



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

Approved at the 10th Arctic Council Ministerial meeting 11 May 2017, Fairbanks, Alaska, U.S.A.

ACAP

Status: On Track

1.1 Reduction of Black Carbon from Diesel Sources in the Russian Arctic Project (SLCP EG)

Contact

Description of this initiative

Assess primary sources of black carbon in the Russian Arctic; develop a baseline emissions inventory for black carbon from diesel in key areas; implement targeted demonstration projects; establish policy recommendations and financing options.

2017 Deliverables

Report: Circumpolar best practices: Policy and financing options for black carbon emission reductions from diesel sources

ACAP

Status: On Track

1.3 Arctic Black Carbon Case Studies Platform (SLCP EG)

Contact

Description of this initiative

Through this project, EPA will work with its partners in ACAP to present a catalogue of black carbon mitigation efforts – a set of standardized case studies or “snapshots” – to capture the variety of interventions and policy tools that can reduce black carbon emissions.

2017 Deliverables

Black carbon case studies portal will be showcased as part of ACAP's project work during the U.S. Chairmanship.

ACAP

Status: On Track

1.4 Valday Cluster Upgrade for Black Carbon Reduction in the Republic of Karelia, Russian Federation (SLCP EG)

Contact

Description of this initiative

This project aims to implement a range of alternatives for providing energy to off-grid settlements in this region with the objectives to; 1) contribute to mitigation of pollutants, including SLCPs such as BC and other GHGs; 2) decrease the dependence of the Cluster settlements on transported fossil fuels, 3) reduce the electricity/district heating costs for the municipality; 4) increase the reliability and quality of electricity/district heating supply and 5) strengthen the expertise of the local institutions in the energy supply and project management.

2017 Deliverables

[Blank]

ACAP

Status: On Track

1.5 Mitigation of methane emissions - Syktyvkar Dyrnos landfill project, Russian Federation (SLCP EG)

Contact

Description of this initiative

The Dyrnos Landfill project consists of two main components including final closure of the existing landfill and installation of a methane gas collection and utilization system and construction of a new sanitary plot at the existing landfill and completion of construction works and commissioning of a new waste sorting facility. The project will take important steps towards reducing the adverse environmental and health impacts from the current waste management system. It will contribute towards achieving the compliance with the relevant Russian and EU environmental standards, and will be a key contribution to the final exclusion of the Barents Environmental "Hot Spot" Ko-6 (waste management in the Republic of Komi). The project is expected to demonstrate the improvement of municipal solid waste management towards integrated waste management systems in Russian cities.

2017 Deliverables

[Blank]

ACAP

Status: On Track

1.6 Phase-out of ozone-depleting substances and fluorinated greenhouse gases (HFC) at fish and seafood processing enterprises (SLCP EG)

Contact

Description of this initiative

The project has two main objectives. The first is to phase out hydrochlorofluorocarbons and hydrofluorocarbons at one of the fish and seafood processing enterprises of the Murmansk oblast. The second is to transfer ozone and climate-safe technologies to onshore fish and seafood processing enterprises that use hydrochlorofluorocarbons and hydrofluorocarbons in refrigeration and air-conditioning equipment, enterprises engaged in repair and after-sales service of onboard refrigeration and air-conditioning equipment in the Murmansk oblast, and initiate their conversion to environmentally safe refrigerants.

2017 Deliverables

[Blank]

ACAP

Status: On Track

2.1 Non-ferrous/Zinc Smelter Mercury Reduction in the Russian Federation (POPS/mercury EG)

Contact

Description of this initiative

The project will seek to identify, develop and apply pollution reduction approaches and technologies to a selected pilot smelter, and monitor the approaches for baseline and progress determinations. The project awaits a signed letter of commitment to participate in the project from the smelter facility owners. A Workshop on "Technical Information Exchange on Mercury Abatement in the Metallurgical Industry", was held in Yekaterinburg in April 2015. Currently, changes to the Workshop Report are under discussion that may make it acceptable to the Russian Federation.

2017 Deliverables

None

ACAP

Status:

2.2 Mercury Control Technology Workshop (POPS/mercury EG)

Contact

Description of this initiative

This Workshop project is intended to disseminate results and encourage replication of successful mercury emissions reduction approaches, including the results from a US-led pilot project, conducted in cooperation with various Russian institutes, UNEP and Sweden, completed in 2014, on carbon sorbent technologies* at a coal-fired power plant in Cherepetskaya, Russia. The project is designed to have a complementary function to a GEF- funded project, being implemented by the Russian Federation and UNEP, comprising a mercury emission inventory and the drafting of a Minamata Action Plan. In addition to coal combustion, the workshop would address other key sectors for emissions reductions including non-ferrous metals smelting and gold mining. The Project Steering Group on Mercury developed a proposal for a project focusing on disseminating and replicating results.

* (Standard activated carbon and bromated carbon injection; the project also investigated the stability of sorbent-containing fly ash residues and the leaching potential of metals.)

2017 Deliverables

None

ACAP

Status: **On Track**

2.3 Phase III Reduction/Elimination of Emissions of Dioxins and Furans in Russia with a focus on Northern regions (POPS/mercury EG)

Contact

Description of this initiative

Project to reduce dioxins and dust emission and training program for the Vorkutinskiy cement plant

2017 Deliverables

[Blank]

ACAP

Status: **On Track**

2.4 Pilot emission reduction actions at Vorkutinskiy Cement Plant (POPS/mercury EG)

Contact

Description of this initiative

Based on the results from inventory activities in Phase I (2002-2005) and Phase II (2006-2008), the Vorkutinskiy Cement Plant (VCP) was selected for a Phase III Pilot Action Project for reduction of dioxins and furans emissions. In close cooperation with NEFCO, the EG so far conducted the following activities at the facility:

1: Prefeasibility study bt NEFCO (2011-2013), 2: Seminar on environmental requirements on using waste as fuel (2014); 3: Sample and Analysis of Emissions (2014-2016), 4: Feasibility Study and Drafting of an Action Plan for Reduction Actions at VCP (2014-2016),

If deemed feasible and fundable, the following activities are supposed to follow from 2016:

5: Implementation of Reduction Actions, 6: Assessment of Reduction, 7: Dissemination of experiences.

2017 Deliverables

Two reports addressing (1) air emissions from the Vorkuta Cement Plant and (2) a demonstration project targeting dioxins and other pollutants from the Vorkuta Cement Plant

ACAP

Status: Awaiting info

2.5 P2345 - Inventory programs, control technologies and other support to Russia's compliance with international convention requirements (POPS/mercury EG)

Contact Mr Ruslan Butovskiy (RU)

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Description of this initiative

A draft project proposal, aiming at eliminated or reduced dioxin and furan pollution from sources in Russia affecting the Arctic Environment, was elaborated by the PSG on Dioxins and Furans in 2014-2015 and submitted to the PSI Committee from which it received an Eol approval in March 2015. Based on this, a more detailed project application is now under development, where possible also incorporating Mercury issues.

2017 Deliverables

None

ACAP

Status: On Track

3.1 Phase III: Demonstration of environmentally sound destruction of obsolete pesticides (Hazardous Waste EG)

Contact Timo Seppala (FI)

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Description of this initiative

The project will aim to demonstrate whether Russian super-critical water oxidation facility (SCWO) based on the SCHO-10-EET technology located in Krasnoyarsk, Russian Federation, will provide a domestic capability for cost effective, environmentally sound destruction of obsolete pesticides and specifically POPs pesticides. The technology demonstration also has a broader national and global objective of contributing to Russia's ability to achieve compliance under Article 6 of the Stockholm Convention. This is also consistent with the global objectives of the Arctic Council and ACAP in respect to reduction in Arctic contamination. Project completion is contingent on PSI funding.

2017 Deliverables

None

ACAP

Status: Delayed

3.2 Demonstration of management and destruction of 250 tons of PCB in transformers: Phase III (Hazardous Waste EG)

Contact Vladimir Ivlev (RF)

ivlev@mnr.gov.ru

Description of this initiative

PCB Project addresses mitigation of the PCB problem in RF. The aim is to destroy 250 tons of PCB via two sub-projects: 1. Emptying and cleaning contaminated PCB containing transformers; 2. Destruction of PCB. The method can also be used to destroy other hazardous pollutants e.g. certain types of pesticides.

2017 Deliverables

Feasibility and inventory studies.

ACAP

Status: **Delayed**

3.3 Demonstration of Rapid Environmental Assessment of Pesticides Contaminated Sites (Hazardous Waste EG)

Contact

Description of this initiative

The project will demonstrate a cost-effective and rapid technique to screen levels and scope of contamination at old pesticide storage sites using a methodology that the Blacksmith Institute developed for the UN Food and Agriculture Organization (FAO). The method can help to assess the environmental and health risks caused by hundreds of old pesticides storages in Northern Russia. The project closely follows on Russian implementation of Stockholm Convention on POPs.

2017 Deliverables

None

ACAP

Status: **On Track**

4.1 Circumpolar Local Environmental Observers (CLEO) Network (IPCAP)

Contact

Description of this initiative

The Arctic Council will expand the coverage of an existing Alaska-based monitoring tool, the Local Environmental Observer network (LEO) that links traditional knowledge and scientific analysis, across the Arctic. Trained traditional knowledge experts are able to record their observations in the LEO database. These observations are reviewed by the Alaska Native Tribal Health Consortium (ANTHC), which serves as a secretariat. ANTHC is able to share observations of concern with regulators, academics and others who can in turn provide technical assistance to local communities when needed. During Phase I of the project, ACAP will create a North American CLEO "Hub", including indigenous communities in the Alaskan and Canadian Arctic for delivery to the 2017 Ministerial. In addition, we will explore the development of a framework for expansion of the CLEO to the Nordic region. Phase II of the project is to establish a CLEO Hub in the Nordic region, as appropriate and explore options for linking with Russian indigenous communities. Phase III of the project will look at interoperability of the CLEO Hubs and/or related observational networks. The CLEO project is also captured in the Resilience project description.

2017 Deliverables

Framework for expansion of LEO.

ACAP

Status: On Track

4.2 Community-based black carbon and public health assessment (IPCAP)

Contact

Description of this initiative

This project, which is a collaboration of the AIA, Arctic Alliance, Alaska Native Science Commission, University of Alaska-Anchorage, and the University of Alaska-Fairbanks, with support from the Swedish Environmental Protection Agency, will: assess, on a pilot basis, local sources of black carbon emissions from a representative sampling of Arctic Alaskan and Russian villages; provide a broad characterization of associated risks to public health; 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.

2017 Deliverables

None

AMAP

Status: On Track

01. Adaptation Actions for a Changing Arctic

Contact

Description of this initiative

Pilot project on adaptation to Arctic change. TLK is used throughout the project with project participation from PP representatives.

2017 Deliverables

Three regional science reports and three regional summary for policy makers.

AMAP

Status: On Track

02. Air Pollution, including SLCFs

Contact

Description of this initiative

Develop future AMAP initiative on air pollution and SLCFs

2017 Deliverables

AMAP work-plan component on Air pollution/SLCFs follow-up work (proposed workplan includes update deliverables in 2019 and 2021)

AMAP

Status: On Track

03. Human Health and combined effects

Contact

Description of this initiative

Further develop AMAP initiative on human health, particularly biomonitoring and cohort studies and health effects of contaminants

2017 Deliverables

AMAP work-plan component on human health follow-up work

AMAP

Status: On Track

04. Unmanned Aircraft Systems (UAS)

Contact

Description of this initiative

Continue work on safety guidelines and demonstrate the use of cross-jurisdictional environmental monitoring

2017 Deliverables

None

AMAP

Status: On Track

05. Contaminant issues: Radioactivity

Contact

Description of this initiative

Prepare future AMAP initiative on radioactivity

2017 Deliverables

AMAP work-plan component on Radioactivity follow-up work

AMAP

Status: On Track

06. Contaminant issues: POPs and mercury

Contact

Description of this initiative

AMAP's POPs and mercury expert groups will produce an update assessment components as follows:

2016: Update assessments on Chemicals of Emerging Arctic Concern;

2016/17: Update assessment on Biological Effects of POPs and Mercury

2017/18: Update assessment on Climate Change Impacts on POP

2017 Deliverables

Scientific and policy-makers summary reports on chemicals of emerging Arctic concern
AMAP work-plan component on POPs and mercury follow-up work

AMAP

Status: On Track

07. Sustaining Arctic Observing Networks (SAON) Project: Coordination of metadatabases

Contact

Description of this initiative

Coordinate databases on Arctic observational assets metadata

2017 Deliverables

None

AMAP

Status: On Track

08. AMAP Trends and Effects Programme

Contact

Description of this initiative

AMAP is conceived as a process integrating both monitoring and assessment activities, in order to: produce integrated assessment reports on the pollution and climate status and trends of the conditions of Arctic ecosystems; identify possible causes for changing condition detect emerging problems, their possible causes, and the potential risk to Arctic ecosystems including indigenous peoples and other Arctic residents; recommend actions required to reduce risks to Arctic ecosystems.

2017 Deliverables

None

AMAP

Status: On Track

09. Arctic Ocean Acidification

Contact

Description of this initiative

Prepare a report with a focus on the socioeconomic impacts of Arctic Ocean acidification, like fisheries. Follow up to the AMAP 2013 AOA report.

2017 Deliverables

None

AMAP

Status: On Track

10. Climate Issues: Snow, Water, Ice and Permafrost in the Arctic (SWIPA)

Contact

Description of this initiative

Building on 2017 assessment on Snow, Water, Ice and Permafrost in the Arctic (SWIPA), the work will synthesize new information, address teleconnections and contribute to IPCC reports on the 2 degree Paris goal and climate, oceans and cryosphere.

2017 Deliverables

Scientific and policy-makers summary reports on SWIPA findings

AMAP

Status: On Track

11. International Conference on Arctic Science: Bringing Knowledge to Action - April 24-27, 2017 Reston, Virginia, USA

Contact

Description of this initiative

Arrangement of an international conference to showcase results of recent AMAP (and other WGs) scientific assessment work

2017 Deliverables

Conference, Reston VA: 24-27 April 2017. Report on conference outcome

CAFF

Status: On Track

01. Circumpolar Biodiversity Monitoring Program (CBMP) - General

Contact

Description of this initiative

- The CBMP is a flagship program of the CAFF working group and an ongoing monitoring program that has received international recognition

- The CBMP is the biodiversity component of the Sustaining Arctic Observing Network (SAON) and is the official Arctic biodiversity network of the Global Earth Observation's Biodiversity Observation Network (GEOBON).

- CBMP activities are structured around the major Arctic ecosystem: marine, freshwater, terrestrial and coastal.

- The plans help improve ability to detect important trends, link these trends to their underlying causes, predict future trends and scenarios for Arctic biodiversity, and thereby provide more timely and credible information to support decision making.

- The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

See deliverables listed under each CBMP component

CAFF

Status: On Track

01.1 CBMP Marine Biodiversity Monitoring group

Contact

Description of this initiative

- The Arctic Marine Biodiversity Monitoring Plan was delivered in 2011 and is the first of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the marine plan further work is underway to continue to assess the state of the ecosystem and national implementation.

- The CBMP supports the inclusion of TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

State of the Arctic Marine Biodiversity Report (Summary report and science report); Annual implementation reports

CAFF

Status: On Track

01.2 CBMP Freshwater Biodiversity Monitoring group

Contact

Description of this initiative

- The Arctic Freshwater Biodiversity Monitoring Plan is one of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the freshwater plan further work is underway to continue to assess the state of the ecosystem and national implementation.
- The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

Annual implementation reports

CAFF

Status: On Track

01.3 CBMP Terrestrial Biodiversity Monitoring group

Contact

Description of this initiative

- The Arctic Terrestrial Biodiversity Monitoring Plan is one of four pan-Arctic biodiversity monitoring plans developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems. Since the delivery of the terrestrial plan further work is underway to continue to assess the state of the ecosystem and national implementation.
- The CBMP endeavours to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

Annual implementation reports

CAFF

Status: On Track

01.4 CBMP Coastal Biodiversity Monitoring Plan

Contact

Description of this initiative

- The Arctic Coastal Biodiversity Monitoring Plan is the final of four pan-Arctic biodiversity monitoring plans being developed by the CBMP to improve the ability to detect and understand the causes of long-term change in the composition, structure and function of Arctic ecosystems.
- The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

Coastal biodiversity monitoring plan: background paper; Coastal workshop report;

CAFF

Status: On Track

01.5 CBMP Indicators

Contact

Description of this initiative

- The CBMP has chosen a suite of indices and indicators that provide a comprehensive picture of the state of Arctic biodiversity – from species to habitats to ecosystem processes to ecological services.
- These indices and indicators are developed in a hierarchical manner, allowing users to drill down into the data from the higher-order indices to more detailed indicators. These are being developed through an expert consultation process.
- The CBMP endeavors to include TK holder expertise from the inception of projects to the analysis of information gained. It also seeks to include a diverse network of experts with both science and TK expertise.

2017 Deliverables

Arctic Species Trend Index: Migratory Birds Index; Arctic Protected Areas indicator report (Marine & Terrestrial); Arctic Land Cover Change Initiative MODIS Satellite data

CAFF

Status: Delayed

02. Nomadic herders: enhancing resilience of pastoral ecosystems and livelihoods

Contact

Description of this initiative

Project at risk/delayed because release of Global Environment Fund (GEF) funding remains stalled • Purpose of this project is to strengthen the sustainability of the pastoralist livelihoods; and to increase the resilience and capacity of the nomadic communities to adapt to change.

- The project engages TK holders and their information.

2017 Deliverables

[Blank]

CAFF

Status: On Track

04. Second Arctic Biodiversity Congress

Contact

Description of this initiative

To follow-up on the first congress and organise a second event in advance of the Aichi target year of 2020

2017 Deliverables

[Blank]

CAFF

Status: On Track

06. Actions for Arctic Biodiversity 2013-2021: Implementing the recommendations of the Arctic Biodiversity Assessment

Contact

Description of this initiative

Actions for Biodiversity 2013-2021: implementing the recommendations of the Arctic Biodiversity Assessment, is the implementation plan for the Arctic Biodiversity Assessment's 17 recommendations. It is a living document that will be reviewed and updated every two years. The plan is not meant to be exhaustive or to replace working group work plans; rather it is complementary, emphasizing specific actions that address the ABA recommendation.

☒ The Arctic Council Ministers agreed to implement 17 recommendations articulated in the Arctic Biodiversity Assessment: Report for Policy Makers. Implementing the Arctic Biodiversity Assessment (ABA) recommendations requires a combination of building on existing efforts and embarking in new directions.

2017 Deliverables

A progress report implementation of the recommendations from the Arctic Biodiversity Assessment

CAFF

Status: On Track

06.1 Invasive species

Contact

Description of this initiative

Project aims to 1) prevent the introduction of invasive species in Arctic marine, coastal, freshwater, and terrestrial ecosystems, and through establishing a baseline, improve management of on-going invasions using risk-based assessment and management approaches; and 2) develop an invasive species strategy for delivery to the 2017 Arctic Council Ministerial. This will include recommendations for management actions, which might be addressed in subsequent phases of this initiative. Proposed actions/recommendations will be submitted to the CAFF Board for negotiation and approval. CAFF is working with PAME on the marine and coastal components of the strategy.

2017 Deliverables

Arctic Invasive Alien Species Strategy and Action Plan

CAFF

Status: On Track

06.2 Ice associated marine mammals

Contact

Description of this initiative

Project aims to increase comparative understanding of ice-associated Arctic marine mammals and their responses to large-scale environmental changes; enhancing forward-looking capacity will improve potential opportunities for mitigation and conservation.

2017 Deliverables

[Blank]

CAFF

Status: On Track

06.3 Traditional Knowledge and Wisdom: Changes in the North American Arctic

Contact

Description of this initiative

This report is a compendium of Arctic Indigenous perspectives and understandings from Indigenous authors, and others, on biodiversity change in the Arctic and examples of the use of TK&W in managing fish, wildlife, and habitat.

2017 Deliverables

Traditional Knowledge and Wisdom: Changes in the North American Arctic

CAFF

Status: On Track

07. The Arctic Migratory Bird Initiative

Contact

Description of this initiative

- The Arctic Migratory Bird Initiative is a Chairmanship priority.
- The project's objective is to improve conservation outcomes for arctic-breeding migratory birds by addressing conservation issues throughout their migratory range.
- Focus is on three conservation issues: 1. Habitat destruction/degradation; 2. Unsustainable harvest; 3. Bycatch

Bycatch

- Actual work will be undertaken on a flyway basis, with priority issues identified on each flyway.

2017 Deliverables

A progress report on implementation of the AMBI

CAFF

Status: On Track

08. Seabird program

Contact

Description of this initiative

- The Seabird program promotes, facilitates, and coordinates conservation, management and research activities among circumpolar countries and improves communication between seabird scientists and managers inside and outside the Arctic.
- Key activities include work to monitor seabirds (e.g., survival, diets, phenology, and productivity) to explain observed changes in populations as well as provide circumpolar information on the status of seabirds to management agencies in Arctic States.

2017 Deliverables

Seabird monitoring plan; Arctic seabirds breeding in the African Eurasian Waterbird Agreement area

CAFF

Status: On Track

09. Arctic Flora program

Contact

Description of this initiative

- The CAFF Flora Group (CFG) promotes, encourages and coordinates the international conservation of Arctic flora, vegetation, and habitats as well as research activities. It works to enhance the exchange of information on Arctic flora and vegetation and factors affecting the status and trends in Arctic flora species.
- A key activity led by the US is the Circumboreal Vegetation Map (CBVM) will develop a global map of the circumboreal forest biome with a common legend. By recognizing the boreal region as a single geo-ecosystem with a common set of cultural, political and economic issues, the CBVM project will be the first detailed vegetation map of the entire global biome.

2017 Deliverables

The Alaska-Yukon Region of the Circumboreal Vegetation Map (CFG)

CAFF

Status: Delayed

10. Conservation of biodiversity in a changing Russian Arctic

Contact

Description of this initiative

Assessment activity

*awaiting Global Environment Facility Decision

2017 Deliverables

[Blank]

CAFF

Status: On Track

11. Arctic Biodiversity Data Service (CAFF)

Contact

Description of this initiative

- Develop the online mechanism to house, collect, display and search for Arctic biodiversity related data, maps and graphics for decision making.
- The Arctic Spatial Data Infrastructure (Arctic SDI) is an initiative from the national mapping organisations of all eight Arctic Council countries to collect and exchange spatially referenced data on the Arctic to create a harmonized map of the entire Arctic region.

2017 Deliverables

Digital Elevation Model; CAFF Data holdings on ABDS; ABDS Progress report

CAFF

Status: On Track

12. Education

Contact

Description of this initiative

CAFF has developed “educational kits” that communicate information to schoolchildren in the Arctic (10- 11 years old) about key Arctic ecosystems and processes. This is the first step in a process to expand CAFF activities to these audiences. CAFF’s Communications Strategy identifies four priority target audiences, one of which is Arctic residents. A gap exists in CAFF’s communication to this audience, in particular younger audiences (as identified by the Arctic Biodiversity Congress and ABA recommendation #17).

2017 Deliverables

A set of educational toolkits (life linked to spring, tundra and ponds)

CAFF

Status: On Track

13. Mainstreaming

Contact

Description of this initiative

The purpose of this project is to implement the following recommendation from the Arctic Biodiversity Assessment: "Mainstreaming biodiversity 4. Require the incorporation of biodiversity objectives and provisions into all Arctic Council work and encourage the same for on-going and future international standards, agreements, plans, operations and/ or other tools specific to development in the Arctic." Implementation of this recommendation requires establishing a clear framework that defines and develops:

- biodiversity objectives and provisions (also referred to here as biodiversity principles) in the Arctic context;
- Practical approaches and tools for incorporating biodiversity principles into Arctic Council work and for broader application as outlined in ABA Recommendation #4. TEEB Study (Completed): A scoping study on ecosystem services and the application of a TEEB approach and methodology in the Arctic.

2017 Deliverables

Biodiversity Principles: options paper; The Economics of Ecosystems and Biodiversity (TEEB) for the Arctic: A Scoping Study and Executive Summary

CAFF

Status: Delayed

14. Salmon peoples of Arctic rivers

Contact

Description of this initiative

Project start delayed due to challenges in securing funding required. The Salmon Peoples of Arctic Rivers (SPAR) will bring together TK holders, scientists and resource agencies to design an assessment of freshwater river systems based on TK. The design of this holistic assessment will focus on "Salmon peoples" as a measure of ecosystem health, and outline future data needs that could contribute to the resilience and adaptation of these peoples and the salmon populations upon which they depend.

2017 Deliverables

[Blank]

CAFF

Status: On Track

15. Traditional Knowledge and CAFF

Contact

Description of this initiative

This progress report provides a brief progress report on how TK is being approached within CAFF.

2017 Deliverables

TK and CAFF Progress report

EPPR

Status: On Track

01. Arctic Rescue - 2014

Contact

Description of this initiative

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

2017 Deliverables

[Blank]

EPPR

Status: On Track

02. Development of Safety Systems in Implementation of Economic and Infrastructure Projects

Contact

Description of this initiative

Improvement of industrial and environmental safety related to economic and infrastructural projects (primarily development of hydrocarbons on the Arctic continental shelf and hydrocarbons transportation)

2017 Deliverables

[Blank]

EPPR

Status: On Track

08. Maintain and update the operational guidelines attached to the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response

Contact

Description of this initiative

Maintain and update the operational guidelines as required

2017 Deliverables

Recognize the findings in the MOSPA TTX after-action report and establishment of the EPPR MER EG.

EPPR

Status: On Track

09. Coordination and practical implementation of the SAR agreement

Contact

Description of this initiative

In March 2015, SAOs expanded EPPR's mandate to include search and rescue (SAR) including followup to the SAR Agreement. EPPR is currently in the process of identifying short, medium and long term issues relevant to the SAR Agreement.

2017 Deliverables

[Blank]

EPPR

Status: On Track

12. Prevention, Preparedness and Response for small communities

Contact

Description of this initiative

At the EPPR I 2015 and at the October 2015 scoping workshop, it was agreed that the project would focus on oil spill PPR in small communities.

2017 Deliverables

The expected deliverables are: (1) a summary report, and (2) a web-based interactive map.

EPPR

Status: **On Track**

14. Development of a Database of Arctic Response Assets

Contact

Description of this initiative

The project developed a stand-alone, spatially searchable database that contains all Arctic specific oil spill response equipment, vessels, and resources located in each Arctic nation using off-the-shelf software. The database can be easily uploaded to GIS-enabled applications.

Through guidance and work of the Arctic Spill Response Database Working Group that included representatives from Norway, Canada, Finland, Iceland, Sweden, Denmark, and the U.S. a system was developed that meets the project objectives. Equipment types included in the system include: Aircraft, Boom, Communications Equipment, Dispersant, In Situ Burn, Oily Water Separator, Pump, Remote Sensing and Tracking, Shoreline Cleaner, Skimmer, Sorbent Type, Specialist Vehicle, Subsea Equipment, Temporary Storage, Vessel (Non-Skimming) and Vessel (Skimming).

Records for each of the specific equipment type varies. The database includes coordinates of the location of assets to provide for a clear understanding of the distribution and capabilities of response equipment in the Arctic.

Countries that provided equipment data include: Denmark, Finland, Greenland, Iceland, Norway, Sweden, and the U.S.

The system provides for a variety of search options to meet specific needs for contingency planners, emergency managers, and researchers. The user can search by Country, Equipment Type, Manufacturer, Owner, and Response Type, and any combination therein. Reports produced by unique searches can be exported for the production of printable reports that can show imperial or metric measures. As exported data is loaded into an Excel spreadsheet it can then be further manipulated and refined based on the user's exacting needs

2017 Deliverables

- a. Arctic Spill Response Database Query Tool User Guide
- b. Equipment Database

EPPR

Status: **On Track**

15. ARCSAFE

Contact

Description of this initiative

(Full title: EPPR Cross Country Cooperation Network to Improve Emergency Prevention, Response and the Safety of Rescue Workers in Case of a Maritime Accident Involving a Potential Release of Radioactive Substances in the Arctic (ARCSAFE))

The main goal is to promote cooperation and network-activities among the Arctic Council countries in order to strengthen cross-border prevention, preparedness and handling of maritime incidents or accidents which may involve a potential release of radioactive substances. The proposed project will serve as an arena/umbrella, bringing together different national and international authorities and stakeholders to promote cross border networking, experience exchange, and participation in joint exercises, with the aim of preventing accidents and incidents and improving the preparedness and handling of potential accidents in a best possible way from risk assessment to the elimination of consequences.

2017 Deliverables

None

EPPR

Status: On Track

16. Conditions on Oil Spill Circumpolar Response Viability Analysis

Contact

Description of this initiative

The Circumpolar Oil Spill Response Viability Analysis (formerly Circumpolar Oil Spill Response Gap Analysis) was funded by the Norwegian Coastal Administration and the Bureau of Safety and Environmental Enforcement. The purpose of the Viability Analysis is to address the specific subset of challenges (climatic and oceanographic properties) present in the Arctic and to undertake a comprehensive overview of oil spill response limitations and the effectiveness of the range of response strategies under Arctic conditions. The ultimate goal is to estimate how often different types of response systems could be deployed in different areas of the Arctic.

The project was undertaken in two phases and performed by DNV GL and Nuka Research and Planning Group, LLC.

2017 Deliverables

Circumpolar Oil Spill Response Viability Analysis Technical Report

EPPR

Status: On Track

17. Follow-up on the Framework Plan on Oil Pollution Prevention

Contact

Description of this initiative

At the SAO meeting in Anchorage (October 2015), it was agreed that EPPR has the lead on prevention, with PAME as co-lead. The report and matrix are regularly circulated to States, PPs, Working Groups, and other relevant bodies.

2017 Deliverables

Report and matrix Arctic Council status on implementation of the "Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic"

EPPR

Status: On Track

18. International Standards for Petroleum, Offshore Oil and Maritime Industries

Contact

Description of this initiative

The purpose of the work is to describe how necessary engineering and technical standards are identified, developed, established and maintained. Further to describe the work done by various international trade groups and standards organizations who participate in the various phases of the work. The final report will be a useful knowledge base for improved understanding on the development and maintenance of standards in the Arctic to prevent potential accidents with subsequent oil pollution from offshore petroleum and maritime activities.

2017 Deliverables

The report "Standards for the Prevention of Oil Spills from Offshore Oil and Maritime Activities in the Arctic"

EPPR

Status: On Track

19. Update of Field Guide for Oil Spill Response in Arctic Waters

Contact

Description of this initiative

At EPPR I in Svalbard, the idea of updating the 1998 version of the Field Guide for Oil Spill Response in Arctic Waters was briefly discussed. The U.S. is prepared to lead the update and requested assistance from other EPPR delegations.

Linkages to the work being undertaken in the PPR in Small Communities Project was noted, and it was agreed that a community perspective should be included in the update.

2017 Deliverables

The updated guide will be a deliverable for the 2017 Ministerial meeting.

PAME

Status: On Track

01. Arctic Marine Shipping Assessment I (A) (AMSA) – Linking with International Organizations

Contact

Description of this initiative

Continue to monitor and identify opportunities to engage with international organizations (IMO, ISO, IALA, WMO etc) to advance implementation of AMSA recommendations.

A representative from the Federal Maritime and Hydrographic Agency of Germany presented on behalf of the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) Expert Team on Sea Ice (ETSI) on ETSI's Arctic-related activities at PAME I-2017.

A representative from the Danish Shipowners' Association presented on their priorities with respect to Arctic shipping operations at PAME I-2017.

A representative from the Danish Ministry of Defence presented on the assessment report regarding "Marine Environmental Risk – Concerning Waters In And Adjacent To Greenland And The Arctic," at PAME I-2017.

A representative from Italy made a presentation on their Arctic interest, in particular with respect to shipping activities, at PAME I-2017.

A representative from the Danish Maritime Authority presented on the ArcticWeb project to the Shipping Expert Group at PAME I-2017.

A representative from OSPAR presented on their Offshore Industry Committee and Environmental Impacts of Human Activities Committee work at PAME I-2017. PAME noted the synergies between OSPAR and PAME on issues concerning offshore oil and gas, offshore renewable energy, and marine noise, and encouraged the exploration of possible future cooperation, as appropriate.

A representative from the International Council on Clean Transportation (ICCT) will be invited to make a presentation at PAME II-2017 relating to the use and carriage of HFO by ships in the Arctic as it pertains to the HFO projects in PAME's 2017-2019 Work Plan.

A representative from the Finnish Maritime Environment Tri-authority Operations (METO) will be invited to make a presentation at PAME II-2017 regarding the Finnish METO maritime cooperation on the maritime surveillance systems, communication means and risk analyses methods to produce a common maritime situational awareness in a cost effective way.

A representative from the Finnish Shipowners' Association will be invited to make a presentation at PAME II-2017 on Arctic shipping.

A representative from Germany (tentative) will make a presentation on their Arctic interests at PAME II-2017

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period / Terms of Reference for the Arctic Shipping Best Practices Information Forum - for information.

PAME

Status: **On Track**

02. Arctic Marine Shipping Assessment I (A) (AMSA) - Linking with International Organizations

Contact

Description of this initiative

PAME in cooperation with the IMO and World Maritime University (WMU) convened an International Conference on Safe and Sustainable Shipping in a Changing Arctic Environment (ShipArc 2015) 25-28 August 2015 in Malmö, Sweden.

Additions to be made following PAME II-2016.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **On Track**

03. AMSA I(B) – IMO Measures for Arctic Shipping

Contact

Description of this initiative

Four project descriptions from the PAME 2017-2019 Work Plan regarding Mitigating Risks Associated with the Use and Carriage by Ships of HFO in the Arctic:

- project to 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 (Canada/USA utilizing ASTD system if approved);
- project in partnership with the Sustainable Development Working Group (SDWG) (subject to SDWG to 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 (USA/AIA/CCU);
- project to prepare an information paper summarizing PAME's work on HFO for possible submission by one or more Arctic States to IMO's Marine Environmental Protection Committee (Canada/PAME Secretariat);
- 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 LNG. (Norway/WWF)

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" for 2015-2017. / Refer to PAME Work Plan for HFO project descriptions.

PAME

Status: [No answer]

03. AMSA I(C) - Uniformity of Arctic Shipping Governance

Contact PAME Secretariat

pame@pame.is

Description of this initiative

PAME has approved a project to collect and summarize information on Arctic State safe and low-impact marine corridor initiatives and programs with a view to submitting a report by PAME I- 2019. Canada, Iceland and AIA co-lead the project.

PAME invited Canada to make a presentation at PAME II-2017 regarding the concept of safe and low impact shipping corridors

2017 Deliverables

Refer to PAME Work Plan for project descriptions.

PAME

Status: On Track

04. AMSA I(D) – Strengthen Passenger Ship Safety in Arctic Waters

Contact Peter Oppenheimer

peter.oppenheimer@noaa.gov

Description of this initiative

Follow-up to the Arctic Marine Tourism Project released a best Practice Guidelines document in April 2015. Canada,, U.S. and Norway provided a paper to PAME II-2016 "Summary paper identifying potential specific Arctic Marine Tourism Project (AMTP) follow-up activities."

A representative from EYOS Expeditions will be invited to make a presentation at PAME II-2017 on safe and environmentally sound navigation in the Arctic of non-commercial yachts and pleasure craft and to identify areas of potential collaboration with PAME on such issues

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Additional report for the 2015-2017 period.

PAME

Status: On Track

05. AMSA II(A) – Survey of Arctic Indigenous Marine Use

Contact James Gamble (AIA)

aia@alaska.net

Description of this initiative

In 2013 the AIA began work on the first phase of a three phase project on building an Arctic marine subsistence use mapping tool which will allow communities to produce scientifically justifiable maps of their subsistence use in the marine environment. The project has since evolved and now includes the Korean Maritime Institute as its partners. AIA had noted interest in additional partners to allow the project to move forward in additional communities.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **Completed**

06. AMSA II(D) – Specially Designated Arctic Marine Areas

Contact

Description of this initiative

Taking into account the AMSA II(C) Report and the two Arctic high seas EBSAs identified by the Convention on Biodiversity, invited AMAP and CAFF to denote areas within the high seas area of the Central Arctic Ocean that are particularly vulnerable to shipping. Once that information is received from AMAP and CAFF, PAME will further explore possible international protection measures that could be pursued by Arctic States, individually or collectively, at the IMO.

Development of Arctic Regional Reception Facilities Plan (RRFP) as a long-term solution to help meet the challenges posed by the expected increases in Arctic shipping activities. The aim is to allow for the environmentally sound management of ship waste and ensure that ships can comply with MARPOL requirements for the proper disposal of ship generated waste. This project does not attempt to circumvent or supplant any work by the IMO or other international body with recognized competence, and is in keeping with established principles and existing IMO/MARPOL guidance. It will complement work being undertaken by IMO.

Continued work of the Regional Reception Facilities (RRF) Expert Group (EG) in consideration and input into the ongoing work of the RRF-EG is encouraged from all Arctic States, Permanent Participants and Observers. The ICES/PAME Working Group on Integrated Ecosystem Assessment for the Central Arctic Ocean (WGICA) will have as one of the items of work to consider vulnerability of the ecosystem of the Central Arctic Ocean in relation to climate change and Arctic shipping, and welcomes progress report on that work at future meetings. Norway will provide an update on the status of current ship traffic in the high seas areas of the Central Arctic Ocean to PAME II-2016.

2017 Deliverables

See above.

PAME

Status: **On Track**

07. AMSA II(E) - Protection from Invasive Species

Contact

Description of this initiative

PAME has partnered with CAFF in its project to develop a strategy to prevent the introduction of alien and aquatic invasive species into Arctic ecosystems (Invasive Species Project). PAME's contributions to this project include the following: (1) provide all PAME information papers related to aquatic invasive species; (2) participate in the project steering committee; (3) and review any documents as needed and contribute to the development of the project report and its policy recommendations.

2017 Deliverables

The Arctic Invasive Alien Species Strategy and Action Plan (ARIAS).

PAME

Status: **Completed**

08. AMSA II(F) - Oil Spill Prevention

Contact

Description of this initiative

Contribute to the TFOPP implementation matrix as it relates to PAME's work.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **On Track**

09. AMSA II(G) – Address impacts on Marine Mammals

Contact

Description of this initiative

Collaborate with other AC working groups to monitor and provide support for work related to the impact of shipping on marine mammals. Collaboration with WWF as relevant.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **On Track**

10. AMSA II(H) – Reduce Air Emissions

Contact

Description of this initiative

PAME will continue to explore how best it could use information it compiles on emissions (especially black carbon) from ships in the Arctic and their effects on the marine environment, including in cooperation with other working groups, in particular AMAP, to support reductions in ship air emissions.

PAME continues to invite Arctic stakeholders to augment the consolidated bibliography of ship air emission publications posted to the PAME website.

PAME has invited Norway to submit a brief update on IMO's work with respect to black carbon, specifically the outcome of the 71st Session of the IMO's Marine Environmental Protection Committee (3-7 July 2017) to the Shipping Expert Group at PAME II-2017, if relevant.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **Completed**

11. AMSA III(A) – Address the infrastructure Deficit

Contact

Description of this initiative

Regular updates and status provided on infrastructure aspects such as the IMO's GISIS Port Reception Facility database.

2017 Deliverables

Progress/status provided in the "Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: **On Track**

12. AMSA III(B) – Arctic Marine Traffic Systems

Contact

Description of this initiative

PAME's Arctic Ship Traffic Data (ASTD) project will establish an on-line data repository of reliable, accurate and comprehensive Arctic ship traffic data and related information for use by Arctic States and Arctic Council Working Groups to analyze shipping activities in light of changing environmental conditions and regulatory developments, as well as to identify ship traffic trends over multi-year periods to help inform future decision making.

The ASTD project is PAME's response to increasing shipping in the circumpolar Arctic. It fulfills the Arctic Council's need for an Arctic shipping activity database.

Data will be provided voluntarily by the Arctic States, supplemented where appropriate with other high-quality, no-cost data available from international bodies such as the World Meteorological Organization. Compatibility with other Arctic Council projects and datasets will be secured, including CAFF's Arctic Biodiversity Data Service and the Arctic Spatial Data Infrastructure (SDI) platform

2017 Deliverables

Signature by the SAOs of all Arctic States is a prerequisite to the establishment of the ASTD system. It will allow the ASTD Expert Group to finalize developments and set up for the ASTD database.

PAME

Status: **Completed**

12. AMSA III(D) – Investing in Hydrographic, Meteorological and Oceanographic Data

Contact

Description of this initiative

The USA undertook an informal review of the 1st World Ocean Assessment, giving particular consideration to those chapters relating to shipping in the Arctic and current and proposed PAME work on shipping-related issues, and provided a report to the Shipping Expert Group at PAME II-2016.

2017 Deliverables

None

PAME

Status: On Track

14. AMSA implementation progress report

Contact

Description of this initiative

PAME provides biennial AMSA shipping progress implementation reports for submission to AC Ministerial meetings. This report addresses work pursuant to other Arctic Council shipping mandates and recommendations.

2017 Deliverables

Status of the Implementation of the AMSA 2009 Recommendations" Report for the 2015-2017 period.

PAME

Status: Delayed

16. Meaningful Engagement of Arctic Indigenous Peoples and Local Communities in Marine Activities (MEMA)

Contact

Description of this initiative

PAME approved the revised MEMA Part II work plan items for inclusion into the PAME 2017-2019 Work Plan. Part II will analyze and assess 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.

The main activities will include to 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 (EIA).

2017 Deliverables

MEMA Report: Part I – for information.
MEMA Workshop Summary Report - for information.

PAME

Status: **On Track**

17. Updates of the AOOGG 2009 and Response to AMSP Strategic Actions and TFOPP Framework

Contact

Description of this initiative

PAME has approved the Resource and Exploration and Development Expert Group (REDEG) Terms of Reference (ToR) and scope of work. PAME decided to focus future presentations and information gathering on offshore renewable energy, noise from activities, mining activities that can affect the marine environment and non-emergency offshore oil and gas activities.

At the PAME i-2017 meeting, PAME noted with appreciation the work done by the REDEG members on:

☐ The online survey on implementing recommendations of the System Safety Management and Safety Culture Report that EPPR has agreed to distribute to national regulators.

☑ The survey related to possible updates of the Arctic Offshore Oil and Gas Guidelines (AOOGG 2009) and notes REDEG's decision not to pursue new 2017-2019 projects.

2017 Deliverables

Details to be determined

PAME

Status: **On Track**

18. Arctic Offshore Oil and Gas Regulatory Resource (AOOGRR)

Contact

Description of this initiative

Ongoing / Website (was launched in May 2013 and provides indexed access to information and data on national entities and agencies websites related to management, regulation, and enforcement of Arctic offshore oil and gas activities. (online May 2013) / Annual spring updates

2017 Deliverables

Website has been opened up for access and will be updated once per year. Next overview is due in June 2017.

PAME

Status: **On Track**

19. Arctic Ocean Review follow-up

Contact

Description of this initiative

Follow up to the AOR Final Report recommendations has been incorporated into the AMSP 2015-2025 and other PAME activities, as relevant.

2017 Deliverables

Contributions to AOR follow-up is identified in all PAME activities as relevant, including the AMSP implementation reporting for the period 2015-2017.

PAME

Status: On Track

20. Implementation of the Arctic Council Marine Strategic Plan (AMSP 2015-2025)

Contact

Description of this initiative

The aim is to systematically track status of the AMSP's 40 strategic actions.

PAME has agreed to the final version of the AMSP Communication Plan and the AMSP Implementation Plan, including the AMSP implementation tracking table, and encourages close involvement of other Arctic Council working groups and subsidiary bodies in reporting progress on its strategic actions and note the usefulness of using this in developing respective work plan items and contributing to collaboration on cross-cutting issues, as relevant.

The tracking table is a living document to be modified as needed to best serve its purpose.

The Arctic Marine Strategic Plan (AMSP) 2015-2025 was approved by the Arctic Council ministers at their meeting in Iqaluit, Canada on 24th of April 2015. With reference to AMSP, Section 8.0 on Implementation, 1st draft proposal and roadmap to prepare AMSP implementation plan has been prepared and was discussed at the PAME II-2015 meeting and distributed to other Arctic Council working groups. The aim of an Implementation Plan for the AMSP 2015-2025 forty strategic actions is to provide a structured approach that tracks follow-up activities (new and ongoing) in close coordination and cooperation with other Arctic Council working groups with overall guidance from the SAOs

2017 Deliverables

1st status report on the AMSP Implementation Plan.

PAME

Status: On Track

22. Ecosystem Approach to Management

Contact

Description of this initiative

The work of the Ecosystem Approach expert group (EA-EG) is proceeding according to its Terms of Reference (ToRs) for the period 2015-2017 which was developed for the joint EA-EG in consultations with AMAP, CAFF and SDWG. These ToRs were developed in response to the following recommendation of the EBM Expert Group (Kiruna 2013): "Identify a lead to assure coordination of a common approach to the work of the Arctic Council on EBM in the Arctic and ensure appropriate reporting of progress to the Senior Arctic Officials" in addition to other marine-specific EBM recommendations in the Kiruna Declaration. Six elements are recognized for the implementation of the EA to management and form the basis of the work of this expert group.

PAME produces progress reports on the work of the Ecosystem Approach expert group (EA-EG) describing work. The year 2016 included the planning of the international conference on status of implementation of the Ecosystem Approach to management in the Arctic, held in Fairbanks, Alaska, 23-25 August 2016. Over 70 participants from Arctic Member States, Permanent Participants and others took part in the conference. PAME has participated in the work of the new ICES/PAME Working Group on Integrated Ecosystem Assessment for the Central Arctic Ocean (WGICA) and its terms of reference as approved by ICES. The WGICA met at the ICES headquarters in Copenhagen, 24-26 May 2016. It is expected that AMAP and CAFF will join as co-sponsors of WGICA from 2017. The PAME Secretariat will circulate the terms of reference to its members. There have been some delays in production of the report "Status of Setting Ecological Objectives in the Arctic" based on the background document on ecological objectives, included as Annex III of the 5th EA workshop report from Bergen last May. Arctic States, PPs and observers are again invited to contribute more information to be used in this report, according to the recommendations from the 5th workshop by May 15

2017 Deliverables

Status of Implementation of the Ecosystem Approach to Management in the Arctic

PAME

Status: On Track

23. Enhance PAME's work on a Pan-Arctic Network of Marine Protected Areas (MPA)

Contact

Description of this initiative

Status on progress:

- Each country provided updated protected areas datasets which were harmonized and processed into a database on protected areas for the Arctic.
- Report timeline has been extended to allow for incorporation of additional data received into the protected areas database.
- Based on additional data received the 2nd draft of the "Arctic Protected Areas Indicator" report is under revision and is scheduled to be circulated for review in October 2016. This report measures the extent of protected areas across the Arctic (marine and terrestrial) and PAMEs input and relevance is with respect to the marine portion of the report.
- Release of harmonized dataset and the "Arctic Protected Areas Indicator" report has thus been rescheduled in June-Aug 2017 (original timeline was: Jun-Aug 2016).

[Project description]

The Framework for a Pan-Arctic Network of MPAs was approved by the Arctic Council ministers at their meeting in Iqaluit, Canada on 24th of April 2015. Follow-up on this framework is one of the U.S. Chairmanship priorities. PAME is contributing to this work through three activities that include contributions to: 1) the MEMA project; 2) inventory and mapping of existing Arctic MPAs, and 3) desktop study on area-based conservation measures and its linkages to categories of Arctic marine biodiversity.

PAME agreed to a revised timeline to finalize the inventory mapping of existing Arctic MPAs project (joint effort by the PAME and CAFF and Secretariat) with release harmonized dataset and status/trends (indicator) report in August 2016.

The USA is the lead on the "Desktop study on area-based conservation measures and its linkages to categories of Arctic marine biodiversity 'Toolbox'" project and is in the process of updating the project description including more detailed information on the following two proposed connectivity workshops:

- The 1st connectivity workshop to identify and vet models for migratory species and larval dispersal, be held 22-23 September 2016 on the east coast of the USA.
- The 2nd connectivity workshop integrating 1st workshop models with climate change and reviewing management tools for protecting connectivity, was held back-to-back with the PAME I-2017 meeting 2-3 February 2017.

PAME is in cooperation with CAFF, in the MPA activities and workshops.

PAME has approved the MPA Network Toolbox Project work plan for inclusion into the PAME 2017-2019 Work Plan, which includes the 4th Arctic MPA workshop in 2018, to potentially be hosted by Canada, to convene MPA managers, Indigenous peoples, community representatives, and other MPA partners to share experiences in planning and developing Arctic MPA networks.

The 3rd Arctic MPA Workshop will be held 21-22 September 2017, in conjunction with the PAME II-2017 meeting

2017 Deliverables

CAFF and PAME final Protected Areas Indicator Report.

Status of Implementation of the Ecosystem Approach to Management in the Arctic

PAME

Status: On Track

25. Follow-up of the Arctic Biodiversity Assessment

Contact

Description of this initiative

Follow up on ABA recommendations as appropriate to PAME mandate has been incorporated into the AMSP 2015-2025.

2017 Deliverables

As a part of the AMSP implementation reporting for the period 2015-2017.

PAME

Status:

26. Adaptation Actions for a Changing Arctic (AACA) part c

Contact

Description of this initiative

Provide input for AACA part C to AMAP as required and Incorporated into a implementation plan/follow-up matrix that is being developed for the Arctic Ocean Review recommendations as it relates to PAME's

2017 Deliverables

[Blank]

SDWG

Status:

02. Assessing, Monitoring and Promoting Arctic Indigenous Languages

Contact

Description of this initiative

Building on the Inuit Circumpolar Council's 2008 SDWG work in the same area, a follow-up Arctic Indigenous Languages Assessment Symposium was held February 10-12, 2015 in Ottawa, with strong youth participation, to present the Project's findings and facilitate knowledge transmission. Other deliverables under the Canadian Chairmanship include a Symposium Report, for information only, as well as a Project status report on the activities for 2013-15. The Arctic languages website (<http://www.arcticlanguages.com>) was launched in 2013 as an early project deliverable and features a large collection of electronic language learning tools as well as a repository of academic articles related to Arctic indigenous languages. Follow-on activities under consideration.

2017 Deliverables

[Blank]

SDWG

Status: **Completed**

06. Gender and Equity in the Arctic

Contact

Description of this initiative

Builds on the 2002 Taking Wing conference on gender equality and women in the Arctic.. The Akureyri, Iceland conference held in October 2014 focused on the living conditions of men and women throughout the circumpolar North; addressed key issues including access to and control over resources; representation in decision-making; political participation; regional development; human security; and material and cultural well-being. A possible follow-on project proposal will be under consideration at SDWG Orono meeting, 01-02 October 2016.

2017 Deliverables

[Blank]

SDWG

Status:

09. Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change

Contact

Description of this initiative

The Arctic Adaptation Exchange online portal builds on the ongoing adaptation work of the Arctic Council, notably the Adaptation Actions for a Changing Arctic project (AACCA). The portal will serve as a central information hub for communities, researchers, and decision-makers across a variety of sectors by bringing the Arctic Council's work on adaptation, along with other relevant resources, together in one place in support of information exchange and decision-making. Follow-on activities are under consideration.

2017 Deliverables

[Blank]

SDWG

Status: **On Track**

11. Arctic Energy Summit

Contact

Description of this initiative

The Arctic Energy Summit is a three-day conference that establishes a comprehensive approach to Arctic energy that includes petroleum-related activities, renewable energy potential and projects, energy efficiency and remote energy systems. The Summit provides a forum to share best practices, emerging technology, innovation and policy issues. The 4th Arctic Energy Summit will take place 18-20 September, 2017 in Finland. Conference planning and preparations have begun, with great interest from around the Arctic and world. The project will deliver its final report in February 2018.

2017 Deliverables

None

SDWG

Status: On Track

12. Arctic Remote Energy Networks Academy (ARENA)

Contact

Description of this initiative

ARENA seeks to increase human capacity, promote leadership, and deploy traditional and local knowledge through the creation of a knowledge exchange program emphasizing the development, operation, and management of remote energy networks (microgrids) incorporating renewable resources. ARENA combines online webinars, classroom, laboratory, and field study learning environments, drawing from best practices established through experiences of the people living and the organizations operating in the Arctic. Participants will bring back to their home areas knowledge, skills, and tools that facilitate integrating clean energy technologies in their communities and promote energy security and diversification, including completed feasibility studies.

2017 Deliverables

a report of first on-site training session will be submitted to SAOs in early April 2017

SDWG

Status: **Completed**

13. Arctic Indigenous Youth, Climate Change and Food Culture (EALLU)

Contact

Description of this initiative

This project seeks to maintain and further develop a sustainable and resilient reindeer husbandry in the Arctic in face of climate change and globalization, while working towards a vision of creating a better life for circumpolar reindeer herders. Sub-goals of the project include:

- To build awareness of Arctic climate change in northern indigenous youth societies, through enhanced resilience;
- To document, systematize, make use of and respect the Traditional Knowledge of food cultures of Arctic indigenous/reindeer herding peoples;
- To work towards knowledge building and experience exchange in and between local indigenous/reindeer herding societies in the Arctic, focusing on food culture and youth;
- To increase focus on and understanding of Arctic indigenous food cultures and value added, by disseminating and giving a voice to the Traditional Knowledge and food cultures of Arctic indigenous peoples, including by use of ReindeerPortal.org and ArcticPortal.org;
- To stimulate knowledge development for innovation, business development and local value added in Arctic indigenous peoples' societies and areas, in appropriate ways, working in the intersection between academia and business, between science and traditional knowledge, and between "modernity" and traditions.

The project focused on youth involvement and engagement, seminars and place-based workshops, local capacity building, summer/ winter schools, networking, as well as co-production of project outputs by youth. The project deliverable voices the Traditional Knowledge on food culture of Arctic indigenous peoples, carried by elders and disseminated by youth, thereby also bridging gaps between generations for preservation of unique Arctic knowledge. The project will ensure included gender equality among participants, also in accordance with the Aoluguya Declaration on the occasion of the 5th World Reindeer Herders Congress in 2013.

The project followed the ethical guidelines for handling of Traditional Knowledge developed by ICR (Sundset et al. 2007), as well as the drafted principles for inclusion of Traditional Knowledge into the work of the Arctic Council.

2017 Deliverables

Arctic Council cookbook on indigenous foods and cultures

SDWG

Status: **Completed**

14. Improving Health through Safe and Affordable Access to Household Running Water and Sewer (WASH)

Contact

Description of this initiative

This project focused on water-related health challenges in Arctic and Sub-Arctic communities. The core scientific activity of this project was a survey by the Arctic Health Human Experts Group (AHHEG) of WASH infrastructure and the diseases related to insufficient household water quality or quantity. Key project activities included: an international WASH conference in April 2016 in Sisimiut, Greenland (complete); a WASH conference September 18-21, 2016 in Anchorage (WIHAH); an online survey that assessed the current state of WASH in the Arctic. TLK collaboration was integral to the project design. TLK holders' perspectives were sought on the workability of technologies in their communities.

2017 Deliverables

WASH survey summary; WIHAH Conference Report, including Executive summary and next steps;

SDWG

Status: **Completed**

15. Operationalizing a One Health approach in the Arctic (One Health)

Contact

Description of this initiative

One Health is an approach to assess health issues at the interface between humans, animals, and ecosystems. This project seeks to forge co-equal, all-inclusive collaborations across multiple scientific disciplines and Arctic communities in order to enhance resiliency of the Arctic inhabitants through an enhanced understanding of climatic change impacts on health risks to people, animals, and the environment. The project included TLK holders in the leadership team to develop strategy for implementing an Arctic One Health framework and in Table Top Exercises, as well as "on-the-ground" activities.

2017 Deliverables

2017 deliverable: final report

SDWG

Status: **Completed**

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

Contact

Description of this initiative

RISING SUN was designed to create a common, science-based set of metrics to evaluate the key correlates and outcomes associated with suicide prevention interventions, across Arctic states. Common metrics, developed through an on-going engagement with Permanent Participants and community leaders, as well as mental health experts, will facilitate data sharing and pooling, evaluation, and interpretation of interventions across service systems. These metrics will aid health workers to better serve the needs of their communities while helping policymakers measure progress, evaluate the scale-up of interventions, and identify impediments to implementation and cultural adaptability challenges. The core of RISING SUN was a series of three meetings (Sept 2015 in Anchorage; May 2016 in Tromso; March 2017 in Iqaluit). Community members, many of whom may be TLK holders, have been invited and strongly encouraged to participate in all three meetings.

2017 Deliverables

A final report synthesizing results from the described activities; toolkit of best practices for practitioners

SDWG

Status: **Completed**

17. The Economy of the North 2015 (ECONOR III)

Contact

Description of this initiative

ECONOR III provides an updated overview of the economy, socio-economic living conditions and environmental issues in the circumpolar Arctic, as impacted by the global economy and climate change. This report follows upon ECONOR I, (2006) and ECONOR II (2008). The ECONOR projects harmonize socio-economic statistical data across national and regional borders. The ECONOR III project expresses the importance of TLK for understanding the characteristics of the economy of the north. Traditional and Local Knowledge is integrated in a chapter that describes traditional living, the subsistence activities and their relationship to the market economy.

2017 Deliverables

Final Report: ECONOR III: "The Economy of the North 2015".

SDWG

Status: On Track

18. The Arctic as a Food Producing Region

Contact

Description of this initiative

The project takes a multi-disciplinary approach in assessing the potential for increased production and added value of food from the Arctic, with the overarching aim of improving food security, and enhancing the social and economic conditions of Arctic communities. By focusing on biological (climate change), commercial (commercial resources, infrastructure and resource and industry policy), cultural (food traditions and organization of food chains) and market conditions (local, national and international), this project will identify potential pathways for Arctic food production and distribution. The aim is twofold: 1) to enhance commercial food production 'in the North and for the North' and 2) to develop North to South food production linkages.

2017 Deliverables

None for 2017. Final report for 2019 Finnish Ministerial

SDWG

Status: On Track

19. Arctic Renewable Energy Atlas (AREA)

Contact

Description of this initiative

The online Arctic Renewable Energy Atlas (AREA) will be a central location to access information, case studies, and best practices in the Arctic region to facilitate implementation of renewable energy and energy efficiency projects. Information presented within the Atlas will fall into four categories: resource supply, demand, investment and capacity, and traditional and local knowledge. Taken together, AREA will foster knowledge exchange between Arctic residents and promote clean energy prospecting by internal and external investors.

2017 Deliverables

2017 deliverables: project website and online renewable energy resource maps

SDWG

Status: On Track

20. Gender Equality in the Arctic II

Contact

Description of this initiative

The project promotes and expands the dialogue on Gender Equality in the Arctic region. Building on previous projects, initiatives and conferences, in particular the outcome and recommendations from the Conference – Gender Equality in the Arctic- Current Realities and Future Challenges, that was held in Akureyri in October 2014. The project aims to continue that work by establishing a formal network of experts in this field that will over the course of the next two years advance the work of the Arctic Council and the SDWG in this area.

2017 Deliverables

None

Task Force

Status: On Track

Task Force for Enhancing Scientific Cooperation in the Arctic

Contact

Description of this initiative

The Kiruna Declaration calls on the Task Force to "...work towards an arrangement on improved scientific research cooperation among the eight Arctic States."

2017 Deliverables

If all goes as planned, the "Agreement on Enhancing Arctic Scientific Cooperation" will be presented for Ministerial signature.

Task Force

Status: On Track

Task Force on Arctic Marine Cooperation

Contact

Description of this initiative

A report identifying future needs for strengthened cooperation for Arctic marine areas will be presented to SAOs before the 2017 Ministerial for review and approval before submission to Arctic Council Ministers.

2017 Deliverables

A report identifying needs and principles for strengthened cooperation for Arctic marine areas. A continuation of the Task Force is recommended with a new mandate to negotiate the terms of reference for a possible new subsidiary body.

Task Force

Status: On Track

Task Force on Telecommunications Infrastructure in the Arctic (TFTIA)

Contact

Description of this initiative

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

2017 Deliverables

Completed report: "Telecommunications infrastructure in the Arctic: a circumpolar assessment" containing findings and recommendations.

X - Expert Group

Status: On Track

Expert Group in support of implementation of the Framework for Action on Black Carbon and Methane

Contact

Description of this initiative

The Expert Group was established at the Arctic Council Ministerial Meeting in Iqaluit 24 April 2015. The objective of the group is to periodically assess progress of the implementation of the Arctic Council's Framework for Action on Black Carbon and Methane, and to inform policy makers from Arctic states and for participating Arctic Council Observer States. This includes preparing, on a once every two-year cycle to the Arctic Council chairmanship, a high level "Summary of Progress and Recommendations" report, with appropriate conclusions and recommendations.

2017 Deliverables

A "Summary of Progress and Recommendations" report, including appropriate conclusions and recommendations, will be presented to Ministers.