i>	SDWG <ul style="list-style-type: none"> ✓ One Health ✓ Arctic Adaptation Exchange Portal ✓ Arctic as a Food Producing Region
		AMAP <ul style="list-style-type: none"> ✓ This is supported by the AMAP Monitoring Programme (when relevant) and is the ambition of SAON
		EPPR <ul style="list-style-type: none"> ✓ Prevention, Preparedness and Response for Small Communities (focusing on oil spill response)
		CAFF <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ A report on Traditional Knowledge and Wisdom: Changes in the North American Arctic and the involvement of northern communities ✓ TK holders in the development of the CBMP Arctic Coastal Biodiversity Monitoring Plan. ✓ CAFF's educational kits
7.1.6	<i>Improve and coordinate communication of knowledge generated in Arctic Council assessments to the circumpolar and global community.</i>	PAME <ul style="list-style-type: none"> ✓ Collaboration with international organizations on Arctic related activities of common interest
		SDWG <ul style="list-style-type: none"> ✓ ECONOR III
		AMAP <ul style="list-style-type: none"> ✓ This is the ambition of AMAP assessment work and in particular of AACA
		CAFF <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ CAFF's framework of Resolution of Cooperation with relevant biodiversity related multi-lateral environmental agreements and bodies (CBD, Ramsar, AEWA, CMS). ✓ CAFF's Arctic Biodiversity Data Service (ABDS)
7.1.7	<i>Continue the development and standardizing of data sharing and management at a circumpolar level.</i>	SDWG <ul style="list-style-type: none"> ✓ ECONOR III
		AMAP <ul style="list-style-type: none"> ✓ This is the ambition of SAON and in particular the Arctic Data Committee

No.	Strategic Action	Follow up/Implementation
		<p>EPPR</p> <ul style="list-style-type: none"> ✓ Standardization as a tool for prevention of oil spills in the Arctic <p>CAFF</p> <ul style="list-style-type: none"> ✓ See previous entries regarding CBMP and ANDS
7.1.8	<p><i>Improve awareness of Arctic shipping activity and its impacts, promote expanded information sharing of ship traffic data among Arctic states and, as appropriate, other stakeholders, and update selected parts of the 2009 Arctic Marine Shipping Assessment (AMSA) Report, including those pertaining to the volume, composition and destination of Arctic shipping, shipping impacts, and key infrastructure needs such as hydrographic surveying and nautical charting.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ The identification of a project for PAME to report on Polar Code implementation, Port States Control Regime statistics on ship compliance, and challenges, if any, in observing the Polar Code ✓ Regular updates on the work of the IMO with respect to black carbon ✓ Arctic Ship Traffic Data project (ASTD): A proposed system for maritime traffic analysis <p>AMAP</p> <ul style="list-style-type: none"> ✓ Adaptation Actions for a Changing Arctic (AACA) <p>EPPR</p> <ul style="list-style-type: none"> ✓ Development of a Database of Arctic Response Assets ✓ Initial engagement (IALA)
7.1.9	<p><i>Strengthen, where feasible, the collection, observation, monitoring and dissemination of relevant data on the Arctic marine environment. This could include hydrographic and bathymetric data; oceanographic data (including tides and currents) and meteorological information for numerical modeling and forecasting; pollutants; climate change-related impacts (especially ocean acidification); and ecosystem and biodiversity status and trends (including invasive species and other metrics of environmental change).</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Arctic Ship Traffic Data project (ASTD): A proposed system for maritime traffic analysis <p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic Adaptation Exchange Portal <p>AMAP</p> <ul style="list-style-type: none"> ✓ Part of this is the ambition of AACA. It is supported by the AMAP Monitoring Programme and assessment activities like AOA <p>EPPR</p> <ul style="list-style-type: none"> ✓ Conditions on Oil Spill Circumpolar Response Viability Analysis <p>CAFF</p> <ul style="list-style-type: none"> ✓ See earlier entries re ABDS and CBMP, and CAFFs data agreements with GBIF and OBIS

No.	Strategic Action	Follow up/Implementation
7.1.10	<i>Strengthen the development of circumpolar procedures for, and improve remote sensing capabilities to support, ice detection, monitoring, and forecasting and improve the provision of near-shore and off-shore ice information (current and forecast conditions).</i>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ the Land Cover Change Index ✓ (SAON – The indicators’s work. It is in a very premature phase) ✓ See earlier note on CBMP suite of indicators under 7.1.9 and 7.1.9 <p>EPPR</p> <ul style="list-style-type: none"> ✓ Initial engagement - International Ice Charting Working Group (IICWG)
7.1.11	<i>Support continued development of circumpolar indicators of changes and stressors across the Arctic marine environment, as well as metrics for monitoring biodiversity.</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ PAME has worked jointly with CAFF on finalizing the Arctic Protected Areas: Indicator Report and the release of the harmonized dataset based on data received from Member States. <p>AMAP</p> <ul style="list-style-type: none"> ✓ Adaptation Actions for a Changing Arctic (AACA) project.
<p>Goal 2: Conserve and protect ecosystem function and marine biodiversity to enhance resilience and the provision of ecosystem services.</p>		
7.2.1	<i>Promote the implementation of the ecosystem approach to management in the Arctic through synthesis and application of the results of relevant work by the Arctic Council and associated efforts by relevant organizations.</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Status of implementation of the Ecosystem Approach to management (EA-EG) ✓ Conference report from the International science and policy conference on the status of implementation in the Arctic (August 2016) ✓ White paper: Status of Setting Ecological Objectives in the Arctic ✓ Work of the joint ICES/PAME working group <p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA <p>AMAP</p> <ul style="list-style-type: none"> ✓ Part of this could be the in scope of the Central Arctic Ocean assessment <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ The ecosystem approach is fundamental to CSFF’s mandate and promoting its use and application including support to AC cross-cutting efforts e.g. EA expert group is reflected in the CAFF work plan.

No.	Strategic Action	Follow up/Implementation
7.2.2	<i>Identify and assess threats and impacts to areas of heightened ecological and cultural significance and how such areas may be influenced in the future by climate change and other human induced changes and activities.</i>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AOA may identify and assess such areas <p>ACAP</p> <ul style="list-style-type: none"> ✓ Circumpolar Local Environmental Observer (CLEO) <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment.
7.2.3	<i>Identify and develop tools and methodologies for assessing cumulative impacts and risks for Arctic marine ecosystems and areas of heightened ecological and cultural significance with the aim of using them for integrated assessments.</i>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA <p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ See earlier notes to CBMP, and ABDS ✓ Participation in the PAME led EA expert group ✓ As part of its support to the CBD work to identify EBSAs in the Arctic CAFF has processed and made accessible via the ABDS the data collected by the CBD for its work to identify EBSAs in the Arctic
7.2.4	<i>Encourage the Arctic states to implement appropriate measures, – or to pursue such measures at relevant international organizations to protect Arctic Marine Areas of Heightened Ecological and Cultural Significance. Focus should be on species and ecosystems particularly at risk from climate change and cumulative impacts, including areas of refuge for ice-associated species that are, or are expected to become particularly important to Arctic marine biodiversity under future climate conditions.</i>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment.
7.2.5	<i>Develop and encourage the Arctic states to implement common measures and support</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Arctic invasive species strategy and action plan (in collaboration with CAFF)

No.	Strategic Action	Follow up/Implementation
	<i>research into technology and techniques for early detection and reporting of marine invasive species in the Arctic marine environment.</i>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ Arctic invasive species strategy and action plan
7.2.6	<i>Identify and map areas of the marine environment that are particularly vulnerable to the effects of ocean acidification to inform appropriate monitoring and adaptation measures.</i>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AOA may identify and assess such areas
7.2.7	<i>Promote cooperation among Arctic and non-Arctic states to address threats to the staging and wintering grounds and migrating corridors of migratory species using the marine environment.</i>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ Arctic Migratory Bird Initiative (AMBI)
7.2.8	<i>Actively support efforts, in cooperation with indigenous peoples, to: reduce long range pollution accumulating in the Arctic marine food-chains, and; address climate change and ocean acidification by reducing emissions and implementing adaptation measures, as a matter of urgency.</i>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project.
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment.
7.2.9	<i>Limit the impacts of climate change in the short term through concerted efforts to create inventories of and reduce emissions of short lived climate forcers, in particular black carbon and methane.</i>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project.
		<p>ACAP</p> <ul style="list-style-type: none"> ✓ A number of projects that deal with black carbon reduction, not directly marine related
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment.
7.2.10	<i>Develop a pan-Arctic network of marine protected areas, based on the best available knowledge, to strengthen marine ecosystem</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Framework for a Pan-Arctic Network of MPAs follow-up activities: <ul style="list-style-type: none"> ○ A report in support of the “Desktop study on area-based conservation measures and its linkages to categories of Arctic

No.	Strategic Action	Follow up/Implementation
	<i>resilience and contribute to human wellbeing, including traditional ways of life.</i>	marine biodiversity “Toolbox” project.
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ Reflected in CAFF work plan and CAFF contributes to the implementation of the MPA Framework and with PAME is releasing the 2016 protected areas indicator report
<p>Goal 3: Promote safe and sustainable use of the marine environment, taking into account cumulative environmental impacts.</p>		
7.3.1	<i>Advance EBM as an overarching framework for conservation and sustainable use of living and non-living resources in the Arctic marine environment, taking into account cumulative impacts on the Arctic and the need for adaptation to climate change.</i>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and actions from the Arctic Biodiversity Assessment. ✓ The Ecosystem approach is fundamental to CAFF’s mandate and promoting its use and application including support to AC cross-cutting efforts e.g. EA expert group is reflected in the CAFF work plan
7.3.2	<i>Improve the understanding of risks and risk reducing measures related to Arctic shipping and oil and gas exploration and development activities, including gap analysis and sharing of best practices related to oil spill prevention, preparedness and response to emergencies in the Arctic.</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Arctic Offshore Oil and Gas follow-up activities ✓ Regulatory resource website
		<p>EPPR</p> <ul style="list-style-type: none"> ✓ Conditions on Oil Spill Circumpolar Response Viability Analysis ✓ Standardization as a tool for prevention of oil spills in the Arctic ✓ Field Guide for Oil Spill Response in Arctic Waters

No.	Strategic Action	Follow up/Implementation
		<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations from the Arctic Biodiversity Assessment. ✓ Through its mainstreaming efforts is working to incorporate biodiversity objectives and provisions into all Arctic Council work and encourage the same for on-going and future international standards, agreements, plans, operations and/or other tools specific to development in the Arctic. This includes, but is not restricted to, oil and gas development, shipping, fishing, tourism and mining. A set of biodiversity principles is under development.
7.3.3	<p><i>Explore whether there are substances in addition to oil that would benefit from additional pollution preparedness and response cooperation among the Arctic states.</i></p>	<p>EPPR</p> <ul style="list-style-type: none"> ✓ Technical Workshop - ARCSAFE
7.3.4	<p><i>Support the research, development, and implementation of oil spill detection, mitigation measures, and response technologies in ice-covered and ice-infested waters.</i></p>	<p>EPPR</p> <ul style="list-style-type: none"> ✓ EPPR Arctic Oil Spill Response Technology Workshop <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations from the Arctic Biodiversity Assessment.
7.3.5	<p><i>Develop recommendations for consideration by Arctic states to promote maritime safety and environmental protection with the objective of reducing risks related to international shipping activities in Arctic waters.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ The finalization of a report on regional reception facilities arrangements in the Arctic <p>CAFF</p> <ul style="list-style-type: none"> ✓ See note under 7.3.2. re mainstreaming and biodiversity principles
7.3.6	<p><i>Advance continuous improvement of safety and environment protection performance and the use of best and most appropriate practices and technology for all marine activities.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ The finalization of a paper entitled “Heavy Fuel Oil & Other Fuel Releases from Shipping in the Arctic and Near-Arctic” and the finalization of a report prepared for PAME entitled “Possible Hazards for Engines and Fuel Systems Using Fuel Oil in Cold Climate” ✓ The identification of specific projects to be identified during PAME I-2017 on mitigating the risks associated with the use and carriage of HFO by vessels in the Arctic ✓ The Arctic Marine Tourism Project (AMTP) - the first project in a potential suite of renewed efforts by the Arctic Council to analyze and promote sustainable tourism across the circumpolar Arctic.

No.	Strategic Action	Follow up/Implementation
		<p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA <p>CAFF</p> <ul style="list-style-type: none"> ✓ See note under 7.3.2. re mainstreaming and biodiversity principles
7.3.7	<p><i>Support and enhance international efforts and cooperation to continue to identify, assess and reduce existing and emerging harmful contaminants.</i></p>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work on contaminants. <p>ACAP</p> <ul style="list-style-type: none"> ✓ Part of the mandate of ACAP <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations from the Arctic Biodiversity Assessment.
7.3.8	<p><i>Promote the management of human activities in the circumpolar Arctic in accordance with Ecosystem Based Management and international law to ensure long term sustainability of stocks and ecosystems.</i></p>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ Arctic EIA <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and action from the Arctic Biodiversity Assessment. ✓ See earlier note under 7.3.1 re EBM
7.3.9	<p><i>Strengthen the development of a common Arctic protocol for ecotoxicological assessment and screening of chemicals used in resource extraction activities in the Arctic.</i></p>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and action from the Arctic Biodiversity Assessment.
7.3.10	<p><i>Support ongoing work to examine and recommend actions to reduce black carbon emissions from activities in Arctic waters. Encourage research that advances technical definitions, measurement standards, and mitigation options with respect to the impact on the Arctic from black carbon.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ The finalization of a paper entitled “Heavy Fuel Oil & Other Fuel Releases from Shipping in the Arctic and Near-Arctic” and the finalization of a report prepared for PAME entitled “Possible Hazards for Engines and Fuel Systems Using Fuel Oil in Cold Climate”
7.3.11	<p><i>Promote cooperation to improve and expand a) hydrographic and bathymetric data collection and b) Safety of Navigation services and products (including nautical chart and publication production) to support safe and efficient marine shipping in the Arctic.</i></p>	<p>CAFF</p> <ul style="list-style-type: none"> ✓ The Arctic SDI project

No.	Strategic Action	Follow up/Implementation
7.3.12	<i>Strengthen the dialogue with relevant business, industry and environmental stakeholders and Arctic inhabitants in order to foster conservation and sustainable use of the Arctic marine environment.</i>	PAME ✓ The establishment of an Arctic Shipping Best Practices Information Forum
		SDWG ✓ One Health ✓ Arctic Adaptation Exchange Portal ✓ Arctic as a Food Producing Region ✓ EALLU
		CAFF ✓ Recommendations and action from the Arctic Biodiversity Assessment. ✓ See earlier notes re mainstreaming and Arctic Biodiversity Congress ✓
7.3.13	<i>Strengthen the dialogue with industry (including through the Arctic Economic Council) in order to foster sustainable development in the Arctic.</i>	PAME ✓ The establishment of an Arctic Shipping Best Practices Information Forum ✓ Collaboration with international organizations on Arctic related activities of common interest
		SDGW ✓ Arctic as a Food Producing Region
		CAFF ✓ Recommendations and action from the Arctic Biodiversity Assessment. ✓ See earlier notes re mainstreaming and Arctic Biodiversity Congress
<p align="center">Goal 4: Enhance the economic, social and cultural well-being of Arctic inhabitants, including Arctic indigenous peoples and strengthen their capacity to adapt to changes in the Arctic marine environment.</p>		
7.4.1	<i>Improve meaningful engagement of Arctic indigenous peoples and other Arctic inhabitants in relevant decisions, including through the consideration and use of traditional and local knowledge (TLK) in avoiding or mitigating negative environmental, subsistence, and cultural impacts, as well as in maintaining or increasing well-</i>	PAME ✓ The Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities (MEMA) Part I Report ✓ Arctic Marine Indigenous Use of Mapping (AIA) project SDWG ✓ One Health ✓ Arctic Adaptation Exchange Portal ✓ Arctic as a Food Producing Region ✓ EALLU

No.	Strategic Action	Follow up/Implementation
	<i>being and socioeconomic opportunities.</i>	<p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and action from the Arctic Biodiversity Assessment. ✓ See earlier notes re TLK
7.4.2	<i>Facilitate coastal community exchanges between Arctic states to improve sharing of knowledge and experiences and to strengthen the dialog with relevant business and industry in the Arctic in order to foster the conservation and sustainable use of the Arctic marine environment.</i>	<p>PAME</p> <ul style="list-style-type: none"> ✓ The Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities (MEMA) Part I Report <p>CAFF</p> <ul style="list-style-type: none"> ✓ Recommendations and action from the Arctic Biodiversity Assessment. ✓ The report on Traditional Knowledge and Wisdom: Changes in the North American Arctic and the involvement of northern communities and TK holders in the development of the CBMP Arctic Coastal Biodiversity Monitoring Plan.
7.4.3	<i>Assess vulnerabilities and adaptation options of Arctic coastal communities to changes in climate and the marine environment, as well as challenges and opportunities related to these changes and new patterns of activity.</i>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ One Health ✓ Arctic Adaptation Exchange Portal ✓ Arctic as a Food Producing Region <p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ See above note re coastal monitoring plan as a contribution towards facilitating future such assessments and dialogues
7.4.4	<i>In cooperation with the Permanent Participants, encourage engagement, as appropriate, with indigenous peoples organizations and bodies, that have specialized in traditional knowledge and that can inform the work of the Arctic Council in the protection of the marine environment and in enhance the well-being and the capacity of Arctic inhabitants, including Arctic indigenous peoples to deal with a changing Arctic and increased activity.</i>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ One Health ✓ Arctic Adaptation Exchange Portal ✓ Arctic as a Food Producing Region <p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ See previous entries regarding use of TK and engagement of indigenous peoples in CAFF work e.g. the development of the Coastal Biodiversity Monitoring Plan

No.	Strategic Action	Follow up/Implementation
7.4.5	<p><i>Strengthen efforts on information, education and outreach with Arctic indigenous peoples and other residents regarding the effects of climate change to strengthen resilience and approaches to adaptation.</i></p>	<p>SDWG</p> <ul style="list-style-type: none"> ✓ ARENA ✓ AREA <p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACCA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ See earlier notes re CAFFs education initiative and the second Arctic Biodiversity Congress ✓ CAFF has a resolution of cooperation with APECS and works to ensure that young scientists have the opportunity to participate in CAFF activities and meetings
7.4.6	<p><i>Strengthen the Arctic Council's communication to the public in Arctic and non-Arctic countries pointing out the importance of ongoing changes in the Arctic and their likely impact on non-Arctic areas, and emphasizing the effects on the wellbeing of all Arctic residents.</i></p>	<p>PAME</p> <ul style="list-style-type: none"> ✓ Addressed by development of project-specific communications plans and outreach efforts such as brochures and website. <p>AMAP</p> <ul style="list-style-type: none"> ✓ AMAP monitoring and assessment work, including the Adaptation Actions for a Changing Arctic (AACCA) project. <p>CAFF</p> <ul style="list-style-type: none"> ✓ CAFF addresses this via the implementation of its communications strategy and active outreach programme