

Meeting Notes
Interagency Arctic Research Policy Committee
Principals Meeting
November 7th 2011
09:00-12:00
The White House Conference Center

Principal Attendees by Agency: Alice Hill (DHS), Monica Medina (DOC/NOAA), John Stubstad (DOD), Gerald Geernaert (DOE), Alan Thornhill (DOI), David Balton (DOS), Katie Thomson (DOT), Michael Slimak (EPA), David Hohman (HHS), Tim Ragen (MMC), Tom Wagner (NASA), Subra Suresh (NSF), Steve Fetter (OSTP), Eva Pell (SI), Frances Ulmer (USARC), Ann Bartuska (USDA)

Presenters other than Principals: Robert Winokur (DOD), Simon Stephenson (NSF), Shella Biallas (DOI), William Fitzhugh (SI), Michael Kuperberg (DOE), Nikoosh Carlo (NSF)

IARPC Staff: Brendan Kelly (Executive Director), Sara Bowden (Secretary)

The meeting was chaired by Dr. Subra Suresh, Director of the National Science Foundation and Chairman of the IARPC.

Summary of Action Items:

1. The Staff Group is asked to develop further the flow chart of Federal agency research in the Arctic.
2. In order to ensure better communication and a sharing of information, prior to the next Principal's meeting, Principals will be asked to provide one or two research activities of critical importance to their agency.
3. In order to ensure better Federal agency coordination, Principals are asked to consider their staff participation IARPC in order to guarantee that the totality of their interests is represented in the IARPC process.
4. In order to ensure that Arctic interagency activities are coordinated, the IARPC staff group will develop a fact sheet on the various interagency efforts having an Arctic focus. Such interagency activities include, but are not limited to, the National Ocean Council, the Arctic Policy Group, and the Arctic Interagency Research Policy Group. The Staff Group will ensure that there is overlapping participation between IARPC and each of these groups and ensure that activities within IARPC are reported to these groups.
5. Federal Agencies are encouraged to send suggestions and comments to the NRC Blue Ribbon Panel on Antarctic Research within the next the next few months.
6. Begin drafting the infrastructure section of the 5-year plan immediately and develop it in tandem with the rest of the research sections in order to ensure the right synergy between the two sections. Include Department of State review of the infrastructure section to ensure coordination with international partners.

7. USDA will provide input to sections on human health and resilience of the 5-year plan.
8. The Staff Group should consider whether a set of overarching scientific questions should be included in the 5-year plan.
9. By the end of this calendar year, the staff group will collect and incorporate agency comments on the draft 5-year plan, include the section on infrastructure and re-circulate the plan to the Principals. After the principal's have been given a chance to review the plan in early 2012, it can be circulated for community input.
10. The IARPC staff group will prepare a discussion on international activities as they relate to IARPC for a future IARPC Principals meeting.

Meeting Notes:

1. Opening Remarks and Principals' Introductions

The second meeting of the IARPC during the Obama administration was opened by Dr. Subra Suresh at 9:05. He reminded participants that the nation's overall Arctic policy is laid out in National Security Presidential Directive-66/Homeland Security Presidential Directive-25 and that Arctic research policy is spelled out in the Arctic Research Policy Act of 1984. He stressed the fact that the Arctic is experiencing unprecedented change, including, increased commerce, tourism, and transportation; changing fisheries; eroding coastlines; and increased release of greenhouse gases through thawing permafrost and destabilized gas hydrates. Now more than ever, increased interagency and international collaborations are necessary to protect the nation's security, environmental and economic interests in the Arctic.

He invited principals to introduce themselves.

2. Introductory Remarks

Dr. Steve Fetter noted that research meeting the nation's security, environmental, and resource interests in the Arctic is gathering momentum as exemplified by a number of new efforts to coordinate research activities across the agencies.

The first of these is the IARPC. Other interagency efforts include the formation of the National Ocean Council in 2010 which, in their National Ocean Policy, specifies the Arctic as a region of critical importance; and efforts of the Working Group on Coordinated Energy Development and Permitting which aims to bring science into decision-making on energy development in the Arctic. Additionally, there are many efforts of individual agencies that are independent of interagency collaborations. Dr. Fetter called for better coordination of these multiple and varied interagency efforts.

Dr. Fetter thanked the IARPC staff for its progress on the 5-year plan and suggested that discussions begin on how to effectively implement the actions outlined in the plan. One tool for implementation is an Arctic research budget crosscut, which OSTP would not oppose if it would facilitate progress towards implementing actions and provide a measure for progress. If a budget crosscut is undertaken there must be a solid justification for it.

3. Updates on Action Items from April 2011 Meeting

Dr. Brendan Kelly, the Executive Director of IARPC, noted the following items were completed since the last Principal's meeting.

- The IARPC Charter was completed and signed by Dr. Jane Lubchenco (NOAA) and Dr. Paul Anastas (EPA), the chairs of the Committee on Environment, National Resources and Sustainability (CENRS) of the National Science and Technology Council (NSTC).
- The Staff Group completed a draft of the 5-year plan.
- Monthly staff meetings were held to develop the plan as well as to inform staff of ongoing Arctic research activities within and among agencies, including briefings on gas hydrates by DOE, on climate research by the USGCRP, on the SEARCH Program by Hajo Eicken (University of Alaska Fairbanks), on Arctic Science, Engineering, and Education for Sustainability by the NSF, and the Next Generation Ecosystem Experiment by DOE.

Dr. Kelly noted that the Staff Group intends to have the plan done by the end of this calendar year but seeks guidance from the principals on the level and extent of internal and external review for the plan.

4. US Arctic Research Commission (USARC)

Ms. Frances Ulmer, the Chair of the USARC, began by giving a brief overview of the history, mandate, and functions of the Commission. The Commission was created in 1984 by the Arctic Research and Policy Act (ARPA). It is a small, independent Federal agency with the purpose to advise and inform the President of the United States and Congress.

She emphasized that after years of trying to get the United States and the world to focus on the Arctic, there is a sudden increase in the level of interest from policy makers and the general public. She noted that it is important that during a time of increased interest, that the United States focus its attention and resources strategically. Research should have the goal of informing policy.

Ms. Ulmer explained USARC's role relative to IARPC. The Commission produces a biannual goals and objectives report which is used to inform IARPC's 5-year plan. The current goals report, which will be updated in early 2012, focuses on five research goals, four of which IARPC has adopted, in one form or another, in the draft 5-year plan. These goals are:

- Environmental Change of the Arctic, Arctic Ocean, and Bering Sea
- Arctic Human Health
- Civil Infrastructure
- Natural Resource Assessment and Earth Science
- Indigenous Languages, Cultures, and Identities

The IARPC 5-year plan, speaks to all but the social science goal on Indigenous languages, cultures, and identities. Ms. Ulmer pointed out, however, that some useful interagency effort has begun, primarily via efforts at the Smithsonian, NSF, and other agencies.

Ms. Ulmer noted that the USARC will continue to assist with the development of the 5-year plan and will urge an Arctic research budget crosscut to ensure consistency with the plan and help in meeting Arctic

research goals. She stated that it is the view of the Commission that a Federal budget crosscut would inform policy makers on how and where resources are being spent and ensure that limited resources are being used wisely and collaboratively. She shared with the IARPC an initial diagram of Federal agency linkages with interests in the Arctic with very rough budget numbers associated with each agency's research activities in the Arctic. A more complete and thorough crosscut at this point in time would be beneficial, she stated.

She concluded her remarks by noting the importance of international collaborations. The Commission is meeting with the Canadian Polar Commission to begin a dialogue on issues of joint concern.

Dr. Suresh thanked Ms. Ulmer for the initial flow chart and noted that activities which point out what agencies are doing individually and jointly can be very beneficial. He suggested that the staff level develop the flow chart more fully.

ACTION: The Staff Group is asked to develop further the flow chart of Federal agency research in the Arctic.

5. Strategies for coordinating Arctic research efforts

Dr. Steve Fetter explained that this item on coordinating Arctic research efforts is not about coordinating research within IARPC, but rather is aimed at recognizing and discussing the challenge of coordinating IARPC activities in relation to other interagency efforts: the National Ocean Council activities, the Arctic Policy Group led by the State Department, and the Arctic Region Interagency Policy Committee convened by the National Security Staff. Congress and the Executive branch have given policy roles concerning the Arctic to these interagency groups, yet the division of labor and responsibilities among these interagency groups has not been made explicit.

IARPC has been successful in engaging with the National Ocean Council process to prepare the Strategic Action Plan. Having common staff participate in the NOC process ensures that the IARPC 5-year research plan reflects and is consistent with the actions proposed by the National Ocean Council's Strategic Action Plan. In addition, the IARPC staff has used a similar tactic to ensure research principles and prioritization of activities of IARPC, while specific to the Arctic, are consistent with national priorities for research in all regions. For example, one focus of the 5-year plan is environmental change associated with the changing climate, and the plan has been informed by consultation with the U. S. Global Climate Research Program and a draft of its Strategic Action Plan.

Dr. Fetter noted however, that ensuring coordination among various interagency committees could be improved by increasing the number of agency representatives in the IARPC staff level group to ensure that all interests within agencies are represented. As the IARPC member agencies look to fill in this representation, they may consider drawing on staff that also represent their agency on other interagency efforts, for example, the Arctic Region Interagency Policy Committee or the Alaska Interagency Energy group. Having some overlapping staff in each of these interagency efforts will reduce the likelihood of duplication of effort and benefit each group through cross-fertilization with activity updates from these staff.

IARPC has a charter that provides good information about IARPC, but the staff group may want to consider creating a fact sheet which emphasizes IARPC's relationship to other interagency efforts. Such a fact sheet will create linkages between interagency groups and can be used to help better explain the role of IARPC within individual agencies.

Making progress on coordination among interagency committees is important to integrate national efforts with international initiatives. The United States plays an important role in the Arctic Council. The United States will chair the Arctic Council in 2015-2017. That role will be better supported if the differences in scope and linkages between the multiple interagency efforts are better understood.

In the subsequent discussion, it was pointed out that many of the activities that occur within and among agencies do not get discussed in any of these fora. Principals should be asked, prior to each meeting, for one or two important items which they feel should be highlighted in the IARPC so that other agencies can gain awareness of these activities.

ACTION: In order to ensure better communication and a sharing of information, prior to the next Principal's meeting, Principals will be asked to provide one or two research activities of critical importance to their agency.

ACTION: In order to ensure better Federal agency coordination, Principals are asked to consider their staff participation IARPC in order to guarantee that the totality of their interests is represented in the IARPC process.

ACTION: In order to ensure that Arctic interagency activities are coordinated, the IARPC staff group will develop a fact sheet on the various interagency efforts having an Arctic focus. Such interagency activities include, but are not limited to, the National Ocean Council, the Arctic Policy Group, and the Arctic Interagency Research Policy Group. The Staff Group will ensure that there is overlapping participation between IARPC and each of these groups and ensure that activities within IARPC are reported to these groups.

Dr. Tim Regan inquired about communication of Federal activities within Alaska. Ms. Ulmer noted that Federal entities in Alaska tend to coordinate well around the issues of climate change and adaptation, but there is no mechanism comparable to IARPC at the State level. It was agreed that coordination within Alaska and between Federal agencies will need to continue on a case-by-case basis.

6. Scope of IARPC: concerns common to Arctic and Antarctic research

Dr. Suresh pointed out that while the primary focus of IARPC is Arctic, NSF and other agencies have significant investments in the Antarctic as well, and some of the Antarctic activities can inform the Arctic research community. He noted in particular that the OSTP and NSF have commissioned a Blue Ribbon Panel on Antarctic Research which met for the first time in November 2011. The Blue Ribbon Panel has expressed interest in better understanding the work of Federal agencies in both poles.

As an example of the intertwined interests of both poles, Dr. Suresh pointed to infrastructure as one area of concern. NSF has relied on the Swedish R/V *Oden* to supply the US station in Antarctica, freeing up the R/V *Healy* for Arctic research activities. However, this year the *Oden* was unavailable, opening up

the possibility of redirecting the *Healy* away from the Arctic. NSF has been able to lease a Russian R/V for Antarctic resupply and research, avoiding a conflict for the *Healy*.

Dr. David Balton agreed that there are strong linkages, but noted that geopolitically the two regions are very different with different international structures overlaying them. To the extent that there are efficiencies to make research in both poles more productive, they should be explored but with the caution that our interests and structures are very different in the Arctic and the Antarctic.

Ms. Ulmer pointed out that the unspoken issue is the inadequacy of our icebreaker assets. The extent to which this blue ribbon panel can articulate this need to OMB and Congress would be useful. She also noted that perhaps calling for an NRC Blue Ribbon Panel on the Arctic would be beneficial in helping to identify common interests.

ACTION: Agencies are encouraged to send suggestions and comments to the NRC Blue Ribbon Panel within the next the next few months.

7. Navy Arctic Roadmap and interagency interests

Mr. Robert Winokur provided an overview of the development of the Navy Arctic Roadmap, a historical context for the navy's interest in the Arctic and a description of interagency and international activities of the Navy in the Arctic.

The development of the Roadmap was driven first by the fact that sea ice is diminishing in the Arctic which has an impact on national security and Navy assets. The Navy created the Climate Change Task Force which developed the Roadmap. The Navy Task Force Climate Change attempts to take a science-based approach to inform policy and has engaged over 175 organizations from across national and international interests in the development of the Roadmap.

The Navy's Arctic strategic objectives are security, safeguarding maritime interests, protecting infrastructure and resources, strengthening and fostering cooperative relationships, and ensuring Navy forces are capable and ready. Mr. Winokur emphasized the need for partnerships within the US Government as well as internationally in order to ensure a safe and secure Arctic.

8. NOAA Arctic Vision and Strategy and Data Sharing MoA

Ms. Monica Medina explained that NOAA announced its Arctic Vision and Strategy document in March 2011. The NOAA Arctic Vision will guide NOAA research in the Arctic over the next several years. In addition, NOAA just signed a data sharing MoA with industry in hopes of gaining access to new Arctic data collected by industry in the region.

The NOAA Strategy identified the Arctic as one of its priority areas and the Strategy includes six specific goals.

- Forecast sea ice
- Strengthen foundational science to understand and detect Arctic climate and ecosystem changes
- Improve weather and water forecasts and warnings
- Enhance international and national partnerships

- Improve stewardship and management of ocean and coastal resources in the Arctic
- Advance resilient and healthy Arctic communities and economies

NOAA envisions an Arctic where decisions and actions related to conservation, management, and resource use are based on sound science and support healthy, productive, and resilient communities and ecosystems. Acquiring additional data and information to improve our understanding of the physical and biological processes and ecosystem functions is important to NOAA achieving its goals.

In addition to the Strategy, in May NOAA signed a MoA with ConocoPhillips, Shell, and Statoil which provides a framework for information sharing in the Arctic. NOAA believes that the MoA will help maximize information about physical and biological science in the Arctic and will incorporate annexes on sea ice, biological information, and oceanographic information. She emphasized that this agreement has no bearing on pending or future permit or license applications before the Agency. NOAA has stepped up these efforts because of the growing oil and gas interests, but Ms. Medina noted that shipping is another area gaining attention and an Arctic plan on transportation safety may be in the offing.

9. Chukchi and Beaufort Seas Research Partnerships

Dr. Alan Thornhill suggested that Federal agencies need to take a sharp look at intended future research in order to ensure smart and informed interagency collaborations. Most agencies have strategic or long term plans like the Navy Roadmap. If IARPC undertook a spatial and temporal, science-based needs analysis across the government and including other entities, we would get an understanding of possible synergies and conflicts that could occur in our research undertakings. Should there be such an assessment, agencies could calibrate their activities in order to identify gaps and avoid conflicts.

One area in which NSF and DOI are attempting to work together on this is in the Chukchi and Beaufort seas, where they are intending to take a need-based approach and work together to develop a research plan that addresses gaps in knowledge. If other agencies with research initiatives in this region joined the partnership, the outcome would be even better.

Dr. Kelly explained that the North Pacific Research Board (NPRB) funds research in Alaskan waters and the Arctic. While their activities in the past have been limited to the Subarctic, they are now expanding their reach into the Chukchi and Beaufort Seas, the same area where NSF plans future funding initiatives. At the same time, there is a strong interest from oil and gas companies for answers to research questions in the Arctic. A future request for proposals by NPRB and NSF would be improved if they had knowledge of what other federal agencies such as ONR, NOAA, and NASA have planned in the region. This sharing of research plans will optimize limited resources to answer the critical questions.

10. Draft Five-year Arctic Research Plan

Dr. Suresh began the discussion of the 5-year plan by asking Principals to think about it in the context of broad interagency collaboration. In a time of financial constraint, Principals need to be thinking of the plan as a way of doing better with less. If we are able to leverage resources through interagency collaboration, the plan will be successful.

Mr. Simon Stephenson, with help from Federal agency representatives and lead authors, presented the research sections of the plan. He emphasized that the plan is not intended to cover everything the Federal Government is doing in the Arctic but rather highlight where individual agency efforts would be

enhanced through interagency collaborations. All sections, except those dealing with the Arctic Observing Network (Section 3.2) and Marine Ecosystems (Section 3.3), were summarized.

At the conclusion of the summaries, Mr. Stephenson asked the Principals for feedback on the plan, ideas about a public comment period and ideas about the implementation process.

One issue that arose in the subsequent discussion related to data management and infrastructure for dealing with data, particularly real-time data. Other infrastructure issues that were raised included the need for development and maintenance of ports, satellites, and ice breakers. The 5-year plan should realistically portray these needs in order to sustain research in the Arctic. Principals agreed that the infrastructure section needs to be written in tandem with further development of the plan. By doing so, issues of infrastructure and how they are going to be addressed will be included in the plan. In addition, the Department of State pointed out that infrastructure issues are often addressed in an international context and international considerations should be taken into account in the infrastructure section.

ACTION: Begin drafting the infrastructure section of the 5-year plan immediately and develop it in tandem with the rest of the research sections in order to ensure the right synergy between the two sections. Include Department of State review of the infrastructure section to ensure coordination with international partners.

With regard to the sections of human health and resilience, the USDA suggested that sections on food and nutrition be added. In addition, climate change is having a positive impact on high latitude farming which has an economic impact on the communities. The USDA offered to work on these issues with the lead authors.

ACTION: USDA will provide input to sections on human health and resilience of the 5-year plan.

Principals agreed that it would be useful for the plan to lay out what are the critical questions framing the plan. For example, perhaps the plan should include a description of the most critically environmentally sensitive areas and address the question, how do we protect them? Along these lines, it was mentioned that the plan does not specifically deal with issues surrounding diminishing sea ice and permafrost.

ACTION: The Staff Group should consider whether a set of overarching scientific questions should be included in the 5-year plan.

Dr. Suresh asked for comments regarding public review. Since it is an internal US Government document, it might be wise to restrict external input, but under ARPA we are required to include community engagement and input. Several Principals felt that it is vitally important to engage local communities and let them be genuinely involved in the plan.

Mr. Stephenson touched on the implementation process noting that in order to implement the recommendations of the plan, there will need to be small teams formed around each research theme and those teams will need to engage a large community of researchers. There also needs to be an infrastructure put in place to support the implementation teams.

Dr. Suresh asked Principals to get comments to the staff group on the 5-year plan and asked the staff group to incorporate comments and re-circulate the plan to Principals by the end of this year. The plan will then be circulated for community input.

ACTION: By the end of this calendar year, the staff group will collect and incorporate agency comments on the draft 5-year plan, include the section on infrastructure and re-circulate the plan to the Principals. After the principal's have been given a chance to review the plan in early 2012, it can be circulated for community input.

11. International Collaborations

All Arctic nations are devoting more time on the Arctic and many non-Arctic nations are as well. There are opportunities for hydrocarbon extraction, shipping, and the possibility of expanded or new fisheries. International discussions on these issues take place in different fora, one of which is the Arctic Council. A number of the issues that AC is grappling with are ones that the United States is concerned about. For example, there is a new effort on ecosystem based management and a task force on oil spills. Mr. Balton suggested that as the IARPC plans for research unfold, they need to be put in an international context. He suggested that a longer discussion of international activities as they relate to the work of IARPC take place at a future IARPC meeting.

ACTION: The IARPC Staff Group will prepare a discussion on international activities as they relate to IARPC for a future IARPC Principals meeting.

12. Closing comments, next meeting date

Dr. Suresh thanked everyone for participating in the meeting. He suggested that one longer meeting such as this on a twice a year basis is preferable to many shorter meetings. Therefore, the Staff Group will continue to meet regularly, and if there is a need for a meeting sooner than six months from now, it will be called. Otherwise, the Principals will meet again in approximately six months.

The meeting was adjourned at 12:00.