

# Senior Arctic Officials' Report to Ministers

Iqaluit, Canada

24 April, 2015



ARCTIC COUNCIL

## Introduction by the Chair of Arctic Council Senior Arctic Officials

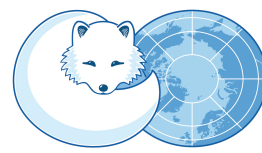
This report to Arctic Council Ministers is divided into two sections: Part A covers the accomplishments of the Arctic Council from 2013-2015 under the Canadian chairmanship, and Part B addresses the planned activities for 2015-2017, when the United States of America will chair the Council. The Arctic Council consists of eight Arctic States, and six indigenous Permanent Participants. There are six working groups as well as task forces and expert groups. The Council's work is supported by a secretariat based in Tromsø, Norway.

The theme for Canada's Chairmanship was *Development for the People of the North*. Over the course of its two-year chairmanship, Canada has put Arctic peoples at the forefront of the Arctic Council's agenda. The Council has taken steps to better the lives of Arctic peoples by enhancing sustainable economic development, promoting mental wellness in Arctic communities, and ensuring traditional and local knowledge of Arctic peoples is consistently integrated into the work of the Council.

The flagship accomplishment of Canada's Arctic Council Chairmanship was the establishment of a new circumpolar business forum—the Arctic Economic Council. This independent forum, which was established in September 2014, provides a key venue for business-to-business cooperation, and will inform the work of the Arctic Council by providing the circumpolar business perspective.

Canada's chairmanship also made strides under the Arctic Council pillar of environmental protection. Examples included enhancing black carbon and methane reductions in the Arctic for health and climate benefits and developing an action plan to prevent oil pollution in the Arctic.

As SAO Chair, I look forward to passing the torch to my esteemed colleague, Ambassador David Balton of the United States of America, who will help guide SAOs under the theme of *One Arctic: Shared Opportunities, Challenges and Responsibilities*.



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## Part A: 2013-2015 Achievements

### 1. Task Forces: Reports on Achievements 2013-2015

#### TASK FORCE ON ARCTIC MARINE OIL POLLUTION PREVENTION

##### MANDATE

The Task Force on Arctic Marine Oil Pollution Prevention (TFOPP) was established at the Kiruna Ministerial and was mandated to “identify how best the Arctic Council can contribute to marine oil pollution prevention in the Arctic, recommend a concrete plan of action, and, as appropriate, develop cooperative arrangements to implement the Action Plan.”

From the Kiruna Declaration

*Decide to establish a Task Force to develop an Arctic Council action plan or other arrangement on oil pollution prevention, and to present the outcomes of its work and any recommendations for further action at the next Ministerial meeting in 2015,*

##### SUMMARY

The TFOPP was co-chaired by Norway and the Russian Federation, represented in each case by the Senior Arctic Official. Participants in Task Force meetings included representatives from all Arctic States, as well as from two Permanent Participants the Inuit Circumpolar Council and the Aleut International Association. Working Groups EPPR and PAME participated in the meetings, as well as Observers to the Arctic Council took part a, including China, France, Germany, Italy, India, Japan, the United Kingdom, the Republic of Korea, Singapore, the Circumpolar Conservation Union (CCU), the Nordic Council of Ministers, the Standing Committee of the Parliamentarians of the Arctic Region (SCPAR), the World Wide Fund for Nature (WWF), the European Union and UArctic.

The co-chairs invited additional expert input from the Association of Oil and Gas Producers and the International Association of Drilling Contractors. The work of the TFOPP was conducted during five meetings and associated inter-sessional work. Through this intensive process, consensus developed on a non-binding document.



Implementation of the Framework Plan is left in the hands of the appropriate and competent national authorities in each State, and the Framework Plan includes explicit acknowledgement that the implementation of the Framework Plan may be discussed during the meetings of relevant bodies of the Arctic Council.

## **DELIVERABLES/ACHIEVEMENTS**

Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic

The Framework Plan—although not a legally-binding document—fulfills the Task Force’s mandate by offering a route forward for cooperation among the eight Arctic states on the prevention of oil pollution in the marine areas of the Arctic connected to both the petroleum sector and the shipping sector. The plan focuses on enhancing the exchange of information among participants in the Framework Plan.

The Framework Plan addresses themes such as:

- Development of an overview of measures for improved safety in petroleum activity;
- Promotion of standardization initiatives within the sphere the petroleum sector;
- Strengthening of cooperation between national regulators of petroleum activity;
- Strengthening of maritime traffic monitoring and management;
- Improvement of maritime services, including navigational charts and met-ocean forecasts; and
- Reduction of risks associated with the use and transport of heavy fuel oil.

Implementation of the Framework Plan is left in the hands of the appropriate and competent national authorities in each State.

As part of the Framework Plan, the Arctic states intend to promote cooperation between their competent national authorities on issues concerning the prevention of Arctic marine oil pollution connected to the petroleum sector. Dialogue has already begun between the relevant Arctic regulators with the purpose of formalizing future cooperation.

## TASK FORCE TO FACILITATE THE CREATION OF A CIRCUMPOLAR BUSINESS FORUM

### Benefits to people living in the Arctic

- The aim of the Arctic Economic Council is to foster responsible economic development that benefits the people of the Arctic

### MANDATE

The goal of the Task Force to Facilitate the Creation of a Circumpolar Business Forum was to advance circumpolar business development by encouraging the business community to create a circumpolar business forum—the Arctic Economic Council (AEC) —to bring circumpolar business perspectives to the work of the Arctic Council, providing value to Arctic States and Permanent Participants. The AEC will focus initially on responsible resource development, and will provide a venue for industries and indigenous businesses operating in the Arctic to advance Arctic-oriented business interests, share best practices, forge partnerships and engage in deeper cooperation.

### From the Kiruna Declaration:

*Recognize the central role of business in the development of the Arctic, and decide to increase cooperation and interaction with the business community to advance sustainable development in the Arctic,*

*Recognize that Arctic economic endeavours are integral to sustainable development for peoples and communities in the region, desire to further enhance the work of the Arctic Council to promote dynamic and sustainable Arctic economies and best practices, and decide to establish a Task Force to facilitate the creation of a circumpolar business forum,*

### SUMMARY

During the 2013-2015 Chairmanship, the Arctic Council States and Permanent Participants worked together to facilitate the creation of the Arctic Economic Council (AEC). The AEC was formally established as an independent body at its founding meeting in Iqaluit, Nunavut (September 2-3, 2014). As such, the TFCBF (which had been co-chaired by Canada, Finland, Iceland and Russia) concluded its work. The AEC will determine its own governance, organizational structure, work plan and activities.

At its founding meeting, AEC members decided that the AEC will comprise solely business representatives from the eight Arctic States and six indigenous Permanent Participant organizations of the Arctic Council (42 members in total). The AEC selected a Canadian chair and three vice chairs from Russia, Finland and the ICC to guide its work.

The AEC is currently in the process of establishing sectoral working groups that will be open to business representatives from outside the AEC to enrich discussions. Terms of Reference and membership for the following working groups have been developed: Arctic Stewardship; Maritime Transportation; and Responsible Resource Development. The AEC is also working to establish its own independent secretariat in Tromsø, Norway.

The AEC has launched its own website and established a social media presence. AEC representatives are also engaged in numerous outreach activities with businesses around the Arctic, seeking input into a long-term work plan.

## **DELIVERABLES/ACHIEVEMENTS**

### **The Arctic Economic Council (AEC)**

The AEC is intended to serve as the forum for interaction between the Arctic Council and the circumpolar business community. Through facilitating this two-way dialogue, the AEC will help inform the work of the Arctic Council by providing a circumpolar business perspective while enriching private sector understanding of Arctic Council interests and initiatives. The AEC will also foster business-to-business cooperation by sharing best practices, industry standards and innovative solutions to promote responsible economic development for the benefit of the people of the Arctic. The AEC will further aim to provide the necessary framework for being good business partners in the Arctic with indigenous residents and communities by promoting small and medium enterprise development, respect for traditional knowledge and Arctic stewardship.



## TASK FORCE FOR ACTION ON BLACK CARBON AND METHANE

### Benefits to people living in the Arctic

- The Framework to Reduce Black Carbon and Methane emissions lays out the foundation to tackle key short lived climate pollutants
- Short-lived climate pollutants disproportionately affect warming in the Arctic
- TFBCM work will lead to benefits for the climate with important co-benefits for human health and local air quality

### MANDATE

From the Kiruna Declaration

*Decide to establish a Task Force to develop arrangements on actions to achieve enhanced black carbon and methane emission reductions in the Arctic, and report at the next Ministerial meeting in 2015,*

### SUMMARY

The TFBCM was co-chaired by Canada and Sweden and included representatives from all Arctic States and most Permanent Participants. Arctic Council observers (including China, Germany, Japan, Republic of Korea, the European Union, the United Kingdom and the United Nations Environmental Program) also participated in various meetings of the Task Force, and relevant experts provided guidance, as required. The Task Force's outcome builds on previous technical work undertaken in the Arctic Council by an earlier Task Force on Short Lived Climate Forcers, the Arctic Monitoring Assessment Programme (AMAP), and the Arctic Contaminants Action Program (ACAP).

The Task Force, during the course of its six meetings, successfully delivered on its mandate and developed an Arctic Council Framework for Action on Enhanced Black Carbon and Methane emissions reductions. As short-lived climate pollutants, disproportionately impact the Arctic, their reduction will lead to benefits for the climate with important co-benefits for human health and air quality in the Arctic. This Framework represents a high level commitment of Arctic States to take mitigation action, but is not legally binding. It is an action-oriented document and includes work at the national, regional and global levels to reduce emissions of black carbon and methane.

## DELIVERABLES/ACHIEVEMENTS

The Framework lays out a common vision with enhanced, ambitious, national and collective action to accelerate the decline in our overall black carbon emissions and to significantly reduce our overall methane emissions. The work of the Task Force also resulted in the creation of an Expert Group with specific terms of reference to support progress on the implementation of the Framework and to continuously drive ambition. It includes a further commitment to provide black carbon inventories starting in 2015 and provides guidance to report on national actions; to establish an aggregate summary of black carbon and methane emissions; and to adopt an ambitious, aspirational and quantitative collective goal on black carbon, and to consider additional goals, by the next Arctic Council Ministerial meeting in 2017. Recognizing that black carbon and methane emitted beyond the borders of Arctic States have a substantial impact on the Arctic, the Framework notes that Arctic States look forward to Arctic Council Observer states taking similar action.

The Framework also acknowledges that reducing anthropogenic carbon dioxide emissions remains the most important challenge to address global and Arctic climate change. Arctic States view the Framework as supporting and complementing the goals of the United Nations Framework Convention on Climate Change (UNFCCC).

## INTERPRETATION

Russia considers the expert group to be a working organ of the Arctic Council and to be a part of the Arctic Council structure. The participating states submit any national reports related to black carbon and methane emissions on their own initiative and within the framework of their participation in the work of the expert group. These reports are voluntary exchanges of information in accordance with international law and the national legislation of the respective participating state. In this context, “high level political commitments” mean general guidelines for the further cooperation between the states on the issue of the regulation of the black carbon and methane emissions. The document of the Arctic Council “Enhanced Black Carbon and Methane Reductions: An Arctic Council Framework for Action” will be implemented by the Russian Federation in the context of this understanding.

## TASK FORCE ON ENHANCING SCIENTIFIC COOPERATION IN THE ARCTIC

### Benefits to people living in the Arctic

- Increased international scientific cooperation is needed to improve our knowledge of the changing Arctic, and resilience of Arctic ecosystems, environment and societies.

### MANDATE

From the Kiruna Declaration:

*Agree that cooperation in scientific research across the circumpolar Arctic is of great importance to the work of the Arctic Council, and establish a Task Force to work towards an arrangement on improved scientific research cooperation among the eight Arctic States,*

### SUMMARY

Under the co-chairmanship of representatives from Sweden, the Russian Federation and the United States, the Scientific Cooperation Task Force met five times, with participation from all Arctic States, Permanent Participants, and some observers. Delegations confirmed the importance of scientific research in the Arctic, the role of traditional knowledge and, given the elevated cost of performing research in the Arctic, the importance of efficiency and collaboration to further research in areas of common interest. Delegations then focused on the need to remove obstacles to collaboration and to support efficiency in collaborative Arctic research. The Task Force identified several key areas where shared efforts could improve scientific cooperation including sharing of data and metadata, facilitating the movement of people, samples and equipment across borders for the purposes of conducting research, facilitating logistics and access to research areas, and facilitating access to research facilities. The Task Force concluded that a high-level agreement was the best mechanism to advance the objectives set by the Ministers in Kiruna, and the text of a draft Memorandum of Understanding was initially discussed. In the course of these discussions, it became clear that addressing issues such as the movement of people and equipment across borders and access to research areas may require significant involvement from a wide range of government agencies and stakeholders that do not have a science mandate. It was agreed that resolution on these issues may benefit from the force of a legally binding agreement.

The Task Force recommends to SAOs, for inclusion in the Iqaluit Declaration, that the Task Force work towards a legally binding Agreement on scientific cooperation with a view to completing its work during the US Chairmanship.



## DELIVERABLES/ACHIEVEMENTS

Through a series of meetings held in Stockholm, Helsinki, Reykjavik, Tromsø and Oslo, the Task Force identified the importance of improving data sharing and simplifying the logistics and regulations involved with research clearances and cross-border movements of researchers and their equipment. Arctic States presented their lists of national research priorities, which were then compiled into a list of many shared priorities. These priorities are also shared by international science planning bodies.

The International Arctic Science Committee made a presentation emphasizing how cross-border logistics has been made easier during the International Polar Year of 2007/2008, as a possible model for more permanent improvements. The text of a non-binding Memorandum of Understanding was developed as a basis for further discussions. Because several delegations felt that it would be preferable to present a legally binding agreement to Ministers, all delegations agreed to identify domestic jurisdictional implications.

Delegations agreed to recommend to the SAOs that the Ministers be asked to support a continued mandate for the Task Force to work towards a legally binding agreement during the U.S. chairmanship. Using the draft MOU as a starting point, delegations discussed the scope of the agreement, underlying issues related to customs and border regulations and the role of non-parties in relation to the agreement, and elements that could be included. It was recognized that as the next meeting would involve negotiation of a legally binding agreement, that the meeting would only go forward if all Arctic State delegations were ready to proceed at that point.

At the last Task Force meeting, delegations discussed the text of a legally binding agreement. It was understood that this work would not be considered formal negotiations on a legally binding agreement, but would focus on clarifying objectives, terms of reference and other parameters of the possible agreement.

In 2015 Ministers decided to extend the Task Force mandate, including to work towards a legally-binding agreement on scientific cooperation, with a view to completing its work no later than the next Ministerial meeting.

## 2. Arctic Council Working Groups: Report on their achievements in 2013-2015

### ARCTIC CONTAMINANTS ACTION PROGRAM (ACAP)

#### Benefits to people living in the Arctic

- The project on black carbon from wood stoves recommends actions to reduce emissions in the Arctic and improve local air quality
- Demonstration project with a Murmansk bus company resulted in a 90% reduction of black carbon emissions in just 1 year
- Several mercury projects support implementation of the Minamata Convention in the Russian Federation
- ACAP dioxin/furan projects reduce risk of hormone related diseases in Russian Arctic.
- ACAP and Indigenous Peoples' cooperation reduces exposure to contaminants at the community level in the Arctic.

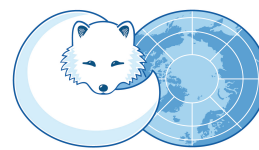
#### MANDATE

The objective of the Arctic Contaminants Action Program (ACAP) is to prevent adverse effects from, reduce and ultimately eliminate pollution of the Arctic Environment. The mandate of the Working Group is defined through decisions of the Arctic Council Ministers. The main objectives and priorities for ACAP are documented in the "Arctic Council Action Plan to Eliminate Pollution of the Arctic" (2001) as supplemented by Work Plans approved by Ministers every two years.

#### FROM THE KIRUNA DECLARATION

*Recognize that reduction of short-lived climate forcers, could slow Arctic and global climate change, and have positive effects on health, and welcome the report on short lived climate forcers, and support its recommendations including that national black carbon emission inventories for the Arctic should continue to be developed and reported as a matter of priority,*

*Recognize that there are further persistent organic pollutants to be addressed that pose threats to human health and the environment in the Arctic, encourage Arctic States to continue monitoring and assessment activities and enhance their efforts to meet the objectives of the Stockholm convention, and welcome the completion of the successful demonstration project preventing the release of 7000 tons of obsolete pesticides into the Arctic environment, and look forward to further activities in this area,*



## SUMMARY

Arctic Contaminants Action Program (ACAP) has continued to implement demonstration projects to reduce releases of contaminants in the Arctic and areas affecting the Arctic in accordance with the Arctic Council Ministerial Declaration from Kiruna. The Working Group focuses on reduction of black carbon and other short-lived climate forcer contaminants, mercury, obsolete pesticides and polychlorinated dioxins and furans. During the Canadian Chairmanship, ACAP projects have achieved several important results. ACAP successfully completed a project on black carbon emissions from wood burning stoves. The report identifies voluntary actions that could reduce black carbon emissions from residential wood combustion. The recommended actions may benefit Arctic people through improved local air quality and climate change mitigation. ACAP also completed several activities under its project on reducing black carbon diesel emission in the Russian Federation. An inventory of diesel black carbon emissions in the Murmansk area of Russia found that emissions from bus traffic in Murmansk were a significant source of diesel black carbon. A demonstration project upgrading the fleet of a local bus company to Euro V standards was completed, resulting not only in a significant decrease in black carbon emissions, but also improved reliability and comfort for bus passengers and significant cost saving to the bus company from reduced fuel and maintenance costs. Demonstration projects on destruction of hazardous waste such as PCBs and POPs in the Russian Federation have not progressed due to lack of environmentally sound destruction capacity in the Russian Federation.

## DELIVERABLES/ACHIEVEMENTS

### Reduction of Black Carbon Emissions from Residential Wood Combustion

ACAP has completed a project on Reduction of Black Carbon Emissions from Residential Wood Combustion (lead countries: Finland and Norway), and the project report has been submitted to Ministers for their endorsement. The overall objective of this project is to suggest action to reduce emissions of black carbon from residential wood combustion in the Arctic. The project has compiled information on wood burning stove and boiler technologies in the Arctic and analyzed existing approaches to emission inventories, reduction methodologies and mitigation instruments and measures in Canada, Denmark, Finland, Norway, Sweden and the United States. The report's findings state that the full potential for reduction cannot be achieved, even with today's or tomorrow's modern stove technologies, without introducing complementary instruments, such as emission limits and measures to promote fuel homogeneity, regular training of the users of wood stoves, information campaigns and stove inspections. The report identifies voluntary actions that could be adopted to reduce black carbon emissions from residential wood combustion on both the national level and pan-Arctic level. The recommended actions may benefit Arctic people through improved local air quality and climate change mitigation.



## Reduction of Black Carbon from Diesel Sources in The Russian Arctic

ACAP has also completed several activities under its project on Reduction of Black Carbon from Diesel Sources in the Russian Arctic (lead countries U.S. and Russian Federation). The project completed an emissions inventory of black carbon from diesel sources in the Murmansk Region of Russia, which showed that the top two sources of black carbon from diesel sources were off-road vehicles at mines and on-road vehicles such as trucks and buses. Based on this information a pilot mitigation project was completed upgrading the bus fleet at a Murmansk bus company to Euro V standards, which resulted in a 90 percent decrease in black carbon emissions from the fleet, as well as significant reductions in other pollutants. A brochure, available in English and Russian, describing the results from this highly successful project has been submitted to Ministers for endorsement.

## Arctic Black Carbon Case Studies and Platform

The last black carbon project approved by ACAP for 2013-2015 is the Arctic Black Carbon Case Studies and Platform project (led by U.S.). The first phase of developing an initial set of six concise case studies on black carbon reduction activities or best practices has been completed. These case studies are hosted on the ACAP website. The next phase for this project, to be completed during the U.S. Chairmanship, is to develop a searchable platform, maintained by the Arctic Council Secretariat, to house the case studies and to create a user-friendly interactive map interface for the general public to find information on black carbon activities in the Arctic. The project leads will also compile additional case studies during this time.

ACAP has also approved a project to reduce black carbon emissions through energy upgrades to off-grid cluster settlements in Valday, Karelia (led by the U.S., Russian Federation and NEFCO). This project sought and received funding from the PSI and is expected to begin implementation in mid-2015.

## Mercury Projects

ACAP is working towards implementation of two projects to reduce mercury releases. Reduction of mercury releases from non-ferrous metals smelters in the Russian Federation (Co-leads: the United States, Russia and NEFCO) will include cleaner production approaches as well as the application of one or more mercury reduction technologies, which also address mercury waste. The project will result in mitigation and management of mercury releases to air and water and waste reduction at a Russian smelter, serving as a demonstration for other smelters in Russia and elsewhere. The Mercury Emissions Reduction Technology Workshop (co-leads: the United States and Russia) will assist the Russian Federation in determining options for implementing emissions control provisions of the Minamata Convention, complementing the Russian Federation's work to develop an improved emissions inventory and an Action Plan for implementation of the Minamata Convention.

## Dioxins/Furans Project

ACAP has conducted preparatory activities for a pilot action project to address dioxin emissions at the Vorkutinskiy Cement Plant in the Komi Republic (co-leads Sweden and NEFCO). A sampling and analysis in 2014, mapped emissions of dioxins and furans as well as dust, black carbon and heavy metals from the facility. A feasibility study identified relevant emission reduction actions and drafted an Action Plan. A seminar on “Environmental requirements on the use of waste as alternative fuel in the cement industry” was held in Syktyvkar, linking the need for waste destruction on the one hand and the interest of the plant owner to use waste as alternative fuel on the other. The outcomes of the seminar included further capacity building on dioxin and waste combustion issues in the Russian Arctic, as well as promoting the implementation of the Stockholm Convention on Persistent Organic Pollutants.

## Project Support Instrument

The work of ACAP is supported by the Project Support Instrument (PSI). The PSI was made operational by the Fund Manager (NEFCO) on 18 July 2014 upon the deposit of the contribution of the Russian Federation. This achievement realizes the efforts of the Arctic Council to finance circumpolar cooperation, as recognized at the 3rd Ministerial Meeting in Inari (2002) and decided at the 4th Ministerial Meeting in Reykjavik (2004). The current Contributors to the PSI are Finland, Iceland, Norway, Russian Federation, Sweden, the United States, Permanent Participant Saami Council, through the Sami Parliament, and NEFCO.

The Arctic Council PSI is to focus on actions against pollution in the Arctic. The Instrument is a voluntary, non-exclusive mechanism for financing specific priority projects that have already been approved by the Arctic Council. The PSI Instrument may make use of a broad range of funding arrangements to include grants and revolving instruments.



## ARCTIC MONITORING AND ASSESSMENT PROGRAM (AMAP)

### Benefits to people living in the Arctic

- AACA will provide science-based information to enable effective adaptation actions within a rapidly changing Arctic using three regional pilot areas and a pan-Arctic perspective.
- New AMAP assessments on black carbon, ozone and methane provide a scientific basis for decision-making to reduce emissions to avoid Arctic warming.
- Documents how human exposure to many contaminants declined in parts but not all of the Arctic. Effects of newer contaminants need to be better understood
- Assessments shows that levels of many regulated POPs are generally declining, but there is emerging concern about new chemicals reaching the Arctic.
- Documenting that trace radioactive contamination from the Fukushima accident reached the Arctic, but at levels too low to cause concern. Remediation is reducing radioactivity sources in the Arctic but certain activities can enhance releases of naturally occurring radionuclides
- Facilitating the development of unmanned aircraft systems, which have potential for use in Arctic monitoring and also in search and rescue operations
- Two committees have been established to further the work of SAON on data and information services and observation networks
- Arctic Ocean acidification has potential to affect livelihoods from subsistence and commercial fisheries: assessing key impacts a priority
- AMAP's Arctic information contributed to the establishment of the Minamata Convention and further development of the Stockholm Convention
- AMAP overview reports on SWIPA and Arctic Ocean Acidification and AACA brochure translated into Russian and Saami available soon

### MANDATE

To monitor and assess the status of the Arctic region with respect to pollution and climate change by documenting the levels and trends, pathways and processes, and effects on ecosystems and humans, and to propose actions to reduce associated threats for consideration by governments. AMAP produces sound, science-based, policy-relevant assessments and public outreach products to inform policy and decision-making processes.

## SUMMARY

As health is an important aspect of society, the AMAP Human Health Assessment Group has prepared an updated assessment of the dietary exposure of Arctic populations to environmental contaminants, their health effects, and various means to communicate such risks to exposed groups.

AMAP expert groups have prepared scientific assessments of the short-lived climate pollutants black carbon and tropospheric ozone and also of methane in the Arctic. The AMAP WG has prepared a summary report for policy-makers based on these two scientific assessments. The work under the AMAP expert groups on Short-Lived Climate Pollutants (SLCPs) has been conducted in parallel with the Arctic Council Task Force on Black Carbon and Methane (TFBCM).

Work to follow-up AMAP's assessment of Snow, Water, Ice and Permafrost in the Arctic (SWIPA) has been initiated with regard to a freshwater budget for the Arctic and Arctic carbon cycling, and also to update the SWIPA assessment concerning the status of sea and land ice, glaciers and ice caps, snow and permafrost, and trends and feedbacks. These activities support AMAP's work under the project Adaptation Actions for a Changing Arctic (AACA).

In relation to environmental contaminants, AMAP expert groups have prepared updated scientific assessments of radioactivity and of trends in persistent organic contaminants in the Arctic. The policy-relevant conclusions and recommendations from these two assessments, together with those from the updated assessment of human health in the Arctic, are being compiled in the report Arctic Pollution 2015 –Summary for Policy-makers. Follow-up work on AMAP's Arctic Ocean Acidification assessment (2013) has also been initiated.

Under the project Adaptation Actions for a Changing Arctic, Regional Integration Teams covering the three pilot areas, 1) the Barents region, 2) Baffin Bay/Davis Strait, and 3) the Bering/Chukchi/Beaufort region, have worked in cooperation with regional communities and other stakeholders to develop detailed plans for their work and assessment reports. Sustaining Arctic Observing Networks (SAON) work has been enhanced with the establishment of two committees to consider data/information services and observations and networks covering the full range of Arctic social, economic, health and environmental sciences data and observations.

AMAP has worked closely with other entities of the Arctic Council on cross-cutting issues, and has engaged with international organisations and conventions. Results of Arctic Council work performed under the auspices of AMAP have been presented at scientific conferences and at public outreach events.

## DELIVERABLES/ACHIEVEMENTS

### Sustainable Circumpolar Communities

The updated AMAP human health assessment report contributes to this priority by addressing health aspects in relation to environmental contaminants in local traditional foods. This report acknowledges the nutritional and cultural values of traditional foods, but notes that certain food species in some Arctic areas contain concentrations of contaminants, particularly mercury, that can cause health effects in vulnerable groups, especially developing foetuses, infants and young children. Dietary advice can help indigenous communities to avoid contaminant exposure, but is complex and is not a long-term solution. This report also provides initial thoughts on adaptation issues for small Arctic communities to the combined impact of climate change, environmental contaminants and emerging increased risks of animal-borne infectious diseases.

### Adaptation Actions for a Changing Arctic (AACA)

Activity on AACA included the establishment of the AACA Integration Team and Regional Integration Teams for the three pilot areas chosen for the project: 1) Barents; 2) Davis Strait/Baffin Bay; and 3) Bering/Chukchi/Beaufort. These regional teams work in close consultation with stakeholders to produce information to assist local decision-makers and stakeholders to develop adaptation tools and strategies to deal with climate change and other environmental stressors. The three regions have prepared detailed assessment outlines and identified lead authors. The AACA Integration Team has provided overall coordination of this work, which has included workshops on climate scenarios and modelling and the preparation of a report on socio-economic drivers of change in the Arctic. AMAP is coordinating with other Arctic Council Working Groups and international science organizations in this work. A progress report on activities under the AACA project is provided.

### Assessment of Short-Lived Climate Pollutants in the Arctic

Two AMAP expert groups have completed assessments of the emission sources, transport of black carbon and tropospheric ozone and methane to the Arctic and their effects on Arctic climate. Based on the results of these assessments, AMAP has prepared a policy-makers summary, the Arctic Climate Issues report, including key findings and conclusions of the two assessments, as a deliverable to the 2015 Ministerial Meeting. The work under the AMAP SCLP expert groups has been conducted in parallel with and provided technical input to the Arctic Council TFBCM.

## Updated assessment of human health in the Arctic

The AMAP human health assessment group has prepared an updated assessment covering the results of biomonitoring of concentrations of environmental contaminants in human residents of the Arctic, evaluation of the potential and observed effects of these contaminants, and risk assessment and risk communication issues for Arctic communities. This report also includes information on recent actions to assist small Arctic communities to adapt to the combined impacts of climate change, environmental contaminants, and emerging risks of infectious animal-borne diseases. A summary of the policy-relevant outcome of this assessment, containing conclusions and recommendations, has been included in the Arctic Pollution 2015 report.

## Updated assessment of trends of POPs in the Arctic

AMAP has prepared an updated assessment of the temporal trends of persistent organic pollutants (POPs) in air and biota as well as in humans in the Arctic based on long-term monitoring data. This report has been provided to the UNEP Secretariat responsible for conducting an ongoing Stockholm Convention effectiveness evaluation review, in accordance with Arctic Council instructions that support AMAP implementation of the work under this Convention. A summary of the policy-relevant outcome of this assessment, containing conclusions and recommendations, has been included in the Arctic Pollution 2015 report. Work continues on additional components of an updated POPs assessment that includes new contaminants of emerging concern in the Arctic and biological effects.

## Updated assessment of radioactivity in the Arctic

This updated assessment includes new information on decommissioning and handling of radioactive waste; accidental releases of radioactivity, including assessment of the consequences for the Arctic of the Fukushima accident; and technologically enhanced releases of naturally occurring radionuclides (TENORM) from mining and oil and gas activities. A summary of the policy-relevant outcome of this assessment, containing conclusions and recommendations, has been included in the Arctic Pollution 2015 report.

## Unmanned Aircraft Systems (UAS)

The AMAP expert group on UAS has prepared an updated white paper on access in the Arctic for unmanned aircraft systems for scientific research, monitoring and search and rescue purposes. It has also prepared a manual of operating guidelines for the use of such vehicles. These documents should be ready for release later in 2015.

## Sustaining Arctic Observing Networks (SAON)

SAON has further developed its work by the establishment of two committees: the Committee on Data and Information Services will prepare overall strategies to improve access to data and information in northern areas, and the integration and dissemination of data and information through a SAON-led Circum-Arctic Information System. The Committee on Observations and Networks will prepare overall strategies to improve the collection of data and information from observations relating to Arctic social, economic, health and environmental sciences, including options for long-term funding of operations and the establishment of a set of early-warning indicators of change in the Arctic.

## Arctic Ocean Acidification

Following the delivery of the Arctic Ocean Acidification (AOA) assessment and its related policy-makers summary report in 2013, AMAP has begun a follow-up activity based on the recommendations in the assessment report.

## Technical support for UNEP

AMAP provided technical input to the ongoing Stockholm Convention effectiveness review process and continues to communicate relevant results of AMAP work on new chemicals to the groups under the Stockholm Convention and LRTAP Convention responsible for reviewing chemicals proposed for listing under these agreements. AMAP contributed to the work to secure the agreement of the Minamata Convention on mercury, including the work to prepare the UNEP Global Mercury Assessment (GMA) 2013. These activities ensure that Arctic information is well represented in the work of the Conventions.

## Translation of reports

The overview report on SWIPA and the Arctic Ocean Acidification Overview report as well as the AACA information brochure have been translated into both Russian and Saami and will be published soon.

## CONSERVATION OF THE ARCTIC FLORA AND FAUNA (CAFF)

### Benefits to people living in the Arctic

- An action plan for Arctic Council decisions on conservation and sustainable use of Arctic biodiversity for the next decade.
- Arranged the largest gathering in the history of the Arctic Council bringing partners and stakeholders together to discuss the challenges facing Arctic biodiversity and suggest solutions
- Identifying on the ground actions inside and outside the Arctic to improve the conservation status of priority migratory birds
- Identifying emerging trends and improving our understanding of changes in the Arctic
- Providing easy access to biodiversity data from across the Arctic and CAFF projects, programs and activities
- Making possible seamless mapping across the Arctic and contributing towards better planning and development
- Helping improve understanding of the value and benefits provided by the Arctic and its living natural resources
- Including traditional knowledge to allow for more holistic understanding of change in the Arctic
- Raising awareness and communicating knowledge on the Arctic and its natural resources

### MANDATE

CAFF's mandate is to address the conservation of Arctic biodiversity, and to communicate its findings to the governments and residents of the Arctic, helping to promote practices which ensure the sustainability of the Arctic's living resources. CAFF's projects provide data for informed decision making to resolve challenges arising from trying to conserve the natural environment and permit regional growth.

### From the Kiruna Declaration:

*Recognize the value of sustaining Arctic ecosystems and biodiversity and that the Arctic environment needs to be protected as a basis for sustainable development, prosperity, lifestyles and human wellbeing, and commit to pursue the conservation and sustainable use of Arctic biological resource*

*Note with concern that Arctic biodiversity is being degraded and that climate change is the most serious threat, welcome the Arctic Biodiversity Assessment, the first Arctic-wide comprehensive assessment of status and emerging trends in Arctic biodiversity, approve its recommendations and encourage Arctic States to follow up on its recommendations, and instruct Senior Arctic Officials to ensure that a plan for further work under the Arctic Council to support and implement its recommendations is developed, and that a progress report is delivered to the next ministerial meeting*

*Encourage Arctic States to take decisive action to help sustain Arctic biodiversity and implement internationally agreed biodiversity objectives, to cooperate on adaptive management strategies for vulnerable species and ecosystems, and to continue existing Arctic biodiversity research and monitoring efforts through the Circumpolar Biodiversity Monitoring Program*

## **SUMMARY**

CAFF implemented its work plan as approved at the 2013 Ministerial meeting. The Arctic Biodiversity Assessment (ABA) was the first assessment of the state of Arctic biodiversity and ecosystems. Actions for Arctic Biodiversity 2013-2021: Implementing the recommendations of the ABA, provides a path towards implementation. It acknowledges the work of Arctic Council working groups and task forces and demonstrates that implementation of 10 recommendations began during Canada's Arctic Council chairmanship. Life Linked to Ice describes impacts of loss of sea ice on biodiversity and the ecosystem services ice provides.

The Arctic Biodiversity Congress, held in Trondheim, Norway in December 2014 brought together scientists, policy-makers, government officials, indigenous peoples, students, industry and civil-society representatives to discuss challenges facing Arctic biodiversity and actions for conservation and sustainable use of the Arctic's living resources. It was the largest such gathering in the history of the Arctic Council.

The Arctic Migratory Birds Initiative (AMBI) implements ABA recommendation 8. It aims to improve the status of a few priority Arctic breeding birds along their migratory routes. AMBI was a priority project for Canada's Chairmanship and has engaged observer countries, non-government organizations and international associations. For the 2015 Ministerial, AMBI delivers a four-year work plan.

The Circumpolar Biodiversity Monitoring Program (CBMP) is an on-going foundational program, providing harmonized and integrated biodiversity information. The CBMP: Strategic Plan 2013 – 2017 is a blueprint for CBMP implementation. Also produced were national reports on implementation of the freshwater, marine and terrestrial monitoring plans, annual reports on circumpolar progress, and initial development of the Coastal monitoring plan.

To ensure accessible biodiversity information, CAFF established the Arctic Biodiversity Data Service (ABDS) which became operational in 2015. The Arctic Spatial Data Infrastructure is linked to the ABDS. The Arctic SDI delivers a signed Memorandum of Understanding, which ensures cooperation on spatial information and application of international standards to seamless circumpolar mapping.

## **DELIVERABLES/ACHIEVEMENTS**

### **Arctic Biodiversity Assessment**

Actions for Arctic Biodiversity 2013-2021: Implementing the recommendations of the ABA provides a comprehensive action plan for implementing the 17 recommendations from the ABA, approved by Ministers in the Kiruna Declaration.

### **Arctic Biodiversity Congress**

With over 450 participants and the use of a variety of engagement techniques, the Arctic Biodiversity Congress provides a model for bringing a wide range of perspectives into the work of the Arctic Council and for promoting the work of the Arctic Council. Three of the Arctic Council Secretariats (CAFF, PAME, Arctic Council) pooled resources and capacity to ensure its success.

### **Arctic Migratory Bird Initiative (AMBI)**

The Arctic Migratory Birds Initiative (AMBI) implements recommendation 8 of the ABA. It aims to improve the status of a few priority species of Arctic breeding migratory birds along their entire migratory routes, both inside and outside of the Arctic. AMBI was identified as a priority project under Canada's Chairmanship of the Arctic Council. AMBI has engaged observer countries, non-government organizations and international associations in concrete actions to recover declining populations of priority species. For the 2015 Arctic Council Ministerial, AMBI delivers a four year work plan across four flyways, which identifies on-the-ground actions to improve the conservation status of priority species.

### **Circumpolar Biodiversity Monitoring Program (CBMP)**

The Circumpolar Biodiversity Monitoring Program (CBMP) is an on-going foundational program for CAFF. It provides harmonized and integrated biodiversity monitoring information into Arctic Council processes and other relevant international fora. From 2013-2015 the CBMP: Strategic Plan 2013-2017 for implementation of phase II of the CBMP was completed. Also produced were national reports on implementation of the CBMP freshwater, marine and terrestrial monitoring plans, annual reports on progress at the circumpolar level, a remote-sensing strategy, and initial development of the Coastal biodiversity monitoring plan.



## Arctic Biodiversity Data Service (ABDS)

The Arctic Biodiversity Data Service ([www.abds.is](http://www.abds.is)) is an on-line, dynamic, data-management system which allows integration of Arctic biodiversity information from the Arctic Biodiversity Assessment, Circumpolar Biodiversity Monitoring Program, other Arctic Council programs and other international data-management initiatives. Its goal is to facilitate access, integration, analysis and display of biodiversity information for scientists, practitioners, managers, policy makers and others working to understand, conserve and manage the Arctic's species and ecosystems. It ensures a lasting legacy for biodiversity data generated by the Arctic Council.

## Arctic Spatial Data Infrastructure

The Arctic Spatial Data Infrastructure (Arctic SDI) is a key partner in the ABDS. The Arctic SDI delivers a Memorandum of Understanding, signed by the Arctic national mapping agencies. The purpose of the Memorandum is to ensure cooperation on the sharing of spatial information and applying international standards with the aim of creating seamless circumpolar mapping.

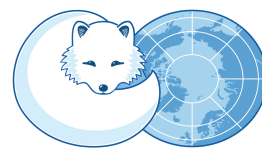
## The Economics of Ecosystems and Biodiversity (TEEB)

The Economics of Ecosystems and Biodiversity, Scoping Study for the Arctic, provides information on how Arctic ecosystems and biodiversity contribute to human well-being and livelihoods; provides contextual information on how human activities affect Arctic ecosystems and their ability to sustain the provisioning of essential services; and presents options on next steps. A progress report is provided, and the final report will be provided to SAOs in fall, 2015.

## Traditional Knowledge

CAFF has a longstanding recognition of the importance of Traditional Knowledge (TK) and Community Based Monitoring (CBM) and has endeavoured to incorporate them into its work plans. This includes, in particular, the CBMP and the ABA. TK and CBM are often discussed together; however, CAFF recognizes them as distinct, understanding that TK is a systematic way of knowing passed down through generations of TK holders, while CBM is a tool used to collect observation data by anyone, regardless of heritage.

Over the past few years, considerable progress has been made in initiatives to engage TK and CBM that furthers the goals of the Arctic Council, including Canadian Chairmanship priorities. This progress report provides a brief summary of CAFF's work in this area and next steps in facilitating engaging TK and CBM.



## Communication and outreach

Each CAFF initiative has a communications element which implements CAFF's communication strategy. Examples include: Arctic Terrestrial, Freshwater, Marine Biodiversity Monitoring Plans - Brochures and scientific posters; videos: Arctic Biodiversity Congress; World Migratory Bird Day 2014; CBMP Freshwater Biodiversity Monitoring Plan; CBMP Terrestrial Biodiversity Monitoring Plan; Arctic photography exhibition *Arctic Biodiversity: through the lens*; CAFF reports translated into Danish, Greenlandic, Inuktitut, Russian, French; development of activity toolkits on Arctic biodiversity for 10-11 year old school children, currently being tested in Canada, Iceland, Greenland and discussions underway to arrange for them to be also tested in the U.S. and Norway.

## EMERGENCY PREVENTION, PREPAREDNESS AND RESPONSE (EPPR)

### Benefits to people living in the Arctic

- The Guide to Oil-Spill Response in Snow and Ice Conditions in the Arctic is a practical tool for responders and communities.
- The compendium Arctic Environmental Hazards and National Programs: resource for the development of any future pan-Arctic risk assessments
- Radiation exercises are an important evaluation tool to test and refine response procedures for responsible authorities and communities.
- 1st exercise under Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA): international effort by Arctic states to validate the Agreement, vital preparation for real-world emergencies
- Arctic Environmental Response Management Application (ERMA) provides a common operating picture of response assets and threatened environmental resources – critical for emergency response.
- Improving industrial and environmental safety standards within the resource development sector remains a priority for the work of EPPR.
- Sharing information and best practices are imperative for improving safety of potentially hazardous facilities or activities.
- Updated procedures for international cooperation in oil spill response and SAR is crucial for a successful emergency response

### MANDATE:

The mandate of the Emergency Prevention, Preparedness and Response Working Group (EPPR) is to address the many aspects of prevention, preparedness and response to environmental emergencies in the Arctic, as well as search and rescue (SAR). EPPR is not an operational response organization. Members of the Working Group exchange information on best practices and conduct projects to include development of guidance and risk-assessment methodologies, response exercises and training. The EPPR Working Group work plan is refined biennially through Ministerial Declarations and is further shaped by guidance from Senior Arctic Officials. The goal of the EPPR Working Group is to contribute to the protection of the Arctic environment from the threat or impact that may result from an accidental release of pollutants (i.e. oil, chemicals and radiation) or questions related to the consequences of natural disasters.

## From Kiruna Declaration:

*Appreciate that the first legally binding agreement negotiated under the auspices of the Arctic Council, the Agreement on Cooperation in Aeronautical and Maritime Search and Rescue in the Arctic, has come into force, recognize its important role for safe transport and enhancing cooperation in assisting people in distress in the Arctic, and acknowledge the importance of continued operational exercises in support of its implementation.*

*Announce the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, the second legally binding agreement negotiated under the auspices of the Arctic Council, and encourage future national, bi-national and multi-national contingency plans, training and exercises, to develop effective response measures.*

*Recognize that effective prevention, including related containment practices, is critical to ensuring the protection of the Arctic marine environment from oil pollution incidents, welcome the Recommended Practices in the Prevention of Arctic Marine Oil Pollution Project reports and recommendations to Ministers, and encourage Arctic States to pursue further work in the recommended areas.*

*Decide to establish a Task Force to develop an Arctic Council action plan or other arrangement on oil pollution prevention, and to present the outcomes of its work and any recommendations for further action at the next Ministerial meeting in 2015.*

*Recognize the important ongoing work in the International Maritime Organization to develop a mandatory Polar Code on shipping and decide to strengthen our collaboration in that work towards its expeditious completion.*

## SUMMARY

EPPR has implemented its work plan for 2013-2015, completing projects and developing new projects in support of the Kiruna Declaration and direction from Senior Arctic Officials. As part of on-going work, EPPR continues to undertake activities and develop projects aimed at improving Arctic nations' capabilities to prevent, prepare for, and respond to emergencies involving petroleum, radiological materials, and hazardous noxious substances (HNS). In follow-up to the Recommended Practices for the Prevention of Oil Pollution in the Arctic (RP3), EPPR will carry out a Circumpolar Oil Spill Response Gap Analysis, as a first step in deciding the necessity and scope of a full Circumpolar Marine Environmental Risk Assessment. The Working Group, in cooperation with the International Maritime Organization (IMO), has developed a Guide on Oil Spill Response in Ice and Snow Conditions. An Arctic version of the Guide will be available on the EPPR website. EPPR continues to conduct radiation exercises to validate emergency-response capabilities, and has under Canada's leadership, successfully completed the first table-top exercise under the auspices of the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA). EPPR also completed the Arctic Environmental Hazards and National

Programs report, which represents an historic compendium of the work Arctic countries have done on risk assessments. EPPR's mandate has expanded to include search and rescue (SAR), including follow-up to the Agreement on Cooperation in Aeronautical and Maritime Search and Rescue Operations in the Arctic (SAR Agreement). The working group is currently exploring ways incorporate this additional task into its work plan. Follow-up activities of the Task Force on Oil Pollution Prevention (TFOPP) will include an active role for EPPR where relevant.

## **DELIVERABLES/ACHIEVEMENTS**

### **Guide to Oil Spill Response in Snow and Ice Conditions in the Arctic**

At the request of the IMO Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances Technical group, EPPR addressed a critical operational gap developing the IMO/EPPR Guide to Oil-Spill Response in Snow and Ice Conditions in the Arctic. The objective of the guide is to identify and describe those aspects of planning and operations that are directly associated with a response to an oil spill in ice and snow conditions. As co-leads, Canada and Norway shepherded the Guide through three rounds of broad consultations, including those with Arctic Council member states, permanent participants, working groups and other external stakeholders. An Arctic-only version of the guide has been developed and will be available on the EPPR website. This Arctic-only version will be put forward as a Ministerial deliverable.

### **Arctic Environmental Hazards and National Programs**

The Arctic Environmental Hazards and National Programs report is a compendium of the work Arctic countries have done on risk assessments and assembles information on national programs to respond to risks in the Arctic. The work has been led by the U.S. The document will be available on the EPPR website.

## Radiation Exercises

The latest radiation emergency exercise in a series begun in 2002, Arctic 2014, was held June 23-24, 2014, at the Atomflot facility in Murmansk, Russia. Co-led by the United States and Russia, the exercise involved a simulated radiation emergency that occurs on a nuclear icebreaker at the dock. Specific goals of the exercise were to:

1. Check the level of preparedness;
2. Develop recommendations for enhancing capabilities;
3. Verify the effectiveness of detailed response procedures;
4. Execute recommendations for public protection and communication; and
5. Examine how regulations and interventions impact response time.

A full report, including lessons learned, will be put forward as a deliverable to the Iqaluit Ministerial meeting.

First international exercise under the auspices of the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic

Canada, with support from EPPR, carried out the first international exercise under the auspices of the Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic (MOSPA). The scenario was an accident involving spilled marine diesel in Simpson Strait. All Arctic Council states participated in the exercise. As follow-up to the international exercise, in May 2014, Canada arranged a table-top exercise to evaluate the legal and procedural requirements to allow foreign resources to enter and operate in Canada as part of the provision of mutual aid. EPPR welcomed the success of this first validation of the Agreement. As outlined in the Agreement, EPPR is responsible for developing proposed amendments to the Operational Guidelines and Appendices to the Agreement. As per the Agreement, substantive changes to the Operational Guidelines must be approved by SAOs. A report on the exercise will be put forward for approval by SAOs as a deliverable to the Iqaluit Ministerial meeting.

## Arctic Environmental Response Management Application

Led by the U.S., the Arctic Environmental Response Management Application (ERMA) is a GIS mapping platform designed to assist in oil spill response by providing a common operating picture of all response assets in theatre and threatened environmental resources. ERMA integrates and synthesizes data—some of which happens in real time—into a single interactive map, providing a quick visualization of the situation and improving communication and coordination among responders and environmental stakeholders. Arctic ERMA is a promising platform that is evolving as more data-sets are added. It has links to existing work in EPPR and other working groups. The link to Arctic ERMA is available on the EPPR website.

Development of Safety Systems in the Implementation of Economic and Infrastructural Projects

Led by Russia and Norway, the overall goal of projects conducted under this initiative is to improve the industrial and environmental safety related to economic and infrastructural projects, primarily the development of hydrocarbons on the Arctic continental shelf and hydrocarbons transportation. In support of these projects, a SAR and oil-spill response exercise was held off the oil platform Prirazlomnaya, close to Varandey Terminal in Russia, on August 5-7, 2014.

### Arctic Rescue Project

The focus of this project is to elaborate best practices, recommendations and key elements of the emergency risk assessment system and the system for improving safety of potentially hazardous facilities. Led by Russia, the overall goal of Arctic Rescue is the international promotion of advanced national experience and improvement of emergency preparedness through information exchange. Concrete outcomes include the opening of the first Arctic Complex Search and Rescue Center in Naryan-Mar in 2014 and a series of conferences held under this project. Russia has presented recommendations from two Arctic Rescue conferences in Naryan Mar and Arkhangelsk.

Updating the Operational Guidelines in support of the Agreement on Marine Oil Pollution Preparedness and Response

Paragraph 21 of the Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response states that Operational Guidelines should be developed and maintained. In the SAO meeting in Stockholm, March 2013, EPPR was given the responsibility of maintaining and updating the Operational Guidelines which are annexed to the Agreement on Marine Oil Pollution Preparedness and Response. At the EPPR I meeting in Oulu, June 2013, EPPR drafted and approved the procedures for updating the Operational Guidelines. These procedures have been approved by the SAOs.

### Chapter on In Situ Burn (ISB) in IMO's Guide on Oil Spills on Water and Broken and Solid Ice Conditions

This project was a joint effort with the IMO. EPPR provided text to the chapter in the IMO Guide on Oil Spills on Water and Broken and Solid Ice Conditions. The gap in information was identified in EPPR's report Behaviour of Oil and Other Hazardous Substances in Arctic Waters. The work contributes to improving preparedness and response capacities.

## PROTECTION OF THE ARCTIC MARINE ENVIRONMENT (PAME)

### Benefits to people living in the Arctic

- PAME's work contribute to improved knowledge and strengthens the capacity of Arctic peoples to adapt to changes in the Arctic marine environment and encourage sustainable use of marine resources
- Follow up of the Arctic Marine Shipping Assessment improves knowledge of shipping issues and helps assess options to make shipping safer for people and the environment.
- Outcomes from the Arctic Tourism project: Best Practice Guidelines are intended to promote sustainability within the Arctic marine tourism industry and make a positive contribution to the environment and Arctic communities.
- The Arctic Marine Strategic Plan (AMSP) for the period 2015-2025 will chart strategic actions on marine issues for the next decade with the goal of enhancing people's well-being, strengthen their capacity to adapt to changes in the Arctic marine environment and conserving ecosystems.
- The Framework for a Pan-Arctic Network of Marine Protected Areas (MPA) supports Arctic countries in developing MPAs to conserve marine ecosystems and encourage sustainable use of marine resources.
- The ecosystem approach work aims to guide sustainable use of marine resources while ensuring a healthy and robust marine ecosystem.
- The Systems Safety Management and Safety Culture Report helps oil and gas regulators and others to understand causes of safety failures and prevent accidents.

### MANDATE

The Protection of the Arctic Marine Environment (PAME) Working Group was established by the Arctic Council Ministers in Nuuk, Greenland in September 1993. PAME provides a unique forum for collaboration on a wide range of activities directed towards protection of the Arctic marine environment. PAME's mandate is to address policy and other measures related to the protection of the Arctic marine and coastal environment from both land and sea-based activities. These measures include coordinated strategic plans as well as developing programs, assessments and guidelines, all of which aim to complement or supplement existing international arrangements.



## SUMMARY

PAME's current work reflects the priorities agreed to at the 2013 Arctic Council Ministerial Meeting. Furthermore, PAME has contributed to Canada's 2013-2015 Arctic Council Chairmanship Programme, particularly in relation to the sub-theme on Safe Arctic Shipping. PAME has also contributed to the Arctic Council task forces in an effort to ensure coordination with relevant PAME work, in particular the Task Force on Arctic Marine Oil Pollution Prevention (TFOPP), the Task Force on Black Carbon and Methane (TFBCM), and the Task Force on Scientific Cooperation.

PAME focuses on the marine agenda of the Arctic Council working on the basis of the 2004 Arctic Marine Strategic Plan and PAME's biennial work plans. Retreating sea ice opens Arctic marine areas to increased shipping and resource use, affecting ecosystems, economies and traditional ways of life for indigenous peoples. PAME's work aims to help Arctic Council members assess these changes and identify options to address them. In the 2013-2015 biennial work plan, new work was initiated on tourism and Marine Protected Areas (MPAs), resulting in a project identifying best practices guidelines for marine tourism, and in a concept paper on MPAs, to encourage further coordination and cooperation in that field. Work on offshore oil and gas included a report on safety management and culture, and work on the ecosystem approach was advanced *inter alia* with workshops on selected issues. Various projects addressed shipping issues, most of them following up on the 2009 Arctic Marine Shipping Assessment (AMSA) and its 17 recommendations. Work in this field included studies on the use and carriage of heavy fuel oil and associated risks, and in identifying options for area-based conservation measures from shipping impacts in the high seas area of the Arctic Ocean. PAME followed closely the development of the IMO's Polar Code, expected to enter into force in January 2017. PAME also led efforts to update the Arctic Marine Strategic Plan for a new decade, 2015-2025, taking account of environmental changes, new knowledge and recent assessments.

## DELIVERABLES/ACHIEVEMENTS

PAME's work has proceeded in accordance with relevant activities in PAME's biennial work plan as approved by the Arctic Council, including implementation of the Arctic Marine Shipping Assessment recommendations and policy follow-up on other assessments and reports of the Arctic Council. PAME's deliverables include: The Arctic Marine Tourism Project (AMTP) Best Practice Guidelines; The Arctic Marine Strategic Plan (AMSP) for the period 2015-2025; The Framework for a Pan-Arctic Network of Marine Protected Areas (MPAs) project; 2015-2017 PAME Work Plan; The Arctic Offshore Oil and Gas Guidelines: Systems Safety Management and Safety Culture Report; AMSA Implementation Progress Report for the period 2013-2015; and the Joint Ecosystem Approach Expert Group Progress Report including the approved terms of reference.

PAME cooperates actively with the other Arctic Council working groups in an effort to contribute to improved efficiency and effectiveness of the Council. Further, PAME works substantively with

Arctic inhabitants, including indigenous peoples, to provide a unique forum for collaboration on a wide range of activities directed towards protection of the Arctic marine environment.

### Follow-up of the 2009 Arctic Marine Shipping Assessment Report (AMSA)

PAME has a designated shipping expert group that includes national representatives, permanent participants, IMO experts, and other shipping experts who work to discuss and implement the recommendations of AMSA and other Arctic Council shipping related reports. Examples of topics that have received follow-up include: collaboration with international organizations on Arctic related activities of common interest, safe and environmentally sound navigation, surveying and nautical charting, shipping industry engagement with Arctic communities, specially designated Arctic marine areas, infrastructure and port waste reception facilities, air emissions, and Arctic marine traffic systems, including the sharing of vessel traffic and monitoring data.

With contributions from a variety of Arctic stakeholders, including other Arctic Council working groups, PAME's shipping expert group prepared the 3rd report on the Status on Implementation of the AMSA Report Recommendations for 2013-2015. This report reflects the status and progress made on the 17 recommendations contained within the original AMSA Report related to, *inter alia*, the promotion of Arctic shipping safety and environmental awareness at national, regional and international levels.

### The Arctic Marine Tourism Project (AMTP): Best Practice Guidelines

The AMTP is the first project in a potential suite of renewed efforts by the Arctic Council to analyze and encourage sustainable tourism across the circumpolar Arctic. Specifically, the AMTP identifies issues or gaps where the Arctic Council can add value by articulating voluntary best practice guidelines in relation to vessel-based Arctic tourism. Two workshops were held during the development of this project. The first workshop was in Ottawa, Canada, from 18-19 March 2014 and the second was in Oslo, Norway on 16 October 2014 in conjunction with the Association of Arctic Expedition Cruise Operators (AECO) annual general meeting. The AMTP co-leads circulated a draft 'best practices guidelines' document to the Arctic Council working groups for review in January 2015, and a final document received SAO approval in March 2015 (leads: Canada and U.S.)

### The Arctic Marine Strategic Plan (AMSP) for the period 2015-2025

The stewardship of the Arctic marine environment is of particular importance to the Arctic states. Since the AMSP was adopted in 2004, the Arctic marine environment has been, and will continue to be, subject to increasing pressures from climate change, economic activities and pollution. Most of the strategic actions in the AMSP have been accomplished or are in the process of being finalized. Updating the AMSP for the period 2015-2025 provides the building blocks towards more coordinated and integrated approaches and supports policy decisions at the local, national,

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

The AMSP covers all Arctic marine areas and relates to key activities affecting Arctic marine ecosystems. Inputs from other Arctic Council working groups was important in this process, and two AMSP workshops were convened over the last two years to generate dialogue and capture inputs. The AMSP takes into full account benefits to people, both in general as an integral part of this Strategic Plan, and more specifically in one of its four overarching goals, including strategic actions related to an overarching goal on enhancing economic, social, and cultural well-being (leads: Canada, Norway and U.S.).

### Framework for a Pan-Arctic Network of Marine Protected Areas (MPA)

The MPA Project Group, reporting to PAME, drafted this Framework. 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, as well as to preserve cultural heritage resources. Individual MPAs and MPA networks strengthen marine ecosystem resilience and contribute to human well-being, including traditional lifestyles, within the broader context of sustainable oceans management practices and climate change.

This 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.

This framework is not binding; each Arctic State will proceed with MPA network development based on its own priorities and timelines. However, having a common vision in place confers a number of advantages that can support and enhance the work of individual Arctic States. A Framework for a pan-Arctic Network of MPAs also contributes significantly to a number of ongoing Arctic Council objectives such as the Ecosystem Approach to Management (leads: Canada, Norway and U.S.).

### Ecosystem Approach to Management (EA) activities

PAME continues to integrate the ecosystem approach into assessments and management recommendations through follow-up to the 2013 EBM marine-related recommendations, taking into account previous work on Large Marine Ecosystems (LMEs). In 2007 PAME established an expert group on the Ecosystem Approach to Management (the EA-EG). This expert group broadened in 2011 to become a PAME-led joint expert group with participation from other Arctic Council working groups working on marine-related issues (AMAP, CAFF, and SDWG). The joint EA-

EG members have prepared a Terms of Reference, taking into account new and ongoing EA activities of cross-cutting nature. The work of the joint EA EG has been carried out according to its work plan as reflected in the progress report (leads: Canada, Norway and U.S.).

### [Follow-up on the 2009 Arctic Offshore Oil and Gas Guidelines \(AOOGG\)](#)

The Systems Safety Management and Safety Culture Report and its recommendations are based on findings from two expert workshops on Health Safety and Environment and Safety Culture, in addition to findings from the Deepwater Horizon investigations, regulatory systems reviews, and assessment of management systems in place in the Arctic. PAME submitted the report to the March 2014 SAO meeting, which approved its final version. Online supporting documents are accessible on the PAME homepage, as they represent the documents in support of the Systems Safety Management and Safety Culture Report.

The PAME Oil and Gas Contact Group prepared a proposal, in coordination with the Shipping Expert Group, for a project to follow-up on, or expand, guidance in Chapter 2 of the 2009 AOOGG on Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities for inclusion to the PAME 2015-2017 Work Plan (lead: U.S., in coordination with the PAME Oil and Gas contact group).

### [Arctic Offshore Oil and Gas Regulatory Resource \(AOOGRR\)](#)

This website has been redesigned and provides links to specific information on national websites related to management, regulation and enforcement of Arctic offshore oil and gas activities. Member states are in the process of supplying relevant links and explanatory information.

Follow-up and implementation of marine-related Arctic Council Recommendations: PAME has started a process to systematically consider and record/track implementation and follow-up actions for a range of Arctic Council reports, assessments and other recommendations of relevance to PAMEs work in order to focus its future activities.

### [Coordination and collaboration with other Arctic Council working groups](#)

PAME actively pursues cooperation with the other Arctic Council Working Groups and Task Forces to contribute to improved efficiency and effectiveness of the Arctic Council. PAME collaborated and communicated with all Arctic Council Working Groups on the development of the revised Arctic Marine Strategic Plan (AMSP) 2015-2025 and emphasized the importance of their inputs in this work. AMAP, CAFF, and SDWG are engaged in marine-related issues and have been invited to participate in the PAME-led Ecosystem Approach Expert Group and a joint Terms of Reference for this collaboration has been developed. PAME regularly reaches out to other bodies with recognized competence of relevance to AMSA shipping follow-up activities as a mean to identify, and where possible collaborate, on issues of common interest

## SUSTAINABLE DEVELOPMENT WORKING GROUP (SDWG)

### Benefits to people living in the Arctic

- The SDWG Mental Wellness initiative builds the evidence base to promote the well-being and resilience of Arctic peoples
- The SDWG Arctic Adaptation Exchange portal helps circumpolar communities develop innovative approaches to climate change adaptation.
- Projects in the Arctic attain better results with consistent and practical integration of applicable Traditional and Local Knowledge.
- AHDR-II provides an update on the state of Arctic human development and identifies trends and knowledge gaps to address moving forward.
- Community-based and academic research alongside youth engagement promotes cultural and linguistic advocacy and uptake in the Arctic.
- Projects in the Arctic foster better understanding of indigenous needs related to transportation, subsistence and culture.
- Listening to reindeer herding youth and addressing their challenges facilitates a sustainable Arctic livelihood for the future.
- Dialogue on gender equality in the Arctic is central to informed policy-making that will address the challenges of the North.
- Cancer services and control strategies for Arctic Indigenous populations can be informed by the extensive review of patterns and trends.

### MANDATE

The mandate of the Sustainable Development Working Group (SDWG) of the Arctic Council is “to propose and adopt steps to be taken by Arctic States to advance sustainable development, including opportunities to protect and enhance the environment and economies, culture and health of Indigenous Peoples and Arctic communities, as well as to improve the environmental, economic and social conditions of Arctic communities as a whole.” The guiding tenet running throughout the work of the SDWG is to pursue initiatives that provide practical knowledge and contribute to building the capacity of Indigenous Peoples and Arctic communities to respond to the challenges and benefit from the opportunities emerging in the Arctic region.

### From the Kiruna Declaration:

*Acknowledge that Arctic peoples are experiencing challenges associated with rapid socio-economic and environmental changes, note the previous work of the Arctic Council to promote mental health in Arctic communities, and decide to undertake further work to improve and develop mental wellness promotion strategies,*

*Recognize that the use of traditional and local knowledge is essential to a sustainable future in the Arctic, and decide to develop recommendations to integrate traditional and local knowledge in the work of the Arctic Council,*

*Recognize that adaptation to the impacts of climate change is a challenge for the Arctic, and the need for strengthened collaboration with Arctic indigenous peoples and other residents, governments and industry, welcome the reports, key findings and on-going work on the Adaptation Actions for a Changing Arctic initiative, and decide to continue the work on enhancing the capacity of decision-makers to manage climate risks including through an on-line information portal and through improved predictions of combined effects,*

## **SUMMARY**

During the 2013-2015 Chairmanship, the SDWG continued its focus on the human dimension of the Arctic, an area of change and opportunity. The SDWG led Arctic Council efforts to consistently integrate Traditional and Local Knowledge into its work through the development of practical recommendations for implementation. Additionally, the SDWG promoted youth engagement in working group initiatives through projects related to mental wellness, reindeer herding, and Arctic Indigenous languages.

As challenges and opportunities in the Arctic are broad and touch on a wide array of themes, issues prioritized by the Arctic Council may fall under the mandate of more than one working group. The SDWG participated in a number of cross-cutting activities, including the Arctic Marine Tourism Project (AMTP) and the Arctic Marine Strategic Plan (AMSP) of PAME, and Adaptation Actions for a Changing Arctic – Part C (AACAC) of AMAP.

The work of the SDWG continues to be informed by the Arctic Human Health Expert Group (AHHEG) and the Social, Economic and Cultural Expert Group (SECEG). AHHEG revised its Terms of Reference to be more concise and refined its areas of focus. SECEG outlined its Rules of Engagement in Arctic Council Projects to highlight the process required for the engagement of SECEG experts in cross-cutting activities.

The Secretariat of the SDWG has been strengthened through the addition of a new website that makes projects more accessible and provides a forum for the SDWG to showcase its work. The SDWG also developed a quarterly newsletter that provides updates on projects and opportunities for deepened engagement, including with Arctic Council Observers.

A high level of commitment and collaborative support from our SDWG colleagues has resulted in the achievements listed below.

## DELIVERABLES/ACHIEVEMENTS

The Evidence-Base for Promoting Mental Wellness and Resilience to Address Suicide in Circumpolar Communities

This project builds on the outcomes and recommendations of the Nuuk Hope and Resilience seminar (2009) and enhances the evidence base to promote mental wellness in circumpolar communities. Two research teams assessed circumpolar approaches to mental wellness and the potential for adapting interventions to other regions. A workshop was held in Tromsø, Norway in May 2014 followed by a symposium in Iqaluit, Canada in March 2015 in order to provide a forum to present findings, transfer knowledge, foster collaboration, and showcase best practices (leads: Canada, Kingdom of Denmark, Norway, Russian Federation, United States, ICC).

### Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change

This initiative builds on the results of Adaptation Actions for a Changing Arctic (AACA) Parts A and B, to facilitate the ongoing exchange and dissemination of information on adaptation. An online portal was created, to be hosted by the University of Alaska - Fairbanks, focusing on providing access to innovative approaches to climate change adaptation and enhancing adaptive capacity (leads: Canada, United States, AIA, GCI).

### Integrating Traditional and Local Knowledge

Responding to the Kiruna Declaration (2013) and the SAO Report to Ministers (2013), the Integrating Traditional and Local Knowledge initiative aims to develop recommendations for the consistent and practical integration of Traditional and Local Knowledge into the work of the Arctic Council. Building on deliberations from two workshops held in Reykjavik and Ottawa, and in consultation with the SDWG HoDs and the Arctic Council's WGs and TFs, the co-leads developed seven recommendations for the integration of Traditional and Local Knowledge into Arctic Council work (leads: Canada, Kingdom of Denmark, United States, AIA, GCI).

### Arctic Human Development Report II

The Arctic Human Development Report II (AHDR-II) provides a decadal update and synthesis report on the state of human development in the Arctic. The report contributes to increased knowledge and understanding of the consequences and interplay of physical and social processes of global change on human living conditions and adaptability in the Arctic. Key findings of the report were distilled in order to highlight areas for future SDWG work (leads: Iceland, Canada, Kingdom of Denmark).

## Assessing, Monitoring and Promoting Arctic Indigenous Languages

The Assessing, Monitoring and Promoting Arctic Indigenous Languages project included the first steps towards the development of an indigenous-driven assessment tool, an analysis of best practices in language policy, an assessment of the state of language acquisition and further development of the [www.arcticlanguages.org](http://www.arcticlanguages.org) website. All of these efforts have produced important research results. A symposium, with strong youth participation, was held in February 2015 to present the project's findings and facilitate knowledge transmission (leads: ICC, Canada, Kingdom of Denmark, United States).

### Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment

The project is designed to expand the findings of the Arctic Marine Shipping Assessment (AMSA) to include Inuit reflections on sea ice use and shipping. Workshops, expanded surveys, reviews of existing sources of information and interviews with Inuit hunters provided a pan-Inuit perspective, culminating in the publication of *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat* (leads: ICC, Canada, Kingdom of Denmark, United States)

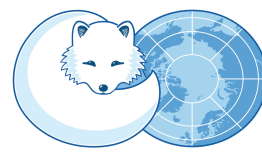
## EALLIN - Reindeer Herding and Youth

The goal of the EALLIN project is to maintain and further develop sustainable reindeer husbandry in the Arctic while simultaneously working towards the vision of creating a better life for circumpolar reindeer herders. This project brings the voice of reindeer herding youth to the forefront to highlight challenges, opportunities and areas for change to make reindeer herding a sustainable and fulfilling livelihood for generations to come. Numerous workshops and consultations were held, culminating in a report that centralizes findings from across the Arctic (leads: Norway, Russian Federation, Saami Council).

## Gender Equality in the Arctic: Current Realities and Future Challenges

Building on the Taking Wing conference (2002), *Gender and Equality in the Arctic: Current Realities and Future Challenges* promotes extensive policy-relevant dialogue on gender-equality issues in the Arctic region. A conference held in Akureyri, Iceland in October 2014 brought together government representatives, policy makers, academics, business, community representatives, non-governmental organizations and others. The conference focused on the living conditions of men and women throughout the circumpolar North, addressing key issues including access to and control over resources, representation in decision-making, political participation, regional development, human security, and material and cultural wellbeing. A report on conference outcomes was produced, laying the foundation for a formal cooperation network of stakeholders focused on gender equity in the Arctic (leads: Iceland, Finland, Kingdom of Denmark, Norway, AIA).





## Review of Cancer among Circumpolar Indigenous Peoples

The Review of Cancer among Circumpolar Indigenous Peoples addresses cancer as an emerging health concern among circumpolar Indigenous Peoples, and recognizes the need for effective prevention and control measures through reliable surveillance data. Drawing on regional data specific to Indigenous populations, this project reviewed the patterns and trends of cancer among Arctic Indigenous Peoples (leads: Canada, Kingdom of Denmark, ICC).

## 3. Initiatives to Strengthen the Arctic Council 2013-2015

### INFORMATION MANAGEMENT

#### Benefits to people living in the Arctic

- The “Amarok” tracking tool showcases the breadth and depth of the Council's activities
- Better access to information puts focus on issues that are important to the people of the Arctic

#### SUMMARY

The Chairmanship has worked with the Arctic Council Secretariat (ACS) to find better ways to manage its information, including tracking its ongoing projects and programs, increasing access to the Council’s past and future work, and archiving its records.

The ACS, in cooperation with the Chairmanship created the Amarok: Arctic Council Tracker to track the many ongoing projects and programs of the Council’s Working Groups and Task Forces. The Amarok will continue to be updated and maintained by the ACS, and the most recent version is included as an annex to this report.

The ACS, in cooperation with the Chairmanship established an open-access archive project to enhance the public’s accessibility to the Arctic Council’s past and future work. The open access repository was publicly launched at the SAO meeting in Yellowknife in October 2014, making Arctic Council documents more readily available to a wider audience via library databases and search tools such as Google Scholar.

In collaboration with Libraries and Archives Canada, the Arctic Council Secretariat identified best practices for archiving its records. In particular, an Internal Records Management Tool was developed as a guide to help classify the different records held by the Secretariat.

## PERMANENT PARTICIPANT CAPACITY

### Benefits to people living in the Arctic

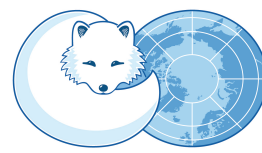
- A unique feature of the Arctic Council is the participation of the Indigenous Permanent Participants
- AC will be strengthened by increasing the capacity of PP organizations to engage in the work of the Council
- It is important to bring strong Arctic Indigenous voices at the table.

### SUMMARY

A fundamental strength of the Arctic Council is the unique role played by the Permanent Participants. However, financial and other capacity limitations have often limited their participation in the Council's work. As the range and number of activities undertaken by the Council increases, this has become even more critical to address the ability of PPs to actively engage in the Council's work. SAOs were instructed to identify approaches to support the active participation of Permanent Participants, and to present a report on their work at the Iqaluit Ministerial meeting.

While instructed to identify approaches to support PP's active participation, the Council has undertaken the following activities. First, the Council completed a thorough assessment of the history and current situation of PP capacity with a view to identifying potential actions to address PP capacity. Emerging from that work, a workshop of Arctic states and PPs was held to discuss the potential options and ideas identified in order to determine if there were areas the Council could take action on. Follow-up actions were taken – establishment of a small ad-hoc small committee to make recommendations to SAOs addressing institutional issues the Council could undertake to better support PPs and hosting of a workshop of PPs to look at ways and means to identify additional financial resources. These actions included a discussion of business efficiencies, ways to increase access to financial and non-financial resources, considerations for greater inclusion of PPs in projects, and support to the PPs to develop a strategic plan to enhance capacity, including the possible establishment of a PP capacity fund. Due to the ongoing nature of this work, the Council will continue to pursue outcomes related to the recommendations and work to support the PPs in their work of developing their own funding mechanism.

Three deliverables were completed, including a report identifying options and approaches to enhance PP capacity, the development and endorsement of recommendations to address institutional issues of the Arctic Council with a view to enhancing PP capacity and the development of an action plan by the PPs during a three day workshop to find ways to pursue alternative sources of funding, including initial steps to develop a funding mechanism which will consist of three elements; the implementation of the four recommendations on institutional issues, development of a PP Core Capacity Fund, and development of a PP Project Support Fund. Work on both funds will also include an examination of in-kind support possibilities.



## TRADITIONAL WAYS OF LIFE

### Benefits to people living in the Arctic

- Traditional practices, cultural skills, values and spirituality are vital to the wellbeing of Arctic Indigenous peoples and communities.
- A greater awareness of the importance of the traditional ways of life could lead to better decision-making by those outside the region.
- Through its work, the Arctic Council supports vibrant and sustainable circumpolar communities.

### SUMMARY

Through showcasing best practices, the overall objective of this initiative is to highlight the importance of the traditional ways of life of Arctic Indigenous peoples, and to promote these ways of life, and their significance, to a broad audience. The work demonstrates that Arctic Indigenous peoples continue to demonstrate resilience and an ability to adapt to a rapidly changing Arctic, finding innovative ways to help ensure that their traditional ways of life remain a sustainable choice for future generations

As a result of this project, three products have been developed by the Arctic Council as tools to promote traditional ways of life—a compendium of best practices, a video, and a communications and advocacy plan. While the advocacy plan outlines a series of key messages that are clear, consistent and timely, and can be delivered to target audiences that would otherwise have limited exposure to information about the importance of traditional ways of life to Arctic Indigenous communities, the compendium and video will serve as valuable visuals to emphasize the work being done at the local and regional levels.

## RELOCATION OF THE INDIGENOUS PEOPLES SECRETARIAT (IPS)

### Benefits to people living in the Arctic

- Co-locating IPS with the Arctic Council Secretariat will strengthen both organizations thus providing more efficient and robust support to the PPs
- AC will be strengthened by increasing the capacity of PP organizations to engage in the work of the Council
- It is important to bring strong Arctic Indigenous voices to the table.

The six Permanent Participants agreed during the Swedish Chairmanship that the IPS should be moved from Copenhagen, Denmark to Tromsø, Norway in order to establish a closer working relationship with the ACS and thus improving efficiency and adding capacity to both. After examining a number of potential models for how to establish IPS in Norway the decision was made that the most efficient model was to have ACS host IPS in Tromsø. Proposed changes to the ACS Host Country Agreement, Staff Rules, and Financial Rules designed to accommodate and clarify the relationship that will exist between the two were circulated for consideration by the SAOs and PPs.

Agreement in principle was reached among the Arctic states and Permanent Participants to the hosting relationship and responsibility for examining the proposed changes to the ACS documents was given to the Small Committee on Administrative Issues. The committee will report back to the SAOs and PPs during the U.S. Chairmanship.

## YOUTH AND OUTREACH

### Benefits to people living in the Arctic

- Engaging youth in the work of the Council helps create the future arctic leaders of tomorrow.
- Raising public awareness of the Arctic Council increases an understanding of how its work can have positive impacts on Arctic residents.

### SUMMARY

Youth engagement is an important element to strengthening the Arctic Council. Informing and engaging youth across the circumpolar region helps to build awareness of the work of the Council and create a sense of shared community on issues of common interest to Arctic youth. Over the past two years, a number of activities involving youth were undertaken. For example, there was a strong focus on youth at the Arctic Indigenous Languages Assessment Symposium that took place in February, 2015. As well, youth played a prominent role at the March, 2015 Circumpolar Mental Wellness Symposium, including through a dedicated youth forum and panel. A circumpolar youth art competition was also organized and exhibited in Ottawa, which provided a unique opportunity to showcase the diverse heritage and cultures of the Arctic. Finally, a Future Arctic Leaders workshop was held, which brought together circumpolar youth to exchange views on key issues of concern and to discuss their vision for the future of the Arctic region. A summary report from this workshop will be available for discussion at a future meeting of the Senior Arctic Officials (SAOs).

In addition to youth engagement, a number of general outreach activities were undertaken to help raise public awareness of the Council and its broad range of work. Such efforts also increase the level of understanding of the benefits the Council's activities can have on those living in the region. Public events were organized on the margins of each SAO meeting, and both the Chair of the Arctic Council and the Chair of the Senior Arctic Officials spoke at a number of Arctic events over the past two years to promote the work of the Council. The Arctic Council Secretariat also organized information booths for delegates at many of those events.



## Part B: Work Plan 2015-2017

### 1. Arctic Council Working Groups: Report on their plans for 2015-2017

#### ARCTIC CONTAMINANTS ACTION PROGRAM (ACAP)

##### Benefits to people living in the Arctic Region

- ACAP work in Saami settlement will reduce black carbon emissions and human health risk in indigenous communities
- ACAP worked with Russian Federation to develop their first national black carbon inventory.
- AIA and co-leads are working on a project to develop community-level actions to mitigate and assess releases and exposure to black carbon
- ACAP is working to expand the local Environmental Observer (LEO) across the Arctic
- A circumpolar information exchange conference on best practices to reduce contaminants in indigenous communities is being planned for 2016.
- Hundreds of pesticides storage facilities, in the Arctic have been contaminated due to improper storage conditions in the past decades.
- Cleaning up pesticide contaminated sites near Arctic villages will prevent contamination of drinking water and food chain.
- ACAP projects work to reduce exposure to dioxin and furans for populations in Vorkuta as well as other part of the Arctic, including indigenous peoples

#### SUMMARY

ACAP addresses Arctic pollution sources and acts as a strengthening and supporting mechanism to encourage national actions to reduce emissions and other releases of pollutants that are relevant in the Arctic. Cooperative actions make an important and significant contribution to the overall international effort to reduce environmental damage on a global level. ACAP will develop concrete project proposals within this mandate for approval as Arctic Council projects, taking into account the needs of indigenous populations in the Arctic. The projects identified in this work plan consist of both projects that have already been approved by the ACAP Working Group and projects that are under development for future ACAP review and possible approval. Additional project proposals may be developed within the scope of this work plan between 2015 and 2017. Implementation of the projects is subject to availability of funds. ACAP advances approved projects and funding, including, as appropriate, from the Arctic Council Project Support Instrument (PSI) and other funding sources.



## PLANNED DELIVERABLES/ACHIEVEMENTS

### Black Carbon Mitigation and Sector Based Activities

The Murmansk Diesel Black Carbon Project focused primarily on the transport sector. In the first phase, the project completed an Emissions Inventory of black carbon from diesel sources in the Murmansk Region of Russia and a pilot mitigation project at a Murmansk bus company focused on an energy efficiency fleet upgrade. In the second phase the project will aim to assess primary sources of black carbon in the Russian Arctic, develop a targeted baseline emission inventory for black carbon from diesel sources in key areas, implement targeted, on-the-ground demonstration projects for reducing black carbon from diesel, and establish policy recommendations and financing options for reducing black carbon diesel sources.

By 2017, the project will:

1. Publish the black carbon inventory;
2. Develop guidelines for off-road vehicle upgrades at mines and potentially identify and implement a pilot project at an open pit mine in Murmansk;
3. Complete an energy system upgrade to wind-diesel at the Tundra Cooperative Saami reindeer farm in Murmansk;
4. Complete a feasibility study for energy supply conversion from diesel in Dolgoshcheliye, Mezenskiy District, and
5. Complete a feasibility study mapping substituting solutions for diesel power plants in Arctic and northwest Russia. The project will also complete a report with policy and financing recommendations for Russia and the Arctic more broadly (co-leads: U.S., Russia, NEFCO)

(co-leads: U.S., Russia, NEFCO)

The Valday Project seeks to reduce diesel black carbon emissions by implementing a range of alternatives, including use of renewable fuel, for providing energy upgrades to off-grid Cluster settlements in Valday, Karelia. This ACAP project received funding from the PSI (EUR 1.12 million) and began implementation in late 2014 (co-leads: U.S., Russia, NEFCO).

Arctic-Barents Region Short-lived Climate Pollutants Mitigation Project(s) NEFCO is working on the development of three SLCP initiatives with a number of sub-projects on the reduction of methane emissions (including flaring) reduction of Black Carbon Emissions, and mitigation of HFC (including ODS) Emissions (End-of-Life Equipment). The proposed project will be submitted for ACAP approval (lead: NEFCO).

Creating black carbon inventories through the establishment of the System for Impact Management of Black Carbon Emissions from sources located in the Russian Arctic project, Russia developed components of a national Black Carbon Emissions Inventory, assessing the impact of black carbon emissions on the Arctic, developing recommendations on black carbon emissions



reductions and establishing a regulatory and policy framework for effective application and follow-up. The proposed project will be submitted for ACAP approval (lead: Russia).

## Black Carbon Communications and Outreach Activities

### **The Arctic Case Studies Platform**

The first phase of this project to develop an initial set of six concise case studies on black carbon reduction activities or best practices was completed during the Canadian Chairmanship. The next phase is to develop a searchable web-based platform that can be easily maintained by the ACS, to house the case studies and to create a user-friendly interactive map for the general public to find information on black carbon activities in the Arctic. The project leads will also compile additional case studies during this time. Information provided by Arctic Council members, observers and others under the proposed Arctic Council Framework for Enhanced Action on Black Carbon and Methane could be uploaded by the ACS to the ACAP Black Carbon Platform and has the potential to become a “one-stop shop” for those looking for information on action on SLCFs in the Arctic (lead: U.S.).

## Improving Economic and Living Conditions in Indigenous Communities

The Indigenous Community Based Black Carbon Assessment Tools will focus on assessing and developing community-level tools for black carbon reduction in indigenous communities, to mitigate health and environmental effects from black carbon sources. The project is expected to take place in Alaskan, Russian and Sami communities. The proposed project will be submitted for ACAP approval (lead: AIA).

The Circumpolar Local Environmental Observers (CLEO) Network recognizes the need for better approaches on the use of traditional knowledge. ACAP is proposing, through its Indigenous Peoples Contaminants Action Program to expand the coverage of an existing monitoring tool, the Local Environmental Observer network (LEO) that links traditional knowledge and scientific analysis, across the Arctic to create the CLEO network. This tool can help indigenous Arctic communities to identify and prioritize their environmental needs, by collecting critical observational data. ACAP hopes to obtain better information on sources of contaminants that may be impacting indigenous Arctic communities, as well as data on changes in the local environment, which may result in releasing contaminants in storage or frozen in the environment. During Phase I of the project, ACAP will create a North American chapter of the CLEO, including indigenous communities in the Alaskan and Canadian Arctic, and will develop a framework for expansion of the CLEO to the Nordic and Russian regions. Phase II of the project is to establish CLEO Chapters in the Nordic and Russian regions. Phase III of the project will link the CLEO Chapters together (lead: U.S.).

The Conference on best practices on contaminant reduction in indigenous communities aims to organize an information conference to highlight best practices on contaminant reduction in indigenous communities in 2016. The proposed project will be submitted for ACAP approval (leads: Russia, RAIPON).

### Non-ferrous/Zinc Smelter Mercury Reduction

The project aims to appropriately identify, further develop and apply pollution reduction technologies at a non-ferrous/zinc smelter in Russia, including related monitoring. A stakeholder workshop is planned with the aim of securing commitment from the project facility (leads: U.S., Russia, NEFCO).

### Mercury Emissions Control Technology Workshop

The project is focused on disseminating results of successful demonstration projects in the Russian Federation, including a demonstration of how standard activated carbon and brominated carbon injections at coal-fired power plants can be used to remove mercury emissions. The workshop will discuss information on mercury emissions control technologies and approaches to assist in the development of the Russian Federation's action plan for implementation of the Minamata Convention (leads: U.S. and Russia).

### Obsolete Pesticides

The demonstration of environmentally sound destruction of obsolete pesticides project will work together with Russian experts and the Ministry of Natural Resources and Ecology, to assess technologies for environmentally sound destruction of obsolete pesticides in northern Russia, when such capacity becomes available. Pending the approval of such technologies, the project will demonstrate destruction of 100 tonnes of obsolete pesticides in an environmentally sound manner. The project will seek synergies with the Russian Federation implementation of Stockholm Convention on POPs, as well as the PCB destruction project for management of PCBs in transformers in Russia. A progress report and possible results from the assessment and demonstration project is anticipated at the Arctic Council Ministerial meeting in 2017 (leads Finland and Russia).

Depending on the results of the Rapid Environmental Assessment (REA), a tool developed for the UN Food and Agriculture Organization (FAO) to assess the risk to local populations and the environment, on three pesticides contaminated sites, a clean-up project will be developed to demonstrate environmentally sound clean-up of an old pesticide storage/burial site in northern Russia, including destruction of the hazardous waste. The project will contribute to the Russian implementation of Stockholm Convention and the work of the Basel Convention Regional Centre. Depending on the outcome, a progress report is anticipated to the Ministerial meeting in 2017. The proposed project has been submitted for ACAP approval (leads: Finland and Russia).

## Implementation of the Action Plan for dioxins and dust emissions reduction at the Vorkutinskiy Cement Plant (VCP)

The project aims to determine actual dioxin emissions at Vorkutinskiy Cement Plant and take measures to reduce dioxin emission. The project is likely to seek funding from PSI (leads: Sweden, Russia, Norway).

The project aims to extend the previous ACAP dioxin inventory activities to other regions of the Russian Federation. It will also promote pilot projects on dioxin emission reduction and a nationwide dioxin and furan inventory organized by Russian authorities. The overall objective is to increase capacity for Russian authorities and industry to comply, in practice, with the requirements of international conventions such as Stockholm, Basel and Rotterdam. Further pilot projects to reduce releases of dioxins and furans in the Russian Federation may be developed (leads: Sweden, Russia, Norway and NEFCO).

## Regional integrated hazardous waste management strategy pilot project

This project aims to develop an Integrated Hazardous Waste Management Strategy (IHWMS) focusing on one or two Northern pilot regions of the Russian Federation that will address, among other items, disposition and destruction of collected contaminants, mercury containing wastes, brominated flame retardants containing waste, POPs including PCBs, dioxins and furans, perfluorinated chemicals and obsolete pesticides. The proposed project will be submitted for ACAP approval (lead: Russia).

## PCB Projects

A demonstration project for the management and destruction of 250 tonnes of PCB in transformers in Russian Federation is currently on hold, awaiting permits for construction of an environmentally sound destruction facility. The project will closely follow the development of hazardous waste management capacity in the Russian Federation (leads Russia, U.S., NEFCO).

A project to eliminate PCBs on Franz Joseph Land Islands (Graham Bell, Heiss and Hoffman Islands) aims to identify, collect, analyze, and eliminate liquid waste using a SKGO-10 mobile facility. The project will investigate technical and biological remediation and monitoring of contaminated areas and develop proposals for improving the system to identify, gather, store and dispose of PCBs in the Arctic zone of the Russian Federation. The proposed project will be submitted for ACAP approval (lead: Russia).

## ARCTIC MONITORING AND ASSESSMENT PROGRAM (AMAP)

### Benefits to people living in the Arctic Region

- AACA is assessing drivers of Arctic change in the Barents, Baffin Bay/Davis Strait, and Bering/Chukchi/Beaufort regions.
- New AMAP assessments on black carbon, ozone and methane provide a scientific basis for decision-making to reduce impacts.
- Human exposure to many contaminants declined in parts but not all of the Arctic. Effects of newer contaminants need to be better understood
- Levels of many regulated POPs are generally declining, but there is emerging concern about new chemicals reaching the Arctic.
- Trace radioactive contamination from the Fukushima accident reached the Arctic, but at levels too low to cause concern.
- Remediation is reducing radioactivity sources in the Arctic but certain activities can enhance releases of naturally occurring radionuclides
- Unmanned aircraft systems have potential for use in Arctic monitoring and also in search and rescue operations
- Two committees have been established to further the work of SAON on data and information services and observation networks
- Arctic Ocean acidification has potential to affect livelihoods from subsistence and commercial fisheries: assessing key impacts a priority
- AMAP's Arctic information contributed to the establishment of the Minamata Convention and further development of the Stockholm Convention
- AMAP overview reports on SWIPA and Arctic Ocean Acidification and AACA brochure translated into Russian and Saami available soon

### SUMMARY

The AMAP work plan 2015-2017 continues the work to monitor and assess the status of the Arctic region with respect to pollution and climate change by documenting the levels and trends, pathways and processes, and effects on ecosystems and humans, and to propose actions to reduce associated threats for consideration by governments. Regional assessments will be produced under the Adaptation Actions for a Changing Arctic (AACA) process for three regions: Barents, Baffin Bay/Davis Strait, and Bering/Chukchi/Beaufort regions, together with an overall integrated AACA report. AACA will provide information to assist regional and local decision-makers and stakeholders to develop adaptation tools and strategies to deal with climate change and other environmental stressors. Assessments of the freshwater budget and the carbon cycle of the Arctic are under preparation, as well as updated assessments of Arctic land ice, permafrost, glaciers and ice caps, and feedbacks and trends in the cryosphere. Further work on Arctic Ocean acidification will continue, with more focus on case studies in specific areas. An assessment of contaminants of emerging concern in the Arctic ecosystem will be prepared. Guidelines regarding

the use of unmanned aircraft systems for scientific monitoring and research in the Arctic will be finalized. Work will continue under the Sustaining Arctic Observing Networks (SAON) program, and AMAP will continue to provide input to the work of other international organizations.

## **DELIVERABLES/ACHIEVEMENTS**

### **Adaptation Actions for a Changing Arctic (AACCA)**

This initiative is supported by several regional teams. The Barents regional implementation includes Norway, Russia, Sweden and Finland. The Baffin Bay/Davis Strait regional implementation includes Denmark/Greenland and Canada; the Bering/Chukchi/Beaufort regional implementation includes the U.S., Russia and Canada.

Work will continue on Arctic-focused climate and integrated environmental frameworks and models that can improve projections of climate change and other relevant drivers of Arctic change in order to improve predictions and inform the development and implementation of adaptation actions by Arctic States and Permanent Participants. This project aims to clarify the basis for adaptation strategies to meet user needs and analyse consequences that may occur in relation to combined effects on ecosystems and socio-economic development. Information for relevant sectors will be compiled and evaluated, and integrated regional reports and other products will be prepared to improve predictive capability of the consequences of climate change and other relevant drivers of change.

AMAP is leading the work, which is being developed in collaboration with other relevant Arctic Council working groups and international science organizations. A progress report will be presented in 2015, other products are anticipated during 2015–2017, and final integrated reports will be produced in 2017.

### **Food and Water Security, including Arctic Freshwater Synthesis component of Snow, Water, Ice and Permafrost (SWIPA) update**

Information relevant to this subject will be provided by AMAP assessment groups including the Human Health Assessment Group and the AMAP/International Arctic Science Committee (IASC)/WRCP CliC (World Climate Research Programme's Climate and the Cryosphere project) joint project on Arctic Freshwater Synthesis. This latter assessment is one component of the update of the 2011 AMAP SWIPA assessment. This component will prepare the first overall budget of freshwater resources in the Arctic and a synthesis of the current status. Planned work includes the preparation of an overall budget for the freshwater resources of the Arctic and projections on the influence of climate change on hydrological conditions (lead: Canada).

## Update of Snow, Water, Ice and Permafrost (SWIPA) assessment

This assessment will update parts of the 2011 AMAP SWIPA Assessment, using updated climate change scenarios and more refined models, as well as more recent information on current and projected changes in the cryosphere of the Arctic. Relevant information from this work will be provided to the AACA project. Planned work and deliverables include updated information on trends and projections of climate-induced changes in Arctic snow, ice and hydrological conditions.

This initiative has a number of leads, including Canada, Norway, U.S. on sea ice; Norway, Russia, and U.S. on permafrost; Russia and U.S. on Arctic trends and feedbacks; Canada on snow; Denmark/Greenland on the carbon cycle, Denmark/Greenland, Russia and Canada on land ice and Canada on the Arctic freshwater synthesis.

## Scientific evaluation of Short-Lived Climate Pollutants (SLCPs) in the Arctic

AMAP will continue to address short-lived climate pollutants (black carbon, ozone and methane) and their impacts on Arctic climate to implement follow-up actions arising from assessments delivered by the AMAP methane and black carbon/ozone expert groups and the Arctic Council Task Force on Black Carbon and Methane in line with decisions of the Arctic Council at their meeting in 2015. This work will address, among other topics, improved monitoring, modelling and assessment of trends and effects of short-lived climate pollutants in the Arctic (leads: Canada, Norway, U.S.).

## Climate Change Indicator System for the Arctic

This activity will build on the set of climate change indicators currently under development by the United States Global Climate Change Research Program (USGCRP) to indicate the status and trends of change in key physical, biological, social and economic parameters related to climate impacts and effects. This activity will involve all Arctic states and Permanent Participants to link a subset of indicators focussed on climate change into a single pan-Arctic network, the Climate Change Indicator System for the Arctic (CCISA). Planned work includes contributing to the development of the framework for the CCISA and illustrating the potential for an Arctic Indicators Network by identifying a subset of Arctic-relevant indicators from the larger USGCRP effort (lead: U.S.).

## Updated assessment of Arctic Ocean Acidification

This assessment will update the 2013 AMAP Arctic Ocean Acidification Assessment, including new information on the extent and effects of acidification in the Arctic Ocean, particularly in relation to biological effects, and will contain case studies of the impacts of ocean acidification in several specific Arctic areas. Planned work and deliverables include an updated assessment of Arctic Ocean acidification, to be delivered in 2017 (leads: Norway, U.S.).

## AMAP Trends and Effects Monitoring Programme: Implementation 2015-2017 and related Arctic monitoring and research activities

AMAP will continue to implement monitoring and assessment in accordance with the approved AMAP Strategic Framework for 2010+. AMAP will update its monitoring guidelines and protocols as part of an ongoing process, in particular to address areas relating to monitoring of cryosphere change, ocean acidification and other impacts of climate change.

As part of its on-going work, AMAP will continue to coordinate work, based largely on national programs, to provide the information necessary for assessment of relevant issues such as:

- spatial and temporal trends in levels of contaminants in Arctic ecosystems, including humans, and radioactivity in Arctic ecosystems;
- biological/ecological effects of contaminants and associated trends, including human health effects;
- climate change, including ocean acidification, SLCFs and cryosphere;
- effects of climate variability and change;
- improved predictive capacity through increased observations, research and understanding of processes governing changes in the Arctic;
- human and ecosystem health effects; and
- combined effects of contaminants, climate change and other stressors, including effects on humans.

AMAP will continue to coordinate and deal with new activities to ensure appropriate data reporting and archiving, including reporting of data to AMAP Thematic Data Centres. AMAP will cooperate with international partners and arrange workshops to improve monitoring capability, including the use of remote sensing.

AMAP will also continue its work on coordination of Arctic monitoring and research through engagement in relevant initiatives under the EU's Horizon 2020 Programme (including EU-PolarNet) and the Third International Conference on Arctic Research Planning (ICARP III).

AMAP's Climate Expert Group and the Human Health Assessment Group will participate in the further development and implementation of special projects in Russia, including the project on the Lena and other Russian Arctic rivers under the GEF-Russian Federation Partnership, implementation of air monitoring, and follow-up on the Persistent Toxic Substances project.

## Updated assessment of pollution issues

As part of its ongoing work, AMAP will continue to evaluate emerging issues of concern related to pollution and climate change and their effects on Arctic ecosystems and populations. Plans for follow-up activities and products in relation to this as well as previously identified issues of concern will be developed as necessary. This work will prepare an updated assessment of POPs, including chemicals of emerging Arctic concern, biological effects, and the influence of climate change on POPs, for delivery in 2017 (leads: Canada and Sweden).

## Use of Unmanned Aircraft Systems (UAS) for scientific purposes in the Arctic

AMAP will continue to develop and finalize safety guidelines and demonstrate the use of UAS in cross-jurisdictional environmental monitoring and other studies. This work will develop guidelines and proposals for the use of UAS in the Arctic for scientific and other appropriate activities. Guidelines and proposals for UAS use in the Arctic will be finalized (leads: Norway, U.S.).

## Sustaining Arctic Observing Networks (SAON)

AMAP will contribute to the implementation of the SAON and continue to co-lead its development on behalf of the Arctic Council, together with the International Arctic Science Committee (IASC) with the aim of supporting and developing Arctic observing networks. The AMAP Secretariat, together with the IASC Secretariat, will continue to provide secretariat support.

## Support for international activities

AMAP has been requested by the Arctic Council to support relevant activities under international bodies such as the UNEP (Stockholm Convention on POPs, Minamata Convention on mercury, UNFCCC) and UN ECE (LRTAP Convention) with regard to provision of Arctic information to relevant groups and supporting the development and implementation of global monitoring and other activities to ensure harmonization with the AMAP Trends and Effects Programme. The main activities include coordination and information exchange activities in relation to the United Nations Environment Programme (UNEP) Chemicals Branch (DTIE), Stockholm Convention and UN ECE Convention on Long-Range Trans-boundary Air Pollution, UNFCCC IPCC and the SWIPA assessment results, the EU-PolarNet and Trans-Atlantic Ocean Research Alliance and the Combined Effects of Contaminants and Climate Change.



## Communication and Outreach

AMAP will implement communication and outreach activities in accordance with the AMAP Communications and Outreach Plan and the Arctic Council's Communications and Outreach Guidelines in the dissemination of AMAP results to relevant stakeholders. Activities will focus on delivery and dissemination of information arising from AMAP assessments and related-work addressing, *inter alia*: AACA, AOA, SWIPA, OGA, mercury, radioactivity, SLCFs, POPs, human health and SAON. AMAP communication and outreach will be accomplished through the production and dissemination of reports (including, where possible, their translation), films, fact sheets, website, educational materials and other outreach products. AMAP will continue to contribute relevant AMAP-related scientific input to the Arctic Report Card

## Arctic Resilience Report

With the accelerating pace of environmental, social and economic changes in the Arctic and the abruptness and irreversibility of many of these changes, the sustainability of Arctic ecosystems and communities is increasingly challenged. Resilience - the capacity to effectively respond to change in social-ecological systems - is becoming ever more important for the Arctic communities. Insights from the Arctic Resilience Report (ARR) work will help people living in the Arctic to strengthen their capacity for navigating change under conditions in which rapid and unexpected developments are likely.

### Mandate

An initiative of the Swedish Arctic Council Chairmanship, the mandate for the ARR was set out by the Arctic Council at its meeting in November 2011. The SAO report to the Nuuk Ministerial meeting and the Nuuk Ministerial Declaration in May 2011 identified "the need for an integrated assessment of multiple drivers of Arctic Change as a tool for Indigenous Peoples, Arctic Residents, government and industry to prepare for the future ..." The ARR was charged with the task of identifying potential "cliffs" or tipping points, assessing challenges to the communities in the Arctic, and identifying ways in which the Arctic Council might contribute to preserving and/or strengthening resilience across the Arctic.

## Summary

This initiative of the Swedish AC chairmanship is now co-chaired by Sweden and the United States. The project has been led by the Stockholm Environment Institute and the Stockholm Resilience Centre in collaboration with the Resilience Alliance. Importantly, the project has built on collaboration with other Arctic states and indigenous people in the region, as well as with several arctic scientific organizations.

Broad participation in the ARR is reflected in the Project Steering Committee, which gathers representatives from Arctic States and Permanent Participants, as well as from the Arctic Council working groups and collaborating organisations and AC Observers. The team of authors also brings together experts from diverse disciplinary, geographic and sectoral contexts.

As part of its assessment, ARR is engaging with AC Working Groups with which there are clear synergies. In addition to consultation with the Working Groups, ARR is working closely with AMAP through the AACA-C and has explored links with the work of the SDWG. The resilience lens is important as an interdisciplinary approach that facilitates the integration of relevant knowledge from different traditions.

The ARR Interim Report was published in 2013. It described innovations in resilience assessment methodology, developed specifically for this large and complex regional scale. It provided an assessment of the potential for large shifts in ecosystem services that may affect human well-being, and reviewed the literature on adaptive and transformative capacity, which enables ecosystems and human populations to withstand unexpected and disruptive changes. It also explored the use of case studies to illustrate some of the challenges and opportunities relating to resilience in particular places and for particular issues in the Arctic.

The next steps in the ARR project are the delivery of the Final report scheduled for May 2016 and a synthesis for policy-makers during spring 2017. As part of the preparations for the final report, ARR plans to conduct two workshops to present preliminary results and gather feedback that will be incorporated into the final product.

## PLANNED DELIVERABLES

Forthcoming deliverables include:

Final Scientific Report on Arctic Resilience (May 2016): this report will set the multiple assessments of change – biophysical, geopolitical, economic, social – into an overarching resilience framework to show how choices made in one domain may influence other domains. Report authors are developing an enriched set of case studies showing how social-ecological resilience at different scales can be strengthened or weakened as a result of these choices. It will contribute to the analysis of shared decision-making processes in the Arctic, describing how change is shaped by different actors in the region and far beyond, and it will close with a section on practical options for action to strengthen resilience and manage change.

Policymaker Synthesis (May 2017): The final product of the ARR will be a policymaker synthesis that provides a summary of key policy relevant findings along with potential applications and recommendations for building resilience.

Contribution to the AACA-C: ARR is collaborating closely with AMAP to contribute a resilience perspective to AACA-C regional reports, and anticipates providing similar support for the eventual Pan-Arctic report. We anticipate that the ARR and AACA-C products will combine to provide an important new set of resources for Arctic decision-making.

## CONSERVATION OF THE ARCTIC FLORA AND FAUNA (CAFF)

### Benefits to people living in the Arctic

- Promote the protection of large areas of ecologically and culturally important marine areas, to ensure long term sustainable use.
- Arctic Freshwater Biodiversity Report provides status and trends of Freshwater Biodiversity to guide decisions on conservation and sustainable use
- Salmon Rivers Peoples' Project will provide a demonstration of the co-production of science and traditional knowledge to guide decisions on conservation and sustainable use
- Increases and focuses long term monitoring and research efforts to address key gaps in knowledge and to guide decisions on conservation and sustainable use
- Helping to reduce the threat of invasive alien species to the Arctic by developing common measures for early detection and reporting.
- Helps promote community-based monitoring as an integral part of conservation, sustainable use and management
- Recognizes the value of traditional knowledge and integrates it into assessment, planning and management
- Advances Ecosystem Based Monitoring as framework for cooperation, planning and development
- Provides a better understanding of climate change vulnerabilities and impacts on sea-ice associated biodiversity
- Supports an early warning system for changes in Arctic ecosystems
- Ensures that states and organizations outside of the Arctic have a positive influence on the Arctic
- Allows access to seamless mapping across the Arctic to support decision-making.
- Promotes the work of the Arctic Council both inside and outside the Arctic.
- Introduces Arctic school children to the importance of biodiversity
- Improves conservation and sustainable use of Arctic biodiversity and ecosystems
- Improving knowledge of the marine environment and promoting sustainable use and conservation
- Improves the conservation status of priority Arctic breeding birds, a shared natural and cultural resource
- Improves the conservation status of Arctic seabirds, a shared natural and cultural resource
- Developing a better understanding of Arctic flora and conservation tools
- Promoting shared responsibility for safeguarding Arctic biodiversity
- Provide an understanding of the implications of biodiversity loss and the value of conservation
- Ensuring that Arctic biodiversity, including its conservation and sustainable use, is accurately portrayed in global processes.

## SUMMARY

The CAFF Work Plan for 2015-2017 focuses on implementation of the Arctic Biodiversity Assessment recommendations, including the Arctic Migratory Bird Initiative (AMBI), and the Circumpolar Biodiversity Monitoring Program (CBMP). The Actions for Arctic Biodiversity 2013-2021 will guide how the Arctic Council addresses biodiversity issues for the coming decade. Key actions in for 2015-2017 include: mainstreaming biodiversity; reducing stressors on migratory birds; ecosystem services evaluation; communications and outreach; adaptation to climate change; addressing stressors on biodiversity, in particular, on migratory species; invasive species; pollution; safeguarding critical areas; improving knowledge and public awareness, in particular, monitoring and traditional and local knowledge, and indicator development. The CBMP Strategic Plan: 2013-2017 also guides the work of CAFF over the next two years.

### Marine Protected Areas (MPA) Network

The overall rationale and objective is to contribute to the pan-Arctic network of existing MPAs through implementation of the MPA framework; and implementation of Recommendations 5, 6 & 7 of the Arctic Biodiversity Assessment (ABA). Main activities include assisting in the implementation of the framework for a pan-Arctic network of MPAs; providing technical information, including mapping areas of high species abundance, unique Arctic diversity and those important for sensitive life stages at a scale appropriate for use in planning; analyzing existing Arctic marine protected areas to identify gaps and priorities including identification of the most climate-change resilient Arctic areas, connectivity gaps and missing buffer zones. PAME and CAFF are the WG leads. CAFF specific co-leads include the U.S. and others to be determined.

### Water Security

CAFF's work in this area contributes to understanding the role and importance of Arctic freshwater systems to biodiversity and people. It responds to ABA recommendations 10, 12, 13 and 16. CAFF has two projects in this area: The State of the Arctic Freshwater Biodiversity Report, which will inform an Arctic Freshwater Assessment and an Arctic Water Resource Vulnerability Index; and the Salmon Rivers Peoples' Project, which advances an understanding of the importance of freshwater fish to food security in the Arctic. Main activities include work towards the CBMP State of Arctic Freshwater Biodiversity Report and exploring a Salmon Rivers Peoples' project, which is intended to assess status and trends of salmon in three rivers in the circumpolar Arctic. Canada and Sweden are leads for CBMP Freshwater Monitoring Group. U.S. and the Kingdom of Denmark are co-leads for the overall CBMP program. The Arctic Athabaskan Council will lead the Salmon Rivers Peoples' Project with the involvement of the Saami Council, the Aleut International Association, RAIPON and the Gwich'n Council International. The Arctic Freshwater Biodiversity Report is to be completed in 2018. The Salmon Rivers Peoples' Project, Phase 1 is to be completed 2017.

## Arctic Climate Resilience

The Circumpolar Biodiversity Monitoring Program (CBMP) is enhancing monitoring, enabling early warning systems, increasing efforts to engage indigenous peoples, and using traditional knowledge. These efforts respond to ABA recommendations 13 and 16. Main activities will involve continuing to implement all ecosystem monitoring plans of the CBMP and indicators. The following are the completion dates for each of the state of biodiversity reports: State of Marine Biodiversity, 2017; State of Freshwater Biodiversity, 2018; State of Terrestrial Biodiversity, 2019; and Coastal Monitoring Plan, 2017.

## Invasive Species Strategy

The rationale and objectives are to improve our understanding of climate change vulnerabilities and impacts in the Arctic. These efforts respond to recommendation 9 of the ABA. Main activities include developing a strategy for the prevention and management of invasive species. The leads are the U.S. and Norway.

## Strategy for Community-Based Monitoring

Expands local environment monitoring through existing citizen-science monitoring networks and traditional knowledge documentation. It responds to recommendation 15 of the ABA. Main activities include developing a strategy for the prevention and management of invasive species. The initiative is led by the U.S.

## Case Studies and Co-Production of Science and Traditional Knowledge

Brings together knowledge systems to provide a holistic understanding of conservation and sustainable use. Main activities include the Community Observation Network for Adaptation and Sustainability (CONAS); the Nomadic Reindeer Herders Project; and a Walrus and Food Security project.

## Ecosystem Based Management

Promote the implementation of Ecosystem Based Management approaches across the work of CAFF. This responds to ABA recommendation 3. Main activities include follow-up on the recommendations of the EBM expert group. Led by the CAFF management board the work is ongoing and budget is in-kind.



### Life Linked to Ice Follow-Up

Improve our understanding of climate change vulnerabilities and impacts on sea-ice associated biodiversity. Main activities involve following-up on the recommendations of the Life-Linked to Ice report. Led by U.S. and Norway.

### Climate Change Indicator System for the Arctic (CCISA)

Support for CCISA and responding to ABA recommendation 13. Main activities include development of and reporting on the CBMP headline indicators. The U.S. and Kingdom of Denmark are leads for the CBMP.

### Improving Arctic Climate Science: Pan-Arctic Digital Elevation Map (DEM)

Improve access to Arctic topographical information to facilitate monitoring and assessment activities and to inform decisions on development, land management and scientific analyses. Main activities include undertaking work with Arctic SDI towards the development of a DEM. The work is led by the U.S.

### Strengthening the Arctic Council

Increase capacity for implementation of Actions for Arctic Biodiversity 2013-2021, including mainstreaming of biodiversity. This work responds to ABA recommendations 13, 15 and 17. Main activities include engagement of observers, industry and international organisations in CAFFs activities. The initiative is led by Norway and is an ongoing activity.

### Public Diplomacy Campaign

Implementation of CAFFs Communication Strategy which works towards raising awareness on Arctic biodiversity, providing information and building partnerships across scales among youth, communities, and managers inside and outside the Arctic. This responds to ABA recommendations 15 and 17. Main activity is to continue to implement CAFF's communication strategy. This work is led by the CAFF Secretariat.

### Youth Engagement

To raise awareness among Arctic children of Arctic biodiversity and the challenges it faces. The principal activity is on developing educational tool-kits for school children. Led by the CAFF Chair, U.S. and Iceland it is to be completed in 2016.

## Actions for Arctic Biodiversity: Implementing the recommendations of the ABA 2013-2021

Ongoing activities follow-up from the Kiruna Declaration, requesting states to implement the ABA recommendations. This initiative is led by CAFF, with components led by different countries, Permanent Participants, working groups and other Arctic Council subsidiary bodies. This is an eight year work plan from 2013-2021. The budget is comprised of in-kind support and funding which varies with individual components

### State of Arctic Marine Biodiversity report

Provide the first CAFF assessment on the state of the CBMP Marine biodiversity. This will be a baseline and regular reporting format for future reporting, on the state and condition of key aspects and areas of Arctic biodiversity. This responds to ABA recommendations 4, 13 and 16. Norway, Russia and U.S. are leads for CBMP Marine Monitoring Group, while the U.S. and the Kingdom of Denmark are co-leads for the overall CBMP program. The report is scheduled for completion in 2017.

### Arctic Migratory Bird Initiative (AMBI)

Encourages engagement of observers in CAFF activity and implements ABA recommendation 8. Main activities include implementation of work plans for Asian-Australasian, African-Eurasian, Americas and Circumpolar flyways. AMBI is an ongoing initiative led by Canada, Norway, and Russia.

### Circumpolar Seabird Program (CBird)

CBird contributes to implementing recommendation 13 of the ABA. Main activities include assessment, monitoring and conservation plans for Arctic seabirds. It is chaired by Canada with individual components led by different countries.

### Circumpolar Flora Program (CFG)

CFG provided foundational information for Arctic floral conservation work and responds to ABA recommendation 13. Main activities include developing the Circumpolar Vegetation Map, red-list for Arctic plants, and moss and lichen check lists. CFG is led by Norway, with individual components led by different countries.



## Mainstreaming Biodiversity

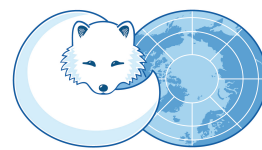
Encourage shared responsibility for biodiversity conservation across different organizations and stakeholders. This responds to ABA recommendation 4. Main activities include developing a set of principles on incorporating biodiversity objectives and safeguards into Arctic Council work.

## The Economics of Ecosystems and Biodiversity (TEEB)

Evaluating the range of ecosystem services provided by Arctic ecosystems and biodiversity, in order to determine the costs associated with biodiversity loss and the value of effective conservation. This implements recommendations 4 and 12 of the ABA. Main activities include completing The Economics of Ecosystems and Biodiversity (TEEB) Scoping Study for the Arctic and to follow-up as appropriate. This work is led by Sweden (partners are TEEB, UNEP, WWF- Arctic and GRID-Arendal). The scoping study will be completed in 2015.

## Providing Arctic Biodiversity data and information to international processes

Ensure that the Arctic Biodiversity Assessment information is used in different global exercises, thereby promoting the Arctic Council and its work. Main activities include providing Arctic biodiversity information to global processes, such as those initiated by the United Nations Convention on Biological Diversity, the Intergovernmental Science-Policy Panel on Biodiversity and Ecosystem Services and the Global Environment Outlook-6.



## EMERGENCY PREVENTION, PREPAREDNESS AND RESPONSE (EPPR)

### Benefit to people in the Arctic Region

- Commitment to Arctic Council MOSPA exercises raises awareness of pan-Arctic pollution risks and promotes readiness for coordinated response
- Overview of oil spill response limitations in Arctic conditions will support optimized prevention and response strategies
- Helping small communities prevent, prepare for, and respond to disasters will be an area of focus for EPPR during the 2015-17 period
- The Arctic response equipment database will inform regional contingency planning and provide a comprehensive snapshot of the actual response capability in the Arctic.
- Safety of oil spill response workers is a critical element of a successful response operation

### SUMMARY

The EPPR is following-up the work in the last work plan, and taking into consideration the priorities of the incoming U.S. Chairmanship., It is also following-up on applicable recommendations from the Framework Plan developed by the Task Force on Oil Pollution Prevention and undertaking projects in support of the SAR Agreement.

### DELIVERABLES/ACHIEVEMENTS

International exercise under the auspices of the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA)

Building on the first successful exercise of the agreement, hosted by Canada in 2014, the second functional exercise is being planned by the United States. The proposed planning concept includes a workshop in 2015, and a live exercise in 2016. The planning phase will include identification of spill scenarios by each Arctic Council state, from which, one high risk scenario will be selected for the 2016 live exercise. Objectives for the exercise include execution of the Agreement and Operational Guidelines notification and request for assistance procedures. (U.S. lead)

### Circumpolar Oil Spill Gap Analysis

This initiative will determine the necessity and viability of a comprehensive Circumpolar Marine Environmental Risk Analysis (CMERA) with a Circumpolar Oil Spill Response Gap Analysis as a first step. The goal is to build upon existing country gap analyses and, by applying common parameters, produce a pan-Arctic perspective. This will avoid duplicating work, but also identify

where gaps exist. The Gap Analysis will provide an evaluation of mechanical and alternative oil spill response strategies based on available data throughout the Arctic. A scoping workshop is planned for 2015. Participation will include consultants, member states and PP delegates, invited experts as well as interested observers and industry representatives. Further work depends on funding (leads: Norway, Kingdom of Denmark, U.S.).

### Prevention, Preparedness and Response for small communities

The objective of this project is to provide guidance to small communities on best practices related to Prevention, Preparedness and Response to natural incidents (flooding, avalanches, destroyed infrastructure, effects of severe weather, etc.), oil spills and accidental releases of radionuclides that might threaten living conditions. Small communities in the Arctic will benefit from information sharing among Arctic states, which will lead to the development of guidelines and other tools for handling emergency prevention, preparedness and response within local communities. The project will begin with a scoping workshop to be held before June 2015. This project responds to the U.S. Chairmanship priority of improving economic and living conditions. The project will also be relevant for observer countries (leads: U.S., Norway, Canada, ICC and AIA).

### Development of a Database of Arctic Response Assets

In May 2013, the member states of the Arctic Council signed the Agreement on Cooperation on Marine Oil Pollutions Preparedness and Response in the Arctic. Both the Agreement and Operational Guidelines speak to spill notification processes, requests for assistance, movement of equipment and resources across borders, and other information critical to an expeditious response to a large oil spill affecting one or more countries. The documents also address requirements for training and exercises. Key to Arctic response preparedness and response is an understanding of the types, quantities, and locations of oil spill response assets that are currently utilized by Arctic countries. The objective for the project is to develop a searchable oil spill response database and populate it with detailed information on Arctic-specific equipment, vessels, dispersant stockpiles and application platforms, *in situ* burn boom, well containment and cap-and-flow devices, and other resources owned by or regionally available to all member states of the Arctic Council. At this time, a comprehensive database of available response assets in the Arctic does not exist. The proposed project would address this gap and is a priority of the U.S. Chairmanship of the Arctic Council (leads: U.S. and Norway).

### Development of Safety Systems in the Implementation of Economic and Infrastructural Projects

The overall goal of these projects is the improvement of industrial and environmental safety related to economic and infrastructural projects, primarily the development of hydrocarbons on the Arctic continental shelf and hydrocarbons transportation. In support of these projects, SAR and Oil Spill Response exercises are undertaken on an annual basis. In 2014, the first regional

Arctic Complex Search and Rescue Center opened, with the purpose of accumulating monitoring results and managing rapid reaction forces in strategically important spheres. This will make it possible to conduct efficient activities during emergencies. In 2015, the second Arctic Complex Search and Rescue Center will open in Murmansk (Russia lead).

### Arctic Rescue Project

The focus of this project is to elaborate best practices, recommendations and key elements of the emergency risk assessment system and the system for improving safety of potentially hazardous facilities. Significant outcomes include developing recommendations on joint activities aimed at ensuring industrial and environmental safety in major transportation corridors in northern Europe, as well as the development of legal regulation and management tools based on best international practices. The overall goal is the international promotion of advanced national experience and improvement of emergency preparedness through information exchange. Implementation of the project includes conducting research, seminars and conferences on relevant subject areas. The next international conference is planned for August 2015, in Salekhard, Russian Federation. The subject of the conference will be safety provisions of Arctic projects implementation (Russia lead).

### Occupational Safety and Health in Arctic Oil Spill Response Workers

This project will produce an EPPR report of the data availability, accessibility and quality to assess worker risk. Possible next steps may include development of solutions to occupational safety and health hazards to oil spill response workers. This type of information could supplement EPPR's Field Guide for Oil Spill Response to benefit the response community (US lead).

### Search and Rescue

EPPR's mandate has expanded to include SAR. EPPR will address SAR tasks in its work plan, including follow up to the SAR Agreement and addressing relevant findings from SAR exercises. Projects to implement the Framework Plan developed by the TFOPP

Pending Arctic Council approval of the Framework Plan, EPPR will discuss and initiate possible follow-up activities.

## PROTECTION OF THE ARCTIC MARINE ENVIRONMENT (PAME)

### Benefit to people in the Arctic Region

- PAME's overall work helps protecting the marine environment and provides guidance for safe shipping and the sustainable use of marine resources for the benefit of Arctic inhabitants.
- Follow up of the Arctic Marine Shipping Assessment improves knowledge of shipping issues and helps assess options to make shipping safer for people and the environment.
- Work on Arctic marine tourism will guide development in tourism with a view to enhance sustainability, conserve the environment and strengthen Arctic communities.
- The updated Arctic Marine Strategic Plan (AMSP) will chart strategic actions on marine issues for the next decade with the goal of enhancing people's well-being, strengthening their capacity to adapt to changes in the Arctic marine environment and conserving ecosystems.
- Work under the Framework for a Pan-Arctic Network of Marine Protected Areas supports Arctic countries in developing MPAs to conserve ecosystems and encourage sustainable use of marine resources.
- The ecosystem approach work aims to guide sustainable use of marine resources while ensuring a healthy and robust marine ecosystem.
- PAME's oil and gas initiatives will, *inter alia*, assist indigenous and local communities in meaningful engagement relating to marine activities, including offshore oil and gas.

### SUMMARY

The PAME Work Plan 2015-2017 was developed according to: PAME's mandate; priorities identified and recommendations made in reports and arrangements developed by or negotiated in Arctic Council subsidiary bodies that are approved by the SAOs and Arctic Ministers; direction provided in Ministerial declarations; follow-up on recommendations from Arctic Council projects and the Arctic Marine Strategic Plan (2015-2025), which outlines the overall direction of the Arctic Council for the protection of the Arctic marine environment, in addition to policy follow up to the scientific and other relevant assessments of the Arctic Council.

The PAME Working Group generally meets twice a year to assess progress, advance its work and convene project-specific meetings back-to-back with the PAME meetings.

PAME's work in the area of addressing the Impacts of Climate Change, Arctic Climate Adaptation and Resilience represents a collaborative effort among working groups and entails cross-cutting activities which will be identified inter-sessionally by SAOs following the 2015 Ministerial meeting (this effort has various leads due to its cross-cutting nature).

## DELIVERABLES/ACHIEVEMENTS

### Task Force on Arctic Marine Cooperation

PAME to feed into the analysis and outcomes of the Task Force on Arctic Marine Cooperation (TFAMC) as needed (U.S. lead).

### Marine Protected Areas

Enhancing PAME's work on a Pan-Arctic Network of Marine Protected Areas (MPAs) includes Stakeholder engagement and communication as a part of the project on Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) (leads: U.S. Canada, AIA, Saami Council and ICC); a project on inventory mapping of existing MPAs Leads (U.S. lead in collaboration with PAME and CAFF secretariats); and a "desktop study" of area-based conservation measures and their linkages with categories of Arctic biodiversity toolbox in support of marine protected area networks (U.S. lead).

### Follow-up activities of AMSA Recommendations

PAME will continue to monitor and, as appropriate, identify opportunities to engage and collaborate with international organizations and others on issues of common interest to advance implementation of the AMSA Recommendations and other Arctic Council-related shipping recommendations such as the Arctic Ocean Review (AOR) Final Report Recommendations (U.S. lead). In cooperation with the IMO and World Maritime University (WMU), PAME will plan and convene an International Conference on Safe and Sustainable Shipping in a Changing Arctic Environment in August 2015 (leads: Sweden, Canada, U.S.). PAME will also continue to promote collaboration among Arctic states as they implement the Polar Code and follow-up on the Heavy Fuel Oil Phase II and II(b) Reports. Further project proposals for the additional activities will be developed subject to funding, including a compendium of case study information on maritime incidents in the Arctic that resulted in a spill or release of HFO and the environmental impact thereof (leads: Canada, U.S., Norway), and a project that describes the technical challenges and risks that arise from using HFO as fuel for ships especially in cold climates (lead: Norway).

### Tourism and Shipping Initiatives

PAME will work on strengthening passenger ship safety in Arctic waters by following up on the Arctic Marine Tourism Project's (AMTP) voluntary best practice guidelines. Examples of possible follow up actions include developing proposals for a site-specific guideline template, or compiling and updating a publicly available repository of Arctic marine tourism information (leads: Canada and U.S.).

To strengthen ties to Arctic communities, PAME will undertake a project on Arctic Indigenous Use Mapping: Tools for Communities (leads AIA, U.S.) and the MEMA project on meaningful engagement of Indigenous Peoples and local communities in marine activities. This is a cross-cutting shipping, and oil and gas project.

An Arctic Regional Reception Facilities Plan will be prepared as a long-term solution, meeting the challenges facing the expected increases in shipping for the foreseeable future. The aim is to allow for the environmentally sound management of ship's waste and ensure that ships can comply with MARPOL in the Arctic. While the important work of the Polar Code and other bodies continues, this project does not attempt to circumvent any other work and is in keeping with established principles and existing IMO/MARPOL guidance and will compliment any work being undertaken by IMO or other bodies. This project will list all types of ships and the needs of each type of ship and identify the route(s) and ports of call for ships in the region. This plan will be specific to one or more regions of the Arctic taking into consideration relevant circumstances to ensure that ships transiting Arctic regions can comply with all applicable provisions of MARPOL. Consideration will be given to applicable international regulatory schemes with special attention to the Polar Code, when it comes into force in 2017; other IMO Guidance; ISO Standards; and National, state, and local regulations. Leads: Russia, U.S. with the PAME/Project Team. Timeline: the project should be finalized by the end of 2016.

PAME will follow-up on oil spill prevention activities based on the outcome of the Task Force on Arctic Marine Oil Pollution Prevention (TFOPP), with details on specific activities to be identified intersessionally.

PAME contributions to reducing air emissions will continue by exploring how best to use information compiled on such emissions (especially black carbon) and their effects on the marine environment. Leads: Norway, U.S.

The Arctic Marine Traffic Systems initiative will continue to pursue opportunities including, as appropriate, through the proposed Arctic Shipping Data Service (ASDS), for updating Arctic ship traffic data contained in the AMSA Report for use in studies, assessments, trend analyses, and the development of recommendations that enhance Arctic marine safety and support protection of Arctic people and the environment. Leads: PAME Secretariat, Norway, U.S. and the PAME shipping expert group.

PAME will produce a fourth AMSA Shipping Progress Implementation Report (covering the period 2015-2017) for submission to the Arctic Council Ministerial meeting in 2017. This report will also address progress on other Arctic Council shipping-related mandates and recommendations, including those set forth in the Arctic Ocean Review Report and the Arctic Biodiversity Assessment. Leads: Finland, Iceland, Norway.

## Oil and Gas Initiatives

A new MEMA project on meaningful engagement of Indigenous Peoples and local communities in marine activities will cover all Arctic marine and coastal activities, including shipping, offshore oil and gas activities, coastal infrastructure development, and research and management activities. The information to be compiled will come from Arctic Council documents and reports, national legal regimes and guidance of Arctic states, guidelines and declarations from communities and indigenous organizations, international instruments, and guidance from industry, NGOs and other stakeholders. This is a cross-cutting shipping and oil and gas project.

The website Arctic Offshore Oil and Gas Regulatory Resource (AOGRR) has been redesigned and provides links to specific information on national websites related to management, regulation, and enforcement of Arctic offshore oil and gas activities. Member states are in the process of supplying relevant links and explanatory information.

Selected updates of the Arctic Offshore Oil and Gas Guidelines 2009: The Oil and Gas Contact Group will consider the development of project proposals for environmental monitoring of operations, waste management, discharge of chemicals and emissions for possible inclusion in the PAME Workplan 2017-2019. The Contact Group will respond as appropriate to AMSP Strategic actions and themes and projects of the 2015-2017 U.S. Chairmanship.

## Arctic Marine Strategic Plan

PAME will undertake implementation of the Arctic Marine Strategic Plan (2015-2025): Implementation plan to be developed during the period 2015-2017, and the aim is that specific activities will become integral part of future PAME work plans as approved at the biennial Arctic Council ministerial meetings. Leads: all members and the PAME Secretariat.

## Joint Ecosystem Approach Expert Group

Ongoing activities based on the work of the Joint Ecosystem Approach Expert Group as per the revised terms of references. The activities are structured according to the six identified elements in the framework for implementation of the Ecosystem Approach (EA) and will include activities such as contributing to the development of ecological objectives by convening a workshop, preparing a scoping white paper on the issue of developing ecological objectives by Arctic States, PPs, and AC working groups and prepare a report Status of Setting Ecological Objectives in the Arctic for the SAO meeting in spring 2016. As well, conduct follow-up actions on Integrated Ecosystem Assessments (IEA) to consider methodological developments in IEA in collaboration with ICES and other relevant organizations, and prepare a briefing on Integrated Ecosystem Assessments of Arctic LMEs for consideration by the working groups 2016 or 2017.



In implementing an ecosystem approach in the Arctic, the Expert Group will convene a workshop or conference on the status of implementing the EA in the Arctic in 2016 to be followed up with an appropriate report to Ministers in 2017 on Status of Implementation of the Ecosystem Approach to Management in the Arctic. The Expert Group will also consider issues of scale in EA by preparing a scoping document on the relationships between the specific ecosystem scale and the wider pan-Arctic scale.

These activities will be supported by the development of a network of experts working to implement EA in the Arctic, and support the development of a bibliographic resource that identifies key works in EA and IEA, as well as twice-yearly progress reports on the work to PAME and the other AC WGs.

### Information outreach, capacity building and collaboration

This work includes: liaise and exchange information with relevant organizations and programs (e.g. UNEP Regional Seas Programme) regions, and other regional programs; encourage activities and proposals from Permanent Participants, review work plans of other AC WGs to identify areas for cooperation and respond accordingly; and strive for the development of outreach and communication efforts and plans for PAMEs activities (e.g. through updates on the PAME homepage, brochures, roll-up stands and other communication material). Leads: PAME Chair/Secretariat



## SUSTAINABLE DEVELOPMENT WORKING GROUP (SDWG)

### Benefits to people living in the Arctic

- Improved energy affordability and reduced dependence on fossil fuels in remote Arctic communities through renewable energy
- Attendees of the Arctic Energy Summit address energy as a fundamental element of the sustainable development of the Arctic
- The Arctic Adaptation Exchange will continue to help circumpolar communities develop innovative approaches to climate change adaptation.
- Encourage efficient methods for delivering clean water and sewage disposal services to improve public health in remote communities
- Provide Arctic residents and policymakers with tools to assess freshwater vulnerability and improve local water management
- The One Health approach better assesses health issues at the interface between humans, animals and ecosystems.
- Enhance the ability of health workers and policy-makers to scale-up suicide interventions and measure progress through common metrics
- ECONOR III will provide a statistical overview of the economies, social conditions, and environmental change in the Arctic
- The potential for the Arctic to increase food production and increase added-value of food from the Arctic can enhance food security.
- Capturing the Traditional Knowledge and food cultures of Indigenous reindeer herders will support sustainable development in the Arctic
- The implementation and use of Traditional and Local Knowledge in Arctic Council work will lead to better results
- Updated data and analysis is needed to better understand the trends and threats to Arctic Indigenous language vitality

### SUMMARY

The Sustainable Development Working Group (SDWG) will continue to address the human dimension of the Arctic by pursuing initiatives that provide practical knowledge and contribute to building the capacity of indigenous peoples and Arctic communities to respond to the challenges and opportunities in the Arctic region.

## DELIVERABLES/ACHIEVEMENTS

### Addressing Energy Security in Remote Arctic Communities

Many remote Arctic communities rely on diesel fuel to generate electricity—fuel that which is expensive to transport, generates black carbon, contaminates the environment and harms residents' health. Energy security for residents in remote Arctic communities can be strengthened through increasing the use of renewable energy and improvements to energy efficiency. The SDWG will work on exploring and developing projects which enhance energy security through these measures over the course of the U.S. Chairmanship and beyond. At a minimum, this work will include a U.S.-led project called the Remote Communities Renewable Energy (RCRE) partnership. This project aims to develop a modular system pairing renewable energy technology, such as wind turbines, with diesel generators and energy-storage devices to power micro-grid systems in small Arctic communities. Other projects that address energy security in Arctic communities may also be added to this project cluster.

### Arctic Energy Summit

The SDWG will support the Arctic Energy Summit (AES), a multi-disciplinary event drawing together industry executives, government agency officials and policy makers, researchers, energy professionals and community leaders to collaborate on, and share innovative approaches to, Arctic energy issues. The 2015 Summit will address renewable energy, oil and gas exploration and production, remote and rural heat and power, and energy transportation and transmission. As has been done in the past, the AES would produce a summary report and present it to the SDWG at their meeting immediately following the 2015 Summit.

### Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change

This initiative will continue to support the online portal, in association with the University of Alaska Fairbanks, focused on adaptation to foster innovative approaches to climate change adaptation and enhance adaptive capacity. To the extent possible, Member States will build on their open-data policies to consolidate and facilitate access to their respective climate-related Arctic datasets, and link this data to the Arctic Adaptation Exchange Portal. All Arctic Council working groups are also encouraged to submit links to their various datasets and/or reports related to adaptation.

## Arctic Water Resources Vulnerability Index

In coordination with AMAP, this project will internationalize the University of Alaska-Fairbanks' Arctic Water Resource Vulnerability Index (AWRVI) to provide Arctic communities with a valuable tool to assess the status of their freshwater resources. The expanded assessment will then feed into the Arctic Adaptation Exchange Portal developed by the SDWG during the Canadian chairmanship, allowing local government officials, researchers and residents to evaluate their communities' freshwater resiliency and address vulnerabilities.

## Community Water, Sanitation and Public Health

Capitalizing on the results of the Alaska Water and Sewer Challenge, this project will focus on decentralized water and wastewater treatment, recycling and usage efficiency. A workshop will be convened to facilitate collaboration between researchers, engineers, manufacturers, vendors and health experts on measures to increase access to, and reduce the operating costs of, in-home running water and sewer in remote communities, attract investment, improve public health, and spur public-private partnerships. The workshop will also serve as a platform to report on a circumpolar health assessment of existing community systems, water quality and quantity, utilization of traditional water sources and related health indicators.

## Operationalizing One Health in the Arctic

One Health is an interdisciplinary approach to assess health issues at the interface between humans, animals and ecosystems. By the end of the US chairmanship, the SDWG will have taken steps to institutionalize the practice of One Health across the Arctic region, and will have contributed key findings to Arctic Council reports, as well as relevant meetings. Hubs will be designated to serve as Points of Contact (PoCs) for Member States and Permanent Participants. A circumpolar-agreed checklist will be developed to measure progress towards on-the-ground implementation of One Health, inform priority-setting and facilitate non-expert engagement with the initiative.

## Suicide Prevention and Resilience

The RISING SUN project (Reducing the Incidence of Suicide in Indigenous Groups – Strengths United through Networks) aims to create common metrics for evaluating suicide prevention efforts in the Arctic as a key component of scaling up and evaluating interventions across the circumpolar region. Complementing the mental health work completed under the Canadian chairmanship, the common metrics, developed through engagement with Permanent Participants and community leaders, will aid health workers and policy-makers in measuring progress and identifying challenges by facilitating data sharing and pooling, evaluation, and interpretation across service systems.

## ECONOR III

ECONOR III will give a statistical overview of the economy, social conditions and environmental change in the Arctic. The project is led by Statistics Norway but the national statistic agencies in all the eight Arctic states contribute into the project. The project will be finalized in 2016, with a summary for policymakers ready for the 2017 Ministerial.

## The Arctic as a Food-Producing Region

The purpose of this project is to assess the potential for increased production and added value of food from the Arctic. The project will give an overview of the status of, and the potential for, various food production options in the Arctic. Further, it will assess the added value of these products when marketed by their special qualities and unique origin. The project will also identify factors that are important to further develop the Arctic as a food-producing region

## EALLU – Arctic Indigenous Youth, Climate Change and Food Culture

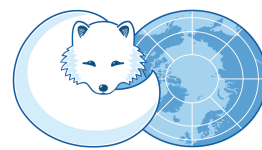
The EALLU project will maintain and further develop sustainable and resilient reindeer husbandry in the Arctic in the face of climate change and globalization to work towards a vision of creating a better life for circumpolar reindeer herders. The project will raise awareness of climate change among indigenous youth groups, document and raise awareness of the traditional knowledge of food cultures of Arctic indigenous reindeer herding peoples, and stimulate business development and local value-added in Arctic indigenous peoples' regions.

## Use of Traditional and Local Knowledge in the work of the Arctic Council

The SDWG will work in collaboration with Working Groups and Task Forces to implement the recommendations developed through the Integrating Traditional and Local Knowledge initiative towards the consistent and practical use of traditional and local knowledge in the work of the Arctic Council.

## Assessing, Monitoring and Promoting Arctic Indigenous Languages

The ICC-led work on assessing, monitoring and promoting Arctic indigenous languages will continue during 2015-17 building on the research results of the first phase under the Swedish and Canadian chairmanships as well as the outcomes of the February 2015 Symposium.



## 2. Work Plans of the Task Forces

### TASK FORCE ON ARCTIC MARINE COOPERATION

With the opening of the Arctic marine environment as a result of diminished sea ice among other things, the time has come to explore the need for deepened cooperation in a range of areas. The Arctic Council working groups do outstanding, cutting edge work within their mandates. A cross-cutting effort that would look broadly at how our cooperation is working and how we might enhance collaborative efforts in the Arctic marine environment is a useful topic for a Task Force to explore.

The recommended composition and terms of reference of the Task Force are as follows:

**Name:** Task Force on Arctic Marine Cooperation (TFAMC)

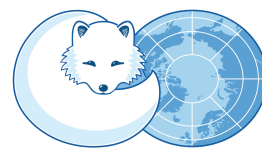
**Members:** Representatives from the Arctic States, Permanent Participants, observers, and invited experts as may be necessary.

**Co-Chairs:** United States and Norway

**Administration:** Meetings of the Task Force should take place back-to-back with meetings of the PAME working group. The ACS will administratively support the Task Force.

**Deliverable and timing:** The Task Force should deliver a report to Ministers in 2017 identifying future needs for strengthened cooperation for Arctic marine areas, as well as whether the Council should begin negotiations on a cooperation mechanism for Arctic marine areas – ideally naming the specific mechanism - and/or any other recommendations it may deem appropriate.

**Objectives:** A Task Force reporting to the SAOs will be formed with a mandate to consider future needs for strengthened cooperation on Arctic marine areas, as well as mechanism (e.g. regional seas program, or other mechanism as appropriate), to meet these needs, and to make recommendations on the nature and scope of any such mechanisms. It should be noted that a decision by Ministers to form this Task Force would not constitute a decision to establish a cooperation mechanism. Arctic States would consider this decision at a later time, with the benefit of the Task Force's analysis and recommendations. In conducting the needs analysis, the Task Force should provide answers to the basic questions outlined below, which are by no means exhaustive.



## 1. Mandate and Scope

- What functions could a cooperative mechanism serve? Should a cooperative mechanism promote relatively informal coordination (e.g., by serving as a forum in which domestic officials responsible for specific aspects of domestic ocean management discuss shared challenges and best practices designed to address those challenges), or should it promote more formal coordination among countries of management measures? Should it serve as a mechanism to promote and coordinate efforts to improve scientific understanding of Arctic marine areas such as ocean acidification, marine debris effects, sea ice monitoring, etc.?
- Should a cooperative mechanism have a defined geographic scope such as, for example, the high seas area of the Arctic Ocean and/or other (seabed) areas beyond national jurisdiction?
- What would be the relationship between the work of a cooperative mechanism and the work of other institutions or mechanisms serving similar functions in adjacent or overlapping areas (such as AOOS, OSPAR, HELCOM, ICES and PICES, among others)?

## 2. Relationship to the Arctic Council

- Should a cooperative mechanism fit within the Arctic Council's existing structure (e.g. as part of PAME), or should it be established as a separate mechanism with a defined relationship to the Council?
- Questions of membership and participatory rights in a cooperative mechanism may bear on these considerations.

## 3. Legal Form

- Questions of legal form—whether a cooperative mechanism should be based on a legally binding agreement, or a non-binding alternative, will depend on answers to the substantive questions outlined above, and should only be taken up after a consensus on the substance begins to emerge.

### Timeline:

- The Task Force should hold its first meeting no later than autumn 2015.
- The Task Force should complete its analysis of the issues outlined above no later than the 2017 Ministerial meeting.

## TASK FORCE ON TELECOMMUNICATIONS INFRASTRUCTURE IN THE ARCTIC (TFTIA)

The existing telecommunications infrastructure in the Arctic is not sufficient to meet current demands for modern community needs, regional connectivity, human services, scientific observations, navigation, and support for potential emergency SAR or oil spill response. To adequately meet increased needs of maritime and human activity and to improve the quality of life for Arctic residents, there is a strong need to assess, and ultimately expand telecommunications infrastructure.

The recommended composition and terms of reference of the Task Force are as follows:

**Name:** Task Force on Telecommunications Infrastructure in the Arctic (TFTIA)

**Members:** Representatives from the Arctic States, Permanent Participants, observers, the telecommunications industry, and end user groups

**Co-Chairs:** Norway and others TBD

**Administration:** The ACS will administratively support the Task Force.

**Deliverable and timing:** The Arctic Telecommunications Infrastructure Assessment should be completed by the 2017 Ministerial meeting, but may require more time to complete. An eventual build-out of an Arctic-wide telecom infrastructure is a long-term, multi-year endeavour.

**Objectives:** A Task Force reporting directly to the SAOs will be formed, consisting of representatives of the Arctic States, Permanent Participations, the telecommunications industry, and end user groups, to coordinate a circumpolar assessment of telecommunications infrastructure and networks. The Task Force would deliver a completed assessment to include, among other things, recommendations for public-private partnerships to enhance telecommunications access and service in the Arctic. The results of this assessment could be made publicly available on the Arctic Maritime and Aviation Transportation Infrastructure Initiative (AMATII) website and would be presented at the appropriate international fora with a strong message from the Arctic States to make the Arctic a top priority for future telecommunications investment.

**Timeline:** The Task Force should hold its first meeting no later than autumn 2015.



## Part C: Annex Documents

### Arctic Council Secretariat Biennial Work Plan and Proposed Budget for 2016 And 2017

Submitted by the Director of the Arctic Council Secretariat  
9<sup>th</sup> Arctic Council Ministerial Meeting  
Iqaluit, Nunavut, Canada  
April 2015

The work plan for the Arctic Council Secretariat (ACS) for the period 2016-2017, as presented here, was approved by Senior Arctic Officials at the SAO meeting in Whitehorse, Canada in March 2015 in accordance with the Terms of Reference of the Arctic Council Secretariat. Full implementation of this work plan is subject to approval of the associated budget, which is planned for consideration at the Arctic Council Ministerial Meeting in Iqaluit, Canada in April 2015.

## 1. INTRODUCTION

This biennial work plan for the standing Arctic Council Secretariat (ACS) for the calendar years 2016 and 2017 is the second biennial work plan for the ACS. It covers the United States' chairmanship of the Arctic Council during the entirety of 2016 and through the spring of 2017, as well as the beginning of Finland's chairmanship of the Arctic Council in 2017, and runs through the end of that calendar year.

The work plan builds in broad terms upon the ACS Terms of Reference and upon the Communications Implementation Plan for the Arctic Council Secretariat as approved by Senior Arctic Officials in March of 2014. In large measure, the work plan reflects a continuation of the routines, practices and tasks that were identified in the first biennial work plan or decided later in coordination with the Arctic Council chairmanship and/or the Senior Arctic Officials. Furthermore, the work plan reflects other tasks likely to be undertaken by the ACS at the request of the Chairmanship or the SAOs, subject to the availability of the necessary resources.

Apart from the individual issues and tasks listed in the work plan, the ACS will draw upon its experience and knowledge of past practices in the Arctic Council to advise the Chairmanship and other members of the Arctic Council, as appropriate, on all relevant issues with respect to the Council's ongoing work.

## 2. SECRETARIAT SUPPORT OF THE ARCTIC COUNCIL

The ACS will provide secretariat support for the Arctic Council and, in particular, for the Chairmanships of the United States and of Finland, in accordance with the ACS Terms of Reference and as further detailed in this work plan. The work of the ACS will be undertaken as appropriate in cooperation with, and under the direction of, the SAO Chair. The support from the ACS can be broadly divided into four categories as follows.

- General support to the chairmanship, SAOs, PPs and other Arctic Council stakeholders
- Administrative continuity and capacity
- Communications and outreach
- Russian language services

### 2a. General support to the Chairmanship and the Arctic Council

The ACS will:

- Attend SAO meetings and Ministerial meetings; provide support for logistical and practical preparations including, *inter alia*, registration of participants and hosting of meeting web sites; assist with preparation and publishing of agendas and meeting documents; take minutes from meetings and prepare meeting reports.

- Manage the Arctic Council Chair email account and assist the SAO Chair in daily correspondence; receive correspondence to the Arctic Council and distribute it as appropriate; draft responses for the SAO Chair's consideration; coordinate with Arctic States, Permanent Participants, Working Groups, Task Forces and others as appropriate.
- Provide support as requested, as appropriate, and as resources permit during Working Group, Task Force and expert group meetings.
- Coordinate, collect and consolidate input to reports and other documents from SAOs, Permanent Participants, Working Groups, Task Forces, expert groups, other Arctic Council subsidiary bodies, and accredited Observers.
- Ensure distribution of reports and other documents as needed to SAOs, Permanent Participants, Working Groups, Task Forces, expert groups, other Arctic Council subsidiary bodies, and accredited Observers.
- Support Observers, in accordance with the Observer Manual, including relating to entities applying for Observer status.
- Undertake other tasks as requested by the Chairmanship or the SAOs, subject to the availability of the necessary resources.

## 2b. Administrative continuity

To help ensure the smooth functioning of the Arctic Council, the ACS will do the following.

- Maintain and update distribution lists, contacts and focal points, and make updated lists available to the Arctic Council subsidiary bodies. In addition, distribute emails as appropriate on behalf of SAOs and/or Permanent Participants to relevant recipients via the Arctic Council Secretariat email account.
- Maintain and further develop relevant Arctic Council archives and ensure that important documentation is kept in a safe and appropriate manner.
- Support the Chairmanship in its working processes and keep track of formal deadlines of the Arctic Council as appropriate.
- During the lead-up to the Finnish Chairmanship (2017-2019), work with Finnish representatives to prepare.

## 2c. Communications and outreach

The ACS will undertake the following:

- Maintain and develop the Arctic Council website and the Arctic Council-branded social media accounts.
- Facilitate information-sharing and timely responses to questions about the Arctic Council.
- Relate to external stakeholders at the request of the Chairmanship or SAOs (see section 5 for more details).

## 2d. Russian language services

The ACS will provide Russian language services, including the following.

- Translate the main documents for Arctic Council Ministerial meetings and SAO meetings (e.g., agendas, meeting reports, key reports and report summaries) into Russian.
- Translate website content into Russian on the main Arctic Council website.
- As appropriate, and as resources permit, translate Arctic Council communication and outreach materials, or other documents or materials.
- Subject to approval by the Director, provide language assistance, including interpretation, to the Working Groups, Task Forces and other subsidiary bodies.
- Develop an English-Russian glossary of terms used in the work of the Arctic Council.
- Provide other Russian language-related support as instructed by the Director.

## 3. OVERVIEW AND COORDINATION OF ARCTIC COUNCIL ACTIVITIES

The ACS will endeavor to provide a comprehensive overview of Arctic Council activities, including specific reporting on particular elements of interests, as directed by the Chairmanship or by SAOs. Where appropriate and where desired, the ACS will also assist the Chairmanship in monitoring cross-cutting projects. Tasks associated with this element of the ACS's work may include the following.

- Coordinate with the Chairmanship to continue to develop and improve the comprehensiveness and usability of the Tracking Tool, a database of all ongoing Arctic Council projects. The Tracking Tool should serve to help Arctic Council members, as well as Observers and the general public, to better appreciate the breadth and diversity of the Arctic Council's work, as well as to track progress and coordinate cross-cutting efforts.
- As directed by SAOs, continue to maintain and update the information contained in the project costing database and work to improve its usability. In the long term, work towards the creation of a unified database merging the Tracking Tool and the project costing database.
- As directed by SAOs, continue to develop a database of Arctic Council decisions since the Council's founding in 1996. In the long term, consider whether it is feasible to link this database of decisions with the Tracking Tool and with the project costing database.
- With assistance from the Member States, Permanent Participants, Working Groups and Task Forces, work to identify good opportunities to schedule Working Group and Task Force meetings close to one another to facilitate participation.

## **4. SECRETARIAT FUNCTIONS FOR ACAP, EPPR AND SUPPORT TO OTHER SUBSIDIARY BODIES**

### **4a. Secretariat functions for ACAP and EPPR**

The ACS will act as Executive Secretary for the Emergency, Preparedness, Prevention and Response Working Group (EPPR) and the Arctic Contaminants Action Program Working Group (ACAP). The main goal of the ACS is to ensure continuity, avoid duplication and make the work of EPPR and ACAP even more effective. This work will be carried out in close cooperation with the Chairs of ACAP and EPPR and will include the following tasks.

- Maintain the Working Groups' calendars and provide notification of deadlines, including requesting and distributing meeting documents prior to the Working Group meetings.
- Work with the Working Group Chairs to develop meeting agendas and prepare all pre- and post- meeting reports to Ministers/SAOs.
- Maintain Working Group e-mail lists and websites, including the password-protected areas. Develop website content in cooperation with the Working Group Chair(s), with the majority of the content being produced by the Chair(s) and members of the Working Group.
- In cooperation with the host country, assist in making meeting arrangements and manage meeting registrations.
- Represent EPPR and ACAP at Executive Secretary meetings.
- Promote the accomplishments of EPPR and ACAP.

### **4b. Support to Other Subsidiary Bodies**

The ACS will provide administrative and secretariat support to the Arctic Council Task Forces, expert groups and other subsidiary bodies, as requested and as resources permit. Such support may, at the discretion of the ACS Director and relevant Chair(s), include the duties listed above in Section 4a. In addition, by request and as resources allow, the ACS may undertake the following tasks.

- Translate meeting documents, materials and deliverables from and into Russian.
- Provide simultaneous and consecutive interpretation at meetings.

## **5. COMMUNICATION AND OUTREACH ACTIVITIES**

Under the direction of and in close cooperation with the Chairmanship, the ACS will coordinate the overall outreach and communications under the Arctic Council brand. Building upon the approved Communications Strategy for the Arctic Council and on the Communications Implementation Plan for the Arctic Council Secretariat, which was approved at the Yellowknife SAO meeting in March 2014, the ACS will carry out the following tasks.

### 5a. Website management

- Upgrade as appropriate the technical framework and structure of the websites hosted on the ACS server in order to ensure maximum user-friendliness, compatibility and stability and monitor website statistics and make changes as necessary to encourage increased visitor traffic to the site(s).
- Further expand the quantity and diversity of material available on the Arctic Council website by working closely with the Chairmanship, SAOs, and Working Groups. In addition, the ACS will make efforts to highlight content from other sources (e.g., social media, external news sources, videos, photos, archive documents etc.).
- Improve the archive section of the Arctic Council website in order to provide easier access to both public and password-protected documents. Establish connections between the internal ACS archiving software and the website to minimize effort and avoid duplication.
- Create password-protected sections of the Arctic Council website for meetings and other needs as requested by the Chairmanship and the SAOs.
- Continue to assist Arctic Council entities with website design, hosting and management as outlined in the ACS work plan for 2013-2015.

### 5b. Internal communications and coordination of the Communications & Outreach group

- Expand monitoring of national and international media, reduce the man-hours devoted to such work, and provide regular (daily, weekly or monthly) updates to SAOs and PPs.
- Create and distribute periodic overviews of (1) national and international media attention, (2) statistics from the Arctic Council's social media channels, and (3) statistics from the Arctic Council website to SAOs, PPs, Working Groups and accredited Observers, as well as to all representatives within the Communications and Outreach group.
- For ACS-hosted websites (e.g., EPPR, ACAP and the Open Access archive), and as resources allow, create and distribute periodic overview of website statistics to relevant stakeholders.
- Coordinate meetings of the Communications & Outreach Group as described in the Communications Strategy for the Arctic Council, including both periodic "come-as-you-can" group calls and purpose-specific calls leading up to major meetings.

### 5c. Social media and other content formats

- In close cooperation with the Chairmanship, continue to manage the Arctic Council Facebook and Twitter accounts. Provide suggestions on content and potential expansion of such channels where such opportunities exist. Explore opportunities for collaboration with other social media accounts within the Arctic Council network.
- Cooperate with the Chairmanship, with other Arctic Council entities and, where necessary, with external contractors to plan and produce or acquire multimedia content (video, audio, images) for use by Arctic Council entities.

### 5d. Working with external media

- In close cooperation with the Chairmanship, continue to serve as a first point of contact for Arctic Council media inquiries and facilitate timely communication between the media and Arctic Council representatives who can respond to questions.
- Develop interviews, statements, opinion pieces and/or any other forms of Arctic Council content for proactive placement in media outlets that reach the Arctic Council's target audiences as identified in the Communications Strategy for the Arctic Council and the Communications Implementation Plan for the Arctic Council Secretariat.
- Strengthen relationships with key partners in international and national media.

### 5e. Representations of the Arctic Council

- Continue to welcome guests (e.g., state delegations, students, academics, journalists or others) who ask to visit the ACS offices in Tromsø. Upon request, provide basic briefings on the current priorities of the Arctic Council, its structure and functioning, its history, and the work of the ACS in particular.
- Attend selected key non-Arctic Council conferences and events as time, resources and budget permit, and in coordination with the Chairmanship. Use these events as opportunities to distribute informational materials about the Council and its work, and to make person-to-person connections with individuals in many of the target groups identified in the Communications Strategy for the Arctic Council.
- Continue to work to create products (e.g., professionally laid-out and printed versions of Declarations, or Arctic Council pins) appropriate for distribution to participants and the public at meetings, conferences and other events.

## 6. ADMINISTRATIVE FUNCTIONS

Since the establishment of the ACS, its administrative functions have been continuously tested, reviewed and improved. This development will continue in the 2016-2017 period, although all basic administrative systems are in place and functioning well. As of February 2015, the size of the ACS staff is a good fit for the suite of tasks currently required of the Secretariat.

2017 will mark the end of the Arctic Council Secretariat's first four years in existence. During 2017, five employee contracts will expire (between February and September), as will several contracts with suppliers. This underlying fact will determine many of the internal administrative activities of the ACS during the work plan period. In addition, the potential relocation of the Indigenous Peoples Secretariat to Tromsø could lead to new responsibilities for the ACS and would imply an increase in ACS staff. Otherwise, there are no planned additions to the ACS staff during the work plan period, unless necessitated by the assignment of additional tasks to the ACS by SAOs.

### 6a. Staff recruitment, assessment, development and welfare

Developing and strengthening the human resources of the ACS will remain a high priority. Should SAOs decide to integrate the IPS with the ACS, it will certainly have an impact on the scope of this field of work during 2016 and 2017, but without altering the general aims of ACS in this area. During 2016-2017, the ACS will undertake the following tasks.

- Respond to the possible need to recruit many new staff members during 2017, as many staff members' contracts will expire between February and September of that year. If mutual agreement is reached, some or all staff members may stay on with the ACS for another four-year period, reducing this element of the ACS's work.
- Conduct recruitment processes as needed in the fall of 2016 and spring/summer of 2017. As needed, develop work descriptions and announcements, review applications, conduct interviews, check references, negotiate contracts and arrange relocation of new employees to Tromsø. Depending on the number of new recruitments, this could be a major undertaking for the ACS in this period.
- Continue its ongoing dialogue with host country authorities in terms of accommodating the distinct needs of international staff members and making the transition for new staff members to Tromsø as smooth as possible.
- Work with Member States to explore the possibility of secondments to the ACS. Secondments to the ACS have thus far proven to be beneficial; the ACS will work to accommodate future such arrangements where appropriate and as resources permit.
- Perform annual appraisal conversations with all staff members, using the template developed for this purpose, to get a clear sense of how each employee is thriving and performing. Determine from the results of the appraisal conversations what kind of training would benefit each employee in the performance of his or her duties.



- Arrange training, presentations and other development events to obtain external professional input on certain working areas (e.g., communications or cross-cultural understanding) and strengthen cohesion between ACS employees.

#### 6b. Suppliers and agreements

The ACS will perform a review of existing contracts, including services such as accounting/payroll and IT-support, to determine if existing arrangements are adequate or if the ACS should consider other options. If the review of suppliers indicates that the ACS should change one or several suppliers, then some transition costs may apply.

#### 6c. Rent and premises

As of January 2015, initial plans for new premises for the ACS offices are delayed, and there is uncertainty as to when Fram II (a new building, intended to be the future location of the ACS offices) will be ready. Fram II is unlikely to be completed during the work plan period of 2016-2017. As of this writing, the ACS is renting offices at the Fram Centre through the Norwegian Polar Institute. Depending on the final decision on the construction of the Fram II, the issue of housing for the ACS offices may have to be raised either before or during the work plan period.

#### 6d. Budget for 2016-2017

The ACS has prepared a draft budget for 2016 and 2017 which is associated with this Work Plan. Due to the many uncertainties mentioned above regarding key considerations such as recruitment and office space, it may become necessary for practical reasons to revisit the budget during the 2016-2017 period. In that case, additional work will be necessary to assess and make any necessary adjustments.

### 7. ARCHIVING

The ACS will continue to implement the archiving work as outlined in the Policy on ACS Records Management, the Guidelines for the Disposition of ACS Records, the Guidelines for the Release of ACS Records, the Guidelines for Access to ACS Records, and the Integrated Records Management Tool documents, all of which have been approved by SAOs. The internal ACS archive, which consists of records (for example, administrative documents and internal correspondence) held by the ACS, will be maintained and updated, with guidance sought from SAOs as necessary. Priority will be placed on sourcing all historical Arctic Council documents in order to complete the collection of these documents by the end of 2016 and to sort them systematically. A more robust and accessible photography archive will also be developed.

## **8. OPEN ACCESS REPOSITORY DEVELOPMENT**

The ACS will maintain the Open Access repository and work to ensure that it includes all significant Arctic Council products, including, but not limited to, Working Group publications and reports from subsidiary bodies. When possible and appropriate, work will be done to link the Open Access repository with other portals, archives, and databases to increase document distribution.

## **9. 20TH ANNIVERSARY OF THE ARCTIC COUNCIL**

The Arctic Council will mark its 20th anniversary on 19 September 2016. The ACS will support and assist the US Chairmanship in marking the anniversary in an appropriate manner. The ACS will coordinate with the US Chairmanship and support the Host Country, the Government of Norway, to stage an event in Tromsø to celebrate the 20 year anniversary at a convenient time in 2016.

## **10. BIENNIAL WORK PLAN, BUDGETS AND REPORTING**

The ACS will:

- Prepare a work plan for the period 2018-2019 for submission to SAOs prior to the 10th Ministerial Meeting, expected to take place in the United States in 2017.
- Prepare a budget for the period 2018-2019 for submission to SAOs and consideration by Ministers at the 10th Ministerial Meeting, expected to take place in the United States in 2017.
- Report on ACS operations and activities at each meeting of Senior Arctic Officials.

## ARCTIC COUNCIL SECRETARIAT PROPOSED BIENNIAL BUDGET 2016-2017

The Arctic Council Secretariat (ACS) has prepared a proposed budget for 2016 and 2017 in accordance with the ACS Terms of Reference Art. 6.1. The proposal is based on the biennial work plan of the ACS for 2016-2017, which was approved by SAOs at the SAO meeting in Whitehorse in March 2015. The ACS is planning to function with the same number of staff and does not expect any fundamental changes in its operations during 2016 and 2017. The increase in the draft budget from 2015 to 2016 and 2017 is primarily due to the following three factors.

First: Norway has generously seconded the position of deputy director at the ACS since 2013. From August 1st 2015, the ACS will have to finance this position, including costs related to recruitment and possible moving- and establishment allowance.

Second: The cost of professional services (e.g. audit, accounting, payroll, IT, communications, website), has been growing in accordance with natural growth in the Secretariat's activities. Based on experience, it is also evident that the actual costs for accounting/payroll and IT-services are higher than originally estimated.

Third: Five employment contracts expire during 2017. According to ACS Staff Rules Art. 5.3, it is possible to prolong appointments for up to four years<sup>1</sup>. It is of course impossible to predict at present how many new recruitments will be made in 2017. However, the ACS has assumed that up to three new recruitments will be made, hence the extra costs for recruitment and for establishment/moving allowance.

With this uncertainty taken into account, a miscellaneous category under "staff expenses" has been established in order to cover additional unforeseen costs in relation to possible recruitment processes; indeed, the actual number of new contracts in 2017 may be higher than three. It is also worth noting that the cost for overhead/office is anticipated to be lower for the period 2016-2017 than in 2014 and 2015 (expected). Costs related to travel are also expected to be lower in 2017 and 2018, as the Chairmanship will in 2017 return to Europe.

Any cash surplus will, in accordance with the Financial Rules Art. 5.6, be accounted for in the contributions of Arctic states for the following year; *"...The determined surplus shall be pro-rated for each state and shall be subtracted from the annual contribution"*.

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<sup>1</sup> For staff members in the Professional staff category.



Arctic Council Secretariat - budget for 2016

EXPENSES	NOK	USD
<b>STAFF</b>		
Prof. Staff, salaries/social ben.	kr 4,912,839.00	\$ 805,383.00
Home travels	kr 50,000.00	\$ 8,197.00
Gen. Staff, salaries/social ben.	kr 794,711.00	\$ 130,280.00
Insurance	kr 23,000.00	\$ 3,770.00
Training and development	kr 100,000.00	\$ 16,393.00
Miscellaneous	kr 250,000.00	\$ 40,984.00
<b>Staff:</b>	<b>kr 6,130,550.00</b>	<b>\$1,005,007.00</b>
<b>RENT</b>		
Rent of offices		
<b>Rent:</b>	<b>kr 752,000.00</b>	<b>\$ 123,279.00</b>
<b>PROFESSIONAL SERVICES</b>		
Audit, annual fee and consulting	kr 64,000.00	\$ 10,492.00
Accounting and payroll	kr 210,000.00	\$ 34,426.00
IT	kr 274,628.00	\$ 45,021.00
Communications	kr 189,000.00	\$ 30,984.00
Website and consultant	kr 140,000.00	\$ 22,951.00
E-Docs, Archive	kr 75,000.00	\$ 12,295.00
Photo project	kr 80,000.00	\$ 13,115.00
Miscellaneous	kr 100,000.00	\$ 16,393.00
<b>Prof.servi</b>	<b>kr 1,132,628.00</b>	<b>\$ 185,677.00</b>
<b>OVERHEAD/OFFICE</b>		
PC, phones, videoconf.	kr 237,000.00	\$ 38,852.00
Supplies	kr 75,000.00	\$ 12,295.00
Print and freight	kr 60,000.00	\$ 9,836.00
Subscriptions	kr 12,000.00	\$ 1,967.00
Miscellaneous	kr 50,000.00	\$ 8,197.00
<b>Overhead</b>	<b>kr 434,000.00</b>	<b>\$ 71,148.00</b>
<b>GENERAL ADM.ISSUES</b>		
Recruitment/advert.	kr 50,000.00	\$ 8,197.00
Meetings/representation	kr 150,000.00	\$ 24,590.00
<b>Gen.adm.</b>	<b>kr 200,000.00</b>	<b>\$ 32,787.00</b>
<b>TRAVEL EXPENSES</b>		
Travel	kr 1,350,000.00	\$ 221,311.00
<b>Travel:</b>	<b>kr 1,350,000.00</b>	<b>\$ 221,311.00</b>
<b>AC 20TH ANNIVERSARY</b>		
<b>Anniversa</b>	<b>kr 100,000.00</b>	<b>\$ 16,393.00</b>
<b>TOTAL EXPENSES</b>	<b>kr 10,099,178.00</b>	<b>\$1,655,602.00</b>



INCOME	NOK	USD
<b>CONTRIBUTIONS:</b>		
Denmark	kr 649,152.00	\$ 106,418.00
Canada	kr 649,152.00	\$ 106,418.00
Finland	kr 649,152.00	\$ 106,418.00
Iceland	kr 649,152.00	\$ 106,418.00
Norway	kr 649,152.00	\$ 106,418.00
Russia	kr 649,152.00	\$ 106,418.00
Sweden	kr 649,152.00	\$ 106,418.00
USA	kr 649,152.00	\$ 106,418.00
Total contributions:	kr 5,193,217.00	\$ 851,344.00
Host country contribution, Norway	kr 3,838,465.00	\$ 629,257.00
Translation contribution, Norway	kr 847,496.00	\$ 138,934.00
Internal fee	kr 50,000.00	\$ 8,197.00
VAT refund	kr 100,000.00	\$ 16,393.00
Return of interest	kr 70,000.00	\$ 11,475.00
<b>TOTAL INCOME:</b>	<b>kr 10,099,178.00</b>	<b>\$1,655,600.00</b>

*Based on an exchange rate of 6.100*

**Arctic Council Secretariat - budget for 2017**

<b>EXPENSES</b>	<b>NOK</b>	<b>USD</b>
<b>STAFF</b>		
Prof. Staff, salaries/social ben.	kr 5,010,067.00	\$ 821,322.00
Home travels	kr 100,000.00	\$ 16,393.00
Establishment allowance	kr 300,000.00	\$ 49,180.00
Moving allowance	kr 300,000.00	\$ 49,180.00
Gen.staff, salaries/social ben.	kr 803,038.00	\$ 131,648.00
Insurance	kr 25,000.00	\$ 4,098.00
Training and development	kr 100,000.00	\$ 16,393.00
Miscellaneous	kr 250,000.00	\$ 40,984.00
<b>Staff:</b>	<b>kr 6,888,105.00</b>	<b>\$ 1,129,198.00</b>
<b>RENT</b>		
Rent of offices		
<b>Rent:</b>	<b>kr 782,000.00</b>	<b>\$ 128,197.00</b>
<b>PROFESSIONAL SERVICES</b>		
Audit, annual fee and consulting	kr 70,000.00	\$ 11,475.00
Accounting and payroll	kr 218,400.00	\$ 35,803.00
IT	kr 278,788.00	\$ 45,703.00
Communications	kr 196,560.00	\$ 32,223.00
Website and consultant	kr 145,600.00	\$ 23,869.00
E-Docs, Archive	kr 75,000.00	\$ 12,295.00
Miscellaneous	kr 100,000.00	\$ 16,393.00
<b>Prof.servi</b>	<b>kr 1,084,348.00</b>	<b>\$ 177,762.00</b>
<b>OVERHEAD/OFFICE</b>		
PC, phones, videoconf.	kr 247,000.00	\$ 40,492.00
Supplies	kr 78,000.00	\$ 12,787.00
Print and freight	kr 61,400.00	\$ 10,065.00
Subscriptions	kr 12,000.00	\$ 1,967.00
Miscellaneous	kr 50,000.00	\$ 8,197.00
<b>Overhead</b>	<b>kr 448,400.00</b>	<b>\$ 73,508.00</b>
<b>GENERAL ADMINISTRATIVE ISSUES</b>		
Recruitment/advert.	kr 150,000.00	\$ 24,590.00
Meetings/representation	kr 150,000.00	\$ 24,590.00
<b>Gen.adm.</b>	<b>kr 300,000.00</b>	<b>\$ 49,180.00</b>
<b>TRAVEL</b>		
Travel	kr 1,180,000.00	\$ 193,443.00
<b>Travel:</b>	<b>kr 1,180,000.00</b>	<b>\$ 193,443.00</b>
<b>TOTAL EXPENSES</b>	<b>kr 10,682,853.00</b>	<b>\$ 1,751,288.00</b>

	INCOME	NOK	USD
<b>CONTRIBUTIONS:</b>			
Denmark	kr	686,899.00	\$ 112,606.00
Canada	kr	686,899.00	\$ 112,606.00
Finland	kr	686,899.00	\$ 112,606.00
Iceland	kr	686,899.00	\$ 112,606.00
Norway	kr	686,899.00	\$ 112,606.00
Russia	kr	686,899.00	\$ 112,606.00
Sweden	kr	686,899.00	\$ 112,606.00
USA	kr	686,899.00	\$ 112,606.00
Total contributions:	kr	5,495,190.00	\$ 900,848.00
Host Country Contrib	kr	4,061,663.00	\$ 665,841.00
Translation contribut	kr	846,000.00	\$ 138,689.00
Internal fee	kr	75,000.00	\$ 12,293.00
VAT refund	kr	120,000.00	\$ 19,677.00
Return of interest	kr	85,000.00	\$ 13,940.00
<b>TOTAL INCOME:</b>		<b>kr 10,682,853.00</b>	<b>\$1,751,288.00</b>

*Based on an exchange rate of 6.100*

**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Arctic Contaminants Action Program (ACAP)</b>						
1	2013	2015	1.1 Reduction of Black Carbon from Diesel Sources in the Russian Arctic Project (SLCFC PSG)	U.S.	Assess primary sources of black carbon in the Russian Arctic; develop a baseline emissions inventory for black carbon from diesel in key areas; implement targeted demonstration projects; establish policy recommendations and financing options.	A brochure, available in English and Russian, describing the results have been prepared. ACAP has submitted the English version to Ministers for endorsement.
2	2012	2014	1.2 Reduction of black carbon emissions from residential wood combustion in the Arctic (SLCFC PSG)	Finland, Norway	Compile information on black carbon emissions along with abatement instruments and measures / Phase 1: Desk study on emission inventories and abatement instruments and measures for reduction on black carbon / Phase 2: to be decided	Final Report: Reduction of Black Carbon Emission from Residential Wood Combustion in the Arctic
3	2013	Ongoing	1.3 Arctic Black Carbon Case Studies Platform (SLCFC PSG)	U.S.	Through this project, EPA will work with its partners in ACAP to present a catalogue of black carbon mitigation efforts – a set of standardized case studies or “snapshots” – to capture the variety of interventions and policy tools that can reduce black carbon emissions.	Included in ACAP input to SAO Report to Ministers.
4	2014	Ongoing	1.4 Valday Cluster Upgrade for Black Carbon Reduction in the Republic of Karelia, Russian Federation (SLCFC PSG)	U.S., NEFCO	This project aims to implement a range of alternatives for providing energy to off-grid settlements in this region with the objectives to; 1) contribute to mitigation of pollutants, including SLCPs such as BC and other GHGs; 2) decrease the dependence of the Cluster settlements on transported fossil fuels, 3) reduce the electricity/district heating costs for the municipality; 4) increase the reliability and quality of electricity/district heating supply and 5) strengthen the expertise of the local institutions in the energy supply and project management.	Included in ACAP input to SAO Report to Ministers.
5	2013	Ongoing	2.1 Non-ferrous/Zinc Smelter Mercury Reduction in the Russian Federation (Mercury PSG)	Russian Federation, U.S., NEFCO	The project will seek to identify, develop and apply pollution reduction approaches and technologies to a selected pilot smelter, and monitor the approaches for baseline and progress determinations. The project awaits a signed letter of commitment to participate in the project from the smelter facility owners.	Included in ACAP input to SAO Report to Ministers.



**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Arctic Contaminants Action Program (ACAP)</b>						
6	2010	Ongoing	2.2 Mercury Control Technology Workshop	U.S., Russian Federation	Demonstrates the efficiencies of mercury emissions removal of standard activated carbon and bromated carbon injection / Investigates the stability of ash and sorbent residues and leaching potential of metals / Project Steering Committee will develop a proposal for a project focusing on disseminating and replicating results	
7	2001	Ongoing	3. Phase III: Demonstration of environmentally sound destruction of obsolete pesticides (Obsolete Pesticides PSG)	Finland, Russian Federation	Assess technologies for environmentally sound destruction of obsolete pesticides in Russia and demonstrate destruction of obsolete pesticides. Project will seek synergies with the PCB destruction project for management of PCBs in transformers in Russia. Dependent on availability of destruction technologies or possibilities to export.	Included in ACAP input to SAO Report to Ministers.
8	2001	Ongoing	4. Phase III (Dioxin/Furan PSG) Reduction/Elimination of Emissions of Dioxins and Furans in Russia with a focus on Northern regions	Sweden	Project to reduce dioxins and dust emission and training program for the Vorkutinskiy cement plant	Included in ACAP input to SAO Report to Ministers.
9	2001	Ongoing	5. Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III (PCB PSG)	Russia, U.S., NEFCO	PCB Project addresses mitigation of the PCB problem in RF. The aim is to destroy 250 tons of PCB via two sub-projects: 1. Emptying and cleaning contaminated PCB containing transformers; 2. Destruction of PCB. The method can also be used to destroy other hazardous pollutants e.g. certain types of pesticides.	Included in ACAP input to SAO Report to Ministers.

## Amarok: Arctic Council Tracker (AACT)

Iqaluit 24 April 2015

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Arctic Monitoring and Assessment Programme (AMAP)</b>						
10	2013	2017	1. Adaptation Actions for a Changing Arctic – Part C	All	Implement Phase 2 which includes development of climate scenarios and integrated environmental frameworks/models to improve predictions of climate change and other relevant drivers of change in the 3 pilot regions. Traditional knowledge and PPs are involved in all three regional assessments.	Progress report
11	2013	2015	2. SLCF Expert Group	Canada, Norway, USA	Support work of Task Force for Action on Black Carbon and Methane / Update assessment to include scientific data and information on black carbon, methane and tropospheric ozone from sources inside and outside of the Arctic	Policy-makers summaries; Scientific assessment reports (available electronically)
12	2013	2015	3. Human Health Assessment	Canada, Norway	AMAP's human health assessment group will: Produce an update to the 2009 AMAP Human Health Report / Continue to work with SDWG's human health expert group on issues of joint concern (incl. Food Security)	Policy-makers summaries; Scientific assessment reports (available electronically)
13	2013	2015	4. Unmanned Aircraft Systems (UAS) Expert Groups	Norway, USA	Continue work on safety guidelines and demonstrate the use of cross-jurisdictional environmental monitoring	(void)
14	2013	2015	5. Follow-up activities Radioactivity	Norway, Russia	AMAP's radioactivity expert group will: Produce an update to the 2009 AMAP Radioactivity report	Policy-makers summaries; Scientific assessment reports (available electronically)
15	2013	2015	6. Follow-up activities POPs	Canada, Sweden	AMAP's POPs expert group will: Produce an update to the 2009 AMAP POPs assessment	Policy-makers summary on POPs trends
16	2013	ongoing	7. Sustaining Arctic Observing Networks (SAON) Project: Coordination of metadatabases	U.S.	Coordinate databases on Arctic observational metadata	Progress report (in AMAP report)
17	(void, ongoing)	(void, ongoing)	8. AMAP Trends and Effects Programme	All	AMAP is conceived as a <i>process</i> integrating both monitoring and assessment activities, in order to: <ul style="list-style-type: none"> <li>- produce integrated assessment reports on the pollution and climate status and trends of the conditions of Arctic ecosystems;</li> <li>- identify possible causes for changing conditions;</li> <li>- detect emerging problems, their possible causes, and the potential risk to Arctic ecosystems including indigenous peoples and other Arctic residents;</li> <li>- recommend actions required to reduce risks to Arctic ecosystems.</li> </ul>	The programme provides input to AMAP assessments

**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Conservation of Arctic Flora and Fauna (CAFF)</b>						
18	2001	ongoing	1. Circumpolar Biodiversity Monitoring Program (CBMP) - General	Kingdom of Denmark, U.S. are the overall leads for the CBMP. Individual components are led by different countries. The key components are outlined in this tracking tool.	<ul style="list-style-type: none"> <li>•The CBMP is a flagship program of the CAFF working group and an ongoing monitoring program that has received international recognition.</li> <li>•The CBMP is the biodiversity component of the Sustaining Arctic Observing Network (SAON) and is the official Arctic biodiversity network of the Global Earth Observation's Biodiversity Observation Network (GEOBON).</li> <li>•CBMP activities are structured around the major Arctic ecosystem: marine, freshwater, terrestrial and coastal.</li> <li>• The plans help improve ability to detect important trends, link these trends to their underlying causes, predict future trends and scenarios for Arctic biodiversity, and thereby provide more timely and credible information to support decision making.</li> <li>• The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	See below
19	2009	ongoing	1.1 CBMP Marine Biodiversity Monitoring group	Rotating chairs currently - US and Norway currently leading the steering group	<ul style="list-style-type: none"> <li>•The Arctic Marine Biodiversity Monitoring Plan was delivered in 2011 and is the first of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the marine plan further work is underway to continue to assess the state of the ecosystem and national implementation.</li> <li>• The CBMP supports the inclusion of TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	<ul style="list-style-type: none"> <li>•National reports for implementation of the marine monitoring plan (2015)</li> <li>•Annual report and workplan (2014)</li> </ul>
20	2010	ongoing	1.2 CBMP Freshwater Biodiversity Monitoring group	Rotating chairs currently - Canada, Sweden currently leading the steering group	<ul style="list-style-type: none"> <li>•The Arctic Freshwater Biodiversity Monitoring Plan is one of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the freshwater plan further work is underway to continue to assess the state of the ecosystem and national implementation.</li> <li>• The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	<ul style="list-style-type: none"> <li>•National reports for implementation of the freshwater monitoring plan (2013)</li> <li>•Annual report and workplan (2014)</li> </ul>

**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Conservation of Arctic Flora and Fauna (CAFF)</b>						
21	2011	ongoing	1.3 CBMP Terrestrial Biodiversity Monitoring group	Rotating chairs currently - Canada is currently leading implementation of the plan.	<ul style="list-style-type: none"> <li>•The Arctic Terrestrial Biodiversity Monitoring Plan is one of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the terrestrial plan further work is underway to continue to assess the state of the ecosystem and national implementation.</li> <li>• The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	<ul style="list-style-type: none"> <li>•National reports for implementation of the terrestrial monitoring plan (2015)</li> <li>•Annual report and work plan (2014)</li> </ul>
22	2014	2015	1.4 CBMP Coastal Biodiversity Monitoring Plan	Canada, U.S. co-leads	<ul style="list-style-type: none"> <li>•The Arctic Coastal Biodiversity Monitoring Plan is the final of four pan-Arctic biodiversity monitoring plans being developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems.</li> <li>• The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	<ul style="list-style-type: none"> <li>• Terms of Reference (2015)</li> </ul>
23	2001	2015	1.5 CBMP • Indicators and indices	CAFF Secretariat lead	<ul style="list-style-type: none"> <li>• The CBMP has chosen a suite of indices and indicators that provide a comprehensive picture of the state of Arctic biodiversity – from species to habitats to ecosystem processes to ecological services.</li> <li>• These indices and indicators are developed in a hierarchical manner, allowing users to drill down into the data from the higher-order indices to more detailed indicators. These are being developed through an expert consultation process.</li> <li>• The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.</li> </ul>	<ul style="list-style-type: none"> <li>•Indices reports for migratory birds and land cover change (2015)</li> </ul>
24	2012	ongoing	2. Nomadic herders: enhancing resilience of pastoral ecosystems and livelihoods	Russia	<ul style="list-style-type: none"> <li>• Purpose of this project is to strengthen the sustainability of the pastoralist livelihoods; and to increase the resilience and capacity of the nomadic communities to adapt to change.</li> <li>• The project engages TK holders and their information.</li> </ul>	None

**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Conservation of Arctic Flora and Fauna (CAFF)</b>						
25	2013	2015	3. Arctic Biodiversity Congress	Norway, Canada	<ul style="list-style-type: none"> <li>• A major international science and policy conference being held December 2-4, 2014. Objective of the Congress is to promote the conservation and sustainable use of Arctic biodiversity through dialogue among scientists, policy-makers, government officials, industry, civil society and indigenous peoples.</li> <li>• There were several Congress case studies and sessions devoted to the ABA recommendation related to TK, including on the co-production of knowledge as well as TK in circumpolar initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Chairs' statement on conclusions and recommendations (2015)</li> <li>• Congress proceedings (2015)</li> <li>• Case study summary (2015)</li> <li>• Scenario planning summary (2015)</li> <li>• Three theme summaries (2015)</li> </ul>
26	2013	2015 (delivery of the implementation plan, however, follow-up to the plan will be ongoing)	4. Arctic Biodiversity Assessment Implementation Plan	Canada, Norway	<ul style="list-style-type: none"> <li>• Ministers directed the development of an implementation plan for the policy recommendations part of the Arctic Biodiversity Assessment (ABA). The ABA was a key deliverable for CAFF in 2013 and included: (1) an Arctic Biodiversity Trends (2010) report; (2) a full ABA Scientific Report and synthesis (2013); (3) compendiums of traditional ecological knowledge (2013); and lastly, (4) the ABA Summary for Policy Makers (2013).</li> <li>• The implementation plan is an important product that will help shape the direction of CAFF's work and ensure follow-up to a major Arctic Council assessment.</li> <li>• TK was considered in the ABA, including through the creation of TK compendiums as well as specific policy recommendations related to TK.</li> <li>• Work is also underway a report entitled, "Understanding Traditional Knowledge on Biodiversity Change in North America", to improve the TK included in the ABA compendium focused on the North American region.</li> <li>• Work is underway on the Economics of Ecosystems and Biodiversity in the Arctic</li> </ul>	<ul style="list-style-type: none"> <li>• Reports to SAOs/Ministers 2015</li> <li>• ABA Implementation Plan (2015)</li> </ul>
27	2013	2017	5. The Arctic Migratory Bird Initiative	Canada, Norway, Russia	<ul style="list-style-type: none"> <li>• The Arctic Migratory Bird Initiative is a Chairmanship priority.</li> <li>• The project's objective is to improve conservation outcomes for arctic-breeding migratory birds by addressing conservation issues throughout their migratory range.</li> <li>• Focus is on three conservation issues: 1. Habitat destruction/degradation; 2. Unsustainable harvest; 3. Bycatch</li> <li>• Actual work will be undertaken on a flyway basis, with priority issues identified on each flyway.</li> </ul>	<ul style="list-style-type: none"> <li>• Progress report to SAOs/Ministers (2015)</li> </ul>

**Amarok: Arctic Council Tracker (AACT)**

**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Conservation of Arctic Flora and Fauna (CAFF)</b>						
28	1992	ongoing	6. Seabird program	Overall chair: Canada. Individual components are led by different countries	<ul style="list-style-type: none"> <li>• The Seabird program promotes, facilitates, and coordinates conservation, management and research activities among circumpolar countries and improves communication between seabird scientists and managers inside and outside the Arctic.</li> <li>• Key activities include work to monitor seabirds (e.g., survival, diets, phenology, and productivity) to explain observed changes in populations as well as provide circumpolar information on the status of seabirds to management agencies in Arctic States.</li> </ul>	Items scheduled for delivery include: <ul style="list-style-type: none"> <li>• Circumpolar Seabird Monitoring Plan (2014)</li> </ul>
29	1992	ongoing	7. Arctic Flora program	Overall chair: US. Individual components are led by different countries	<ul style="list-style-type: none"> <li>• The CAFF Flora Group (CFG) promotes, encourages and coordinates the international conservation of Arctic flora, vegetation, and habitats as well as research activities. It works to enhance the exchange of information on Arctic flora and vegetation and factors affecting the status and trends in Arctic flora species.</li> <li>• A key activity led by the US is the Circumboreal Vegetation Map (CBVM) will develop a global map of the circumboreal forest biome with a common legend. By recognizing the boreal region as a single geo-ecosystem with a common set of cultural, political and economic issues, the CBVM project will be the first detailed vegetation map of the entire global biome.</li> </ul>	<ul style="list-style-type: none"> <li>• Moss &amp; Lichen checklists</li> <li>• Proceedings of CFG workshops - 2013/14</li> </ul>
30	2011	ongoing	8. Conservation of biodiversity in a changing Russian Arctic - scoping study	Russia	Assessment activity	
31	2012	ongoing	9. Arctic Biodiversity Data Service (CAFF)	CAFF Secretariat, Individual components are led by different countries	<ul style="list-style-type: none"> <li>• Develop the online mechanism to house, collect, display and search for Arctic biodiversity related data, maps and graphics for decision making.</li> <li>• The Arctic Spatial Data Infrastructure (Arctic SDI) is an initiative from the national mapping organisations of all eight Arctic Council countries to collect and exchange spatially referenced data on the Arctic to create a harmonized map of the entire Arctic region.</li> </ul>	Arctic Biodiversity Data Service – portal and data framework (2015)

## Amarok: Arctic Council Tracker (AACT)

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Emergency Prevention, Preparedness and Response (EPPR)</b>						
32		Ongoing Program - umbrella-project Updated Dec 2014	1. Arctic Rescue - 2014	Russia	Improve state of preparedness and response along the Russia Northern Sea Route including conducting exercises and conferences	Included in EPPR input to SAO Report to Ministers
33		Ongoing Program - umbrella-project Updated Dec 2014	2. Development of Safety Systems in Implementation of Economic and Infrastructure Projects - 2014	Norway, Russia	Improvement of industrial and environmental safety related to economic and infrastructural projects (primarily development of hydrocarbons on the Arctic continental shelf and hydrocarbons transportation)	Included in EPPR input to SAO Report to Ministers.
34		Phase I: March 2010-Sept 2014. Phase II: Sept 2013-Sept 2015	3. Arctic Region Oil Spill and Logistics: Environmental Response Management Application (ERMA) Phase I and II	U.S., Canada	Phase I: Develop a GIS tool for oil spill response resource and logistics. Phase II: Use Arctic ERMA in operational exercises with US and Canada.	Pending SAO approval: Final Report on Phase I and II of Arctic ERMA
35		<b>Ongoing Program</b> Updated June 2014	4. Arctic Environmental Hazards and National Mitigation Programs	U.S.	The purpose of this document is to provide broad information on activities in the Arctic that pose a risk to the Arctic environment. The document also discusses the responsibilities of the Arctic states regarding emergency prevention, preparedness and response programs and activities	Pending SAO approval: Arctic Environmental Hazards and National Mitigation Programs
36	June 2014	December 2014	5. Planning of a Circumpolar Oil Spill Response Gap Analysis	US, Norway, Denmark (TBC)	A Gap Analysis will be the first step. Discussions on how this is being undertaken by lead countries.	Included in EPPR input to SAO Report to Ministers.
37		Ongoing program for exercises	6. Radiation Emergency Training and Exercises	Russia, U.S.	Improve emergency preparedness and response capabilities through radiological emergency exercises / Next full-scale exercise planned for mid-2014 in Russia	Pending SAO approval: "Handbook: Exercise "Arctic-2014" A brochure will be made available for the Showcase event.
38	October 2011	June 2015	7. Operational Safety and Health of Arctic Oil Spill Response Workers	U.S.	The output will be a supplement to the Arctic Council "Field Guide for Oils Spill response in the Arctic Waters".	Included in EPPR input to SAO Report to Ministers.
39	May 2013	<b>Ongoing Program</b> Updated Dec 2014	8. Maintain and update the operational guidelines attached to the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response	Norway/EPPR Chairmanship	Maintain and update the operational guidelines as required	Pending SAO approval: Exercise: After Action Report on the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic
40	May 2013	<b>Ongoing Program</b> Updated Dec 2014	9. Coordination and practical implementation of the SAR and OSR Agreements	Norway, U.S., Denmark (TBC)		Inclusion of SAR in the EPPR mandate will need to be included in the Declaration and/or SAO Report to Ministers.
41	June 2013	January 2016	10. IMO Guide on Oil Spill Response in Ice and Snow Conditions	Canada, Norway	Development of guide for submission to IMO.	

**Amarok: Arctic Council Tracker (AACT)**

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Emergency Prevention, Preparedness and Response (EPPR)</b>						
42	June 2013	May 2015	11. EPPR Arctic Guide on oil Spill Response in Ice and Snow Conditions	Canada, Norway	Development of a EPPR/AC Guide based on the final draft IMO Guide, for use in Arctic regions.	Pending SAO approval: Guide to Oil Spill Response in Snow and Ice Conditions in the Arctic
43	June 2014	2017	12. Prevention, Preparedness and Response for small communities	Norway, US, Canada, AIA, ICC		Included in EPPR input to SAO Report to Ministers.
44	June 2014	June 2015 for scoping	13. Remotely Piloted Aircraft for Emergency Response			
45	June 2014	December 2015	14. Development of a Database of Arctic Response Assets	U.S.	The objective for the project is to develop a searchable oil spill response database and populate it with detailed information on Arctic specific equipment, vessels, dispersant stockpiles and application platforms, in situ burn boom, well containment and cap and flow devices, and other resources owned by or regionally available to all member states of the Arctic Council.	Included in EPPR input to SAO Report to Ministers.



**Amarok: Arctic Council Tracker (AACT)**

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Protection of the Arctic Marine Environment (PAME)</b>						
46	2009/2010	Ongoing	1. Arctic Marine Shipping Assessment II (A) (AMSA) – Linking with International Organizations	U.S.	Continue to monitor and identify opportunities to engage with international organizations (IMO, ISO, IALA, WMO etc) to advance implementation of AMSA recommendations	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
47	2009/2011 HFO Phase II 2011	HFO Phase II Report finalized in Feb 2014	2. AMSA I(B) – IMO Measures for Arctic Shipping	Norway, Russia, U.S.	Actions 1 and 2: Support the work of IMO on developing the Polar Code, including on Heavy Fuel Oil (HFO) in the Arctic / Action 3: Project will include: obtaining and analyzing data on vessel activity; identification of gaps in existing regulatory requirements for use and carriage of HFO; preparation of a risk analysis for present and projected use of HFO	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period. Additional report on follow-up recommendations to the HFO Phase II project (to be decided at the PAME II-2014 meeting in Sep)
48	2009/2010	Ongoing as work advances with AMSA implementation and relevant work within relevant international organizations	3. AMSA I(D) – Strengthen Passenger Ship Safety in Arctic Waters	Canada, Denmark, U.S.	Continue to monitor and support IMO activities to strengthen passenger ship safety and work with passenger ship industry and others to identify and improve best practices. Also see item 10.	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Additional report for the 2013-2015 period. Report on follow-up recommendations to the AMSA II(D) project (to be decided at the PAME II-2014 meeting in Sep).
49	2011	Ongoing, part of SDWG/ICC and AIA activities	4. AMSA II(A) – Survey of Arctic Indigenous Marine Use	PAME Chair	Solicit progress reports from States and PPs on use of marine resources as relevant, including the AIA project on building marine based subsistence mapping capacity in Arctic coastal communities	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
50	2012	AMSA II(D) Report finalized in Feb 2014	5. AMSA II(D) – Specially Designated Arctic Marine Areas	Canada, Finland, Norway, Russia, U.S.	Develop recommendations on areas with the high seas of the Arctic Ocean that may merit consideration as possible proposals for protective measures in IMO	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
51	2014	Ongoing	6. AMSA II(D)-Regional Reception Facilities Plan (RRFP)	Russia, USA in collaboration with the correspondence group/project team	Prepare an Arctic RRFP as a long term solution, meeting the challenges facing the expected increases in shipping. The aim is to allow for the environmentally sound management of ships waste and ensure that ships can comply with MARPOL in the Arctic.	provided as an activity in the PAME 2015-2017 WP
52	2013	Ongoing	7. AMSA II(F) - Oil Spill Prevention	All Arctic States	Contribution and communication to the TFOPP as it relates to PAMEs work.	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Protection of the Arctic Marine Environment (PAME)</b>						
53	2010	Ongoing	8. AMSA II(G) – Address impacts on Marine Mammals	PAME Chair, U.S.	Collaborate with other AC working groups to monitor and provide support for work related to the impact of shipping on marine mammals	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
54	2009/2010	Ongoing	9. AMSA II(H) – Reduce Air Emissions	Finland, Norway, Russia, U.S.	Monitor and support IMO work related to black carbon / Encourage continued scientific research related to BC emissions, including a technical definition and appropriate measurement methods and control measures	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
55	2009/2010	Ongoing	10. AMSA III(A) – Address the infrastructure Deficit	U.S.	Continue to monitor and support initiatives for strengthening Arctic marine infrastructure	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
56	2009/2010	Ongoing	11. AMSA III(B) – Arctic Marine Traffic Systems	Norway, U.S, in collaboration with the PAME shipping expert group and the PAME Secretariat	Build on work related to vessel traffic monitoring and tracking and build on the AMSA 2005 shipping database and develop an Arctic shipping data service in consultation with AIS technical experts identified by member governments.	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period. Also an activity in the PAME 2015-2025 WP
57	2013	Final Report including recommendation to be submitted to the 2015 Ministerial meeting	12. Arctic Marine Tourism Project (AMTP)	Canada, U.S	Potential elements could include: collecting and assessing existing information on trends and adverse and beneficial impacts; developing an inventory of existing laws, codes, practices, guidelines and best practices; identifying fundamental principles of sustainable tourism; developing best practices / Canada will champion the development of Arctic Cruise Ship Guidelines as part of its AC Chairmanship commitments	Final report on the Arctic Marine Tourism Project (AMTP) "Best Practices".
58	2010	Ongoing	13. Update the Arctic Ship traffic data - Linking with AMSA III(B) above	All Arctic States	Explore opportunities for updating arctic ship traffic data contained in AMSA for use in studies, assessments, trend analysis and development of recommendations that enhance Arctic marine safety (Also see item 9)	As an activity in the PAME 2015-2025 WP
59	2011	Ongoing	14. AMSA implementation progress report	Canada, Finland, U.S.	Continue to provide biennial AMSA implementation progress reports for submission to AC Ministerial meetings	progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2013-2015 period.
60	2011	Final Report submitted and approved by the Apr 2014 SAO meeting	15. Health, Safety and Environmental Management Systems for Offshore Oil and Gas Drilling Activities	U.S.	Findings from the HSE and Safety Culture workshops, Deepwater Horizon investigations, regulatory systems reviews and assessment of management systems in the Arctic are being completed. Recommendations will be developed based on these findings for the final report.	submit to the 2015 Ministerial for approval.

**Amarok: Arctic Council Tracker (AACT)**  
**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Protection of the Arctic Marine Environment (PAME)</b>						
61	2011	Ongoing	16. Arctic Oil and Gas Management, Regulation and Enforcement (MRE) Web-Based Information Resource	PAME Secretariat	Ongoing / Website (was launched in May 2013 and provides indexed access to information and data on national entities and agencies websites related to management, regulation, and enforcement of Arctic offshore oil and gas activities. (online May 2013) / Annual spring updates	General update/status on follow-up of this report as a part of the PAMEs progress report to ministers 2015. Website to be opened up for access and will be updated once per year.
62	2013	Ongoing	17. Arctic Ocean Review follow-up	Canada, Norway, U.S.	Activities to be added based on the findings of the AOR, and approved by SAOs	contributions to AOR follow-up is identified in all PAME activities as relevant.
63	2013	Ministerial meeting 2015	18. Revision of the Arctic Council Marine Strategic Plan (AMSP)	Canada, Norway, U.S.	Will take into account relevant outcomes from Kiruna Ministerial for inclusion into a new AMSP	Final revised Arctic Marine Strategic Plan (AMSP) for the period 2015-2025.
64	2009	ongoing activity by PAME since 2002	19. Ecosystem Approach to Management	Norway, U.S.	Continue to work on integrated assessment and comparing case studies / Consider the use of identified areas of heightened ecological significance / Refer to the PAME 2013-2015 Work Plan for further details on activities. PAME will continue with specific projects based on the priorities of the Arctic Council, taking into account outcomes and needs from other Arctic Council work, including the follow-up of the EBM	Progress Report on the Ecosystem Approach work and a revised ToR for the joint EA-EG, including follow-up to the EBM Recommendations of relevance to PAME.
65	2013	Final Report submitted and approved by the 2015 Ministerial meeting	20. Framework for a Pan-Arctic Network of Marine Protected Areas (MPA)	Canada , Norway, U.S.	Form an expert group to explore the development of a Pan Arctic framework for a network of Arctic Marine Protected Areas	Final report on the Framework for a Pan-Arctic Marine Protected Area (MPA) Network project.
66	2013/2014	Ongoing	21. Follow-up of the Arctic Biodiversity Assessment	PAME	Will follow up on ABA recommendations as appropriate to PAME mandate and incorporated into a implementation plan/follow-up matrix that is being developed for the Arctic Ocean Review recommendations.	
67	2013	Ongoing	22. Adaptation Actions for a Changing Arctic (AACA) part c	PAME	Provide input for AACA part C to AMAP as required and Incorporated into a implementation plan/follow-up matrix that is being developed for the Arctic Ocean Review recommendations as it relates to PAMEs mandate.	

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**Iqaluit 24 April 2015**

#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Sustainable Development Working Group (SDWG)</b>						
68	November 2011	2015	1. Arctic Human Development Report II (AHDR-II)	Iceland, Canada, Kingdom of Denmark	The Arctic Human Development Report II (AHDR-II) provides a decadal update and synthesis report on the state of human development in the Arctic.	N/A
69	November 2011	Ongoing	2. Assessing, Monitoring and promoting Arctic Indigenous Languages	ICC, Canada, Kingdom of Denmark , U.S.	Building on the Inuit Circumpolar Council's 2008 SDWG work in the same area, a follow-up Arctic Indigenous Languages Assessment Symposium was held February 10-12, 2015 in Ottawa, with strong youth participation, to present the Project's findings and facilitate knowledge transmission. Other deliverables under the Canadian Chairmanship include a Symposium Report, for information only, as well as a Project status report on the activities for 2013-15. The Arctic languages website ( <a href="http://www.arcticlanguages.com">http://www.arcticlanguages.com</a> ) was launched in 2013 as an early project deliverable and features a large collection of electronic language learning tools as well as a repository of academic articles related to Arctic indigenous languages.	Project Status Report
70	November 2011	2015	3. A Circumpolar-wide Inuit Response to the AMSA	ICC, Canada, Kingdom of Denmark,U.S.	Communicate findings of the AMSA to Inuit and seek guidance on moving AMSA forward / Expand earlier survey on Inuit use of sea and sea ice to assess how current Inuit use of sea and sea-ice is impacted by Arctic shipping.	Final Report – The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat
71	November 2011	Unknown	4. Electronic Memory of the Arctic	Russia, Norway	Electronic information resources from libraries museums, Arctic Council archives, expert blog of EMA portal will allow experts to discuss issues on history of geographical discoveries and exploration, industry, geology, nature, folklore and literature of the circumpolar world, artistic heritage, ethnography (Russian driven).	N/A
72	November 2011	2015	5. Reindeer Herding and Youth (EALLIN)	Russia, Norway, Saami Council	Building on the work of the SDWG's 2009 EALAT Reindeer Herders' Voice project, efforts are ongoing to maintain and further develop sustainable reindeer husbandry in the Arctic / Work towards a vision of creating a better life for circumpolar reindeer herders / Continue to promote knowledge building.	Final Report and Executive Summary – Youth: The Future of Reindeer Herding Peoples
73	22-Oct-13	2015	6. Gender and Equity in the Arctic	Iceland, Finland, Norway, Kingdom of Denmark, AIA	Builds on the Taking Wing conference on gender equality and women in the Arctic that was organized in 2002. A conference was held in Akureyri, Iceland in October 2014 that focused on the living conditions of men and women throughout the circumpolar North, addressing key issues including access to and control over resources, representation in decision-making, political participation, regional development, human security, and material and cultural wellbeing.	Conference Report

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Sustainable Development Working Group (SDWG)</b>						
74	Mar-14	2015 (recommendations) Ongoing (implementation)	7. Integrating Traditional and Local Knowledge	Canada, Kingdom of Denmark, US, AIA, GCI	Develop recommendations to integrate traditional and local knowledge into the work of the Council.	Recommendations for the integration of traditional and local knowledge into the work of the Arctic Council.
75	22-Oct-13	2015	8. Promoting Mental Wellness in Northern Circumpolar Communities. A symposium was held in Iqaluit, Canada in March 2015 in order to provide a forum to present finding, transfer knowledge, foster collaboration, and showcase best practices.	Canada, Norway, U.S., Russia, Kingdom of Denmark, ICC	Builds on the outcomes and recommendations of the Nuuk Hope and Resilience seminar (2009) and enhances the evidence base to promote mental wellness in circumpolar communities. Two research teams assessed circumpolar approaches to mental wellness and the potential for adapting interventions into other regions. A symposium will be held in Iqaluit, Canada in March 2015 in order to provide a forum to present finding, transfer knowledge, foster collaboration, and showcase best practices.	Final Report - Sharing Hope: Circumpolar Perspectives on Promising Practices for Promoting Mental Wellness and Resilience
76	23-Oct-13	2015	9. Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change	Canada, US, AIA, GCI	The Arctic Adaptation Exchange online portal builds on the ongoing adaptation work of the Arctic Council, notably the Adaptation Actions for a Changing Arctic project (AACAA). The portal will serve as a central information hub for communities, researchers, and decision-makers across a variety of sectors by bringing the Arctic Council's work on adaptation, along with other relevant resources, together in one place in support of information exchange and decision-making.	Adaptation Portal
77	24-Oct-13	2015	10. Review of Cancer Among Circumpolar Indigenous Peoples	Canada, Kingdom of Denmark, ICC	The project addresses cancer as an emerging health concern among circumpolar Indigenous Peoples, and recognizes the need for effective prevention and control measures through reliable surveillance data. Drawing on regional data specific to Indigenous populations, this project reviewed the patterns and trends of cancer among Arctic Indigenous Peoples.	Final Report – Review of Cancer Among Circumpolar Indigenous Peoples: Summary Report

## Amarok: Arctic Council Tracker (AACT)

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#	Initiative Start	Initiative End	Initiative	AC Leads	Description (Please detail if/how Traditional Knowledge has been used)	Deliverables for 2015 Ministerial
<b>Current Task Forces</b>						
78	2013	2015	Facilitating the Creation of the Arctic Economic Council	Chair: Canada; co-chairs: Russia, Finland and Iceland	The AEC will be looked to as an independent body to promote sustainable economic and social development, and environmental protection. The AEC will also involve indigenous businesses and will provide a venue for all representatives to advance Arctic-oriented interests, share best practices, forge partnerships and engage in deeper cooperation.	Creation of the Arctic Economic Council
79	2013	2015	Arctic Marine Oil Pollution Prevention	Norway, Russia	The Kiruna Declaration calls for a Task Force to be established "...to develop an Arctic Council action plan or other arrangement on oil pollution prevention, and to present the outcomes of its work and any recommendations for further action at the next Ministerial meeting in 2015."	The goal is to develop an Arctic Council Action Plan on marine oil pollution prevention
80	2013	2015	Action on Black Carbon and Methane	Canada, Sweden	Addressing short-lived climate pollutants (SLCPs), such as black carbon and methane, offers the potential for local health benefits as well as substantial near-term climate benefits as part of a comprehensive strategy to address climate change. This initiative builds on the recent scientific and technical work on SLCPs accomplished within the Arctic Council, and complements work already underway in domestic, regional and other international forums, such as the Climate and Clean Air Coalition (CCAC).	To develop arrangements on actions to achieve enhanced black carbon and methane emissions reductions in the Arctic
81	2013	2015	Enhancing Scientific Cooperation in the Arctic	Russia, United States	The Kiruna Declaration calls on the Task Force to "...work towards an arrangement on improved scientific research cooperation among the eight Arctic States."	Recommendations on ways to enhance scientific cooperation
<b>Canadian Chairmanship Initiatives</b>						
82	2013	2015	Promoting Traditional Ways of Life	Chairmanship, Finland, GCI	An education and advocacy strategy aimed at promoting the traditional ways of life of Arctic inhabitants.	Develop a compendium of best practices on promoting traditional ways of life Develop an advocacy plan to promote the traditional ways of life of Arctic inhabitants.
83	2013	2015	Strengthening the Arctic Council	Chairmanship	Main outcomes of this work are to: improve administrative processes, enhance the profile of the Arctic Council and enhance PP capacity. Examples of this include: tracking and reporting on the Council's work; increasing collaboration and coordination with international organizations; developing and archiving project with in-kind contributions from Library and Archives Canada; evaluating PP capacity, including funding; and promoting youth engagement.	Improved records management practices. Tracking on all ongoing Arctic Council initiatives. Improved administrative processes. Recommendations for enhancing Permanent Participant capacity.
<b>Other AC Projects</b>						
84	2011		Arctic Resilience Report	Sweden	Identify the potential for shocks and large shifts in ecosystem services that affect human well-being in the Arctic / Analyze how different drivers of change interact in ways that affect the ability to withstand shocks / Evaluate strategies for adaptation and transformation in the face of rapid change.	

# Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic

The Government of Canada, the Government of the Kingdom of Denmark, the Government of the Republic of Finland, the Government of Iceland, the Government of the Kingdom of Norway, the Government of the Russian Federation, the Government of the Kingdom of Sweden, and the Government of the United States of America, hereinafter referred to as “the Participants,”

*Mindful of* the responsibility of the Arctic States to protect the Arctic environment,

*Recognizing* that the prevention of incidents leading to the release of oil into the Arctic marine environment is one of the most effective measures to protect the Arctic marine environment;

*Recalling* the 2013 Kiruna Declaration, which established a Task Force to develop an Arctic Council Action Plan or other arrangement on oil pollution prevention;

*Taking into account* the relevant provisions of the 1982 United Nations Convention on the Law of the Sea;

*Taking into account* applicable rules of international environmental law that may be relevant to the Arctic marine environment;

*Acknowledging* the role of the International Maritime Organization related to maritime safety and the prevention of oil pollution by ships operating in the marine areas of the Arctic;

*Recognizing* that indigenous peoples, communities, and local and regional authorities can provide important resources and knowledge that are necessary for the development and adoption of measures to prevent marine oil pollution;

*Recognizing* the contributions and ongoing work of Arctic Council Working Groups, including the Conservation of Arctic Flora and Fauna, Protection of the Arctic Marine Environment, and Emergency Prevention, Preparedness and Response;

*Recognizing* the contributions and ongoing work of: the World Meteorological Organization; the International Hydrographic Organization, specifically, the Arctic Regional Hydrographic Commission; and the Intergovernmental Oceanographic Commission;

*Recognizing* that operating in Arctic conditions demands specific human resources, training, education, and expertise; and *stressing* the value of exchanging information and experience in technology, best practices and standards, as well as joint research and development, to prevent oil pollution;

*Recognizing* the importance of mapping ecologically vulnerable and sensitive areas in the Arctic and the importance of acquiring knowledge about such identified areas, and the use of such knowledge in assessing appropriate measures to prevent harm from marine oil pollution in the Arctic; Have come to the following understanding:

# 1. INITIAL PROVISIONS

## 1.1 OBJECTIVE.

The objective of this Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic — henceforth “Framework Plan” — is to strengthen cooperation, including exchange of information, among the Participants in the field of prevention of marine oil pollution in order to protect the Arctic marine environment.

## 1.2 Scope of application.

This Framework Plan applies to petroleum and maritime activities in the marine areas of the Arctic that entail a risk of oil pollution to the Arctic marine environment.

## 1.3 Nature of cooperation.

The Participants intend to cooperate under this Framework Plan in accordance with relevant rules of international law and with the national legislation (laws and regulations) and, as appropriate, policies of the respective States.

## 1.4 Information Sharing.

1.4.1 Information sharing efforts as detailed in this section are intended to be carried out by the Participants in accordance with their respective national legislation (laws and regulations) and, as appropriate, policies, as well as in accordance with any contract, agreement or arrangement to which they are party.

1.4.2 Regarding information on processes, regulations, policies and practices related to the prevention of pollution of the Arctic marine environment by oil:

a) the Participants may request such information from other Participants;

b) the Participants may respond to such requests from other Participants, either directly or through existing fora as appropriate; and

c) the Participants may in addition share any information of this nature that they consider may be of interest to other Participants.

The Participants may withhold information that may be unreasonably difficult or costly to discover or provide.



## **1.5 Impact assessment and protection of the Arctic marine environment.**

- 1.5.1 The Participants intend to carry out impact assessments – in accordance with their national legislation (laws and regulations) and, as appropriate, policies – including environmental impact and risk assessments of petroleum and maritime activity which may result in the pollution of the Arctic marine environment by oil.
- 1.5.2 The Participants intend to protect and conserve the Arctic marine environment, including wildlife, vulnerable ecosystems and ecosystem services, while regulating or engaging in petroleum and maritime activities in the marine areas of the Arctic, in accordance with their national legislation (laws and regulations) and, as appropriate, policies.

## **1.6 IMPLEMENTATION OF THIS FRAMEWORK PLAN.**

- 1.6.1 The Participants intend to strengthen cooperation between their competent national authorities in order to implement this Framework Plan.
- 1.6.2 The Participants intend — where possible, and in accordance with their national legislation (laws and regulations) and, as appropriate, policies — to cooperate with the private sector in order to improve standards and best practices for the prevention of the pollution of the Arctic marine environment by oil.
- 1.6.3 The Participants intend to have their competent national authorities implement this Framework Plan. The implementation may be discussed during the meetings of the relevant bodies of the Arctic Council when appropriate.

## 2. MEASURES FOR PREVENTION OF OIL POLLUTION FROM ARCTIC PETROLEUM ACTIVITY

### 2.1 DEVELOP AN OVERVIEW OF MEASURES FOR IMPROVED SAFETY.

The Participants intend to:

a) cooperate to develop an overview of the existing and potential technical and operational safety measures specifically designed to prevent oil pollution in the Arctic marine environment from offshore petroleum activity.

### 2.2 PROMOTE STANDARDIZATION ACTIVITIES.

The Participants intend to:

a) promote the development of standards and/or best practices relevant to the prevention of oil pollution in the Arctic, e.g., well design, source control, capping, containment and other technical and operational measures;

b) assess whether existing and proposed standards for petroleum activity are sufficient to meet Arctic challenges; and

c) support participation of technical experts in the efforts referred to in this section.

### 2.3 STRENGTHEN COOPERATION OF NATIONAL REGULATORS.

The Participants intend to:

a) promote cooperation between competent national authorities on issues concerning the prevention of Arctic marine oil pollution from petroleum activities.

## 3. MEASURES FOR PREVENTION OF OIL POLLUTION FROM ARCTIC MARITIME ACTIVITY

### 3.1 STRENGTHEN TRAFFIC MONITORING AND MANAGEMENT.

#### 3.1.1 Remote and aerial surveillance.

The Participants intend to:

- a) share lessons learned and best practices from responding to/monitoring pollution incidents and operating in harsh Arctic environments;
- b) develop operational procedures for pollution patrol, ice patrol, etc. in the Arctic;
- c) explore possible exchange of personnel for familiarization tours as part of the crew;
- d) explore the possibility of coordination of earth observation satellites to acquire/share imagery over contiguous waters.

#### 3.1.2 Enhancing cooperation on maritime risk assessments.

The Participants intend to:

- a) exchange experience and best practices of data collection and analysis for maritime risk assessments;
- b) exchange maritime traffic and environmental sensitivity data and associated methodologies; and
- c) explore the possibility of developing a common and publicly accessible database of Arctic maritime traffic and environmental sensitivity data.

### 3.2 IMPROVE MARITIME SERVICES.

#### 3.2.1 Navigational charts.

The Participants intend to:

- a) explore coordination of hydrography and mapping surveys to improve the safety of Arctic shipping; and
- b) exchange experiences and best practices on hydrography and nautical charting in the Arctic.

### 3.2.2 Improve meteorological and oceanographic forecasts.

The Participants intend to:

- a) exchange experience and best practices in the field of forecasting meteorological, oceanographic and ice related conditions and hazards as well as regarding climatological ice and metocean information; and
- b) improve methods, standards and systems for detecting and monitoring metocean and ice related conditions, and distributing this information, when appropriate, in a timely manner between Participants and communities throughout the Arctic.

### 3.2.3 Broadband and satellite communications.

The Participants intend to:

- a) exchange information on relevant systems of broadband and satellite communication to improve safety of navigation in the Arctic.

### 3.2.4 Prevention of marine incidents that could result in oil pollution.

The Participants intend to:

- a) develop a catalogue of existing resources (tug boats, tow packages, ship arrestors, mooring buoys, etc.) that may play a role in minimizing the potential for, and the environmental impact of, a marine incident that could result in oil pollution, and to assess the adequacy of such resources.

### 3.2.5 Navigation in ice conditions.

The Participants intend to:

- a) exchange best practices and any other relevant information on national requirements and, when appropriate, industry standards for navigating in marine areas of the Arctic in ice conditions.

### 3.2.6 Icebreaking and ice-management services.

The Participants intend to:

- a) exchange best practices and information on existing icebreaking and ice-management services.

### **3.3 REDUCE RISKS ASSOCIATED WITH USE AND TRANSPORT OF HEAVY FUEL OIL.**

The Participants intend to:

- a) explore and pursue ways to reduce the environmental risk posed by transportation, storage or use of heavy fuel oil by ships in the Arctic.

## 4. OTHER PROVISIONS

- 4.1 This Framework Plan applies from April 25, 2015.
- 4.2 The Participants may modify this Framework Plan at any time upon their mutual consent in writing.
- 4.3 Any Participant may discontinue its participation in this Framework Plan by giving written notice to the other Participants.
- 4.4 This Framework Plan is not legally binding and does not create any rights nor obligations for the Participants under international law.
- 4.5 Nothing in this Framework Plan, including the exchange of information provisions, affects the respective positions of the Participants on the Law of the Sea in the marine areas of the Arctic or other marine areas.

## Enhanced Black Carbon and Methane Emissions Reductions an Arctic Council Framework for Action

We, the Arctic States: Canada, the Kingdom of Denmark, the Republic of Finland, the Republic of Iceland, the Kingdom of Norway, the Russian Federation, the Kingdom of Sweden, and the United States of America, in collaboration with the Permanent Participants of the Arctic Council: the Arctic Athabaskan Council, the Aleut International Association, the Gwich'in Council International, the Inuit Circumpolar Council, the Russian Association of Indigenous Peoples of the North and the Saami Council,

*Recognizing* that the Arctic is warming considerably faster than other regions of the globe, leading to fundamental changes to the environment and human living conditions in both the Arctic and around the world;

*Acknowledging* that black carbon and methane emitted within and beyond the borders of Arctic states have substantial impact on the Arctic and that their reductions lead to near-term climate, health and economic benefits in the Arctic, contributing to global efforts to limit the increase in global average temperature to below 2 degrees Celsius above pre-industrial levels;

*Recognizing* that work under this Arctic Council Framework supports and complements the goal of the United Nations Framework Convention on Climate Change and that reducing anthropogenic carbon dioxide emissions remains the most important challenge to address global and Arctic climate change;

*Commit* to take leadership based on this Arctic Council Framework by further reducing the overall black carbon and methane emissions from our countries and by working with Arctic Council Observer States and others to also reduce emissions produced beyond the borders of Arctic States.

## A COMMON VISION FOR ENHANCED ACTION

We commit to take enhanced, ambitious, national and collective action to accelerate the decline in our overall black carbon emissions and to significantly reduce our overall methane emissions. Through our enhanced actions under this Arctic Council Framework, we further commit to provide black carbon inventories starting in 2015; to establish an aggregate summary of black carbon and methane emissions; and to adopt an ambitious, aspirational and quantitative collective goal on black carbon, and to consider additional goals, by the next Arctic Council Ministerial meeting in 2017;

We also commit to share national reports and policies for our actions to reduce emissions; measure our collective progress; and jointly identify conclusions and recommendations. We call upon Arctic Council Observers to join us in these actions given the global nature of the challenge.

All of these efforts aim to further spur continuous improvements for climate and health in the Arctic.

## ARCTIC STATES RESOLVE TO:

### 1. TAKE LEADERSHIP NATIONALLY

#### *National actions, action plans or mitigation strategies*

Arctic States commit to enhance actions to reduce black carbon and methane emissions at the national level in line with the common vision of this Arctic Council Framework and our national priorities, through the development of national actions or action plans or mitigation strategies, which can include setting of aims and objectives, implementing policies and regulations, identifying best practices and awareness-raising activities. We intend to strengthen our respective actions and mitigation strategies over time by learning from each other's policy experiences and best practices via the two-year iterative process outlined in Annex A.



### *Improved emission information and inventories*

Each Arctic State commits to:

- develop and improve emission inventories and emission projections for black carbon using, where possible, relevant guidelines from the Convention on Long-Range Transboundary Air Pollution (CLRTAP) and improve the quality and transparency of information related to emissions of black carbon;
- enhance expertise on the development of black carbon inventories, including estimation methodologies and emissions measurements, by working jointly through the Arctic Council and other appropriate bodies; and
- continue to improve anthropogenic emission inventories and projections for methane, as reported to the United Nations Framework Convention on Climate Change (UNFCCC).

### *National Reporting*

Each Arctic State commits to submit a national report to the Arctic Council Secretariat according to the guidelines and the timeline in Annex B. The Arctic Council Secretariat will make the national reports publically available.

## **2. ENHANCE COLLECTIVE ACTION**

### *Continually driving mitigation ambition*

To improve ambition and promote enhanced action over time, we establish a two-year iterative process as described in Annex A. The process will be driven by an Expert Group as described in Annex C to periodically assess the progress made under this Framework in order to drive enhanced action on black carbon and methane. A “Summary of Progress and Recommendations” report will be presented to Arctic Council Ministers for their consideration. This process should inform and engage policy makers in all Arctic States and Arctic Council Observer States, including through the possibility of convening a higher-level policy maker forum, and/or an open dialogue at the discretion of the Arctic Council Chair. Based on analysis, recommendations, and exchange of experiences, Arctic States will seek to adopt enhanced strategies, policies and practices, appropriate to their national circumstances and priorities.

### *Science, research and monitoring*

Arctic States underscore the importance of continuing monitoring, research and other scientific efforts, with the inclusion of traditional and local knowledge, to improve the understanding of black carbon and methane emissions, emission inventories, Arctic climate and public health effects, and policy options.

Arctic States support a four-year cycle of periodic scientific reporting, including the assessment of status and trends of short-lived climate pollutants such as black carbon and methane with a focus on the impacts of anthropogenic emissions on Arctic climate and public health. This should include estimates of associated costs of mitigation, as well as enhancing our state of knowledge regarding natural sources.

Arctic States intend to sustain and, as appropriate, expand their own existing activities and capabilities to monitor levels of black carbon and methane in the Arctic. Arctic States resolve to improve coordination across the region, through relevant forums in order to, among other things, assist in assessing collective mitigation progress and characterizing climate impacts in the Arctic, including the capability to detect changes in natural methane releases as a result of Arctic warming.

### *Increasing awareness*

Arctic States commit to raise awareness of the impact of black carbon and methane emissions on the environment, climate, and health of the inhabitants of the Arctic. Arctic States intend to work with subnational governments, and Permanent Participants of the Arctic Council to identify areas and activities related to awareness-raising, which can lead to projects that strengthen local capacities to identify, mitigate, and prevent localized pollution.

Based on sound science and socio-economic knowledge/analysis, Arctic States intend to work jointly to raise awareness of the impacts of these pollutants internationally, particularly with Observer States and other States whose emissions potentially impact the Arctic region, and seek action on their part to reduce black carbon and methane emissions. As part of this effort each Arctic State's national report and the "Summary of Progress and Recommendations" report will be made publically available on the Arctic Council website and shared with all Arctic Council Observers, relevant international organizations, and other stakeholders.

### *Project and sector based activities*

Arctic States resolve to carry out project- and sector-based activities, within the Arctic Council and nationally, based on best available technologies and practices for concrete reductions of black carbon and methane emissions in different sectors of the economy, including also broader programmes that impact these emissions. Project- and sector-based activities should focus in particular on sectors identified as the most significant and emerging sources<sup>2</sup> of anthropogenic black carbon and methane to support the Framework's objectives, national actions, and promote joint cooperation. These activities are to continue to build on work already underway within the Arctic Council. In each two-year cycle, the Arctic Council chair, in consultation with Arctic States, Permanent Participants, and taking into consideration ongoing work in the Arctic Council, may select a particular sector or area for focused attention.

Arctic States recognize the role of the Project Support Instrument in financing approved Arctic Council projects to reduce black carbon and methane emissions in the Arctic, as well as the need for funding from other sources to increase the scale and pace of black carbon and methane emission reductions.

## **3. PROMOTE ACTION BY OTHERS**

### *Arctic Council Observers*

Given the substantial impact that black carbon and methane emitted beyond the borders of Arctic States have on the Arctic, robust mitigation action by Arctic Council Observer States is vital for overall success. Accordingly, Arctic States look forward to Arctic Council Observer States joining us and actively participating in the implementation of this Framework including by strengthening their domestic actions, developing robust emission inventories, taking part in relevant meetings and submitting national reports as outlined in Annex B. Arctic Council Observer States are particularly encouraged to focus on activities of theirs that disproportionately impact the Arctic. Arctic Council Observer States' efforts will be highlighted in the "Summary of Progress and Recommendations" report, and particularly noteworthy contributions will be recognized by the Arctic Council.

Arctic States also encourage Arctic Council Observer Organizations to enhance knowledge and awareness of black carbon and methane emissions and their impact on the Arctic, and to undertake activities aimed at reducing emissions.

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<sup>2</sup> Sectors identified by the Arctic Council Task Force on SLCFs in its 2011 and 2013 reports.

### *Other stakeholders*

The private sector has an important role in reducing emissions, developing new technologies, and sharing best practices that will lower emissions, especially in key sectors like transportation and oil and gas development. The Arctic Council invites the private sector to participate, as appropriate, in the implementation of this Framework. Other stakeholders, including civil society, other governments, financial institutions and academia, can also play a key role in helping to reduce emissions of methane and black carbon and enhancing awareness of the impacts of these emissions on the Arctic.

Arctic States intend to work with financial institutions to both promote financing of activities to reduce black carbon and methane emissions as well as to encourage mainstreaming of considerations of these emissions into their broader funding decisions.

Arctic States intend to carry out further activities with stakeholders to increase awareness and encourage actions to reduce emissions within, and transported to, the Arctic in order to reduce the impacts of these pollutants on Arctic peoples and the environment.

### *International and regional forums and agreements*

Arctic States will actively work with, and within, relevant forums and agreements to provide an Arctic perspective, prioritize collective efforts, and promote actions and decisions that lead to enhanced black carbon and methane emissions reductions. The Expert Group will assess and identify specific opportunities for Arctic States to engage in this regard.

## **IMPLEMENTATION**

This Arctic Council Framework represents high-level political commitments of the Arctic States, and does not have binding obligations under international law. The guidance and processes for implementing the common vision for enhanced action are set forth in the three Annexes that follow.

## ANNEX A – TWO-YEAR ITERATIVE PROCESS TO ENHANCE IMPLEMENTATION

1. By 1 September of the first year of each two-year Chairmanship period, Arctic Council States submit national reports to the Arctic Council Secretariat. National reports will be made publically available by the Arctic Council Secretariat.
2. The Arctic Council Secretariat will compile the national reports submitted by Arctic States as well as national reports from, and other information on, efforts and accomplishments by, participating Arctic Council Observer States and others.
3. By 1 October of the same year as specified in paragraph 1 above, the Arctic Council Secretariat will provide a “compilation” report to the Expert Group.
4. The Expert Group will review, analyze, and assess progress toward the common vision of the Framework based on the “compilation” report, relevant output of Arctic Council Working Groups and other information. The Expert Group will be supported in this regard by the Arctic Council Secretariat and relevant bodies of the Arctic Council.
5. The Expert Group will produce a “Summary of Progress and Recommendations” report, including conclusions and specific recommendations for further action.
6. At its discretion, the Arctic Council Chair may convene a high level policy-maker forum among relevant decision makers to promote greater action and ambition, and/or an open dialogue among a broader group of relevant stakeholders including from the private sector and other states. Such an effort would complement and support the work of the Arctic Council.
7. The “Summary of Progress and Recommendations” report is presented through the Senior Arctic Officials, to Ministers from Arctic Council States as well as Observer States.
8. Based on the “Summary of Progress and Recommendations” report, all Arctic States, Permanent Participants, participating Arctic Council Observer States and other relevant stakeholders will consider opportunities for enhanced individual and collective action.

## ANNEX B - GUIDANCE FOR NATIONAL SUBMISSIONS

This guidance is intended to provide clarity for the initial launch and implementation of the Arctic Council Framework. As this Framework creates a first-time reporting and review function that will occur periodically over multiple chairmanship cycles of the Arctic Council, this initial guidance is intentionally simple and flexible, and may need to be further refined and clarified over time as more experience is gained.

Arctic States and participating Arctic Council Observer States are requested to provide information following this guidance, taking into account national circumstances.

Each Arctic State, and participating Arctic Council Observer States, should submit, to the degree possible, the following to the Arctic Council Secretariat:

1. Summary of current black carbon emissions to CLRTAP, where appropriate, and, if available, future projections
2. Summary of current methane emissions to UNFCCC and, if available, future projections
3. Summary of National Actions, National Action Plans, or Mitigation Strategies by sector
4. Highlights of best practices or lessons learned for key sectors
5. Projects relevant for the Arctic
6. Other information if available (e.g., climate, health, environmental, economic effects of emissions and mitigation)

### **FURTHER GUIDANCE FOR EACH OF THESE ELEMENTS IS PROVIDED HERE:**

*Summary of current black carbon emissions to CLRTAP, as appropriate, and, if available, future projections*

In the national submission to the Arctic Council Secretariat, each Arctic State and participating Arctic Council Observer States should have the option of including: a) a high-level summary of their black carbon emissions as submitted to CLRTAP or that is generally consistent with relevant guidelines under CLRTAP; b) the same submission as provided to CLRTAP; or c) notification to the Secretariat that the black carbon emission inventory has been submitted to CLRTAP and where it can be collected from CLRTAP's public website. The sectoral breakout of black carbon emissions is expected to be consistent with relevant CLRTAP guidelines, where applicable. States not submitting inventories to CLRTAP may wish to provide a high-level summary of national black carbon emissions. Future black carbon emission projections, if available, should generally cover the same sectors as provided in the emissions inventory, and should extend from the latest available baseline year out to the next 10-30 years.

### *Summary of current methane emissions to UNFCCC and, if available, future projections*

In the national submission to the Arctic Council Secretariat, each Arctic State and participating Arctic Council Observer States should have the option of including: a) a high-level summary of their methane emissions as submitted to UNFCCC; b) the same inventory as submitted to UNFCCC; or c) notification to the Secretariat that the greenhouse gas (including methane) inventory has been submitted to UNFCCC and where it can be collected from UNFCCC's public website. The sectoral breakout of methane emissions is expected to be consistent with the inventories submitted to UNFCCC.

Future anthropogenic methane emission projections, if available, should generally cover the same sectors as provided in the emissions inventory, and should extend from the best available baseline year out to the next 10-30 years.

### *Summary of National Actions or National Action Plans or Mitigation Strategies by sector*

Each Arctic State and participating Arctic Council Observer States should provide brief information about key mitigation actions occurring in each sector, but should have flexibility in how such information is summarized. For example, information on national actions, brief summaries of action plans, or brief descriptions of mitigation strategies can be included. Summaries of methane mitigation actions contained in National Communications to the UNFCCC may be used for this purpose.

### *Highlights of best practices or lessons learned for key sectors*

In the national submission to the Arctic Council Secretariat, each Arctic State and participating Arctic Council Observer States may wish to highlight successes, progress, and/or lessons learned in reducing emissions and implementing mitigation strategies for particular sources and sectors.

### *Projects relevant for the Arctic*

In the national submission to the Arctic Council Secretariat, each Arctic State and participating Arctic Council Observer States may wish to highlight particular demonstration, research, atmospheric modeling, or mitigation projects that address either emissions characterization, emission reduction potential, mitigation implementation feasibility, mitigation costs, and/or environmental, health, and climate effects. This may include projects occurring under the Arctic Council or projects occurring outside of Arctic Council Working Groups, including in other multi-national fora.

*Other information if available (e.g., climate, health, environmental, economic effects of emissions and mitigation)*

In the national submission to the Arctic Council Secretariat, each Arctic State and participating Arctic Council Observer States may wish to highlight particular analyses and assessments that could contribute to improved understanding of climate, health, environmental and/or economic effects of current or projected levels of emissions, and the effects of mitigating emissions.



## ANNEX C

### TERMS OF REFERENCE

#### Expert Group

In support of implementation of the Framework for Action on Black Carbon and Methane

#### Objective:

The objective of this Expert Group is to periodically assess progress of the implementation of the Arctic Council's Framework for Action on Black Carbon and Methane, and to inform respective policy makers from Arctic States and for participating Arctic Council Observer States. This includes preparing, on a once every two-year cycle of the Arctic Council chairmanship, a high level "Summary of Progress and Recommendations" report, with appropriate conclusions and recommendations, for presentation to Arctic Council Ministers at the biennial ministerial meeting on collective progress by Arctic States, and participating Arctic Council Observer States, where possible, in achieving the common vision and commitments outlined in the Framework.

#### Structure and composition:

The Expert Group will be comprised of representatives from Arctic States, Permanent Participants, and Arctic Council Working Groups, with expertise in policies and measures related to emissions and emissions reductions of black carbon and methane from multiple sources, as well as experience in reviewing information and synthesizing it for policy makers. Those Arctic Council Observer States which intend to provide national reports will also be invited to send representatives with similar expertise to participate in the Expert Group. Experts from academia, international or other organizations may be invited to provide advice and guidance, as required.

Each Arctic State will nominate one or two government representatives to this group, through their respective Senior Arctic Official. Each Permanent Participant will nominate one or two representatives through their Permanent Participant Head of Delegation. AMAP and ACAP, and any other interested Arctic Council Working Groups will be invited. Arctic Council Observer States which intend to provide national reports will inform the Arctic Council Secretariat of their representative.

The Expert Group will be chaired by a representative of the Arctic Council State which is the current Chair of the Arctic Council during the two-year period that coincides with the preparation of the "Summary of Progress and Recommendations" report.

The Expert Group should be supported administratively by the Arctic Council Secretariat.

## Tasks:

Drawing on national submissions from Arctic States, and other information as appropriate (see Annex B of Framework), the Expert Group will, *inter alia*:

- prepare quantitative and/or qualitative analysis on how Arctic States are collectively progressing in meeting the common vision and other elements agreed on in the Framework document. This analysis will include information about emissions, projections and mitigation actions (and associated costs) and could be further informed by climate and public health impacts. This may involve the assistance of relevant Arctic Council Working Groups;
- prepare a similar analysis of participating Arctic Council Observer State actions on emissions reductions as well as to compile other relevant data on emissions by other countries;
- identify steps necessary by which to share information and actively engage Arctic Council Observer States and other stakeholders;
- document the lessons learned and best practices of completed or ongoing projects. This may involve the assistance of relevant Arctic Council Working Groups;
- identify areas and actions related to policies and best practices that could potentially be enhanced or replicated; opportunities for further action where gaps exist; and activities related to awareness-raising, or where there is the opportunity to share this with relevant international and regional fora;
- prepare the draft “Summary of Progress and Recommendations” report, including appropriate conclusions and recommendations, which could help inform both Arctic Council Ministers as well as a high level policy maker forum and/or dialogue if convened by the respective Arctic Council Chair for that two year iterative cycle, to further explore opportunities for individually and collectively taking action on the report’s recommendations;
- transmit the report to Senior Arctic Officials for their review and approval, and for submission to Arctic Council Ministers for their Arctic Council Ministerial meeting;
- conduct other activities as necessary to achieve the objectives laid out for the Expert Group;
- discuss and if necessary propose improvements of the Framework and its annexes;
- assess and identify specific opportunities for Arctic States to further engage in relevant international and regional forums and agreements; and
- propose options for consideration in order to establish a collective baseline, undertake the analysis and identify options for quantitative goal(s) as described in “the common vision” of this Framework.

### Modalities:

Once national submissions are made available, the Expert Group will meet twice in person during the two-year period, unless the Chair determines that an additional face-to-face meeting or meetings are required. The first meeting will be to scope out the elements of the report, identify leads, and assign tasks; the second meeting will be to finalize the report to ministers. Otherwise, the Expert Group will conduct its work predominantly by teleconference, electronic and other means.

The Chair of the Expert Group will be accountable for the overall preparation of the “Summary of Progress and Recommendations” report, including: coordination of the work; developing and managing timelines; pulling together the draft report; and coordinating its review and approval by the Expert Group members. The Chair may seek the support of a smaller group of Expert Group members to assist with some of these tasks.

### Resources and budget:

Meeting costs will normally be financed by the host country. Travel costs and accommodation will be covered by the participants, in accordance with applicable laws and available resources. Expert Group members are expected to cover the in-kind costs associated with their routine participation in the activities of the group.

### SAO guidance:

The Chair of the Expert Group should provide updates to SAOs and seek guidance as appropriate.

# Summary Report: Work on the Ecosystem Approach within the Arctic Council

Submitted to Iqaluit Ministerial Meeting

April 2015

## BACKGROUND

In order to advance the ecosystem approach in the context of the Arctic Council, the Arctic Council Ministers established an expert group on ecosystem-based management (EBM) for the Arctic environment during their 2011 Ministerial meeting. This group operated during the 2011-2013 period and was charged with building a common understanding of the ecosystem approach across Arctic Council Member States, Permanent Participants (PPs), Observers, and Working Groups.

The EBM expert group delivered their findings to the Senior Arctic Officials (SAOs) in 2013, which included a definition for EBM, a set of EBM principles, and 12 recommendations for specific activities that could be undertaken by the Arctic Council Member States, PPs, and Arctic Council Working Groups, as appropriate, to advance the ecosystem approach in the Arctic.

In the Kiruna Declaration of 2013, ministers of the Arctic Council States “Welcome[d] the report on Ecosystem Based Management, approve[d] the definition, principles and recommendations, encourage[d] Arctic States to implement recommendations both within and across boundaries, and ensure[d] coordination of approaches in the work of the Arctic Council’s Working Groups.”

Following upon that directive, at the Whitehorse SAO meeting in fall of 2013, the Senior Arctic Official from the United States “asked that the Working Groups affected by the recommendations of the EBM Expert Group [*Note: includes AMAP, CAFF, PAME and SDWG*] report regularly on their efforts ... [and] that a summary report detailing work towards the EBM recommendations from all Working Groups be prepared for the 2015 ministerial meeting.”

SAOs tasked the ACS to “follow up with the Working Groups to ensure that a joint report on the Arctic Council’s follow up of the EBM recommendations” is prepared as desired.

Accordingly, the Working Groups named above – AMAP, CAFF, PAME and SDWG – have all submitted concise responses detailing their efforts in support of each of the recommendations contained in the report “Ecosystem-Based Management in the Arctic”. The responses below have been collated and summarized in the report that follows.

## SUMMARY

In reporting on their efforts to implement the recommendations as contained in the report, the Working Groups highlighted the importance of:

- Collaborative work among the Working Groups;
- The role of the ecosystem approach as it is explicitly or implicitly advanced by ongoing work (e.g., the ABA);
- The contribution which is made by Working Groups' work to facilitate implementation of the ecosystem approach by the Arctic States;
- The existing or potential contribution which could be made by existing expert groups within the Working Groups to ecosystem-approach goals;
- Work related to the ecosystem approach in which the Working Groups are engaged through other for a (e.g., the Convention on Biological Diversity);
- Ongoing work to incorporate TK into the Working Groups' work;
- Collaborative work across states currently underway within the Working Groups; and
- Options for undertaking or supporting regular Arctic Council surveys/overviews of the ecosystem approach in the Arctic.

Some of the projects specifically mentioned as contributing to ecosystem-approach goals are:

- The Arctic Biodiversity Assessment and its associated work, including the Arctic Migratory Bird Project (EBM Report Recommendation #1.1)
- Life Linked to Ice (1.1, 1.3)
- AMSA IIc (1.2, 3.2)
- Arctic EBSA workshop (1.2)
- The Circumpolar Biodiversity Monitoring Program, including the Arctic Terrestrial Biodiversity Plan and the implementation of the Arctic biodiversity Freshwater, Marine and Terrestrial Monitoring Plans (1.2, 1.5, 2.2, 3.1, 3.2, 3.4)
- Circumpolar-wide Inuit Response to the Arctic Marine Shipping Assessment (1.2, 1.5, 2.1, 3.2)
- Electronic Memory of the Arctic (1.2, 2.1, 3.4)
- Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change (1.2, 1.4, 1.5, 2.1, 3.2, 3.4)
- Review of Cancer among Circumpolar Indigenous Peoples (2.1)

- AACA-C (1.4, 2.1, 3.1, 3.3, 3.5)
- Observed Best Practices in Ecosystem/based Ocean Management in the Arctic (1.5)
- Revised map of Arctic Large Marine Ecosystems (3.1)
- TEEB scoping study (3.3)
- The Arctic Biodiversity Data Service (3.4)
- Sustaining Arctic Observing Networks (3.4)

Two existing expert groups were frequently cited for their existing and potential contributions to advancing EBM in the Arctic:

- Ecosystem Approach Expert Group (1.1, 1.4, 2.1, 2.2)
- Social, Economic and Cultural Expert Group (1.1, 1.5, 3.2, 3.3)

## POTENTIAL WAYS FORWARD

In a general sense, improving follow-up on the EBM recommendations approved in Kiruna among the Arctic Council Working Groups will require ever more coordination, collaboration and information-sharing. This could include such steps as the “action items” listed below. These are suggestions, in no particular order, which arose from an informal collaborative discussion including many key stakeholders in Trondheim, Norway in December of 2014. They do not constitute, and are not intended to constitute, a definite plan for implementation. Instead, they should be considered as inputs for further discussion and planning.

**Action item 1:** Chairmanship, with assistance from the Arctic Council Secretariat, could work to identify a lead to ensure coordination across Arctic Council Member States, PPs, Working Groups, and partners.

**Action item 2:** AMAP, CAFF, PAME and SDWG to ensure Working Group work plans for 2015-2017 address implementation of the 12 EBM recommendations, as appropriate.

**Action item 3:** After a review of Arctic Council and non-Arctic Council assessments of ecosystems, PAME Ecosystem-Approach Expert Group, with CAFF (CBMP), to provide guidance on approaches for integrating such assessments in both marine and terrestrial environments.

**Action item 4:** CAFF (CBMP), PAME, AMAP, SDWG to take a participatory case study approach to illustrate interactions between Traditional and Local Knowledge (TLK) and science in developing and implementing the ecosystem approach. Ensure participation of relevant Working Groups in a specific case study on monitoring coastal Arctic.

**Action item 5:** SDWG to consider the EBM report’s recommendation 1.3 regarding integration of TLK within its initiative on addressing TLK.

**Action item 6:** Arctic Council Member States to consider the utility of a regional seas program as a platform for implementing ecosystem-approach principles in the Arctic marine areas.

**Action item 7:** CAFF (CBMP), PAME and AMAP to help Arctic Council bodies to progress towards consistent use of assessment units. Utilizing the CBMP terrestrial assessment units and other CAFF units, review, develop, and communicate consistent assessment units that are the terrestrial equivalent of, for example, Large Marine Ecosystems or Arctic Marine Areas, and can serve the needs of ecosystem-approach efforts (e.g. physiographic provinces) across Working Groups. Provide an overview of boundary areas /definitions of the Arctic as they may differ across Working Groups.

**Action Item 8:** Following upon the CAFF-led TEEB for the Arctic scoping study and ongoing Adaptation Actions for a Changing Arctic (AACA) efforts related to ecosystem services, CAFF, PAME, AMAP, SDWG and Permanent Participants should encourage Working Groups and PPs to engage in these efforts in the context of the EBM recommendation on ecosystem services. Informed by these efforts, Arctic Council Member States, Working Groups and/or SAOs may suggest and implement next steps related to resilience, EBM and/or valuation of ecosystem services.

**Action Item 9:** CAFF, PAME, AMAP and SDWG should initiate new efforts and continue existing work to improve interoperability of data and tools from Arctic Council assessments as well as assessments performed by other entities.

## STATUS OF IMPLEMENTING TWELVE EBM RECOMMENDATIONS IN THE ARCTIC COUNCIL

Degrees of engagement of Working Groups in implementing the EBM recommendations from Kiruna (2013) based on the responses tendered by Working Groups to SAOs at their meeting in Yellowknife in October, 2014. As the analysis was presented to stimulate workshop discussions, the degrees of commitment were not officially vetted through the Working Groups, hence the degree of priority for each recommendation may not accurately reflect levels of engagement.

*Summary of responses from AMAP, CAFF, PAME and SDWG to EBM recommendations. Drawn from document ACSAO-CA03 Yellowknife EXEC 4.3 Oct 2014*

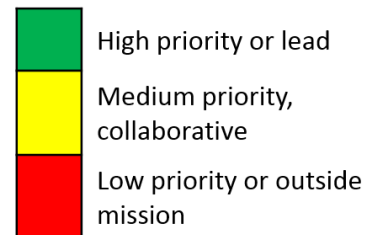
	AMAP	CAFF	PAME	SDWG	
1.1	Yellow	Yellow	Yellow	Yellow	Overarching EBM goal
1.2	Yellow	Yellow	Yellow	Yellow	Ways to manage BECSA
1.3	Yellow	Yellow	Yellow	Green	Traditional knowledge EBM
1.4	Yellow	Yellow	Yellow	Yellow	<u>Transboundary EBM</u>
1.5	Red	Yellow	Green	Yellow	Update <u>BePOMAr</u>
2.1	Yellow	White	Green	Yellow	Coordinate common EBM
2.2	Yellow	Yellow	Yellow	Yellow	Periodic EBM review w/ IEA
3.1	Yellow	Green	Green	Red	Apply LME and terrestrial units
3.2	Red	Yellow	Yellow	Yellow	Identify BECSA, EBM, vulnerabilities
3.3	Yellow	Yellow	Red	Yellow	Ecosystem services for communities
3.4	Green	Green	Yellow	Yellow	Data for EBM, data portal
3.5	Yellow	Yellow	Green	Yellow	Compare and integrate IEA

	High priority or lead
	Medium priority, collaborative
	Low priority or outside mission



## ROLE OF ARCTIC COUNCIL WGS IN ECOSYSTEM-APPROACH IMPLEMENTATION: SIX STEPS IMPLEMENTING THE ECOSYSTEM APPROACH TO MANAGEMENT IN THE ARCTIC (PAME EA EG BROCHURE)

Roles of Arctic Council Working Groups in implementing the ecosystem approach in the Arctic in terms of the six elements of the implementation framework developed by the PAME Ecosystem Approach Expert Group. Gray tone indicates that Working Groups do not have a direct role in managing Arctic resources, but individual Arctic states and individual Working Group members may have such roles.



		AMAP	CAFF	PAME	SDWG
Identify	1				
Describe	2				
Set objectives	3				
Assess	4				
Value	5				
Manage	6				

# COLLECTED RESPONSES FROM ARCTIC COUNCIL WORKING GROUPS TO RECOMMENDATIONS REGARDING ECOSYSTEM-BASED MANAGEMENT

## 1. POLICY AND IMPLEMENTATION

Advancing further EBM efforts across the Arctic will build upon existing EBM implementation and involve transboundary and sub-national or regional arrangements, integrated approaches, shared goals, and consideration of traditional knowledge as appropriate. The Expert Group on Arctic EBM recommends the following actions:

1.1 Develop an overarching Arctic EBM goal, derived from established Arctic Council goals and visions, and provide guidance on how to develop and operationalize objectives supporting this goal.

### 1.1 PAME

This recommendation is not an appropriate task for the Ecosystem-Approach Experts Group or PAME working alone; it must be approached collaboratively.

### 1.1 CAFF

CAFF's release of the Arctic Biodiversity Assessment (ABA – [www.arcticbiodiversity.is](http://www.arcticbiodiversity.is)) has placed renewed emphasis on EBM. This emphasis can be seen in the following:

- One of the ABA's three cross-cutting themes focuses on the necessity of taking an ecosystem-based approach to management. It stressed the need for a comprehensive and integrated approach to address the interconnected and complex challenges facing biodiversity and to ensure informed policy decisions in a changing Arctic.
- One of the six thematic groups into which ABA recommendations were divided focused on EBM, and included the following specific recommendation. *„Advance and advocate ecosystem-based management efforts in the Arctic as a framework for cooperation, planning and development. This includes an approach to development that proceeds cautiously, with sound short and long-term environmental risk assessment and management, using the best available scientific and traditional ecological knowledge, following the best environmental practices, considering cumulative effects and adhering to international standards.“*
- Results from the ABA implementation plan and Arctic Biodiversity Congress will also provide assistance in achieving these goals.
- “Life Linked to Ice” - under Appendix 1, point 3.3, the report provides an analysis of Ecosystem-Based Management, which underscores the importance of this EBM recommendation.

## 1.1 AMAP

AMAP is not currently engaged in developing management goals or objectives, but AMAP assessments do lead to various types of recommendations that are intended to inform policy debates. AMAP assessments should therefore serve as an important input to formulating EBM goals and objectives.

## 1.1 SDWG

SDWG is not involved in developing management goals or objectives but would be happy to do so if requested. SDWG's Social Economic Cultural Expert Group (SECEG) can potentially play a role to look at how EBM policy outcomes can advance social and economic goals, and help Arctic residents adapt to changing ecological and social-economic conditions.

## 1.2 Explore ways in which Arctic States can cooperate to advance conservation and management of biologically, ecologically, and culturally significant areas.

### 1.2 PAME

PAME is already addressing this recommendation through its work on Large Marine Ecosystems (LMEs). In addition, a workshop on Ecologically or Biologically Significant Marine Areas (EBSAs) is in the future through the Convention on Biological Diversity (CBD).

### 1.2 CAFF

CAFF is active in the efforts of the UN CBD, including attending and providing information for the Arctic EBSA workshop. In addition, CAFF addressed marine areas in the development of the AMSA IIc, which identified Arctic marine areas of heightened ecological and cultural significance. CAFF is also working to better understand biodiversity change through its Circumpolar Biodiversity Monitoring Program (CBMP), which can serve to provide information useful in this process.

### 1.2 AMAP

AMAP, together with CAFF and SDWG, prepared the AMSA IIc follow-up report "Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIc". This report used, *inter alia*, information from the AMAP-coordinated assessment of oil and gas activities in the Arctic.

## 1.2 SDWG

SDWG worked with AMAP and CAFF to prepare the AMSA IIc follow-up report “Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIc”. As of this writing, the Inuit Circumpolar Council (ICC) is leading the SDWG project *A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment*. ICC’s objectives for this project are twofold: 1) to communicate AMSA findings to Inuit and seek their guidance on moving AMSA forward, and 2) to expand its earlier survey on Inuit use of sea and sea ice. The project and final draft report in 2015 will help Arctic States work more cooperatively with Inuit and other Indigenous Peoples to advance conservation efforts.

In addition, the *Electronic Memory of the Arctic* project and the *Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change* project will involve the collection and dissemination of materials that advance conservation and management of biologically, ecologically, and culturally significant areas. The Social, Economic and Cultural Experts Group’s (SECEG) participation in the AACA-C project (AMAP) and the Arctic Marine Tourism Project (PAME) will also help advance this objective. Such participation is anticipated, but awaits confirmation.

## 1.3 Develop and adopt a policy and best practices for incorporating traditional knowledge into EBM activities as appropriate.

### 1.3 PAME

This recommendation appears to be a better fit for the capabilities of SDWG, but PAME is exploring this within its own work as well.

### 1.3 CAFF

In the report “Life Linked to Ice” under Appendix 1, point 3.3, there is an analysis of Ecosystem-Based Management, which underscores the importance of this EBM recommendation.

### 1.3 AMAP

AMAP monitoring and assessment activities take account of Traditional Knowledge where appropriate.

### 1.3 SDWG

Permanent Participants in the SDWG have led the work to produce seven draft “guiding principles” for integrating Traditional Knowledge into the work of the AC and identified several ideas to translate these proposed principles into concrete next steps. This work will help inform how traditional knowledge can be incorporated into EBM activities.

1.4 Encourage initiatives between two or more Arctic States to advance implementation of EBM in the Arctic and demonstrate how knowledge is collected, shared, processed and used to contribute to EBM in the Arctic.

#### **1.4 PAME**

The Ecosystem-Approach Experts Group has its fourth workshop coming up in spring [2015] for the Beaufort Large Marine Ecosystem. In addition, a pilot study of Norwegian-Russian joint management of the Barents is in the works.

#### **1.4 CAFF**

CAFF's CBMP Marine, Terrestrial and Freshwater groups contain country representatives that actively collect, share and process national data to better understand biodiversity change. This is an opportunity for countries to analyze data and partner on issues of mutual concern.

#### **1.4 AMAP**

The AMAP-coordinated work on 'Adaptation Actions for a Changing Arctic' (AACAC) is establishing regional implementation activities in the Barents, Baffin/Davis Strait and Bering/Chukchi/Beaufort Sea regions that will have strong links to and support EBM objectives.

#### **1.4 SDWG**

The SDWG project *Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change* involves the creation of an adaptation portal to facilitate access to adaptation resources and create a space where Northern decision-makers can exchange experiences, lessons learned and best practices. This could provide an opportunity to demonstrate how EBM-related knowledge is collected, shared and processed.

1.5 Review, update and adjust the Observed Best Practices in Ecosystem-based Ocean Management in the Arctic, endorsed by the 2009 Arctic Council Ministerial, to be applicable to all environments, including marine, coastal and terrestrial.

### **1.5 PAME**

This is an appropriate task for PAME, with CAFF assuming responsibility for a terrestrial extension.

### **1.5 CAFF**

CAFF's CBMP marine biodiversity monitoring plan (in implementation) and its coastal biodiversity monitoring plan (in development) may provide information of value to follow up on the above recommendation.

### **1.5 AMAP**

AMAP is not generally involved in this type of activity, although its assessment work does provide input on the management of marine, freshwater and terrestrial systems.

### **1.5 SDWG**

Outcomes from *A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment and the Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change* project could be examined with respect to revising the Observed Best Practices in Ecosystem-based Ocean Management in the Arctic. SECEG participation in the AACCA Part C project (AMAP) and the Arctic Marine Tourism project (PAME) will also help advance this objective.

## 2. INSTITUTIONAL

Recognizing the important ongoing EBM work within the Arctic Council, particularly in the marine environment, sustaining and strengthening EBM will require building greater coordination and integration capacity across the Arctic Council and taking steps to further advance EBM in terrestrial environments. The Expert Group on Arctic EBM recommends the following actions:

**2.1 Identify a lead to assure coordination of a common approach to the work of the Arctic Council on EBM in the Arctic and ensure appropriate reporting of progress to the Senior Arctic Officials.**

### **2.1 PAME**

This makes sense as an assignment for the Ecosystem-Approach Expert Group, which could collect info from the states and assess whether there is a need for common guidelines.

### **2.1 CAFF**

[No response]

### **2.1 AMAP**

The AMAP-coordinated AACA-C work includes activities that compare, and that could potentially promote, harmonization of EBM approaches applied in different regional settings.

### **2.1 SDWG**

Input or reporting related to EBM is not as relevant to SDWG as other Working Groups, as SDWG projects focus more on the human dimension. Nonetheless, there are links to a number of SDWG projects (e.g., *A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment*, *Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change*, *Electronic Memory of the Arctic*, *Review of Cancer Among Circumpolar Indigenous Peoples*). The SDWG Executive Secretary is best-placed to report on these initiatives.

2.2 Institute periodic Arctic Council reviews of EBM in the Arctic to exchange information on integrated ecosystem assessment and management experiences, including highlighting examples from Arctic States.

### **2.2 PAME**

This reporting could be funneled through the Ecosystem-Approach Expert Group, with PAME focused on marine and CAFF/AMAP focused on terrestrial components.

### **2.2 CAFF**

CAFF conducts marine work through the CBMP and through its assessments programme (e.g. the Arctic Biodiversity Assessment) that can be used to inform information exchange. CAFF also has capacity in not just terrestrial, but freshwater and coastal environments.

### **2.2 AMAP**

AMAP intends to support such reviews as instituted by the Arctic Council.

### **2.2 SDWG**

SDWG will participate in any reviews of EBM instituted by the Arctic Council. SDWG is well-placed to provide input on the human dimension of EBM.



## 3. Science and Information

Advancing Arctic EBM will require the identification of important coastal, marine, and terrestrial areas, improved data comparability and compatibility, enhanced information exchange and monitoring, and improvements in the development and use of integrated ecosystem assessments. In order to achieve this, the Expert Group on Arctic EBM recommends the following actions:

**3.1 Encourage the use of the revised map of 17 Large Marine Ecosystems as the oceans management unit to implement EBM in the Arctic; and explore the development of terrestrial assessment units (landscape equivalents to LMEs) based upon ecological criteria or existing eco-regions.**

### **3.1 PAME**

The revised map has been delivered with 18 Arctic LMEs. The next step is to encourage use by working groups AMAP and CAFF and to use the revised map as a basis for work.

### **3.1 CAFF**

CAFF's CBMP utilizes eight Arctic Marine Areas identified in the Arctic Marine Biodiversity Monitoring Plan (published 2011). These were communicated to the team developing the LMEs. CAFF is also working on terrestrial EBM issues - a key aspect of which is the implementation of the CBMP terrestrial and freshwater biodiversity monitoring plans.

### **3.1 AMAP**

The AMAP-coordinated AACA is considering the potential for using LMEs as a basis for its work. [It should be noted that, for terrestrial areas in particular, there exist a number of alternatives to eco-regions when it comes to defining 'terrestrial assessment units' for management purposes, e.g. river basins].

### **3.1 SDWG**

The use of the LME map is not applicable for the majority of SDWG projects.

3.2 Identify biologically, ecologically, and culturally significant areas in the coastal, marine and terrestrial environments, and consider EBM-related needs for these areas. Identify the coastal, marine and terrestrial areas most vulnerable to human impacts.

### **3.2 PAME**

This ties in with bullet 1.2 [Note: “Explore ways in which Arctic States can cooperate to advance conservation and management of biologically, ecologically, and culturally significant areas”]. The AMSA IIc has been completed, and a successor is needed to take over the terrestrial and, to a lesser extent, coastal sections.

### **3.2 CAFF**

Through the CBMP’s Freshwater, Coastal, Marine and Terrestrial biodiversity monitoring plans, CAFF may provide biodiversity-related information into processes aimed at responding to this recommendation.

### **3.2 AMAP**

This work has been completed for the marine environments under the AMSA IIc. AMAP has no plans for such initiatives within the coastal and terrestrial environments.

### **3.2 SDWG**

Outcomes from *A Circumpolar-Wide Inuit Response to the Arctic Marine Shipping Assessment and the Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change* project could help towards this objective. The SECEG could possibly play a role in identifying culturally significant coastal, marine and terrestrial areas through participation in the AACA Part C project (AMAP) and the Arctic Marine Tourism project (PAME).

3.3 Assess the value of significant arctic ecosystem services relevant to the well-being of local communities and regional economies and ecosystem services, and those of particular global significance.

### 3.3 PAME

This is mostly appropriate for SDWG, although the AACA-C will address this goal as well.

### 3.3 CAFF

CAFF is undertaking a TEEB (The Economics of Ecosystems and Biodiversity) Arctic scoping study for the Arctic in partnership with TEEB, UNEP, WWF and UNEP-GRID Arendal which is scheduled for completion for the 2015 Ministerial.

### 3.3 AMAP

The 'value of significant Arctic ecosystem services' will most likely be addressed for selected regions in the AACA-C project.

### 3.3 SDWG

SDWG and the SECEG involvement in the AACA-C will support the objective of assessing the well-being of local communities and economies vis-à-vis ecosystem services.

3.4 Enhance access to, and use of, the multidisciplinary data required for the implementation of EBM by building upon ongoing work in the Arctic Council to contribute to an Arctic Council data portal.

### 3.4 PAME

As part of this effort, PAME is looking into the data issue for the Barents, Beaufort, etc. – the regional level. There are many obstacles. In many ways, the Arctic Council is already addressing this with its existing data portals. Gathering experience from smaller-scale portals rather than plunging in to making a huge one is wise.

### 3.4 CAFF

The Arctic Biodiversity Data Service is CAFF's data portal and is the data-management framework for managing data generated via the Conservation of Arctic Flora and Fauna and its Circumpolar Biodiversity Monitoring Programme. It is an online, interoperable data management system which serves as a focal point and common platform for all CAFF programs and projects as well as a dynamic source for up-to-date circumpolar Arctic biodiversity information and emerging trends. It will allow for discovery, archiving and access to data at various spatial, temporal, and taxonomic

scales (e.g., populations, regions, nations, circumpolar, biomes, habitats) allowing users to explore relationships and factors driving change. It could feed into this recommendation.

### **3.4 AMAP**

AMAP is already addressing this in a number of data-related initiatives. SAON (Sustaining Arctic Observation Networks) has the objective to enhance access to Arctic observational data.

### **3.4 SDWG**

SDWG is working to develop an adaptation portal (*Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change* project) and is gathering and digitizing circumpolar related information on a variety of topics from AC state libraries, museums and archives (Electronic Memory of the Arctic project). These sources of information could potentially be linked to an AC data portal.

**3.5 Exchange information and experiences with integrated assessments of ecosystem status, trends and pressures for coastal, marine, and terrestrial areas and provide guidance on approaches for integrating existing assessments.**

### **3.5 PAME**

This is the focal activity of the Ecosystem-Approach Expert Group.

### **3.5 CAFF**

The use of an ecosystem-based approach to conservation and management is inherent in all of CAFF's work and has remained integral to all CAFF activities since its formation under the Arctic Environmental Protection Strategy in 1992.

### **3.5 AMAP**

Information exchange for integrated assessment purposes is a key component of the AACA activity. AMAP and CAFF are the primary AC working groups responsible for assessments of status, trends and impacts on coastal, marine, and terrestrial areas in the Arctic, and many of these assessments now involve integration of physical, biological and social-economic aspects.

### **3.5 SDWG**

SDWG provides human-dimension input into assessments as requested. SECEG participation in the AACA-C project will help to identify the socio-economic implications of assessments/scenarios and the development of possible adaptation strategies.

## Annex: Postscript from CAFF

A brief summary of examples of recent CAFF activities which build upon the nine EBM principles defined by the EBM task force and respond to the activities recommended by Ministers in Kiruna to advance EBM in the Arctic includes:

- The ABA action plan to implement the ABA recommendation is underway with early implementation already ongoing e.g. the Arctic Migratory Bird Initiative (AMBI);
- In cooperation with AMAP and SDWG the development of the AMSA IIC report on the Identification of Arctic marine areas of heightened ecological and cultural significance: Arctic Marine Shipping Assessment (AMSA) IIC;
- The report “Life Linked to Ice: A guide to sea-ice-associated biodiversity in this time of rapid change” was completed and released;
- Completion of the Arctic Terrestrial Biodiversity Plan;
- Completion of the CBMP strategic plan (2013-2017) phase II implementation of the CBMP;
- Implementation of the Arctic biodiversity Freshwater, Marine and Terrestrial monitoring Plans;
- Commencement of a scoping study on the Arctic’s ecosystem services; and
- Commencement of a project to address protection of Arctic lifestyles and people through migratory bird conservation.