ARCTIC COUNCIL

Senior Arctic Officials' Report to Ministers

11th Arctic Council Ministrial meeting

Rovaniemi, Finland

7 May 2019

Senior Arctic Officials' Report to Ministers 2019

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Acronyms and abbreviations found in Arctic Council reports

AAC	Arctic Athabaskan Council
AACA	Adaptation Actionsfor a Changing Arctic (AMAP project)
AAR	After-Action Report (EPPR, 2019)
ABA	Arctic Biodiversity Assessment (CAFF, 2013)
ABDS	Arctic Biodiversity Data Service (CAFF)
AC	Arctic Council
ACAP	Arctic Contaminants Action Program (1 of 6 Working Groups)
ACGF	Arctic Coast Guard Forum
ACIA	Arctic Climate Impact Assessment (AMAP, 2005)
ACOPS	Advisory Committee on Protection of the Seas (Observer)
ACS	Arctic Council Secretariat
AEC	Arctic Economic Council
AEPS	Arctic Environmental Protection Strategy
AEWA	African-Eurasian Waterbird Agreement
AHDR	Arctic Human Development Report
AHHEG	Arctic Human Health Expert Group (SDWG)
AIA	Aleut International Association
AINA	Arctic Institute of North America
AMAP	Arctic Monitoring and Assessment Programme (1 of 6 Working Groups)
“AMAROK”	The Arctic Council Tracking Tool “AMAROK”
AMATII	Arctic Maritime and Aviation Transportation Infrastructure Initiative (SDWG, 2011, 2013)
AMBI	Arctic Migratory Birds Initiative (CAFF)
AMIUM	Arctic Marine Indigenous Use Mapping: Tools for Communities (PAME)
AMSA	Arctic Marine Shipping Assessment (PAME, 2009)
AMSP	Arctic Marine Strategic Plan 2015-2025 (PAME, 2015)
AMTP	Arctic Marine Tourism Project (PAME)
AOA	Arctic Ocean Acidification (AMAP, 2013)
AOOGG	Arctic Offshore Oil and Gas Guidelines (PAME, 2009)
AOR	Arctic Ocean Review Project (PAME, AMAP)
AORF	Arctic Offshore Regulators’ Forum
AOR	Arctic Ocean Review (PAME, 2013)
AOS	Arctic Observing Summit
APAI	Arctic Protected Areas Indicator Report (PAME, CAFF)

APG	Associated petroleum gas
Arctic TEEB	The Economics of Ecosystems and Biodiversity in the Arctic (CAFF)
AREA	Arctic Renewable Energy Atlas (SDWG project)
ARENA	Arctic Remote Energy Networks Academy (SDWG project)
ARIAS	Arctic Invasive Species Strategy and Action Plan (CAFF initiative)
ARR / ARA	Arctic Resilience Report / Arctic Resilience Assessment
ARAF	Arctic Resilience Action Framework
ASDI	Arctic Spatial Data Infrastructure
ASDS	Arctic Shipping Data Service (PAME)
ASTD	Arctic Ship Traffic Data project (PAME)
ASTI	Arctic Species Trend Index (CAFF)
AWRH	Association of World Reindeer Herders (Observer)
BCM	Black Carbon and Methane
BEAC	Barents Euro-Arctic Council
CAFF	Conservation of Arctic Flora and Fauna (1 of 6 Working Groups)
CASA	Compendium of Arctic Shipping Accidents (PAME)
CBD	Convention on Biological Diversity
CBird	The Circumpolar Seabird Expert Group (CAFF)
CBM	Community-Based Monitoring
CBPM	Circumpolar Biodiversity Monitoring Program (CAFF)
CBMP	Circumpolar Biodiversity Monitoring Program (CAFF initiative)
CBVM	Circumpolar Vegetation Map/ Mapping (CAFF)
CBSS	Council of the Baltic Sea States
CCAC	Climate and Clean Air Coalition
CCU	Circumpolar Conservation Union (Observer)
CEMG	Coastal Expert Monitoring Group (CAFF)
CFG	Circumpolar Flora Group
CLEO	Circumpolar Local Environmental Observer Network (ACAP)
CliC	Climate and Cryosphere
CLRTAP	Convention on Long-Range Transboundary Air Pollution
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CPAN	Circumpolar Protected Areas Network (CAFF)
C&O group	Communications and outreach group
DCE	Designated/contributing expert (AMAP)
EA	Ecosystem Approach
EAAFP	East Asian Australasian Flyway Partnership
EALLU	Arctic Indigenous Youth, Climate Change and Food Culture (SDWG)

EBM	Ecosystem-Based Management
EBSAs	Ecologically and Biologically Significant Areas (AMAP, CAFF, PAME)
ECONOR	Economy of the North (SDWG project)
ECORA	An Integrated Ecosystems Management Approach to Conserver Biodiversity and Minimize Habitat Fragmentation in Three Selected Model Areas in the Russian Arctic (CAFF, 2009)
EG	Expert Group
EGBCM	Expert Group on Black Carbon and Methane
EMERCOM	"Agency for Support and Coordination of Russian Participation in International Humanitarian Operations" of the Ministry of Civil Defence and Emergencies of the Russian Federation (RF)
EPA	Environmental Protection Agency (USA, Sweden)
EPPR	Emergency Prevention, Preparedness and Response (1 of 6 Working Groups)
ERMA	The Environmental Response Management Application (EPPR)
EU	European Union
FAO	Food and Agriculture Organization (UN)
FCZ	Fisheries Conservation Zone
FEMG	Freshwater Expert Monitoring Group (CAFF)
FP-OPP	Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic (2015)
GBIF	Global Biodiversity Information Facility
GCI	Gwich'in Council International
GEF	Global Environment Facility
GIS	Geographic Information System
HELCOM	Helsinki Commission, protection of Baltic marine environment
HFC	Hydrofluorocarbons
HFO	Heavy Fuel Oil (PAME)
HHAG	Human Health Assessment Group (AMAP)
HoD	Head of Delegation
HSEMS	Health Safety and Environmental Management Systems (PAME)
IASC	International Arctic Science Committee (Observer)
IASSA	International Arctic Social Sciences Association (Observer)
ICC	Inuit Circumpolar Council
ICES	International Council of the Exploration of the Seas
IEA	Integrated Ecosystem Assessment (PAME)
IMO	International Maritime Organization (UN)
IPCAP EG	Indigenous Peoples' Contaminants Action Program Expert Group
IPCC	Intergovernmental Panel on Climate Change

IPPI	International Polar Partnership Initiative
IPS	Indigenous Peoples' Secretariat
IPY	International Polar Year
ISAC	International Study of Arctic Change
ISO	International Organization for Standardization
ITU	International Telecommunications Union
IUCH	International Union for Circumpolar Health (Observer)
IUCN	International Union for the Conservation of Nature (Observer)
IWGIA	International Work Group for Indigenous Affairs (Observer)
KNE	Key National Expert (AMAP)
LME	Large Marine Ecosystem (PAME)
MARPO	International Convention for the Prevention of Pollution from Ships
MEMA	Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (PAME, SDWG)
MEPC	Marine Environment Protection Committee (PAME)
MFA	Ministry of Foreign Affairs
MOSPA	Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013)
MPA	Marine Protected Area
NAMMCO	North Atlantic Marine Mammal Commission (Observer)
NCM	Nordic Council of Ministers (Observer)
NEFCO	Nordic Environment Finance Cooperation (Observer)
NF	Northern Forum (Observer)
NOAA	National Oceanic and Atmospheric Administration (USA)
ODS	Ozone-Depleting Substances
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic
O&G	Oil and gas
PAME	Protection of the Arctic Marine Environment (1 of 6 Working Groups)
PCB	Polychlorinated biphenyl
PICES	North Pacific Marine Science Organization
PINRO	Polar Institute of Marine Fishery and Oceanography (RF)
POP	Persistent Organic Pollutant
PP	Permanent Participant
PSI	Project Support Instrument
RAIPON	Russian Association of Indigenous Peoples of the North
RAP-ML	Regional Action Plan on Marine Litter in the Arctic (PAME)
REDEG	Resource Exploration and Development Expert Group (PAME)
RPA	Regional Programme of Action
RRFP	Regional Reception Facilities Plan (PAME)
SAMBR	State of the Arctic Marine Biodiversity Report (CAFF project)
SAO	Senior Arctic Official
SAOC	SAO Chair (Chair of the Senior Arctic Officials)
SAOX	SAO executive meeting
SOLAS	International Convention for the Safety of Life at Sea

SAON	Sustaining Arctic Observing Networks
SAR	Search and rescue
SCPAR	Standing Committee of the Parliamentarians of the Arctic Region (Observer)
SC	Saami Council
SCTF	Task Force on Enhancing Scientific Cooperation in the Arctic
SDG	[UN] Sustainable Development Goals
SDI	Spatial Data Infrastructure
SDWG	Sustainable Development Working Group (1 of 6 Working Groups)
SECEG	Social, Economic and Cultural Expert Group (SDWG)
SLCP/F	Short-Lived Climate Pollutants/Forcers
SLCP/F EG	Short-Lived Climate Pollutants/Forcers Expert Group
SWIPA	Snow, Water, Ice, and Permafrost in the Arctic (AMAP project)
TBD/TBC	To be determined / To be confirmed
TF	Task Force
TFAMC	Task Force on Arctic Marine Cooperation
TFAMC II	Task Force on Arctic Marine Cooperation II
TFBCM	Task Force on Black Carbon and Methane
TFCBF	Task Force to Facilitate the Circumpolar Business Forum
TFICA	Task Force on Improved Connectivity in the Arctic
TFII	Task Force on Institutional Issues
TFOPP	Task Force on Arctic Marine Oil Pollution Prevention
TFTIA	Task Force on Telecommunications Infrastructure in the Arctic
TK	Traditional knowledge
TKLK	Traditional knowledge and local knowledge
ToR	Terms of Reference
TTX	Table Top Exercise
UArctic	University of the Arctic
UAS	Unmanned Aircraft System
UN	United Nations
UNCLOS	UN Convention on the Law of the Sea (1982)
UN-ECE	United Nations Economic Commission for Europe (Observer)
UNDP	United Nations Development Programme (Observer)
UNEP	United Nations Environment (Observer)
UNEP-WCMC	United Nations Environment-World Conservation Monitoring Center
UNFCCC	UN Framework Convention on Climate Change
WASH	Improving Health in Arctic Communities through Safe and Affordable Access to Household Running Water and Sewer: Water, Sanitation and Health (SDWG project)
WG	Working Group
WHO	World Health Organization
WMO	World Meteorological Organization
WMU	World Maritime University
WWF	World Wildlife Fund for Nature – Global Arctic Program (Observer)
WP	Work plan

1. Introduction from the Chair of the Senior Arctic Officials

Finland's Chairmanship of the Arctic Council: Exploring Common Solutions

It was Finland´s turn to take over the Chairmanship of the Arctic Council from the United States at the Ministerial meeting held in Fairbanks on 11 May 2017, building upon their ambitious and successful program. In many areas, Finland has continued the programs and projects initiated by our predecessors, while taking a fresh look at the emerging needs in the Arctic region.

Tensions in international relations have put a particular pressure on Finland to preserve the constructive nature of cooperation carried out by the Arctic Council, and indeed seek ways to strengthen it even further. These efforts were reflected in the overall theme of the Finnish Chairmanship: Exploring Common Solutions.

The four priority areas – environmental protection, connectivity, meteorological cooperation and education – were well received by the Arctic States (including the working groups) and the Permanent Participants. The Working Groups, Task Forces and the Expert Group on Black Carbon and Methane have each carried out an extraordinary amount of work and incorporated these priorities into their activities. The priority themes have also helped the Arctic Council to broaden its horizons and engage with international organizations and other actors.

It should be acknowledged that addressing the impacts of climate change in the Arctic has been challenging. At the same time, the Senior Arctic Officials, the Permanent Participants and the Working Groups have gone the extra mile to keep the groundbreaking work of the Arctic Council moving forward, preparing high-quality reports, accurate assessments and much-needed recommendations for the benefit of all Arctic inhabitants.

This Senior Arctic Officials' Report to Ministers summarizes the incredible amount of world-class activities carried out by the Working Groups, the Task Forces and the Expert Group, and it emphasizes the commitment of the highly qualified experts engaged in Arctic Council co-operation. Arctic Council Observers are increasingly interested in contributing to this work, and Finland has carried out a number of outreach activities with the Observer States and international organizations.

The past two years have been a profound experience for me as Chair of the Arctic Council. It has shown that lifelong learning is not only necessary but actually quite intriguing. The Arctic has come alive especially through colleagues and friends who live in the region and share their thoughts, hopes and concerns. One of those respected colleagues and friends is my successor, Ambassador Einar Gunnarsson. I am sure that the Arctic Council will be in steady hands during the Icelandic Chairmanship.

Aleksi Härkönen

Chair of the Senior Arctic Officials

2. Strengthening cross-cutting work in the Arctic Council

During the Finnish Chairmanship, thematic sessions on issues such as pollution prevention, education, biodiversity, connectivity, and meteorological cooperation gave impetus to joint work on cross-cutting themes across the Arctic Council. The sessions included presentations both by internal and external experts and provided opportunities to overcome knowledge gaps and establish new working relationships between many actors, including with the Observers, to increase cooperation on data collection and data sharing.

The Arctic Resilience Forum (ARF) held in September 2018 highlighted how Working Groups (WGs) can work systematically together to improve the level of coordination and interdisciplinary collaboration across the Arctic Council – some of the crucial elements of a resilience approach. Integrating traditional knowledge and local knowledge, monitoring the relationship between human activities and Arctic ecosystems, and conserving the ability of ecosystems to sustain human livelihoods are all essential to building resilience. SAOs discussed follow up to the Arctic Resilience Action Framework (ARAF) and adopted SDWG's suggestions for taking resilience building in the Arctic forward. Resilience would not continue to be a stand-alone project in the SDWG for the next two years, but SDWG would possibly revisit the resilience issue in 2020. The suggestions are included in Annex 6.5.

During the Arctic Environment Ministers' Meeting (AEMM) held in October 2018, the WGs, the Expert Group on Black Carbon and Methane (EGBCM), and the World Meteorological Organization (WMO), informed Environment Ministers and high-level PP representatives about major environmental challenges facing the Arctic region. The AEMM also included a Talanoa dialogue session where PP representatives and Ministers shared personal stories about the consequences of climate change to the people living and working in the circumpolar Arctic.

When cooperating closely on a given subject matter, WGs, TFs and EGs aim to deliver comprehensive analyses and cooperative assessments and formulate informed policy recommendations to be considered by Arctic States and PPs. For instance, as a part of the Arctic Council's work on short-lived climate pollutants (SLCPs), the EGBCM collaborated with representatives from AMAP, ACAP, PAME, and EPPR to update the knowledge base of its work and build on the efforts of the other subsidiary bodies.

Projects conducted by WGs are eligible for funding provided by the Arctic Council's Project Support Instrument (PSI). During the Finnish Chairmanship, the SAOs reviewed PSI practices and explored ways to improve its capacity as a funding mechanism for the Arctic Council's work. The SAOs will, throughout the incoming Icelandic Chairmanship, continue to oversee the PSI and the implementation of all recommendations from the review.

The Finnish Chairmanship's focus on improved connectivity in the Arctic also opened new discussions and opportunities on knowledge sharing between Arctic States, PPs (AIA), WGs (EPPR, SDWG and CAFF), external bodies such as the Arctic Economic Council (AEC) and the Arctic Coast Guard Forum (ACGF), as well as academics. The outcome of this collaboration was a policy report with findings and recommendations that aims to ultimately close the digital connectivity gap for the inhabitants of the Arctic.

In 2019, the Arctic Council formalized its collaboration with the AEC by concluding the Council's first Memorandum of Understanding (MoU) with an external body. Through this, the Council seeks to further enhance cooperation with the AEC on joint objectives to improve the well-being, safety and prosperity of Arctic inhabitants, and to ensure a vibrant regional economy for the future (See Annex 6.2).

Strengthening the Arctic Council's communications and outreach activities was another high priority of Finland's Chairmanship. The approval of an updated version of the Arctic Council's communication strategy underlined the emphasis put on common governing principles for communication across the Council and its subsidiary bodies. The overall objective is to trans-

mit complex ideas and scientific findings in a visual and accessible way to the Arctic Council's diverse target audiences. (See updated strategy in Annex 6.1.)

In October 2018, the second Arctic Biodiversity Congress (ABC) held in Rovaniemi, Finland was another concrete example of how the Arctic Council seeks to effectively communicate the work it produces across all its bodies. The ABC 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.

The Finnish Chairmanship also took actions to enhance the Arctic Council's relations with its Observers. For example, Finland encouraged Observers to present their work on pollution prevention and biodiversity during special Observer sessions organized at SAO plenary meetings. In addition, thematic WG-Observer sessions, including a workshop on marine litter, allowed participants to share information and expertise, and explore new avenues for closer collaboration between the Council's subsidiary bodies and regional and global partners. In 2018, the NGS announced its intention to withdraw as an accredited Observer at the Arctic Council. The SAOs have acknowledged the NGS's decision and thank them for their contributions to the Council.

The Common Operating Guidelines for Working Groups was updated in 2018 with an annex on SDWG guidelines (See Annex 6.4.). The Guidelines provide a succinct introduction to the workings of the WGs and thus facilitate cooperation within and among these bodies, including cooperation with Observers.

Looking ahead, current and emerging challenges to the Arctic environment and the well-being of the region's inhabitants call for enhanced cooperation across all of the Arctic Council subsidiary bodies. As demonstrated by the work plans presented in this report by the WGs, TFs and EG, cooperation is already taking place on a large range of cross-cutting themes, such as:

- Health and well-being;
- Cultural integrity;
- Food and water security;
- Reduction of pollution and hazardous substances;
- Prevention, preparedness and response to emergencies;
- Marine litter and microplastics;
- Effects of climate change;
- Adaptation and resilience; and,
- Protection of biodiversity and sustainable use of living resources.

The incoming Icelandic Chairmanship will continue to support and encourage cooperation between the WGs to strengthen the Arctic Council. Cross-cutting efforts such as reducing plastic contamination in the Arctic are very much in line with Icelandic priorities. Iceland intends to place emphasis on discussing and promoting potential ways and means for the Arctic States to reduce plastic contamination of the Arctic's marine environment. This cross-cutting focus will be enhanced by the ongoing projects of the Arctic Council's WGs, currently running or to be conducted during the next two years.

Under the Finnish Chairmanship, PAME conducted a desktop study on marine litter, which included microplastics in the Arctic, and approved a second phase for its project on "Regional Action Plan (RAP) on Marine Litter in the Arctic" to be conducted in 2019-2021. One of PAME's findings suggested that insufficient waste management in some Arctic coastal communities served as important sources of localized marine litter. ACAP and SDWG have planned to work together on solid waste and marine debris. In addition, SDWG will conduct a follow-on project in 2019-2020 on "Solid Waste Management in Small Arctic Communities" cooperatively with ACAP, AMAP, EPPR, and CAFF. On its part, CAFF

will focus on impacts of marine litter on wildlife, while AMAP will develop monitoring guidelines for marine plastics and marine litter by 2021.

The cross-cutting approach on plastics and marine litter calls for both close collaboration amongst the WGs as well as active work coordination to avoid any unnecessary overlaps or gaps in order to strengthen the final deliverable. Indeed, coordination amongst different subsidiary and external bodies can only strengthen the Arctic Council's overall work. To that end, the incoming Icelandic Chairmanship will propose to the Arctic Council the appointment of a Special Coordinator on Plastics to steer coordination with WGs and other relevant bodies and experts to help increase the level of engagement from Observers, and to ensure that the work undertaken under the auspices of the Council and the political interest in this matter coincide. As such, the Special Coordinator will have the mandate to:

- Engage directly with WG Chairs and Executive Secretaries on potential research overlapping and gaps;
- Engage in dialogue with Observers and relevant private sector representatives; and,
- Ensure transparency of this work and regularly report back to the SAOs.

Secretariat support will be provided as needed by the ACS and the Icelandic Chairmanship. The Arctic States and the PPs could each provide contact points for the Special Coordinator, either at SAO or deputy SAO level.

Oldervika, Tromsø, Norway
Photo: Arctic Council Secretariat / Ingeborg Y. Pettersen

3. Arctic Council Working Groups: report on achievements in 2017-2019 and work plans for 2019-2021

3.1. Arctic Contaminants Action Program (ACAP)

Mandate

ACAP's mission is to contribute to the efforts to reduce environmental risks and prevent pollution of the Arctic environment. ACAP acts as a strengthening and supporting mechanism of the Arctic Council, encouraging national actions to reduce emissions and releases of pollutants and to reduce environmental, human health and socio-economic risks. ACAP, in cooperation with national authorities, develops pilot projects that build capacity and demonstrate emission reduction activities for contaminants. Exchange of information and knowledge on best practices, technologies, regulations, and other measures among Arctic States are key instruments in this work. ACAP contributes to the implementation by the Arctic States of international conventions and related protocols relevant to the Arctic. ACAP strives to support pilot projects that contribute to the reductions of emission of:

- Hazardous substances such as persistent organic pollutants (POPs), mercury, hazardous waste, and others regulated by international conventions;
- Short-lived climate pollutants (SLCPs) such as black carbon, methane and hydrofluorocarbons (HFCs) currently covered under international conventions; and,
- Pollutants of emerging concern, including marine litter and plastics/microplastics.

3.1.1 Achievements 2017-2019

In follow-up to the Fairbanks declaration 2017 (e.g., see paragraphs 11, 14-17, 20, 23-26 of the declaration), ACAP has, inter alia, undertaken the following work over the course of 2017-2019.

ACAP continued to work toward reducing environmental risk and environmental pollution in the Arctic region through its four Expert Groups (EGs), in cooperation with other Arctic Council Working Groups (WGs), while also actively contributing to the Arctic Council's Expert Group on Black Carbon and Methane (EGBCM), Task Force on Arctic Marine Cooperation (TFAMC) and Task Force on Improved Connectivity in the Arctic (TFICA). ACAP also provided input and representation at the Arctic Resilience Forum (ARF), Arctic Biodiversity Congress (ABC), and the Arctic Environment Ministers Meeting (AEMM).

Summary of achievements 2017-2019

EG POPs and Mercury (EG POPs/HG)

This EG continued its work in coordinating and facilitating demonstration projects that reduce releases of POPs and mercury into the Arctic environment. Completion of the Russian National Implementation plan of the Stockholm Convention, and entry into force of the Minamata Convention were major milestones that will continue to shape future work on this issue. Two projects, the *Updated and Broadened Inventory of Primary Emission Sources of Selected POPs and Mercury*, and the *Inventory Programs, Control Technologies and other Support to Russia's Compliance with International Convention Requirements*, have been refined to cover both POPs and mercury. The new project *ARCRISK – Mercury Risk Evaluation, Risk Management and Risk Reduction Measures in the Arctic* was developed and launched. Coordination with AMAP's Expert Group on POPs and Expert Group on Mercury was undertaken to ensure complementary and mutually reinforcing work.

EG on Waste (EGW)

ACAP continued its work on environmentally sound destruction of hazardous waste as an ongoing priority area. The project *Demonstration of Environmentally Sound Destruction of Obsolete Pesticides: Phase III* developed a testing program for environmentally sound destruction of POPs using a Russian Super Critical Water Oxidation (SCWO) technology, upon which the next phase, commercial scale obsolete pesticide destruction, will be based. The findings of the project *Demonstration of Management and Destruction of 250 Tons of PCB in Transformers:*

Phase III are being developed to support the *Russian National Implementation Plan of the Stockholm Convention*.

EG Short Lived Climate Pollutants (EG SLCP)
ACAP continued to focus on projects that help reduce releases of short-lived climate pollutants and mitigate the impacts of emissions on Arctic communities. The *Black Carbon Case Studies Platform*, a one-stop shop for sharing information on black carbon (BC) reduction activities in the Arctic, added 23 new case studies to the Arctic Environmental Response Management Application (Arctic ERMA), from the previous list of 45 case studies reported in the SAO Report to Ministers in 2017. Additional showcase write-ups have been highlighted on the ACAP webpage. The project *Mitigation of Black Carbon and Methane Emissions from Associated Petroleum Gas (APG) Flaring in the Arctic Zone of the Russian Federation* completed the final report from Phase Ia (an evaluation of APG flaring impacts), informing the development of Phase Ib with terms of reference for demonstration of best available techniques and best environmental practices (BAT-BEP) to reduce SLCP emissions and two business cases for APG utilization. The project P*hase-out of Ozone Depleting Substances and Fluorinated Greenhouse Gases at Fish and Seafood Processing Enterprises of the Murmansk Oblast* has completed Phase I interim and inventory report. Possible Phase II initiation will be based on the results of the Phase I report.

Indigenous Peoples' Contaminants Action Program (IPCAP)
The EG IPCAP continued its work on projects that have a direct impact on the indigenous peoples living and working in the Arctic. The *Circumpolar Local Environment Observer Network* (CLEO) continued to grow, with close to 3000 members and more than 1000 observations from 600 communities across the circumpolar Arctic. Feasibility studies were completed in Norway and Finland. Training and youth exchanges, in cooperation with CAFF, took place to increase awareness and mobilized new observers and communities in the North. Work on the establishment of a CLEO hub in the Saami region progressed well through collaborations with Saami educational and cultural organizations. Moreover, CLEO materials were translated into additional languages.

The *Community-Based Black Carbon and Public Health Assessment* evaluated, on a pilot-project basis, local sources of black carbon emissions from a representative sampling of Arctic Alaskan and Russian villages. Key partnerships and contacts were established in Alaska and Russia to facilitate ongoing work. Progress on the project included the completion of a desk study under which the project gathered inventory data; developing guidance on assessing emissions and measuring concentrations of black carbon; demonstrating monitoring in an Alaskan village; initiating regulatory requirements for research involving human subjects in Alaska and Russia; and developing public health survey templates for identified communities. The *Saami Solid Waste Inventory* project successfully completed an inventory of undocumented and illegal sources of pollution in the Murmansk region. This work will be important for future work on solid waste management within ACAP.

3.1.2 ACAP Work Plan 2019-2021

Introduction
ACAP recognizes that cooperative actions contribute significantly to the overall international effort to reduce environmental damage on a global level. ACAP will continue to develop concrete project proposals within this mandate, considering the needs of Arctic indigenous communities by incorporating traditional knowledge and local knowledge when appropriate. The projects identified in ACAP's work plan (WP) include project proposals that have already been approved by ACAP and that are currently under development for future ACAP consideration. Additional proposals may be developed within the scope of this WP during 2019-2021 period.

ACAP has noted the increasing focus on solid waste management, particularly as it relates to the need to reduce plastic marine litter and

the release of microplastics into the Arctic environment. This is a cross-cutting issue that will require cooperation among the relevant Arctic Council WGs. ACAP encourages multi-disciplinary, multi-pollutant projects and is noting its intention to scope out such activities in 2019-2021.

Implementation of planned projects is contingent on securing financing for those projects, subject to the Arctic Council Rules of Procedure. ACAP may advance approved projects for funding to the Arctic Council Project Support Instrument (PSI) and other funding sources as appropriate. Future SAO decisions related to the PSI will be followed by ACAP, and the work plan may be modified accordingly.

List of individual projects and activities

EG POPs and Mercury (EG POPs/HG)

PROJECT/ACTIVITY: Updated and Broadened Inventory of Dioxin and Mercury Emission Sources of Selected POPs and Mercury.

Leads/co-leads: Russian Federation

Rationale and overall objective: The aim of this project is to reduce or eliminate the formation and emission of POPs and mercury from sources in Russia affecting the Arctic environment. It seeks to initiate facilitation of a nationwide dioxin and furan inventory by Russian authorities.

Main activities: Engagement with relevant authorities; an inventory of emission sources in prioritized sectors and contaminated sites; outreach activities with authorities, business owners, trade organizations and environmental stakeholders. Part of the follow-up on the Russian NIP for the Stockholm Convention on POPs.

Timeline and financing: Once approved by ACAP, the project leads will apply to the PSI for funding.

PROJECT/ACTIVITY: Control Technologies

Leads/co-leads: Russian Federation

Rationale and overall objective: The aim of this project is to reduce or eliminate the formation and emission of POPs and mercury from sources in Russia affecting the Arctic environment. It seeks to present a program for the introduction and dissemination of techniques and management systems for reducing formation and emission of dioxins.

Main activities: A review of relevant (BAT-BEP) compliant to the Stockholm Convention on POPs and the Minamata Convention on Mercury, technical/operational recommendations, guidance on methodology, outreach workshops, and an education program for staff in federal and regional level authorities and relevant sectors. Follow-up activities may include a draft program for the introduction and dissemination of control technologies and reference materials on a publicly accessible website.

Timeline and financing: Once approved by ACAP, the project leads will apply to the PSI for funding.

PROJECT/ACTIVITY: Promotion of Decreased Pollution in the Arctic Region with the Introduction of BAT

Leads/co-leads: Russian Federation

Rationale and overall objective: The project goals are to prevent and decrease pollution of the Arctic and Barents regions based on BAT knowledge delivery to enterprises and universities, and to facilitate investments in the area.

Main activities: Capacity building, feasibility studies, and additional interventions when required, in cooperation with industry, academia and research/design bureaus. These activities implement BAT at selected enterprises in the key industrial sectors through applicable cleaner production, resource efficiency measures and feasible environmental investments. The seven sectors include: 1) pulp and paper industry; 2) the mining, mineral and metallurgical industry; 3) oil and gas industry; 4) the organic chemical process industry; 5) the inorganic chemical process industry; 6) water and wastewater treatment and management; and 7) combined heat

and power (CHP) combustion plants, including combined incineration.

Timeline and financing: PSI funding approved for up to 425,000 EUR

PROJECT/ACTIVITY: ARCRISK – Mercury Risk Evaluation, Risk Management, and Risk Reduction Measures in the Arctic

Leads/co-leads: Norway

Rationale and overall objective: The aim of this project is to develop an action plan with targeted risk reduction measures for mercury releases from key sources in the Arctic.

Main activities: The project is comprised of six work packages that include the following list of activities to be carried-out: inception, mercury source inventory, risk evaluation of mercury and multiple stressor impacts, demonstration of sound reduction measures, stakeholder involvement, capacity building and dissemination, and project management.

Timeline and financing: The project leads are seeking funding from the PSI.

PROJECT/ACTIVITY: Development of Mercury containing Waste Management Systems in the Arctic Regions of the Russian Federation

Leads/co-leads: Russian Federation

Rationale and overall objective: Based on findings from the UN Environment-Global Environment Facility (UNEP-GEF) mercury inventory project 2015-2017, discussions have started for launching a project on mercury containing wastes and extraction from "man-made-deposits". If these discussions are found productive, efforts will be put towards the development of a project proposal in 2019.

Main activities: The EG POPs and Mercury is developing a project proposal.

Timeline and financing: Once approved by ACAP, the project leads will apply to the PSI for funding.

EG on Waste (EGW)

PROJECT/ACTIVITY: Demonstration of Management and Destruction of 250 tons of PCB in Transformers and Capacitors (Phase III)

Leads/co-leads: Russian Federation

Rationale and overall objective: This project will liaise with the UNEP-GEF funded project Environmentally Sound Management and Disposal of PCB at the Russian Railroad Network and Other PCBs Owners (Phase I), implemented by the United Nations Industrial Development Organization (UNIDO) and Russian Railways. The PSI Committee approved funding for a feasibility study to develop the project further in cooperation with the EG on Waste. The project is awaiting necessary inputs from Russian Railways and the Ministry of Natural Resources.

Main activities: This project will be carried out in a stepped manner. The first step will be an independent evaluation of the UNIDO-GEF proposal and preparation of a feasibility document. The second step will be the implementation of the PCB project. Further details will be established within the course of the independent evaluation.

Timeline and financing: Funding approved for a feasibility study by the PSI Committee.

PROJECT/ACTIVITY: Demonstration of Environmentally Sound Destruction of Obsolete Pesticides (Phase III)

Leads/co-leads: Finland, Russian Federation

Rationale and overall objective: In 2015, Supercritical Water Oxidation (SCWO) technology passed Rosprirodnadzor's environmental approval procedure, and a waste management company based in Krasnoyarsk invested in a facility. ACAP approved the project *Use of SCWO for Environmentally Sound Destruction of Obsolete Pesticides* in February 2016. With financing from the PSI, a preliminary technical assessment has been completed by an international hazardous waste expert. The test program is anticipated to be completed in 2019. Next steps for this project will depend on the result of the SCWO

review and availability of other destruction technologies for the Russian Federation, the demonstration project to destroy stockpiles of obsolete pesticides, and potentially, PCBs, at the facility. An international information exchange workshop on obsolete pesticides inventory and destruction technologies will be organized to take place in the Russian Federation in 2020. The project results support the Russian NIP of the Stockholm Convention, and the international requirements defined in the Stockholm Convention (Article 6), and relevant Basel Convention guidelines, and European Union (EU) directives.

Main activities: Testing of SCWO technology (2018-2019) and the demonstration of environmentally sound destruction (2019-2020).

Timeline and financing: The PSI Committee approved funding for the feasibility study (Phase I) and testing phase (Phase II).

PROJECT/ACTIVITY: Rapid Environmental Assessment (REA)

Leads/co-leads: Finland, Russian Federation

Rationale and overall objective: Depending on the results of the *Rapid Environmental Assessment* (REA) – a tool developed for the United Nations Food and Agriculture Organization (FAO) that will assess the risk to local populations and the environment – on three pesticide-contaminated sites, a clean-up project will be developed to demonstrate environmentally sound cleanup of an old pesticides storage/burial site in northern Russia, including destruction of the hazardous waste. The project will contribute to the Russian Federation's implementation of the Stockholm Convention and the work of the Basel Convention Regional Centre. A progress report is anticipated before the Icelandic Ministerial meeting in 2021.

Main activities: The project will include 1) demonstration of the REA process; 2) a final report; 3) a feasibility study on contaminated storage remediation; and 4) a report on remediation of an obsolete pesticide-contaminated storage. Project implementation is dependent on identifying and contracting the consultants to implement the project.

Timeline and financing: Finland, Norway and Sweden are providing funding for the project.

PROJECT/ACTIVITY: Information Exchange Workshop on Obsolete Pesticides Inventory and Destruction Technologies

Leads/co-leads: Finland, Russian Federation

Rationale: Following successful testing of the Russian SCWO technology for environmentally sound destruction of POPs, a workshop to present the results discussing the criteria and international best practices for environmentally sound destruction of hazardous waste will be organized.

Main activities: A workshop with Russian and international experts presenting examples of best practices used for management and environmentally sound destruction of hazardous waste, especially pesticides and POPs waste.

Timeline and financing: Finland, Norway and Sweden are providing funding for the project.

PROJECT/ACTIVITY: Phase-out and Environmentally Sound Management of Fire-fighting Foams Containing Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) in the Arctic Region

Leads/co-leads: Finland, United States

Rationale and overall objective: Fluorinated aquous film-forming fire-fighting foams (AFFF) are used in airports, refineries and other high-risk facilities. They represent a potential direct release of highly persistent, toxic and bioaccumulative chemicals into the environment. Alternatives have been developed. The project would demonstrate a transition into fluorine-free foams in a facility in the Arctic. Potential co-operation with EPPR WG.

Main activities: The EGW is developing a project proposal.

Timeline and financing: Once approved by

ACAP, the project leads will apply to the PSI for funding.

EG on Short Lived Climate Pollutants (EGSLCP)

PROJECT/ACTIVITY: Black Carbon Case Studies

Leads/co-leads: United States

Rationale and overall objective: Provide a one-stop shop for public information on black carbon work being undertaken in the Arctic. The case studies provide insight that can be used to translate results, replicate projects, and disseminate lessons learned.

Main activities: Continue to add new case studies to the Arctic Environmental Response Management Application (Arctic ERMA) site and develop new showcase studies. Increased outreach will also be undertaken by Arctic States, PPs and Arctic Council Observers.

Timeline and financing: No funding required to develop case studies.

PROJECT/ACTIVITY: Phase-out of Ozone Depleting Substances and Fluorinated Greenhouse Gases at Fish and Seafood Processing Enterprises of the Murmansk Oblast

Leads/co-leads: Russian Federation

Rationale and overall objective: The project will support implementation of the Montreal Protocol and the UNFCCC Paris Agreement. This project was approved by ACAP in February 2017. The project seeks to phase out hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) at one of the fish and seafood processing enterprises of the Murmansk oblast. Objectives of the project include:

1. Transferring ozone and climate-safe technologies to onshore fish and sea food processing enterprises that use hydrochlorofluorocarbons and hydrofluorocarbons in refrigeration and air-conditioning equipment; and,
2. Transferring knowledge to enterprises engaged in repair and after-sales service of onboard refrigeration and air-conditioning equipment in the Murmansk oblast; 3) and initiating conversion of equipment to environmentally safe refrigerants.

Moreover, the project will seek to:

1. Complete feasibility studies – including inventories – to phase out HFCs-HCFCs Ozone-Depleting Substances (ODS) and management of end-of-life HFC/ODS refrigeration and freezing systems at the on- and off-shore fish and seafood processing and servicing enterprises; and,
2. Develop project documentation and implement transfer and commissioning of ozone and climate-safe technologies including capacity-building measures.

Main activities: Activities from Phase I include the organization of study tour(s) and an agreement on project beneficiaries. Phase II will involve the purchase, installation, commissioning and subsequent maintenance of alternative technologies in fishing vessels and on-shore processing facilities; the creation of HFC and HCFC consumption monitoring systems for these enterprises; public awareness activities; and efforts to promote replication in other regions of the Russian Arctic.

Timeline and financing: Financing approved by the PSI Committee for Phase I, while Phase II financing is pending approval by the PSI Committee.

PROJECT/ACTIVITY: Mitigation of Black Carbon and Methane Emissions from APG Flaring in the Arctic Zone of the Russian Federation

Leads/co-leads: Russian Federation

Rationale and overall objective: The rationale of this project is to increase compliance to obligations under the Paris Protocol by the oil and gas sector in the Russian Federation. The main objective is to contribute to reduced emissions of black carbon and methane, including associated releases (e.g., Hg, PAH, non-methane VOC-pre-

cursors to tropospheric ozone emissions) from the oil and gas sector in the Russian Arctic. The project seeks to create the basis for concrete mitigation measures and improved policies through better knowledge about emission sources, the scale and characteristics of emissions and abatement costs (including technology options), and cost effectiveness of available options.

Main activities: The project is expected to have a duration of four years and will include the following activities:

1. Development of an emissions inventory of black carbon point sources;
2. Undertaking action to mitigate emissions from flaring sites;
3. Reporting on levels of methane emissions from the oil and gas sector;
4. Provide recommendation for changes to policies and regulations; and,
5. Dissemination of results to key stakeholders, including a final report and communications activities through ACAP. These activities are contingent on necessary approval in ACAP and funding.

Timeline and financing for 2019-2021: Currently funding of up to EUR 400,000 has been approved by the PSI Committee for Phase II: The use of new methodology to reduce APG flaring at remote fields.

PROJECT/ACTIVITY: Pilot Project for Reducing CO2 and Black Carbon Emissions on the Rivers of the Arctic Zone of the Russian Federation

Leads/co-leads: Russian Federation

Rationale and overall objective: Significantly reduce atmospheric emission of SLCPs from river shipping in northern regions of the Russian Arctic. In addition, the project seeks to decrease atmospheric emissions and water discharges of local pollutants and contaminants. Best practices could be replicated in other regions of the Russian Federation, the Arctic and around the globe. The project also intends to address reduction of ODS and HFCs in river shipping in northern Russia. Reduction of identified atmospheric emissions, as well as reduction of contaminated water discharge, could be achieved through:

1. Creation of regulatory measures, standards and market environments to facilitate the design and deployment of more efficient and less polluting ships based on BAT;
2. pilot development of a new class of ships for operation on the rivers of northern Russia; and,
3. wide dissemination of results, lessons learned, and best practices.

Main activities: This project may proceed if the Russian Federation lifts its study reservation and the Russian Federation's Ministry of National Resources and Economy (MNRE) and other Russian entities agree on potential changes to the scope of work. ACAP will need to approve any substantial modifications to the scope of work.

Timeline and financing: Financing for scoping of the project has been approved by the PSI Committee.

IPCAP Expert Group

PROJECT/ACTIVITY: Circumpolar Local Environmental Observer Network (CLEO)

Leads/co-leads: United States, Sweden, Canada

Rationale and overall objective: The purpose of the Circumpolar Local Environmental Observer Network (CLEO) is to increase awareness of vulnerabilities to the impacts of unusual changes in the environment through observations by local residents of Arctic communities. The leads will continue to promote CLEO in the Arctic region, by establishing a hub and expanding youth engagement through academic and cultural institutions.

Main activities: Student internships in cooperation with CAFF, translation of CLEO materials into additional languages, in developing a col-

laboration with the University of the Arctic.

Timeline and financing: Funding from Sweden, United States and Canada.

PROJECT/ACTIVITY: Community-Based Black Carbon Health Assessment

Leads/co-leads: AIA, Russian Federation, United States

Rationale and overall objective: Assess, on a pilot basis, local sources of black carbon emissions from a number of Alaskan, Russian and Saami villages. It will provide a broad characterization of associated public health risks; explore short- and long-term mitigation options; assess and, where possible, strengthen local capacities to identify, mitigate, and prevent black carbon pollution; draft a framework tool for community-based assessments of black carbon emissions and health risks; and educate local communities about black carbon emissions and risks.

Main activities: Conduct black carbon monitoring and public health assessments in target villages, identify and promote mitigation options, and communicate findings and results to communities and decision-makers.

Timeline and financing: Funding is pending approval by the PSI Committee.

PROJECT/ACTIVITY: Scaling up Solid Waste/Marine Debris Management

Leads/co-leads: United States, Canada, Finland

Rationale and overall objective: Building upon previous ACAP work, the project seeks to collaborate with the SDWG to share expertise and leverage resources in scaling up solid waste management activities.

Main activities: Develop an online exchange tool; identify 3-5 communities to work with; develop capacity building planning tools; develop a template for an Arctic Council Green Star community standards model.

Timeline and financing: Funding is being sought from lead countries.

Administration

The ACAP secretariat is located in Tromsø, Norway and is staffed by the ACAP Executive Secretary within the Arctic Council Secretariat at the Fram Centre. Funding for approved ACAP projects is provided by Arctic States, the PSI, and other funding mechanisms as appropriate. ACAP meets twice per year, supplemented with teleconferences as required, to discuss projects and priorities in the WP as well as new projects within the ACAP mandate. ACAP attends meetings of the Senior Arctic Officials (SAOs), WGs, Task Forces (TFs) and other Arctic related events deemed appropriate by ACAP Chair. Sweden held the Chair of ACAP from 2015-2019 and Norway will take over for the period 2019-2021, pending official WG approval.

Communications

The ACAP Executive Secretary, with support from the Arctic Council Secretariat (ACS), maintains the ACAP webpages, ACAP SharePoint, and ACAP Twitter account. Outreach materials, such as factsheets and short videos are produced either by the ACAP Secretariat with support from the ACS or in cooperation with lead countries and lead funders of the relevant projects. The ACAP Chair and Executive Secretary accept invitations to speak about the work of ACAP in relevant settings, for example at the Arctic Resilience Forum and the EU Northern Dimension Future Forum. Communicating the results of ACAP projects is a high priority for ACAP and is an area where increased resources will be assigned from 2020.

3.2 Arctic Monitoring and Assessment Programme (AMAP)

Mandate

AMAP's mandate is to monitor and assess the status of the Arctic region with respect to pollution (e.g., persistent organic pollutants, heavy metals, radionuclides, acidification, and petroleum hydrocarbons) and climate change issues by documenting levels and trends, pathways and processes, and effects on ecosystems and humans, and by proposing actions to reduce associated threats for consideration by governments.

3.2.1 Achievements 2017-2019

Summary of Achievements 2017-2019

In follow-up to the Fairbanks declaration 2017 (i.e., paragraphs 1, 9, 15, 16, 24, 25, 29, 30), AMAP has, inter alia, undertaken the following work over the course of 2017-2019). Specific references to the declaration are noted as *FD*.

Addressing issues on climate change and its impacts

Assess the impacts of climate change

The second Snow, Water, Ice and Permafrost in the Arctic (SWIPA 2017) assessment report was published in November 2017. This report has been used in the preparation of the UN Intergovernmental Panel on Climate Change (IPCC) SR15 report and is currently being used in the preparation of the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (IPCC SROCC). AMAP has facilitated work on scientific papers that have been submitted for publication in the Special Issue Focus on Indicators of Arctic Environmental Variability and Change of Environmental Research Letters and several other journals. These articles have targeted the IPCC processes, and are being summarized in an eight-page Arctic Climate Issues Update product, which is a deliverable to the 2019 Rovaniemi Ministerial meeting (*FD*: 1, 23).

AMAP representatives participated in and presented findings at the Rovaniemi Arctic Environment Ministers' Meeting (AEMM) of October 2018 as well as at the November 2018 Arctic Circle break out session on the release of IPCC's 1.5 °C report in Reykjavik.

Assess the impacts of ocean acidification

AMAP delivered the scientific findings of the *AMAP Assessment 2018: Arctic Ocean Acidification* (AOA) at the *Arctic Biodiversity Congress* (ABC) in 2018. A *Summary for Policymakers* based on this work will be a deliverable to the 2019 Rovaniemi Ministerial meeting. The assessment addressed socio-economic implications of AOA through a series of case studies. It confirmed the need to address AOA within the wider context of impacts of climate change on ecosystems and the need to reduce emissions of CO2 that are the principal driver of AOA (*FD*: 9).

Addressing contaminants and human health issues

Assess the impacts of contaminants

Results of the *AMAP Assessment 2016: Chemicals of Emerging Arctic Concern* (CEAC) have been used to support work under the Stockholm Convention to review new chemicals for inclusion under that convention and to establish priorities for future screening activities. The *AMAP Assessment 2018: Biological Effects of Contaminants on Arctic Wildlife and Fish* has been completed with scientific results presented at the ABC and a *Summary for Policymakers* will be a deliverable to the 2019 Rovaniemi Ministerial meeting. The assessment highlighted the continuing risks to certain Arctic species posed by 'legacy' pollutants, as well as new CEACs (*FD*: 15, 16). Legacy pollutants are chemicals, primarily POPs, that remain in the environment long after they become subject to regulatory measures.

Assess the impacts of short-lived climate forcers

In 2017, the *Fairbanks declaration* emphasized the need for collective progress to reduce black

carbon and methane emissions by the Arctic States and Observer States. AMAP's work on short-lived climate forcers (SLCF) supports the work of the Arctic Council's Expert Group on Black Carbon and Methane (EGBCM) and is well coordinated with that expert group (EG). This also applies to work ongoing under other relevant international bodies (including the UN Economic Commission for Europe (UNECE) Convention on Long-range Transboundary Air Pollution (CLRTAP), IPCC, the International Maritime Organization (IMO), etc.) (*FD*: 23, 24).

Contributing to international conventions

In addition to the above-mentioned contributions to the IPCC, AMAP has supported Arctic Council engagement with the Minamata Convention (mercury) process through side-events and panel discussions during the COP1 and COP2 meetings. It has also contributed to the development of the UN Environment Global Mercury Assessment (GMA) through a joint *UN Environment/AMAP Technical Background Report to the GMA* that will be delivered in 2019, with key findings presented in November 2018 at the Minamata COP2 (*FD*: 15, 16).

Adapting to climate change

The main follow up from AMAP's *Adaptation Actions for a Changing Arctic* (AACA, 2017) has been to disseminate results through national activities and perform a "lessons learned" process to identify how information in the regional reports could be translated and made useful for national, regional and local decision-makers (*FD*: 25).

Increasing international cooperation on sustaining observations

World Meteorological Organization (WMO)

AMAP has actively engaged in work with the World Meteorological Organization (WMO) to develop plans for enhanced cooperation on meteorological observations and expand its Climate Expert Group to include meteorological experts, as well as continue to work on Arctic/mid-latitude weather connections (*FD*: 29, 30).

The Sustaining Arctic Observing Networks (SAON)

SAON was established in 2011 following the Arctic Council Nuuk Declaration as a joint effort of the Council and the International Arctic Science Committee (IASC) to increase international cooperation on observing in the Arctic. AMAP appoints the Chair of SAON on behalf of the Arctic Council. SAON's secretariat is hosted by AMAP secretariat in Tromsø, Norway.

SAON approved its *Strategy and Implementation Plan* in 2018.

The first goal of SAON is to "create a roadmap to a well-integrated Arctic Observing System" through a connected, collaborative, and comprehensive long-term pan-Arctic network that serves societal needs. To that end, SAON organizes the biennial Arctic Observing Summit (AOS) with the International Study of Arctic Change (ISAC), the International Arctic Science Committee (IASC), and other partners. The conference statement from the AOS of 2018 was delivered to the 2nd Arctic Science Ministerial (ASM2) meeting in 2018 and was fed into the ASM2 theme on Strengthening, Integrating and Sustaining Arctic Observations, Facilitating Access to Arctic Data, and Sharing Arctic Research Infrastructure.

The second goal of SAON is to "promote free and ethically open access to all Arctic observational data." Focus has been on identifying and understanding the specifics of polar data sharing and interoperability through a series of workshops. In 2018 the IASC/SAON Arctic Data Committee organised with partners the Polar Data Planning Summit and the Polar Data and Systems Architecture Workshop (*FD*: 29, 30).

List of AMAP deliverables to the Rovaniemi Ministerial meeting

- Arctic Climate Change Update 2019;
- Arctic Ocean Acidification Assessment: 2018 Summary for Policy-makers; and,
- Biological Effects of Contaminants on Arctic Wildlife & Fish: Summary for Policy makers.

3.2.2 AMAP Work Plan for 2019-2021

Introduction

AMAP has developed its *Strategic Framework* which has been coupled with its work plan. AMAP's work reflects the long-term commitment of the Arctic Council to monitor and assess changes in the level of pollution and climate change and their impact on Arctic ecosystems and human populations. AMAP presents its assessments as key prerequisites to sound policy- and decision-making, and the assessments also serve information needs of other relevant bodies and stakeholders. The *Strategic Framework* outlines mechanisms to ensure the appropriate operationalization of AMAP's strategic goals and the evaluation of AMAP's achievements and implementation.

AMAP's *Strategic Framework* has five goals:

1. Improved knowledge and understanding of Arctic change through collaborative assessment processes, for use in evidence-based decision-making;
2. A strong, sustained and coordinated circumpolar monitoring and observation network;
3. Enhanced understanding of Arctic change and its impacts through inclusive partnership with indigenous peoples and local residents;
4. Effective communication on Arctic challenges and global implications; and,
5. Support to relevant international processes.

The WP was also developed within the context of a multi-year schedule for updating assessments of issues under AMAP's mandate. It reflects near-term priorities for the period 2019-2021 identified by AMAP and considers timing and allocation of resources, the needs and requirements of the Arctic Council as well as relevant international organizations and processes that use AMAP results in their work.

The WP takes note of incoming Icelandic Chairmanship priorities, in particular concerning marine plastics, as well as issues related to the cryosphere; climate change and water in a warming world; the need for sustained Arctic observations to strengthen the understanding of Arctic climate and weather extremes; and the need to provide information as a basis for adaptation and resilience.

As outlined in the *Strategic Framework,* Goal 3 is to achieve the Enhanced Understanding of Arctic Change and its Impacts through Inclusive Partnership with Indigenous Peoples and Local Residents. In addition, the WP also recognizes the potential contributions of Observers to its workings.

List of individual projects and activities

PROJECT/ACTIVITY: Addressing Issues on Climate Change and its Impacts

Lead/co-leads: Lead: United States. Co-leads: Norway and Sweden

WG partners: Parts of the work connect to other Arctic Council WGs, specifically CAFF (effects of climate change on ecosystems and ecosystem feedbacks to climate).

Other partners: Observers, WMO (meteorological cooperation), IPCC.

Rationale and overall objective: Work conducted in support to the preparation of the IPCC *Special Report on the Ocean and Cryosphere in a Changing Climate* (SROCC) and ultimately the *Sixth Assessment Report* (AR6) and connect to UNFCCC/ IPCC priority: Food security and action to combat climate change and its impacts.

Main activities: Planned work on Arctic climate issues include:

- An evaluation of the performance of global climate models in the Coupled Model Intercomparison Project Phase 6 (CMIP6) for climate parameters in the Arctic;
- Investigation of Arctic/mid-latitude weather connections;
- Examination of Arctic thresholds and ex-

tremes, and carbon cycling in the Arctic;

- A review of time series trends and patterns of key Arctic parameters, including sea-ice extent, snow cover duration; and,
- Work to strengthen guidance on monitoring to improve quantification of future climate change and climate change effects is also being conducted.

Understanding how climate change will affect ecosystems and ecosystem services is key to human livelihoods in the Arctic. From the policy perspective, an assessment of how climate change affects species and ecosystems upon which Arctic residents depend, particularly indigenous peoples, has been identified as a high priority within AMAP. It will follow-up with CAFF to scope stepwise work to jointly review and assess climate impacts on Arctic marine, freshwater and terrestrial ecosystems and ecosystem feedbacks to climate.

Timeline: A compilation and overview of the results of the above work will be prepared as a scientific report comprising of an update on Arctic climate issues for the 2021 Arctic Council Ministerial meeting in Iceland. An assessment of climate impacts on Arctic ecosystems is planned for 2023.

Funding: Participating national experts will have national support.

PROJECT/ACTIVITY: Addressing Contaminants and Human Health Issues

Lead/co-leads: Canada, Kingdom of Denmark, Finland, Sweden (persistent organic pollutants (POPs) and contaminants of emerging concern); Canada, Kingdom of Denmark (mercury); Norway, Russian Federation (radioactivity); Canada, Kingdom of Denmark (human health); Finland, Norway, United States (air pollution/SLCPs); Canada, Norway (microplastics and marine litter).

WG partners: Parts of the work connect with that of other Arctic Council WGs, specifically ACAP (chemicals and SLCPs), CAFF (pollution effects on biota), EPPR (radioactivity), PAME (marine litter and microplastics), SDWG (human health), and EGBCM (SLCPs).

Rationale and overall objective: The aim is to support further development and implementation of the UNEP Stockholm (POPs) and Minamata (mercury) conventions, CLRTAP, and connect to UNFCCC/IPCC priority (food security) and the following UN Sustainable Development Goals (SDGs): #2 on food security, #3 on ensuring healthy lives, #6 on access to safe drinking water, and #13 on action to combat climate change and its impacts.

Main activities: An update assessment of mercury in the Arctic is planned for 2021 as an update to the 2011 assessment. Work on POPs focuses on the development of an updated review of contaminants-climate change interactions. Further follow-ups on the assessment of chemicals of emerging concern will also be undertaken as well as work to prepare data products for use in the next Stockholm Convention effectiveness evaluation. An updated human health assessment, including the consideration of health effects of dietary transitions in Arctic populations and risk communication, has been initiated with delivery aimed for 2021/2022. An updated assessment of radioactivity issues of concern is planned for 2023. Contributions from human health monitoring are also an important part of the planned input to the Stockholm Convention effectiveness evaluation.

AMAP is mid-way through an updated assessment of SLCPs. A new generation of emissions scenarios is being developed. It will be used in modelling work to investigate impacts of these pollutants in a more integrated manner. Impacts to be considered will go beyond those of direct climate forcing. In addition, the implications of air pollutants for both climate change and air quality and a wider suite of impacts will be considered. The results of the assessment will be delivered in 2021. The work on SLCPs will be conducted in coordination with work done under other bodies, including the EGBCM, CLRTAP bodies and other relevant groups, including

coordination activities in relation to the EU and proposed OECD initiatives on black carbon.

AMAP will follow-up on PAME's *Desktop Study on Marine Litter Including Micro-plastics in the Arctic* and the recommendation to develop a regional action plan on marine litter in the Arctic. AMAP's contribution will be to develop the monitoring programme and guidelines to accompany the action plan. AMAP will also follow-up with PAME on future work to implement an ecosystem-based approach to marine management. For both activities, the follow-up is also meant to ensure an appropriate division of roles and responsibilities in future work addressing these issues.

Timeline: The activities are part of a coordinated plan for activities with deliverables in 2020 (POPs and human health targeting Stockholm Convention information needs); 2021 (mercury update assessment; integrated air pollution/SLCFs assessment), 2022 (human health update assessment), 2023 (radioactivity update assessment).

Funding: National experts will have national support.

Administration

The AMAP WG Chair is elected by the AMAP Head of Delegations (HoDs) for a period of two years. During the years 2017-2019, the Chair has been from Norway. A new AMAP Chair (Sweden) and Vice Chairs (Norway, Russia, United States) for the period 2019-2021 were elected at an AMAP HoDs meeting in January 2019.

The AMAP Secretariat relocated to Tromsø in April 2018. Secretariat staff currently comprises an Executive Secretary and three Deputy Secretary positions, and the AMAP Administrative Officer. The Executive Secretary and Administrative Officer are based in Tromsø in office space shared with the Arctic Council Secretariat (ACS) and the Indigenous Peoples' Secretariat (IPS). A Deputy Secretary position vacancy is expected to be filled in Tromsø in 2019. The AMAP Secretariat engages accounting services assistance and other occasional part-time assistance to help with administrative and project-related work as necessary. Core funding for the AMAP Secretariat is provided by Norway with additional contributions from other countries and funding bodies.

AMAP Secretariat manages information on specific AMAP activities, the products of AMAP's expert groups, AMAP's relations with the Arctic Council and the ACS, and all other AMAP external processes and envisaged workloads.

Communications and outreach

One of AMAP's goals is to:

> inform its target audiences by producing sound evidence-based, policy-relevant assessments, communications, and outreach products for use in policy- and decision-making processes as well as raising awareness in the general public. AMAP will work closely with other Arctic Council Working Groups, Permanent Participants, governments, Observers, educational institutions, the media, and other organizations to promote AMAP results. (AMAP Strategy 2019+).

To that end, AMAP produces peer-reviewed scientific and technical reports that target scientific and educational communities. These reports provide validated documentation for statements and conclusions communicated in AMAP deliverables to Arctic Council Ministerial meetings.

In addition to the deliverables for Arctic Council Ministerial meetings, AMAP undertakes a range of outreach initiatives based on the results of its assessment work:

- AMAP work is translated into other languages and provides the basis for a large number of scientific journal publications;
- AMAP work is presented at several international conferences and other events; and,
- AMAP continues to upgrade and further develop AMAP website services and has implemented AMAP social media feeds (Facebook and Twitter).

AMAP will routinely evaluate the ways in which information on climate and pollution issues is consolidated and delivered. For climate issues, the rapid changes may point to a need for more frequently updated products, which is why the work plan focuses on trends and patterns in selected climate parameters and on summarizing these in shorter updates on climate issues of concerns.

Grey alder (alnus incana) in early spring.
Photo: Arctic Council Secretariat / Ingeborg Y . Pettersen

3.3 Conservation of the Arctic Flora and Fauna (CAFF)

Mandate

CAFF's mandate is to address the conservation of Arctic biodiversity, and to communicate findings to the governments and residents of the Arctic, helping to promote practices that ensure the sustainability of the Arctic's living resources.

3.3.1 Achievements 2017-2019

In follow-up to the Fairbanks declaration 2017 (i.e. paragraphs 1, 7, 8, 21, 22, 29, 31, 32), CAFF has, inter alia, undertaken the following work over the course of 2017-2019.

Summary of achievements 2017-2019

CAFF has focused on implementing the "Actions for Arctic Biodiversity 2013-2021: Implementing the recommendations of the Arctic Biodiversity Assessment (ABA)" and conducted an evaluation of progress.

Arctic Biodiversity Congress (ABC)

The second Arctic Biodiversity Congress (ABC), held in Rovaniemi, Finland in October 2018 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. With over 500 participants it was the largest such gathering in the history of the Arctic Council. The Congress was held in conjunction with an Arctic Environment Ministers meeting (AEMM) hosted by Finland, which provided an opportunity for engagement with Arctic ministers on important biodiversity issues.

With a variety of engagement techniques focused on promoting dialogue and collaborations, the ABC provides a model to promote the Arctic Council and brings a wide range of perspectives into its work. All Arctic Council WGs contributed to the event's development and helped ensure its success.

Circumpolar Biodiversity Monitoring Program (CBMP)

The CBMP, CAFF's cornerstone program, is an international network of scientists, governments, agencies, indigenous organizations and conservation groups working to harmonize and integrate efforts to monitor the Arctic's living resources. A new CBMP Strategic Plan (2018-2021) focuses on ensuring the program's continued relevance, implementation and sustainability. The CBMP continues to work to improve involvement of Arctic Council, PPs and traditional knowledge and local knowledge holders within all aspects of the work.

CBMP efforts are organized around the Arctic's major ecosystems (marine, freshwater, terrestrial, and coastal) with key actions including indicator development; data aggregation and rescue; identification of knowledge gaps; development and implementation of coordinated monitoring plans; and reporting of status and trends in biodiversity.

- The *Arctic Coastal Biodiversity Monitoring Plan* (CBMP-Coastal Plan) provides a platform to support a multi-knowledge and ecosystem-based approach to understanding Arctic coastal systems;
- The *State of the Arctic Freshwater Biodiversity Report* (SAFBR) summarizes the status and trends in key elements of the Arctic freshwater environment and provides advice on how to better improve Arctic freshwater biodiversity monitoring. The results are based on efforts to find, gather, integrate and interpret all available Arctic freshwater biodiversity monitoring datasets to improve the detection and understanding of changes in circumpolar freshwater biodiversity. For the first time, the work captured in the report will be showcased by a series of peer-reviewed articles in a special journal edition. SAFBR, uniquely in Arctic Council assessments, provides not just science and policy reports but also an integrated database upon which the SAFBR is based. This is a key outcome from the SAFBR process as it provides a means to keep our knowledge on the status of Arctic freshwater biodiversity easily updated, used, accessed, applied to answer questions and conduct further assessments; and,
- Work on the *State of the Arctic Terrestrial Biodiversity Report* (START) is underway and planned to be finished during 2019-2021; follow-up on the findings and advice of *State of the Arctic Marine Biodiversity Report* of 2017 (SAMBR) is also underway. The CBMP reporting mechanisms are designed to reduce the time between detection of a change on the ground and an effective policy response.

Arctic Migratory Birds Initiative (AMBI)

The AMBI is an ongoing project designed to improve the status and secure the long-term sustainability of declining Arctic breeding migratory bird populations. AMBI's focus has been the four global flyways. It is an important Arctic Council project engaging Observer and non-Observer countries and organizations. During the 2017-2019 Chairmanship period, AMBI has ramped up its capacity to maximize effectiveness in each flyway. The success of AMBI has relied on engagement from Observers and other states and organizations to raise important issues and deliver conservation results directly affecting Arctic migratory bird conservation and the communities that rely on them. Important in these efforts are technical workshops held in Observer countries, such as in China (2018). Cooperation with China, for example, could help significantly advance action on habitat protection and unsustainable harvest in the East Asian-Australasian Flyway.

Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan

The ARIAS Strategy and Action Plan was developed to identify urgent actions necessary to protect the Arctic from one of its most significant emerging threats: the adverse impacts of invasive alien species. These are priority actions for the protection of all Arctic ecosystems, taking

environmental, cultural and economic drivers, impacts, and response measures into consideration. CAFF has worked closely with PAME on the marine components of the strategy, and an Implementation Coordination Group co-chaired and comprised of representatives from both CAFF and PAME has built a relationship for continued work.

Inspiring Arctic Voices through Youth: Engaging Youth in Arctic Biodiversity

To advance youth engagement and leadership in public outreach and education about the Arctic, an Arctic Youth Summit held in Finland on October 5-12, 2018 in conjunction with the ABC, and the Arctic Youth Exchange Strategy of 2018 have provided spaces and opportunities for dialogue amongst youth to share their perspectives and build capacity amongst youth. These efforts have:

- Created a global network of youth engaged and interested in Arctic biodiversity;
- Provided experience and insight into how biodiversity issues are addressed in the Arctic;
- Empowered young people to engage in conservation and promotion of Arctic biodiversity in their own home countries; and
- Created a Youth Declaration on Arctic biodiversity challenges.

Mainstreaming

CAFF's mainstreaming activities focused on building relationships with industry on Arctic conservation issues. This includes developing partnerships with the mining industry to create a better understanding of the challenges industry faces incorporating biodiversity considerations into its work, specifically best practices on how it addresses these challenges. These efforts raise awareness about CAFF's mission and tools available to support shared objectives and opportunities for collaboration.

Traditional Knowledge and Local Knowledge (TKLK)

CAFF has a long history of recognizing of TKLK and has endeavoured to utilize such knowledge systems into its activities. CAFF additionally recognises TK and LK to be two separate knowledge systems. Focus to date has been on TK. Over 2017-2019, key activities have been efforts to include TK holders in the development of the CBMP Arctic Coastal Biodiversity Monitoring Plan. The CBMP Coastal Expert Monitoring Group has placed a strong focus on building a platform for co-production of knowledge, allowing for the utilization of both TK and science. Additionally, the ongoing Salmon Peoples of Arctic Rivers is bringing together TK holders, scientists and resource agencies to design an assessment of freshwater river systems based on TK. The design of this holistic assessment will focus on "Salmon peoples" as a measure of ecosystem health and outline future data needs that could contribute to the resilience and adaptation of these peoples and the salmon populations upon which they depend.

Arctic Biodiversity Data Service (ABDS)

The ABDS is an online, interoperable data management system to access data arising from CAFF's programs and activities. It was developed to increase access to Arctic biodiversity data for the common good of scientists, Arctic communities, policy-makers, and other stakeholders. The ABDS has built partnerships with key international actors including the Global Biodiversity Information Facility (GBIF), the Arctic Spatial Data Infrastructure (Arctic SDI), the Ocean Biogeographic Information System (OBIS) and the Global Earth Observation System of Systems (GEOSS) to ensure that information on Arctic biodiversity flows into other global processes. The ABDS is ensuring that the data generated by CAFF monitoring and assessments is archived, accessible and available to inform future regional and global assessments.

List of CAFF deliverables to the Rovaniemi Ministerial meeting

- CBMP: State of the Arctic Freshwater Biodiversity Report (summary report for policy makers and science report);
- CBMP headline indicators: Audit of global goose populations;
- CBMP Coastal Biodiversity Monitoring Plan;
- CBMP Strategic Plan 2018-2021;
- Mainstreaming Biodiversity in Arctic Mining: Context, challenges and solutions for improvement;
- AMBI Workplan 2019-2023;
- Scoping for Sustainable Management and Resilience of Arctic wetlands: Phase 1 report;
- Marine Fishes of the Arctic region;
- Arctic Biodiversity Congress; and
- Inspiring Arctic Voices through Youth: Engaging Youth in Arctic Biodiversity.

Progress Reports

- Arctic Biodiversity Data Service (ABDS);
- Actions for Arctic Biodiversity 2013-2021: evaluating the implementation of the ABA recommendations;
- Arctic Spatial Data Infrastructure (SDI);
- Traditional Knowledge;
- Annual reports, workshop proceedings and national implementation reports; and,
- Salmon People of Arctic rivers: Phase I.

3.3.2 Work Plan 2019-2021

Introduction

This document outlines the projects and activities CAFF plans to undertake for the 2019-2021 ministerial period. The CAFF WP may be amended by the CAFF Board according to new opportunities and priorities. CAFF's mandate and associated activities are integral to the success of Iceland´s Arctic Council Chairmanship priorities.

The *Actions for Arctic Biodiversity 2013-21: Implementing the recommendations of the Arctic Biodiversity Assessment* (ABA) guides how the Arctic Council addresses biodiversity issues. Key actions in phase 4 of this plan (2019-2021) will be on completing projects, implementing strategies and plans developed in early phases, evaluating progress, and designing follow-up.

Focus will continue over ongoing CAFF actions that address:

- Mainstreaming Biodiversity;
- Ecosystem services;
- Communications and outreach;
- Adaptation to climate change;
- Coordination of long-term biodiversity monitoring;
- Stressors on biodiversity, protecting migratory species, invasive species and pollution;
- Indicator development;
- Safeguarding biodiversity under changing conditions;
- Cumulative effects;
- Bringing together different knowledge systems to build evidence-based information to enhance understanding of changes occurring in the arctic to inform decision making across scales; and,
- Improving knowledge and public awareness, including contributing to the Convention on Biological Diversity assessment on achievement of the United Nations' Aichi Biodiversity Targets, the Sustainable Development Goals and a new global biodiversity framework post 2020.

Many projects benefit from in-kind support from Arctic states and PPs. Additional support is requested through grant applications and state contributions. The timeline for each project is completed as projects develop.

List of individual projects and activities

PROJECT/ACTIVITY: Actions for Arctic Biodiversity 2013-21: Implementing the Recommendations of the ABA

Lead/co-leads: Components are led by different Arctic States, PPs, WGs and other Arctic Council subsidiary bodies.

Rationale and overall objective: A foundational framework following up from the Kiruna, Iqaluit (2015) and Fairbanks (2017) declarations, with the objective of promoting ABA implementation among Arctic States and others. Expected deliverables include an evaluation report on implementation of ABA recommendations and a plan for next steps upon completion of the Actions for Arctic Biodiversity 2013-21.

Main activities: Implementation of ABA recommendations including projects and activities listed below. Evaluation of the implementation of ABA recommendations towards the end of the Action plan period and consideration of next steps.

Timeline: ongoing

PROJECT/ACTIVITY: Continued implementation of the Circumpolar Biodiversity Monitoring Program (CBMP) including the CBMP Strategic Plan for 2018-2023 and the Arctic Coastal/Marine/Freshwater/Terrestrial Biodiversity Monitoring Plans. This activity also includes the completion and follow-up on the State of Arctic Freshwater, Terrestrial, Marine and Coastal Biodiversity Reports as well as the ongoing development of the CBMP suite of headline indicators

Lead/co-leads: Kingdom of Denmark and the United States, with components led by other Arctic States such as Canada, Iceland and Sweden

Rationale and overall objective: This is a foundational program implementing CAFF's mandate and ABA recommendations which is working to harmonize and integrate efforts to monitor the Arctic's living resources. Expected deliverables include continued implementation of the CBMP and its monitoring plans including assessments, technical reports, strategies, data and meetings etc

Main activities: Harmonizing and integrating efforts to monitor and report on the status and condition of Arctic biodiversity, ecosystems and living resources. Key activities will be to continue the implementation of the CBMP Strategic plan, including development of *The State of the Arctic Terrestrial Biodiversity Report*, follow-up on the SAFBR, development of an implementation plan for the coastal biodiversity monitoring plan and a scoping process to target next steps on SAMBR implementation, as well as other CBMP activities.

Timeline: ongoing

PROJECT/ACTIVITY: Implementation of the Arctic Migratory Birds Initiative (AMBI)

Lead/co-leads: Russian Federation.

Rationale and overall objective: This project aims to improve the status and secure the long-term sustainability of declining Arctic breeding migratory bird populations. The success of AMBI depends on active and meaningful participation from non-Arctic States and indigenous peoples with whom cooperation on important issues of mutual concern is essential to ensure the legacy of our shared species. Expected deliverables include achievement of the various objectives and tasks outlined in the AMBI workplan.

Main activities: Implementation of the AMBI 2019-2023 work plan

Timeline: 2013-2023

PROJECT/ACTIVITY: Implementation of the Arctic Invasive Alien Species Strategy and Action Plan (ARIAS) 2017-21

Leads: CAFF will engage with PAME and existing Implementation Coordinating Group (ICG) members to propose a new approach for ARIAS implementation. Implementation actions will be led by different Arctic States, PPs, WGs and other Arctic Council subsidiary bodies.

Rationale and overall objective: To reduce the threat of invasive alien species by developing and implementing common measures for early detection, reporting, identifying and blocking pathways of introduction, and sharing best practices and techniques for monitoring, eradication and control. Expected deliverables include achievement of objectives and tasks outlined in the AMBI work plan.

Main activities: Implementation of the ARIAS Strategy and Action Plan

Timeline: 2017-2021

PROJECT/ACTIVITY: Community Observation Network for Adaptation & Security (CONAS)

Lead/co-leads: AIA

Rationale and overall objective: To utilize human observers to document environmental changes, significant to understanding pan-arctic processes. Expected deliverables include map and data products.

Main activities: Generating map and data products to inform decision making.

Timeline: ongoing

PROJECT/ACTIVITY: Salmon Peoples of Arctic Rivers

Leads: AAC, Saami Council, RAIPON, AIA.

Rationale and overall objective: TK holders, scientists and government agencies are designing an assessment of freshwater river systems based on TK. The design of this holistic assessment will focus on "Salmon peoples" as a measure of ecosystem health and outline future data needs that could contribute to the resilience and adaptation of these peoples and the salmon populations upon which they depend.

Main activities: Complete Phase I and initiate Phase II. Expected deliverables include completion of Phase II and design and planning for the assessment.

Timeline: 2018-2021

PROJECT/ACTIVITY: Mainstreaming Arctic Biodiversity

Leads: Sweden, Canada and the United States.

Rationale and overall objective: To incorporate biodiversity objectives and provisions into all Arctic Council work and encourage the same for ongoing and future international standards, agreements, plans, operations and/or other tools specific to development in the Arctic. This includes, but is not restricted to, oil and gas development, shipping, fishing, tourism and mining. Expected deliverables include continued engagement with various industry sectors and follow-up on the findings of phase 1.

Main activities: Working to engage industry on Arctic conservation issues including continuing to build relationships with the mining industry to develop a better understanding of how that industry operates in the Arctic, specifically how it incorporates biodiversity considerations into its plans, operations and meaningfully engages with communities; raising awareness about CAFF's mission and tools available to support shared objectives; and exploring opportunities to learn from experiences and support common goals.

Timeline: 2019-2021

PROJECT/ACTIVITY: Circumpolar Seabird expert group (CBird)

Leads: Finland with different activities led by different countries

Rationale and overall objective: Coordinates the conservation of Arctic seabirds and enhances the exchange of information on factors affecting status and trends in Arctic seabirds. Activities include the implementation of seabird conservation strategies, AMBI Circumpolar flyway work-

plan and the Circumpolar Seabird Monitoring Plan.

Main activities: Data compilation, analysis and coordination. Expected deliverables include assessments, technical reports, strategies, data and meetings etc

Timeline: ongoing

PROJECT/ACTIVITY: Inspiring Arctic voices through youth: engaging youth in Arctic Biodiversity

Lead/co-leads: United States, WWF and others to be confirmed

Rationale and overall objective: To advance youth involvement, capacity-building and leadership in public outreach and education about the Arctic. The objective being to create opportunities for dialogue amongst youth and with the appropriate organizations around the world to share their perspectives.

Main activities: Exploring opportunities to follow-up on the outcomes of the Arctic Youth Summit and continue implementation of the Youth Exchange Program and possible linkages to the Nomadic Reindeer Herders project. Expected deliverables include continued implementation of the youth strategy.

Timeline: ongoing

PROJECT/ACTIVITY: Scoping for Resilience and Management of Arctic Wetlands

Lead/co-leads: Sweden

Rationale and overall objective: This project aims to enhance the state of knowledge on resilience and management of Arctic wetlands in response to global change, including climate and land use, and identify knowledge gaps and research needs concerning sustainable development policies. Subsequent stages will produce policy recommendations to support/develop management strategies to conserve and/or restore Arctic wetlands.

Main activities: Implementation of phase 2 (2019-2021) to examine regulatory approaches and management efforts aimed at maintaining wetlands functions while also allowing for their use, understanding their bio- and geophysical characteristics and qualities. Expected deliverables include completion of Phase 2 and resultant reports and products.

Timeline: 2017-2023

PROJECT/ACTIVITY: Follow-up on the Arctic Council Cross-cutting Initiatives

Lead/co-leads: CAFF Chair

Rationale and overall objective: Activities include follow-up on recommendations of the Ecosystem Based Management (EBM) expert group; participation in the ecosystem approach expert group in a scoping process to explore potential for climate change impact analyses in marine, terrestrial and freshwater ecosystems; underwater noise; Climate Change Factsheets Arctic Marine Strategic Plan; assist in the implementation of the framework for a circumpolar Arctic network of Marine Protected Areas and the Modelling of Arctic oceanographic connectivity; follow-up on the Arctic Council's Resilience framework, and explore the impacts of wildfires on Arctic biodiversity emphasizing ecology, mapping and reporting. Expected deliverables include continued contributions to support cross-cutting activities.

Main activities: Coordination of biodiversity input

Timeline: 2019-2021

PROJECT/ACTIVITY: The Arctic Biodiversity Data Service (ABDS) Development Including Cooperation on the Arctic Spatial Data Infrastructure (SDI)

Lead/co-leads: CAFF Secretariat

Rationale and overall objective: To facilitate access, integration, analysis and display of biodiversity information for scientists, practitioners, managers, policy makers. It will ensure that biodiversity data generated by the Arctic Council are organized to guarantee a legacy and be avail-

able to inform global and regional assessments.

Main activities: Data rescue, development, standardization, integration and display. Expected deliverables include continued development of the ABDS, addition of data and support to CAFF activities.

Timeline: ongoing

Administration

The CAFF International Secretariat is based in Akureyri, Iceland. The Secretariat has five staff: Executive Secretary, Executive Assistant; Data Manager; Project Manager and Communications Manager. CAFF was founded in 1992 via the Arctic Environmental Protection Strategy (AEPS). A ministerial agreement (1997) provides the framework for country contributions to the operation of the CAFF Secretariat. The United States has held the chair in 2017–2019 (CAFF has held five management board meetings under the U.S. chairmanship). At the Rovaniemi Ministerial meeting in May 2019, Sweden will become the chair (2019-2021).

Communications and outreach

CAFF's communication goals: 1) Provide target audiences with timely, accurate, clear and complete information on conservation issues for use in policy and scientific and TK decision-making; 2) Increase the understanding and profile of Arctic biodiversity amongst target audiences and work to incorporate biodiversity conservation across various sectors, ensuring the sustainable use of the Arctic's natural resources; 3) Raise CAFF's profile amongst target audiences as a credible, reliable and authoritative voice in Arctic biodiversity research and policy; 4) Strategically employ a variety of ways and means to communicate, recognizing user needs, and the effectiveness of various channels; and 5) Provide adaptive, responsive and proactive communications support to CAFF audiences.

Main activities: Development of communication tools and products as well as coordination and outreach initiatives for each project. Examples include reports, educational materials, social media, website development, webinar series, scientific posters, video production, photography competition, event hosting, presentations at key events, and press inquiries. Materials are translated into other languages when resources allow.

Purple saxifrage (Saxifraga oppositifolia)
Photo: Arctic Council Secretariat / Ingeborg Y. Pettersen

3.4 Emergency Prevention, Preparedness and Response (EPPR)

Mandate

EPPR is mandated to contribute to the prevention, preparedness and response to environmental emergencies, radiological and nuclear incidents, and other accidents, and search and rescue (SAR) in the Arctic. While not an operational response organization, members of the WG conduct projects to address gaps, prepare strategies, share information, collect data, and cooperate with relevant partners on capabilities and research needs in order to prepare for future challenges and maximize the use of available resources available in the Arctic. Projects and activities include the development of guidance and risk assessment methodologies, the coordination of response exercises and training, and exchange of information on best practices regarding the prevention, preparedness and response to accidents and threats from acute releases of pollutants and radionuclides, and the consequences of natural disasters.

EPPR is assigned the responsibility for maintaining the "Operational Guidelines" that implement the *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic* (MOSPA) to which all Arctic States are parties. EPPR also supports the *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue* (SAR) by addressing relevant lessons learned from SAR exercises and real incidents. EPPR, in cooperation with PAME, coordinates the implementation of the *Framework Plan on Oil Pollution Prevention* (FPOPP) of 2015.

3.4.1 Achievements 2017-2019

Summary of achievements 2017-2019

In follow-up to the Fairbanks declaration 2017 (i.e., paragraphs 2-6 and 17), EPPR has, inter alia, undertaken the following work over the course of 2017-2019.

EPPR actively participated in the Task Force on Arctic Marine Cooperation (TFAMC), the Task Force on Improved Connectivity in the Arctic (TFICA), the Arctic Resilience Forum (ARF), the Arctic Biodiversity Congress (ABC), and the Arctic Environment Ministers Meeting (AEEM).

Implementation of the MOSPA Agreement

On 7 March 2018, under the leadership of Finland and the EPPR Marine Environmental Response Expert Group (MER EG), the 4th functional table top exercise (TTX) of the MOSPA Agreement took place. The TTX successfully tested connectivity for each competent authority and allowed an opportunity for each state to analyze internal capacity to provide an offer of assistance. The scenario resulted in the involvement of the Copenhagen Agreement States to a situation that required further international response through the MOSPA. EPPR finalized the After-Action Report (AAR), which highlights observations, recommendations and best practices. The AAR provides recommendations for updating the Operational Guidelines, including updating forms and drafting Exercise Planning Guidance. Both the AAR and Exercise Planning Guidance will be submitted for Ministerial approval.

Implementation of the Arctic SAR Agreement

The EPPR SAR Expert Group (SAR EG) works to promote and assess implementation of the Arctic SAR Agreement. Its mandate includes acting as a facilitator for high-level, intergovernmental cooperation on Arctic SAR issues. The specific goal of the SAR EG is to identify key lessons from Arctic incidents and exercises and communicate necessary mitigation or remedial actions to Arctic States, regional fora, such as the Arctic Coast Guard Forum (ACGF), and international bodies, such as the International Maritime Organization (IMO). The SAR EG supports existing operational fora by leveraging high-level engagement with national and scientific institutions.

Follow-up on the Framework Plan on Oil Pollution Prevention (FPOPP)

The status report on the implementation of the

FPOPP identifies follow-up activities that support the objectives of the framework plan. The finalized report, submitted for Ministerial approval in 2019, includes input from Arctic States, PPs, WGs, and other relevant stakeholders capturing activities that are taking place. The report will be used to identify gaps in implementing recommendations and encouraging development of initiatives in these areas.

Prevention, Preparedness and Response in Small Communities
Phase II endeavored to build awareness of the challenges that incidents may create in small communities and to provide options to prepare appropriate responses during an oil pollution emergency. Outreach videos have been developed with an external company under the guidance of the project leads Norway, Canada, the United States and the AIA, with support from the EPPR Secretariat based in Tromsø. The videos focused on 1) Basic oil pollution response principles; 2) Planning for an initial community-based pollution response; and 3) Oil pollution risk and impacts to communities. They will be submitted for Ministerial approval.

Review of legal challenges related to the MOSPA Agreement
The aim of this project was to clarify legal liability issues (responder and requesting state) in relation to the MOSPA Agreement. The full project report, and a Summary Report with recommendations on additions or clarifications to the MOSPA Agreement to mitigate uncertain legal provisions or risks, will be submitted for Ministerial approval.

EPPR Image Database
The EPPR Image Database is a unique library of Arctic-related oil spill response, SAR and emergency management graphics and photos accessible by EPPR members for use internally and for outreach materials. The images are free from copyright issues, represent a broad array of subjects and are managed under a set of agreed upon usage guidelines by EPPR. The library currently has images from Arctic States and PPs, and the option of having an external graphic designer develop EPPR specific images is being considered.

ARCSAFE Project (Radiation)
The ARCSAFE-project has been extended to include radiation authorities from Sweden and the Kingdom of Denmark as new partners in addition to Norway, United States and the Russian Federation. See separate deliverable "ARCSAFE Summary Status Report" for more information on tasks and project activities performed in the period.

List of EPPR Deliverables to the Rovaniemi Ministerial meeting

- Prevention, Preparedness and Response in Small Communities;
- ARCSAFE Summary Status Report;
- MOSPA 2018 After Action Report and updated MOSPA Operational Guidelines (Appendix IV);
- MOSPA Exercise Planning Guidance;
- Review of Legal Challenges related to the MOSPA Agreement; and
- Follow-Up on the Framework Plan for Oil Pollution Prevention and Response.

3.4.2 EPPR Work Plan 2019-2021

Introduction
EPPR strives to be the premier forum for international cooperation on prevention, preparedness and response to emergencies in the Arctic with a view of advancing risk mitigation and improving response capacity and capabilities. EPPR is assigned the responsibility for maintaining the Operational Guidelines that implement the MOSPA Agreement. EPPR also supports the Arctic SAR Agreement by addressing relevant lessons learned from SAR exercises and real incidents. EPPR, in cooperation with PAME, coordinates follow-up on the FPOPP.

EPPR will continue to implement, as well as de-

velop, project proposals within its mandate for approval as Arctic Council projects, recognizing the rights and interests of the indigenous peoples and all Arctic inhabitants and incorporating this knowledge when appropriate. The projects hereunder include previously approved EPPR projects as well as projects that are currently under development for future EPPR review and approval. Additional project proposals may be developed within the scope of this WP during the 2019-2021 period. Implementation of projects is subject to available funding.

List of individual projects and activities

PROJECT/ACTIVITY: MOSPA Exercise Planning and Exercise 2020

Leads: Iceland, Marine Environmental Response Expert Group (MER EG)

Rationale and overall objective: As EPPR has responsibility for maintaining the Operational Guidelines that implement the MOSPA Agreement, the MER EG works to exercise and maintain these guidelines. To ensure all Arctic States remain engaged in multilateral discussions, bi-annual exercises are planned under the leadership of the Arctic Council Chairmanship. Under the leadership of the Icelandic Chairmanship (2019-21), a scenario will be developed that would be large enough to invoke the MOSPA Agreement. It is anticipated that the exercise may be the first live MOSPA exercise. In addition, EPPR will seek cooperation with the ACGF during planning and preparations for the operational portion of the MOSPA exercise.

Main activities: Annual connectivity test held during the first quarter of each year to validate contact information. MOSPA Exercise Planning Guidance will be followed to develop the scenario and exercise. An AAR will be developed that will include lessons learned and recommendations. This report will be submitted to Ministers in 2021.

Timeline and Financing: 2019-2021

Funding needs and sources: TBD.

PROJECT/ACTIVITY: Follow-Up on the Framework Plan for Oil Pollution Prevention and Response (FPOPP)

Leads: EPPR in cooperation with PAME

Rationale and overall objective: This activity will be used to identify gaps in follow-up to the FPOPP and encourage development of initiatives in these areas. Projects developed in support of addressing gaps will be approved by EPPR, or other WGs, as appropriate. The status report, final project reports and other materials will be approved by EPPR and be put forward for SAO and Ministerial approval in 2021.

Main activities: EPPR, in cooperation with PAME, will continue to report on the status of implementation of the FPOPP. The goal is to develop a Google form, similar to the AMAROK, which will facilitate input from stakeholders. A report on implementation will be submitted to Ministers in 2021.

Timeline: 2019- 2021

Funding: TBD

PROJECT/ACTIVITY: Arctic Rescue

Lead: Russian Federation

Rationale and overall activities: The focus of this project is to elaborate on best practices, recommendations and key elements of the emergency risk assessment system and the system for improving safety of potentially hazardous facilities.

Main activities: The development of recommendations for joint activities aimed at ensuring industrial and environmental safety in major transportation corridors in northern Europe, supported by the development of legal regulation and management tools based on best international practices. Implementation of the project includes conducting research, seminars, and conferences on relevant subject areas.

Timeline: 2019-2021

Funding: Russian Federation.

PROJECT/ACTIVITY: Safety Systems in Implementation of Economic and Infrastructural Projects

Lead: Russian Federation

Rationale and overall objective: The project's main goal is the improvement of industrial and environmental safety related to economic and infrastructure projects, primarily the development of hydrocarbons on the Arctic continental shelf and transportation of related oil and gas products.

Main activities: In support of these projects, SAR and oil spill response exercises will be conducted annually.

Timeline: 2019 - 2021

Funding: Russian Federation

PROJECT/ACTIVITY: ARCSAFE

Leads: Norway, United States, Russian Federation, Sweden, Kingdom of Denmark

Rationale and overall objective: The main goal of the project is to promote cooperation and information exchange amongst Arctic Council participants to strengthen cross-border prevention, preparedness and handling of maritime incidents or accidents, which may involve a potential release of radioactive substances.

Main activities: A technical workshop will take place in June 2019. Dissemination of information and complementing ongoing work in other relevant international fora, including the International Atomic Energy Agency (IAEA) and the International Maritime Organization (IMO).

Timeline: 2019 - 2021

Funding needs and sources: TBD

PROJECT/ACTIVITY: Prevention, Preparedness and Response in Small Communities

Leads: Norway, Canada, Kingdom of Denmark, AIA, MER EG, EG SAR

Rationale and overall objective: Continuing from the successes of Phase I and Phase II of the project, Phase III will seek to continue meaningful engagement with small communities. The project seeks to build awareness of the challenges that oil spill incidents may create in small communities, and to provide options to prepare responses to these emergencies.

Main activities: Extension of the project to include, for example, SAR issues will be determined at EPPR II 2019.

Timeline: 2019-2021

Funding needs and sources: TBD

PROJECT/ACTIVITY: Risk Assessment Methods and Metadata - Guideline and Toolbox

Leads: Norway

Rationale and overall objective: Development of a risk assessment guideline in combination with a practical toolbox to further cooperation and alignment between the Arctic States. The results of the project will provide a robust basis for a future Circumpolar Marine Risk Assessment. This project contributes to objective 3.1.2 Enhancing cooperation on maritime risk assessments of the FPOPP.

Main activities: A series of workshops with relevant stakeholders and WGs will be held. Development of a web-based tool that will be hosted on the EPPR website. Final guidelines document and tool box will be submitted to Ministers in 2021.

Timeline: 2019-2020

Funding needs and sources: Norway

PROJECT/ACTIVITY: Circumpolar Oil Spill Response Viability Analysis (COSRVA) – Phase II

Lead: Norway

Rationale and overall objective: There is increasing concern about the risk of oil spills as human activity increases in the Arctic. The purpose of the circumpolar Arctic response viability analysis (COSRVA) is to better understand the potential for different oil spill response systems to oper-

ate in the Arctic marine environment. Phase II of the COSRVA will take into account new and improved metocean data (ERA 5) and implement these into an online system to eliminate the reported shortcomings in the previous dataset. This project contributes to objective 3.1.2 Enhancing cooperation on maritime risk assessments of the FPOPP.

Main activities: Development of a risk assessment guideline in combination with a practical toolbox to further cooperation and alignment between the Arctic States. The results of the project will provide a robust basis for a future Circumpolar Marine Risk Assessment. A series of workshops with relevant stakeholders and WGs will also be held. Development of a web-based tool that will be hosted on the EPPR webpage. Final guideline document and tool box will be submitted to Ministers in 2021.

Timeline: 2019- 2021

Funding needs and sources: Norway, others TBD

PROJECT/ACTIVITY: RADSAR

Lead: Norway

Rationale: This is a sub project of ARCSAFE and focuses on identifying and sharing competence between the Arctic States on search and rescue (SAR) operations involving maritime radio-nuclear (RN) scenarios.

Main activities: Gather information on how a SAR/RN case is handled and coordinated on an operational level by the Rescue Coordination Centers (RCCs), including training, equipment and information flow between SAR organizations and RN specialists needed to sustain this specific level of operational capacity. Best practices observations, procedures, competence building, and maintenance strategies will be described, in order to share experiences of how maritime SAR in a radio-nuclear scenario can be organized and conducted. The information will be available to Arctic States.

Timeline: 2019- 2021

Funding needs and sources: Norway

PROJECT/ACTIVITY: EPPR Radiological/SAR Table Top Exercise 2019 (RADEX2019)

Lead: Norway

Rationale: The RADEX 2019 TTX will cover a maritime radiological/nuclear event including a SAR operation thus calling upon coordinated action from several response organizations. During the exercise, the participants will discuss, exchange experiences and identify challenges related to SAR operations in radiologically hazardous environments in the Arctic. The main goal of the exercise is to identify possible challenges and to further improve national and international emergency preparedness and response to such scenarios.

Main activities: RADEX 2019 TTX to be held in Bodø, Norway

Timeline: 2019

Funding needs and sources: Norway

PROJECT/ACTIVITY: Potential Establishment of an EPPR Radiation Expert Group (RAD EG)

Lead: Norway

Rationale: Based on a proposal by Norway, EPPR has initiated work on the potential establishment of an EPPR RAD EG. EPPR has appointed Norway to lead intersessional work together with appointed radiation experts from Arctic States to develop a suggested mandate and a description of a proposed organizational structure. An important task for this work will be to evaluate if the RAD EG mandate should be linked to the possible establishment of an Arctic RAD Agreement.

Main activities: Presentation on RAD EG work in Bodø, Norway.

Timeline: 2019- 2021

Funding needs and sources: TBD

PROJECT/ACTIVITY: EPPR Work on Wild Fires

This is a new project area for EPPR but falls within the mandate of the WG. It was discussed at EPPR II 2018 and specific projects and activities will be elaborated during the period 2019-2021. Moving forward, it will be important to include the participation and insights from Arctic States, PPs and relevant WGs and the Expert Group on Black Carbon and Methane (EGBCM).

PROJECT/ACTIVITY: EPPR Research & Development (R&D) Collaboration

Lead: Norway in collaboration with each EPPR Member State

Rationale: In 2017, EPPR and the U.S. Department of the Interior's Bureau of Safety and Environmental Enforcement (BSEE) hosted a workshop to share information and discuss the latest advances in oil spill response technology and best practices relevant to the Arctic region. Engineers, scientists, regulators, academics, and researchers from around the globe presented research, with breakout sessions, which yielded the most effective information sharing to date across the R&D spectrum. Acknowledging that environmental response in the Arctic region is difficult and costly, EPPR provided unique opportunity for Arctic States, Permanent Participants, scientists, researchers, and industry to work in collaboration to enhance existing and identify new and relevant oil spill response equipment, technologies, and strategies for the Arctic. Based on a proposal by Norway, EPPR has initiated work on a second EPPR R&D Workshop with Norway leading the intersessional work together with the other Arctic Member States to develop a suggested way ahead for this workshop and potential future collaboration.

Main activities: EPPR I 2019 R&D Workshop in Bodø, Norway.

Timeline: 2019 – 2021

Funding needs and sources: TBD

Administration

The EPPR secretariat is located in Tromsø, Norway and is staffed by the EPPR Executive Secretary within the ACS. Funding for approved EPPR projects comes from the Arctic States and other funding mechanisms as appropriate. EPPR meets twice a year to discuss projects and priorities identified in the work plan, including new projects within the EPPR mandate. Biannual meetings include a one-day Expert Group meeting and two days of plenary sessions. Teleconferences are held between meetings to ensure intersessional work. EPPR attends meetings of the SAOs, WGs, TFs and other Arctic related events deemed appropriate by the EPPR Chair. EPPR remains committed to supporting the cross-cutting initiatives identified by the SAOs and WGs. From 2017-2019, the Kingdom of Denmark has been responsible for the EPPR Chairmanship, supported by vice Chairs from Norway and Canada. The same structure will remain in place for the Icelandic Chairmanship.

Communication and outreach

The EPPR Executive Secretary, with support from the ACS, maintains the EPPR website, EPPR SharePoint, EPPR Twitter and EPPR Instagram accounts. Outreach materials, such as factsheets and short videos are produced by the EPPR Secretariat with support from the ACS or in cooperation with project leads. The EPPR Chair and Executive Secretary accept invitations to speak about the work of EPPR in relevant settings, for example at the Arctic Resilience Forum and the Arctic Coast Guard week. Communicating the results of EPPR projects is a high priority for EPPR and is an area where increased resources will be assigned from 2020.

3.5 Protection of the Arctic Marine Environment (PAME)

Mandate

PAME is the focal point of the Arctic Council's activities related to the protection and sustainable use of the Arctic marine environment and provides a unique forum for collaboration on a wide range of activities on the protection and sustainable use of the Arctic marine environment. Its mandate is to:

> address marine policy measures and other measures related to the conservation and sustainable use of the Arctic marine and coastal environment in response to environmental change from both land and sea-based activities, including non-emergency pollution prevention control measures such as coordinated strategic plans as well as developing programs, assessments and guidelines, all of which aim to complement or supplement efforts and existing arrangements for the protection and sustainable development of the Arctic marine environment.

3.5.1 Achievements 2017-2019

Over the last two years, PAME's work has proceeded in accordance with its biennial work plan, as approved by the Arctic Council in 2017. PAME cooperates actively with the other Arctic Council WGs to contribute to improved efficiency and effectiveness of the Arctic Council. Further, PAME works substantively with Arctic inhabitants, including indigenous peoples, to collaborate on a wide range of activities and topics on the Arctic marine environment.

Summary of achievements 2017-2019

In follow up to the 2017 Fairbanks declaration (i.e., paragraphs 1, 3, 5, 6, 8, 10, 11, 17, 25, 28 and 32), PAME has, inter alia, undertaken the following work over the course of 2017-2019.

Follow-up to the 2009 AMSA and other Shipping Report Recommendations

PAME, aided by its Shipping Expert Group, advanced a number of projects and initiatives to promote safe and sustainable shipping in the Arctic which included:

- Collaboration with international organizations on Arctic related activities of common interest;
- The Arctic Shipping Best Practice Information Forum (established in 2017), which supports effective implementation of the IMO's Polar Code, including its first two meetings and the launch of its web portal in May 2018 (www.arcticshippingforum.is);
- Joint submission of the *Regional Reception Facilities Plan (RRFP) – Outline and Planning Guide for the Arctic* to IMO's Marine Environment Protection Committee (MEPC) 74 in 2019; and,
- The finalization of two informational papers related to heavy fuel oil (HFO), one of which was co-sponsored by all Arctic States and submitted to the IMO on 31 January 2018.

PAME also executed the official launch of the Arctic Ship Traffic Data (ASTD) database in January 2019; completed a report with EPPR on a Compendium of Arctic Shipping Accidents (CASA), and completed the *Underwater Noise in the Arctic – State of Knowledge Report;* and started the process of developing a non-binding Memorandum of Understanding (MoU) with the Arctic Regional Hydrographic Commission which will continue into the next work plan period.

PAME made continued efforts towards a harmonized and effective implementation of the Polar Code, in addition to progress on *Developing an Approach/Framework for more Systematically Engaging with Observers on PAME's Shipping Related Work*, which will continue with at least one workshop in 2019.

Protection from Invasive Species
PAME and CAFF have established a Joint Arctic Invasive Alien Species Strategy and Action Plan (ARIAS) Implementation Coordinating Group (ICG) and approved its Terms of Reference (refer to CAFFs Achievements).

Framework for a Pan-Arctic Network of Marine Protected Areas (MPAs)
PAME held its third and fourth workshops[1], hosted by Finland in September 2017 and by Canada in March 2019 on MPA networks with the aim to integrate findings into the Arctic MPA-network Toolbox, a practical, hands-on resource for MPA programs and partners for advancing the design and implementation of MPA networks.

Ecosystem Approach to Management (EA)
PAME continues to follow national and international EA developments and integrate the principles of EA into assessments and management recommendations. This contributes to the follow-up to the recommendations in the 2013 Ecosystem-Based Management in the Arctic Report, building on previous work on Large Marine Ecosystems. The joint EA EG coordinates activities with participation from other Arctic Council WGs. The 6th EA workshop held in Seattle in January 2018 focused on the EA Guidelines and Integrated Ecosystem Assessment, and the EA EG developed Guidelines for Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems. The EA EG also developed a plan for a 2nd International EA Conference in Bergen, Norway in 2019, with a focus on the issue of scale integration in EA implementation. PAME continues the joint effort by the International Council for the Exploration of the Sea (ICES)/North Pacific Marine Science Organization (PICES)/PAME WG on Integrated Ecosystem Assessment for the Central Arctic Ocean (WGICA) and notes the completion of the report on Integrated Ecosystem Assessment of the Central Arctic Ocean: Ecosystem Description and Vulnerability Characterization.

Arctic Offshore Resource Exploration and Development
The Resource Exploration and Development Expert Group (REDEG) completed the *Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) Part II report.* The MEMA online database is accessible on the PAME homepage at www.memadatabase.is and is publicly available as a resource for those interested in engagement of indigenous peoples and local communities.

Arctic Marine Pollution
PAME completed the *Desktop Study on Marine Litter, including microplastics, in the Arctic* (Phase I). The main task was to collect all relevant and existing literature and scientific studies on marine litter in the Arctic. The aim was to better understand the sources and drivers of marine litter, the pathways and distribution, the interactions with and impacts on Biota, and monitoring and responses. This is the first compilation of marine litter covering the circumpolar Arctic but is by no means comprehensive. It helps to improve the understanding of the status and impacts of marine litter, and in particular plastic litter and microplastics, in the Arctic region. A marine litter expert group was established to assist in this work, in addition to its collaboration with other Arctic Council WGs. A workshop was convened in June 2018 in Iceland in support of this project.

Arctic Marine Strategic Plan (AMSP) 2015-2025 Implementation Plan
The PAME Secretariat produced the 2nd AMSP implementation report, which records status on relevant AMSP Strategic Actions for the period 2017-2019 and identifies follow-up activities that are reflected in the PAME WP 2019-2021 and other WGs' WPs, as per their respective mandates. The AMSP Implementation Plan provides a mechanism to systematically track progress and status of its 40 Strategic Actions. This 2nd report was developed in close collaboration with other Arctic Council WGs to ensure trans-

[1] See Marine Protected Areas (MPAs) workshops website: https://pame.is/index.php/projects/marine-protected-areas.

parent and systematic cross-working group progress, provide a status reporting mechanism for all WPs, as relevant, and contribute to collaboration on cross-cutting marine-related issues.

Coordination and collaboration with other Arctic Council WGs

PAME actively pursues cooperation with other Arctic Council WGs and TFs to contribute to improved efficiency and effectiveness of the Council. PAME collaborated with all WGs on the development of the 2nd AMSP implementation Progress Report. AMAP and CAFF continue to be engaged in the joint EA EG, and PAME continues to make efforts to strengthen the communication between the EA EG co-chairs and the relevant WGs.

PAME provided input to CAFF on the "Actions for biodiversity" tracking tool and to EPPR on the *Status report on implementation of the framework plan on oil pollution prevention*. PAME collaborates closely with CAFF on MPA and invasive species activities and all Arctic Council WGs on the development of the *Desktop Study on Marine Litter, including microplastics, in the Arctic*. PAME has invited ACAP, AMAP and the EGBCM to submit short summaries of their work related to black carbon, especially as it pertains to shipping.

List of PAME deliverables to the Rovaniemi Ministerial meeting

PAME's activities for SAO and Ministerial approval/welcome:

- Underwater Noise in the Arctic: A State of Knowledge report;
- Desktop study on Marine Litter, including Microplastics, in the Arctic (Phase I);
- Guidelines for Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems;
- Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities (MEMA) Part II Findings for Policy Makers (full report); and,
- 2nd reporting on progress/implementation of the 2015-2025 Arctic Marine Strategic Plan; and,
- PAME 2019-2021 Work Plan.

3.5.2 PAME Work Plan 2019-2021

Introduction

The PAME 2019-2021 WP was developed in accordance with: PAME's mandate; priorities identified and recommendations made within Arctic Council approved reports; direction provided from Ministerial declarations; follow-ups on recommendations from Arctic Council projects and the AMSP (2015-2025), which outlines the overall direction of the Arctic Council for the protection of the Arctic marine environment; and policy follow-up on the scientific and other relevant assessments of the Arctic Council. Additional project proposals may be developed within the scope of this WP between 2019-2021, subject to PAME approval, confirmed lead/co-lead commitment and financing.

Many projects have in-kind support from Arctic States and PPs. Additional support is requested through grant applications and state contributions.

List of individual projects and activities

Marine Protected Areas

PROJECT/ACTIVITY: Modelling Arctic Oceanographic Connectivity to further develop PAME's Marine Protected Areas Toolbox

Lead: Sweden

Rationale and overall objective: Ongoing climate change may facilitate increased access to the Arctic region, and potential new economic opportunities, but may also bring potential threats to the Arctic marine and coastal environments. These changes could benefit from more integrated approaches to Arctic marine management, including the consideration of MPA networks designed to aid in the conservation and sustainable use of the Arctic environment.

Main activities: Development of models as a tool

to help decision makers in designing MPA networks and identifying possible optimal networks of (multiple) MPAs; calculation of optimal network and barriers; coordination meetings and collaboration with other Arctic Council WGs as relevant, in particular with CAFF and its Circumpolar Biodiversity Monitoring Program (CBMP).

Timeline: 2019-2021

Estimated budget: 163,000 USD (lead)

PROJECT/ACTIVITY: Arctic Protected and Important Areas

Leads: PAME and CAFF Secretariats

Rationale and overall objective: Both WGs will work jointly to update the 2017 Arctic Protected Areas Indicator Report (APAI).

Main activities: The APAI data will be compared to the data for the Arctic in the Protected Planet database, managed by the United Nations Environment-World Conservation Monitoring Centre (UNEP-WCMC). The purpose of this comparison is to determine differences between the two databases and update each database accordingly.

Timeline: 2019-2021

Estimated budget: In-kind support from PAME and CAFF Secretariats

PROJECT/ACTIVITY: Develop two Factsheets on Marine Protected Areas (MPAs) under change

Co-leads: Finland, United States

Rationale and overall objective: Develop two factsheets on MPAs under change with the aim to leverage and synthesize factual information from the Arctic Council's work on this topic and communicate to decision makers and the public; and contribute to cross-working groups cooperation on common topics.

Main activities: The 1st factsheet will synthesize factual information on MPAs under change and the role of MPAs in building resilience. The 2nd factsheet will synthesize factual information on impacts of these changes on indigenous peoples. PAME will consider translations of the fact sheets as resources permit.

Timeline: 2019-2021

Estimated budget: 170,000 USD (co-leads)

PROJECT/ACTIVITY: Expansion and refinement of the MPA-Network Toolbox

Lead: MPA Expert Group Partners: CAFF, WWF, CCU

Rationale and overall objective: To continue enhancing PAME's work on a Pan-Arctic Network of Marine Protected Areas and contribute to some of the near-term actions listed in the Framework for a Pan-Arctic Network of MPAs and the AMSP strategic action number 7.2.10.

Main activities: Expand the MPA Network Toolbox based on the outcomes of the 4th MPA Workshop held on 19-21 March 2019 in Cambridge Bay, Nunavut, Canada, on Exploring ways to support Indigenous/Local involvement in, and Indigenous/Local led, marine protection in the circumpolar Arctic Ocean.

Timeline: Ongoing/continuation from previous WP.

Estimated budget: In-kind support from PAME and CAFF Secretariats

Arctic Marine Shipping

PROJECT/ACTIVITY: Black Carbon Emissions from Shipping Activity in the Arctic and Technology Developments for their Reduction

Lead: Iceland; co-lead: Finland

Rationale and overall objective: To strengthen harmonization and foster dialogue and cooperation between the Arctic Council member states, PPs and Arctic Council Observers on research on various fuel and exhaust gas treatment methods as possible means by which to reduce the amount of harmful gases emitted by vessel engines.

Main activities: To compile data on black carbon emissions from shipping activity in Arctic waters

using PAME's Arctic Ship Traffic Database (ASTD) database to better understand the distribution and magnitude of these emissions in the region; and foster dialogue and sharing of information among PAME Members, industry, experts, and others as appropriate on technology developments, including information on cost-efficiency methodology and other relevant factors, for the reduction of black carbon emissions from shipping in the Arctic. The final project proposal may consider as appropriate, relevant work under the IMO, and may be revised accordingly, in light of complementarity, by the projects' correspondence group, which is composed of the Russian Federation, Finland, the United States and the Kingdom of Denmark.

Timeline: 2019-2021

Estimated budget: 105,000 USD (co-leads)

PROJECT/ACTIVITY: Arctic Shipping Status Reports

Leads: United States, PAME Secretariat

Rationale and overall objective: To provide a snapshot on Arctic shipping by utilizing PAME's ASTD database.

Main activities: Develop user-friendly, illustrative informational factsheets on Arctic shipping to highlight important developments in Arctic shipping activities and disseminate them online, e.g. as story maps.

Timeline: 2019-2021

Estimated budget: 85,000 USD (co-leads/in-kind)

PROJECT/ACTIVITY: Environmental toxicity and fate of light and intermediate fuel oils when spilled in cold waters

Lead: Norway; co-lead: Finland;

Rationale and overall objective: To gather knowledge and explain the large variation in environmental toxicity of light and intermediate fuel oil. This is a joint project proposal by PAME and EPPR.

Main activities: PAME anticipates finalizing and approving this project proposal intersessionally in coordination and consultation with EPPR.

Timeline: 2019-2021

Estimated budget: TBC

PROJECT/ACTIVITY: Arctic Marine Tourism: Development in the Arctic and Enabling Real Change

Lead: Iceland; co-lead: Canada

Rationale and overall objective: This project will follow up on recommendations contained in the Arctic Marine Tourism Project – Best Practice Guidelines document (AMTP 2015).

Main activities:

- Compile data on tourism vessels in the Arctic using PAME's ASTD database to better understand recent developments, identify gaps in data, and explore the feasibility to map the use and carriage of Automatic Identification System (AIS) by vessels not obligated to do so by IMO regulations; and,
- Summarize existing site-specific guidelines for near-shore and coastal areas of the Arctic visited by passengers of marine tourism vessels and pleasure crafts.

The final product will be a summary report with recommendations on next steps, for Ministerial approval in May 2021, and an online repository of information collected for the purposes of the project.

Timeline: 2019-2021

Estimated Budget: 110,000 USD (lead, partly in-kind)

PROJECT/ACTIVITY: PAME-ARHC Memorandum of Understanding

Leads: United States, Canada

Rationale and overall objective: To formalize the relationship between PAME and the Arctic Regional Hydrographic Commission (ARHC) through the development of a non-binding

Memorandum of Understanding (MOU). The purpose of the MOU would be to foster greater communication between the two bodies and enhance coordination and cooperation on projects of mutual interest.

Main activities: Develop a non-binding MOU in close collaboration with ARHC

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: Underwater Noise in the Arctic: Understanding Impacts and Identifying Mitigation Strategy Options - Phase I

Co-leads: Canada, WWF

Rationale and overall objective: Obtain a better understanding and estimate the current underwater noise emissions incidentally generated by commercial shipping in the Arctic, while using information from PAME's ASTD database, and collaborating with CAFF as appropriate to advance implementation of AMSA Report Recommendation II (G).

Main activities (Phase I):

- Obtain a better understanding and estimate the current underwater noise emissions (or 'noiseprint') from shipping in the Arctic;
- Identify areas where underwater noise from shipping and areas of heightened ecological or cultural significance overlap as identified by the Arctic Council; and,
- Based on the results obtained, and recognizing the limitations inherent to high-level analyses, investigate possible mitigation strategy options to reduce the impact of underwater noise incidentally generated by shipping in the Arctic. Expert input and traditional knowledge and local knowledge will be used to inform any such options.

Timeline: Phased approach with phase one for the 2019-2021 period.

Estimated budget: In-kind

PROJECT/ACTIVITY: Compendium of Shipping Accidents in the Arctic (CASA): follow-up

Lead: United States (joint project with EPPR)

Rationale and overall objective: Develop a compendium of shipping accidents in the Arctic for the period 2005-2017 and an overview report to update the corresponding information contained in the 2009 Arctic Marine Shipping Assessment (AMSA) Report.

Main activities: Incorporate the CASA information using GIS mapping tools into PAME's ASTD database and conduct a further analysis and report to identify accident causes and potential options for reducing the risk of such accidents.

Timeline: 2019-2021 (continued from previous WP)

Estimated budget: In-kind

PROJECT/ACTIVITY: HFO Phase IV (b) – Collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO

Co-leads: United States, AIA, CCU (joint project with SDWG) (ongoing/continued from previous work plan)

Rationale and overall objective: Collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO.

Main activities: To develop a report summarizing the information collected in a field survey in 2018 and 2019 about on-shore use of heavy fuel oil (HFO) by indigenous peoples and local communities, as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions. Consideration of a report to the 7th session of the IMO's sub-Committee on Pollution Prevention and Response (PPR) by one or more Arctic States.

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: Collect and Summarize Information on Arctic States' Safe and Low-Impact Marine Corridor Initiatives

Co-leads: Canada, Iceland, AIA

Rationale and overall objective: Collect information on best practices for safe and low-impact shipping corridors in the Arctic and contribute to enhanced marine navigation safety

Main activities: Collect and summarize information on safe and low-impact marine corridor initiatives and programs in the Arctic region and submit a final report to PAME.

Timeline: 2019-2021 (continued from previous WP)

Estimated budget: In-kind

PROJECT/ACTIVITY: A Framework for More Systematically Engaging with Observers on Shipping Related Matters

Co-leads: United States, Republic of Korea, Italy, Poland, Northern Forum (tbc)

Rationale and overall objective: Identify options for leveraging Observer interest, expertise and capabilities.

Main activities: Develop an approach for more systematically engaging with Observers on PAME's shipping-related work and identify opportunities for Observers to contribute to and/or support such work. PAME will convene one or more workshops during the two-year biennium to advance this project.

Timeline: 2019-2021 (continued from previous WP)

Estimated budget: In-kind

PROJECT/ACTIVITY: Update of PAME's Shipping Priorities and Recommendations

Co-leads: United States, Canada

Rationale and overall objective: To finalize updates of the Ministerial-approved 2009 AMSA Report Recommendations for consideration and adoption by the Arctic Council.

Main activities: Preparation of a report that explains and provides a rationale for the proposed changes.

Timeline: 2019-2021 (continued from previous WP)

Estimated budget: In-kind

PROJECT/ACTIVITY: Further Development of the Arctic Ship Traffic Database (ASTD)

Co-leads: United States, Norway

Rationale and overall objective: Further refinement of information contained in the ASTD.

Main activities: To further augment and refine the information contained in the ASTD as well as enhance its analytical and report generating capabilities. The ASTD was publicly launched on 7 February 2019 and the project will continue to strengthen and debug the database in response to empirical experience and user feedback.

Timeline: 2019-2021 (continued from previous WP)

Estimated budget: as per the Cooperative Agreement among the Arctic States Regarding Arctic Ship Traffic Data Sharing (2017).

PROJECT/ACTIVITY: The Arctic Shipping Best Practice Information Forum

Co-leads: Iceland, United States, Canada

Rationale and overall objective: To foster increased used of the Arctic Shipping Best Practices Information Forum webportal.

Main activities: Convene annual meetings of participants and continue the development and expansion of the Forum's web portal (arctic-shippingforum.is). The webportal includes links to key information related to the IMO's Polar Code and serves as a resource hub of information, guidance and guidelines that aid decision makers involved in Arctic marine navigation and those affected by maritime operations related to the Polar Code. This is in accordance with the

Terms of Reference (ToR) for the Arctic Shipping Best Practice Forum (2017).

Timeline: Two annual meetings during the 2019-2021 period (continued from previous WP)

Estimated budget: In-kind

PROJECT/ACTIVITY: Develop an Overview of Arctic States' and Observer States' Interpretation of the Polar Code

Lead: Norway

Rationale and overall objective: The adoption of the Polar Code was a first step towards ensuring safe and sustainable shipping in the Arctic. In order to ensure the success of the Polar Code there is a need to work towards facilitating, where applicable, consistent implementation and enforcement of the Code.

Main activities: Based on input from the Arctic States as well as Observer states, a comprehensive overview of maritime administrations' interpretations of the Code will be developed. This exercise will contribute to the establishment of a 'common ground' for interpretation and give an overview of remaining challenges.

Timeline: 2019-2021.

Estimated Budget: In-kind

Protection from Arctic Invasive Species

PROJECT/ACTIVITY: Implementation Plan for the ARIAS Strategy and Action Plan

Leads: PAME Chair, will engage with the CAFF Chair and existing Implementation Coordinating Group (ICG) members to propose a new approach for ARIAS implementation. Implementation actions will be led by different Arctic States, PPs, WGs and other Arctic Council subsidiary bodies.

Rationale and overall objective: To reduce the threat of invasive alien species by developing and implementing common measures for early detection, reporting, identifying and blocking pathways of introduction, and sharing best practices and techniques for monitoring, eradication and control.

Main activities: Implementation of the ARIAS Strategy and Action Plan

Timeline: The ICG to develop project proposals intersessionally for CAFF and PAME to consider including in their respective 2019-2021 work plans.

Estimated Budget: In-kind

Arctic Marine Pollution

PROJECT/ACTIVITY: Regional Action Plan on Marine Litter in the Arctic

Leads: Canada, Kingdom of Denmark, Finland, Iceland, Norway, Sweden, United States, AIA, OSPAR

Rationale and overall objective: To develop a Regional Action Plan on Marine Litter in the Arctic (RAP-ML) addressing both sea and land-based activities, focusing on Arctic-specific marine litter sources and pathways that will play an important role in demonstrating Arctic States' stewardship efforts towards reducing the negative impacts of marine litter, including microplastics, to the Arctic marine environment. The RAP-ML may be updated in subsequent bienniums to address new and emerging information and priorities; therefore, the structure needs to be realistic and adaptable.

Main activities: Collaboration with other Arctic Council WGs on marine litter activities to ensure that this work is adequately reflected in the first version of the Regional Action Plan.

Timeline: First version of the RAP-ML during the 2019-2021 period.

Estimated Budget: 220,000 USD.

PROJECT/ACTIVITY: Communication and Outreach Activities (In connection with drafting the RAP-ML)

Leads: same as in the development of the RAP-ML

Rational and overall objective: Development of

outreach and communications material in support of the RAP-ML project

Main activities:

- Marine Litter workshop/conference;
- Plastic in a bottle;
- Project video;
- Arctic marine litter competition; and,
- Marine Litter graphics site on the PAME website for outreach purposes

Ecosystem Approach to Management

PROJECT/ACTIVITY: Convening of the 2nd International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic in Bergen, Norway 2019

Leads: Norway and the United States in close collaboration with the EA expert group

Rationale and overall objective: Continue 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), and new and ongoing EA activities of cross-cutting nature. The title of the conference is The Ecosystem Approach to Management of Arctic Marine Ecosystems: Integrating Information at Different Scales in the Framework of EA Implementation.

Main activities: Topics to be addressed include Integrated Ecosystem Assessment, Ecological Quality Objectives, Marine Protected Areas, National EA Implementation by Arctic States, and the Central Arctic Ocean. While the focus is on EA implementation in the Arctic, the topic of scale integration is general and universal.

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: 7th EA Workshop

Leads: Norway and the United States in close collaboration with the EA expert group

Rationale and overall objective: Continue 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), and new and ongoing EA activities of cross-cutting nature.

Main activities: To convene the 7th EA workshop in 2020 with focus on element No. 5 of the EA framework: Value the cultural, social, and economic goods and services produced by the ecosystem.

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: Report on Development in Defining or Setting Ecological Objectives

Leads: Norway and the United States in close collaboration with the EA expert group

Rationale and overall objective: Continue 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), and new and ongoing EA activities of cross-cutting nature.

Main activities: Report on developments in defining or setting ecological quality objectives in the context of EA implementation in national and international processes.

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: Integrated Ecosystem Assessment (IEA) of the Central Arctic Ocean

Leads: Norway, United States, ICES, PICES in close collaboration with the EA expert group

Rationale and overall objective: Provide scien-

tific advice on issues such as the prospect for future fisheries in the Central Arctic Ocean and sensitivity and vulnerability to shipping activities. Contribute to the implementation of the EA in the Central Arctic Ocean.

Main activities: Continue emphasis on development of Integrated Ecosystem Assessment (IEA). Continue to report on developments within ICES/PICES/PAME Working Group on Integrated Ecosystem Assessment (WGICA) as well as other ICES activities on IEA, the meetings of scientific experts on fish stocks in the Central Arctic Ocean, and any other relevant activities.

Timeline: 2019-2021

Estimated budget: In-kind

Resource Exploration and Development

PROJECT/ACTIVITY: MEMA Information Handbook for Engagement with Indigenous Peoples and Local Communities

Leads: United States, Canada, AIA, ICC, Saami Council in close collaboration with the Resource and Exploration Expert Group (REDEG). PAME has invited SDWG to participate in this project.

Rationale and overall objective: Follow-up to the *Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities* (MEMA) project.

Main activities: To develop an information handbook or reference guide as a practical tool for engagement with indigenous peoples and local communities.

Timeline: 2019-2021

Estimated budget: In-kind

PROJECT/ACTIVITY: Update/Status Report on Current Offshore Oil and Gas Activities by Arctic States

Lead: United States in close collaboration with the REDEG

Rationale and overall objective: To describe current oil and gas activities of the Arctic States based on States' submissions of information including on relevant legislation, regulations and practices.

Main activities: To prepare an update/status report on current offshore oil and gas activities by Arctic States. To this end, REDEG will develop a template to facilitate States' submissions.

Timeline: 2019-2021

Estimated budget: In-kind

Strategic Framework Documents

PROJECT/ACTIVITY: AMSP Implementation Status Report 2019-2021

Leads: PAME HoDs, PAME Secretariat, in collaboration with the other Arctic Council WGs

Rational and overall objective: To track progress on implementation of the AMSP 40 Strategic Actions and report on its status.

Main activities: Develop the 3rd AMSP Implementation Status Report in collaboration with other Arctic Council WGs for the period 2019-2021 for submission to the Arctic Council Ministerial meeting in 2021.

Timeline: 2019-2021

Estimated budget: In-kind

Administration

The PAME International Secretariat is based in Akureyri, Iceland. The Secretariat has a staff of three: 1) the Executive Secretary; 2) Executive Assistant; and 3) project manager. A Ministerial agreement (1998) provides the framework for voluntary contributions to the operation of the PAME Secretariat. Contributions are provided by six of the eight Arctic States in support of the Secretariat. PAME cooperates closely with CAFF to share fixed Secretariat overhead costs. Canada has chaired, and the United States has co-chaired the PAME WG during 2017–2019 period. PAME's Vice-Chair (United States) will continue to serve as Acting Chair until the position is filled. PAME has held four WG meetings, two MPA network expert workshops, two Arc-

tic Shipping Best Practices Information Forum meetings, and two ASTD workshops, in addition to a number of meetings of the PAME EGs during the Finnish Chairmanship of the Arctic Council.

Communication and outreach

The lead of PAME's overall communications activities is the PAME Secretariat. PAME develops necessary project-related communications, which include brochures, promotional materials, websites, video production, event hosting, presentations at key events, and press inquiries. PAME participates in relevant international symposia, meetings and other appropriate venues to communicate PAME's activities. PAME's work plan includes information outreach and efforts to increase cooperation and collaboration with international and regional organizations to include the liaising and exchange of information with relevant organizations and programs (e.g. UNEP Regional Seas Programme), and other regional programs. PAME's homepage serves as the main outreach and communication tool (www.pame.is).

Outputs of PAME's activities for information include:

- Arctic Shipping Best Practice Information Forum Status Report, Webportal and Press Release;
- Report on the environmental, economic, technical and practical aspects of the use by ships in the Arctic of alternative fuels;
- Arctic Ship Traffic Data Project Status Report, Database and Press Release (United States);
- Regional Reception Facilities project titled: Proposal for a new output to amend MARPOL to allow the establishment of regional arrangements in the Arctic for joint submission by all Arctic States to the 74th Session of IMO's Marine Environment Protection Committee (MEPC);
- MEMA database;
- Progress report on the EA-EG 2017-2019 work plan;
- Integrated Ecosystem Assessment Report for the Central Arctic Ocean, pending its completion; and,
- Various communication and outreach products.

Reindeer - Tromsø, Norway
Photo: Arctic Council Secretariat / Linnea Nordström

3.6 Sustainable Development Working Group (SDWG)

Mandate

The SDWG's Terms of Reference were formally adopted at the Arctic Council Ministers' Meeting in Iqaluit, Canada in September 1998. The goal of the sustainable development program is to propose and adopt steps to be taken by the Arctic States to advance sustainable development in the Arctic, including opportunities to protect and enhance the environment, the economies, cultures and health of indigenous communities and of other inhabitants of the Arctic, as well as to improve the environmental, economic and social conditions of Arctic communities as a whole. The SDWG Strategic Framework adopted in 2017, encourages projects and initiatives under twelve thematic priorities relating to the human dimension of the Arctic.

3.6.1 Achievements 2017-2019

Summary of achievements 2017-2019

In follow-up to the Fairbanks declaration 2017 (i.e., paragraphs 4, 11, 13, 14, 15, 17, 20, 21, 25, 31 and 32), and according to the twelve thematic priorities set out in the SDWG Strategic Framework 2017, SDWG has, inter alia, undertaken the following work over the course of 2017-2019.

List of SDWG deliverables for the Rovaniemi Ministerial meeting

Educational opportunities

- Book: Including the North: A comparative study of the policies on inclusion and equity in the circumpolar north; and,
- Conclusions: Teacher Education for Diversity and Equality in the Arctic.

Heritage and culture of Arctic communities

- Report: EALLU – Arctic Indigenous Peoples' Food Systems: Youth, Knowledge & Change 2015-2019.

Reduction/elimination of inequalities

- Information Sheet: Gender Equality in the Arctic II; and,
- Website: GEAII website: https://arcticgenderequality.network.

Human health:

- Report: One Arctic - One Health;
- Report: Project CREATeS: Circumpolar Resilience, Engagement and Action Through Story; and,
- Videos: Project CREATeS Digital Stories.

Community vitality

- Report: Arctic Resilience Action Framework (ARAF) Progress Report 2017-2019; and,
- Report: Report of the 1st Arctic Resilience Forum 10-11 September 2018 in Rovaniemi, Finland.

Water and sanitation services

- Report: Best Waste Management Practices for Small and Remote Arctic Communities.

Infrastructure

- Report: Good Practices for Environmental Impact Assessment and Meaningful Engagement in the Arctic – including Good Practice Recommendations.

Sustainable energy

- Report: Arctic Sustainable Energy Futures: The Arctic Community Energy Planning and Implementation (ACEPI) Toolkit;
- Toolkit: Arctic Community Energy Planning and Implementation Toolkit;
- Report: Arctic Remote Energy Networks Academy (ARENA) Achievements Report;
- Website: ARENA website - http://arena.alas-

ka.edu;

- Webinars: ARENA webinars - http://arena.alaska.edu/2017-webinars/; and,
- Report: Arctic Energy Summit 2017 Final Report.

Sustainable business involvement and development

- Report: The Arctic as a Food-Producing Region Final Report.

3.6.2 SDWG Work Plan 2019-2021

Introduction

SDWG focuses on the human dimensions of the Arctic, and in accordance with its mandate, pursues activities to protect and enhance the environment, economy, social conditions and health of indigenous communities and Arctic inhabitants.

SDWG work plan (WP) for 2019 to 2021 has been developed taking into account the *2017 SDWG Strategic Framework*, including the twelve thematic priority areas contained in it, with a view to promoting initiatives that enhance sustainable development and meaningful understanding of the Arctic region; are applicable and valuable for the communities; long-term in scope; and enhance circumpolar collaboration and engagement of indigenous and Arctic communities.

List of individual projects and activities

The projects identified in this WP include 1) continuing projects that have already been endorsed by the SDWG; 2) follow-on projects which require an updated project proposal template to describe the next phase of work; and 3) projects that are under development for future SDWG review and possible endorsement.

Additional project proposals may be developed and endorsed within the scope of this WP during the Icelandic Chairmanship (2019-2021). Projects and activities below are listed according to their thematic priority. In general, funding for SDWG projects is provided by leads and co-leads as in-kind contributions. No budget information is thus provided below.

Educational opportunities

PROJECT/ACTIVITY: Continue and expand the *Arctic Children – Preschool Education and Smooth Transition to School* project to include the *International Arctic School* project proposed by the Russian Federation, RAIPON and the Northern Forum (NF).

Lead/Co-leads: Anticipated leads include Russian Federation, RAIPON, Canada, Finland, Norway, NF, IASSA and IASC

Rationale and overall objective: Develop circumpolar networks and harness innovative technologies to build knowledge and develop skills needed to maintain vibrant communities in a changing region. Objectives include: i) analyzing and evaluating educational practices that do not interrupt the traditional way of life of indigenous peoples/children of nomads, but provide them with the knowledge and skills necessary to function fully as effective members of both their own community and mainstream society; ii) enhancing all levels of education in the Arctic; iii) understanding the conditions for access to quality general education; iv) identifying an effective model of high quality education; and v) establishing a network for cooperation to create new standards, including language preservation and delivery of education in multiple languages.

Main activities: Collection of data related to best international practices and their implementation; optimal curriculum and education process organization; creation of an Arctic nomadic tutoring system. A revised, expanded project proposal is under development.

Heritage and culture of Arctic communities

PROJECT/ACTIVITY: Follow-on to Arctic Indigenous Youth, Food Knowledge and Arctic Change (EALLU)

Lead/Co-leads: Anticipated leads include Norway, Canada, Russian Federation, Sweden,

United States, AAC, AIA, Saami Council and the AWRH

Rationale and overall objective: Deepen global understandings of the region's peoples, cultures, traditional ways of life, languages and values and promote traditional knowledge and local knowledge. Sustain and celebrate indigenous languages, traditional lifeways and practices, including knowledge about traditional diets and food security. Support the identification and promotion of heritage sites and areas of particular cultural significance in the Arctic. Promote food security, food empowerment, and understanding of indigenous peoples' food systems in the context of sustainable development. Utilize the food cultures and systems of Arctic indigenous peoples as a foundation for adaptation to Arctic change. Strengthen education components and explore new possibilities for local economic development from northern sea routes.

Active engagement of circumpolar indigenous youth is at the core of this project, which seeks to explore opportunities for indigenous peoples provided by a changing Arctic.

Main activities: An updated project proposal template is under development.

Reduction/elimination of inequalities

PROJECT/ACTIVITY: Gender Equality in the Arctic III (GEA)

Lead/Co-leads: Leads include Iceland, Canada, Finland, others to be determined

Rationale and overall objective: Strengthen and promote the adoption of sound policies for the elimination of inequalities based on age, sex, disability, race, ethnicity, origin, religion or economic or other status at all levels. Promote dialogue on gender equality in the Arctic region by strengthening the network of experts and stakeholders that was launched during GEA phase II (2017-19). Secure a permanent platform for networking and consolidating knowledge on subjects relating to gender equality in the Arctic.

Main activities: Strengthen the network of experts and stakeholders by developing the GEA web-portal to provide a permanent platform for cooperation and building knowledge on gender equality in the Arctic. Consolidate information and inventories on existing projects and best practices on the webportal. Organize sessions on gender equality in conjunction with relevant Arctic events to raise awareness.

Publish a comprehensive report on Gender Equality in the Arctic (subject to available funding). This is an endorsed project.

Human health

PROJECT/ACTIVITY: One Arctic – One Health

Lead/Co-leads: Anticipated leads include Canada, United States, and Finland

Rationale and overall objective: Exchange information, assessments and innovations that can support public health systems and health service delivery – including clean energy sources/systems – with particular emphasis on projects that reduce death and disability from environmental risk factors, suicide, and high-burden infectious and chronic diseases. The project's objective is to build understanding of the ties between human, animal, plant, and environmental health in the circumpolar region, as a key strategy for adapting to rapid environmental change.

Main activities: Emphasize continued knowledge and information sharing. Further simulation exercises that identify strengths and areas for capacity building. Cooperative activities to address observed events, such as those identified by the Circumpolar Local Environmental Observers (CLEO) Network. Build relationships with traditional knowledge and local knowledge holders - as well as relevant stakeholders in other WGs, such as AMAP, ACAP, and CAFF. An updated project proposal template is under development.

PROJECT/ACTIVITY: Follow-on to Circumpolar Resilience, Engagement and Action Through Story (CREATeS)

Lead/Co-leads: Anticipated leads include ICC, Canada, Finland, and Sweden

Rationale and overall objective: Support and facilitate international connections and collaborations between circumpolar communities—specifically youth, indigenous peoples, families, health practitioners, researchers, and policy-makers—towards effective action that reduces suicide and fosters mental wellness.

Main activities: Follow-on work will include, but not be limited to, a continued focus on participatory arts-based methods (e.g., digital storytelling) as well as opportunities for knowledge and practice exchange emphasizing implementation of suicide prevention and mental wellness initiatives. Research in this realm will also be supported as will communications of all project activities. A formal project proposal is forthcoming.

Community vitality

PROJECT/ACTIVITY: Survey of Living Conditions in the Arctic II (SLiCA II)

Lead/Co-leads: Proposed by ICC (to be confirmed)

Rationale and overall objective: Increase foundational knowledge of human development and the indicators of community vitality and provide tools for constructive solutions to demographic challenges, patterns of human settlement, urban planning and mobility. Promote the linkages between the protection of the environment and wellness, resilience and adaptability of communities. The objective is to update and extend the work of the SliCA project carried out by SDWG from 1998 to 2011.

Main activities: A project proposal template is under development for future SDWG review and endorsement.

Water and sanitation services

PROJECT/ACTIVITY: Follow-on to Solid Waste Management in Small Arctic Communities

Lead/Co-leads: Anticipated leads include Canada, Finland and AIAAIA

Rationale and overall objective: Strengthen the participation of local communities in improving sustainable water, sanitation and waste disposal management with an eye to the unique engineering challenges and environmental risks that the region faces. The project's objective is to continue SDWG work in this area and increase cooperation with other WGs (e.g., ACAP, AMAP, EPPR, CAFF). In addition, it seeks to explore cooperation with the AEC in relation to public/private partnerships directed at waste management.

Main activities:

- Continue to examine current best practices in solid waste management among the Arctic States;
- Determine the potential need for policy actions to address waste management issues;
- Assess the potential for recycling/reusing plans that will lower waste and provide revenue, building on indigenous traditions of "nothing wasted, everything used"; and,
- Develop programs to educate communities and raise awareness about waste management and how changes can positively affect them; and v) assess contaminants issues related to solid waste disposal in the Arctic. A project proposal is under development for future SDWG review and endorsement.

Infrastructure

PROJECT/ACTIVITY: Zero Arctic: Concepts for Carbon Neutral Arctic Construction Based on Tradition

Lead/Co-leads: Finland and Canada

Rationale and overall objective: Provide information to inform responsible and sustainable long-term investments in all forms of Arctic infrastructure while considering the present needs of communities as well as the changing environment through independent efforts and in coordination with other subsidiary bodies and task forces. The project seeks to:

i. develop regional concepts for Arctic building construction that are carbon neu-

tral over their full life-cycle;

ii. utilize both scientific life-cycle assessment and energy simulation methods;

iii. learn from and apply traditional knowledge of sustainable construction;

iv. explore the potential for compensating anthropogenic greenhouse gas emissions through natural and man-made carbon sinks in the context of Arctic construction; and,

v. enable the capacity for continuous development of Arctic carbon neutral construction.

Main activities: Establish a network of relevant stakeholders in Arctic countries. Benchmark the life cycle energy performance and greenhouse gas emissions of Arctic construction. Analyze the traditional Arctic solutions to sustainable and energy-efficient construction. Recognize locally-adoptable, cost-optimal and user-centered service and design innovations for reaching carbon neutrality. Develop concepts for regional carbon neutral villages and buildings. Arrange stakeholder and expert workshops for key tasks of the project. Disseminate the findings through local seminars, reports and media. This is an endorsed project.

Sustainable energy

PROJECT/ACTIVITY: Arctic Energy Summit 2019

Lead/Co-leads: Iceland and Finland

Rationale and overall objective: Promote responsible and sustainable management, use and development of energy and resources as well as innovative approaches encouraging renewable energy in even the most remote Arctic communities. Establish a comprehensive approach to Arctic energy that includes petroleum-related activities, renewable energy potential and projects, energy efficiency and remote energy systems. Provide a forum to share best practices, emerging technology and process innovation as well as relevant and topical policy issues. Respond to the challenges of climate change and sustainable development in the Arctic.

Main activities: The 5th Arctic Energy Summit is a three-day conference planned to take place in Iceland. It will produce a summary of findings that encourage consideration of pilot projects, research gaps and best practices. This is an endorsed project.

PROJECT/ACTIVITY: Arctic Remote Energy Networks Academy II (ARENA II)

Lead/Co-leads: Anticipated leads include Canada, United States, GCI

Rationale and overall objective: Assist capacity building by sharing knowledge and establishing professional networks related to the transition from diesel to hybrid and renewable energy systems.

Main activities: Building on the successful model of ARENA I, planning for learning opportunities to provide knowledge, skills and tools that facilitate integrating clean energy technologies in the Arctic region with a view to promote development of community energy solutions. An updated project proposal template is under development and will include an on-site session.

PROJECT/ACTIVITY: Maintenance of Arctic Renewable Energy Atlas (AREA) Website

Lead/Co-leads: Anticipated leads include United States, Canada, GCI and the Republic of Korea

Rationale and overall objective: Provide a tool to visualize renewable energy supply and demand data in the Arctic and to present Arctic-wide local community success stories to inform decision-makers and promote responsible investment.

Main activities: Complete AREA's online tool to enhance knowledge of the best practices and local adaptation actions on Arctic renewable energy and energy efficiency; store renewable energy data for inclusion in the online atlas; provide a library of online multimedia content presenting the local perspective and highlighting community level success stories. The project's

work for the Finnish Chairmanship is currently being completed. A project proposal template for the next phase is under development for future SDWG review and endorsement.

PROJECT/ACTIVITY: Follow-on to Arctic Sustainable Energy Futures Toolkit

Lead/Co-leads: Anticipated leads include GCI, Canada, Netherlands and the EU.

Rationale and overall objective: Implement a proactive and comprehensive long-term energy planning process that brings together stakeholder groups to create more socially desirable and economically feasible energy solutions for Arctic communities.

Main activities: Establish pilot projects in communities, and work to develop an Arctic Sustainable Energy Futures Fund to help fully realize the energy initiatives proposed in the community plans. A project proposal template is under development.

Transportation links

PROJECT/ACTIVITY: No projects are currently identified but discussions will take place during the Icelandic Chairmanship and possible projects might be brought forward. This is a thematic area that has a lot of potential for joint cooperation with other WGs.

Rationale and overall objective for this thematic priority: Promote the development of sustainable transportation infrastructure and traditional corridors that increase the capabilities for efficient movement of people and goods that have implications for Arctic communities, often in cooperation with other subsidiary bodies as mentioned below.

Science and research for sustainable development

PROJECT/ACTIVITY: No projects are currently identified but discussions will take place during the Icelandic Chairmanship and possible projects might be brought forward. This is a thematic area that has a lot of potential for joint cooperation with other WGs.

Rationale and overall objective for this thematic priority: Facilitate good use of the Arctic region's research institutions and extensive intellectual resources to benefit sustainable development, including through academic exchanges and joint Arctic research.

Economic assessments

PROJECT/ACTIVITY: Economy of the North IV (ECONOR IV) (Follow-on work to SDWG project ECONOR I-III)

Lead/Co-leads: Anticipated leads include Canada and Norway

Rationale and overall objective: Strengthen analysis and joint monitoring of economic trends and activities in the Arctic, to include both cash and subsistence economies, to enhance sustainable and diverse economic development, investments and policies.

Main activities: During 2019-21, a team of experts, including the prospective ECONOR IV project team, will examine questions of resource wealth and distribution, as well as economic regulation, production, and decision-making, in the Arctic with a view to developing an ECONOR IV proposal to the SDWG. On a broader scale, this group will facilitate continued collaboration between statistical agencies beyond the scope of the Economy of the North report series to date to ensure sustainability of knowledge delivery to where it is needed most both locally and internationally in support of informed decision-making. A project proposal is currently under development for future SDWG review and endorsement.

PROJECT/ACTIVITY: Possible participation in a side event at the World Circular Economy Forum (WCEF)

Rationale and overall objective: SDWG is pursuing possible participation in a side event at the World Circular Economy Forum (WCEF) in Helsinki in June 2019 and possibly also in Canada in 2020. This project/activity arises from the SDWG Thematic Discussion on Sustainable Economic Development —low-carbon, resource-efficient

circular economy during Finland's Chairmanship.

Sustainable business involvement and development

PROJECT/ACTIVITY: Arctic Food Innovation Cluster (AFIC)

Lead/Co-leads: Canada, Finland, Iceland, Russian Federation, United States, GCI, AIA

Rationale and overall objective: Explore economic development, including in new and emerging sectors, and evaluate its potential benefits, including job creation and promotion of local culture and products. Highlight the sustainable development impacts of such sectors, create new frameworks and provide necessary support to all stakeholders in addressing the challenges and opportunities resulting from a larger and more diversified business presence in the region. Facilitate the development of a focused approach to food production and regional economic development. Respond to global challenges of food production while seeking to define the Arctic's role and contribution to the changing climate and issues of food security locally and around the world.

Main activities: Food production encompasses traditional, artisanal, and industry-scale production of natural resources into food for own, national, and international consumption. The project will bring together actors in the Arctic food value chain (e.g., Arctic food producers with governments, Arctic indigenous communities, universities, research centers, vocational training providers and industry associations) to explore ways to increase the Arctic's competitiveness in food industries. This is an endorsed project.

PROJECT/ACTIVITY: Blue Bio-economy in the Arctic

Lead/Co-leads: Anticipated leads include Iceland and others to be determined

Rationale and overall objective: Consider opportunities and possible obstacles in the development of blue bio-economy in the Arctic.

Main activities: A project proposal template is under development for future SDWG review and endorsement.

Expert group activities

Arctic Human Health Expert Group (AHHEG)

AHHEG's work focuses primarily on the thematic priority of Human Health. AHHEG collaborates closely with the AMAP Human Health Assessment Group. AHHEG provides expert advice and support for the above-listed projects on One Health and suicide prevention. Specifically, AHHEG and its members will continue to steer, participate in, and disseminate information within their networks about project activities. In addition, SDWG is considering a new project template on International Circumpolar Surveillance (ICS), which is a network of public health laboratories for monitoring invasive bacterial infections in the circumpolar north.

Social, Economic and Cultural Expert Group (SECEG)

During the period 2019-2021, SDWG will continue to enhance SECEG's role as an analytical tool for sustainable development and further implementation of the SDWG Strategic Framework. SECEG will begin shorter, regular knowledge outputs as a first step towards more comprehensive assessments or State of the Arctic reports. Canada is providing funding for a SECEG study entitled Renewable Resource Economies in the Arctic: A State of Knowledge Report, in cooperation with UArctic thematic networks that have expertise in this area. SECEG will continue to network with the larger social science and indigenous knowledge communities.

Collaboration with other Working Groups

SDWG continues to examine opportunities to expand its collaboration with other Arctic Council subsidiary bodies. Some matters under consideration by the SDWG are identified below; however, these are not yet endorsed activities under the SDWG Work Plan:

- SDWG is exploring collaboration with ACAP on a range of projects and activities, including:

    - projects relating to solid waste management in small Arctic communities and on activities related to the Indigenous Peoples Contaminants Action Program (IPCAP);

- Through AHHEG, SDWG continues to collaborate with AMAP's Human Health Assessment Group on a range of human health projects and activities;
- SDWG is exploring collaboration with CAFF on a range of projects and activities, including:
    - the implementation of Arctic Biodiversity Assessment goal #4 in respect of the mining industry to develop a user-driven approach for the incorporation of biodiversity considerations in industry operations;
    - CAFF's work on the roles and functions of Arctic wetlands as a resource to support sustainable development and resilience in the Arctic;
    - CAFF's youth engagement work; and,
    - other CAFF work that is closely aligned with SDWG work, including indigenous languages; and,
- SDWG is exploring collaboration with PAME on a range of projects and activities, including:
    - the 2nd PAME conference on implementation of the Ecosystem Approach in the Arctic (marine).

Administration

The SDWG secretariat is located in Ottawa, Canada. The secretariat is currently operated under a contract funded primarily by the Government of Canada, with contributions from Finland. The Executive Secretary is under contract until 31 May 2019. Secretariat budget details for 2019-2021 are not currently available.

During the Finnish Chairmanship, the SDWG held four plenary meetings. For the period 2019-2021, Iceland will chair the SDWG. The tentative SDWG meeting schedule for 2019-2021 is:

- 11-12 Sept 2019 Ísafjörður;
- 22-23 March 2020 Akureyri;
- 26-27 October 2020 Egilsstaðir; and,
- 03-04 February 2021 Reykjavik

Communications and outreach

Each SDWG project proposal includes a communications element. SDWG adopted a communications plan in May 2017 in conjunction with the new SDWG Strategic Framework 2017. The communications work plan for 2019-2021 is under development by a SDWG Communications sub-committee. Examples of possible products include reports, education toolkits, social media campaigns, website development, webinar series, scientific posters, video production, workshops, seminars and conferences, presentations at key events, and responding to press inquiries. SDWG materials are translated into other languages when resources allow.

Oldervika, Tromsø, Norway
Photo: Arctic Council Secretariat / Ingeborg Y. Pettersen

4. Task Forces and other subsidiary bodies: report on achievements in 2017-2019 and work plans for 2019-2021

4.1 Task Force on Arctic Marine Cooperation (TFAMC)

4.1.1 Summary

The Task Force on Arctic Marine Cooperation (TFAMC, Task Force I), that worked in 2015-2017 was established with the general aim of considering enhancements to Arctic marine cooperation. During the discussions in the Task Force, the focus became to enhance marine cooperation under the umbrella of the Arctic Council.

The Fairbanks Declaration in spring 2017 adopted the report of TFAMC, Task Force I, including an assessment of future needs and existing mechanisms of cooperation, and adopted the TFAMC I's recommendations to strengthen coordinated marine stewardship. Further, the Fairbanks Declaration established a "new mandate for the Task Force to build upon this work by presenting Terms of Reference (ToRs) for a possible new subsidiary body, and recommendations for complementary enhancements to existing Arctic Council mechanisms, for consideration by Ministers in 2019."

Based on additional instructions from the Senior Arctic Officials (SAOs) in February 2018, the TFAMC II (2017-2019) suspended its work regarding the development of draft ToR for a possible new Arctic Council subsidiary body. Instead, the Task Force has focused its recent work on the recommendations for complementary enhancements of the Arctic Council institutions, including the possibility of dedicated SAO sessions as requested by the SAOs in March 2018, with the overall aim of addressing the nine identified functional needs for improved cooperation set forth in the TFAMC I's 2017 Report to Ministers.

The TFAMC II was able to identify complementary enhancements to existing institutions that meet seven of nine identified functional needs. The two remaining needs are:

1. Extending cooperation throughout the marine stewardship cycle; and,
2. Integration across sectors and jurisdictional boundaries.

In addition, further work is also required to fully address the functional need regarding regional cooperation on area-based stewardship (6).

The primary recommendation from the TFAMC II is the establishment of a SAO-based mechanism to coordinate and guide the marine activities of the Arctic Council and improve coordination on marine issues in the Arctic Council. Such a mechanism could also pursue additional complementary enhancements to meet the remaining functional needs that are not yet met. Details on such a SAO-based mechanism are described in the attached document.

The Recommendations by the TFAMC II sets out a proposed list of complementary enhancements to current Arctic Council institutions that Arctic Council decision-makers could draw from at their discretion to help meet the recommendations set forth in the TFAMC I's 2017 Report to Ministers.

Accordingly, the attached document includes the Recommendations of the TFAMC II regarding the Complementary Enhancements (Chapter I) and the requested details (mentioned above) on a SAO-based mechanism (Chapter II).

Additionally, the Task Force recommends strengthening of the relevant secretariat capacity, in order to efficiently implement the enhancements suggested by the TFAMC II. However, the Task Force leaves the question of which secretariat(s) should handle these issues for SAO consideration, as agreed at the meeting in Levi, Finland in March 2018.

The Task Force has not conducted detailed cost assessment following the Task Force´s recommendations for enhancements. However, the Co-chairs believe that the cost implications will primarily be limited to:

1. the cost of holding annual consultations of SAOs with marine experts; and,
2. hiring of one marine expert by one of the Secretariats to help conducting such meetings. Costs could be assessed on the basis of the above.

Furthermore, in case SAOs in the future decide to return to the discussion of a potential subsidiary body for facilitating, coordinating and communicating the Arctic Council's marine-related activities the TFAMC II has done some preparatory work on it, and the results of that are reflected in the Co-Chairs' Non-Paper from 15 January 2018.

Finally, the Co-Chairs would like to thank all the members of the Task Force II for good collaboration and the Arctic Council Secretariat for their efforts and inputs during the past two years.

4.1.2 Recommendations

Recommendations by the TFAMC II for complementary enhancements of the Arctic Council institutions including the SAO based mechanism to coordinate marine issues in the Arctic Council.

The Task Force on Arctic Marine Cooperation TFAMC, Task Force I), that worked in 2015-2017 was established with the general aim of enhancing Arctic marine cooperation and it identified nine functional needs for improved cooperation. The Fairbanks Declaration in spring 2017 established a "new mandate for the Task Force to build upon this work by presenting ToR for a possible new subsidiary body, and recommendations for complementary enhancements to existing Arctic Council mechanisms, for consideration by Ministers in 2019."

Based on additional instructions from the Senior Arctic Officials (SAOs) in February 2018, the TFAMC II (2017-2019) suspended its work regarding the development of draft ToR for a possible new Arctic Council subsidiary body. Instead, the Task Force has focused its recent work on the recommendations for complementary enhancements of the Arctic Council institutions, including the possibility of dedicated SAO sessions as requested by the SAOs, with the overall aim to meet the nine identified functional needs for improved cooperation set forth in the TFAMC I's 2017 Report to Ministers.

This document includes the Recommendations of the TFAMC II regarding the Complementary Enhancements (Chapter I) and the requested details on a SAO based mechanism (Chapter II) to improve coordination on marine issues in the Arctic Council.

Boat, Rovaniemi, Finland
Photo: Arctic Council Secretariat / Linnea Nordström

Chapter I

Recommendations of the TFAMC II Regarding Complementary Enhancements to Current Arctic Council Institutions

As part of its work in 2015-2017, the Task Force on Arctic Marine Cooperation I identified a number of "functional needs" that could be met by additional mechanisms or enhancements. These needs are:

1. Extending cooperation throughout marine stewardship cycle;
2. Integration across sectors and jurisdictional boundaries;
3. Integration of knowledge;
4. Strengthening the science-policy interface;
5. Regional cooperation in the development and regular assessment of ecological quality indicators and objectives;
6. Regional cooperation on area-based stewardship;
7. Regional assessment, monitoring and accountability;
8. Communication and advocacy of Arctic marine stewardship; and,
9. Coordination of marine- activities within the Arctic Council and by the Arctic Council with other relevant bodies.

TFAMC II has considered these nine functional needs for cooperation on marine related issues identified by the TFAMC I. At the direction of SAOs in March 2018, the TFAMC II has focused on how these needs might be met through complementary enhancements to the Arctic Council institutions. Accordingly, this paper sets out a proposed list of complementary enhancements to current Arctic Council institutions that Arctic Council decision-makers could draw from at their discretion to help meet the recommendations set forth in the TFAMC I's 2017 Report to Ministers.[2]

For each identified complementary enhancement, numbers in parentheses indicate which of the above functional needs identified in the 2017 report would be addressed. These proposals reflect the detailed input from Arctic States, PPs, WGs, and Observers as appropriate. Many of these complementary enhancements could be made immediately or at a target date in the near future. Others could be phased-in gradually.

The TFAMC II has not been able to identify complementary enhancements that would sufficiently meet two of the functional needs. These remaining functional needs are:

1. Extending cooperation throughout the marine stewardship cycle; and,
2. Integration across sectors and jurisdictional boundaries.

In addition, further work is required to also fully address functional need number (6), above, regarding regional cooperation on area-based stewardship.

Enhancements to Ministerial operations (3,4,6,9)

Consider meetings of Ministers with responsibility for particular marine issues, and also include marine issues as specific topic of discussion for all Ministerial meetings and/or Ministerial declarations.

Enhancements to SAO operations (3,4,5,6,9)

Changes to some of the current practices and/or activities of the Senior Arctic Officials (SAOs) are suggested which could be considered to enhance the cooperation and coordination on marine issues within the Arctic Council. These changes could also be made on an informal basis

[2] In the 2017 Fairbanks Declaration, Arctic Ministers adopted the *Report to Ministers of the Task Force on Arctic Marine Cooperation (TFAMC) "as an assessment of future needs and existing mechanisms of cooperation, and its recommendations to strengthen coordinated marine stewardship." Fairbanks Declaration, para. 12.*

through SAO practice.

SAOs should

- Give strategic guidance to Working Groups, including by:
    - Providing high-level guidance on marine issues through the Council's Arctic Marine Strategic Plan 2015-2025 (AMSP);
    - Listing priorities on marine issues; and,
    - Adopting a work plan for the Arctic Council, in order to assist with the implementation of the AMSP 2015-2025.
- Require marine related WG reports and recommendations to be coordinated appropriately with other WGs, include prioritized recommendations, and which AMSP recommendation is supported;
- When making SAO decisions:
    - Rank marine related recommendations coming from Working Groups when presented to Ministers; and,
    - Link recommendations to the AMSP.
- When reporting to Ministers, include information about implementation of the AMSP, Ministerial decisions, and other decisions of Arctic Council bodies noting that PAME develops an AMSP implementation report each biennium;
- Schedule SAO meetings in a way that would increase the time available for Working Groups to meet, make decisions, and implement their work; and,
- Consider dedicated sessions at SAO meetings on marine issues with the participation of marine experts (both WGs and external marine experts).

The TFAMC II suggests that SAOs provide support/guidance on the further implementation of an ecosystem-based approach to marine issues, building on and strengthening the Ecosystem Approach (EA) Expert Group which has developed a framework for implementing the EA to management of marine (and coastal) ecosystems in the Arctic.

Enhancements to Working Group operations (3,4,5,6,7,9)

Many improvements could potentially be made to enhance the cooperation within the Arctic Council through adjusting how the working groups operate and are able to interact with each other. This could be made once again by making amendments to the provisions of the Annexes to the Arctic Council Rules of Procedure relating to Working Groups. The working groups were well represented and active in the discussions on complimentary enhancements and contributed many of the suggestions listed below.

- Heads of delegation within each working group should provide, on an annual basis, expert WG participant points of contact to their Secretariats which could then be shared through a password-protected webpage;
- States and PPs are encouraged to provide periodically information, by using common templates as appropriate to Working Groups regarding the status of implementation and impact of Arctic Council projects and marine related policy recommendations with reference to the Arctic Marine Strategic Plan (2015-2025);
- Amend the provisions of the Annexes to the Arctic Council Rules of Procedure relating to WGs to systematize coordination of their work, such as by:

- Requiring advance sharing and coordination of marine-related draft work plans/projects among Working Groups via relevant mechanisms (e.g., PAME Secretariat / ACS / or through another mechanism);

- Adopting common procedures for each Working Group with regard to operations, including common work plans on cross-cutting marine issues among Working Groups arising from the AMSP and Ministerial declarations;

- Formalizing regular meetings of WG Chairs and PP representatives with a standing agenda item on cross-cutting marine issues, and consider inviting AC observers and other Arctic stakeholders as appropriate; and,

- Adopting a general rule inviting WG Chairs and Executive Secretariats or their designated representatives, which may be the WG participants that are geographically located where the meetings are occurring to attend other WG meetings.

- Amend the provisions of the Annexes to the Arctic Council Rules of Procedure to ensure that conflicts are avoided between WG meeting schedules, and afford SAOs the discretion to institute a common practice across all WGs for the rotation of WG meeting locations;
- Link all WG project recommendations to delivery of the AMSP and EBM;
- Consider short (one to two page) summaries for use by SAOs in considering WG activities at least biannually;
- Prioritize policy recommendations made by WGs to SAOs;
- Common templates could be used by Arctic States to describe to WGs and the SAOs the effectiveness of projects that have been implemented, with reference to the AMSP; and,
- Develop and adopt one set of marine environmental quality objectives and indicators for the Arctic Council in line with the Arctic Council Marine Strategic Plan.

Enhancements to secretariat(s) (9)

The TFAMC discussed the need for integrating the marine activities across the different WGs of the Arctic Council, as well as ensuring a coordinated approach to communication of the Arctic Council and its work/products to the global community in a more coordinated way. It was understood that improvements could be made to this through enhancing the capacity of the Secretariats of the Arctic Council, through some combination of the following, for consideration and determination by SAOs and Ministers:

- Update the role of the PAME Secretariat or the Terms of Reference of the ACS to include integrating and coordinating cross-cutting marine activities;
- Increase capacity of the PAME Secretariat or ACS to carry out integration and cross-cutting marine activities through:
    - A dedicated public communications officer for marine issues; and,
    - Marine specialist(s).
- Encourage secondment of staff from national governments of Arctic States to Secretariats and develop financial support for PP secondment of staff to Secretariats. SAOs should consider the possibility of secondments from Observer States.

Enhancements to external communications and cooperation (8,9)

Improvements to the Arctic Council's communication and cooperation with external bodies could be made through some relatively simple actions that would enable for more transparency and coordination across WGs and with the

ACS:

- WGs share external contact information regarding points of contact they might have in other organizations, such as the IMO, WMO, etc. with each other and consolidate it in an Arctic Council password protected page;
- Encourage coordination across WGs via the PAME Secretariat and/or ACS prior to public communications relating to cross-cutting marine issues;
- ACS develops a marine issue web page with links to the work of WGs and other Arctic Council bodies as well as reports and other documents;
- Produce consolidated Arctic Council fact sheets and other summaries for public communication purposes relating to marine issues; and,
- WGs work with observers and relevant international and regional organizations to produce or coordinate communications
- When WGs consider entering into non-binding collaborative relationships with outside entities that involve cross-cutting marine issues, WGs should communicate that intention with each other in order to determine whether other WGs have interest in participating in the collaborative relationship before pursued at the SAO level for approval.

Chapter II

Recommendation for a SAO mechanism to coordinate and guide the marine activities of the Arctic Council: functions, format, participation and frequency of the meetings of such a mechanism

In an effort to enhance strategic and policy guidance, and to enhance collaboration and coordination of marine activities in the Arctic Council, we recommend that the SAOs convene periodic meetings with invited marine experts including, but not limited to, those engaged with the Arctic Council WGs.[3]

Functions of such meetings would be to:

- Provide SAOs with a forum to holistically discuss and coordinate marine issues;
- Give strategic guidance on marine issues to the WGs and TFs;
- Provide policy guidance, including priorities for the Arctic Council´s work on marine issues;
- Review and revise as necessary the Arctic Marine Strategic Plan;
- Develop a unified marine workplan for the Arctic Council;
- Discuss future complementary enhancements for the functional needs that was not fully covered by the Recommendations by TFAMC II[4];
- Give greater effect to the recommendations from the WGs and examine follow-through on those recommendations;
- Identify future challenges and emerging issues; and,
- Report to the Ministerial meetings.

[3] SAOs have indicted to the TFAMC II that recommendations in this regard should focus on an SAO-based mechanism rather than an alternative or parallel mechanism.

[4] Recommendations of the TFAMC II Regarding Complementary Enhancements to Current Arctic Council Institutions.

Format for the meetings and participation:

- The meetings would be held at least once a year, in conjunction with the SAO meetings;
- Accordingly, the rules of procedures of the meetings would follow those for the SAO meetings;
- Meetings would be chaired by the SAOC; and,
- Participation would be according to the rules of procedure with regard to SAO; and, meetings (including with regard to observer participation), and should include marine experts.

Photo: Arctic Council Secretariat / LInnea Nordström

4.2 Task Force on Improved Connectivity in the Arctic (TFICA)

Mandate

The Task Force on Improved Connectivity in the Arctic (TFICA) was established at the 2017 Arctic Council Ministerial meeting in Fairbanks. The mandate was to "compare the needs of those who live, operate, and work in the Arctic with available infrastructure and to work with the telecommunications industry and the Arctic Economic Council to encourage the creation of required infrastructure with an eye towards pan-Arctic solutions, and to report to Ministers in 2019."

4.2.1 Summary of achievements 2017-2019

Under the co-chairmanship of Finland and the Kingdom of Denmark, the Task Force on Improved Connectivity in the Arctic (TFICA) met four times, with participation from all Arctic States, some Permanent Participants and some Observers.

Task Force meeting dates and locations:

- Helsinki - November 2017
- Washington DC - May 2018
- Copenhagen - September 2018
- Reykjavik - December 2018

In addition to TF meetings, there were a number of meetings and teleconferences with participation from the larger group, and a number of teleconferences where only the drafting group participated. The drafting group's final meeting took place in Ottawa in January 2019 where the Report was finalized. The Task Force received administrative and logistical support from the Arctic Council Secretariat.

The focus of the Task Force has been to better understand user needs, to explore new technological solutions, commercial opportunities, and the sharing of best practices. Insights and input from key stakeholders has been important to the Task Force, where presentations from diverse groups such as the Finnish Meteorological Institute, the AEC, the EPPR, the ACGF, and a large number of business and industry representatives were well received.

Notably, at the meeting in Washington, twelve industry representatives representing diverse interests were invited to take part in a round table discussion. The aim of the meeting was to get a better understanding of connectivity status and emerging technologies, user needs and network deployment in the Arctic. Lessons learned from that meeting clearly demonstrated that there are in fact a number of ongoing projects which aim to provide full satellite coverage of the Arctic, in addition to the various undersea cables passing through the Arctic. Each of these technologies has the potential to dramatically increase connectivity, speed and improve coverage throughout the Arctic. Furthermore, the discussions showed that there are a variety of challenges in trying to reach the end users in the Arctic, and that there is a need to gain a better understanding of the demands and different end user requirements in order for industry to identify potential solutions to these connectivity challenges. The main user groups identified are governments with a particular focus on health, education, military, justice and SAR. However, new technology and better connectivity may open up opportunities for new practices in rural areas, such as within reindeer husbandry territories.

Pricing, availability, reliability and accessibility remain some of the biggest challenges. Regarding barriers and network deployment, the need for Public Private Partnerships has been highlighted. Match funding or finding areas of mutual interest and identifying the right models has been labeled a key issue. In terms of regulations, the industry representatives encouraged governments to be flexible and provide important timeline information and regulatory certainty to help facilitate the deployment of new technol-

ogy. The main conclusion was that connectivity in the Arctic will depend on different solutions and that there is no "one size fits all" solution. Connectivity solutions are already developing and are likely to be a mixture of local, pan-Arctic and global.

In order to get a better understanding of how connectivity may benefit Arctic users, questionnaires were developed and sent to the PPs, Arctic Council WGs, the ACGF, the AEC. The findings are presented in the final report from the Task Force.

The TFICA made concerted efforts to reach out to the AEC and invited them to its meetings. At the fourth meeting held in Reykjavik, the AEC gave a presentation and participated in the discussion where it stressed that improving Arctic connectivity in a particular location will not guarantee business and economic growth. Public-Private Partnerships (PPPs) and public support programs should incorporate market mechanisms and other structural means to ensure that new communications infrastructure will be built where demand is greatest. Attaining responsible economic development will increase the demand for connectivity, which requires that all Arctic stakeholders work collaboratively on a strategic vision to foster responsible investment.

4.2.2 Deliverable

The TFICA's completed assessment (containing findings and recommendations) entitled "Improving Connectivity in the Arctic" is the Task Force's deliverable for the 11th Arctic Council Ministerial meeting.

Recommendations

The Task Force recommends to SAOs that the Arctic Council:

- Work with the telecommunications industry to:
    - engage with indigenous peoples during the design and implementation phases of network technology infrastructure;
    - demonstrate that new technology can withstand Arctic climatic and environmental conditions; and
    - develop connectivity that supports maritime and aeronautical users and, in particular, search and rescue efforts.
- Support the AEC's engagement with the telecommunications industry and other experts to expand and accelerate network deployment across the Arctic;
- Engage with the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), as well as other external bodies, to raise awareness for the need for improved connectivity in these industries operating across the Arctic region;
- Support continued collaboration among the Arctic Council Working Groups to further the goal of improving connectivity for Arctic users; and,
- Facilitate the collection of statistics in order to measure connectivity, penetration and access across the Arctic region on an ongoing basis.

The Task Force also encourages that Arctic Council states:

- Provide regulatory clarity that can support increased investment to accelerate network deployment in the Arctic;
- Consider ways to accommodate emerging technologies that may not yet have relevant rules and regulations;
- Consider ways to incentivize investment by reducing regulatory burdens while still respecting environmental assessments and other public policy objectives; and,
- Develop regulatory policies that reward and recognize a mix of technologies and service

providers (technology neutrality). Considering there is no one size fits all approach, encourage national incentive schemes to be results-oriented and outcome-focused to improve innovation and allow for new technological possibilities in the Arctic.

Next Steps

As noted at the March 2019 SAO plenary meeting in Ruka, renewing the Task Force's mandate or establishing a new Expert Group on connectivity would not be a preferred way forward for the Arctic Council. SAOs and PPs agreed that the Task Force had successfully completed its mandate and that work on connectivity should remain high on the Council's agenda.

The incoming Chairmanship has decided to explore one of the Task Force's recommendations based on a proposal made by the United States. This option, to be considered by the Arctic Council, would seek the appointment of a senior level representative with a mandate to work closely with telecommunications network providers, investors and other relevant actors to identify connectivity projects and programs that could directly benefit users in the Arctic. This work would be carried out in close cooperation with the AEC, in line with the MoU signed between the Arctic Council and the AEC in 2019. If appropriate, an Arctic Council ad-hoc mechanism could be formed to support the work of the senior level representative and to provide information to the Arctic Council on its progress. Administrative support to the senior representative could be provided by the ACS and/or the AEC Secretariat and the roles for the two secretariats will be decided by the SAOs.

It must be underlined that carrying out this innovative approach will require the active support and participation of the Arctic States and the PPs.

4.3 Expert Group in support of implementation of the framework for action on black carbon and methane (EGBCM)

Mandate

Based on accumulating evidence on the contribution of black carbon and methane to the warming of the Arctic, the Arctic Council agreed in 2015 to adopt the Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions. The Framework is a non-legally binding agreement which lays out a common vision for Arctic States with enhanced, ambitious, national and collective action to accelerate the decline in overall black carbon emissions and to significantly reduce overall methane emissions. The Expert Group on Black Carbon and Methane (EGBCM) was established to implement the Framework.

As part of this Framework, Arctic States agreed to submit biennial national reports on emissions and actions reducing emissions and to periodically report on progress and provide recommendations on enhanced action. At the 2017 Arctic Council Ministerial meeting, a first edition of the Summary of Progress and Recommendations was adopted, including a collective aspirational goal to reduce black carbon emissions by 25-33 percent relative to 2013 levels by 2025 (*FD*: 24). Most Arctic countries still associate themselves with the goal.[5]

As emissions of black carbon and methane outside of the Arctic also contribute to both Arctic and global warming, Arctic Council Observers have been invited to join the Arctic States in efforts to reduce emissions of black carbon and methane and to submit similar reports on their progress.

[5] Canada, the Kingdom of Denmark, Finland, Iceland, Norway, Russia and Sweden have affirmed their support of the collective goal. The United States does not associate itself with the collective aspirational goal, citing significant uncertainties and missing information with respect to the aggregate emission trajectory. The U.S. notes that particulate matter regulations are projected to roughly halve US black carbon emissions below 2013 levels by 2025 (U.S. National Black Carbon and Methane Emissions, a Report to the Arctic Council, 2015).

4.3.1 Summary of achievements 2017-2019

The main deliverable to the Rovaniemi Ministerial meeting is the second Summary of Progress and Recommendations report from the EGBCM, which provides an overview of the progress by Arctic States and Observers in reducing emissions of black carbon and methane as well as recommendations for enhanced action. The summary of progress is based on national reports submitted in 2018, in some cases supplemented with information provided later. Data indicates that black carbon emissions have declined relative to 2013, which suggests actions to reduce emission have been effective.

Priority areas for the reduction of black carbon identified in the 2017 report were diesel-powered mobile sources, oil and gas production, and residential biomass combustion. For methane, priority areas include emissions from the oil and gas sector and solid waste disposal.

The EG concluded that the priority areas are still relevant in 2019. Some clarifying modifications have been made in existing recommendations; for instance, the priority area concerning diesel engines has been expanded to cover stationary diesels as these are prominent in remote communities in the Arctic.

Two priority areas have been added to the report; agriculture and animal husbandry and management of wildfires. Agriculture and animal husbandry contribute to emissions of both methane and black carbon. Recommended actions are to promote sustainable and efficient food systems, address methane emissions from food production (specifically, enteric fermentation), and reduce the practice of open burning of agricultural waste. Wildfires are a major source of black carbon. The recommended policy actions aim to reduce the occurrence of large, high-intensity wildfires through forest management and education campaigns, and to strengthen emergency response to wildfire events through resource sharing and prediction models.

Many of the actions to reduce emissions of black carbon and methane will take effect only gradually. Projections submitted by states suggest that significant future reductions will be achieved with current policies. Implementing the recommendations as appropriate according to national circumstances can reduce emissions and, as a result, lead to climate, health and air quality benefits. Further improving reporting by all states and Observer states of emissions and actions to curb emissions remains a priority.

4.3.2 Deliverable

Expert Group on Black Carbon and Methane, Summary of Progress and Recommendations 2019.

Work Plan 2019-2021

The Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions lays out the ongoing responsibilities of the EGBCM, and the work plan for 2019-2021 will broadly follow the 2-year cycle defined in that Framework.

Iceland will chair the EGBCM following the Icelandic Arctic Council Chairmanship.

Summary of work plans for 2019-2021 with tentative deliverables

One of the main inputs for the work are the biennial national reports on black carbon and methane which Arctic States have committed to submit. They will be asked to do so by late 2019/early 2020. Observers are also encouraged to submit biennial national reports by then.

The third edition of the Summary of Progress and Recommendations will be delivered to the 2021 Ministerial meeting.

Rationale and overall objectives

As stated in its Framework, 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 policy makers from Arctic States and from participating Arctic Council Observer States. This includes preparing, once

every two-years 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. The sharing of national reports and policies for actions to reduce emissions; the measuring progress are fundamental for this work.

Main activities

The activities of the EGBCM will be to report on progress in the priority areas identified in the 2017 & 2019 reports, namely:

- Mobile and stationary diesel-powered sources;
- Oil and gas sector;
- Residential combustion;
- Solid waste disposal;
- Methane emissions from agriculture and animal husbandry and burning of agricultural waste; and,
- Management of wildfires.

In addition, technical development will be undertaken with the aim of improving access to and reliability of emission data and projections.

The work will be organized around the priority areas with designated experts taking the lead in providing sections for the report. Priority area leaders will be identified at the autumn 2019 meeting of the EGBCM.

The EGBCM's work builds on and is complementary to AMAP's scientific assessments of the role and impacts of black carbon and methane. In addition, the EGBCM's work maintains links with ACAP's practical action to reduce emissions of SLCPs. Close communication will also be maintained with relevant work by PAME and the EPPR. The EGBCM will also follow the development of relevant activities in in other international fora.

Timeline and budget, including start date, meeting schedule and end date

The EGBCM operates through contributions in-kind from the Arctic States and Observer States. There is no dedicated budget for the EGBCM at the level of the Arctic Council.

A tentative meeting schedule is as follows:

October 2019: Meeting under new Icelandic chair: plans for the work on evaluating progress and improving projections, including discussion on how to best deliver the report, and streamline deadlines. Considering how to complement the work of the Arctic Council Working Groups; Considering relevant results of work in other fora such as the OECD and the EU as appropriate.

Late 2019/early 2020 Arctic States and Observers are requested to submit Biennial National reports on black carbon and methane to the Arctic Council Secretariat.

September 2020: First draft of the Summary of Progress and Recommendations 2021. Updating of emission data, documentation of policy action.

January 2021: Finalizing the Summary of Progress and Recommendations 2021.

Administration

The Chair of the EGBCM will be proposed by the Arctic Council Chair and confirmed by the SAO-meeting. Support for the work is provided by the ACS.

Levi, Finland
Photo: Arctic Council Secretariat / Linnea Nordström

5. Arctic Council Secretariat work plan and budget for 2020 and 2021

5.1 Introduction

This biennial work plan of the Arctic Council Secretariat (ACS) for the calendar years 2020 and 2021 is the fourth full biennial work plan for the ACS. The ACS was formally established on 21 January 2013 and started its operations 1 June 2013 in Tromsø, Norway. This biennial work plan covers the main part of the Icelandic Chairmanship of the Arctic Council, which extends from May 2019 to May 2021 and the beginning of the Chairmanship of the Russian Federation (May-December 2021).

This work plan builds in broad terms upon the ACS Terms of Reference (as approved by the Arctic Council Deputy Ministers in 2012 and revised by SAOs at the Anchorage SAO meeting in 2015) and the Arctic Council Communication Strategy as approved by the Senior Arctic Officials in October 2016 and revised in October 2018. ACS routines and practices are well established, and the work plan reflects to a large extent a continuation of these. The work plan also considers requests for support that have been discussed previously in the Arctic Council as well as requests from the incoming Chairmanships. These new tasks are subject to the availability of the necessary resources.

In addition to the individual issues and tasks listed in the WP, 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 and as needed, on any relevant issues having to do with the Council's ongoing work.

According to the ACS Terms of Reference (Article 8.2), the overall operation of the Secretariat is to be reviewed, unless otherwise decided by the SAOs, after six years. On 1 June 2019, it is six years since the ACS became operational. At the SAO executive meeting in Helsinki in June 2017, the SAOs decided that a review of the ACS functions should take place under the Icelandic Chairmanship. Depending on the findings and recommendations of the review, it may become necessary for the ACS to adjust its operations and/or priorities in 2020-2021.

5.2 Goals and objectives for 2020-2021

The ACS will provide secretariat support for the Arctic Council and, in particular, for the Chairmanships of Iceland and the Russian Federation, 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 (SAOC). Within the core functions of the ACS, the main goals and objectives for the period 2020-2021 are:

5.2.1 Support for the Arctic Council

The overarching goal of the ACS is to continue to offer efficient, reliable and relevant support to the Chairmanship of the Arctic Council, to the Arctic States, Permanent Participants, subsidiary bodies and Observers. For the period 2020-2021, the ACS has the responsibility to provide secretariat support to the Icelandic and Russian Chairmanships, including: administering SAO and Ministerial meetings as well as other Arctic Council events; managing the regular correspondence of the Chairmanship and its SAOC; reporting and sharing information about the Chairmanship and the Arctic Council's general activities; steering the continuous Observer review process; coordinating relationships with external bodies; implementing the ACS review recommendations produced in 2019; assisting the Chairmanship transition process from Iceland to Russia; providing translation of key Arctic Council documents; and accomplishing general tasks per Chairmanships.

5.2.2 Secretariat functions for ACAP and EPPR and support to other subsidiary bodies

The Arctic Council Secretariat continues to provide secretariat support to ACAP and EPPR, as well as the EGBCM, and TFs established by Ministers. Main tasks include planning of regular meetings, developing agendas in cooperation with the Chair of the subsidiary body, writing meeting reports, and ensuring the successful completion of approved tasks as outlined in the

WPs. As a focal point for these subsidiary bodies, the ACS will remain a reliable source of institutional memory for the work of ACAP, EPPR, EGBCM, Task Forces and other Arctic Council initiatives.

5.2.3 Communications

The overarching goal for the communications work at the ACS is to ensure the implementation of the Arctic Council Communications Strategy (http://hdl.handle.net/11374/2242) in close cooperation and coordination with Arctic Council subsidiary bodies. In the years 2020-2021 the ACS will; work to strengthen the Arctic Council brand and establish the Arctic Council, its representatives and its subsidiary bodies as trusted and primary sources for information on Arctic issues addressed by the Arctic Council and its subsidiary bodies; work to ensure good internal communications within the Arctic Council through facilitating continuous information-sharing. This builds the basis both for internal coordination and strong external communications.

5.2.4 Administrative functions

The overarching goal for the administrative functions at the Arctic Council Secretariat is to secure a stable, competent work force which is given the best possible work conditions within the limits of the budget. For the period 2020-2021 the ACS plans to:

- hire two new positions; one person to strengthen the support for ACAP/EPPR and one additional staff member for communications;
- develop an internal human resource management document; and,
- develop an emergency plan.

5.3 Supporting the Icelandic and Russian Chairmanships

The ACS has the responsibility to provide secretariat assistance to the Icelandic and Russian Chairmanships in multiple areas throughout the years 2020-2021, including:

5.3.1 Administering SAO and Ministerial meetings

The ACS will take part in the planning and preparation stages of SAO and Ministerial meetings by assisting the Chairmanship to draft, circulate, revise and publish agendas and meeting documents on the SharePoint platform. It will also provide and coordinate support for logistical and practical preparations including, inter alia, registration of participants for various meetings. The ACS will take minutes and prepare post-meeting reports for the Council's consideration and also ensure that all relevant documentation from the Chairmanship's activities is properly archived in SharePoint as well as in the Arctic Council Open Access Repository (OAR). The ACS will further work with the Chairmanships' communications teams on suitable material for press release from the meetings.

5.3.2 Assisting in other related meetings

The ACS will also provide support as requested, as appropriate, and as resources permit, during WGs, TFs, EGs and other meetings. This includes offering secretariat support for other meetings of the Arctic Council when instructed to do so by the Chairmanship, and when ACS resources allow. This could be any potential meetings on the political or administrative level.

5.3.3 Managing regular correspondence

The ACS will manage the Arctic Council Chair email account and assist the SAO Chair in daily correspondence. This includes: receiving letters, invitations and other correspondence to the Arctic Council and distribute them as appropriate; draft responses for the SAO Chair's consideration; coordinate with Arctic States, PPs, WGs,

TFs and others as appropriate. In addition, the ACS will circulate emails as appropriate on behalf of SAOs and/or PPs to relevant recipients via the ACS email account.

5.3.4 Reporting and information sharing

The ACS will coordinate, collect, and consolidate input to reports and other documents from SAOs, PPs, WGs, TFs, EGs, other Arctic Council subsidiary bodies, and accredited Observers. At the end of the Icelandic Chairmanship, it will coordinate and facilitate the process for compiling the SAO Report to Ministers and copy-edit the draft report.

In addition, the ACS will ensure the distribution of reports and other documents as needed to SAOs, PPs, WGS, TFs, EGs, other Arctic Council subsidiary bodies, and Observers. Maintain and update the database of points-of contact and distribution lists and make updated lists available also to the Arctic Council subsidiary bodies upon request.

5.3.5 Steering the Observer review process

The ACS will assist the Chairmanship in implementing and finalizing the review of Arctic Council Observers during the second year of the Icelandic Chairmanship. It will ensure an accessible open channel of communication between the Arctic Council and the Observers, facilitate access to information about Observer activities, and provide general support to Observers in accordance with the Observer manual, including entities applying for Observer status.

5.3.6 Coordinating relationships with external bodies

In cooperation with, and on behalf of the Chairmanship, the ACS will coordinate and manage relations with external bodies. This includes ensuring that any approved procedures/templates are followed-up on if and/or when developing or entering into new relationships is required, such as MoUs with external bodies.

5.3.7 Implementing ACS review recommendations

Following the 2019-2020 review of the ACS, the ACS will work with the Chairmanship and Council as a whole to implement any recommendations to improve the efficiency and effectiveness of its operations.

5.3.8 Assisting the Chairmanship transition process

During the lead-up to the Russian Chairmanship (2021-2023), work with Russian and Icelandic representatives to plan and prepare for a smooth transition and facilitate communication between the two Chairmanships. Maintain communication with and provide language support to the Russian Chairmanship team, including translation of documents as necessary and requested.

5.3.9 Providing translation of key documents

The ACS will translate the main documents for Arctic Council Ministerial and SAO meetings into Russian the language (e.g., agendas, meeting reports, key reports, report summaries, declarations, SAO Reports to Ministers, draft agreements, and frameworks negotiated under the auspices of the Arctic Council). Following established practice, provide simultaneous interpretation, as necessary, at SAO executive meetings, and, as resources allow, provide Russian language assistance to Arctic Council subsidiary bodies.

5.3.10 General tasks per Chairmanship

As requested by the Chairmanship or SAOs, the ACS will gather information about earlier Arctic Council work, decisions, or projects, and prepare background material for SAOs' consideration. In addition, it will undertake other tasks as requested by the Chairmanship or the SAOs, subject to the availability of necessary resources.

Overall, the ACS will support the Chairmanship in its working processes and keep track of formal deadlines of the Arctic Council as appropriate.

5.4 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 interest, as directed by the Chairmanship or by SAOs. Tasks associated with this element of the ACS's work may include the following:

- Facilitate regular communication/meetings between the Chairmanship, the WGs and the ACS to coordinate WPs, deliverables and communications work;
- Assist and facilitate the implementation of the Arctic Council's strategic work, as appropriate and if instructed to do so. Provide a regularly updated and comprehensive overview of Arctic Council activities via the "Amarok" Arctic Council project tracking tool, which is designed to help with coordination and tracking of the Arctic Council's work, as well as with public outreach;
- Report on specific aspects of the Arctic Council's work, and assist with monitoring cross-cutting initiatives, as directed by the Chairmanship or by SAOs; and,
- With assistance from the Arctic States, PPs, and subsidiary bodies, work to identify opportunities to schedule subsidiary body meetings back-to-back to avoid meeting overlaps and to facilitate participation.

5.5 Secretariat functions for ACAP, EPPR and support to other subsidiary bodies

5.5.1 Secretariat functions for ACAP and EPPR

The ACS will act as secretariat for the ACAP and EPPR Working Groups. The main goal for the Executive Secretary for ACAP/EPPR is to ensure continuity, avoid duplication, and make the work of EPPR and ACAP as effective as possible. Since 2014, the level of activity and ambition in these two groups has grown considerably, and it has been determined that it is necessary to expand the secretariat capacity for both groups. To that end, the ACS will seek to hire one additional full-time staff member to strengthen the support that the ACS can provide to the ACAP/EPPR Chairs. One option could be to hire a new person for the position of ACAP Executive Secretary. The existing position could then be transferred into a full-time position as EPPR Executive Secretary.

The work of the Executive Secretary will be carried out in close cooperation with the Chairs of ACAP and EPPR and will include the following tasks:

- Organize and attend ACAP and EPPR WG meetings and technical workshops;
- Attend and support the ACAP/EPPR Chairs at SAO and Ministerial meetings;
- Ensure proper and timely reporting from ACAP and EPPR Working Group meetings;
- In close cooperation with the ACAP and EPPR Chairs, ensure that the approved work plans are implemented;
- Maintain and develop, with the help of ACS colleagues, the EPPR and ACAP pages on the Arctic Council website and the EPPR and ACAP social media accounts;
- Work to ensure good internal communications between the ACAP/EPPR Secretariat and ACAP/EPPR Chairs;

- Facilitate information-sharing and timely responses to questions from Heads of Delegation (or other delegates) to ACAP and EPPR;
- Work to ensure that relevant ACAP and EPPR documents are available in the Arctic Council's Open Access Repository (OAR) and in its internal archive;
- In close consultation with the ACAP and EPPR Chairs, relate to external stakeholders as needed or as requested by ACAP/EPPR; and,
- Work closely with the Arctic Council WGs and other subsidiary bodies to ensure cross-cutting and complementary activities within the themes outlined in the Council's Communications Strategy and where appropriate, within different global trends and processes (UN SDGs, Stockholm, Minamata, Basel Conventions).

5.5.2 Support to other subsidiary bodies

The ACS will provide administrative and secretariat support to the Arctic Council TFS, select EGs and other subsidiary bodies or initiatives, 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 5.1. 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; and,
- Provide simultaneous and consecutive interpretation at meetings.

5.6 Communications activities

Under the direction of and in close cooperation with the Chairmanship, the ACS will coordinate overall internal and external communications under the Arctic Council brand. In order to meet the increasing demand for more and better communication, the ACS will, during this WP period seek to expand the communications team with one additional staff member. Building upon the approved Arctic Council Communications and Outreach Guidelines (https://oaarchive.arctic-council.org/handle/11374/1778, approved in 2016 in Fairbanks and its Communications Strategy (http://hdl.handle.net/11374/2242), the ACS will carry out the following tasks:

5.6.1 Internal communications and coordination

- Work to ensure good internal communications within the Arctic Council through facilitating continuous information-sharing and coordination between the Chairmanship, SAOs, PPs, WGs and other stakeholders as necessary, involving the Arctic Council's Communications and Outreach Group whenever relevant;
- Where resources are available aim at supporting Arctic Council subsidiary bodies in outreach activities, providing layout, graphic design, editing, and copy-editing to ensure a unified style across the Arctic Council;
- Work to coordinate and reinforce the branding of Arctic Council products and, if mandated to do so, aim at developing one visual identity across the Arctic Council family, including Arctic Council subsidiary bodies;
- Compile periodic reviews of media mentions of the Arctic Council and its activities, including Russian language articles, as well as of statistics from the Arctic Council website and social media channels. Distribute re-

views to the Communication and Outreach group and other interested Arctic Council bodies and stakeholders;

- Continue to expand and refine the ACS style guide (based on the Chicago Manual of Style 16th edition) as needed, and work towards a consistent style in all Arctic Council products;
- In close cooperation with the Chairmanship, explore ways to expand the resources available for communications work conducted by the ACS; and,
- In close cooperation with the Chairmanship, manage the biennial review of the Arctic Council Communications Strategy, which is scheduled to take place at the fall SAO meeting in 2020.

5.6.2 Website management

- Regularly update the technical framework and structure of ACS-hosted websites (Arctic Council, ACAP, EPPR, IPS, SDWG) in order to ensure maximum user-friendliness, compatibility, and stability. Continue to explore options to improve server and website security. Unify the technical architecture of the websites, in order to simplify administration, whilst keeping it secure;
- Upgrade the Arctic Council main website to make information readily available for both Arctic Council affiliated and general users. Aim at carrying out a user-group testing in order to improve user-friendliness;
- Continue to assist, to the extent resources allow, Arctic Council subsidiary bodies with website design, hosting, and management. Aim at a harmonized design in line with the Arctic Council visual identity and the updated Arctic Council main website style;
- Monitor website statistics and aim at using data to improve user-friendliness if needed. Use social media channel to increase traffic to main website; and,
- Continue to improve the multi-lingual capacity of ACS-hosted websites. Translate website content into Russian on the main Arctic Council website and improve display of Russian language content.

5.6.3 Information materials and content development

- Work to establish the Arctic Council website as one main entry-point for information on Arctic issues addressed by the Arctic Council and its subsidiary bodies. Continue to expand the quantity and diversity of easily accessible information available on the Arctic Council website by working closely with the Chairmanship, SAOs, PPs, WGs, the IPS and potentially other stakeholders. Align content with the Arctic Council Communications strategy (http://hdl.handle.net/11374/2242) and take external information requests into account;
- Expand the production, purchase, and use of multimedia content, such as photos, videos, and infographics, which can be used on multiple platforms such as the website and social media;
- Continue populating the photo archive and establishing a video archive to offer visual material for internal and external use;
- Actively advertise the materials available through the Open Access Repository to the public/internal/external audiences, and explore possible connections with other repositories and archiving initiatives;
- As appropriate, and as resources permit, translate Arctic Council communications materials, or other documents or materials into Russian language; and,
- Continue to develop and keep up-to-date the Russian archive in SharePoint and the guidelines for using the Open Access Repository. Develop a Russian language digital resources booklet and update the English-Russian glossary of acronyms used in the work of the Arctic Council.

5.6.4 Social media

- Continue to manage the Arctic Council Facebook and Twitter accounts. Work to develop diverse content for these channels. Wherever possible, coordinate with other Arctic Council accounts, and those of partner organizations, to increase distribution of information about the Arctic Council and its work; and,
- Consider expansion to new web channels, which will enhance the Arctic Council's outreach opportunities to the targeted audiences outlined in the Arctic Council's Communication strategy.

5.6.5 Engaging with media and external partners

- In close cooperation with the Chairmanship, continue to serve as needed as a first point-of-contact for inquiries from media and others. Facilitate timely communication between media representatives and Arctic Council representatives who can respond to questions. Aim at establishing a range of Arctic Council representatives as media personalities;
- Develop materials to help media representatives report timely and accurately on the Arctic Council and its work. This should include a variety of materials, including photographs, video clips, interviews, graphics, and key messages;
- Aim at regularly informing media, stakeholders and the interested public about ongoing activities of the Arctic Council and its subsidiary bodies, e.g. through a periodic newsletter;
- Seek out for communications and outreach opportunities, e.g. before an event, as a report is released, 25th Arctic Council anniversary etc. in cooperation with Arctic Council subsidiary bodies and stakeholders and develop joint communications materials; and,
- Seek out suitable external cooperation partners to engage in joint outreach activities on Arctic issues, where interests and focus areas align. Possible cooperation partners could be universities, international organizations, such as WMO, IMO, etc.

5.6.6 Representations of the Arctic Council

- Continue to welcome guests (e.g. state delegations, students, academics, journalists, or others) to the ACS offices in Tromsø and provide basic briefings on the current priorities of the Arctic Council, its structure and function, its history, and the work of the ACS in particular;
- Attend selected important non-Arctic Council conferences and events as resources permit, and in coordination with the Chairmanship. Use these events to increase awareness of Arctic issues and the role of the Arctic Council by hosting side events, placing Arctic Council representatives as panel and keynote speakers, distributing information materials and making person-to-person connections with individuals of the target groups identified in the Arctic Council's Communication Strategy; and,
- Create products (brochures, pins, pens, bags, etc.) appropriate for distribution to participants and the public at meetings, conferences and other events, as well as VIP gifts for selected official purposes.

5.7 Administration

The overarching goal for the administrative functions at the ACS is to secure a stable, competent work force that is given the best possible work conditions within the limits of its budget. The ACS will work closely with key suppliers and institutions in order to further develop and strengthen its capacity.

5.7.1 Human resources

As of March 2019, the ACS has 14 staff members (including two IPS staff members) and two secondments, one from the Kingdom of Denmark and one from the Russian Federation.

Since the first secondment in 2014, secondments have proven to be a great asset for the ACS. With no new secondments on the horizon, the ACS has to plan for tasks currently being undertaken by secondments to be done by other staff members.

Overall, the ACS is approaching a period with more uncertainty when it comes to staffing. Some staff are now well into their second and final term at the ACS, and it is unlikely that staff in this category will complete their terms since they will need to secure new employment before their present contracts expire. Two staff members have already taken the consequence of this and moved on to other employment. New staff with less AC experience is onboarding and at the same time some key contracts expire. The contracts of the director and the office manager both expire in 2021. It will be important for the ACS to retain contracted staff for as long as possible, and it will be important to have a plan for recruitment, onboarding and transfer of knowledge in due time.

During this WP period, the ACS is suggesting hiring two new positions at the Secretariat. Currently the ACAP and EPPR WGs are being served by only one Executive Secretary. Based on increasing workloads and our experience so far, we have reached the conclusion that this task is too much for one single individual. The ACS is proposing to hire a new person as the Executive Secretary for ACAP starting early 2020.

In line with the Arctic Council Communications Strategy and the increased need for communication and outreach, the ACS requires strengthened capacity in this field and is planning to hire a second full time person for this purpose.

The ACS has operational documents such as the Staff rules, the Terms of Reference and the Financial rules. The ACS plans to develop a comprehensive Human Resource Management document for internal management. Such a document would serve as a guiding document when it comes to recruitment, onboarding, offboarding and describe in more detail what a staff member can expect when working for the ACS.

The ACS is also planning to develop an internal emergency plan outlining some potential scenarios, emergency roles and procedures.

Based on appraisal conversations and the overall need of the secretariat, professional development and training will be offered and carried out within the framework of the approved budget.

5.7.2 Information technology, security and archives

The ACS will continue to strengthen and develop IT services and capacity in order to provide the best possible service for the Arctic Council. User friendly applications and systems will be balanced with necessary security measures.

The secretariat will also continue to improve and encourage online collaboration by offering secure platforms for password protected meeting documents and dedicated work areas for Arctic Council initiatives and subsidiary bodies as necessary.

The ACS will maintain and further develop Arctic Council archives and routines for archiving and ensure that documents are stored in a proper manner. Any updated archiving procedures will be implemented. Continue to upload new and historical content to the OAR and work with the hosting company to ensure timely technical updates. Work to maintain the OAR and to con-

tinue publishing SAO meeting documents, and SAOX meeting documents after eight years, as required by the ACS archiving system.

In the period of this WP, the ACS will develop an internal advisory on IT security measures.

5.7.3 Budget for 2020-2021

The ACS has prepared a draft budget for 2020 and 2021 (5.10.1 and 5.10.2) associated with the WP.

5.8 Biennial work plan, budgets, and reporting

The ACS will:

- Prepare a WP for the period 2022-2023 for submission to SAOs prior to the 12th Ministerial meeting, expected to take place in Iceland in 2021;
- Prepare a budget for the period 2022-2023 for submission to SAOs and consideration by Ministers at the 12th Ministerial meeting, expected to take place in Iceland in 2021; and,
- Report on ACS operations and activities at each meeting of SAOs.

5.9 IPS Work Plan 2020-2021

5.9.1 Introduction

The Arctic Council Indigenous Peoples' Secretariat (IPS) supports the active participation and full consultation of Permanent Participants (PPs) in the work of the Arctic Council. The Terms of Reference outline IPS's core functions, including:

- Facilitate the participation of indigenous peoples' organizations in the work of the Arctic Council, including providing secretariat support functions to the PPs, assisting Permanent Participants to prepare and submit proposals relevant to the work of the Arctic Council, and facilitating the presentation of the perspectives of indigenous peoples in Arctic Council meetings;
- Enhance the capacity of the PPs to pursue the objectives of the Arctic Council, best make contributions to the Council's work, participate and intervene in the Arctic Council, and further their activities in relation to participation and full consultation within the Arctic Council;
- Facilitate dialogue and communications among the PPs and among PPs and other Arctic Council and related bodies, and facilitate the translation of communications between the PPs as far as possible;
- Contribute to raising public awareness of Arctic Council issues through a regularly updated web site and other publications;
- Support the PPs in carrying out actions to maintain and promote the sustainable development of indigenous peoples' cultures and environmental protection in the Arctic; and,
- Gather and disseminate information on and provide and list sources of different forms of knowledge.

The IPS work plan (WP) for 2020 and 2021 was developed based on the IPS Terms of Reference and discussions with the IPS Board. Each section

in the WP corresponds to IPS's functions and lists specific actions IPS may take to fulfil its functions in 2020 and 2021. Additionally, section "1.8 Administrative Functions" describes IPS's work concerning the IPS Board, hiring, and strategic planning. Since IPS's capacity varies throughout the year, some work items may only be performed as time and resources permit. Work items that do not include a disclaimer will be prioritized.

5.9.2 Facilitating Permanent Participants' work in the Arctic Council

Logistical support

- Assist the PPs in registering for Arctic Council and related international events, arranging their travel logistics, applying for visas, and seeking travel support when requested;
- Provide technical assistance as required; and,
- Attend the Ministerial meeting, SAO meetings, SDWG meetings, other Arctic Council WGs and EG meetings, and related international meetings to facilitate the PPs' participation, when time and resources permit.

Institutional support

- Act as a "corporate memory" for the Arctic Council and its PPs;
- Be a common secretariat unit for all six Permanent Participants that provides support and assistance in carrying out their work at the Arctic Council, including coordinating work among the Permanent Participants;
- Carry out research and analysis of current and future issues as required by the PPs;
- Assist PPs in drafting joint statements, declarations, recommendations and other documents on indigenous peoples' issues as requested;
- Maintain and further develop relevant IPS archives, ensuring that important documentation is kept in a safe and appropriate manner; and,
- Regularly update a record of PPs participation at Arctic Council meetings.

Information sharing

- Distribute relevant information about Arctic Council and related meetings to the PPs;
- Produce IPS newsletters on indigenous peoples' issues in the Arctic Council or collaborate with the Arctic Council Secretariat Communication Officer to feature indigenous peoples' issues in the Arctic Council newsletter, as time permits; and,
- Provide PPs with an updated meeting calendar on relevant Arctic activities.

5.9.3 Capacity-building activities

Internships in 2020 and 2021

- Host an internship for indigenous youth in 2020 and 2021 in partnership with the Labrador Institute of Memorial University of Newfoundland;
- Offer internships to Arctic indigenous youth where appropriate and when resources permit; and,
- Seek sustainable funding to strengthen the internship program and continue to explore possibilities for PPs´ secondment to IPS.

Training and education

- Facilitate and assist in organizing trainings, workshops and course seminars on themes of importance for the PPs and IPS as deemed necessary; and,
- Coordinate with PPs to plan an IPS tour of Arctic indigenous communities in North America and other regions, and to host a course on the role of PPs in the Arctic Council if resources permit.

Fundraising

- Continue to support mechanisms that fund the work of PPs;
- Continue to work on a long-term fundraising strategy for IPS; and,
- Continue to seek travel support, project funding and in-kind support for PPS and IPS to attend Arctic Council and other international programs related pertaining to Arctic-related environmental protection, sustainable development, and indigenous affairs.

When applicable, seek travel support funding for PPs and IPS to attend the trainings, workshops and course seminars organized by IPS in cooperation with PPs.

5.9.4 Communications among the Permanent Participants and Arctic Council bodies

Russian language services

- Provide communication, translation assistance, and interpretation between the PPs and their Russian chapters;
- Arrange interpretation and translation into Russian language or other languages as required and resources permit; and,
- Translate IPS Board documents, PPs caucuses documents, and – in close coordination with the ACS Russian language advisor – requested Arctic Council WGs, SAO and Ministerial documents into Russian as time and resources permit; and,
- Translate IPS newsletters into Russian language, where applicable.

Cooperation and coordination among Permanent Participants

- Organize and facilitate indigenous caucuses and follow-up meetings to consolidate PPs' common strategies before SAO and other meetings, or as requested;
- Organize and facilitate informal consultations between PPs, when appropriate;
- When an Arctic Indigenous Leaders' Summit takes place, assist the PPs in planning and organizing the event; and,
- Strengthen collaboration and networks across Arctic indigenous peoples through information exchange and joint events coordination.

Cooperation and coordination at the expert level

- Collaborate with the Arctic Council WGs' secretariats on ways and means to ensure Permanent Participants' participation in the projects and activities of the WG, TFs and EGs;
- Attend WG meetings to assist PPs' contributions as resources permit;
- Explore means to develop a mechanism for information exchange between PPs about Arctic Council expert level work. The mechanism will be a resource for PPs' use and may include 1) a map visualization of the PPs' Heads of Delegation (HoD) in each WG, their contacts, and projects where each PP participates and/or 2) an expert database/talent bank of indigenous and scientific experts working within the Arctic Council WGs and TFs, as resources permit; and,
- Assist PPs in reporting on or developing applications for Arctic Council projects when requested and resources permit.

Cooperation and coordination with Arctic Council bodies

- Assist in planning and communication between PPs and the Russian Federation leading up to the Russian Chairmanship of the Arctic Council;
- Arrange and facilitate meetings and joint events between the PPs, Arctic Council Observers, the AEC and other related bodies as requested; and,

- Facilitate cultural exchanges between the PPs and Arctic States within the PPs' home territories, where resources permit.

5.9.5 Public awareness of indigenous peoples' issues in the Arctic Council

Communication and outreach

- Contribute to raising public awareness of Arctic indigenous peoples' issues and the work of PPs in the Arctic Council by maintaining and developing a regularly updated website (www.arcticpeoples.org) and the IPS-branded social media accounts;
- Organize a photo exhibition in Tromsø or other Arctic regions, or a photo/video contest using Instagram, Facebook and the website to highlight indigenous communities and life in the Arctic;
- Develop guidelines for best practices in IPS communications;
- Update the online story map website developed for the Arctic Council 20th anniversary, as resources permit; and,
- Facilitate information-sharing and timely responses to questions about PPs and IPS.

Representation in international fora

- In cooperation with the Chair of the IPS Board, assist the PPs in steering committees and other management processes such as the Arctic Science Summit Week/ICARP, University of the Arctic, IASSA, IASC, etc.; and,
- Attend selected conferences and events as time, resources and budget permit.

5.9.6 Support the Permanent Participants in maintaining and promoting Arctic-related sustainable development and environmental protection

The Indigenous Peoples Contaminant Action Program (IPCAP)

The mandate of the Indigenous Peoples Contaminant Action Program (IPCAP), an expert group under ACAP, is to work on projects related to reducing exposure and impact of contaminants in indigenous peoples' communities. AIA is currently chairing IPCAP. When time and resources permit, IPS will:

- Provide secretariat support to the Chair of IPCAP;
- Be instrumental in developing project proposals under IPCAP, including identifying travel funds and project funds;
- Encourage the involvement of more PPs, including assisting in communication and outreach with PPs on IPCAP; and,
- Assist the IPCAP Chair with arranging an international conference exploring the impact of contaminant exposure on indigenous communities in the Arctic Interaction.

Support Permanent Participants' affairs and events

- Assist PPs in organizing and facilitating their summits, congresses, and other major events when requested and when resources allow;
- Support PPs' involvement in other international fora (e.g. Parliamentarians of the Arctic, Agenda 2030, UN Local Communities and Indigenous Peoples' Platform, etc.) as requested; and,
- Support PP' programs and activities as they pertain to Arctic- related sustainable development, environmental protection and collaboration with other indigenous peoples, when requested.

5.9.7 Gather and disseminate information on different forms of knowledge

- Support PPs in organizing and facilitating the use of indigenous peoples' perspectives, indigenous knowledge and concerns in the work of the Arctic Council and other relevant international bodies when the opportunity arises;
- Develop and maintain a collection of the Arctic Council's and PPs' reports, studies and resources related to indigenous knowledge in the appropriate venue (e.g. IPS's SharePoint or website);
- Utilize IPS-branded social media accounts to disseminate facts and information on indigenous languages and knowledge; and,
- Support the actions of PPs to promote their indigenous languages, including supporting online learning programs, as requested.

5.9.8 Administrative functions

Summary of functions related to the IPS Board

IPS is governed by a board of nine members including one representative from each of the six Permanent Participants, plus one representative from the current chair of the Arctic Council, one representative from the host country of IPS, and one representative from the future Arctic Council chairmanship. The director of the Arctic Council Secretariat is an ex-officio member of the IPS Board.

The Terms of Reference and IPS Procedural Guidelines specify all tasks related to the IPS Board. To summarize, in 2020-2021 IPS will:

- Work closely with the Saami Council during their chairmanship of the IPS Board (2019-2021). Leading up to the next IPS Board chairmanship (2021-2023), collaborate with Inuit Circumpolar Council (who may become the next Chair in accordance with IPS Procedural Guidelines) to prepare their chairmanship;
- Arrange board meetings at least once per year in person and at other times by teleconference or in person, as necessary;
- Coordinate the preparation of reports, recommendations, and other documents for review or decision by the IPS Chair or IPS Board;
- Record minutes and decisions at the board meetings and disseminate them to the IPS Board within 30 days;
- Undertake tasks as requested by the IPS Chair or the IPS Board, subject to the availability of the necessary resources; and,
- Coordinate regular reporting and accounting to the board on WPs, budget and expenditure matters, funding matters, and IPS activities generally.

Staff recruitment, assessment, development and welfare

- Respond to the possible need to recruit a new IPS Technical Advisor and IPS Executive Secretary as their contracts expire in July 2020 and September 2021 respectively. If a mutual agreement between parties can be reached, consideration to extend contracts can be negotiated, reducing this element of IPS´s work;
- Conduct recruitment processes as needed in 2020 and 2021: develop work description and announcement, review applications, conduct interviews, check references, negotiate contracts and arrange relocation of new employee to Tromsø; and,
- Perform annual appraisal conversations with staff members and determine from the results of the appraisal conversations possible professional development opportunities that would benefit the employee and IPS in the performance of his or her duties.

Biennial work plan, budget and reporting

- Prepare a biennial WP and budget for 2022 and 2023; and,
- Report on IPS's necessary projects and annual reports.

IPS strategic priorities

- Facilitate meetings and communication between PPs, IPS and the IPS Board in efforts to identify strategic priorities and develop a long-term strategic plan for the work of IPS.

Photo: Arctic Council Secretariat / Linnea Nordström

5.10 Arctic Council Secretariat proposed biennial budget for 2020-2021

In accordance with the Arctic Council Secretariat´s (ACS) Terms of Reference Art. 7.1, the Arctic Council Secretariat (ACS) has prepared budgets for 2020 and 2021. The proposed budgets are in line with the ACS work plan (WP) for 2020 and 2021.

The largest expense category in the ACS budget is staff cost. For the last three chairmanships, the ACS has benefitted greatly from one to two secondments in any given budget period. Even if there may be one secondment from August 2019, the ACS should not have to rely on temporary secondments for core tasks. In order to maintain our working capacity and as elaborated in the WP, the ACS is proposing to establish two new positions at the ACS starting early 2020. One position will be allocated for ACAP/EPPR and one position will be dedicated to communications. With an ever-increasing work load and based on our experience so far, it is not sustainable for one Executive Secretary to serve two of the AC´s six WGs alone. The additional position within communications is an attempt to respond to the expressed demand for increased communications efforts.

It is a challenge to budget for years to come when there are many unknowns. In 2020, some staff members will be well into their second and final term at the ACS. However, we do not know exactly when these staff members will need to be replaced. Second, we do not know where new staff members will be recruited from, which may have a significant impact on recruitment and relocation costs.

Travel costs are a substantial part of the budget. We expect to assist with planning and execution of relevant AC meetings as we have done in the past. However, we do not know the exact number of meetings, the location of all meetings, nor do we know future chairmanships´ need for support.

During the year 2019, the overall operations of the ACS will be reviewed according to the Terms of Reference article 8.2. Depending on the conclusions of the review and if need be, the ACS proposes that the Ministers, when approving the budget at the Rovaniemi Ministerial, mandate the SAOs to revisit the budgets for 2020 and 2021.

According to the Financial rules article 5.3, all contributions to the budget shall be made in USD. This is challenging for the ACS since the budget is prepared using NOK and the expenditures paid in NOK. When the budgets for 2018 and 2019 were discussed in Juneau in 2017, it was questioned why the ACS had chosen the 10-year average exchange rate which deviated some 30% from the actual exchange rate at the time. The considerable difference between the set exchange rate in the budgets and the development of the exchange rates has repeatedly led to a substantial “surplus” (deferred income) when contributions have been received. Looking at the development over the past years, the ACS has decided to go for a five-year average exchange rate for 2020 and 2021. This rate (1 USD/7,8343 NOK) is slightly more conservative than the average predictions of major financial institutions in Norway for the coming two years.

If the exchange rates in 2020 and 2021 deviate substantially from the chosen five-year average, the ACS will ask the SAOs to consider revisiting the exchange rate prior to sending out the calls for annual state contributions.

According to the Terms of Reference article 7.2, the Host Country contribution shall be 42,5% of the administrative budget and at no time exceed USD 739 130 unless otherwise agreed to by the Arctic States. The balance of the administrative budget is shared equally by all Arctic states and shall at no time exceed USD 1 million unless otherwise agreed to by the Arctic states.

The budget for 2020 is NOK 13,092,417/USD 1,671,165 and the forecast budget for 2021 is 13,755,883/USD 1,755,853. The budgets for 2020 and 2021 are well within the boundaries set forth in the Terms of Reference.

5.10.1 Arctic Council Secretariat Budget for 2020

EXPENSES		NOK		USD	
STAFF					
	Salaries	Kr	7 495 527,00	$	956 758,00
	Employer fee, pension and insurance	Kr	718 792,00	$	91 749,00
	Training and development	Kr	120 000,00	$	15 317,00
	Recruitment	Kr	100 000,00	$	12 764,00
	Establishment- and moving allowance	Kr	292 000,00	$	37 272,00
	Home travels	Kr	60 000,00	$	7 659,00
	Miscellaneous	Kr	200 000,00	$	25 529,00
	Staff	Kr	**8 986 319,00**	$	**1 147 048,00**
DEPRECIATION					
	Depreciation	Kr	140 000,00	$	17 870,00
	Depreciation	**Kr**	**140 000,00**	**$**	**17 870,00**
RENT					
	Rent	Kr	1 365 204,00	$	174 260,00
	Rent	**Kr**	**1 365 204,00**	**$**	**174 260,00**
PROFESSIONAL SERVICES					
	Auditor	Kr	55 000,00	$	7 020,00
	Accounting and payroll	Kr	320 000,00	$	40 847,00
	IT	Kr	299 028,00	$	38 169,00
	Communications	Kr	280 000,00	$	35 740,00
	Web and digital media	Kr	68 572,00	$	8 753,00
	Video conference systems	Kr	10 000,00		1 276,00
	Miscellaneous	Kr	50 000,00	$	6 382,00
	Professional services	**Kr**	**1 082 600,00**	**$**	**138 187,00**
OVERHEAD/OFFICE					
	Computers and hardware	Kr	40 000,00	$	5 106,00
	Mobile phones, purchase and use	Kr	150 000,00	$	19 147,00
	Subscriptions	Kr	39 600,00	$	5 055,00
	Supplies	Kr	67 694,00	$	8 641,00
	Meetings/representation	Kr	100 000,00	$	12 764,00
	Print	Kr	24 000,00	$	3 063,00
	Freight	Kr	5 000,00	$	638,00
	Fees	Kr	18 000,00	$	2 298,00

EXPENSES		NOK		USD	
Miscellaneous		Kr	70 000,00	$	8 935,00
	Overhead/office	**Kr**	**514 294,00**	**$**	**65 647,00**
TRAVEL					
Travel		Kr	1 017 000,00	$	129 812,00
	Travel	**Kr**	**1 017 000,00**	**$**	**129 812,00**
FINANCIAL INCOME AND EXPENSES					
Financial income		Kr	-14 000,00	$	-1 787,00
Financial expenses		Kr	1 000,00	$	128,00
	Net financial items	**Kr**	**-13 000,00**	**$**	**-1 659,00**
TOTAL COST 2020		**KR**	**13 092 417,00**	**$**	**1 671 165,00**

INCOME		NOK		USD	
CONTRIBUTIONS					
	Canada	Kr	868 841,00	$	110 902,00
	Kingdom of Denmark	Kr	868 841,00	$	110 902,00
	Finland	Kr	868 841,00	$	110 902,00
	Iceland	Kr	868 841,00	$	110 902,00
	Norway	Kr	868 841,00	$	110 902,00
	Russian Federation	Kr	868 841,00	$	110 902,00
	Sweden	Kr	868 841,00	$	110 902,00
	USA	Kr	868 841,00	$	110 902,00
	Total contributions	**Kr**	**6 950 727,00**	**$**	**887 217,00**
	Host Country Contribution	**Kr**	**5 137 494,00**	**$**	**655 769,00**
	Translation contribution	Kr	926 196,00	$	118 223,00
	Internal fee (estimate)	Kr	78 000,00	$	9 956,00
TOTAL INCOME		**KR**	**13 092 417,00**	**$**	**1 671 165,00**

Note: USD set exchange rate is 5 year average (7,8343)

5.10.2 Arctic Council Secretariat Budget for 2021

	EXPENSES	NOK		USD	
STAFF					
	Salaries	Kr	7 709 514,00	$	984 072,00
	Employer fee, pension and insurance	Kr	737 902,00	$	94 189,00
	Training and development	Kr	120 000,00	$	15 317,00
	Recruitment	Kr	100 000,00	$	12 764,00
	Establishment- and moving allowance	Kr	292 000,00	$	37 272,00
	Home travels	Kr	60 000,00	$	7 659,00
	Miscellaneous	Kr	200 000,00	$	25 529,00
	Staff	Kr	**9 219 416,00**	$	**1 176 802,00**
DEPRECIATION					
	Depreciation	Kr	145 000,00	$	18 508,00
	Depreciation	**Kr**	**145 000,00**	**$**	**18 508,00**
RENT					
	Rent	Kr	1 403 640,00	$	179 166,00
	Rent	**Kr**	**1 403 640,00**	**$**	**179 166,00**
PROFESSIONAL SERVICES					
	Auditor	Kr	56 650,00	$	7 231,00
	Accounting and payroll	Kr	329 600,00	$	42 071,00
	IT	Kr	307 970,00	$	39 310,00
	Communications	Kr	288 400,00	$	36 812,00
	Web and digital media	Kr	70 629,00	$	9 015,00
	Video conference systems	Kr	10 000,00	$	1 276,00
	Arctic Council 25 years	Kr	150 000,00	$	19 148,00
	Miscellaneous	Kr	50 000,00	$	6 382,00
	Professional services	**Kr**	**1 263 249,00**	**$**	**161 245,00**
OVERHEAD/OFFICE					
	Computers and hardware	Kr	45 000,00	$	5 744,00
	Mobile phones, purchase and use	Kr	155 000,00	$	19 785,00
	Subscriptions	Kr	40 578,00	$	5 180,00
	Supplies	Kr	80 000,00	$	10 212,00
	Meetings/representation	Kr	100 000,00	$	12 764,00
	Print	Kr	24 000,00	$	3 063,00

EXPENSES		NOK		USD	
	Freight	Kr	4 000,00	$	511,00
	Fees	Kr	18 500,00	$	2 361,00
	Miscellaneous	Kr	70 000,00	$	8 935,00
	Overhead/office	**Kr**	**537 078,00**	**$**	**68 555,00**
TRAVEL					
	Travel	Kr	1 201 000,00	$	153 300,00
	Travel	**Kr**	**1 201 000,00**	**$**	**153 300,00**
FINANCIAL INCOME AND EXPENSES					
	Financial income	Kr	-14 500,00	$	-1 851,00
	Financial expenses	Kr	1 000,00	$	128,00
	Net financial items	**Kr**	**-13 500,00**	**$**	**-1 723,00**
TOTAL COST 2020		**KR**	**13 755 883,00**	**$**	**1 755 853,00**

INCOME		NOK		USD	
CONTRIBUTIONS					
	Canada	Kr	914 363,00	$	116 713,00
	Kingdom of Denmark	Kr	914 363,00	$	116 713,00
	Finland	Kr	914 363,00	$	116 713,00
	Iceland	Kr	914 363,00	$	116 713,00
	Norway	Kr	914 363,00	$	116 713,00
	Russian Federation	Kr	914 363,00	$	116 713,00
	Sweden	Kr	914 363,00	$	116 713,00
	USA	Kr	914 363,00	$	116 713,00
	Total contributions	**Kr**	**7 314 905,00**	**$**	**933 702,00**
	Host Country Contribution	**Kr**	**5 406 669,00**	**$**	**690 128,00**
	Translation contribution	Kr	954 309,00	$	121 811,00
	Internal fee (estimate)	Kr	80 000,00	$	10 212,00
TOTAL INCOME		**KR**	**13 755 883,00**	**$**	**1 755 853,00**

Note: USD set exchange rate is 5 year average (7,8343)

5.10.3 Indigenous Peoples' Secretariat Draft Budget for 2020

	EXPENSES	NOK		USD	
STAFF					
	Salaries, pensions, employer fee	Kr	1 468 830,00	$	187 487,00
	Recruitment, allowance	Kr	212 059,00	$	27 068,00
	Training, development, insurance	Kr	34 000,00	$	4 340,00
	Miscellaneous	Kr	30 000,00	$	3 829,00
	Staff	Kr	**1 744 889,00**	$	**222 724,00**
DEPRECIATION					
	Depreciation	Kr	27 000,00	$	3 446,00
	Depreciation	**Kr**	**27 000,00**	**$**	**3 446,00**
RENT					
	Rent, Fram2	Kr	227 534,00	$	29 043,00
	Rent	**Kr**	**227 534,00**	**$**	**29 043,00**
PROFESSIONAL SERVICES					
	Auditor	Kr	9 000,00	$	1 149,00
	Accounting and payroll	Kr	72 500,00	$	9 254,00
	IT	Kr	63 240,00	$	8 072,00
	Communications	Kr	43 142,00	$	5 507,00
	Web and digital media	Kr	31 428,00	$	4 012,00
	Miscellaneous	Kr	20 000,00	$	2 553,00
	Professional services	**Kr**	**239 310,00**	**$**	**30 546,00**
OVERHEAD/OFFICE					
	Computers and hardware	Kr	7 000,00	$	894,00
	Mobile phones, purchase and use	Kr	38 000,00	$	4 850,00
	Supplies	Kr	11 430,00	$	1 459,00
	Printers	Kr	6 000,00	$	766,00
	Freight	Kr	2 500,00	$	319,00
	Miscellaneous	Kr	10 000,00	$	1 276,00
	Overhead/office	**Kr**	**74 930,00**	**$**	**9 564,00**
GEN.ADM.ISSUES					
	Meetings/representation	Kr	50 000,00	$	6 382,00

	EXPENSES	NOK		USD	
	Subscriptions	Kr	5 700,00	$	728,00
	Fees	Kr	3 000,00	$	383,00
	Gen.adm.issues	**Kr**	**58 700,00**	**$**	**7 493,00**
TRAVEL					
	Travel	Kr	220 000,00	$	28 082,00
	Travel	Kr	220 000,00	$	28 082,00
TOTAL COST 2020		**KR**	**2 592 363,00**	**$**	**330 899,00**

Exchange rate: 7,8343 (5-year average 2014-2018)

5.10.4 Indigenous Peoples' Secretariat Draft Budget for 2021

	EXPENSES	NOK		USD	
STAFF					
	Salaries, pensions, employer fee	Kr	1 512 895,00	$	193 112,00
	Recruitment, allowance	Kr	240 534,00	$	30 703,00
	Training, development, insurance	Kr	34 000,00	$	4 340,00
	Miscellaneous	Kr	30 000,00	$	3 829,00
	Staff	Kr	**1 817 429,00**	$	**231 984,00**
DEPRECIATION					
	Depreciation	Kr	25 800,00	$	3 293,00
	Depreciation	**Kr**	**25 800,00**	**$**	**3 293,00**
RENT					
	Rent, Fram2	Kr	233 940,00	$	29 861,00
	Rent	**Kr**	**233 940,00**	**$**	**29 861,00**
PROFESSIONAL SERVICES					
	Auditor	Kr	9 980,00	$	1 274,00
	Accounting and payroll	Kr	75 000,00	$	9 573,00
	IT	Kr	69 400,00	$	8 858,00
	Communications	Kr	45 299,00	$	5 782,00
	Web and digital media	Kr	32 999,00	$	4 212,00
	Miscellaneous	Kr	20 000,00	$	2 553,00
	Professional services	**Kr**	**252 679,00**	**$**	**32 253,00**
OVERHEAD/OFFICE					
	Computers and hardware	Kr	8 000,00	$	1 021,00
	Mobile phones, purchase and use	Kr	39 900,00	$	5 093,00
	Supplies	Kr	12 306,00	$	1 571,00
	Printers	Kr	6 000,00	$	766,00
	Freight	Kr	2 500,00	$	319,00
	Miscellaneous	Kr	10 000,00	$	1 276,00
	Overhead/office	**Kr**	**78 706,00**	**$**	**10 046,00**
GEN.ADM.ISSUES					
	Meetings/representation	Kr	52 500,00	$	6 701,00

	EXPENSES	NOK		USD	
	Subscriptions	Kr	5 814,00	$	742,00
	Fees	Kr	3 000,00	$	383,00
	Gen.adm.issues	**Kr**	**61 314,00**	**$**	**7 826,00**
TRAVEL					
	Travel	Kr	220 000,00	$	28 082,00
	Travel	Kr	220 000,00	$	28 082,00
TOTAL COST 2020		**KR**	**2 689 868,00**	**$**	**343 345,00**

Exchange rate: 7,8343 (5-year average 2014-2018)

6. Annexes

6.1 Arctic Council Communications Strategy (2018)

“Arctic Council Communications Strategy”, approved by the SAOs 9 October 2018.

https://oaarchive.arctic-council.org/bitstream/handle/11374/2242/Arctic-Council-Communications-Strategy_2018_ROVANIEMI.pdf?sequence=1&isAllowed=y

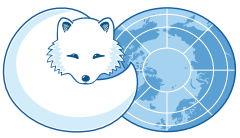
6.2 Memorandum of Understanding Arctic Council and Arctic Economic Council (2019)

Memorandum of Understanding

between

The Arctic Council and

The Arctic Economic Council



ARCTIC COUNCIL

Memorandum of Understanding between the Arctic Council and the Arctic Economic Council

The Arctic Council is the preeminent intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.

The Arctic Economic Council is an independent organization that facilitates Arctic business-to- business activities and responsible economic development through the sharing of best practices, technological solutions, standards, and other information.

The Arctic Council recognizes the crucial role of Permanent Participants in its work and promotes meaningful engagement of indigenous peoples, while the Arctic Economic Council works to improve the economies, communities, lives and culture of the Arctic indigenous peoples.

In the 2017 Fairbanks Declaration, the Ministers of the eight Arctic States encouraged strengthened cooperation between the Arctic Council and the Arctic Economic Council in order to enhance responsible economic development and to build partnerships for issues of common interest and capacity building of Arctic inhabitants.

The Arctic Council and the Arctic Economic Council hereby enter into this Memorandum of Understanding (MoU) to further their shared goal of well-being, safety and prosperity of Arctic inhabitants, and a vibrant regional economy in the changing conditions of the Arctic.

1. The purpose of this MoU is to provide a framework for cooperation and to facilitate collaboration between the Arctic Council and the Arctic Economic Council.

2. In particular, the Arctic Council and the Arctic Economic Council intend to collaborate on:

   2.1 sustainable economic development;

   2.2 blue economy and maritime safety;

   2.3 improving telecommunications connectivity;

   2.4 education and capacity building;

   2.5 utilization of best available information, including scientific research, best practices and, where relevant, traditional knowledge and local knowledge; and

   2.6 such other areas of cooperation as may be mutually acceptable.

3. The Arctic Council and the Arctic Economic Council will to the extent possible:

   3.1 regularly exchange information on initiatives and expertise relating to the areas

   3.2 of cooperation set forth in paragraph 2;

   3.3 where relevant, seek to participate in appropriate ways in each other's programs and projects relating to paragraph 2 areas; e.g., by identifying subject matter experts to participate in relevant meetings pursuant to paragraph 39 and 40 of the Arctic Council Rules of Procedure and pursuant to paragraph 1.1.iv of the Arctic Economic Council Rules of Procedure.

3.4 consider organizing joint activities, as appropriate.

4. The Secretariats of the Arctic Council and the Arctic Economic Council will serve as focal points to coordinate cooperation under this MoU.
5. Nothing in this MoU imposes financial obligations upon either the Arctic Council or the Arctic Economic Council.
6. This MoU may be modified by the mutual consent of the Arctic Council and the Arctic Economic Council.
7. This MoU may be discontinued by the Arctic Council and the Arctic Economic Council at any time with notice to the other party.
8. This MoU may remain in effect for 4 years if not discontinued sooner in accordance with paragraph 7. If the Arctic Council and the Arctic Economic Council so decide, they may extend the MoU for an additional period.

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Secretariat

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info@arcticeconomiccouncil.com

For the Arctic Economic Council

Date and signature

Date and signature

6.3 AMAROK

"AMAROK Arctic Council Tracker Report", submitted by the ACS to the SAOs in Achorage, USA, 21 - 22 October 2015.

https://arcticcouncil.sharepoint.com/sites/AC/COMMS/Lists/AMAROK/AllItems.aspx

6.4 Working Group Common Operating Guidelines

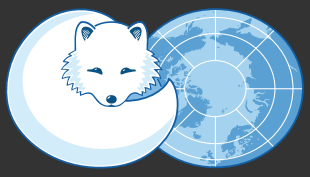
“Working Group Common Operating Guidelines”, approved intersessionally in December 2016. (SDWG Annex approved and added in April 2018.)

https://oaarchive.arctic-council.org/bitstream/handle/11374/1853/13184-v1_Procedural-Document_WG-Common-Operating-Guidelines.pdf?sequence=8&isAllowed=y

6.5 SDWG Suggestions on ARAF for Consideration by SAOs

“SDWG Suggestions on ARAF for Consideration by SAOs” (Part I only)

https://arcticcouncil.sharepoint.com/sites/AC/SAOX/Shared%20Documents/Forms/AllItems.aspx?web=1&FolderCTID=0x012000B70CF91163ADC240BDEB1519CF37805F&id=%2Fsites%2FAC%2FSAOX%2FShared%20Documents%2FMeetings%2FSAOXFI205_2019_RUKA%2FSAOXFI205_2019_RUKA_12_SDWG_ARAF-Suggestions%2Epdf&parent=%2Fsites%2FAC%2FSAOX%2FShared%20Documents%2FMeetings%2FSAOXFI205_2019_RUKA



ARCTIC COUNCIL

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