

**ARCTIC COUNCIL MINISTERIAL DECLARATION
RECOMMENDATIONS, 1998-2015**

UNITED STATES IMPLEMENTATION

June 2017

The United States considers the Arctic Council to be the most valuable forum for Arctic cooperation. Since its inception on September 19, 1996 in Ottawa, the Arctic Council has produced nine ministerial declarations (Iqaluit/1998; Barrow/2000; Inari/2002; Reykjavik/2004; Salekhard/2006; Tromso/2009; Nuuk/2011; Kiruna/2013; Iqaluit/2015). These declarations include recommendations to be implemented by the Arctic States individually, by the Arctic States collectively through the Arctic Council, or by other international bodies.

This report explains how the United States, through federal government departments and agencies, has implemented or supported implementation of most of the recommendations from the first nine ministerial declarations (1998-2015). The U.S. Department of State, in partnership with all relevant federal departments and agencies, will periodically update this report.

Declaration recommendations are organized under the following categories: (a) Arctic marine environment; (b) Arctic monitoring and assessment; (c) climate change; (d) biodiversity; (e) contaminants and environmental protection; (f) emergency prevention; (g) sustainable development; and (h) strengthening the Arctic Council. Recommendations are listed chronologically within each category. They are grouped by common issue (with lettering) when the basic substance of a particular recommendation appears in more than one declaration.

During the period 1998-2015, there were **87** implementable declaration recommendations. The United States has implemented **73** recommendations; **13** recommendations are in process or on-going; **one** recommendation has not been implemented.

Arctic Marine Environment

1). **Encourage** Member States and others to disseminate the Arctic Waters Oil Transfer Guidelines widely (*Reykjavik, 2004*)

Implemented: The U.S. Coast Guard (USCG) disseminated guidelines to stakeholders. USCG regulations exceed the provisions of these guidelines.

2). **Endorse** the Arctic Marine Strategic Plan and encourage its implementation through the working groups and other mechanisms and in cooperation with regional and global bodies (*Reykjavik, 2004*)

Implemented: The U.S. National Oceanic and Atmospheric Administration (NOAA) co-led the update of the Arctic Marine Strategic Plan (AMSP) 2015-2025, which was adopted at the 2015 Iqaluit Ministerial.

Implemented: The United States has embedded the principles and elements of the AMSP 2004-2014 into Federal Policy: a) HSP 25/NSPD 66 Arctic Policy of the United States 2009, b) 2013 Interagency Integrated Arctic Management Report to the President, c) National Strategy for the Arctic Region and its implementation plan 2014-2015, d) National Ocean Policy and its implementation plan 2014-2015, and e) the Arctic Research Plan 2017-2021.

3). **Call upon** Member States, Arctic Council working groups and relevant regional and international bodies to further the application of this approach [an ecosystem-based management approach] to the Arctic marine environment (*Reykjavik, 2004*)

Implemented: The United States (U.S. Department of State) co-chaired with Sweden and Iceland an Expert Group on Ecosystem-Based Management (EBM) from 2011-2013 that resulted in a final report adopted at the 2013 Kiruna Ministerial. Its recommendations included a definition of EBM in the Arctic, a set of principles for EBM in the Arctic, and a set of high-priority activities for coordinating and improving the EBM work of the Arctic Council.

3a). **Welcome** the Report on Ecosystem-Based Management, **approve** the definition, principles and recommendations, **encourage** Arctic States to implement recommendations both within and across boundaries, and **ensure** coordination of approaches in the work of the Arctic Council's Working Groups (*Kiruna, 2013*)

Implemented: United States National Ocean Policy includes a focus on ecosystem-based management.

Implemented: The Protection of Arctic Marine Environment Working Group (PAME) established an Expert Group on the Ecosystem Approach to management that the United States (NOAA) co-leads with Norway.

Implemented: The United States led an Arctic Council workshop in December 2014 to explore further implementation of the EBM Expert Group report's recommendations.

3b). **Welcome** and continue to **encourage** progress toward implementation of the ecosystem-based management recommendations approved by Ministers in Kiruna, and request the development of practical guidelines for an ecosystem-based approach to the work of the Arctic Council be completed as soon as possible (*Iqaluit, 2015*)

In Process: The Ecosystem Approach Expert Group, co-led by the United States (NOAA) with members from the PAME, Conservation of Arctic Flora and Fauna (CAFF), and Arctic Monitoring and Assessment Program (AMAP) working groups, co-convened a 2016 workshop – “International Science and Policy Conference on the Status of Implementation of the Ecosystem Approach in the Arctic” to broadly address progress toward the Kiruna recommendations. The report of the workshop now being developed contains a series of recommendations on how to develop practical guidelines for an ecosystem-based approach to the work of the Arctic Council. A follow up workshop is planned for the 2017 – 2019 biennium.

4). **Promote** the application of the Arctic Offshore Oil and Gas Guidelines and **recommend** their review in the year 2000 (*Iqaluit, 1998*)

Implemented: The U.S. Minerals Management Service (MMS) promoted the guidelines through its Alaska Region web page. MMS co-led a PAME update to the guidelines during the 2000-2002 biennium. MMS (now DOI/BOEM and DOI/BSEE) regulations exceed the provisions of these guidelines.

4a). **Urge** all States to apply these Guidelines (Arctic Council Offshore Oil and Gas Guidelines) throughout the Arctic as minimum standards in national regulations (*Tromso, 2009*)

Implemented: The U.S. Department of the Interior’s Bureau of Ocean Energy Management (DOI/BOEM) promotes the guidelines through its Alaska Region web page and, together with the U.S. Department of the Interior’s Bureau of Safety and Environmental Enforcement (DOI/BSEE) led efforts to update the guidelines within the PAME working group. DOI/BOEM and DOI/BSEE regulations exceed the provisions of these guidelines.

4b). **Welcome** the Arctic Offshore Oil and Gas Guidelines: “Systems Safety Management and Safety Culture” report, and **urge** governments to apply these guidelines throughout the Arctic (*Iqaluit, 2015*)

Implemented: DOI/BOEM requires operators to develop an integrated operations plan (IOP) that addresses all phases of its proposed Arctic outer continental shelf exploration program, and submit the IOP to DOI/BOEM at least 90 days in advance of filing its Exploration Plan.

5). **Approve** the Arctic Marine Shipping Assessment (AMSA) 2009 Report including its recommendations on enhancing Arctic marine safety, protecting Arctic people and the

environment, and building Arctic marine infrastructure and **request** Senior Arctic Officials (SAOs) to develop appropriate follow up actions (*Tromso, 2009*)

In Process: The United States (NOAA) co-led development of the AMSA and now leads the implementation of its 17 recommendations through the PAME working group. Implementation activities underway relate to, for example, development of an Arctic Shipping Traffic Database, a study on the use of heavy grade fuel oil, a study of port reception facilities, implementation of the Polar Code and more.

Implemented: The United States Committee for the Marine Transportation System (CMTS) generated reports to the President that support implementation of the AMSA, including:

- a. "U.S. Arctic Marine Transportation System: Overview and Priorities for Action 2013"
- b. "A Ten-Year Projection of Maritime Activity in the U.S. Arctic Region 2015"
- c. "A Ten-Year Prioritization of Infrastructure Needs in the U.S. Arctic 2016"
- d. "Recommendations and Criteria for Using Federal Public-Private Partnerships to Support Critical U.S. Arctic Maritime Infrastructure 2016"

6). **Support** the continued implementation of the Regional Programme of Action for the Protection of the Arctic Marine Environment from Land-based Activities (RPA) (*Reykjavik, 2004*)

6a). **Encourage** the continued implementation of the Arctic Council Programme of Action for the Protection of the Arctic Marine Environment from Land-based Activities (*Tromso, 2009*)

Implemented: The United States implements the RPA through legislation and regulations, and further implements the RPA through its acceptance of the Minamata Convention on Mercury.

In Process: The United States co-leads with Canada the Resource Exploration and Development Expert Group (REDEG) within PAME. Among other things, the group focuses on terrestrial development projects that may affect the marine environment.

7). **Promote** the application of the assessment of current and potential shipping activities to assist in determining what, if any, additional Arctic shipping measures are required, including work on an International Code of Safety for Ships Operating in Polar Waters (Polar Code) under the auspices of the International Maritime Organization (IMO) (*Iqaluit, 1998*)

7a). **Encourage** active cooperation within the International Maritime Organization (IMO) on development of relevant measures to reduce the environmental impacts of shipping in Arctic waters (*Tromso, 2009*)

7b). **Urge** that the ongoing work in the IMO to update the Guidelines for Ships Operating in Arctic Ice-Covered Waters be completed, application of its relevant parts be made mandatory, and global IMO ship safety and pollution prevention conventions be augmented with specific mandatory requirements or other provisions for ship construction, design, equipment, crewing,

training, and operations, aimed at safety and protection of the Arctic environment (*Tromso, 2009*)

7c). **Urge** the completion as soon as possible of work at the International Maritime Organization to develop a mandatory polar code for ships (*Nuuk, 2011*)

7d). **Recognize** the important ongoing work in the International Maritime Organization to develop a mandatory Polar Code on shipping and **decide** to strengthen our collaboration in that work toward its expeditious completion (*Kiruna, 2013*)

Implemented: The United States actively worked through the IMO to develop the Polar Code, which entered into force on January 1, 2017. The United States is beginning to implement the Polar Code.

8). **Welcome** the “Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic,” and **decide** to begin implementing the Framework Plan through working groups, expert-level dialogues, and further actions to prevent marine oil pollution, including regular exchanges of knowledge and experience among Arctic offshore petroleum regulators (*Iqaluit, 2015*)

Implemented: The United States proposed the creation of the Arctic Offshore Regulators Forum (AORF), which was established in 2015 and operates independently of the Arctic Council. The United States (DOI/BSEE) chaired the AORF from 2015-2017. The United States (DOI/BSEE) also served as co-chair with Norway in the publication of the report “Standardization as a Tool for Prevention of Oil Spills in the Arctic” that describes how engineering and technical standards for offshore petroleum and maritime activities are identified, developed, established, and maintained.

Implemented: Under U.S. (NOAA) Chairmanship, the EPPR working group led the development of the Status Report on Implementation of the “Framework Plan for Cooperation on Prevention of Oil Pollution Prevention from Petroleum and Maritime Activities in the Marine Areas of the Arctic.” This was developed in cooperation with PAME, other WGs, and entities outside of the Arctic Council.

9). **Welcome** the “Recommended Practices in the Prevention of Arctic Marine Oil Pollution” project reports and recommendations to Ministers, and **encourage** Arctic States to pursue further work in the recommended areas (*Kiruna, 2013*)

Implemented: Under United States (NOAA) Chairmanship, the EPPR working group accomplished the following with active U.S. participation:

- a. A workshop to explore the use of unmanned aerial vehicles in the Arctic;
- b. Reports on: 1) baseline regulatory standards; and 2) standards as a tool for prevention of oil spills from offshore oil and maritime activities in the Arctic;

In Process: EPPR serves as a forum for the Arctic States to discuss relevant research, regulatory approaches, and risk assessments.

10). **Welcome** the “Guide to Oil Spill Response in Snow and Ice Conditions in the Arctic” and the further efforts to implement the “Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic,” (MOSPA) and **request** continuous efforts to further cooperation on oil spill preparedness and response, especially through renewed emphasis on research, information sharing, and exercises (*Iqaluit, 2015*)

Implemented: Under United States (NOAA) chairmanship, EPPR:

- a. Developed a database of Arctic response assets to support contingency planning and oil spill response equipment distribution for environmental protection during oil spills; the searchable database supports implementation of MOSPA; results are displayed in NOAA’s Arctic Environmental Response Management Application for ease of access.
- b. Maintains and updates the Operating Guidelines that implement MOSPA
- c. Created an Expert Group on Marine Environmental Response (MEREG) to institutionalize the exercise cycle for maintaining the operational guidelines
- d. Developed a library of spill scenarios involving vessels and offshore facilities in the Arctic and conducted a functional exercise of MOSPA
- e. Developed a process and a report for assessing conditions for response viability under various Arctic Ocean conditions
- f. Identified prevention, preparedness, and response capacity in Small Communities
- g. Updated the EPPR Arctic spill response field guide
- h. Conducted an EPPR-sponsored workshop in the United States on oil spill response technology, best available technologies, and both recent and ongoing research to improve response in the Arctic

11). **Promote** the application of an assessment of the adequacy of existing international agreements and arrangements related to the protection of the Arctic marine environment (*Iqaluit, 1998*)

Implemented: The United States (NOAA) co-chaired a process in PAME to develop two Arctic Ocean Review reports (Phases I and II) compiling global and regional measures relevant to the conservation and sustainable use of the Arctic Marine Environment; summarized potential weaknesses and impediments; and identified opportunities that Arctic States could use to strengthen governance in the marine environment. Under United States (NOAA) chairmanship, EPPR completed a review and update of the MOSPA Agreement and Operational Guidelines in 2016 after successful connectivity and table-top exercises.

12). **Recognize** the importance of freshwater to the health of Arctic inhabitants and their communities and to Arctic biodiversity, and **request** that appropriate next steps be presented to Ministers in this area and to **consider** whether existing national or regional initiatives could be extended to other parts of the Arctic (*Iqaluit, 2015*)

Implemented: The United States participated in developing the “Arctic Freshwater Synthesis Report” and a Freshwater Workshop, both through the AMAP working group.

In Process: The United States is helping to develop the first “State of Arctic Freshwaters Report” and, through the CAFF working group, continues to implement the Circumpolar Biodiversity Monitoring Program (CBMP) Arctic Freshwater Biodiversity Monitoring Plan.

13). **Approve** the Framework for a Pan-Arctic Network of Marine Protected Areas, and **decide** to continue work to develop such a network, based on the best available knowledge and science in order to strengthen marine ecosystem resilience, taking into account the cultural and sustainable use of marine resources (*Iqaluit, 2015*)

Implemented: The United States (U.S. Department of the Interior (DOI) and NOAA) established an Arctic MPA working group in 2015 within the Marine Protected Area (MPA) Federal Advisory Committee. This working group proposed 14 guiding principles on Arctic MPAs in 2016.

Implemented: The United States (NOAA) co-led the development of “Framework for a Pan-Arctic Network of MPAs” in 2015, and hosted two workshops on MPA networks - one with a focus on connectivity and one with a focus on resilience. The United States (NOAA, U.S. Fish and Wildlife Service (FWS)) through PAME and CAFF respectively, helped develop an MPA Indicators Report in 2017.

In Process: The United States (NOAA), through PAME, co-led development of a “PAME MPA network toolbox: Area-based conservation measures and ecological connectivity”, a living document that will be enhanced and refined over time based on the outcomes of subsequent workshops and related published research.

Arctic Monitoring and Assessment

1). **Urge** all the Member countries to maintain and extend long term monitoring of change in all parts of the Arctic, and request AMAP to cooperate with other AC Working Groups, IASC and other partners in efforts to create a coordinated Arctic observing network, that meets identified societal needs (*Salekhard, 2006*)

1a). **Urge** Member States and other entities to strengthen monitoring and research efforts needed to comprehensively address Arctic change and to promote the establishment of a circumpolar Arctic observing network of monitoring stations with coordinated data handling and information exchange for scientific data, statistics and traditional knowledge as a lasting legacy of the IPY (and as the evolving Arctic component of the Global Earth Observing System of Systems, GEOSS) (*Salekhard, 2006*)

1b). **Encourage** the continuation of this work with emphasis on improving sustained long term observation (*Tromso, 2009*)

Implemented: The Arctic Council co-established with the International Arctic Science Committee (IASC) in 2011 the Sustaining Arctic Observer Networks (SAON) process, with AMAP serving as the Arctic Council chair of the SAON board. The United States (U.S. Global Change Research Program) through the AMAP working group was the first SAON board chair.

Implemented: The CAFF and AMAP working groups developed a status report in 2007 on the coordination of long-term monitoring efforts in the Arctic. CAFF's Circumpolar Biodiversity Monitoring Program (CBMP) created an implementation plan for an integrated and sustained arctic biodiversity monitoring network in 2008. Since 2013, the United States (U.S. Bureau of Land Management (BLM) and U.S. National Parks Service (NPS)) has co-led the CBMP. To ensure coordination and integration with related global initiatives, the CBMP is strategically linked to other international conservation programs and research and monitoring initiatives, including serving as the GEOSS/Group on Earth Observations – Biodiversity Observing Network (GEOBON) Arctic node. With active United States (FWS) support, CAFF developed the Arctic Biodiversity Trends 2010 Report.

Implemented: The United States (NOAA) has deployed marine observation and monitoring stations via the Arctic Ocean Observing System (AOOS) and SAON.

In Process: The United States (NOAA) has set up the U.S. Arctic Observing Network (US AON), a federal government interagency effort that will work to better coordinate sustained long term observations in the Arctic and identify gaps in existing networks.

2). **Encourage** the AC Member States to implement the “Assessment Report on Acidifying Pollutants, Arctic Haze, and Acidifying Pollutants in the Arctic” (AAHA) recommendations addressing acidification and Arctic haze effects, as appropriate, recognizing that the effects are regional in nature (*Salekhard, 2006*)

2a). **Recognize** that the Assessment reports depend on the underlying data for their validity, **encourage** Member States to make available all relevant data to support AMAP's future assessments (*Salekhard, 2006*)

Implemented: The United States (U.S. Environmental Protection Agency (EPA)) plays an active role in the Convention on Long-Range Transboundary Air Pollution (LRTAP), and has conducted work to address acidifying pollutants and haze in the Arctic. U.S. federal government air quality monitoring data are publicly available and accessible for use by Arctic Council working groups.

3). **Request** the Arctic States to continue to take action on mitigation and adaptation and to monitor and assess the state of Arctic Ocean acidification (*Kiruna, 2013*)

3a). **Decide** to undertake work to raise awareness of ocean acidification in the Arctic (*Iqaluit, 2015*)

Implemented: The United States (NOAA) participated in the AMAP working group assessment entitled “Arctic Ocean Acidification 2013.” NOAA hosted a successful Arctic Ocean Acidification (AOA) workshop in October 2016 that included scientists and stakeholders from all Arctic States. The United States is leading the build-out of the Global Ocean Acidification Observing Network (GOAON).

Biodiversity

1). **Endorse** long-term monitoring of Arctic biodiversity to provide policymakers with the information needed to accurately assess the impacts from global environmental change, and increased human activities related to regional development and economic growth (*Salekhard, 2006*)

1a). **Note** with concern that Arctic biodiversity is being degraded and that climate change is the most serious threat, encourage decisive action to help sustain Arctic biodiversity and **promote** cooperation on adaptive management strategies for vulnerable species and ecosystems where possible, **decide** to work within relevant international processes to follow up on the recommendations of the Arctic Biodiversity Assessment (*Iqaluit, 2015*)

Implemented: The United States (NOAA) initiated the Arctic Marine Biodiversity Observation Network (AMBON) through the National Oceanographic Partnership Program (NOPP).

2). **Encourage** countries to contribute actively to Circumpolar Biodiversity Monitoring Program (CBMP) and **expect** CBMP to provide valuable data for increased knowledge and improved management of biodiversity in the Arctic (*Salekhard, 2006*)

2a). **Welcome** progress on the Circumpolar Biodiversity Monitoring Program, **encourage** all states and permanent participants to continue national implementation, and look forward to the State of Marine Biodiversity report in 2017 (*Iqaluit, 2015*)

Implemented: The CAFF working group established the CBMP in 2006, and an implementation plan in 2008. The United States (FWS, NOAA, BLM, NPS) participates in the ongoing CBMP.

2b). **Encourage** Arctic States to take decisive action to help sustain Arctic biodiversity and implement internationally agreed biodiversity objectives, to cooperate on adaptive management strategies for vulnerable species and ecosystems, and to continue existing Arctic biodiversity research and monitoring efforts through the Circumpolar Biodiversity Monitoring Program (*Kiruna, 2013*)

Implemented: To ensure coordination and integration with related global initiatives and internationally agreed biodiversity objectives, the CBMP is strategically linked to other international conservation programs and research and monitoring initiatives, including:

- a. The CAFF working group Arctic Biodiversity Assessment (ABA)

- b. The United Nations Environment Program (UNEP) Biodiversity Indicators Partnership
- c. The Sustaining Arctic Observing Networks (SAON)
- d. The Group on Earth Observations – Biodiversity Observing Network (GEOBON)
- e. The United Nations Convention on Biological Diversity (UN CBD) through the Cooperative Strategy for the Conservation of Biological Diversity in the Arctic Region

Climate Change

1). **Encourage** Member States to take effective measures to adapt to and manage the environmental, economic and social impacts of climate change and UV radiation, inter alia through enhancing the access of Arctic residents to information, decision makers and institutional capacity building (*Reykjavik, 2004*)

Implemented: The United States enhances access to information via contributions to the SDWG's Arctic Adaptation Exchange Portal, and has made hundreds of Arctic, climate-relevant tools and datasets available through the U.S. Climate Data Initiative and Climate Resilience Toolkit websites.

1a). **Urge** the Arctic Council members to strengthen their work on adaptation to climate change, including by pursuing community-level actions, and continue to share information on best practices (*Tromsø, 2009*)

Implemented: In 2016, three United States Landscape Conservation Cooperatives (FWS) co-hosted a series of four workshops throughout Alaska, bringing together tribal leaders, government agencies, universities, scientists, planners, and land managers to share information and best practices for adapting to climate change and increasing coastal resilience.

Implemented: The United States (DOI) co-led the Arctic Council's Arctic Resilience Report with Sweden and led the development of the Council's Arctic Resilience Action Framework (ARAF).

2). **Encourage** relevant national and international research bodies and sponsors to take into account the Arctic Climate Impact Assessment (ACIA) science recommendations in the planning, development and implementation of their programmes (*Reykjavik, 2004*)

2a). **Reconfirm** their commitments to the Reykjavik Declaration and to the ACIA policy document, adopted at the AC meeting in 2004, and that the Member States will continue their active efforts to implement the recommendations on mitigation, adaptation, research, monitoring and outreach (*Salekhard, 2006*)

Implemented: Executive Order 13653 (2013) required the United States government to integrate considerations of the challenges posed by climate change effects into their programs, policies, rules and operations to ensure they continue to be effective, even as the climate changes. (This Executive Order has been rescinded.)

2b). **Decide** to promote global, national and local awareness of the ACIA and any follow-up activities through appropriate outreach activities (*Reykjavik, 2004*)

Implemented: The United States conducted outreach on ACIA through Congressional testimony.

Implemented: The AMAP and CAFF working groups conducted ACIA outreach activities; the United States participates in these working groups through several federal departments and agencies.

3). **Encourage** research and practical actions, as well as exchange of expertise and best practices among the Member States to increase stability of the Arctic infrastructure in changing climatic conditions (*Salekhard, 2006*)

Implemented: The United States' Five Year Arctic Research Plan (2017-2021) directs federal agencies to research the impact of changing climatic conditions on critical infrastructure. In addition, the federal Arctic Executive Steering Committee has improved planning for relocating Alaskan coastal villages and established partnerships to research innovative approaches to infrastructure maintenance in changing climatic conditions. Federal Executive Order 13653 (2013) required the United States government to integrate considerations of the challenges posed by climate change effects into federal programs, policies, rules and operations to ensure continued effectiveness during climate change. (This Executive Order has been rescinded.)

4). **Urge** implementation of early actions where possible on methane and other short-lived climate forcers (*Tromso, 2009*)

Implemented: In March 2014, the United States released the report: "Climate Action Plan - Strategy to Cut Methane Emissions."

4a). **Encourage** collaboration with the Methane to Markets Partnership and other relevant international bodies taking action to reduce methane and other short-lived forcers, (*Tromso, 2009*)

Implemented: This Partnership grew to become the Global Methane Initiative, launched by the United States and 37 other countries in 2010. It now includes 42 countries (including four Arctic States) representing 70 percent of global methane emissions. The United States was one of seven founding members of the Climate and Clean Air Coalition, a voluntary partnership for reducing short lived climate pollutants (SLCPs) established in 2012, and has been one of the Coalition's largest financial contributors.

4b). **Encourage** Arctic states to implement, as appropriate in their national circumstances, relevant recommendations (from the Arctic Council Report on Short-Lived Climate Forcers (SLCF)) for reducing emissions of black carbon (*Nuuk, 2011*)

In Process: The United States will achieve substantial black carbon emissions reductions by 2030, largely due to controls on new mobile diesel engines. Diesel retrofit programs for in-use mobile sources are a valuable complement to new engine standards for

reducing emissions. Other source categories in the United States, including stationary sources (industrial, commercial and institutional boilers, stationary diesel engines, uncontrolled coal-fired electricity generating units), residential wood combustion (hydronic heaters and woodstoves), and open biomass burning offer potential opportunities, but have more limited mitigation potential due to smaller remaining emissions in these categories, or limits on the availability of effective black carbon control strategies. Achieving further BC reductions, both domestically and globally, will require adding a specific focus on reducing direct particulate matter (PM) 2.5 emissions to overarching fine particle control programs.

4c). **Decide** to implement the Framework for Action on Enhanced Black Carbon and Methane Emissions reductions (*Iqaluit, 2015*)

Implemented: The United States and other Arctic States adopted a “Framework for Reducing Black Carbon and Methane Emissions.” In connection with the framework, the United States and other Arctic States submitted their first ever national reports on black carbon and methane emissions, developed black carbon inventories and projections, and launched an Expert Group on Black Carbon and Methane to assess progress and develop recommendations on enhanced mitigation action.

Implemented: The United States chaired the Arctic Council’s Expert Group on Black Carbon and Methane, which has delivered its inaugural “Summary of Progress and Recommendations” to the SAOs for approval. The Experts have also proposed an aspirational, collective black carbon goal of 25-33% reduction below 2013 levels by 2025.

Implemented: In 2017, the United States (EPA) provided \$286,000 in Diesel Emission Reduction Act (DERA) grants to the Alaska Energy Authority (AEA). AEA provided matching funds of more than \$300K to replace old diesel generators with newer, more efficient ones, thereby reducing particulate matter (PM) and black carbon (BC) emissions.

5). **Urge** all Parties to the UNFCCC to take urgent action to meet the long-term goal of holding the increase in global average temperature below 2 degrees Celsius above pre-industrial levels (*Nuuk, 2011*)

5a). Confirm the commitment of all Arctic States to actively contribute to reaching an adequate agreed outcome at the UNFCCC 15th Conference of the Parties (CoP15) in Copenhagen in December 2009 (*Tromso, 2009*)

5b). **Confirm** the commitment of all Arctic States to work together and with other countries under the United Nations Framework Convention on Climate Change (UNFCCC) to conclude a protocol, another legal instrument or an agreed outcome with legal force no later than 2015 (*Kiruna, 2013*)

5c). **Reaffirming** Arctic States’ commitment to work together and with partners towards an effective, ambitious, durable international climate agreement in Paris in December 2015 that is

applicable to all, and our determination to work within and beyond the United Nations Framework Convention on Climate Change to limit the increase in global average temperature to below 2 degrees Celsius above pre-industrial levels (*Iqaluit 2015*)

Implemented: The United States signed and ratified the Paris climate pact at the 21st Meeting of the Conference of the Parties to the UNFCCC (COP-21).

Contaminants/Environmental Protection

1). **Reaffirm** our commitment from the Alta Declaration to take the findings and recommendations from the AMAP Report, Arctic Pollution Issues: A State of the Arctic Environment Report, into consideration in our policies and programmes, to increase our efforts to limit and reduce emissions of contaminants into the environment and to **promote** international cooperation and make a determined effort to secure support for international actions in order to address the serious pollution risks reported by AMAP (*Iqaluit, 1998*)

Implemented: The Arctic Council created the ACAP working group in 2006.

2). **Agree** to work vigorously for the early ratification and implementation of the Protocols on the elimination or reduction of discharges, emissions and losses of Persistent Organic Pollutants (POPs) and of Heavy Metals under the framework of the United Nations Economic Commission for Europe Convention (UN ECE) on Long-Range Transboundary Air Pollution (*Iqaluit, 1998*)

2a). **Encourage** the Arctic States to act together to assist the early conclusion of such a global agreement (on POPs) (*Iqaluit, 1998*)

2b). **Encourage** those countries, and in particular Arctic States, which have not yet ratified the UN ECE Protocols on heavy metals and on persistent organic pollutants to take all appropriate steps to become parties to the two protocols (*Iqaluit, 1998*)

2c). **Declare** that completion and early ratification of a global convention on persistent organic pollutants is an objective of great importance to all Arctic States, and **decide** to strengthen efforts to finalize a comprehensive and verifiable convention at the last session of the Intergovernmental Negotiating Committee scheduled for South Africa in December 2000 (*Barrow, 2000*)

2d). **Call on** Arctic States to accede to, ratify and implement relevant existing agreements designed to protect and restore the Arctic environment, and to identify gaps where new agreements may be needed (*Barrow, 2000*)

2e). **Appreciate** actions in support for the implementation of the Stockholm Convention and the POPs and Heavy metals protocol of the UNECE Convention on Long-Range Transboundary Air Pollution (LRTAP), and **encourage** countries to continue work to reduce emissions and sign, ratify and enhance the implementation of these Conventions and Protocols (*Tromso, 2009*)

2f). **Appreciate** actions in support of the implementation of the Stockholm Convention and the Persistent Organic Pollutants (POPs) and Heavy metals protocol of the UNECE Convention on Long-Range Transboundary Air Pollution (LRTAP), and **encourage** countries to continue work

to reduce emissions and sign, ratify and enhance the implementation of these Conventions and Protocols (*Nuuk, 2011*)

2g). **Encourage** countries to continue work to reduce emissions and sign, ratify and enhance the implementation of these Conventions and Protocols (Stockholm Convention, POPs and Heavy Metals protocol of the UNECE Convention on Long-Range Transboundary Air Pollution) (*Nuuk, 2011*)

2h). **Encourage** Arctic States to continue monitoring and assessment activities and enhance their efforts to meet the objectives of the Stockholm convention (*Kiruna, 2013*)

2i). **Urge** Arctic States and observers to continue their efforts in monitoring and assessing existing and emerging contaminants (in reference to POPs) (*Iqaluit, 2015*)

Not Implemented: The United States has not ratified the Stockholm Convention. The United States has not accepted the UNECE POPs Protocol.

Implemented: The United States accepted the UNECE Heavy Metals Protocol on January 10, 2001.

In Process: The United States signed the amended Heavy Metals Protocol on March 19, 2015, but has not yet ratified, acceded to, nor accepted it.

3). **Encourage** actions to reduce the risks of radioactivity to the Arctic (*Barrow, 2000*)

Implemented: The United States (U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA)) works through EPPR to foster improvements in response capabilities for emergencies involving radiological releases via information exchanges, technical workshops, projects, and exercises.

4). **Welcome** with appreciation AMAP's "Arctic Pollution 2002" Report, and take the recommendations into consideration in our policies and programmes to reduce pollution affecting the Arctic (*Inari, 2002*)

Implemented: The ACAP working group takes concrete action on pollutants of concern in the Arctic. The United States (EPA) has chaired ACAP multiple times, and has led numerous projects throughout the Arctic to destroy PCBs, eliminate PoPs, and reduce black carbon and methane emissions.

5). **Welcome** UNEP's global assessment of mercury and international efforts to outline and consider policy options, express concern about increasing mercury levels in some parts of the Arctic documented in the AMAP assessment report, and **agree** to intensify our efforts to achieve global cooperation to address the manmade sources of mercury pollution, and in this respect **welcome** the initiative of the Arctic Council project on mercury. (*Inari, 2002*)

5a). **Agree** to intensify the efforts to achieve global cooperation, inter alia, through UNEP Mercury Partnership Program to address the man-made sources of mercury pollution (*Salekhard, 2006*)

5b). **Commit** to bring forward Arctic perspectives to these negotiations (UNEP Governing Council decision to develop a legally binding instrument on mercury to be ready in 2013) (*Tromso, 2009*)

5c). **Support** the ongoing intergovernmental negotiations under the United Nations Environment Programme to conclude a global agreement on mercury that will significantly reduce global mercury use and emissions (*Nuuk, 2011*)

5d). **Welcome** the Minamata Convention on Mercury, appreciate the reference to the particular vulnerabilities of Arctic ecosystems and indigenous communities, **encourage** its swift entry into force along with robust use and emission reduction actions, and **pledge** to assist the evaluation of its effectiveness through continued monitoring and assessments (*Kiruna, 2013*)

5e). **Urge** governments to ratify the Minamata Convention so that it may come into force and be implemented as soon as possible (*Iqaluit, 2015*)

Implemented: The United States accepted the Minamata Convention in June 2013. The Minamata Convention enters into force on August 16, 2017.

6). **Decide** to strengthen cooperation on prevention of, and response to, accidental spills of oil and hazardous substances in the Arctic (*Tromso, 2009*)

Implemented: The United States (Department of State) co-led with the Russian Federation and Norway negotiations to conclude the “Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic” (MOSPA), supports the work of EPPR, and actively participates in the Arctic Coast Guard Forum (USCG).

7). **Urge** Member States to apply the precautionary approach and polluter-pays principle as reflected in Principles 15 and 16 of the Rio Declaration, respectively, and conduct risk and environmental impact assessments for the exploration, development, transport and storage of oil, and enact and/or enforce appropriate laws and controls (*Tromso, 2009*)

Implemented: The United States (DOI/BOEM) completed a programmatic environmental impact statement for oil exploration in the Beaufort and Chukchi Seas, for the 2012, 2014, and 2015 drilling seasons. The United States (DOI) promulgated Arctic specific regulations to address aspects of oil exploration safety and environmental stewardship.

8). **Urge** the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer to take action as soon as possible, complementary to the UNFCCC, to phase-down the production and consumption of hydrofluorocarbons, which contribute to the warming of the Arctic region (*Kiruna, 2013*)

Implemented: On October 15, 2016, in Kigali, Rwanda, the United States and other Montreal Protocol Parties adopted an amendment to phase down HFCs under the Montreal Protocol. The amendment calls for a reduction of production and consumption of HFCs by more than 80 percent over the next 30 years.

Emergency Prevention

1). **Encourage** the AC Member States to focus on the following areas and initiate new projects in order to improve the capacity to respond to emergencies in the Arctic , exchange of information, training and experience, public information, technical development and support, and co-ordination of response (*Salekhard, 2006*)

Implemented: The United States (USCG) has led tabletop and live exercises and participates in the Arctic Coast Guard Forum (ACGF) in support of the “Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic.” The United States (DOI/BSEE) has led or co-led EPPR projects to: develop a pan-Arctic oil spill response equipment database, conduct an analysis on circumpolar oil spill response viability, and facilitate a workshop to discuss oil spill response technology and research that would lead to improved oil spill recovery and/or treatment in Arctic waters.

Sustainable Development

1). **Commit** to develop an action plan on sustainable development to realize the Framework Document adopted by the ministers in Barrow, the priorities in the Inari Declaration, latest scientific knowledge and the decisions by the Johannesburg WSSD 2002, with the aim to adopt this action plan at the next Arctic Council Ministerial meeting (*Inari, 2002*)

1a). **Adopt** the Sustainable Development Action Plan (SDAP) (*Reykjavik, 2004*)

1b). **Adopt** a mechanism to implement SDAP (*Salekhard, 2006*)

Implemented: The United States co-led with the Russian Federation the process within the SDWG to develop the Sustainable Development Action Plan (SDAP) and a mechanism to implement the SDAP.

2). **Reassert** the role of the Arctic Council as a regional partnership for environmental protection and sustainable development with the firm aim of contributing to the implementation of the Johannesburg outcomes (in reference to the Plan of Implementation adopted the World Summit on Sustainable Development) (*Inari, 2002*)

In Process: The United States has not taken specific action in response to this Ministerial recommendation. The United States considers its work in the Arctic Council to be a contribution to the Johannesburg Plan of Implementation.

3). The Ministers **took note of** recommendations generated by projects on timberline forests, sustainable reindeer husbandry and sacred sites and encourage further dialogue among stakeholders on this basis (*Inari, 2002*)

Implemented: The United States (DOI/BOEM) was a lead country in the production of the AMSA IIC report (“Areas of Heightened Ecological and Cultural Significance”) with DOI and NOAA providing substantive data and information.

4). **Declare** that the Arctic States, in view of the intensified need for global and regional action, will continue to collaborate closely in international fora on environmental protection and sustainable development issues of importance to the Arctic, and when appropriate, **request** the Arctic Council to deliver jointly agreed Arctic messages (*Inari, 2002*)

Implemented: The Arctic States, including the United States, pressed for rapid implementation of the “Polar Code” within the International Maritime Organization. The Arctic States, including the United States, jointly pressed for conclusion of the Stockholm Convention on Persistent Organic Pollutants, and have worked together to support the POPs Protocol of the UNECE LRTAP Convention, via scientific assessments produced by the AMAP working group.

Implemented: In 2013, the Arctic Council adopted a communications and outreach strategy for the period 2013 - 2017. The United States led the process to update the strategy for the period 2017 – 2021.

Implemented: The Arctic States, including the United States, submitted a joint message to the 18th Meeting of the Conference of the Parties to the UN Framework Convention on Climate Change, December 2012.

5). **Direct** Member States and the relevant working groups of the Arctic Council to consider appropriate follow up actions (to the Arctic Human Development Report) (*Reykjavik, 2004*)

Implemented: The United States actively contributed to the original AHDR (2004) and to the second AHDR (2015).

6). **Recognize** the central role of business in the development of the Arctic, and **decide** to increase cooperation and interaction with the business community to advance sustainable development in the Arctic (*Kiruna, 2013*)

Implemented: The United States, through its participation in Arctic Council working groups, consults with the private sector in connection with technical and scientific projects, where applicable. The Arctic Council facilitated the creation of the Arctic Economic Council in 2014.

Strengthening the Arctic Council

1). **Instruct** the Arctic Council to take relevant actions to implement (the traditional and local knowledge) recommendations, and **note** with appreciation the work done by the Permanent Participants to develop their own principles for the use of traditional knowledge (*Iqaluit, 2015*)

In process: the “Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities 2015 - 2019” (MEMA) Project in PAME is reviewing traditional and local knowledge (TLK) and best practices for engagement processes.

2). **Decide** to develop guidelines for engagement in outreach activities and an Arctic Council communication and outreach plan based on common priorities, (*Tromso, 2009*)

Implemented: In 2013, the Arctic Council adopted a communications and outreach strategy for the period 2013 - 2017. The United States led the process to update the strategy for the period 2017 – 2021.

3). **Decide** to further consider how the Arctic Council should best be structured to fulfil its objectives, (*Tromso, 2009*)

In Process: In 2016, the Arctic States decided to develop an Arctic Council strategic plan by 2019.

4). **Decide** to continue discussing the role of observers in the Arctic Council (*Tromso, 2009*)

Implemented: Annex 2 to the Arctic Council rules of procedure (RoP) was amended in 2013 regarding accreditation and review of observers and the criteria for admitting observers.

5). **Instruct** the Senior Arctic Officials to further guide the Council’s engagement with Observers, taking into account contributions to date and opportunities for future collaborations (*Iqaluit, 2015*)

Implemented: The Arctic Council adopted in 2015 an addendum to the Observer Manual for Subsidiary Bodies further defining the role of observers.

6). **Acknowledge** that the work of the Arctic Council continues to evolve to respond to new challenges and opportunities in the Arctic, **request** Senior Arctic Officials to recommend ways and means to strengthen how the work of the Arctic Council is carried out, including identifying opportunities for Arctic States to use the Council’s work to influence and shape action in other regional and international fora as well as identifying approaches to support the active participation of Permanent Participants, and to present a report on their work at the next Ministerial meeting in 2015 (*Kiruna, 2013*)

In Process: In 2016, the Arctic States decided to develop an Arctic Council strategic plan by 2019.

7). **Reaffirm** existing mechanisms and commit to identifying new approaches to support the active participation of Permanent Participants (*Iqaluit, 2015*)

In Process: The United States (Department of State) provides financial support to the Alaska-based Permanent Participants (PPs) to help with meeting participation. The PPs are developing the “Algu Fund” to further facilitate their participation in the Arctic Council.

8). **Welcome** the initiatives undertaken to enhance the accountability and transparency of the work of the Arctic Council in tracking the progress of the Council's activities, archiving and opening access to Council documents, and **decide** to continue this work (*Iqaluit, 2015*)

Implemented: The United States (Department of State) submitted documents from its first Arctic Council chairmanship (1998 – 2000) to the Arctic Council Secretariat in 2016.

Implemented: U.S. government departments and agencies will periodically update the report "Arctic Council Ministerial Recommendations, 1998-2015: United States Implementation."