

Senior Arctic Officials' Report to Ministers

Fairbanks, Alaska, United States | 11 May 2017

Acronyms and abbreviations found in Arctic Council reports

AAC	Arctic Athabaskan Council
AACA	Adaptation Actions for a Changing Arctic (AMAP project)
ABA	Arctic Biodiversity Assessment (CAFF, 2013)
ACAP	Arctic Contaminants Action Program (1 of 6 Working Groups)
ACGF	Arctic Coast Guard Forum
ACIA	Arctic Climate Impact Assessment (AMAP, 2005)
ACS	Arctic Council Secretariat
AEC	Arctic Economic Council
AIA	Aleut International Association
AMAP	Arctic Monitoring and Assessment Programme (1 of 6 Working Groups)
AMSA	Arctic Marine Shipping Assessment (PAME, 2009)
AMSP	Arctic Marine Strategic Plan 2015-2025 (PAME, 2015)
AORF	Arctic Offshore Regulators' Forum
ARIAS	Arctic Invasive Species Strategy and Action Plan (CAFF initiative)
ARR	Arctic Resilience Report
ARAF	Arctic Resilience Action Framework
ASDI	Arctic Spatial Data Infrastructure
ASTD	Arctic Ship Traffic Data project (PAME-project/initiative)
BCM	Black Carbon and Methane
CAFF	Conservation of Arctic Flora and Fauna (1 of 6 Working Groups)
CBMP	Circumpolar Biodiversity Monitoring Program (CAFF initiative)
CCAC	Climate and Clean Air Coalition
EA	Ecosystem Approach
EG	Expert Group
EGBCM	Expert Group on Black Carbon and Methane
EPPR	Emergency Prevention, Preparedness and Response (1 of 6 Working Groups)
FP-OPP	Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic (2015)

GCI	Gwich'In Council International
ICC	Inuit Circumpolar Council
IMO	International Maritime Organization
ITU	International Telecommunications Union
IPCAP	Indigenous Peoples' Contaminants Action Program
IPCC	Intergovernmental Panel on Climate Change
IPS	Indigenous Peoples' Secretariat
MFA	Ministry of Foreign Affairs
MOSPA	Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013)
MPA	Marine Protected Area
NEFCO	Nordic Environment Finance Cooperation
O&G	Oil and gas
PAME	Protection of the Arctic Marine Environment (1 of 6 Working Groups)
PP	Permanent Participant
PSI	Project Support Instrument
RAIPON	Russian Association of Indigenous Peoples of the North
SAMBR	State of the Arctic Marine Biodiversity Report (CAFF project)
SAO	Senior Arctic Official
SAOC	SAO Chair (Chair of the Senior Arctic Officials)
SAON	Sustaining Arctic Observing Networks
SAR	Search and rescue
SC	Saami Council
SCTF	Task Force on Enhancing Scientific Cooperation in the Arctic
SDG	[UN] Sustainable Development Goals
SDWG	Sustainable Development Working Group (1 of 6 Working Groups)
SLCP/F	Short-Lived Climate Pollutants/Forcers
SWIPA	Snow, Water, Ice, and Permafrost in the Arctic (AMAP project)
TF	Task Force
TFAMC	Task Force on Arctic Marine Cooperation
TFOPP	Task Force on Arctic Marine Oil Pollution Prevention

TFTIA	Task Force on Telecommunications Infrastructure in the Arctic
TLK	Traditional and local knowledge
UNFCCC	UN Framework Convention on Climate Change
WG	Working Group
WMO	World Meteorological Organization
WP	Work plan

Table of contents

FAIRBANKS, ALASKA, UNITED STATES 11 MAY 2017	1
ACRONYMS AND ABBREVIATIONS FOUND IN ARCTIC COUNCIL REPORTS	2
TABLE OF CONTENTS	5
1. INTRODUCTION FROM THE CHAIR OF THE SENIOR ARCTIC OFFICIALS	7
2. ARCTIC COUNCIL WORKING GROUPS: REPORT ON ACHIEVEMENTS IN 2015-2017 AND WORK PLANS FOR 2017-2018	8
2.A. ARCTIC CONTAMINANTS ACTION PROGRAM (ACAP).....	8
2.A.i. <i>Achievements 2015-2017</i>	8
2.A.ii. <i>Work plan 2017-2019</i>	10
2.B. ARCTIC MONITORING AND ASSESSMENT PROGRAMME (AMAP).....	21
2.B.i. <i>Achievements 2015-2017</i>	21
2.B.ii. <i>Work plan 2017-2019</i>	24
2.C. CONSERVATION OF THE ARCTIC FLORA AND FAUNA (CAFF).....	30
2.C.i. <i>Achievements 2015-2017</i>	30
2.C.ii. <i>Work plan 2017-2019</i>	32
2.D. EMERGENCY PREVENTION, PREPAREDNESS AND RESPONSE (EPPR).....	38
2.D.i. <i>Achievements 2015-2017</i>	38
2.D.ii. <i>Work plan 2017-2019</i>	41
2.E. PROTECTION OF THE ARCTIC MARINE ENVIRONMENT (PAME).....	49
2.E.i. <i>Achievements 2015-2017</i>	49
2.E.ii. <i>Work plan 2017-2019</i>	52
2.F. SUSTAINABLE DEVELOPMENT WORKING GROUP (SDWG).....	63
2.F.i. <i>Achievements 2015-2017</i>	63
2.F.ii. <i>Work plan 2017-2019</i>	67
3. TASK FORCES AND OTHER SUBSIDIARY BODIES: REPORT ON ACHIEVEMENTS IN 2015-2017 AND WORK PLANS FOR 2017-2019	78
3.A. TASK FORCE ON ENHANCING SCIENTIFIC COOPERATION IN THE ARCTIC (SCTF).....	78
3.B. TASK FORCE ON ARCTIC MARINE COOPERATION (TFAMC).....	80
3.C. TASK FORCE ON TELECOMMUNICATIONS INFRASTRUCTURE IN THE ARCTIC (TFTIA).....	83
3.D. EXPERT GROUP IN SUPPORT OF IMPLEMENTATION OF THE FRAMEWORK FOR ACTION ON BLACK CARBON AND METHANE (EGBCM).....	86
4. ARCTIC RESILIENCE	88
5. STRENGTHENING THE ARCTIC COUNCIL	90
6. ARCTIC COUNCIL SECRETARIAT WORK PLAN AND BUDGET FOR 2018 AND 2019	93
1. INTRODUCTION.....	93
2. SECRETARIAT SUPPORT FOR THE ARCTIC COUNCIL.....	93
2a. <i>General support to the Chairmanship and the Arctic Council</i>	94
2b. <i>Administrative continuity</i>	95
2c. <i>Communications</i>	95
2d. <i>Russian language services</i>	95
3. OVERVIEW AND COORDINATION OF ARCTIC COUNCIL ACTIVITIES.....	96
4. SECRETARIAT FUNCTIONS FOR ACAP, EPPR AND SUPPORT TO OTHER SUBSIDIARY BODIES.....	97
4a. <i>Secretariat functions for ACAP and EPPR</i>	97

4b. Support to other subsidiary bodies.....	97
5. COMMUNICATIONS ACTIVITIES	98
5a. Website management.....	98
5b. Internal communications and coordination	98
5c. Social media and other content formats	99
5d. Working with external media.....	99
5e. Archiving and Open Access Repository (OAR)	100
5f. Representations of the Arctic Council	100
6. ADMINISTRATIVE FUNCTIONS.....	100
6a. Human resources, development and welfare.....	100
6b. Suppliers and agreements.....	101
6c. Rent and premises	101
6d. Budget for 2018-2019	102
7. BIENNIAL WORK PLAN, BUDGETS, AND REPORTING.....	102
8. IPS BIENNIAL WORK PLAN	102
8.1 Introduction.....	102
8.2 Secretariat support for the Arctic Council Permanent Participants	102
8.3 Communication and outreach.....	104
8.4 IPS priorities	104
8.5 Interaction with other international bodies	106
8.6 Administrative functions	107
8.7 Arctic Council Secretariat budget for 2018 and 2019.....	108
7. ANNEXES.....	112
7.A. ARCTIC COUNCIL COMMUNICATIONS STRATEGY.....	112
7.B. COMMUNICATIONS AND OUTREACH GUIDELINES	113
7.C. AMAROK: ARCTIC COUNCIL TRACKER.....	114
7.D. ADDENDUM TO THE OBSERVER MANUAL FOR SUBSIDIARY BODIES	115
7.E. GUIDELINES FOR RELATIONSHIPS WITH OUTSIDE BODIES.....	116

1. Introduction from the Chair of the Senior Arctic Officials

The United States assumed the Chairmanship of the Arctic Council from Canada at the Ministerial meeting held in Iqaluit on 24 April 2015. Canada's successful Chairmanship, organized around the theme of *Development for the People of the North*, provided an excellent basis on which to carry forward a wide range of work to advance the interests of the nations and peoples of the Arctic.

During the U.S. Chairmanship, the Arctic Council celebrated the 20th anniversary of its founding. Many people and organizations marked this milestone in one way or another – including the Foreign Ministers of the Arctic States, who issued a Joint Statement highlighting the 20 years of cooperation and achievement that the Arctic Council has made possible.

Indeed, the Council has evolved significantly since its inception. It has broadened its depth and its reach, and now stands as the premier forum in which to address pan-Arctic issues. The attention it now receives from its Member States and its Permanent Participants – not to mention its growing ranks of Observers – speaks to the high regard that the Council enjoys these days. Those who work in and with the Council have good reason to believe that it will continue to evolve and grow stronger in the coming years.

The United States Chairmanship theme, *One Arctic: Shared Opportunities, Challenges and Responsibilities*, emphasized the commitment to work together on matters facing the Arctic Region. The Arctic Council certainly did just that over the past two years, carrying out an extraordinary range of work and producing a remarkable number of products, as detailed in this Report to Ministers. The Council also took steps to make its many constituent parts into a more seamless whole, and found new ways to engage with its Observers.

Serving as Chair of the Senior Arctic Officials proved to be a terrific and rewarding experience, as it brought me into contact with so many fascinating people who care about this beautiful and magnificent part of our planet. I end my time as SAO Chair confident that the Arctic Council will be in good hands as I pass my gavel to my friend and colleague, Ambassador Aleksi Härkönen of Finland.

2. Arctic Council Working Groups: Report on achievements in 2015-2017 and work plans for 2017-2018

2.A. Arctic Contaminants Action Program (ACAP)

2.A.i. Achievements 2015-2017

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 to encourage national actions to reduce emissions and other 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, and regulations and other measures among Arctic States, is a key instrument. ACAP contributes to implementation by the Arctic States of international conventions and related protocols relevant to the Arctic. ACAP strives to support those pilot projects that contribute to reductions in emissions 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 HFCs at present covered partly under international conventions

Summary of achievements 2015-2017

In follow-up to paragraphs 16, 22-24, and 28-30 of the Iqaluit Declaration 2015, ACAP has, inter alia, undertaken the following work over the course of 2015-2017.

ACAP continued to work toward reducing environmental risk and environmental pollution in the Arctic region through its four Expert Groups (EGs), while also actively participating in the Arctic Council's Expert Group on Black Carbon and Methane (EGBCM), sharing information and best practices, and seeking new ways to support the objectives of the Arctic Council.

In October 2016, SAOs approved a new strategic plan for ACAP, which, along with biennial work plans (WPs), guides the work undertaken by the WG.

Below is a summary of selected achievements from each of the ACAP EGs for the period 2015-2017.

EG POPs and Mercury (EG POPs/HG)

ACAP continues to support a pilot project at the Vorkutinskiy Cement Plant (VCP) in Vorkuta, Komi Republic. The objective of this work is to demonstrate possibilities for implementing environmentally sound and economically effective projects in the Russian Federation within the framework of the Stockholm Convention on POPs. There are two reports from this work delivered to the Ministerial. The first report is from a sampling and analysis assignment, "Assessment of potential air emissions of dioxins/furans, particulate matter, and heavy metals from Vorkuta cement plant when using conventional and complementary fuels." The second report is from a feasibility study, "Demonstration project targeting dioxins and other pollutants at the Vorkuta cement plant - feasibility study for dioxin mitigation and other environmental pilot measures at the Vorkuta cement plant in the Komi Republic." Based on these studies, the possible launching of a pilot project at the VCP is currently being considered and subject to discussions with the Nordic Environment Finance Cooperation (NEFCO) and the owner. Additionally, four fact sheets (in English and Russian) have been developed on dioxins and furans to communicate lessons learned and best practices, and to raise awareness about the effects of dioxins on human health and the environment.

EG Hazardous Waste (EG HW)

Work on the environmentally sound destruction of HW is an ongoing priority for ACAP. Under the project *Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III*, an independent evaluation is being prepared that will form the basis for future work in this sector. The project *Demonstration of environmentally sound destruction of obsolete pesticides: Phase III* is testing the suitability of a Russian Super Critical Water Oxidation (SCWO) technology for environmentally sound destruction of HWs. The results are potentially promising steps toward destroying stockpiles of PCBs and obsolete pesticides in the Russian Federation.

EG SLCP

The projects under the *Reduction of black carbon from diesel sources in the Russian Arctic project* have come to a close with a number of significant achievements. A diesel black carbon emissions inventory for the Russian Federation has been completed, covering several sectors,

including on- and off-road transport and diesel generators. The findings have been published in respected peer-reviewed journals. The first project funded through the Project Support Instrument (PSI), the *Wind-diesel project at tundra collective in the Murmansk Region pilot project*, concluded with good results, and the final report has been submitted to Ministers. Old, inefficient diesel generators were replaced with a new, integrated wind-diesel generator which is bringing health, environmental, and economic benefits to the community. Fact sheets on the results and lessons learned have been developed for wide distribution in English, Russian, Saami and Inuktitut. The “Circumpolar best practices: Policy and financing options for black carbon emission reductions report” was finalized. In addition, the *Valday cluster upgrade for black carbon reduction in the Republic of Karelia, Russian Federation project* provides a range of energy alternatives to off-grid settlements, and has resulted in service improvement, emissions reductions, energy savings, and lessons learned for off-grid communities. The black carbon case studies platform, hosted on the ACAP webpage, is adding additional case studies to provide a “one-stop shop” for broad sharing of information on black carbon reduction activities in the Arctic.

Indigenous Peoples’ Contaminants Action Program (IPCAP)

The *Community-based black carbon and public health assessment project* seeks to assess local sources of black carbon emissions from a number of Alaskan, Saami, and Russian villages, characterizes risks to public health, and explores mitigation options. The project has initiated a desktop study, air monitoring, and proof-of-concept for the demonstration project. These results will provide useful information for the next stages of the project, including associated funding requirements.

“Expansion of the Circumpolar Local Environmental Observer Network (CLEO)” has progressed at a rapid pace. In completing Phase I, two new hubs were launched in Canada in 2016/2017, and have been noted by the Arctic Council Ministers. Phase II, expansion of the network to the Nordic region, is on track. Two workshops to further develop the network were held in June 2016 in Inari, Finland and in January 2017 in Kiruna, Sweden. These workshops resulted in a “Framework for the Circular Expansion of the Local Environmental Observer Network.”

2.A.ii. Work plan 2017-2019

Introduction

ACAP recognizes that cooperative actions contribute significantly to the overall international effort to reduce environmental damage on a global level. ACAP will therefore develop concrete project proposals within this mandate, taking into account the needs of Arctic

indigenous communities by incorporating Traditional and Local Knowledge (TLK) when appropriate. The projects identified in this work plan include those that have already received approval by ACAP and those that are currently under development for future ACAP review and consideration. Additional project proposals may be developed within the scope of this work plan during this time-period (2017-2019).

Further, to reduce pollutants in the Arctic environment, ACAP would like the SLCP EG to include projects on energy efficiency and air quality. In addition, ACAP has noted the increasing number of project proposals from the Russian Federation that address pollutants in a cross-cutting manner. For example, a recent project on reducing pollution released in water through use of best available technologies (BAT) / best environmental practices (BEP) techniques does not seem to fit clearly in one particular EG over another. ACAP would like to encourage continued multidisciplinary, multi-pollutant projects and is noting its intention to scope out such activities in 2017-2019.

Implementation of planned projects is contingent on securing financing for those projects. ACAP also advances approved projects for funding to the Arctic Council PSI and other funding sources when appropriate.

[List of individual projects and activities](#)

Activities on SLCPs

Project/activity: Black carbon case studies

Lead(s): Arctic States and PPs – U.S.

WG partners: EPPR

Other partners: case studies from Observers and other relevant bodies are welcome.

Rationale and overall objective: The U.S., in cooperation with the ACAP secretariat and the ACS, will continue to acquire new case studies and improve the design and user-friendliness of the platform, which is hosted on the ACAP webpage. The objective of the project is to provide a one-stop shop for public information on black carbon work being undertaken in the Arctic. The project leads are also working with EPPR to utilize “Arctic Environmental Response Management Application (ERMA)” to enhance the interactive map elements of the platform. This work is being carried out through the national agencies of the Arctic States, and is supported by in-kind contributions of staff time and resources by the ACS and WGs.

Main activities and interim milestones: Development of 40 case studies and a technical interface for displaying information.

Timeline/completion date: Ongoing

Project/activity: Mitigation of black carbon and methane emissions from associated petroleum gas (APG) flaring in the Arctic zone of the Russian Federation

Lead(s): Arctic States and PPs – The Russian Federation

WG partners: EGBCM

Other partners: Observers – NEFCO; Others - Vygon Consulting, Carbon Limits, Gazprom Neft, and BerezkaGas Company

Rationale and overall objective: The objectives of this project are to improve knowledge, and to contribute to reduced emissions of black carbon and methane from the O&G sector. The project aims to create a basis for concrete mitigation measures at the operations of two Russian Federation companies operating in the Yamalo-Nenets-Pechora Sea region and Khanty-Mansiysk, respectively, and improved policies through better knowledge of emission sources, abatement costs, and mitigation technologies.

Main activities and interim milestones: This project will include: an emissions inventory, mitigating emissions from flaring sites, reporting and mitigating emissions from the O&G sector, reviewing policies and regulations, building capacity, and information dissemination. The project is being developed with substantial contributions from the Russian Federation private sector, and it has also benefitted in its development from the Swedish EPA Trust Fund, managed by NEFCO. Results from the project may be linked to the work of the EGBCM and to the work of the Climate and Clean Air Coalition (CCAC).

Timeline/completion date: 2020

Project/activity: Mitigation of methane emissions – Syktyvkar Dyrnos landfill project, Russian Federation

Lead(s): Arctic States and PPs – Russian Federation

WG partners: None

Other partners: Observers – NEFCO; Others – Barents Council Working Group on Environment, Ministry of Environment of Komi Republic, Syktyvkar City Administration

Rationale and overall objective: The main objectives of the project are to enable (1) final closure of the landfill and installation of a methane gas collection and utilization system and (2) construction of a new sanitary plot and sorting facility at the existing landfill. The project will take important steps towards reducing adverse environmental and health impacts in the area. It will be compliant with relevant Russian Federation and European Union environmental standards, and will contribute towards the exclusion of the Barents Environmental Hot Spot Ko-6.

Main activities and interim milestones: The *Dyrnos landfill project* will include development of necessary documents and measures that enable (1) final closure of the existing landfill and installation of a methane gas collection and utilization system, (2) construction and commissioning of a new land-fill and infrastructure, and (3) establishment of a waste-sorting facility (including infrastructure, installation, and commissioning of waste sorting line).

Timeline/completion date: Ongoing

Project/activity: Phase-out of fluorinated greenhouse gases and ozone-depleting substances at fish and seafood processing enterprises of the Murmansk Oblast (Arctic zone of the Russian Federation)

Lead(s): Arctic States and PPs – Russian Federation

WG partners: None

Other partners: Observers – NEFCO; Others – International Centre for Scientific and Technical Information (ICSTI), United Nations Industrial Development Organization (UNIDO), Murmansk fishery and seafood enterprise(s)

Rationale and overall objective: The objectives of the project are to (1) establish feasibility studies – including inventories – to phase out HFCs-HCFC (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 to (2) develop project documentation and implement transfer and commissioning of ozone and climate-safe technologies including capacity-building measures. The project will support implementation of the Montreal Protocol and the UNFCCC Paris Agreement. Funding has not yet been secured for the project proposal, but may be forwarded to the PSI if approved by ACAP. This project is currently under review by the EG SCLP.

Main activities and interim milestones: The implementation is expected to take 36 months in two phases. Phase 1: Preparation for implementation of the project in the first six months. Phase 2: Main implementation, including commissioning and capacity-building activities over the remaining 30 months.

Timeline/completion date: 2020

Project/activity: Pilot project for reducing CO₂ and black carbon emissions on the rivers of the Arctic zone of the Russian Federation

Lead(s): Arctic States and PPs – Russian Federation

WG partners: None

Other partners: Observers – NEFCO; Others – OOO “VOLGOTRANS”

Rationale and overall objective: The project aims to 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 ozone-depleting substances (ODS) and HFCs in river shipping in northern Russia. Reduction of identified atmospheric emissions, as well as reduction of contaminated water discharge, will 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 and interim milestones: (1) Assessment of SLCP, greenhouse gases, and other contaminant reductions through deployment of new, more efficient, and less polluting ships, associated infrastructure, and improved operational practices. (2) Assessment of relevant Russian regulations and standards, as well as international best practices and BATs pertaining to design and operation of northern river shipping, and development of proposals to promote implementation of these best practices and BAT. (3) Pilot deployment and operations of new ships based on the results of earlier phases, including technologies, standards and practices. (4) Dissemination of results, lessons learned, and developed best practices.

Timeline/completion date: 2019

Activities on HW

Project/activity: Demonstration of environmentally sound destruction of obsolete pesticides (Phase III)

Lead(s): Arctic States and PPs – Finland, Russian Federation

WG partners: None

Other partners: Observers – NEFCO; Others – none

Rationale and overall objective: In 2015, 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, and a test program of the SCWO facility is being developed. The test program is anticipated to be completed in 2017. Next steps for this project will depend on the results 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 this facility. An international information exchange workshop on obsolete pesticides

inventory and destruction technologies will be organized to take place in the Russian Federation in 2017. The project results support the Russian national implementation plan” of the Stockholm Convention, and the international requirements defined in Stockholm Convention Article 6, and relevant Basel Convention guidelines, and European Union directives.

Main activities and interim milestones: 2017 – testing of SCWO technology. 2018 – demonstration of environmentally sound destruction.

Timeline/completion date: 2019

Project/activity: Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III

Lead(s): Arctic States and PPs – Russian Federation

WG partners: None

Other partners: Observers – NEFCO; Others – Russian Railways, UNIDO, St. Petersburg Vodocanal, State University of Oil and Gas, Russian Energy Agency

Rationale and overall objective: This project will liaise with a Global Environment Facility (GEF) funded project *Environmentally Sound Management and Disposal of PCB at the Russian Railroad network and other PCBs owners (Phase 1)* implemented by UNIDO and Russian Railways. The PSI Committee approved funding for a feasibility study following the development of the terms of reference in cooperation with the EG HW. The terms of reference for the feasibility study are under preparation, pending necessary inputs from Russian Railways and UNIDO.

Main activities and interim milestones: This PCB 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 and bankable document. The second step will be the implementation of the PCB project. The details of the project will be established within the course of the independent evaluation.

Timeline/completion date: 2019 with potential for extension based on approval and funding for phased approach

Project/activity: Rapid environmental assessment

Lead(s): Arctic States and PPs – Finland, Russian Federation

WG partners: None

Other partners: Observers – none; Others – none

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 pesticide storage/burial site in northern Russia, including destruction of the HW. Project implementation is dependent on identifying and contracting the consultants to implement the project. 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 by the Ministerial meeting in 2019.

Main activities and interim milestones: 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.

Timeline/completion date: 2017: Rapid environmental assessment on three sites. 2018: Development of a clean-up demonstration project. 2019: Implementation of the clean-up demonstration project.

Project/activity: Assessment and mitigations of risks from a municipal solid waste landfill in permafrost area

Lead(s): Arctic States and PPs – Russian Federation

WG partners: None

Other partners: Observers – none; Others – Krasnoyarsk Krai, Dudinka City Administration, Federal State Institution “Center of the Environmental Industrial Policy”

Rationale and overall objective: Dudinka city landfill is located on permafrost about 500m from the Yenisey River in Krasnoyarsk Krai. The project aims to assess adverse environmental impacts of the landfill on the Arctic environment and develop remediation technology in the remote Arctic permafrost zone. The project will need to be further developed by the EG and approved by ACAP.

Main activities and interim milestones: (1) Survey work, analysis of existing approaches to rehabilitation of waste accumulation sites and the selection of BAT for the remediation of the Municipal Solid Waste (MSW) landfill in Dudinka State. (2) Implementation of remediation of MSW landfill in the city of Dudinka and State. (3) Identification of MSW landfills and dumps located in the Russian Arctic, for the purpose of replicating sound methodological approaches and introduction of the BAT for the rehabilitation of the MSW landfills.

Timeline/completion date: 2019

Activities on POPs and mercury

Project/activity: Promotion of decrease of Barents region pollution by introduction of BAT

Lead(s): Arctic States and PPs – Russian Federation, Sweden

WG partners: None

Other partners: Observers – NEFCO; Others – Barents Euro-Arctic Council Working Group on Environment, BAT Bureau, All Russian Research Institute for Nature Protection (VNIIEcologia), Russian Cleaner Production and Sustainable Development Centre (RCPSDC)

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 the enterprises and universities, and to facilitate investments in the area. The endeavor will be based on capacity building, feasibility studies, and additional interventions required, in cooperation with industry (including its branch organizations), the academia and research/design bureaus, to implement BAT at selected enterprises in the key industrial sectors through applicable cleaner production, resource efficiency measures and feasible environmental investments.

Main activities and interim milestones: This project will be carried out for no more than seven sectors: (1) the pulp and paper industry, (2) the mining, mineral, and metallurgical industry, (3) O&G industries, including refineries, (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. The project activities will include the following.

- Producing scoping and feasibility studies
- Developing continuous operating capacity for the BAT educational system in the Russian Federation
- Identifying and promoting the introduction of BAT, including through feasibility studies and with the cooperation of financial institutions and enterprises
- Implementing the recommendations on industrial emissions mitigation through BAT
- Encouraging the exclusion of environmental Hot Spots from the Barents List, and improving the working methods of the relevant enterprises
- Developing and conducting approximately seven BAT sector seminars
- Convening a BAT conference in Moscow to conclude the project
- Conducting outreach related to the project results.

Timeline/completion date: 2019 (TBD)

Project/activity: Projects related to reduction of dioxins and furans (P2345)

Lead(s): Arctic States and PPs – Norway, Russian Federation, Sweden, U.S.

WG partners: None

Other partners: Observers – NEFCO; Others – none

Rationale and overall objective: ACAP will continue to undertake activities with the overall objective of reducing releases of dioxins and furans. Individual projects developed by the EG

on POPs and mercury will be brought to ACAP for consideration. Based on the feasibility study and technical assessment report approved at the Arctic Council Ministerial in 2017, the need for an action plan at the Vorkutinskiy Cement Plant (VCP) will be considered. A desktop study to update previously examined dioxin emission sources will be undertaken. A project to broaden the emission inventory of potential dioxin emission sources will be developed for ACAP consideration. Introduction and use of BAT remains a priority; in support of this, ACAP will consider activities that support implementation of control technologies. Funding for approved ACAP projects will be sought from the PSI and other funding mechanisms as appropriate.

Main activities and interim milestones: A project plan for the desktop study to update previously examined dioxin emission sources and a broadened emission inventory is currently under development by the EG and is expected to be submitted to ACAP in early 2017 for consideration.

Timeline/completion date: Expected start 2018

Project/activity: Project related to reduction of mercury

Lead(s): Arctic States and PPs – Norway, Russian Federation, Sweden, U.S.

WG partners: None

Other partners: Observers – NEFCO; Others – none

Rationale and overall objective: Further work on mercury within ACAP needs to be examined vis-à-vis implementation of the Minamata Convention and the priorities of the Russian Federation and other Arctic States in this sector. The *Non-ferrous metals/zinc smelter emission reduction project* has been submitted to the PSI for funding, pending input from the Russian partner. A joint project with the ACAP EG on HW, development of mercury-containing waste management systems in the Arctic region of the Russian Federation, is being considered for further development. These, and other projects related to mercury reduction, will be brought to ACAP on a case-by-case basis for consideration.

Main activities and interim milestones: The owner of the suggested pilot plant in Chelyabinsk is to be approached jointly by the EG and Ministry of Natural Resources and Environment of the Russian Federation during spring 2017. If successful, project launch is to be prepared for fall 2017.

Timeline/completion date: Expected project implementation 2018-2019

Activities of the Indigenous Peoples' Contaminants Action Program (IPCAP)

Project/activity: CLEO network for TLK

Lead(s): Arctic States and PPs – U.S., Finland, Sweden, Norway, AIA, Saami Council

WG partners: SDWG, CAFF

Other partners: Observers – NEFCO, Association of World Reindeer Herders; Others – Alaska Native Tribal Health Consortium, Saami Education Institute, International Centre for Reindeer Husbandry

Rationale and overall objective: Building on the successful completion of Phase I, expansion of the CLEO in North America, Phase II, expansion of the network to the Nordic region, is on track. The next steps for the project include establishing new observers, projects, and hubs in the circumpolar region, raising the profile of the network, securing stable funding, and coordinating with other WGs.

Main activities and interim milestones: Bringing new communities of observers and experts living and working on Arctic issues into the CLEO Network, and establishing more CLEO hubs in Arctic States.

Timeline/completion date: Phase one to be completed in May 2017. Phase two to be completed in 2019.

Project Title/activity: Community-based black carbon and public health assessment project

Lead(s): Arctic States and PPs – AIA, Russian Federation, Sweden, U.S.

WG partners: AMAP, SDWG

Other partners: Observers – NEFCO; Others – University of Alaska, Anchorage; University of Alaska, Fairbanks; Alaska Native Science Commission

Rationale and overall objective: This project will 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 and interim milestones: The scope of work developed by AIA and NEFCO includes a desktop study, sample air monitoring and proof-of-concept for the demonstration project. These results will provide useful information for a subsequent final investment decision (FID) for the next stages of the project.

Timeline/completion date: In March 2016, the PSI Committee approved a FID to finance the project's initial, desk-study phase. A final report is expected as a Ministerial deliverable in 2019.

Communications and outreach

The ACAP webpage contains information on ACAP EGs, projects, and meeting documents. ACAP reports benefit from being included in the Arctic Council Open Access Repository. In January 2017, ACAP approved a new visual identity that will be used on all future reports and outreach materials. ACAP has also undertaken the production of fact sheets to communicate project results to broader audiences. ACAP continues to develop its presence on Twitter through its account @ACAP_Arctic. The ACAP executive secretary participates in the Arctic Council communications and outreach group.

Administration

ACAP is housed within the ACS in Tromsø, Norway and is staffed by the ACAP executive secretary. Funding for approved ACAP projects is provided by funds from Arctic States, the Arctic Council PSI, and other funding mechanisms as appropriate. ACAP holds in-person WG meetings twice per year – supplemented by teleconferences as required – to discuss projects and priorities identified in the work plan, including new projects within the ACAP mandate. ACAP attends meetings of other Arctic Council WGs and TFs as necessary, and contributes to initiatives on cross-cutting issues. During the U.S. Chairmanship of the Arctic Council, Sweden chaired the ACAP WG with the U.S. assuming the role of vice Chair. Sweden will continue to chair the ACAP WG for the 2017-2019 period, supported by Norway as vice Chair. ACAP's meeting schedule for the coming two years has been provisionally agreed to be the following: 14-16 June 2017; 7-9 November 2017; 17-19 April 2018; and 6-8 November 2018.

2.B. Arctic Monitoring and Assessment Programme (AMAP)

2.B.i. Achievements 2015-2017

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”.

This mandate is served by implementation of the circumpolar AMAP monitoring and assessment programme, as well as close collaboration with other relevant national, regional, and global monitoring and research initiatives.

In addition, AMAP has been directed by Arctic Council Ministers and SAOs to support Arctic Council Chairmanship priority work, as well as the development and implementation of relevant international processes and conventions relating to pollution and climate issues (Stockholm Convention, Convention on Long-range Transboundary Air Pollution (CLRTAP), Minamata Convention, UNFCCC/IPCC), and work that contributes to the UN Sustainable Development Goals (SDGs).

Summary of achievements 2015-17

Under the U.S. Chairmanship, AMAP has conducted work under various priority areas, as described below. This includes work connected to the U.S. Chairmanship priorities: Addressing the impacts of climate change (targeting SLCPs through reductions in black carbon and methane emissions; and supporting Arctic climate adaptation and resilience efforts), and Arctic Ocean safety, security, and stewardship (creating a better understanding of Arctic Ocean Acidification (AOA) and its effects on Arctic organisms and the economies that rely on them). It also includes work supporting international conventions and processes related to environmental and climate issues.

Climate issues

Three major pieces of work address priority issues associated with Arctic climate change:

The 2017 assessment of “Snow, Water, Ice and Permafrost in the Arctic” (SWIPA) updates the information reported in the SWIPA 2011 assessment. It documents recent changes in the cryosphere and effects of these changes on Arctic environments, explores possible climate

linkages between the Arctic and other parts of the world, and presents new projections for future scenarios (with improvements with respect to uncertainty). This assessment also has a special focus on freshwater systems, with recent information based on work of the 2015 *Arctic Freshwater Synthesis project* co-led by AMAP. SWIPA 2017 shows that the Arctic as we know it is being replaced with a warmer, wetter, and more variable environment. The assessment shows that the Arctic Ocean could be largely free of sea ice in summer as early as 2030, with a continuous decline in snow cover and permafrost extent until at least 2050, and further melting of Arctic land-based ice resulting in a greater Arctic contribution to global sea level rise than previously anticipated. The transformations under way have profound implications for people, resources, and ecosystems in the Arctic and beyond. Urgent efforts to reduce global greenhouse gas emissions are needed, and will have an impact on this development; yet, even with full implementation of the UNFCCC Paris Agreement, the Arctic climate and environment will be substantially different from that of today.

The *Adaptation Actions for a Changing Arctic (AACA) project* has its origins in a request by the Arctic Council “to produce information to assist local decision-makers and stakeholders in three pilot regions in developing adaptation tools and strategies to better deal with climate change and other pertinent environmental stressors.” The AACA focuses on the diverse challenges that residents in three different Arctic regions (the Bering-Chukchi-Beaufort region, the Baffin Bay-Davis Strait region, and the Barents area) have experienced and the adaptations they have begun to plan and implement in response to the rapid changes in climate, landscape, wildlife, and social and economic systems that have occurred in recent decades and are expected in the future. It considers the environmental and socio-economic changes to which inhabitants are and will be adapting, and it provides a number of observations intended to help inform decision-makers about how they might help their communities adapt to future changes. For each of these regions, AMAP has produced a report providing a technical description of changes within the region, and a discussion of current rates of change and related impacts, considering consequences of these changes, past, present and future. The reports describe how new approaches to adaptation planning, governance, and community engagement can improve the prospects for successful adaptation to Arctic change by individuals and communities.

AOA is highlighted under the U.S. Chairmanship to create a better understanding of AOA and its effects on Arctic organisms and the economies that rely on them. AMAP has initiated the preparation of an update to its 2013 assessment of AOA based around five case studies.

Pollution issues

As a result of global regulations and other national and regional controls, levels of many previously identified (so-called ‘legacy’ or ‘already regulated’) POPs are now declining in the Arctic and elsewhere (as documented in the AMAP “POPs and Human Health Assessments”

reported to the Arctic Council in 2015). Yet Arctic environmental contamination is a continually evolving problem. The current 2016 AMAP “Assessment of Chemicals of Emerging Arctic Concern” (CEAC) documents that a broad range of new chemicals, as well as substances such as micro-plastics, are now found in the Arctic. Many of these reached the Arctic through long-range transport, but some are now associated with sources in the Arctic. Most are, however, not subject to international regulation. Moreover, an even larger number of chemicals with potential to reach the Arctic are presently in use, with new chemicals continuing to enter commerce each year. The assessment shows that there is a need to strengthen the cooperation with existing global regulations such as the Stockholm Convention and the CLRTAP. In addition, new approaches to chemical management are needed to address the potential risks to Arctic ecosystems and human populations, including chemical screening approaches and improved access to information from industry. Recommendations to improve engagement with organizations such as the United Nations Environment Programme (UNEP) and the Strategic Approach to International Chemicals Management (SAICM) to address CEAC are relevant to the SDG 12.4 on “environmentally sound management of chemicals [...] in order to minimize their adverse impacts on human health and the environment.”

Other areas of work

AMAP has, together with the International Arctic Science Committee (IASC), continued to provide secretariat support to the Sustaining Arctic Observing Networks (SAON) initiative, including work in 2016 to propose recommendations for future SAON direction.

In 2016, AMAP agreed to serve as the WG reporting channel for the ARR since it does not sit directly within one of the Arctic Council WGs. The AMAP WG reviewed the “ARR synthesis for Arctic leaders” and found it to be consistent with AMAP’s published work on Arctic climate change and other work.

AMAP engagement with international organizations has focused on enhanced cooperation with CLRTAP bodies connected with planned future work on (integrated) air pollution monitoring and assessments, with a special focus on improving scientific knowledge relevant to SLCPs and their impacts on the Arctic. AMAP is also supporting work on the development and implementation of the UNEP Minamata Convention and joint technical work associated with the update of the UNEP “Global Mercury Assessment” in 2018, and has delivered Arctic information and data as input to the Stockholm Convention effectiveness evaluation and consideration of chemicals for listing for regulation under this international agreement.

AMAP is also a partner in the European Union’s Horizon2020 coordination effort and supportive initiative *EU-PolarNet* that, together, aim to improve coordination between European Union polar research institutions and to develop an integrated European polar research programme.

These collaborations have been favorably received within the international organizations concerned, have enhanced the Arctic Council's profile in these activities, and have ensured that Arctic perspectives, information, and data are recognized in these international fora.

AMAP has supported the following work in projects led by other Arctic Council WGs and TFs: Integrated ecosystem assessment (PAME); marine biodiversity trends updates (CAFF); Arctic marine strategic plan and AMSA follow-up (PAME); and One Health (SDWG).

2.B.ii. Work plan 2017-2019

Introduction

Significant parts of AMAP's work to meet its mandate to inform policymakers with up-to-date information on pollution and climate issues are of a continuing nature. This includes the implementation of the AMAP coordinated (trends and effects) monitoring program. The 2017-2019 AMAP WP described below is developed within the context of a multi-year schedule for updating assessment of issues under AMAP's mandate. The 2017-2019 WP reflects near-term priorities identified by the AMAP WG, and it takes into account timing and allocations of resources. Priorities not included here are still important and may be ongoing or have longer time horizons. The WP also takes note of Finnish Chairmanship priorities, in particular concerning environmental protection and education and improved links to the SDGs. Detailed information on specific activities, the EGs that would be responsible, intended products, relationship to the Arctic Council and external processes, and envisaged workload is maintained by the AMAP secretariat. All AMAP work endeavors to engage PPs and use TLK where applicable. The WP also recognizes the potential contributions of Observers.

List of individual projects and activities

Project/activity: Addressing climate issues

Lead/co-leads: Arctic States and PPs - Cryosphere Change (SWIPA) – Canada, Kingdom of Denmark, Norway, Russian Federation, Sweden, U.S.; AOA – Norway, U.S.

WG partners: Joint outreach of Arctic Council information on Arctic climate change and its impacts, is proposed together with CAFF, PAME, and ACS

Other partners: Observers - WMO, IPCC, IASC (on SWIPA); International Council for the Exploration of the Sea (ICES) (on AOA)

Rationale and overall objective: AMAP's continuing work to update information on the implications of climate change for Arctic physical environments and ecosystems is essential

for providing policymakers with the most recent and relevant information to inform decision-making on these far-reaching issues. Arctic climate change impacts are already altering the region's nature and human activities, and this change is projected to continue with implications both for the Arctic and for the world as a whole.

AOA is a consequence of increasing emissions of carbon dioxide that has potential for major effects on Arctic ecosystems, including important subsistence and commercial fisheries.

AMAP has been asked to support the IPCC process to prepare special reports on "impact of global warming of 1.5°C above pre-industrial levels (due in 2018), and "climate change and the oceans and the cryosphere" (due in 2019). The SWIPA and AOA follow-up work also feeds into a range of other Arctic Council activities.

Main activities and interim milestones: A major focus of AMAP work on climate issues under the 2017-2019 work-plan is to contribute to the planned IPCC special reports and to disseminate the results of the SWIPA 2017 update widely and effectively to multiple target groups.

Timeline/completion date: Work to contribute to IPCC special reports is scheduled for 2017 and 2018. Planned work on AOA involves completion in 2017 of the ongoing assessment that was initiated under the AMAP WP 2015-2017. Proposed work on SWIPA outreach requires coordination with other Arctic Council subsidiary bodies and this is part of the work planned in the 2017-2019 period.

Project/activity: Addressing contaminants and human health issues

Lead/co-leads: Arctic States and PPs - POPs and contaminants of emerging concern - Canada, Kingdom of Denmark, Finland, Sweden; Mercury – Canada, Kingdom of Denmark; Radioactivity – Norway, Russian Federation; Human health – Canada, Kingdom of Denmark; Air pollution/SLCPs – Finland, Norway, U.S.

WG partners: Parts of the work connect to work under other Arctic Council WGs, specifically ACAP (chemicals and SLCPs), CAFF (pollution effects on biota), EPPR (radioactivity), SDWG (human health), and EGBCM (SLCPs)

Other partners: Observers – United Nations Economic Commission for Europe (UNECE), UNEP/UN-Environment; Others – industry

Rationale and overall objective: These ongoing activities fulfill AMAP's ongoing mandate. Work elements support the further development and implementation of the UNEP Stockholm (POPs) and Minamata (mercury) Conventions, CLRTAP, and connect to UNFCCC/IPCC priority: Food security and the 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 and interim milestones: Main activities on mercury under the 2017-2019 WP relate to joint work with UNEP relevant to the Minamata Convention and Global Mercury Assessment 2018; an update on the assessment of mercury in the Arctic is planned for 2021 (updating the 2011 assessment of this issue). Work on POPs is focused on completion of ongoing work on biological effects of POPs (and mercury) for delivery in 2017 and work to follow up on the assessment of chemicals of emerging concern, including provision of relevant data and information to bodies responsible for chemical regulation. Assessments of radioactivity and human health were delivered in 2015, so planned work in 2017-2019 relates mainly to routine compilation of new data and activities to enhance cooperation between groups working on contaminant and human health effects. Longer-term planning includes provision of timely input for Stockholm Convention effectiveness evaluation and further work on impacts of climate change on contaminant release and fate in the Arctic, possibly including targeted studies addressing possible radioactive and other pollution at a site in Greenland. AMAP delivered assessments of scientific knowledge regarding SLCP impacts on Arctic climate in 2015 and plans to update these in the form of an interim update in 2019 with a focus on emissions scenarios and modeling and a comprehensive update in 2021 considering air pollution issues in an integrated context (working in collaboration with CLRTAP bodies and other relevant groups, including coordination activities in relation to the European Union initiative on black carbon).

Timeline/completion date: These activities are part of a coordinated plan for activities with deliverables in 2017 (POPs), 2019 (POPs and human health targeting Stockholm Convention information needs; SLCP interim update) and 2021 (mercury; integrated air pollution assessment).

Project/activity: Supporting adaptation actions

Lead/co-leads: Arctic States and PPs - Norway, Finland, Russian Federation, Sweden (Barents region); Canada, Russian Federation, U.S. (Bering-Chukchi-Beaufort region); Canada, Kingdom of Denmark (Baffin Bay/Davis Strait region)

WG partners: SDWG, CAFF, PAME

Other partners: Observers – none; Others - stakeholders (e.g. Arctic Economic Council, industry, local/regional governments, etc.)

Rationale and overall objective: The AACA project is implemented through three regional pilot studies addressing the Bering-Chukchi-Beaufort region, the Baffin Bay-Davis Strait region, and the Barents area.

Main activities and interim milestones: Under the WP for 2017-2019, in addition to completing planned deliverables, the AACA pilot studies will be followed up initially through

an evaluation process and the possible development of an overarching report and possible development of national follow-up activities by the AMAP WG.

Timeline/completion date: Completion of a possible overarching report and initial evaluation of the AACA results would take place during 2017-2019 with the intention of developing more concrete follow-up activities in the period beyond 2019.

Project/activity: AMAP strategy and implementation

Lead/co-leads: Arctic States and PPs - AMAP future strategy development – All Arctic States; Support for SAON – Canada, Norway, U.S.

WG partners: CAFF (for SAON)

Other partners: Observers - IASC (for SAON), WMO; Others - none

Rationale and overall objective: AMAP's existing strategic framework document was developed in 2010. The AMAP WG is planning an activity under the WP 2017-2019 to update its strategic direction for the coming years. AMAP, together with IASC, provide secretariat support to the SAON initiative.

Main activities and interim milestones: Preparation of an updated AMAP strategic framework document, including consideration of how to better incorporate TLK in AMAP work. Ensure continued support of the SAON secretariat.

Timeline/completion date: Strategic Framework development during 2017 for approval by AMAP HoDs in 2018; SAON support - ongoing

Communication and Outreach

Policy-relevant overviews

In addition to the deliverables for the Fairbanks Ministerial that target policy-makers and public outreach, AMAP co-produced the "Arctic Freshwater System in a Changing Climate Overview Report". This report summarizes the results of a collaborative project between AMAP, IASC, and Climate and Cryosphere (CliC). The work was delivered at the Arctic Science Summit Week Conference in Fairbanks 2016 and is reflected in the SWIPA 2017 update assessment.

Additional foreign language translations of AMAP outreach products completed since 2015 include Russian and Saami translations of the "Arctic Climate Issues 2011" (SWIPA 2011 overview report) and AOA 2013 overview reports. The Saami translations have been recognized by the Saami Council as also being of cultural value with respect to adding new words relevant to description of pollution and climate concepts to the Saami language.

During the 2015-2017 period, AMAP provided input to the CLRTAP report “Trends in Ecosystem and Health Responses to Long-Range Transported Atmospheric Pollutants” and, following a request from CLRTAP, provided technical support for the production of both the technical background and policy-makers’ summary reports associated with their assessment “Towards Cleaner Air” (also translated into Russian), which were released at the UNECE Ministerial Conference at Batumi. AMAP also provides assistance to the U.S. National Oceanic and Atmospheric Administration (NOAA) in arranging the peer review of the “Arctic Report Card.”

AMAP also facilitated the delivery of the “ARR Synthesis for Arctic Leaders” at the Arctic Council Ministerial meeting in 2017.

Scientific/technical background reports

AMAP has prepared a series of peer-reviewed technical reports that target the scientific and educational communities and provide the validated documentation for statements and conclusions communicated in AMAP deliverables to the Fairbanks Ministerial, including:

- “SWIPA 2017: Snow, Water, Ice and Permafrost in the Arctic”
- “AACA – Barents area; Overview Report”
- “AACA – Bering-Chukchi-Beaufort region; Overview Report”
- “AACA – Baffin Bay-Davis Strait region; Overview Report”
- “AMAP Assessment 2016: Chemicals of Emerging Arctic Concern”
- “AMAP Assessment 2017: Biological Effects of POPs and Mercury”

AMAP published the following scientific/technical background reports during 2016:

- “AMAP Assessment 2015: Human Health in the Arctic”
- “AMAP Assessment 2015: Trends in Persistent Organic Pollutants in the Arctic”
- “AMAP Assessment 2015: Radioactivity in the Arctic”

As well as these AMAP publications, AMAP work has been featured in a number of scientific journal publications including the “Arctic Freshwater Summary Special Issue of the Journal of Geophysical Research: Biosciences”; and a special issue of the “International Journal of Circumpolar Health.”

Conferences

AMAP work has been presented at several international conferences and other events:

- A scientist involved in AMAP climate-related work participated in Arctic side events at the UNFCCC COP 21 (Paris) and COP 22 (Marrakech); cooperation has been established with the IPCC-secretariat under the SWIPA 2017 work.

- An AACA side event was arranged as part of the 2016 Arctic Frontiers conference.
- Results of the CEAC assessment were delivered at a dedicated session of the Society of Environmental Toxicology and Chemistry (SETAC) Europe international scientific conference.
- Results of the AMAP 2015 human health assessment were presented at the 16th International Congress on Circumpolar Health, Oulu, Finland.
- AMAP's achievements in different areas of work were highlighted at the AMAP 25-year anniversary seminar arranged in conjunction with the AMAP 30th WG meeting in Helsinki.
- AMAP engaged in the International Conference on Arctic Science: Bringing Knowledge to Action (April 24-27, 2017 Reston, Virginia, USA), including sessions organized together with CAFF, EPPR, and SDWG.
- AMAP continues to upgrade and further develop AMAP website services and has implemented AMAP social media feeds (Facebook and Twitter).

Scientists involved in AMAP work regularly publish their work in high-ranking scientific publications and present at international scientific conferences.

Administration

The AMAP Secretariat is located in Oslo, Norway. Staff includes the executive secretary and five deputy secretary positions. In addition, the AMAP Secretariat has one full-time administrative assistant, a half-time accounting assistant and other occasional part-time assistance to help with maintaining archives and other administrative tasks as necessary. AMAP secretariat core funding is provided by Norway, with additional contributions from some other Arctic States to support directed work tasks. Between May 2015 and December 2016, AMAP held two WG meetings and two face-to-face heads of delegation meetings, as well as several virtual heads of delegation meetings. The AMAP WG Chair is elected by the AMAP HoDs for a period of two years. During the years 2015-2017 the Chair has been from Finland. In 2017-2019 the AMAP Chair will be from Norway.

In 2017, the current AMAP executive secretary will retire, and the Norwegian government has announced that the secretariat will be relocated to Tromsø in 2018.

2.C. Conservation of the Arctic Flora and Fauna (CAFF)

2.C.i. Achievements 2015-2017

Mandate

The CAFF WG 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.

Summary of achievements 2015-17

In follow-up to paragraphs 4 and 36-39 of the Iqaluit Declaration 2015, CAFF has, inter alia, undertaken the following work over the course of 2015-2017.

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

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. The CBMP continues to work to improve involvement of Arctic indigenous organizations and TLK holders within its networks. 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. An important example of this kind of reporting is demonstrated in the "State of the Arctic Marine Biodiversity Report" (SAMBR). This report summarizes the status and trends in key biotic elements of the Arctic marine environment and provides advice on how to better improve marine biodiversity monitoring across the Arctic. The results are based on efforts to find, gather, integrate and interpret all available Arctic marine biodiversity monitoring datasets to improve the detection and understanding of changes in circumpolar marine biodiversity. Work on the "State of the Arctic Freshwater Biodiversity Report" and the "State of the Arctic Terrestrial Biodiversity Report" is initiated and planned to be finished before 2019. 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 Bird Initiative (AMBI)

The AMBI is designed to improve the status and secure the long-term sustainability of declining Arctic breeding migratory bird populations. AMBI works along four global flyways and has been an important Arctic Council instrument in engaging Observer and non-Observer countries and organizations. Technical workshops were held in the Netherlands and Singapore. Also, within Canada, through the Americas flyway plans, work includes direct engagement with indigenous communities and regional organizations, such as the Nunavut Wildlife Management Board. A mid-term evaluation of the AMBI 2015-2019 WP has been conducted and will help guide further implementation and refinement of the AMBI WP.

Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan

The ARIAS Strategy and Action Plan identifies 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 directed to the protection of all Arctic ecosystems, taking environmental, cultural and economic drivers, impacts, and response measures into consideration. CAFF worked closely with PAME on the marine components of the strategy.

Arctic Biodiversity Data Service (ABDS)

The ABDS is an online, interoperable data management system to access data arising from CAFF's programs and activities. Its goal is to increase access to Arctic biodiversity data for the common good of scientists, 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)¹, 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.

Traditional and Local Knowledge (TLK)

CAFF has a long history of recognizing the importance of Traditional Knowledge (TK) and has endeavored to utilize such knowledge into its activities, however Local Knowledge (LK) has not been utilized so far. Over 2015-2017, key products include the report "Traditional Knowledge and Wisdom: Changes in the North American Arctic and the involvement of northern communities and TK holders in the development of the CBMP Arctic Coastal

¹ The Arctic SDI is an initiative led by the National Mapping Agencies of the Arctic Council Member States to share spatial data across organizations, WGs and countries. CAFF facilitates the initiative within the Arctic Council.

Biodiversity Monitoring Plan.” The CBMP Coastal Expert Monitoring Group is placing a strong focus on building a platform for co-production of knowledge, allowing for the utilization of both TK and science throughout the entire process.

2.C.ii. Work plan 2017-2019

Introduction

This section outlines the projects and activities CAFF plans to undertake for the 2017–19 ministerial period. The CAFF WP is not fixed for the inter-ministerial period, and may be amended by the CAFF board according to new opportunities and priorities. The timeline for each of the projects is to be completed as projects develop. CAFF’s mandate and associated activities are integral to the success of Finland’s Arctic Council Chairmanship priorities.

“Actions for Arctic Biodiversity 2013-21: Implementing the recommendations of the Arctic Biodiversity Assessment” guides how the Arctic Council addresses biodiversity issues. Key actions in phase 3 of this plan (2017-19) include: safeguarding biodiversity under changing conditions and the influence of cumulative effects; and improving knowledge and public awareness, including by contributing to the Convention on Biological Diversity assessment on achievement of the United Nations’ Aichi Biodiversity Targets, and convening the second Arctic Biodiversity Congress. Focus will continue on ongoing actions from phases 1 and 2 of the ABA implementation plan, which include: mainstreaming biodiversity; ecosystem services; communications and outreach; adaptation to climate change; addressing stressors on biodiversity, protecting migratory species, addressing invasive alien species and pollution; and indicator development. Many projects have in-kind support from Arctic States and PPs. Additional support will be requested through grant applications and contributions from Arctic States.

List of individual projects and activities

Project/activity: Actions for Arctic Biodiversity 2013-21: Implementing the recommendations of the ABA

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

WG partners: Components are led by different WGs

Other partners: Observers – observers are involved in projects related to ABA implementation; Others - none

Rationale and overall objective: These ongoing activities follow up from the Kiruna and Iqaluit Declarations, with the objective of promoting ABA implementation among Arctic States and others.

Main activities and interim milestones: Implementation of ABA recommendations including many of the projects and activities listed in this section.

Timeline/completion date: 2013-21

Project/activity: Continue implementation of the CBMP including completion of the 2018-21 CBMP Strategy; implementation of the “Arctic Marine/Freshwater/Terrestrial Biodiversity Monitoring Plans”; completion and follow-up on the “State of Arctic Freshwater, Terrestrial, Marine Biodiversity Reports”; completion of the Arctic CBMP; continued development of the CBMP suite of headline indicators; and revise the strategy for facilitating community-based monitoring. This also includes projects on trends and analyses such as climate change impacts on the distribution, abundance, and ecology of bearded seals, the *Resilience and management of Arctic Wetlands* project, and the *Arctic Peoples of Salmon Rivers* project.

Lead/co-leads: Arctic States and PPs - Overall leads – U.S., Kingdom of Denmark; Marine – U.S.; Freshwater – Sweden, Canada; Terrestrial – Sweden, Iceland; Coastal – Canada, U.S.

WG partners: AMAP, PAME

Other partners: Observers – France, Germany, Netherlands, United Kingdom, Poland, International Union for Conservation of Nature (IUCN), North Atlantic Mammal Commission (NAMMCO); Others – ICES

Rationale and overall objective: This is a foundational program underlying implementation of CAFF’s mandate, as well as the key to implementation of ABA recommendations.

Main activities and interim milestones: Harmonizing and integrating efforts to monitor the Arctic's living resources and providing baseline and continued regular reporting on the state and condition of key aspects of Arctic biodiversity.

Timeline/completion date: Ongoing

Project/activity: Implementation of the AMBI

Lead/co-leads: Arctic States and PPs - Canada, Norway, Russian Federation, U.S.

WG partners: None

Other partners: Observers - China, France, Germany, India, Japan, South Korea, Netherlands, Singapore, Spain, United Kingdom; Others – Greece, Guinea-Bissau, Mauritania, Myanmar, Philippines, Vietnam, Malaysia, Mexico, Australia (upcoming partners: Suriname, Brazil, Colombia, Venezuela). Arctic Council Observer organizations – UNEP, World Wide Fund for

Nature (WWF), IUCN; Others - Wetlands International, BirdLife International, East Asian Australasian Flyway Partnership, Wildlife Conservation Society, Wadden Sea Secretariat, Convention on Migratory Species, African Eurasian Waterbird Agreement, Wildlife Reserves Singapore, Wetlands and Wildlife Trust, Hong Kong Bird Watching Society, Western Hemisphere Shorebird Reserve Network, Manomet.

Rationale and overall objective: This project aims to improve the status and secure the long-term sustainability of declining Arctic-breeding migratory bird populations.

Main activities and interim milestones: Implementation of the AMBI 2015-19 WP.

Timeline/completion date: 2015-2019

Project/activity: Implementation of the ARIAS Strategy and Action Plan 2017-21

Lead/co-leads: Arctic States and PPs - Norway, U.S.

WG partners: PAME (other WGs to be confirmed when implementation commences)

Other partners: Observers – Observers to be confirmed once implementation commences;
Others - none

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 and interim milestones: Implementation of the ARIAS Strategy and Action Plan.

Timeline/completion date: 2017-21

Project/activity: The 2nd Arctic Biodiversity Congress

Lead/co-leads: Arctic States and PPs - CAFF Chair, Finland

WG partners: All WGs

Other partners: Observers – all Observer States and organizations invited; Others - public, scientific community, TK holders, CAFF partners and expert organizations as relevant

Rationale and overall objective: To promote the conservation and sustainable use of Arctic biodiversity focusing on the results of the CBMP “State of the Arctic biodiversity” reports, progress on implementation of ABA recommendations, and attainment of Aichi Targets.

Main activities and interim milestones: Convene and report on the results of the second Arctic Biodiversity Congress

Timeline/completion date: 2018

Project/activity: Community Observation Network for Adaptation and Security (CONAS): interim report

Lead/co-leads: Arctic States and PPs - AIA

WG partners: None

Other partners: Observers – none; Others – University of Idaho, Center for Resilient Communities

Rationale and overall objective: To use human observers as sensors to observe and document environmental changes that are significant to understanding pan-Arctic processes.

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

Timeline/completion date: Ongoing

Project/activity: Mainstreaming Arctic biodiversity

Lead/co-leads: Arctic States and PPs: Sweden, Canada, U.S., ICC

WG partners: All

Other partners: Observers – TBC; Others – Arctic Council Secretariat and others as relevant

Rationale and overall objective: To incorporate biodiversity objectives and provisions into relevant 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.

Main activities and interim milestones: Develop a possible set of biodiversity principles to incorporate biodiversity objectives and safeguards into Arctic activities.

Timeline/completion date: 2017-2019 (TBC)

Project/activity: Arctic Flora and Seabird EGs

Lead/co-leads: Arctic States and PPs - Overall chairs – Norway (flora) and Finland (seabirds) with individual components led by different countries

WG partners: None

Other partners: Observers – France, United Kingdom, Netherlands; Others – none

Rationale and overall objective: The expert groups coordinate the conservation of Arctic flora/seabirds and enhance the exchange of information on factors affecting the status and

trends in Arctic flora and seabirds. Activities include the implementation of seabird conservation strategies and the completion of the *Circumpolar Boreal Vegetation Map* and the *Arctic Flora Inventory*.

Main activities and interim milestones: Data compilation, analysis, and coordination.

Timeline/completion date: Ongoing

Project/activity: Follow-up on the Arctic Council cross cutting initiatives

Lead/co-leads: Arctic States and PPs - CAFF Chair

WG partners: All

Other Partners: Observers – as relevant; Others – as relevant

Rationale and overall objective: Activities include, but are not limited to, follow-up on recommendations of the EBM EG; participation in the ecosystem approach EG and AMSP; assist in the implementation of the framework for a circumpolar Arctic network of MPAs and follow-up on the Arctic Council's resilience framework.

Main activities and interim milestones: Coordination of biodiversity input

Timeline/completion date: 2017-2019

Project/activity: The Arctic Biodiversity Data Service (ABDS) development, including cooperation on the SDI

Lead/co-leads: Arctic States and PPs - CAFF secretariat

WG partners: PAME

Other partners: Observers – as relevant; Others – the Arctic Spatial Data Infrastructure; Global Biodiversity Information Facility (GBIF); Ocean Biogeographic Information System (OBIS); Group on Earth Observations (GEO); Group on Earth Observations Biodiversity Observation Network (GEOBON); and the Polar Data Catalogue (PDC).²

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

Main activities and interim milestones: Data rescue, development, standardization, integration, display

² The Arctic SDI is an initiative led by the National Mapping Agencies of the Arctic Council Member States to share spatial data across organizations, WGs and countries. CAFF facilitates the initiative within the Arctic Council.

Timeline/completion date: Ongoing

Communications and outreach

CAFF's communication strategy aims to: (1) provide target audiences with timely, accurate, clear and complete information on conservation issues for use by policy-makers, scientific and local and indigenous communities, and other decision-makers, (2) increase the understanding and profile of Arctic biodiversity among 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 among 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 include development of communication tools and products, coordination and outreach, for each target. Examples of activities include developing reports, educational toolkits, social media campaigns, websites, webinar series, scientific posters, videos, photography competitions, and presentations at key events, as well as hosting events and fielding press inquiries. Materials are translated into other languages when resources allow.

Administration

The CAFF international secretariat is located in Akureyri, Iceland. The secretariat has five staff: One executive secretary; an executive assistant; a data manager; and a project manager and communications manager. CAFF was founded in 1992 via the "Arctic Environmental Protection Strategy." A ministerial agreement (1998) provides the framework for Arctic States' contributions to the operation of the CAFF secretariat. Voluntary contributions are provided by all Arctic States in support of the secretariat. CAFF cooperates closely with PAME to share fixed secretariat overhead costs. Norway has held the Chair in 2015–2017. CAFF has held four management board meetings during this period. At the Fairbanks Ministerial meeting, the U.S. will become the Chair (2017-2019).

2.D. Emergency Prevention, Preparedness and Response (EPPR)

2.D.i. Achievements 2015-2017

Mandate

EPPR is mandated to contribute to the prevention, preparedness, and response to environmental emergencies and other accidents, and search and rescue (SAR) in the Arctic. While not an operational response group organization, members of the WG conduct projects to address gaps, prepare strategies, share information, collect data, and collaborate with relevant partners on capabilities and research needs that exist in the Arctic. Projects and activities include development of guidance and risk assessment methodologies, coordination of response exercises and training, and exchange of information on best practices with regard to the prevention, preparedness, and response to accidents and threats from unintentional releases of pollutants and radionuclides, and to 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)” in the Arctic by addressing relevant lessons learned from SAR exercises and real incidents. In October 2015, SAOs designated EPPR as the lead on oil pollution prevention, in cooperation with PAME. In this regard, EPPR will coordinate implementation of the “Framework Plan on Oil Pollution Prevention (FP-OPP)”, adopted by Arctic Council Ministers in Iqaluit, April 2015.

Summary of Achievements 2015-2017

In follow-up to paragraphs 18 and 31-34 of the Iqaluit Declaration 2015, EPPR has, inter alia, undertaken the following work over the course of 2015-2017.

EPPR actively participated in the work of the Task Force on Arctic Marine Cooperation (TFAMC) and the Task Force on Telecommunication Infrastructure in the Arctic (TFTIA), sharing information and best practices, while also seeking ways to support the outcomes of these TFs.

In March 2016, SAOs approved a new strategic plan for EPPR, which includes the addition of search and rescue and follow-up on the FP-OPP. Along with biennial WPs, the strategic plan will guide the work undertaken by the WG.

Implementation of the MOSPA

On 13 June 2016, under the leadership of the U.S., the 2nd functional table top exercise (TTX) of the MOSPA Agreement took place. EPPR adopted the 2016 MOSPA TTX exercise design process as the framework for the 2017-2019 exercise planning cycle under the Finnish Chairmanship. The TTX successfully tested connectivity for each competent authority and allowed an opportunity for each State to analyze internal capacity for supporting another country needing international assistance. The scenario was such that each State had a role to consider during the exercise. EPPR finalized the “After Action Report” (AAR), which highlights observations, recommendations, and best practices. The AAR provides recommendations for updating the Operational Guidelines attached to the MOSPA. In December 2016, EPPR established a Marine Environmental Response (MER) EG to address AAR recommendations specific to the MOSPA Agreement, including a protocol for implementation of AAR lessons learned, and further MER initiatives.

Implementation of the Arctic SAR Agreement

In December 2015, EPPR established an EG on SAR (SAR EG) to promote and assess implementation of the Arctic SAR Agreement. The SAR EG mandate includes acting as a facilitator for high-level, intergovernmental discourse on Arctic SAR issues. The specific goal of the EG is to identify key lessons of Arctic incidents and exercises and communicate necessary mitigation or remedial actions to Arctic States and international bodies, such as the Arctic Coast Guard Forum (ACGF) and the International Maritime Organization (IMO).

The SAR EG supports existing operational fora dealing with Arctic SAR issues by leveraging high-level engagement with national and scientific institutions.

Follow-up on the FP-OPP

Led by Norway and Canada, the status report on implementation identifies follow-up activities that support the objectives in the framework plan. The finalized report includes input from Arctic States, PPs, WGs and relevant stakeholders capturing activities that are already taking place. The report will be used to identify gaps in implementation of recommendations and encourage development of initiatives in these areas.

In response to recommendation 2.1 of the FP-OPP, the report “Overview of measures specifically designed to prevent oil pollution in the Arctic marine environment from offshore petroleum activities” provides a comprehensive overview of prevention measures based on contributions from the industry and R&D institutions through a baseline survey in addition to reviewing open sources. The report demonstrates that extensive R&D initiatives have been ongoing for several decades related to enhancing the safety of offshore petroleum activities

in the Arctic and cold climate regions. Some observations, recommendations, and suggestions for further work have been provided for each of the themes covered by the report.

The project *International standards for petroleum, offshore-oil and maritime industries* aims to provide an introduction to how standards for the offshore and maritime petroleum industry are developed, maintained, and implemented. The report “Standardization as a tool for prevention of oil spills in the Arctic” and its summary report were finalized.

Other key EPPR projects

The updated version of the “Field guide for oil spill response in Arctic waters” includes the addition of new sections on “Health and human safety in the Arctic,” “Wildlife response in the Arctic,” and “Logistics and response strategies in the Arctic.” Improvements will include user-friendly format with updated information in a tactics-focused document. The updated Guide complements the recent strategy-focused 2015 EPPR “Guide to oil spill response in snow and ice conditions in the Arctic.” The revised Guide was provided to EPPR for comments, which are being incorporated into the final version of the Guide.

The IMO and the Marine Environment Protection Committee (MEPC) adopted a global version of the “Guide to oil spill response in snow and ice conditions” during their meeting in October 2016.

The project *Prevention, preparedness, and response for small communities* has developed an implementation strategy that engages communities in a self-assessment of their preparedness for oil spill response, as well as risk and impact. The main outcomes from the project will be: (1) greater awareness of risk and preparedness at a local level, and access to best practices, (2) the ability for national governments to address misperception or lack of awareness, and (3) the identification of gaps in preparedness relative to risk. A summary report for the 2015-2017 period is available.

The project *Development of a database of Arctic response assets* created a stand-alone, searchable database of major response assets in the Arctic. The database is incorporated into Arctic Environment Response Management Application (ERMA), displaying both government- and industry-owned equipment. The database and user manual are significant accomplishments.

The report “Circumpolar oil spill response viability analysis” estimates when and where different types of response options (e.g. in situ burning, mechanical skimming) can be effectively deployed in varying locations and seasons of the Arctic based on historical metocean conditions. The assessment uses a quantitative approach, presenting outputs as a percentage of time for “favorable, marginal, and not favorable” for the selected response techniques. The goal of this effort is to provide more science-based decision-making in Arctic oil spill response contingency planning. An additional benefit of this study will be to identify

components or methods used in response countermeasures that could be optimized through additional research and development.

The goal of the project *Safety systems in the implementation of economic and infrastructural projects* 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 hydrocarbons transportation. In support of these projects, SAR and oil spill response exercises are undertaken annually. “Arctic 2016: Safe Settlement” was held in April 2016 and highlighted the practical issues of conducting SAR operation in the Arctic in winter conditions.

The focus of the Russian-led project *Arctic Rescue* is to elaborate best practices, recommendations and key elements of the emergency risk assessment system and the system for improving safety of potentially hazardous facilities. In support of this work, the conference “Challenges in emergency preparedness and response in the Arctic: Safe Arctic settlement” took place in Zvenigorod, Russian Federation in April 2016.

2D.ii. Work plan 2017-2019

Introduction

EPPR strives to be the premier international forum for collaboration on prevention, preparedness and response issues in order to advance risk mitigation and improve response capacity and capabilities in the Arctic. EPPR is assigned the responsibility for maintaining the Operational Guidelines that implement the MOSPA Agreement. EPPR also supports the SAR Agreement in the Arctic by, inter alia, addressing relevant lessons learned from SAR exercises and real incidents. EPPR coordinates follow-up on the FP-OPP.

EPPR will develop project proposals within its mandate for approval as Arctic Council projects, taking into account the needs of indigenous peoples and incorporating TLK when appropriate. The projects identified in this WP include projects that have already been approved by EPPR and projects that are under development for future EPPR review and approval. Additional project proposals may be developed within the scope of this WP during the 2017-2019 Chairmanship period. Implementation of projects is subject to secure financing.

List of individual projects and activities

Agreement on Cooperation on MOSPA

EPPR Marine Environmental Response Experts Group (MER EG)

Based on a recommendation from the 2016 MOSPA TTX AAR, EPPR established the MER EG in December 2016. Guiding principles were discussed at the inaugural meeting, and it was agreed that work will focus primarily on implementation of the MOSPA Agreement, including implementation of corrective actions and recommendations noted in each EPPR MOSPA Exercise AAR. MER EG representatives will ensure that corrective actions and recommendations are approved by EPPR and that these changes are reflected as suggested updates to the MOSPA Agreement and Operational Guidelines. These corrective actions will then be integrated into national planning processes for resolution. The MER EG will be chaired by a representative from one of the Arctic States. Each Arctic State will designate representative(s) to serve on the EG. PPs, Observers, and WGs are also welcome to designate a representative.

The MER EG will be governed by a charter with projects, initiatives, and milestones identified in a two-year WP, and include projects approved by EPPR, or projects that are seeking approval from EPPR. Some of these initiatives and projects may include, but are not limited to, those listed below.

Project/activity: EPPR MOSPA Exercise Planning

Lead/co-leads: States and PPs – Finland and– the U.S. (MER EG Chair)

WG partners: All invited

Other partners: Observers – all invited; Others - none

Rationale and overall objective: The MER EG works to exercise and maintain the MOSPA Agreement by ensuring all eight Arctic States remain engaged in multilateral discussions, including a bi-annual exercise process. This exercise engages EPPR member state representatives whose countries may be impacted by an oil spill that is large enough to invoke the multilateral MOSPA Agreement and associated operational guidelines, thereby enhancing the collaborative request for assistance process. This will be harmonized with the IMO request-for-assistance formats and processes.

Main activities and interim milestones: Annual Connectivity Test - held during first quarter of 2017 and 2018 to validate operational contact information listed in operational guidelines; 2018 MOSPA Exercise Planning Workshop - during the first EPPR meeting in 2017 to finalize 2018 exercise scenario, design, and concept; MER EG meetings - held on the margins of EPPR WG meetings to discuss 2018 MOSPA Exercise Design Process and implementation of AAR recommendations from 2016 TTX, which will include updates to the operational guidelines.

Project/activity: Development of recommendations for future exercises and workshops based on the assessment of lessons learned and best practices from previous events

Lead/co-leads: Arctic States and PPs - Finland, MER EG Chair

Other partners: MER EG membership comprised of Arctic States, PPs, Observers, and WGs

Rationale and overall objective: Development of a lessons learned (LLs) portal specific to LLs from each MOSPA exercise to properly track and account for progress on those LLs. This will increase visibility and accountability for accomplishing action items resulting from LLs.

Main activities and interim milestones: With the launch of the new EPPR website the MEG EG will provide content to the EG webpage, by providing effective LL tracking and management of MOSPA exercise AARs. Better tracking of action items from past MOSPA exercises will improve future MOSPA exercise planning.

Timeline/completion date: 2017-2019 and on-going

Project/activity: Development of recommendations for training focus areas and training opportunities, which are listed on the EPPR website training portal as openly available training opportunities

Lead/co-leads: Arctic States and PPs - MER EG Chair

Other partners: MER EG membership comprised of Arctic States, PPs, Observers, and WGs

Rationale and overall objective: Each EPPR member state hosts and/or participates in various training opportunities that, if expanded to include all Arctic Council representatives, could further enhance the training opportunities and collaboration in Arctic-specific areas of interest.

Main activities and interim milestones: With the launch of the new EPPR website the MER EG will develop a training portal to expand offerings for various training opportunities across the Arctic Council. Increased visibility and participation in training opportunities grows response expertise across the EPPR and other WGs.

Timeline/completion date: 2017-2019 and ongoing

Project/activity: Follow-up activities to the Circumpolar Oil Spill Response Viability Analysis (COSRVA)

Lead/co-leads: Arctic States and PPs - Kingdom of Denmark, Norway, U.S.

WG partners: None

Other partners: Observers – WWF; Others – International Association of Oil and Gas Producers (IOGP)

Rationale and overall objective: The COSRVA, to be approved by Ministers in Fairbanks, has the goal of providing more science-based decision-making in Arctic oil spill response

contingency planning. An additional benefit of the study is to identify components or methods used in response countermeasures that could be optimized through additional research and development.

Main activities and interim milestones: Follow-up activities, for example projects or workshops, will be discussed at the EPPR WG meeting in June 2017.

Timeline: 2017-2019

Project/activity: Follow-up activities and implementation of use of the pan-Arctic database

Lead/co-leads: Arctic States and PPs - U.S.

WG partners: None

Other partners: Observers – None; Others – None

Rationale and overall objective: The *Database of Arctic Response Assets*, approved by Ministers in Fairbanks, created a stand-alone, searchable database of major response assets in the Arctic. The database is incorporated into Arctic ERMA, displaying both government- and industry-owned equipment, to provide a geospatial visualization for the database.

Main activities and interim milestones: Follow-up activities, for example projects or workshops, will be discussed at the upcoming EPPR WG meeting in June 2017.

Timeline/completion date: 2017-2019

Arctic Search and Rescue Agreement

Expert Group on Search and Rescue (SAR EG)

In December 2015, EPPR established the SAR EG to promote and assess implementation of the Arctic SAR Agreement. The SAR EG mandate includes acting as a facilitator for high-level, inter-governmental discourse on Arctic SAR issues. The SAR EG will be chaired by a representative from one of the Arctic States. Each Arctic State will designate representatives to serve on the EG. PPs, Observers, and WGs are also welcome to designate a representative. The SAR EG has agreed on a charter to guide its work, which EPPR has approved. Project initiatives and milestones include projects approved by EPPR, or projects that are seeking approval from EPPR. Some of these initiatives and projects may include, but are not limited to, the following.

Project/activity: Evaluate exercise reports, identify lessons learned, develop mitigation recommendations and communicate these to the appropriate bodies

Lead/co-leads: Arctic States and PPs – Norway (SAR EG Chair)

WG partners: None

Other partners: Observers - SAR Exercise participation encouraged; Others – national SAR authorities

Rationale and overall objective: The SAR EG will work to develop an exchange system for common SAR experiences. Exercises and live scenarios from the eight States will provide a varied database of SAR experience. Dissemination of these experiences, lessons learned and best practices will, over time, strengthen SAR service.

Main activities and interim milestones: Collect data from live and table top exercise reports, especially exercises that have common interest for the circumpolar SAR community. Exercises, such as the Arctic exercise series, will be analyzed annually and presented at SAR EG meetings. Results and findings will also be linked to the SAR EG web page. This will be coordinated with the ACGF where EPPR will provide a joint portal.

Timeline/completion date: Ongoing

Project/activity: Develop a circumpolar SAR asset database

Lead/co-leads: Arctic States and PPs - Norway (SAR EG Chair)

WG partners: WGs will be invited to participate

Other partners: Observers - will be invited to participate; Others - will be invited, as appropriate

Rationale and overall objective: To fulfill the ambitions of the Arctic SAR agreement, the SAR EG will develop a project to construct a web-based SAR asset database. Arctic Council WGs, PPs, Observers and other relevant stakeholders, such as Arctic ERMA, will be invited to participate in the project to ensure development of an effective and user-friendly database.

Main activities and interim milestones: The SAR EG will propose the project to EPPR in June 2017. Once approved, the project will begin to build the project team and seek relevant partners. This will be coordinated with the ACGF.

Timeline/completion date: 2017-2018

Project/activity: Support complementary operational fora in their action-oriented efforts, such as SAR exercises. This should extend to collaboration with other bodies, fora, WGs, and academia to compile, identify, analyze and disseminate pertinent recommendations and needs related to Arctic SAR issues.

Lead/co-leads: Arctic States and PPs – Norway (SAR EG Chair)

WG partners: WGs will be invited to participate

Other partners: Observers – will be invited to participate; Others – will be invited to participate, as appropriate

Rationale and overall objective: The SAR EG will work to fulfill the Arctic SAR agreement, especially article 9 and article 10. To that end, the SAR EG has a special responsibility to collect and distribute relevant SAR information to Arctic States, to ensure that SAR services develop using best practices, at all levels of engagement. This includes collecting and analyzing data to define SAR-related trends in the Arctic, and contribute to research and development that supports SAR-related themes.

Main activities and interim milestones: Participate in and observe exercises that are relevant for the circumpolar SAR community. Participate at conferences and meetings where SAR related issues are discussed, at both governmental and non-governmental levels. Contribute to good communication between different actors and levels that work with Arctic SAR, including the ACGF.

Timeline/completion date: Ongoing

Project/activity: Follow-up on the FP-OPP

Lead/co-leads: Arctic States and PP's - Norway, EPPR Secretariat, PAME

WG partners: Have been consulted for input

Other partners: Observers – have been consulted for input; Others – have been consulted for input

Rationale and overall objective: This activity will be used to identify gaps in follow-up to the FP-OPP 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 2019.

Main activities and interim milestones: EPPR, in cooperation with PAME, will continue to report on the status of implementation of the FP-OPP. Currently led by Norway and Canada, the status report on implementation identifies follow-up activities that support the objectives in the framework plan. The report will include input from other Arctic Council WGs and relevant stakeholders capturing activities that are already taking place.

Timeline/completion date: Ongoing

Other EPPR WP items

Project/activity: ARCSAFE

Lead/co-leads: Arctic States and PPs - Norway, Russian Federation, U.S.

WG partners: None

Other partners: Observers – none; Others – none

Rationale and overall objective: This project was approved by EPPR in December 2015. The main goal of the project is to promote cooperation and network activities among the Arctic States to strengthen cross-border prevention, preparedness and handling of maritime incidents or accidents, which may involve a potential release of radioactive substances. Importantly, the project group seeks to disseminate and complement ongoing work in this area by other relevant international bodies such as the International Atomic Energy Agency (IAEA) and the IMO.

Main activities and interim milestones: EPPR will conduct a technical exchange on the subject in June 2017 in conjunction with the first EPPR meeting in 2017.

Timeline/completion date: 2017-2019

Project/activity: Safety systems in the implementation of economic and infrastructural projects

Lead/co-leads: Arctic States and PPs - Russian Federation

WG partners: None

Other partners: Observers – none; Others – none

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 hydrocarbon transportation.

Main activities and interim milestones: In support of these projects, SAR and oil spill response exercises are undertaken annually.

Timeline/completion date: 2017-2019

Project/activity: Arctic Rescue

Lead/co-leads: Arctic States and PPs - Russian Federation

WG partners: None

Other partners: Observers – none; Others – none

Rationale and overall objective: 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 and interim milestones: Activities include 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/completion date: 2017-2019

Communications and outreach

The EPPR website contains information on EPPR EGs, projects, and meeting documents. EPPR reports benefit from being included in the Arctic Council Open Access Repository. In January 2017, EPPR approved a new visual identity that will be used on all future reports and outreach materials. EPPR has also undertaken the production of fact sheets to communicate project results to broader audiences. EPPR continues to develop its presence on Twitter via its account @EPPR_Arctic. The EPPR executive secretary participates in the Arctic Council communications and outreach group.

Administration

EPPR is located in Tromsø, Norway and staffed by the EPPR executive secretary within the ACS. Funding for approved EPPR projects comes from Arctic State identified funds and other funding mechanisms as appropriate. EPPR meets twice a year to discuss projects and priorities identified in the WP, including new projects within the EPPR mandate. EPPR attends meetings of other Arctic Council WGs and TFs as necessary while also contributing to initiatives on cross-cutting issues. From 2015-2017, the U.S. has been responsible for the Chairmanship of EPPR, supported by vice Chairs from the Kingdom of Denmark and Norway. The Kingdom of Denmark will be the Chair from May 2017-2019, supported by vice Chairs from two other countries to be determined prior to the June 2017 EPPR meeting.

2.E. Protection of the Arctic Marine Environment (PAME)

2.E.i. Achievements 2015-2017

Mandate

PAME focuses on the marine agenda of the Arctic Council and provides a unique forum for collaboration on a wide range of activities directed towards the protection and sustainable use of the Arctic marine environment.

PAME's mandate: 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.

Summary of achievements 2015-2017

In follow-up to paragraphs 31-33, 35, 40, 42 and 43 of the Iqaluit Declaration 2015, PAME has, inter alia, undertaken the following work over the course of 2015-2017.

PAME's work has proceeded in accordance with relevant activities captured in PAME's biennial WP as approved by the Arctic Council, including implementation of certain "Arctic Marine Shipping Assessment" (AMSA) recommendations, and policy follow-up on other assessments and reports of the Arctic Council.

PAME cooperates actively with the other Arctic Council WGs in an effort to contribute to improved efficiency and effectiveness of the Arctic Council. Further, PAME works substantively with Arctic inhabitants, including indigenous peoples, to provide a unique forum for collaboration on a wide range of activities directed towards protection of the Arctic marine environment.

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

PAME has a designated Shipping Expert Group (SEG) comprised of national representatives, including PPs, IMO experts, and others, who regularly convene to discuss and advance various AMSA and other Arctic Council shipping-related reports' recommendations. Examples of topics that have received follow-up include: collaboration with international organizations on Arctic related activities of common interest; the establishment of an Arctic Shipping Best

Practices Information Forum; the finalization of a paper entitled “Heavy fuel oil and other fuel releases from shipping in the Arctic and near-Arctic”; finalization of a report prepared for PAME entitled “Possible hazards for engines and fuel systems using fuel oil in cold climate”; the identification of specific projects on mitigating the risks associated with the use and carriage of heavy fuel oil (HFO) by vessels in the Arctic; the finalization of a report on regional reception facilities arrangements in the Arctic; the identification of a project for PAME to report on Polar Code implementation; regular updates on the work of the IMO with respect to black carbon; the identification of criteria for prioritizing PAME’s future shipping-related work; the Arctic Shipping Traffic Database (ASTD), a system for maritime traffic analysis; a joint CAFF/PAME project in developing the ARIAS Strategy and Action Plan, in which PAME contributed to the development of the policy recommendations pertaining to marine invasive alien species; the 4th and final report on the “Status on Implementation of the AMSA Report Recommendations for 2015-2017”, as PAME will be developing an updated framework to guide its shipping related work in the future; and increased collaboration with EPPR (e.g. cross-attendance at WG meetings) on shipping issues of shared interest, including a joint project to develop a compendium of shipping accidents in the Arctic for the period 2005-2017.

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

PAME has worked jointly with CAFF on finalizing the “Arctic protected areas: Indicator report” and the release of the harmonized dataset based on data received from the Arctic States. PAME has held two workshops³ with corresponding websites on MPA networks. PAME also produced an “MPA network toolbox” report which describes area-based conservation measures as tools for designing MPA networks and which highlights connectivity, one of the key elements of MPA networks. A 3rd workshop will be hosted by Sweden and Finland in fall of 2017. PAME collaborates on its MPA activities with CAFF, which is represented as a member of the MPA EG.

Ecosystem Approach to Management (EA)

PAME continues to follow national and international developments regarding EA and to integrate the principles of EA into assessments and management recommendations. Through this, PAME contributes to the follow-ups to the 2013 Kiruna recommendations, building on previous work on Large Marine Ecosystems (LMEs). Work on EA activities is done by the joint EA expert group with participation from other Arctic Council WGs working on marine-related

³ Workshop websites: <http://www.pame.is/index.php/projects/marine-protected-areas/mpa-workshop-september-2016>

issues (e.g. CAFF, AMAP, and SDWG). Implementing the institutional recommendation from the Arctic Council EBM report (Kiruna 2013) to conduct regular review, PAME convened jointly with AMAP and CAFF an international conference on the status of implementation of the ecosystem approach to management in the Arctic, and produced a report on the conference. Building on the outcome of the conference, the EA expert group through PAME produced the report “Status on Implementation of EA in the Arctic.” PAME helped to establish and lead the ICES/PAME Working Group on Integrated Ecosystem Assessment for the Central Arctic Ocean (WGICA). PAME encourages AMAP and CAFF to join the ICES/PAME Working Group.

PAME has noted the importance of close collaboration between the MPA and the EA expert groups.

Arctic Offshore Resource Exploration and Development

The Resource Exploration and Development Expert Group (REDEG) has developed terms of reference based on an information survey that asked Arctic States and PPs to detail their priorities. The REDEG statement of work includes gathering information from members and outside experts on offshore renewable energy, offshore and coastal mining, marine noise from activities, and offshore oil and gas.

The project on *Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities* (MEMA) has produced a Part I report. The MEMA online database is accessible on the PAME homepage. PAME has approached SDWG to explore further collaboration in finalizing the report and following up on its findings.

Based on the results of a survey of PAME members, the REDEG will hear from outside experts on non-emergency issues of Arctic offshore O&G activities for the 2017-2019 WP.

REDEG reviewed the recommendations from the “Systems Safety Management and Safety Culture Report” (2013) and developed an online questionnaire on specific actionable and reportable implementation items and has approached EPPR representatives, who have agreed to coordinate the reporting of these implementation actions.

The “Arctic Offshore Oil and Gas Regulatory Resource (AOGRR)” website provides links to specific information on national websites related to management, regulation, and enforcement of Arctic offshore O&G activities and continues to be updated.

AMSP 2015-2025 implementation plan: PAME approved the AMSP communication plan and the AMSP implementation plan, including the AMSP implementation tracking matrix, in February 2016. The implementation plan is a living document that permits modifications based on, for example, Arctic Council Chairmanship priorities, emerging issues, and outcomes from ongoing assessments and findings. The tracking matrix was developed with the aim to provide a mechanism to systematically track progress and status on the AMSP’s 40 strategic actions. This was accomplished in close collaboration with other Arctic Council WGs to ensure

a transparent and systematic cross-Working Group process and provide a status reporting mechanism to be reflected in their respective work plans as relevant. The aim is to contribute to collaboration on cross-cutting marine-related issues. The 1st “AMSP implementation report” has been produced. It records status on relevant AMSP strategic actions for the period 2015-2017 and identifies follow-up activities, which are reflected in the PAME WP 2017-2019 and other WGs’ WP as per their respective mandates.

Coordination and collaboration with other Arctic Council WGs

PAME actively pursues cooperation with the other Arctic Council WGs and TFs to contribute to improved efficiency and effectiveness of the Arctic Council. PAME collaborated with all Arctic Council WGs on the development of the AMSP implementation tracking matrix and emphasized the importance of their inputs in this work. AMAP and CAFF continue to be engaged in the joint EA EG and co-convened with PAME the international conference on status of implementation of the ecosystem approach to management in the Arctic. In October 2015, SAOs decided that EPPR has the lead on oil pollution prevention, in cooperation with PAME. PAME regularly reaches out to other bodies with recognized competence of relevance to AMSA shipping follow-up activities as a means to identify and – where possible – collaborate on issues of common interest. PAME provided inputs to CAFF on the “Actions for Arctic biodiversity” tracking tool and to EPPR on the “Status report on implementation of the framework plan on oil pollution prevention.” PAME is working with CAFF on projects related to MPA and invasive species. SDWG’s Social, Economic, and Cultural EG contributed to the MEMA project.

2.E.ii. Work plan 2017-2019

Introduction

The PAME WP 2017-2019 was developed according to: PAME’s mandate; priorities identified and recommendations made in Arctic Council-approved reports; direction provided in Ministerial Declarations; follow-up 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 to the scientific and other relevant assessments of the Arctic Council. Additional project proposals may be developed within the scope of this WP between 2017-2019, subject to PAME approval, confirmed lead/co-lead commitment, and financing.

List of individual projects and activities

Arctic Marine Shipping Projects

Project/activity: Collect and report information on the use of HFO in the Arctic

Lead/co-leads: Arctic States and PPs - Canada, U.S. (utilizing the ASTD system)

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: Continue to advance the work by PAME on mitigating risks associated with the use and carriage of HFO by vessels in the Arctic.

Main activities and interim milestones: Collect and report information for the most recent three-year period on the number, types, and routes of ships in the Arctic that used HFO as fuel (including quality or grade) or transported it as cargo, including, if available, the volume of HFO carried as bunker fuel and/or cargo as well as the destination of HFO transported as cargo.

Timeline/completion date: 2017-2019

Project/activity: Collect, report and/or review information about on-shore use by indigenous peoples and local communities of HFO

Lead/co-leads: Arctic States and PPs – U.S., AIA

WG partners: SDWG

Other partners: Observers - CCU; Others - none

Rationale and overall objective: Continue to advance the work by PAME on mitigating risks associated with the use and carriage of HFO by vessels in the Arctic

Main activities and interim milestones: A project in partnership with the SDWG (subject to SDWG confirmation) to collect, report, and/or review information about on-shore use by indigenous peoples and local communities of HFO as well as the extent to which such peoples and communities rely on ships that burn HFO to deliver supplies and provisions.

Timeline/completion date: 2017-2019

Project/activity: Prepare an information paper summarizing PAME's work on HFO

Lead/co-leads: Arctic States and PPs - Canada, PAME Secretariat

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: Continue to advance the work by PAME on mitigating risks associated with the use and carriage of HFO by vessels in the Arctic

Main activities and interim milestones: A project to prepare an information paper summarizing PAMEs work on HFO for possible submission by one or more Arctic States to IMO's Marine Environmental Protection Committee

Timeline/completion date: 2017-2019

Project/activity: Explore the environmental, economic, technical, and practical aspects of the use by ships in the Arctic of alternative fuels

Lead/co-leads: Arctic States and PPs - Norway

WG partners: None

Other Partners: Observers – WWF; Others - none

Rationale and overall objective: Continue to advance the work by PAME on mitigating risks associated with the use and carriage of HFO by vessels in the Arctic.

Main activities and interim milestones: A project to prepare or commission a report that explores the environmental, economic, technical, and practical aspects of the use by ships in the Arctic of alternative fuels, including liquefied natural gas.

Timeline/completion date: 2017-2019

Project/activity: Supporting harmonized implementation of the Polar Code

Lead/co-leads: Arctic States and PPs - Finland, Russian Federation

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The Polar Code entered into force on 1 January 2017. For the Polar Code to be a success it is important to ensure harmonized implementation. To this end, both the IMO and the Arctic Council have major roles. This project will look at how PAME can best report on the Arctic States' implementation of the Polar Code.

Main activities and interim milestones: PAME anticipates finalizing and approving this project proposal at the second PAME meeting in 2017. This project proposes to include activities such as how best to report on the implementation of the Polar Code, examine Port State Control regime statistics on ship compliance, and evaluate challenges, if any, in observing the Polar

Code implementation. Close coordination with the IMO will take place throughout the project period.

Finland will coordinate a related international conference on harmonized implementation of the Polar Code (February 2018 in Helsinki). At the conference, the “Polar Code Implementation Inspection Campaign” will be launched. This represents a related event in the project proposal.

Timeline/completion date: 2017-2019

Project/activity: Collect and summarize information on Arctic State safe and low-impact marine corridor initiatives

Lead/co-leads: Arctic States and PPs - Canada, Iceland, AIA

WG partners: None

Other partners: Observers – none; Others - none

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 and interim milestones: Collect and summarize information on Arctic State safe and low-impact marine corridor initiatives and programs with a view to submitting a report by the first PAME meeting in 2019.

Timeline/completion date: 2017-2019

Project/activity: Compendium of Arctic Shipping Accidents, Joint PAME/EPPR project

Lead/co-leads: Arctic States and PPs – U.S.

WG partners: EPPR

Other partners: Observers – none; Others - none

Rationale and overall objective: Update the database of shipping accidents in the Arctic contained in the 2009 AMSA report.

Main activities and interim milestones: Develop a compendium of shipping accidents in the Arctic for the period 2005-2017 to update the database of shipping accidents in the Arctic contained in the 2009 AMSA report and to provide information useful to considering measures that might be pursued to reduce the risk of accidents.

Timeline/completion date: 2017-2019

Project/activity: Engagement with Observer States on shipping-related work

Lead/co-leads: Arctic States and PPs – U.S., AIA (Shipping EG)

WG partners: None

Other partners: Observers – Republic of Korea, Italy; Others - none

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

Main activities and interim milestones: Develop an approach/framework for more systematically engaging with Observer states on PAME's shipping-related work, and identify opportunities for Observer states to contribute to and/or support such work.

Timeline/completion date: 2017-2019

Project/activity: Update of PAMEs shipping priorities and recommendations

Lead/co-leads: Arctic States and PPs – U.S., Canada

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: Update shipping priorities and recommendations.

Main activities and interim milestones: Develop and adopt updated shipping priorities and recommendations under the three themes of the 2009 AMSA Report (“Enhancing Arctic marine safety; protecting Arctic people and the environment; and building the Arctic marine infrastructure”).

Timeline/completion date: 2017-2019

Project/activity: Operationalization of the ASTD System

Lead/co-leads: Arctic States and PPs - Arctic States (PAME HoDs), ASTD EG, PAME secretariat

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: Operationalize the ASTD database.

Main activities and interim milestones: This activity will operationalize the ASTD, including the construction by 2018 and subsequent operation, administration, and management of a data repository hosted by the Norwegian Coastal Administration as set forth in the Cooperative Framework.

Timeline/completion date: 2017-2018

Project/activity: Operationalization of Arctic Shipping Best Practices Information Forum

Lead/co-leads: Arctic States and PPs - SEG co-Chairs (U.S./Canada), Finland, PAME secretariat

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The project aims to foster increased use of the Arctic Shipping Best Practices Information Forum.

Main activities and interim milestones: Hold an annual meeting of stakeholders and develop a web portal with links to key information related to the IMO's Polar Code to serve as a resource hub of information, guidance, and guidelines that aid decision-makers involved in Arctic maritime navigation and those affected by maritime operations related to the Polar Code.

Timeline/completion date: 2017-2019

Project/activity: Develop an implementation plan for the ARIAS Strategy and Action Plan

Refer to CAFF's WP on this item. CAFF, in cooperation with PAME, will develop an implementation plan for the "ARIAS Strategy and Action Plan."

Ecosystem Approach to Management (EA)

Project/activity: Preparation of guidelines for EA/EBM implementation in the Arctic

Lead/co-leads: Arctic States and PPs - Norway, U.S., Joint EA Expert Group

WG partners: CAFF, AMAP, SDWG

Other partners: Observers – WWF; Others - none

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 LMEs, and new and ongoing EA activities of cross-cutting nature.

Main activities and interim milestones: (1) Prepare guidelines addressing EA/EBM implementation in Arctic (marine) ecosystems (per Iqaluit Declaration) following the EA Framework elements, to include adoption of LMEs for management, descriptions of Arctic ecosystems, integrated ecosystem assessments, ecological objectives, and valuation of ecosystem services. EA Framework elements to receive particular attention are ecological objectives and integrated assessments. 2) Hold 6th EA workshop in late autumn 2017/spring 2018; scoping guidelines for implementing EA in the Arctic, with a focus on Integrated

Ecosystem Assessment. (3) Hold 2nd international EA conference 2018 focusing on Integrated Ecosystem Assessment in the Arctic, MPAs in implementation of EA, review of status of implementation of EA and EA framework elements. Continue to promote common understanding and share knowledge and experiences on EA

Timeline/completion date: 2017-2019

Project/activity: Integrated Ecosystem Assessment of the central Arctic Ocean

Lead/co-leads: Arctic States and PPs – PAME HoDs and PPs (EA EG)

WG partners: None

Other partners: Observers – None; Others – ICES/PICES (North Pacific Marine Science Organization)

Rationale and overall objective: Provide scientific 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 ecosystem approach in the central Arctic Ocean.

Main activities and interim milestones: Continue the emphasis on the development of an Integrated Ecosystem Assessment and report on developments within the ICES/PICES/PAME WG on Integrated Ecosystem Assessment (WGICA) and other ICES activities, as well as within the meetings of scientific experts on fish stocks in the Central Arctic Ocean

Timeline/completion date: 2016-19

Framework for a Pan-Arctic Network of MPAs

Project/activity: Expansion and refinement of the PAME MPA network toolbox

Lead/co-leads: Arctic States and PPs - Canada, Finland, Sweden, U.S.

WG partners: CAFF

Other Partners: Observers – WWF, CCU; Others - none

Rationale and overall objective: Enhance work on a Pan-Arctic Network of MPAs and contribute to some of the near-term actions listed in the Framework for a Pan-Arctic Network of MPAs (near-term actions number 3, 4, 6, 7, and 9).

Main activities and interim milestones: The project will include workshops and associated desktop studies that will build on previous work of the MPA EG. This information will be integrated into the Arctic MPA network toolbox, a practical, hands-on resource for MPA programs and partners in advancing the design and implementation of MPA networks.

Building on the first two MPA network workshops in September 2016 and February 2017, the PAME MPA EG plans to hold two more workshops during the 2017-2019 work cycle to dedicate space for interactions and discussions among technical and country experts (e.g. researchers, government scientists, MPA managers, traditional and local knowledge-holders), PPs and others. Finland and Sweden are organizing the third workshop in September 2017, while Canada may be in a position to organize the fourth in 2018.

Timeline/completion date: 2017-2019

Arctic Offshore Resource Exploration and Development (REDEG)

Project/activity: Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities project (MEMA) Part II Report

Lead/co-leads: Arctic States and PPs – U.S., Canada, AIA, Saami Council, ICC (REDEG)

WG partners: SDWG

Other partners: Observers – none; Others - none

Rationale and overall objective: Review and analyze the existing guidance and requirements in the region for engagement of indigenous peoples and local communities in marine activities to inform the Arctic Council on whether more or consolidated recommendations need to be made.

Main activities and interim milestones: Expand and reanalyze information and finish the MEMA Part II Report. Explore cooperation with SDWG and the PPs to follow up on the MEMA outcomes and other potential projects, such as the *Human Dimensions of Arctic EIAs* (refer to the SDWG project on *Arctic Environmental Impact Assessment and Public Participation – Good Practice Recommendations*).

Timeline/completion date: 2017-2019

Project/activity: Resource Exploration and Development Expert Group (REDEG) Information gathering

Lead/co-leads: Arctic States and PPs – U.S., Canada

WG partners: EPPR

Other partners: Observers – none; Others - none

Rationale and overall objective: The REDEG will focus on information-gathering on a number of germane and timely topics for the next two years.

Main activities and interim milestones: (1) Identify and invite experts to address PAME at biennial meetings and on the following topics: offshore renewable energy; noise in the marine environment; offshore and coastal mining; and offshore O&G. REDEG may also invite information papers – “think pieces” – from PAME members on any of these issues. The first being considered is on marine noise and/or offshore renewable energy. (2) Await results of the online survey that PAME developed and that EPPR is circulating to national regulators on implementation of selected recommendations from the 2014 “Systems Safety Management and Safety Culture Report” for possible information related to future relevant REDEG work.

Timeline/completion date: 2017-2019

Project/activity: Follow-up on the FP-OPP

Refer to EPPR’s WP on this item. EPPR, in cooperation with PAME, will continue to report on the status of implementation of the FP-OPP. Currently led by Norway and Canada, the status report on implementation identifies follow-up activities that support the objectives in the framework plan. The report will include input from other Arctic Council WGs and relevant stakeholders capturing activities that are already taking place

Project/activity: Good practice recommendations for Environmental Impact Assessment (EIA), and public participation in EIA in the Arctic (Arctic-EIA)

Refer to SDWG’s WP on this item. PAME will include this project in the 2017-2019 WP and contribute to this work based on its project plan and relevance to PAME’s work.

Marine Litter in the Arctic

Project/activity: Desktop study on marine litter including microplastics in the Arctic (Phase I)

Lead/co-leads: Arctic States and PPs – Sweden, Norway, Iceland and AIA

WG partners: AMAP as relevant

Other Partners: Observers – e.g. UNEP/GPA; Others - e.g. OSPAR as relevant

Rationale and overall objective: To evaluate the scope of knowledge on marine litter in the Arctic and its effects on the marine environment.

Main activities and interim milestones: Conduct a desktop study on marine litter including microplastics in the Arctic, and – based on its outcomes – explore whether there is a need for a regional action plan on marine litter (possible phase II for the period 2019-2021).

Timeline/completion date: 2017-2019

Project/activity: AMSP implementation status report 2017-2019

Lead/co-leads: Arctic States and PPs - PAME HoDs and the PAME secretariat

WG partners: All as relevant

Other Partners: Observers – none; Others - none

Rationale and overall objective: To track progress on implementation of the AMSP 40 strategic actions and report on its status.

Main activities and interim milestones: Track progress on the AMSP strategic actions and develop an AMSP implementation status report in collaboration with other Arctic Council WGs for the period 2017-2019 for submission to the Arctic Council Ministerial meeting in 2019.

Timeline/completion date: 2017-2019

Capacity building and outreach

Project/activity: Capacity building, information outreach, and collaboration

Lead/co-leads: Arctic States and PPs - PAME Chair/secretariat in collaboration with PAME HoDs and PPs

WG partners: All as relevant

Other partners: Observers – all as relevant; Others - none

Rationale and overall objective: Strengthen information outreach and cooperation and collaboration with international/regional organizations and build the capacity and engagement of indigenous communities and other Arctic inhabitants.

Main activities and interim milestones: Liaise and exchange information with relevant organizations and programs (e.g. UNEP Regional Seas programme), and other regional programs; encourage activities and proposals in support of PPs; strive for the development of outreach and communication efforts and plans for PAME's activities (e.g. through updates on the PAME homepage, brochures, roll-up stands, other communication material).

Timeline/completion date: 2017-2019

Communications 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.

Administration

The PAME international secretariat is hosted by Iceland and located in Akureyri. The secretariat has a staff of three: (1) the executive secretary; (2) an executive assistant and (3) a project officer. 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 U.S. has co-chaired the PAME WG during 2015–2017 period and will continue during the 2017-2019 period. PAME has held four WG meetings, two MPA expert workshops, one Ecosystem Approach conference, and one MEMA workshop, in addition to a number of meetings of the PAME EGs during the U.S. Chairmanship of the Arctic Council.

2.F. Sustainable Development Working Group (SDWG)

2.F.i. Achievements 2015-2017

Mandate

The mandate of the Sustainable Development Working Group of the Arctic Council is to propose and adopt steps to be taken by the Arctic States to advance sustainable development in the Arctic. This includes pursuing opportunities to protect and enhance the environment and the economies, culture, and health of indigenous peoples and Arctic communities. The SDWG focuses on initiatives that provide practical knowledge and contribute to capacity building of indigenous peoples and Arctic communities to respond to local, regional, and global challenges and opportunities.

Summary of achievements 2015-2017

Further to paragraphs 8 to 21 of the Iqaluit Declaration 2015, in the period 2015-2017 the SDWG continued its leadership in addressing the human dimensions of the Arctic within the Council, paying special attention to the impacts of rapid change and efforts to respond to resulting challenges and opportunities. Maintaining a focus on the three pillars of sustainable development - social, economic, and environmental - the SDWG encourages the generation and acquisition of new knowledge, increasing capacity, innovative approaches to the unique challenges and opportunities emerging in the Arctic, and assessing and monitoring Arctic systems relevant to the human dimensions of the Arctic. SDWG makes recommendations and provides key information to SAOs and Ministers on sustainable development in the Arctic. In support of these goals, the SDWG's main achievements for 2015-2017 include:

Assessments and Advancing the Arctic Knowledge Base

Economy of the North 2015 (ECONOR III)

This project, led by Norway, the U.S., Canada, and the Saami Council, is the third such socio-economic assessment since 2006. ECONOR III assesses economic conditions and their ties to the natural resource economy, nature-based livelihoods and culture, by harmonization of disparate circumpolar socio-economic data. This report provides one of the most comprehensive pictures of the development of both cash economies and subsistence economies throughout the Arctic region. It highlights the importance of impacts of climate and environmental change on key economic sectors, and provides time-series data for understanding the development of Arctic societies.

Practical Tools and Innovative Solutions

SDWG continued the Arctic Council's long-term commitment to improving the health and mental wellness of indigenous and Arctic communities through three projects that provide innovative tools and solutions to some of the region's most challenging health issues. The SDWG's Arctic Human Health Expert Group (AHHEG) provided substantial leadership and consultation on these efforts.

Reducing the Incidence of Suicide in Indigenous Groups - Strengths United through Networks (RISING SUN)

This project was led by Canada, the Kingdom of Denmark, Norway, the U.S., and ICC. It follows on the Canadian-initiated mental wellness project of 2013-2015 and the *Hope and Resilience* project carried out during the Chairmanship of the Kingdom of Denmark, 2009-2011. During the 2013-2015 period this project focused on developing best practices found in published literature as well as community-based interventions gleaned from public input. RISING SUN has created a consensus-based set of prioritized outcomes to gauge the success of suicide prevention programs. These outcomes – and tools to measure them – have subsequently been distilled into a toolkit for practitioners and community members. (Website: www.nimh.nih.gov/about/organization/gmh/risingsun/index.shtml).

Operationalizing One Health in the Arctic

The *One Health* project, led by Canada and the U.S., is an approach to assess health risks at the interface between humans, animals, and ecosystems. The concept of One Health is accepted in certain areas of the Arctic and is reflective of the indigenous holistic approach to health, but circumpolar networks can be strengthened to improve capacities for risk identification and response. The project has featured knowledge-sharing events, several publications, and a survey of 334 people living across the Arctic, which demonstrated a strong awareness of and interest in the One Health approach. The project also conducted a table top exercise with more than 40 participants from four countries and two PP organizations. The exercise concluded with action plans for filling gaps in addressing One Health events in the Arctic region. The project, which will continue under the Finnish Chairmanship, has links to other subsidiary bodies, such as AMAP, ACAP, and CAFF.

Improving health in Arctic communities through safe and affordable access to household running water and sewer: Water, Sanitation and Health (WASH)

The WASH project, led by the Kingdom of Denmark and the U.S., addresses an important component of improved health, quality of life, and sustainable development in the Arctic since many Arctic and sub-Arctic residents do not have adequate in-home water and sanitation services. The project is aligned with the SDG goal #6 to “ensure availability and sustainable management of water and sanitation for all.” The WASH project conducted a

survey to document the status of water and sewer services and associated health outcomes in the circumpolar region. In addition, WASH examined climate-related vulnerabilities and adaptation strategies for community water and sewer systems and source-water protection. Two WASH conferences held in Alaska and Greenland, which drew 200 attendees from all Arctic States, highlighted innovative strategies to improve access to Arctic-appropriate WASH services, increase system efficiencies and adapt to environmental change that threatens existing systems. (WIHAH conference website: <http://wihah2016.com/>; Sisimiut Conference website: www.conferencemanager.dk/ArtekEvent2016).

Direct capacity building

Recognizing its commitment to developing the Arctic's most valuable resource - the people that inhabit the Arctic region - SDWG has development projects to directly strengthen capacity at the community level in key economic and social domains. These include:

Arctic Remote Energy Networks Academy (ARENA)

The ARENA project - led by Canada, Finland, Iceland, the U.S., GCI, and AIA - strives to build "energy champions" in Arctic communities by combining Internet, classroom, laboratory, and field study learning opportunities. The inaugural cohort of 20 participants from around the circumpolar region have been selected and are participating in the three-stage program (online preparation, on-site training, post-program network/mentoring) based on a tailor-made curriculum, drawing from best practices established through the experience of organizations operating in the Arctic and throughout the world. Participants will bring back to their home regions knowledge, skills, and tools that facilitate integrating clean energy technologies in their communities, and improve the management of fossil fuel resources used for power production and other local energy needs. (Website: <http://arena.alaska.edu/>).

EALLU – Arctic Indigenous Youth, Arctic Change and Food Culture

EALLU is led by Norway with co-leads from Canada, the Kingdom of Denmark, Russia, the U.S., AIA, and the Saami Council, coordinated by the Association of World Reindeer Herders. The project focused on knowledge-building and experience exchange in and between local indigenous reindeer herding societies in the Arctic, focusing on food culture and youth. The project promoted the vitality of, and increased awareness of, the region's unique food traditions and systems; bridged gaps between elder and youth generations; and contributed to improved mental and physical health of indigenous communities. The EALLU project included over 30 workshops and seminars throughout the circumpolar region co-managed by youth, and has contributed to the recognition and development of traditional food cultures and systems. Key recommendations on food security and culture are summarized in its report

and cookbook, sharing not only the ingredients of the food, but also its critical context and importance. (Website: www.eallu.org)

Online information platforms

To ensure the widest availability of key information to Arctic decision makers, SDWG has leveraged online tools to showcase data and best practices. Scientific knowledge and TLK are essential to improving economic and living conditions at the community, regional, national, and international levels.

Arctic Renewable Energy Atlas (AREA)

This project led by Canada, the U.S., and GCI, has developed an online tool designed to enhance knowledge of best practices and local adaptation actions on Arctic renewable energy and energy efficiency. The initial site visualizes collected renewable energy supply and demand data to improve the end-user experience and provide a tool for decision makers. The next phase will include more qualitative work around best practices and community energy success stories, as well as continued work toward data collection. (Website: www.arcticrenewableenergy.org)

Arctic Adaptation Exchange Portal

Building on a website developed under the Canadian Chairmanship (2013-2015), the Arctic Adaptation Exchange online portal has been enhanced to further the ongoing adaptation and resilience work of the Arctic Council; to include increased visualization tools and significant back-end database work; and to ensure easy portability of the platform between hosts. The portal serves as a central information hub for communities, researchers, and decision-makers across a variety of sectors by bringing the Arctic Council's work on adaptation and resilience, along with other relevant resources, together in one place in support of information exchange and decision-making. (Website: <http://arcticadaptationexchange.com/>)

Meaningful Engagement of Indigenous Peoples and Communities in Marine Activities (MEMA) and MEMA Interactive Online Database

SDWG's Social, Economic, and Cultural Expert Group (SECEG) contributed to this PAME project by providing insight into the human dimension of the Arctic through indigenous perspectives and social scientist consultation. (Website: www.pame.is/index.php/projects/offshore-oil-and-gas/mema)

In addition, SDWG has started building a network of experts for a project on *Gender Equality in the Arctic II* led by Iceland, Finland, Sweden, and AIA. An interim report has been received from *The Arctic as a Food Producing Region*, a project led by Canada, Norway, ICC, and GCI.

Both of these projects will continue and are expected to conclude during the Finnish Chairmanship.

SDWG Strategic Framework

Finally, SDWG built on years of strategic efforts to draft and adopt a streamlined integrated strategic framework, including a strategic vision and implementation plan to guide its work in the medium- to long-term future in light of regional and global developments in relation to sustainable development in the Arctic.

2.F.ii. Work plan 2017-2019

Introduction

Pursuant to its new strategic framework, SDWG, through the lens of the human dimension, will encourage projects and initiatives that strengthen the resilience and well-being of the peoples of the Arctic and promote the three basic sustainable development pillars (social equity, economic development, and environmental protection).

This WP for the period 2017-2019 has been developed taking into account the thematic priorities set out in the strategic framework and will be implemented in accordance with the principles and guidelines contained in that framework and related operating documents.

The SDWG requires the integration of TLK in all projects, as appropriate. Project budgets, start dates, meeting schedules, end dates and anticipated deliverables are contained in the project proposals. Co-leads and partners are listed as of the date of drafting.

The projects identified in this WP consist of both projects that have already been endorsed by SDWG and projects that are under development for future SDWG review and possible endorsement. Additional project proposals may be developed within the scope of this WP between 2017 and 2019.

List of individual projects and activities

Continuing Projects

A number of SDWG projects commenced during the U.S. Chairmanship 2015-2017 period and will continue into the Finnish Chairmanship under their current templates. The following SDWG projects in this category are summarized below in alphabetic order.

Project/activity: The Arctic as a Food-Producing Region

Lead/co-leads: Arctic States and PPs - Canada, Norway, GCI, ICC

WG partners: None

Other partners: Observers – none; Others - Greenland Ministry of Fisheries and Hunting; Norwegian Institute of Bioeconomy Research (NIBIO); University of Copenhagen

Rationale and overall objective: This project will (1) assess the potential for increased production and added value of food from the Arctic; and (2) aim to improve economic and social conditions of Arctic communities.

Main activities and interim milestones: The main activities and interim milestones for this project include compiling regional and national inventories of commercial food producers; a project launch held during the circumpolar agriculture conference held in Reykjavik, Iceland on 6 October 2016; meaningful engagement with indigenous peoples/PPs; value chain analysis based on the inventory of northern food producers; and legal analysis of commercial food production. Activities during 2017 include participation at the AMAP international science conference, 24-27 April 2017 and the special session at the International Congress of Arctic Social Science (ICASS IX), 8-12 June 2017.

Timeline/completion date: The project will run through three stages organized by engagement, research, and dissemination. Target completion date is March 2019.

Project/activity: Arctic indigenous youth, climate change and food culture (EALLU)

Lead/co-leads: Arctic States and PPs - Canada, Kingdom of Denmark, Norway, Russian Federation, U.S., AIA, Saami Council

WG partners: None

Others partners: Observers – the Association of World Reindeer Herders, UArctic; Others - none

Rationale and overall objective: Building on the work under the U.S. Chairmanship, the project focuses on further knowledge-building and experience exchange in and between local indigenous reindeer herding societies in the Arctic, focusing on food culture and youth.

Main activities and interim milestones: The project will plan and implement international seminars and workshops on Arctic indigenous food culture, involving Arctic indigenous reindeer herding youth, contributing to competence building, education and development, and bridging knowledge gaps between the generations of indigenous elders and youth on food culture.

Timeline/completion date: The project timeline was set with an anticipated final phase completed during the Finnish Chairmanship.

Project/activity: Arctic Remote Energy Networks Academy (ARENA)

Lead/co-leads: Arctic States and PPs - Canada, Finland, Iceland, U.S., GCI, AIA

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: SDWG will continue to assist in capacity building by sharing knowledge and establishing professional networks related to the transition from diesel to hybrid and renewable energy systems through a combination of a webinar series and on-site programs. Participants will bring back to their home areas knowledge, skills, and tools that facilitate integrating clean energy technologies in their communities, and improve the management of fossil fuel resources used for power production and other local energy needs.

Main activities and interim milestones: ARENA combines Internet, classroom, laboratory, and field study learning opportunities, drawing from best practices established through the experience of the organizations operating in the Arctic, and throughout the world.

Timeline: The project is expected to be completed during the Finnish Chairmanship.

Project/activity: Arctic Renewable Energy Atlas (AREA)

Lead/co-leads: Arctic States and PPs - Canada, U.S., GCI

WG partners: None

Other partners: Observers – Italy, Netherlands, Northern Forum; Others - the U.S. Department of Energy, the National Renewable Energy Laboratory, Natural Resources Canada, the Arctic Portal, the Institute of the North, and the International Renewable Energy Agency

Rationale and overall objective: SDWG will build on AREA's online tool that enhances knowledge of the best practices and local adaptation actions on Arctic renewable energy and energy efficiency. The expanded tool will visualize collected renewable energy supply and demand data in addition to Arctic-wide local community success stories to inform decision-makers and promote responsible investment.

Main activities and interim milestones: Project leads will continue to work with Arctic States and relevant international bodies to amass renewable energy data for inclusion in the online atlas. The leads will also build a library of online multimedia content presenting the local perspective and highlighting community-level success stories. All information will be provided free of charge and will use Geographic Information Systems (GIS), story mapping, and advanced visualization tools.

Timeline/completion date: The project is scheduled to conclude during the Finnish Chairmanship.

Project/activity: Gender Equality in the Arctic II

Lead/co-leads: Arctic States and PPs - Iceland, Sweden, Finland, AIA

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: Objectives of this project are: (1) to enhance and foster relations between gender equality experts of Arctic States and PPs and (2) to create a formal network of experts for information sharing and development of issues relevant to advancing gender equality in the Arctic.

Main activities and interim milestones: An expert network will form a steering group to develop a WP for the Finnish Chairmanship in the spring of 2017. The work will focus on developing an inventory of previous projects, outcomes, and ongoing work in the field of gender equality so as to demonstrate the many individual projects and existing collaborations in this field in the Arctic.

Timeline/completion date: Over the course of the Finnish Chairmanship, the formal network of experts will advance the work of the Arctic Council and the SDWG in this area.

Project/activity: Operationalizing a One Health approach in the Arctic, Part 2 (One Health)

Lead/co-leads: Arctic States and PPs - Canada, U.S.

WG partners: None

Other partners: Observers - none; Others - none

Rationale and overall objective: Part 2 of the *Operationalizing a One Health approach in the Arctic (One Health)* project seeks to expand co-equal, all-inclusive collaborations across multiple scientific disciplines and Arctic communities in order to enhance the resiliency of Arctic inhabitants through a better understanding of the impacts of climate change on health risks to people, animals, and the environment.

Main activities and interim milestones: Planned activities include (1) continued focus on knowledge and information sharing; (2) further simulation exercises that identify strengths and areas for further capacity building; and (3) cooperative initiatives to address observed events, such as those identified by the CLEO network.

Timeline/completion date: This project is expected to be completed during the Finnish Chairmanship.

New Projects

The following are new projects that the SDWG has endorsed for 2017-2019 (listed in alphabetical order):

Project/activity: Arctic Energy Summit 2017

Lead/co-leads: Arctic States and PPs - Finland, Iceland, Russian Federation

WG partners: None

Other partners: Observers – none; Others – the Institute of the North

Rationale and overall objective: The summit is intended to share best practices and emerging technology and process innovation as well as relevant and topical policy issues related to development, implementation and use of energy systems throughout the circumpolar Arctic.

Main activities and interim milestones: The Arctic Energy Summit is a three-day conference addressing Arctic energy that includes O&G development, renewable energy potential and projects, and remote energy systems. The summit will produce recommendations for suggested pilot projects, as well as identified research gaps and best practices. Previous summits have not been endorsed SDWG projects.

Timeline/completion date: The 4th Arctic Energy Summit will take place 18-20 September 2017.

Project/activity: Arctic Generation 2030

Lead/co-leads: Arctic States and PPs – Norway, Finland

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: This project is intended to forge a strong and globally connected community of future Arctic leaders through an investment in the human capital of the region with focus on training, networking, and partnerships led by the region's primary actors in education, research, public policy, and business.

Main activities and interim milestones: The project will focus initially on coastal and marine-related economic activity, education, training, and network building. It will implement a series of collaborative activities between key actors in northern business, higher education, science and capacity building to improve relationships among young northern students, future indigenous leaders, early-career scientists, and business experts. There will be three main

avenues of activities: training and mentorship, community building, and analysis of the effectiveness and impact of the project and related efforts.

Timeline/completion date: Pilot implementation 2017-2019; evaluation, identification of additional partners, and development of full project fall 2018; pilot is to be completed by fall 2019.

Project/activity: Good Practice Recommendations for Environmental Impact Assessment (EIA) and Public Participation in EIA in the Arctic

Lead/co-leads: Arctic States and PPs - Finland, Kingdom of Denmark, Canada

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The objectives of the project are: (1) to ensure that environmental considerations specific to the Arctic, including social and health aspects, are explicitly addressed and incorporated into the planning, design, and decision-making of large-scale projects, (2) to identify existing good practices through sharing and learning with the aim of developing good practice recommendations for EIA in the Arctic, (3) to promote meaningful practices of public participation, especially the participation of indigenous peoples, and the integration of TLK in EIA within the Arctic, and (4) to build a viable network of Arctic EIA actors.

Main activities and interim milestones: (1) During 2017, gather information and set up forms of cooperation, identify existing good practices and develop recommendations; establish webpages for the project; hold a “kick-off” workshop; and engage stakeholders at the Arctic Energy Summit 2017. (2) During 2018, process and distribute the results of the good practice examples; conduct workshops to share recommendations and strengthen the network. (3) By July 2019, finalize the project and publish/promote “Good Practice Recommendations” for environmental impact assessment and related public participation in the Arctic.

Timeline/completion date: Project commences in May 2017 with anticipated completion in July 2019.

Project/activity: Arctic Children: Preschool education and smooth transition to school

Lead/co-leads: Arctic States and PPs – Russian Federation, Finland, RAIPON

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The nomadic school project is aimed at the analysis and evaluation of educational practices that do not interrupt the traditional ways of life of indigenous peoples – for example, children of nomads – and that provide them with the knowledge and skills necessary to function fully as effective members of both their own communities and mainstream society. The main objective of the project is the collection of data related to best international practices and their implementation, the exploration of an optimal curriculum and education process organization, and the creation of Arctic nomadic tutoring system.

Main activities and interim milestones: TBD

Timeline/completion date: TBD

Project/activity: Solid Waste Management in Small Arctic Communities

Lead/co-leads: Arctic States and PPs - Canada, Finland, AIA

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The project goals include: an examination of current best practices in solid waste management; a determination of potential needs for policy actions; assessment of the potential for recycling/reusing plans to reduce waste and provide revenue; an examination of programs to educate communities and raise awareness about waste management; and an assessment of contaminants issues that will include close cooperation with ACAP and possibly the AEC.

Main activities and interim milestones: Not yet determined

Timeline/completion date: Not yet determined

Project/activity: Teacher Education for Diversity and Equality in the Arctic

Lead/co-leads: Arctic States and PPs - Canada, Finland, Norway, Russian Federation

WG partners: None

Other partners: Observers - University of the Arctic; Others - none

Rationale and overall objective: The project is intended to enhance teacher education for early childhood and basic education for sustainable development of the Arctic region. The overall beneficiaries of the project are children and their families residing in the Arctic region, who will benefit from improvements in pedagogy, culturally relevant teaching, and community-sensitive teaching.

Main activities and interim milestones: During 2017: establish networks of teacher education institutions, teachers, teacher educators, policy-makers and researchers; conduct planning research; conduct two international symposia on teacher education; collect data; and conduct two online seminars. During 2018: conduct research activities; publish the special issue of education in the North; conduct local and regional summits for teachers, teacher educators, policy-makers, and researchers.

Timeline/completion date: 2017- March 2019

Project proposal under development

The following project represents a new initiative currently under deliberation within the SDWG.

Project/activity: Arctic Sustainable Energy Futures Toolkit

Lead/co-leads: Arctic States and PPs – (TBD - Proposed by GCI, AIA, Canada)

WG partners: None

Other partners: Observers – none; Others - none

Rationale and overall objective: The objective of this project is to create a proactive and comprehensive long-term energy planning process for communities in the Arctic, namely, the Arctic Sustainable Energy Futures Framework (ASEFF). ASEFF will be a community-centric process that brings together stakeholder groups to create more socially desirable and economically feasible energy solutions for Arctic communities.

Main activities and interim milestones: There is a three-stage implementation plan for the ASEFF: (1) development of the ASEFF Toolkit, (2) ASEFF Toolkit launch in 6-8 communities, and (3) structuring of the “Arctic Sustainable Energy Futures Fund” to help fully realize the energy initiatives proposed in the community plans.

Timeline/completion date: 2017-2019

Possible follow-on projects

The following projects commenced during previous Chairmanships and a follow-on phase may be proposed during the Finnish Chairmanship, pending submission and endorsement of a new project template for each project.

Project/activity: Arctic Adaption Exchange Portal

Lead/co-leads: Arctic States and PPs – (TBD)

WG partners: None

Other partners: Observers – none; Others: none

Rationale and overall objective: During the Canadian Chairmanship of the SDWG (2013-2015), this project established an online portal that promotes community exchange and dissemination of information to support innovative approaches to climate change adaptation. The portal's visualization platform and database back-end were enhanced during the U.S. Chairmanship. The follow-on work to this project is currently being formulated.

Main activities and interim milestones: Not yet determined

Timeline/completion date: Not yet determined

Project/activity: Operationalizing Mental Wellness and Suicide Prevention (follow-on to RISING-SUN)

Lead/co-leads: Arctic States and PPs – (TBD)

WG partners: None

Other Partners: Observers – none; Others - none

Rationale and overall objective: The *Reducing the Incidence of Suicide in Indigenous Groups Strengths United through Networks* initiative under the U.S. Chairmanship designed a common, science-based set of metrics to evaluate the key correlates and outcomes associated with suicide prevention interventions across Arctic States. The next phase will likely focus on outreach and educational efforts that aim to ensure implementation and utility at the local level while also empowering local communities.

Main activities and interim milestones: Plans include (1) education about and dissemination of the RISING SUN toolkit, (2) use of regional webinars to receive feedback on and improve utility of the toolkit, and (3) discussion of regional efforts to validate measures for outcomes identified through the RISING SUN initiative.

Timeline/completion date: The follow-on activities are projected to conclude during the Finnish Chairmanship.

Other activities

Project/activity: International Circumpolar Surveillance (ICS)

Lead/co-leads: Arctic States and PPs – Arctic Human Health EG

WG partners: None

Other partners: Observers – none; Others – none

Rationale and overall objective: The ICS network is entering its 18th year; it launched as an Arctic Council/SDWG endorsed project in 1999 and SDWG through the Arctic Human Health EG continues to follow ICS's work closely. ICS is a network of public health laboratories for monitoring invasive bacterial infections in the circumpolar North. ICS has added tuberculosis surveillance to the other five bacterial pathogens and is continuing the partnerships to maintain proficiency testing among the network reference labs. ICS research networks have expanded to include invasive bacterial diseases, climate change-related infectious diseases, viral hepatitis, *helicobacter pylori* infections and tuberculosis. The diseases and issues identified through ICS are used to inform AHHEG activities and provide expert advice to SDWG.

Main activities and interim milestones: The ICS will report to AHHEG after its September 2017 and August 2018 meetings, providing the EG with an opportunity to consider opportunities for possible cooperation.

Timeline/completion date: Not yet determined

Project/activity: SECEG activities in relation to PAME's MEMA project

Lead/co-leads: Arctic States and PPs - SDWG's Social, Economic, and Cultural EG

WG partners: PAME

Other partners: Observers – none; Others – none

Rationale and overall objective: PAME is discussing the findings of the MEMA report and considering possible follow-up actions.

Main activities and interim milestones: The nature of possible follow-up actions will be subject to discussions in SDWG, but possibilities could include unified and widely applicable guidelines across sectors of marine and terrestrial activities, or a set of principles of meaningful engagement, or an evaluation of the implementation of existing guidance.

Timeline/completion date: Not yet determined

Project/activity: Community use of HFO

Lead/co-leads: Arctic States and PPs – (TBD)

WG partners: None

Other Partners: Observers – none; Others – none

Rationale and overall objective: PAME has requested collaboration on its *HFO in the Arctic* project, specifically examining on-shore use by indigenous peoples and local communities of HFO, as well as the extent to which peoples and communities rely on ships that burn HFO to deliver supplies and provisions.

Main activities and interim milestones: Not yet determined

Timeline/completion date: Not yet determined

Communications and outreach

Each SDWG project has a communications element. The SDWG is currently developing a communications plan in conjunction with the new SDWG strategic framework. Examples of activities 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.

Administration

The SDWG secretariat is located in Ottawa. The executive secretary is the only staff member. The secretariat is currently operated under a contract funded primarily by Canada. Secretariat budget details for 2017-2019 are not known at this time. During the U.S. Chairmanship, the SDWG held four plenary meetings. From 2017-2019, Finland will chair the SDWG, and the U.S. and the Saami Council will serve as vice Chairs. The SDWG meeting schedule for 2017-2019 has not yet been released.

3. Task Forces and other subsidiary bodies: Report on achievements in 2015-2017 and work plans for 2017-2019

3.A. Task Force on Enhancing Scientific Cooperation in the Arctic (SCTF)

Mandate

The SCTF mandate as articulated in the 2013 Kiruna Declaration is to “Establish a Task Force to work towards an agreement on improved scientific research cooperation among the eight Arctic States”. In 2015, the Iqaluit Declaration “acknowledged the importance of scientific cooperation to the circumpolar region, noted the work on Enhancing Scientific Cooperation in the Arctic, and decided to extend the Task Force mandate, including to work towards a legally-binding agreement on scientific cooperation, with a view to completing its work no later than the next Ministerial meeting.”

Summary of achievements during 2015-2017

Under the co-Chairmanship of representatives from the Russian Federation and the U.S., the SCTF met five times between 25 February 2015 and 8 July 2016 to negotiate the text of a legally-binding agreement on scientific cooperation, building on work including preliminary texts developed under the SCTF during the previous Chairmanship. All Arctic States participated in the meetings, along with some PPs, WGs, and Observers. In addition to these meetings, substantial inter-sessional work was conducted. At the ninth and last SCTF meeting in Ottawa, Canada, on 6-8 July 2016, the Arctic States reached agreement on an *ad referendum* text. Between July 2016 and May 2017, the Arctic States completed their internal review and necessary translations.

Deliverables for the Fairbanks Ministerial

The SCTF concluded its work by developing the text of a legally-binding “Agreement on Enhancing International Arctic Scientific Cooperation” (“Agreement”) for signature by the Ministers at the Fairbanks Ministerial, per its mandate. This will be the third legally-binding agreement negotiated under the auspices of the Arctic Council.

The purpose of the Agreement is to enhance cooperation in scientific activities to increase effectiveness and efficiency in the development of scientific knowledge about the Arctic.

Among other provisions, the Agreement will facilitate access by the eight Arctic States to geographic areas that each State has identified, including entry and exit of persons, equipment and materials; access to research infrastructure and facilities; and access to research areas.

The Agreement calls for the Parties to promote education, career development, and training opportunities for early career scientists to foster future generations of Arctic researchers.

The Agreement contains provisions encouraging the use of traditional and local knowledge and confirms that the Parties have the discretion to extend benefits under the Agreement to non-Parties (including Arctic Council Observer states) when they cooperate with Arctic States.

The Agreement calls for designation of competent authorities within each Party to act as points of contact. The Depositary for the Agreement will be the Government of the Kingdom of Denmark.

The SAOs recommend that the Ministers sign the Agreement at the Ministerial Meeting in Fairbanks, Alaska.

3.B. Task Force on Arctic Marine Cooperation (TFAMC)

Mandate

Ministers established the TFAMC through the Iqaluit Declaration “to assess future needs for a regional seas program or other mechanism, as appropriate, for increased cooperation in Arctic marine areas”. The detailed work plan in the SAO Report to Ministers at Iqaluit directs: “the Task Force should deliver a report to Ministers in 2017 identifying future needs for strengthened cooperation for Arctic marine areas, as well as whether the Council should begin negotiations on a cooperation mechanism for Arctic marine areas – ideally naming the specific mechanism - and/or any other recommendations it may deem appropriate.”

Summary of achievements during 2015-2017

Under the co-Chairmanship of the U.S., Norway, and Iceland, the Task Force met five times, with participation from all Arctic States and three PPs. Arctic Council WG representatives from AMAP, CAFF, EPPR, and PAME participated in the meetings as invited experts as well as several Observer states and organizations.

The Task Force began its assessment of future needs at the broadest level, working from strategic objectives adopted by the Arctic Council at the Ministerial level. This strategic direction served as a point of departure for the Task Force and framed its deliberations.

In accordance with its mandate, the Task Force looked ahead to the future of the conservation and sustainable use of the Arctic marine environment. The Task Force examined existing mechanisms for cooperation in our region, particularly those within the Arctic Council. The Task Force likewise considered frameworks, fora, and processes beyond the Arctic that are relevant to addressing the challenges and opportunities in a changing Arctic. The Task Force surveyed mechanisms for regional cooperation in marine stewardship around the world. In this connection, ICES, PICES, IASC, OSPAR, HELCOM, and the Sargasso Sea Commission gave presentations about their structures and functions at the first Task Force meeting. The Task Force’s assessment of future needs also took into account global developments and trends relating to marine stewardship.

Deliverables for the Fairbanks Ministerial

At its January 2017 meeting in Copenhagen, the Task Force finalized its report to Ministers, thereby completing its mandate under the Iqaluit Declaration. The report identifies a range of needs and opportunities for enhancing and strengthening the Arctic Council’s role in Arctic marine stewardship. The Task Force’s report additionally recommends to Ministers that the “Task Force should continue to work during the Finnish Chairmanship with a new mandate building upon its work to date, to negotiate the terms of reference for a potential new

subsidiary body and identify potential complementary enhancements to existing Arctic Council mechanisms.”⁴

Task Force on Arctic Marine Cooperation 2017-2019

In its 2017 Report to Ministers, the Task Force concluded that the needs identified in Section I of the Report could best be addressed in a manner consistent with our shared value of complementing, rather than duplicating, the Arctic Council’s existing marine cooperation, by situating any new marine cooperation mechanisms within the Arctic Council. In particular, the Task Force sees promise in further exploring the establishment of a new Arctic Council subsidiary body, in combination with complementary enhancements to existing Arctic Council mechanisms. In view of the extensive marine cooperation already underway within the Arctic Council, identifying the optimal functions, competence, and responsibility of a possible marine cooperation subsidiary body, and other coordinated enhancements to the Arctic Council, is a detail-intensive endeavor that extends beyond the Task Force’s initial two-year mandate. Accordingly, the Senior Arctic Officials recommend that the Task Force continue to work during the Finnish Chairmanship (2017-2019), with a new mandate building upon its work to date, to negotiate the terms of reference for a possible new subsidiary body and identify complementary enhancements to existing Arctic Council mechanisms. It should be noted that a decision by Ministers to provide this Task Force with a new mandate would not constitute a decision to establish a future subsidiary body for marine cooperation. Arctic Council Ministers would consider this decision at the 2019 Ministerial meeting.

Name: Task Force on Arctic Marine Cooperation (TFAMC)

Co-Chairs: TBD

Members: Representatives from Arctic States and Permanent Participants, and Arctic Council Working Group Chairs or their designees. Observers are permitted to attend as per the Arctic Council’s rules of procedure. Outside experts may be invited to meetings as appropriate.

Deliverables and timing: Terms of reference for a new subsidiary body to address the needs identified in the TFAMC’s 2017 “Report to Ministers”, as well as any recommendations for potential complementary enhancements to existing Arctic Council mechanisms to address these needs.

Objectives: During the Finnish Chairmanship, the TFAMC should build upon its work during the U.S. Chairmanship by developing terms of reference for a potential new Arctic Council subsidiary body to address the needs identified in section 1 of the TFAMC’s 2017 “Report to Ministers,” as well as any recommendations for potential complementary enhancements to

⁴ The Task Force shares the understanding that the decision on the establishment of a subsidiary body would only follow agreement on the terms of reference for such a body.

existing Arctic Council mechanisms to address these needs. For each need identified by the Task Force in its 2017 “Report to Ministers,” the Task Force should examine what capacity to address the need presently exists within the Arctic Council, where additional capacity is needed, and the optimal division of labor between a new marine subsidiary body and existing mechanisms.

In negotiating terms of reference for a possible new subsidiary body, the Task Force should, *inter alia*:

- Define the competence, geographic scope, functions, and responsibilities of a possible new subsidiary body and how it will work with existing Arctic Council mechanisms (e.g. SAOs, Permanent Participants, and Working Groups);
- Ensure a possible new subsidiary body will complement and enhance the marine stewardship work already taking place within the Arctic Council;
- Identify a process for phasing in and adding new functions over time;
- Define relationships between a possible new subsidiary body and other relevant international and regional bodies and organizations; and
- Identify financial and human resource implications.

Timeline: The Task Force should hold its first meeting no later than fall 2017, and should complete its work in time for appropriate consideration by SAOs and Ministers in advance of the 2019 Ministerial meeting.

Administration: Meetings of the Task Force should take place back-to-back with meetings of the Protection of the Arctic Marine Environment (PAME) Working Group. The Arctic Council Secretariat should administratively support the Task Force.

3.C. Task Force on Telecommunications Infrastructure in the Arctic (TFTIA)

Mandate

In the Iqaluit Declaration, Ministers of the Arctic States “decide[d] to establish a telecommunications infrastructure experts group to develop a circumpolar infrastructure assessment as a first step in exploring ways to improve telecommunications in the Arctic, and report to Ministers in 2017”.

As set out in the “Senior Arctic Officials’ Report to Ministers” from 2015, the Task Force on Telecommunications Infrastructure in the Arctic, or TFTIA, was mandated to “... coordinate a circumpolar assessment of telecommunications infrastructure and networks. The Task Force would deliver a completed assessment to include, among other things, recommendations for public-private partnerships to enhance telecommunications access and service in the Arctic.”

Summary of achievements 2015-2017

As mandated, the TFTIA prepared a circumpolar assessment of telecommunications infrastructure and networks, as well as a set of findings and recommendations meant to encourage and assist with the development of improved telecommunications infrastructure in the Arctic. The assessment outlined the needs of local communities in the Arctic, as well as the needs of other categories of users, such as the scientific community and search-and-rescue operators. The assessment also:

- summarized the national priorities and infrastructure of the eight Arctic States;
- offered an overview of technologies that are available to provide connectivity in the Arctic;
- provided a basic assessment of the existing gaps in service provision in the Arctic;
- identified several common, recurring themes from the assessment;
- introduced three common models for financing telecommunications improvements, including public-private partnerships;
- provided a list of findings on the current status of telecommunications in the Arctic, based on work conducted by the Task Force;
- produced a series of “heat maps” showing the extent and type of coverage around the Arctic; and
- developed recommendations regarding the continuation of the Arctic Council’s work in this subject area.

This assessment is a successful effort to bring this information together in a single report, and it represents a significant contribution to understanding the state of connectivity around the circumpolar Arctic.

Finally, the TFTIA's collaboration with the Arctic Economic Council, an outside independent body, has served as a useful case study for possible future collaboration between Arctic Council subsidiary bodies and outside entities. In this case, the AEC served as an invited expert to the TFTIA, allowing collaboration with, and input from, relevant private-sector representatives who were not serving on the TFTIA as part of State, PP, or Observer delegations.

Deliverables for the Fairbanks Ministerial

The TFTIA's completed assessment (containing the requested recommendations) is the Task Force's deliverable for the 10th Arctic Council Ministerial meeting.

Task Force on Improved Connectivity in the Arctic 2017-2019

Name: Task Force on Improved Connectivity in the Arctic (TFICA)

Improved connectivity in the Arctic can strengthen resilience and support sustainable development for indigenous peoples and local communities. Connectivity is critical for search and rescue in the Arctic, and necessary for current and future research in the region. Well-functioning communication networks allow better access to education, healthcare, and commerce, and they enhance citizens' participation in civic life and improve delivery of services.

The TFTIA had the mandate to coordinate a circumpolar assessment of telecommunications infrastructure and networks. The TF recommended in its report that the Arctic Council should continue a strong and enduring focus on telecommunications infrastructure and services, and that future research on, or development of, telecommunications infrastructure and services should take into account the needs of indigenous peoples and local communities, and businesses, tourism, and researchers. Emphasis should also be given to developing connectivity that supports maritime and aeronautical users and, in particular, search and rescue efforts.

Members: The TF would consist of representatives from the Arctic States and PPs. The Arctic Council's six WGs, as well as its Observers, are encouraged to participate in the work of the TF. The representatives should have expertise in economic, technical, financial and/or societal questions and, where possible, the Arctic States and PPs should consider naming experts with the needed knowledge and expertise to take part. In addition, the TF will invite experts, such as from the private sector and academia, to participate in TF meetings and contribute as appropriate to the work of the TF.

Chair [and/or co-Chairs]: TBD

Objective: The TFICA will be formed to continue the work of the TFTIA, and will build upon the experience of the telecommunications industry to deepen the analyses of the different user needs versus the available technologies and services in order to achieve improved connectivity in the Arctic. The TFICA should report directly to the SAOs and deliver a final report to Ministers in 2019.

Tasks:

- Identify which geographical areas and for what type of user needs common pan-Arctic solutions are necessary. Also, within that scope, identify gaps within the existing infrastructure and come up with recommendations on how these gaps can be overcome;
- Examine the possibilities to encourage investments in telecommunications in the Arctic, such as public private partnerships (PPPs), and provide the exchange of best practices;
- Explore the role of new (pan-Arctic, global, or otherwise) technologies that are coming on board in the near future and analyze how these can help to meet needs of users in the Arctic; and,
- Recommend how the Arctic Council should continue its work on telecommunications following the conclusion of this TF.

The TF would provide regular updates to SAOs and seek guidance as needed.

The TF would coordinate with the Arctic Council's six WGs, in particular SDWG and EPPR, to gather input. In addition, the TF will seek input from industry representatives, including the Arctic Economic Council, on current capabilities and ongoing developments in the telecommunications industry. As needed, members of the TF should attend meetings of the WGs and/or AEC.

Timeline: The TF would hold its first meeting no later than autumn 2017. A final report would be delivered to the Ministers and presented at the 2019 Ministerial meeting.

Resources and budget: Meetings will be hosted on a voluntary basis with costs financed by the host country for each meeting. Travel costs and accommodation will be covered by participating delegations.

Administration: The Arctic Council Secretariat should administratively support the Task Force.

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

Mandate

In the 2015 Iqaluit Declaration, the Ministers of the Arctic Council adopted the “Framework for Enhanced Action to Reduce Black Carbon and Methane Emissions” (“Framework”). Under the Framework, Arctic States committed “to take enhanced, ambitious, national and collective action to accelerate the decline in our overall black carbon emissions and to significantly reduce our overall methane emissions,” and to work with Arctic Council Observer States and others “to also reduce emissions produced beyond the borders of Arctic States.” Arctic States further committed “to adopt an ambitious, aspirational and quantitative collective goal on black carbon” by the 2017 Ministerial meeting, and submit biennial national reports on their existing and planned actions to reduce black carbon and methane, as well as national inventories of these pollutants and projections of future emissions, where available.

To help implement these commitments, the Framework establishes an Expert Group, to be chaired by the nation holding the Arctic Council Chair for that two-year cycle. The Expert Group is tasked with developing a biennial “Summary of Progress and Recommendations” based on the national reports and other information as appropriate. Observer States are invited to join the Arctic States in implementing the Framework, and to participate in the Expert Group upon submission of a national report.

Summary of achievements during 2015-2017

In response to the Framework, all Arctic States submitted reports on their national black carbon and methane emissions and actions, as did eight Arctic Council Observer states (France, India, Italy, Japan, Poland, the Republic of Korea, Spain, and the United Kingdom) and the European Union. Some of these countries developed black carbon emissions inventories and projections for the first time, and – as committed under the Framework – will continue to improve their inventories and projections over time. All national reports have been made publicly available on the Arctic Council website.

The Expert Group held three meetings and conducted substantial intersessional work in order to deliver on its mandate. Recommendations were developed to reflect best practices for reducing black carbon and methane emissions, and an ambitious, collective, aspirational quantitative goal on black carbon has been identified.

Deliverables for the Fairbanks Ministerial

In accordance with the Framework for Action, the EGBCM has produced a “Summary of Progress and Recommendations” report. The report:

- summarizes black carbon and methane inventories and emissions projections for Arctic States and for Observer states, where available;
- recommends specific actions for black carbon and methane mitigation in four priority sectors: diesel-powered mobile sources; oil /gas methane leakage, venting and flaring; residential wood combustion appliances; and solid waste.

In the report, the Expert Group proposes the following ambitious, aspirational, and quantitative collective goal on black carbon:

- “Recognizing that several Arctic States have already drastically reduced emissions, Arctic States resolve to collectively further reduce their black carbon emissions by at least 25-33 percent below 2013 levels by 2025.”
- “Moreover, recalling our commitment under the Framework to continually improve our black carbon inventories and projections, as well as to improve ambition and promote enhanced action over time, we resolve to revisit this goal during the Finnish Chairmanship and future Chairmanships at the discretion of the Chair as merited.”

4. Arctic Resilience

The Arctic faces a number of prominent and immediate challenges in the face of dramatic warming, growing populations, and increased pressures on natural resources. Rapid change is making long-term planning and management increasingly difficult as social and ecological systems in the Arctic surpass thresholds which may be irreversible. Indigenous residents of the Arctic have always adapted to environmental changes, but the current rate and intensity of climate change, combined with other social, environmental, economic, and political shifts and constraints, make adaptation extremely challenging in today's Arctic. It is important for governments, indigenous peoples and local communities to work collaboratively to build resilience to social-ecological changes.

During the U.S. Chairmanship, WGs led a number of initiatives to address the need for resilience-building in the Arctic, including the expansion of the Circumpolar Local Environment Observers network (ACAP), the development of the Arctic Invasive Alien Species strategy (CAFF), the incorporation of resilience components to each of the Adaptation Actions for a Changing Arctic (AACAC) regional reports (AMAP), and the operationalization of the One Health approach (SDWG). These initiatives demonstrate new ways that Arctic States are working together to build community and ecosystem resilience to the dramatic social, economic, and environmental changes taking place in the region.

The Arctic States, PPs, WGs, and Observers also worked together to develop a regional framework to increase the understanding of risks and uncertainties, and support and encourage measures to improve the resilience of threatened communities and ecosystems. The Arctic Resilience Action Framework (ARAF) will ensure that resilience-building activities continue, within the Arctic Council and beyond, in a focused, collaborative manner. The ARAF describes a set of shared priorities for building resilience and provides mechanisms for coordinating actions, sharing experiences, and adapting approaches to meet new or emerging challenges. The overall goal of the ARAF is to mobilize and use the broad competence and expertise of all Arctic States, PPs, WGs, and Observers, along with other Arctic stakeholders, to provide the information, tools, analysis, and capacity necessary to address immediate and future resilience and adaptation needs in the circumpolar Arctic.

To implement the ARAF, Arctic States, PPs, and WGs will share actions that they are taking to build resilience and a team of experts will identify opportunities to measure and evaluate progress. Reflecting the cross-cutting nature of resilience, the Arctic Council Secretariat (ACS) will assist in the coordination of the implementation of the ARAF. This work will be conducted within the Sustainable Development Working Group, in coordination with other Working Group secretariats, and shall be reviewed by SAOs after two years. Working Group secretariats shall provide existing information on resilience-relevant WG activities to the ACS. Finland will host the first biennial Arctic Resilience Forum in 2018 to evaluate and discuss the Arctic's collective progress towards building resilience.

The ARAF builds on lessons from the “Arctic Resilience Report” (ARR), an Arctic Council report released in November 2016. The ARR received great media and public interest and was downloaded nearly 10,000 times during the first three months of its release. The ARR identified potential “cliffs” or tipping points – large ecosystem shifts that could significantly impact the ability of social-ecological systems to withstand disruptive change. The report also studied a sample of 25 different communities across the Arctic, assessing the key resilience-building characteristics that enable communities to effectively navigate social and ecological change. Drawing on these findings, the ARR identified ways that the Arctic Council might contribute to strengthening community resilience across the Arctic. A “Synthesis for Arctic Leaders” summarizes key insights from the ARR and identifies areas for further action by communities, policymakers, and other Arctic stakeholders that can build resilience. The areas for further action that the “Synthesis for Arctic Leaders” identifies can be taken forward through the framework provided by the ARAF.

5. Strengthening the Arctic Council

Since its inception in 1996, the Arctic Council has evolved significantly as a forum for addressing circumpolar issues. The Iqaluit Declaration (2015) committed the Arctic States and PPs to strengthen the Arctic Council further. During the U.S. Chairmanship, a number of significant advances took place in this regard, including enhancement of the internal workings of the Arctic Council, improvement in the Arctic Council's internal and external communications, and strengthening of the Council's engagement with Observers and outside entities.

Long-term strategic planning

Although a number of the Arctic Council's subsidiary bodies have adopted multi-year strategies and similar planning documents, the Arctic Council as a whole has never done so. The Arctic States and PPs have agreed that the Arctic Council will now develop a long-term strategic plan. This work will be led by the Finnish Chairmanship. The Arctic States have also agreed on some of the basic principles that should guide the development of the strategic plan, including: (1) form should follow function, (2) the plan should cover a ten-year time frame (but no longer), and (3) the plan should be amenable to adjustment in light of new developments. Other points mentioned for consideration as appropriate were that the plan could consider possible changes in the Council's structure as well as the relationship between the Council and other bodies. The strategic planning effort should keep in mind the Ottawa Declaration (1996), as well as other basic documents of the Arctic Council.

Communication strategy

In 2012, the Arctic Council adopted its first communications strategy. Since then, the Council's communications resources and the landscape in which the Council conducts its work have both changed dramatically. During the U.S. Chairmanship, the ACS worked closely with the Chairmanship and the Arctic Council's permanent contact group for communications to produce an updated communications strategy that reflects these changes and prepares the Council to communicate successfully in the years ahead. The updated communications strategy was approved and adopted at the SAO meeting in Portland, Maine in October 2016. The 2016 communications strategy presents an updated mission and goals. It adds a section on governing principles, and provides a new arrangement of key messages, target audiences and channels. It points out that any meaningful expansion of the Council's communications efforts as they stand at the beginning of 2017 will require additional resources. In addition to the 2016 communications strategy, the Arctic Council adopted new communications and outreach guidelines at the SAO meeting held in Fairbanks, Alaska in March 2016. These

guidelines, which complement the 2016 communications strategy, address the roles and responsibilities of the Chairmanship, Arctic States, PPs, subsidiary bodies, and the ACS. In addition, they explain the appropriate use of the Arctic Council logo.

Other communications efforts

In addition to its work directly focused on external communications, the Arctic Council has continued to expand its other efforts in the communications realm. This includes the continued expansion of the Arctic Council's historical, internal archives, the addition of newly completed reports to the Open Access Repository (publicly accessible, and linked to many other databases worldwide), and the preparation of a standard style guide (based on the Chicago Manual of Style) for documents produced or edited by the Arctic Council Secretariat. Perhaps most visibly, these efforts also include the preparation and adoption of a modern and versatile new visual identity for use by WGs ACAP and EPPR, as well as by TFs that are supported by the ACS.

Relationships with external bodies

During its Chairmanship, the U.S initiated a review of relationships that the Arctic Council as a whole has to external bodies. There is a broad range of relationships at all different levels in the Council. First, relationships exist at a technical/practical level between individual WGs and external bodies. Second, at an overarching level, there is growing interest on the part of outside bodies to have some sort of formal relationship with the Arctic Council itself. After a thorough process that involved the collection of data from all subsidiary bodies and some analysis of the data, the "Guidelines for relationships with outside bodies" were developed and approved by SAOs in Fairbanks in March 2016.

Coordination of subsidiary bodies

During this two-year period, the SAO Chair worked with the six WGs of the Arctic Council on a set of common operating guidelines (OGs) for all the WGs of the Arctic Council. The purpose of the OGs is to provide a consistent set of procedures for the six WGs that are meant to be flexible enough to account for the individual needs of the WGs. If desired, WGs had the option to include an annex to the OGs that covers any specific topics not covered elsewhere in the OGs. Three of the WGs chose to develop annexes specific for their WG, and any WG may amend or include its respective annex at any time, subject to final approval by SAOs. Via intersessional written communication, finalized in December 2016, the OGs were approved, and as such they replace the previous individual WG operating guidelines that were provisionally approved.

Also during the U.S. Chairmanship, in a single week in September 2015, four of the six WGs convened their regular meetings in Tromsø, Norway. Being in the same city at the same time, they participated in a joint plenary session in an effort to increase coordination on cross-cutting topics while also providing some travel relief for those who participate in more than one WG. WGs and other attendees reported that it was helpful for several WGs to work together on specific issues. In the future, similar such meetings might be beneficial for highly targeted topics that involve two or three of the WGs.

Engaging with the Observers

The U.S. Chairmanship has put great emphasis on increased engagement with the Arctic Council Observers. As a result, two Observer “special sessions” were arranged in conjunction with the SAO meetings in Anchorage (October 2015) and Portland (October 2016). In addition, the SAO Chair continued the practices, begun by Sweden, of inviting all Observer delegations to a breakfast meeting, and of inviting select Observers to give representational statements in conjunction with the SAO meetings in Fairbanks (March 2016) and Juneau (March 2017). During the period 2015-2017, the first Arctic Council review of Observers took place, in which 14 of the longest-standing Observers were reviewed. SAOs concluded that those Observers reviewed should maintain their accreditation as Observers to the Arctic Council. As the Arctic Council’s rules of procedure require, Observers submitted a biennial report of their activities towards the end of the Chairmanship period. As part of the initiative to encourage more Observer engagement and increased transparency of Arctic Council activities, these reports are now publicly available on the Arctic Council website.

In a very positive development, many of the Observer states have responded to the invitation for increased engagement by becoming involved in, and contributing to, the black carbon Framework and the Arctic Migratory Bird Initiative, as well as actively participating in the work on shaping scientific cooperation.

In an effort to clarify the role of the Observers, an addendum to the “Observer manual for subsidiary bodies” was developed and approved by SAOs in 2015. These efforts provided an opportunity for the Arctic Council to recognize the very significant contributions and profound value added by Observers.

6. Arctic Council Secretariat Work Plan and Budget for 2018 and 2019

1. Introduction

This biennial work plan of the Arctic Council Secretariat (ACS) for the calendar years 2018 and 2019 is the third full biennial work plan for the ACS. The ACS was established on 21 January 2013 and started its operation 1 June 2013 in Tromsø, Norway. 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 31 May 2019, it will be six years since the ACS became operational. This biennial work plan covers the main part of the Finnish Chairmanship of the Arctic Council, which extends from May 2017 to May 2019 and the beginning of the Chairmanship of Iceland (May-December 2019).

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. After almost four years of successful operation, ACS routines and practices are well established and the work plan reflects to a large extent a continuation of these. The work plan also takes into account requests for support that have been discussed previously in the Arctic Council as well as requests from the incoming Chairmanships. These new tasks are of course subject to the availability of the necessary resources.

In addition to the individual issues and tasks listed in the work plan, the ACS will draw upon its experience and knowledge of past practices in the Arctic Council to advise the Chairmanship and other members of the Arctic Council, as appropriate and as needed, on any relevant issues having to do with the Council's ongoing work.

From 1 January 2016 the Indigenous Peoples' Secretariat (IPS) became a part of the ACS. The IPS has its own work plan and a separate budget for its operations. For the first time, the IPS biennial work plan for 2018 and 2019, which has been approved by the IPS board, is presented as a part of the ACS biennial work plan. The IPS work plan is based upon the ACS Terms of Reference.

In the early part of 2018, the ACS will move into premises in a new building being constructed adjacent to the present offices in the Fram Centre in Tromsø. This will undoubtedly benefit the work of the ACS in many ways, but the relocation will also require extra work by the staff and is expected to have some budgetary implications.

2. Secretariat support for the Arctic Council

The ACS will provide secretariat support for the Arctic Council and, in particular, for the Chairmanships of Finland and Iceland, in accordance with the ACS Terms of Reference and as further detailed in this work plan. The work of the ACS will be undertaken as appropriate in

cooperation with, and under the direction of, the SAO Chair. The support from the ACS can be broadly divided into four categories as follows.

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

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

The ACS will:

- Take part in planning and preparing of SAO and Ministerial meetings; provide and coordinate support for logistical and practical preparations including, inter alia, registration of participants and managing of meeting websites; assistance with preparation and publishing of agendas and meeting documents; take minutes from meetings and prepare meeting reports for the Chairmanship's consideration.
- Provide secretariat support for other political meetings of the Arctic Council, such as the scheduled meeting of Arctic Environment Ministers in Finland in 2018.
- Manage the Arctic Council Chair email account and assist the SAO Chair in daily correspondence; receive 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, Permanent Participants, Working Groups, Task Forces and others as appropriate.
- Provide support as requested, as appropriate, and as resources permit, during Working Group, Task Force, and Expert Group meetings.
- Coordinate, collect, and consolidate input to reports and other documents from SAOs, Permanent Participants, Working Groups, Task Forces, Expert Groups, other Arctic Council subsidiary bodies, and accredited Observers.
- Ensure distribution of reports and other documents as needed to SAOs, Permanent Participants, Working Groups, Task Forces, Expert Groups, other Arctic Council subsidiary bodies, and Observers.
- Assist the Chairmanship in implementing and finalizing the review of Arctic Council Observers during the second year of the Finnish Chairmanship.
- Support Observers, in accordance with the Observer Manual, including relating to entities applying for Observer status.
- As requested by the Chairmanship or SAOs, gather information about earlier Arctic Council work, decisions, or projects, and prepare background material for SAOs' consideration.

- Undertake other tasks as requested by the Chairmanship or the SAOs, including support to the development of a long-term strategic plan, subject to the availability of necessary resources.

2b. Administrative continuity

To help ensure the smooth functioning of the Arctic Council, the ACS will:

- Maintain and update the database of points-of-contact and distribution lists, and make updated lists available to the Arctic Council subsidiary bodies upon request. In addition, the ACS will circulate emails as appropriate on behalf of SAOs and/or Permanent Participants to relevant recipients via the Arctic Council Secretariat email account.
- Maintain and further develop relevant Arctic Council archives and ensure that important documentation is stored and cataloged appropriately.
- Support the Chairmanship in its working processes and keep track of formal deadlines of the Arctic Council as appropriate.
- During the lead-up to the Icelandic Chairmanship (2019-2021), work with Icelandic representatives to plan and prepare for a smooth transition.

2c. Communications

The ACS will undertake the following:

- Maintain and develop the Arctic Council website and the Arctic Council-branded social media accounts.
- Work to ensure good internal communications within the Arctic Council.
- In close cooperation with the Chairmanship, manage the biennial review of the Arctic Council Communications Strategy (approved 2016, Portland).
- Facilitate information-sharing and timely responses to questions about the Arctic Council and its work.
- Work to maintain the Arctic Council's Open Access Repository (OAR) and the Council's internal archive.
- In close consultation with the Chairmanship, relate to external stakeholders (including media) as needed, or as requested by SAOs.
- Work closely with Arctic Council Working Groups in implementing the Arctic Council Communications Strategy.

For more detail on the ACS's communications work, see section 5.

2d. Russian language services

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

- Translate the main documents for Arctic Council Ministerial and SAO meetings into Russian (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).
- Translate website content into Russian on the main Arctic Council website and improve display of Russian-language content.
- As appropriate, and as resources permit, translate Arctic Council communications materials, or other documents or materials.
- Following established practice, provide simultaneous interpretation, as necessary, at SAO executive meetings.
- Subject to approval by the ACS Director, provide language assistance, including interpretation, to the Working Groups, Task Forces, and other subsidiary bodies.
- Serve as a focal point for communication with Russian stakeholders.
- Monitor Russian-language media for articles mentioning the Arctic Council and its activities, and flag the most important or interesting news.
- Update the English-Russian glossary of acronyms used in the work of the Arctic Council.
- Provide other support related to the Russian language as instructed by the ACS Director.

3. Overview and coordination of Arctic Council activities

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

- The ACS will work to provide a regularly updated and comprehensive overview of Arctic Council activities via the "Amarok" Arctic Council tracking tool, which should help with coordination and tracking of the Arctic Council's work, as well as with public outreach.
- The ACS will 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.
- With assistance from the Member States, Permanent Participants, and subsidiary bodies, work to identify good opportunities to schedule subsidiary body meetings back-to-back to facilitate participation.

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

4a. Secretariat functions for ACAP and EPPR

The ACS will act as Secretariat for the Working Groups EPPR (Emergency, Preparedness, Prevention and Response) and ACAP (Arctic Contaminants Action Program). The main goal of the Executive Secretary is to ensure continuity, avoid duplication, and make the work of EPPR and ACAP as effective as possible. This work 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 Working Group 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 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 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.
- Work closely with the other Arctic Council Working Groups to ensure cross-cutting and complementary activities within the themes outlined in the Arctic Council's Vision for the Arctic (2013).

4b. Support to other subsidiary bodies

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

- Translate meeting documents, materials and deliverables from and into Russian.

- Provide simultaneous and consecutive interpretation at meetings.

5. Communications activities

Under the direction of and in close cooperation with the Chairmanship, the ACS will coordinate overall communications under the Arctic Council brand. Building upon the approved Arctic Council Communications and Outreach Guidelines (<http://hdl.handle.net/11374/1778>, approved 2016, Fairbanks) and the Arctic Council Communications Strategy (<http://hdl.handle.net/11374/1836>, approved 2016, Portland), the ACS will carry out the following tasks.

5a. Website management

- Regularly update the technical framework and structure of ACS-hosted websites (AC, ACAP, ARR, EPPR, IPS, SDWG) in order to ensure maximum user-friendliness, compatibility, and stability. Continue to explore options to improve server and website security.
- Continue to assist Arctic Council entities with website design, hosting, and management. Aim to upgrade all ACS-hosted subsidiary websites to a more modern design in harmony with new visual identities and AC main website style.
- Continue to expand the quantity and diversity of material available on the Arctic Council website by working closely with the Chairmanship, SAOs, PPs, and Working Groups.
- Monitor website statistics and make changes as necessary to encourage increased visitor traffic.
- Improve online collaboration by offering secure platforms for password protected meeting documents and dedicated work areas for AC initiatives and subsidiary bodies as necessary.
- Continue to add content to public photo archive. Develop internal web-based AC photo archive and stock photo resource for ACS and subsidiary body use.
- Improve multi-lingual capacity of ACS-hosted websites.

5b. Internal communications and coordination

- In close cooperation with the Chairmanship, explore ways to expand the resources available for communications work conducted by the Arctic Council Secretariat.
- 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 2018.
- Create and distribute periodic overviews of (1) national and international media mentions of the Arctic Council, (2) statistics from the Arctic Council website, and (3) statistics from the Arctic Council's social media channels. These will be distributed to

SAOs, PPs, Working Groups, and Observers, as well as to all representatives of the Communications and Outreach Group.

- Create and distribute informal, ad hoc reviews of media attention to particular initiatives or events, as circumstances merit.
- Facilitate information-sharing and coordination before Arctic Council events (and at other times, as needed) including, as appropriate, through the Arctic Council's Communications & Outreach Group.
- Continue to expand and refine the ACS style guide (based on the Chicago Manual of Style 16th edition) as needed.
- Where resources are available, provide layout, graphic design, editing, and copy-editing for those Arctic Council subsidiary bodies that receive support from the ACS.
- Work to coordinate branding and visual identities across the Arctic Council family, including Arctic Council subsidiary bodies.
- For all ACS-hosted websites, and as resources allow, create and distribute periodic overviews of website statistics to relevant stakeholders.
- Improve communication about upcoming events by encouraging widespread use of online calendar services.

5c. Social media and other content formats

- Continue to manage the Arctic Council Facebook and Twitter accounts. Work to develop content for these channels, and consider expansion to new channels where opportunities exist to do so. Wherever possible, coordinate with other Arctic Council accounts, and those of external partner organizations, to increase distribution of information about the Arctic Council and its work.
- Continue to expand the production, purchase, and use of multimedia content such as photos, audio materials, infographics, and videos.
- Investigate costs and benefits related to joining new social media platforms.

5d. Working with external media

- In close cooperation with the Chairmanship, continue to serve as needed as a first point-of-contact for media inquiries. Facilitate timely communication between media representatives and Arctic Council representatives who can respond to questions.
- Develop materials to help media representatives report accurately on the Arctic Council and its work. This might include photographs, interviews, graphics, and key messages, as well as other resources.
- Wherever possible, work to strengthen relationships with key media partners.

5e. Archiving and Open Access Repository (OAR)

- Continue to upload new and historical content to the OAR and work with the hosting company to ensure timely technical updates.
- Actively advertise the OAR to the public/internal/external audiences, and explore possible connections with other repositories and archiving initiatives.
- Further improve internal archiving routines at the ACS by, for example, delegating specific archiving tasks to dedicated ACS staff members. Improve access to and usability of internal ACS archiving software.

5f. Representations of the Arctic Council

- Continue to welcome guests (e.g. state delegations, students, academics, journalists, or others) who ask to visit the ACS offices in Tromsø. Upon request, provide basic briefings on the current priorities of the Arctic Council, its structure and function, its history, and the work of the ACS in particular.
- Attend selected important non-Arctic Council conferences and events as time and resources permit, and in coordination with the Chairmanship. Use these events as opportunities to distribute informational materials about the Council and its work, and to make person-to-person connections with individuals in many of the target groups identified in the Arctic Council Communications Strategy (2016).
- Create products (brochures, pins, pens, bags, etc.) appropriate for distribution to participants and the public at meetings, conferences, and other events.

6. Administrative functions

The ACS will continue to develop its administrative functions in the 2018-2019 period. The relocation to the new building, called Fram II, is a significant event scheduled to take place in the first half of 2018. Until this date, the ACS will continue to participate in relevant meetings with Fram II project leads and make necessary plans for a smooth relocation. The relocation will, of course, be a considerable task, but also an opportunity to look more closely at the ACS' systems and adjust if there is a need to do so. This goes for technical arrangements as well as office routines and agreements with suppliers. The goal is to provide the best possible service to the Arctic Council within the limits of the budget.

6a. Human resources, development and welfare

The ACS has now a total staff of 12-14 people, including IPS and secondments. Developing and continuing to strengthen the human resources of the ACS will remain a high priority. Two staff contracts are set to expire in 2018, and recruitment processes will be initiated and carried out as appropriate. It will be important to secure continuity and knowledge transfer to any new staff members. It will also be important to secure a smooth relocation process for ACS staff to Fram II, and to ensure that the new offices are functional and in line with health, safety, and environmental rules and regulations.

The use of information technology in the ACS work has grown considerably from the time of its establishment. Today, this technology is key to efficient operation and function. As a result, ACS has many technical tasks related to such things as administration and development of websites, archiving, communication, meeting arrangements, etc. In addition, there is an overall and more general need to provide the AC and the ACS with efficient, secure and durable technological solutions. Due to increased need for resources in the above-mentioned areas, a Technical Officer was hired on a two year contract starting 1 August 2016. The added skills from the technical officer have been extremely beneficial and positive. The ACS would like to make a position for a Technical Officer permanent at the ACS. This is also reflected in the budget for 2018 and 2019.

Based on appraisal conversations and the tasks that the ACS is charged with, personal development and training will be offered and carried out within the framework of the approved budget.

The ACS looks forward to welcoming possible new secondments in 2018 and 2019, and truly values the synergies that these secondments provide. The ACS has received confirmation that both the Kingdom of Denmark and Russia will be providing secondments to the ACS for two years from the middle of 2017 to 2019.

The ACS will continue to engage with appropriate Norwegian authorities to accommodate the needs of ACS staff members.

6b. Suppliers and agreements

The relocation to Fram II is an opportunity to review existing contracts, including services such as accounting/payroll and IT support, to determine whether existing arrangements are adequate or if, instead, the ACS should consider other options. Overall, the general impression is that the current arrangements and agreements are functioning well. However, in line with the ACS IT strategy and new technical developments, there may be both cost and practical reasons to make some adjustments.

6c. Rent and premises

The ACS is currently renting office space from the Norwegian Polar Institute. The new office space for the ACS in Fram II (approximately 280 square meters) will be a mix of open-plan offices and conventional offices situated on the third floor of the new building (adjacent to and connected with Fram I). The ACS plans to use some of the existing office furniture and equipment in the new building. However, some furnishings and equipment will be provided by Fram II and automatically included in the rent. The specifics have yet to be determined. It seems clear at this point that the annual rent will increase in Fram II, but hopefully the new premises will be appropriate and better fit the needs of the ACS.

6d. Budget for 2018-2019

The ACS has prepared a draft budget for 2018 and 2019 which is associated with this work plan. There are still some uncertainties regarding cost related to the relocation to Fram II, and these are visible in the draft budget.

7. Biennial work plan, budgets, and reporting

The ACS will:

- Prepare a work plan for the period 2020-2021 for submission to SAOs prior to the 11th Ministerial meeting, expected to take place in Finland in 2019.
- Prepare a budget for the period 2020-2021 for submission to SAOs and consideration by Ministers at the 11th Ministerial meeting, expected to take place in Finland in 2019.
- Report on ACS operations and activities at each meeting of Senior Arctic Officials.

8. IPS biennial work plan

8.1 Introduction

The IPS work plan for 2018 and 2019 has been developed based on the IPS Terms of Reference and discussions at the IPS Board October 6, 2016 in Portland, Maine. The board approved the IPS work plan for 2018 and 2019 January 19, 2017.

8.2 Secretariat support for the Arctic Council Permanent Participants

8.2.1 IPS Board

A board of nine members govern the IPS. The board members are an authorized representative from each of the six Permanent Participants (PPs), a representative from the following Arctic States: the current Chair of the Arctic Council, the incoming Chair of the Arctic Council and the host country of the Arctic Council Secretariat. The Director of the Arctic Council Secretariat is an ex-officio member of the IPS board.

The Board members may agree upon the IPS board meetings will be held at least once a year in person and at such other times by teleconference or on such locations as.

IPS will:

- Make arrangements for Board meetings;
- 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;
- Coordinate regular reporting and accounting to the Board on work plans, budget and expenditure matters, and funding matters and IPS activities generally.

8.2.2 General support to the Arctic Council Permanent Participants

Indigenous Peoples' Secretariat is instrumental in supporting the PPs in their unique role at the Arctic Council.

IPS will:

- Be a common secretariat unit for all six PPs that will provide support and assistance to PPs in carrying out their work at the Arctic Council, including coordinating the work among the PPs;
- Organize and facilitate, when appropriate, indigenous caucus and informal consultations to consolidate common strategies for the PPs on Arctic issues;
- Assist the PPs to draft joint statements, declarations, recommendations and other documents on indigenous issues;
- Supporting the integration of indigenous peoples perspectives, indigenous knowledge and concerns into the work of the council and other relevant international bodies;
- Carrying out research and analysis of current and future issues as required by the PPs;
- Act as a “corporate memory” on the Arctic Council and its PPs;
- Collaborate with the Arctic Council Working Groups' Secretariats on ways and means to ensure PPs' participation in the activities of the Working Groups, Task Forces and Expert Groups;
- Arrange and facilitate regular meetings between the Arctic Council Observers and PPs;
- Attending the Ministerial meeting, SAO meetings, SDWG meetings and other working groups and expert groups as time and resources permits;
- Attending the Arctic Council Executive Secretaries' working meetings;
- Maintain and further develop relevant Arctic Council Indigenous Peoples' Secretariat (IPS) archives and ensure that important documentation is kept in a safe and appropriate manner;
- Undertake tasks as requested by the IPS Chair or the IPS board, subject to the availability of the necessary resources.

Logistical support

IPS will:

- Assist the PPs, when requested, in arranging their travel logistics and visa applications;
- Assist to register PPs for Arctic Council activities;
- Continue to seek travel support to PPs;
- Provide technical assistance as required;

- Organize, as requested, PP caucus before SAO and SDWG meetings, and as needed follow-up meetings.

Russian language services to the PPs

IPS will:

- Provide communication assistance between the PPs and their Russian chapters;
- Arrange interpretation and translation into Russian or other languages as required from time to time;
- Translate IPS board documents into Russian;
- Translate IPS newsletters into Russian;
- Provide translation services to PPs at their meetings when requested, including the ICC Executive Council meetings and at the ICC General Assembly in 2018

8.3 Communication and outreach

IPS will:

- Contribute to raising public awareness of Arctic indigenous issues through a regularly updated website (www.arcticpeoples.org), and maintain and develop the IPS-branded social media accounts;
- Develop standard power point presentations of IPS;
- In collaboration with the Arctic Council Secretariat produce newsletters on indigenous issues in the Arctic Council;
- Facilitate information-sharing and timely responses to questions about the PPs and IPS;
- Gather and disseminate information on and provide and list sources of different forms of knowledge;
- Strengthen collaboration and networks across Arctic indigenous groups by information exchange and joint events coordination;
- Provide PPs with an updated meeting calendar on relevant Arctic activities;
- Update the online story-map website developed for the Arctic Council 20th anniversary.

8.4 IPS priorities

8.4.1 Capacity building activities

Internships in 2018 and 2019

IPS is one of the few international secretariats that is governed by indigenous peoples themselves. IPS provides a unique venue to support indigenous communities to development youth leadership capacity on international issues.

IPS will:

- IPS will host a three months internship for an indigenous youth in 2018 and 2019 as a co-partner with the Labrador Institute of Memorial University of Newfoundland;
- Continue to offer internships to indigenous youths where appropriate and resources permits;
- Continue to explore possibilities for Permanent Participants' secondment to the IPS.

Education and Youth

IPS will:

- In response to Finland's AC Chairmanship priority of "education" and implementing Arctic Biodiversity Assessment recommendation number 17, work with CAFF to expand its education tool kits to issues addressing sustainable development and indigenous lifestyles, and translate it into Russian and indigenous languages
- Secure indigenous participation in the Model Arctic Council that will take place in Rovaniemi, Finland in October 2018;
- Arrange a course for Russian speaking indigenous peoples, which will provide the introduction and the latest updates of the Arctic Council, its subsidiary bodies and the PPs' organizations;
- Collaborate with the Finish Chairmanship to make sure indigenous perspectives are integrated in the development of teaching methods in early childhood and in primary and lower secondary education;
- Develop training courses and workshops on relevant and requested topics.

8.4.2 Arctic Indigenous Leaders' Summit

An Arctic Indigenous Leaders' Summit will be a venue where the indigenous peoples themselves will set the agenda for what is important to indigenous communities. The purpose of the Summit would be to develop a common understanding from an indigenous perspective of the challenges and possibilities in the Arctic. It will also create an opportunity for a closer cross border collaboration among the indigenous peoples in the Arctic.

IPS will:

- If necessary funding is identified, arrange together with the PPs an Arctic Indigenous Leaders' Summit.

8.4.3 Fundraising

IPS will:

- Continue to support the work on establishing the Álgu Fund;
- Continue to work on a long-range fundraising strategy for IPS;
- Continue to seek travel support, project funding and in-kind support to the PPs and IPS.

8.4.4 The Indigenous Peoples Contaminant Action Program (IPCAP)

In 2006, the Arctic Council approved Indigenous Peoples Contaminant Action Program (IPCAP) as an expert group under ACAP. IPCAP mandate is to work on projects related to reducing exposure and impact of contaminants in indigenous peoples' communities. AIA is currently chairing IPCAP.

A closer IPS involvement in IPCAP will also be a synergy effect of the relocation of the IPS, as the ACAP secretariat is located in Tromsø.

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;
- Assist in communication and outreach to the PPs on IPCAP;
- Assist with arranging an International Conference exploring the impact of contaminant exposure on indigenous communities in the Arctic Interaction.

8.4.5 Evaluation of the IPS relocation to Tromsø

In October 2015, the formal decision on the relocation of IPS to Tromsø was made. The relocation should take effect from January 1, 2016. Further, according to the decision, a post-relocation review of the IPS including how well the system is working with the amended documents shall be undertaken.

IPS will:

- Prepare for a post-relocation review of the IPS, including how well the system is working with the amended documents.

8.5 Interaction with other international bodies

IPS will:

- Assist the PPs on steering committees and other management processes, such as the Arctic Science Summit Week/ICARP, University of the Arctic, IASSA;
- Continue to be a IASSA council board member;
- Continue to be an observer in the monitoring committee for the EU Northern Periphery and Arctic Program;

- Attend selected non-Arctic Council conferences and events as time, resources and budget permits.

8.6 Administrative functions

8.6.1 Staff recruitment, assessment, development and welfare

- Respond to the possible need to recruit a new IPS Executive Secretary as the contract expire December 31, 2019. If mutual agreement is reached, contracts can be prolonged for another four year term, reducing this element of the IPS's work.
- Conduct recruitment process as needed in the fall of 2019. As needed, develop work description and announcement, review applications, conduct interviews, check references, negotiate contracts and arrange relocation of new employee to Tromsø.
- Perform annual appraisal conversations with staff members. Determine from the results of the appraisal conversations what kind of training would benefit each employee in the performance of his or her duties.

8.6.2 Biennial work plan, budget and reporting

IPS will:

- Prepare a biennial work plan and budget for 2020 and 2021;
- Report on the necessary projects and annual reports for the IPS;
- During the lead-up to the Saami Council Chairmanship of IPS, collaborate with the Saami Council to prepare their Chairmanship.

8.7 Arctic Council Secretariat budget for 2018 and 2019

8.7.1 Budget for 2018

EXPENSES	NOK	USD
STAFF		
Salaries, pensions, employer fee	kr 6 623 473	\$1 036 489
Training, development, insurance	kr 190 000	\$29 733
Establishment/moving allowance, home travels	kr 320 000	\$50 076
Miscellaneous	kr 150 000	\$23 473
Staff	kr 7 283 473	\$1 139 770
RENT		
Rent, Fram 1 (approx 2 months in 2018)	kr 147 828	\$23 133
Rent, Fram 2 (approx 10,5 months in 2018)	kr 926 205	\$144 939
Rent	kr 1 074 033	\$168 072
PROFESSIONAL SERVICES		
Auditor	kr 64 286	\$10 060
Accounting and payroll	kr 270 000	\$42 252
IT	kr 283 318	\$44 336
Communications	kr 232 500	\$36 383
Web and digital media	kr 85 715	\$13 413
Archives	kr 64 286	\$10 060
Videoconf. equipment	kr 110 572	\$17 303
Miscellaneous	kr 100 000	\$15 649
Professional services	kr 1 210 677	\$189 455
OVERHEAD/OFFICE		
Computers and hardware	kr 52 250	\$8 176
Mobile phones, purchase and use	kr 134 000	\$20 969
Supplies	kr 300 000	\$46 946
Printers	kr 23 143	\$3 622
Freight	kr 12 857	\$2 012
Miscellaneous	kr 100 000	\$15 649
Overhead/office	kr 622 250	\$97 374
GEN.ADM.ISSUES		
Recruitment/advertisement	kr 100 000	\$15 649
Meetings/representation	kr 134 500	\$21 048
Subscriptions	kr 70 800	\$11 079
Fees	kr 15 000	\$2 347

	Gen.adm.issues	kr 320 300	\$50 123
TRAVEL			
	Travel	kr 1 040 000	\$162 747
	Travel	kr 1 040 000	\$162 747
TOTAL COST 2018		kr 11 550 733	\$1 807 541

Exchange rate; 6,3903

INCOME			
CONTRIBUTIONS:			
	Canada	kr 760 521	\$119 012
	Kingdom of Denmark	kr 760 521	\$119 012
	Finland	kr 760 521	\$119 012
	Iceland	kr 760 521	\$119 012
	Norway	kr 760 521	\$119 012
	Russian Federation	kr 760 521	\$119 012
	Sweden	kr 760 521	\$119 012
	USA	kr 760 521	\$119 012
	State contributions	kr 6 084 167	\$952 094
	Host country contribution	kr 4 496 993	\$703 722
	Translation contribution, NO	kr 882 573	\$138 111
	Return of interest	kr 12 000	\$1 877
	Internal fee, estimate	kr 75 000	\$11 736
	TOTAL INCOME:	kr 11 550 733	\$1 807 541

8.7.2 Budget for 2019

EXPENSES	NOK	USD
STAFF		
Salaries, pensions, employer fee	kr 6 874 826	\$1 075 822
Training, development, insurance	kr 190 000	\$29 733
Establishment/moving allowance, home travels	kr 320 000	\$50 076
Miscellaneous	kr 150 000	\$23 473
Staff	kr 7 534 826	\$1 179 104
RENT		
Rent, Fram 2	kr 1 058 520	\$165 645
Rent	kr 1 058 520	\$165 645
PROFESSIONAL SERVICES		
Auditor	kr 66 858	\$10 462
Accounting and payroll	kr 270 000	\$42 252
IT	kr 299 144	\$46 812
Communications	kr 233 200	\$36 492
Web and digital media	kr 68 572	\$10 731
Archives	kr 64 286	\$10 060
Videoconf. equipment	kr 110 572	\$17 303
Miscellaneous	kr 100 000	\$15 649
Professional services	kr 1 212 632	\$189 761
OVERHEAD/OFFICE		
Computers and hardware	kr 74 125	\$11 600
Mobile phones, purchase and use	kr 134 000	\$20 970
Supplies	kr 80 000	\$12 519
Printers	kr 28 080	\$4 394
Freight	kr 15 000	\$2 347
Miscellaneous	kr 100 000	\$15 648
Overhead/office	kr 431 205	\$67 478
GEN.ADM.ISSUES		
Recruitment/advertisement	kr 100 000	\$15 648
Meetings/representation	kr 134 500	\$21 048
Subscriptions	kr 70 800	\$11 079
Fees	kr 15 000	\$2 347
Gen.adm.issues	kr 320 300	\$50 123

TRAVEL			
Travel		kr 1 062 500	\$166 268
	Travel	kr 1 062 500	\$166 268
TOTAL COST 2019		kr 11 619 983	\$1 818 378

Exchange rate; 6,3903

INCOME			
CONTRIBUTIONS:			
Canada		kr 762 148	\$119 266
Kingdom of Denmark		kr 762 148	\$119 266
Finland		kr 762 148	\$119 266
Iceland		kr 762 148	\$119 266
Norway		kr 762 148	\$119 266
Russian Federation		kr 762 148	\$119 266
Sweden		kr 762 148	\$119 266
USA		kr 762 148	\$119 266
State contributions		kr 6 097 187	\$954 132
Host country contribution		kr 4 506 617	\$705 227
Translation contribution, NO		kr 929 179	\$145 404
Return of interest		kr 12 000	\$1 878
Internal fee, estimate		kr 75 000	\$11 737
TOTAL INCOME:		kr 11 619 983	\$1 818 378

7. Annexes

7.A. Arctic Council Communications Strategy

“Arctic Council Communications Strategy”

Approved at the SAO meeting in Portland, Maine in fall 2016

<http://hdl.handle.net/11374/1836>

7.B. Communications and Outreach Guidelines

“Arctic Council Communications and Outreach Guidelines”

Approved at the SAO meeting in Fairbanks, Alaska in spring 2016

<http://hdl.handle.net/11374/1778>

7.C. Amarak: Arctic Council Tracker

Amarok: The Arctic Council tracking tool “mini-report”

<http://hdl.handle.net/11374/1907>

Amarok: The Arctic Council tracking tool “maxi-report”

<http://hdl.handle.net/11374/1908>

7.D. Addendum to the Observer Manual for Subsidiary Bodies

“Observer Manual for Subsidiary Bodies” (addendum begins p 11)

Updates approved in Anchorage, Alaska (fall 2015) and Portland, Maine (fall 2016)

<http://hdl.handle.net/11374/939>

7.E. Guidelines for Relationships with Outside Bodies

“Guidelines for Relationships with Outside Bodies”

Adopted at the SAO meeting in Fairbanks, Alaska in spring 2016

<http://hdl.handle.net/11374/1761>