An Overview for Workshop Participants

Photo: Kathryn Hansen/NASA
WHAT IS THE INTERAGENCY ARCTIC RESEARCH POLICY COMMITTEE?

What is IARPC?

The Interagency Arctic Research Policy Committee (IARPC) is a committee of the U.S. National Science and Technology Council (NSTC). It aims to enhance scientific monitoring and research on local, regional, and global environmental issues in the Arctic through coordination of federal agencies and domestic and international collaborators. It consists of representatives from 14 federal agencies, the White House Office of Science and Technology Policy (OSTP), and the Office of Management and Budget (OMB). IARPC is chaired by the director of the National Science Foundation (NSF).

Why was IARPC established?

IARPC was established by the Arctic Research and Policy Act of 1984 (ARPA). ARPA “provides for a comprehensive national policy dealing with national research needs and objectives in the Arctic.” ARPA also created the Arctic Research Commission (USARC) to “develop and recommend an integrated national Arctic research policy.” The purpose of IARPC is to work with USARC to develop this national Arctic research policy to guide federal agencies as they develop and implement their own Arctic research programs. IARPC also serves the United States’ interests by coordinating and promoting cooperation between agencies and other non-federal partners to create a five-year Arctic Research Plan.

The United States is an Arctic nation by way of Alaska and therefore has many varied and vested interests in the region. The "Arctic" includes all United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian chain.

How does IARPC operate?

IARPC aims to meet the United States’ Arctic policy goals and needs by coordinating research and fostering collaboration between federal agencies and both domestic and international partners. NSF coordinates IARPC’s activities, with the director of NSF serving as chair. In July 2010, a presidential memo established IARPC as an Interagency Working Group of the National Science and Technology Council (NSTC) Committee on Environment. IARPC operates under the guidelines established by the NSTC for an interagency working group and reports directly to the Council on Environment.

How is IARPC organized?

IARPC is divided into three bodies: the Principals, the Staff Group, and the Secretariat.

The IARPC Principals include one policy-level member each from 14 federal agencies* as well as representatives from the White House Office of Science and Technology Policy (OSTP) and the Office of Management and Budget (OMB). The IARPC Principals meet annually to provide policy advice and direction.

The Staff Group comprises program managers from the 14 federal IARPC agencies and may include multiple representatives from one agency. The IARPC Staff Group was created as an unofficial body to respond to directions from the Principals and to complete IARPC’s day-to-day work. The Assistant Director for Polar Sciences in OSTP serves as the Executive Director of IARPC and chairs the Staff Group. The Staff Group’s main tasks are organizing and coordinating the development and implementation of the Five-Year Arctic Research Plan.

The Secretariat assists the IARPC Principals and Staff Group in facilitating interagency coordination. It works with other NSTC bodies to increase efficiency and eliminate redundancies. The Secretariat aids the implementation of the Arctic Research Plan by supplying hands-on support to IARPC Collaborations Teams.

What is IARPC Collaborations?

In 2013, IARPC’s Staff Group created IARPC Collaborations to implement the first Arctic Research Plan. IARPC Collaborations is a web-based platform that connects both federal and non-federal government researchers to work together on the problems and research goals laid out in the Arctic Research Plan. There are currently nine IARPC Collaboration teams: Atmosphere; Coastal Resilience; Environmental Intelligence; Glaciers & Sea Level; Health & Well-being; Marine Ecosystems; Permafrost; Sea Ice; and Terrestrial Ecosystems. Each team is led by at least one federal employee and non-federal member. The teams meet monthly via web-conference to share knowledge and to enhance the implementation of the Arctic Research Plan. Over 2,500 Arctic researchers and partners have come together to accelerate the pace of Arctic research, including members from the state of Alaska and academic, non-profit, private sector, Indigenous, and international organizations.

*iarpccollaborations.org

*Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of Health and Human Services, Department of Homeland Security, Department of Interior, Department of State, Department of Transportation, Environmental Protection Agency, Marine Mammal Commission, National Aeronautics and Space Administration, and the Smithsonian Institution.
What is the 5-Year Arctic Research Plan?

By law (the Arctic Research and Policy Act of 1984), IARPC develops and implements an Arctic Research Plan every five years. The plan is developed in consultation with the USARC, the governor of the state of Alaska, Arctic residents, the private sector, and public interest groups.

What does the research plan address?

The plan does not attempt to encompass all federally supported Arctic research. Instead, as stated in the 2017-2021 plan, "it addresses key topics for which an interagency approach is most likely to accelerate progress...The plan identifies critical areas where the U.S. Arctic research enterprise supports U.S. policy from community to global scales and looks for areas where the federal investment is enhanced through interagency collaboration."

The Arctic Research Plan 2013-2017

The first integrated Arctic Research Plan (2013-2017) was released in February 2013. This plan established seven research areas to inform national policy and specifically benefit from interagency coordination. Those research areas were: sea ice and marine ecosystems; terrestrial ice and ecosystems; atmospheric studies of surface heat, energy, and mass balances; observing systems; regional climate models; adaptation tools for sustaining communities; and human health.

The Arctic Research Plan 2017-2021

The second integrated Arctic Research Plan (2017-2021) included many of the same objectives and goals as the first plan but developed a stronger focus on the health and well-being of northern residents. The plan also emphasized the role that northern residents play in the co-production of scientific knowledge. The 2017-2021 plan introduced four policy drivers and two new goals (permafrost and coastal resilience). The four policy drivers of the 2017-2021 plan are: enhance the well-being of Arctic residents; advance stewardship of the Arctic environment; strengthen regional and national security; and improve understanding of the Arctic as a component of Planet Earth.
How are the plans implemented?

IARPC Collaborations is the primary channel for implementing Arctic Research Plans. In the current plan, each Collaboration Team corresponds to one of the research goals of the current plan. Progress on the research goals is done via performance elements. Each year an annual progress report is released in October, and a biennial report is submitted to Congress every other year. (Annual and biennial reports can be found on the About page of IARPC Collaborations.) The IARPC Staff Group and Principals continually assess how well IARPC is addressing the research goals and objectives in support of the policy drivers. Below are select highlights of IARPC accomplishments during 2018-2019 organized by policy driver:

**Policy Driver 1: Enhance the Well-Being of Arctic Residents**

In 2018 and 2019, the Environmental Intelligence Collaboration Team coordinated with federal agencies and communities to respond to Arctic Harmful Algal Blooms (HABs). HABs produce toxins that can sicken humans and damage the environment. The team established baseline data on HABs by facilitating the coordination of research cruises in the Bering and Chukchi Seas to improve research and sampling activities. The sampling effort addressed the need for information on testing of natural resources and subsistence foods for algal toxins and potential impacts on human health through wild food consumption. Additionally, in 2019, the Health & Well-being Collaboration Team and Coastal Resilience Collaboration Teams worked to address issues around violence and mental health challenges in Indigenous communities in Alaska. One of their initiatives included the new toolkit from RISING SUN (Reducing the Incidence of Suicide in Indigenous Groups – Strengths United through Networks).

**Policy Driver 2: Advance Stewardship of the Arctic Environment**

In September 2019, MOSAiC (Multidisciplinary Drifting Observatory for the Study of Arctic Climate) was launched when the German research vessel Polarstern headed north to begin its 12-month drift across the central Arctic Ocean. MOSAiC is an international research expedition intended to study the physical, chemical, and biological processes that couple the Arctic atmosphere, sea ice, ocean and ecosystem. The MOSAiC drift will conclude in the late summer/early autumn 2020; by that time, 82 U.S researchers and technical support staff will have been able to conduct research aboard the Polarstern.

**Policy Driver 3: Strengthen National and Regional Security**

Launched in August 2018, the Stratified Ocean Dynamics in the Arctic project coordinates research that is essential for the improvement of numerical models for Arctic environmental forecasting and the development of observing systems. The Arctic Observing Systems Sub-Team also tackles national and regional security through its work on observational needs and by coordinating U.S. contributions to an Arctic-wide observing strategy and implementation plan of the Sustaining Arctic Observing Networks (SAON, which is a joint effort of the Arctic Council and the International Arctic Science Committee).

**Policy Driver 4: Improve Understanding of the Arctic as a Component of Planet Earth**

In May 2018, the Gravity Recovery and Climate Experiment Follow On satellites, a joint U.S (NASA) and Germany mission, were launched. In September 2018, NASA launched the ICESat-2 (Ice, Cloud and Land Elevation Satellite-2) satellite. The elevation of the surface of the Greenland Ice Sheet is a key product.
To advance stewardship of the Arctic environment, while also respecting local and Indigenous cultures and knowledge, the Arctic Research Plan is guided by *Principles for Conducting Research in the Arctic*. Those core principles are: Be Accountable, Establish Effective Communication, Respect Indigenous Knowledge and Cultures, Build and Sustain Relationships, and Pursue Responsible Environmental Stewardship.

IARPC is currently in the process of developing the Arctic Research Plan 2022-2026. The plan is drafted based on the intents of 14 U.S federal agencies and the needs of Arctic communities and the non-federal research community. The plan development process can be broken into five distinct stages.

**Stage 1: Review & Planning**

The review & planning process took place during fall 2019-spring 2020. In fall 2019, IARPC sought approval to begin the development process and secured resources. Next, IARPC developed an engagement strategy. In January 2020, the Plan Development Steering Group was established and started monthly meetings.

**Stage 2: Development**

The next phase, development, began spring 2020 and will conclude in the fall 2020. During this phase, IARPC gathered input through the first federal register request for information (open from April 3rd to August 2nd), and through public input listening sessions and webinars. A virtual plan development workshop will be held in September 2020 to develop the draft framework and set of scientific goals of the next Arctic Research Plan. IARPC envisions the workshop stimulating conversation and idea generation among the full spectrum of partners of the federal research enterprise in the Arctic. IARPC Principals will then consider a draft outline, approve the general plan framework, and continue to provide guidance throughout all the stages of plan development.

**Stage 3: Drafting**

The drafting stage will be in the winter of 2020-2021. Once the IARPC Principals have approved the policy drivers and research goals, the federal drafting teams begin writing chapters and supplementary material informed by input received during the development phase.
Stage 4: Public Review

The public review stage will take place in winter-spring 2021. During this stage, a second Federal Register Notice will be posted seeking comments on the draft plan.

Stage 5: Revision and Release

The final stage of the plan development process will take place from summer to winter 2021. During this time the input gathered during the Federal Register comment period will be considered and, where appropriate, incorporated into the revised plan. The plan will then go interagency review and clearance before being released in December 2021.

ARCTIC RESEARCH PLAN 2022-2026
Development Process

**Review & Planning**
Sept 2019–Mar 2020
- Approval to begin plan development process
- Develop engagement strategy and begin outreach
- Identify Federal Plan Development Steering Group

**Development**
Apr–Sept 2020
- Steering group meets monthly
- First Federal Register request for input, April 3–August 2
- Public listening sessions and webinars
- Workshop to develop policy drivers and research goals

**Drafting**
Oct 2020–Jan 2021
- IARPC principals approve drivers and goals
- Federal drafting teams write plan, informed by input received by the public

**Public Review**
Feb–June 2021
- Gather input on draft plan, including through Federal Register notice

**Revision & Release**
July–Dec 2021
- Revise plan
- Interagency review
- Release plan

This document was written by Kathleen White on behalf of the IARPC Plan Development Steering Group.