North by 2020: Implementing a Forum for Local and Global Perspectives on the North at the University of Alaska during the International Polar Year 2007-09

Introduction

The Fourth International Polar Year 2007-09 (IPY-4) highlights a suite of major interconnected transformations that are underway in the North. These include (1) regime shifts in climate and the environment that are unprecedented in the historical and recent geological record; (2) sweeping effects of change on Northern populations and cultures; (3) expansion of global geopolitical and economic interests into the North; and (4) increasing interdependence between the Arctic region and global processes. By focusing the public’s attention to polar regions on a global scale, IPY-4 presents a unique opportunity to emphasize the quality of research and educative efforts in progress and to make the case for innovative work that contributes to Northern futures. In particular, the IPY can serve as a forum to explore, discuss, plan and prepare opportunities for sustainable development in a North experiencing rapid transformation.

As the nation’s Arctic university and as a leader in Arctic research the University of Alaska (UA) can play a crucial role in exploring the key forces that are likely to shape the future of the North. Because our institution represents a nexus of scientific, geopolitical, economic and public economic interests we are exceptionally well-suited to investigate and develop sustainability strategies. Under the umbrella of the UAF IPY Development Plan (www.alaska.edu/ipy/researchers/development.xml) this document outlines the implementation of a key component of this effort – a Forum for Local and Global Perspectives on the North.

The aim of this Forum initiative, North by 2020, is to bring together scholars, scientists and educators from UA and other key partners within the State of Alaska with recognized stakeholders, outside experts, as well as the broader public to jointly assess the challenges facing the North, envision futures for our region, and seize emerging opportunities (see schematic in Figure 1).

Goals and outcomes

Evidence ranging from observations of local indigenous experts, satellite and ground-based measurements and climate models suggests that the climate of the Arctic is undergoing rapid and significant change. In contrast with climate variations in the recent past, the Arctic may well be heading towards a new, stable climate state, vastly different from that governing the past few centuries, with substantial repercussions for the Earth as a whole. To this point, the discussion of global climate change and the fact that both in timing and amplitude it is felt most strongly in the North (“polar amplification of climate change”), has centered on detection and potential impacts on the Arctic. The initiative North by 2020 recognizes that such impacts may be both positive and negative and will
require substantial planning efforts to take advantage of future opportunities and be prepared for challenges. One of North by 2020’s principal aims is to bring together researchers, local experts, planners and decisionmakers to identify the key challenges and opportunities and help develop an action plan that draws heavily from local and international expertise in ways outlined in more detail below. The guiding vision for this concerted effort is to move beyond the notion of the Arctic as the canary in the coalmine towards its potential role as the leader of the pack in devising integrated strategies that adapt to and take advantage of change underway in the North. Native communities throughout the Arctic have demonstrated a remarkable resilience and capacity to adapt to substantial environmental change and associated hardships in the past. The present initiative takes this as an inspiration to ask what the North can do for the rest of the world in devising a strategy of adapting and leading the response to a climate of change.

Specific outcomes and associated products include the following:
(1) Synthesis of the relevant information, available technology and adaptation strategies relevant in the context of change underway in the North;
(2) Mapping of the extent and nature of change predicted to impact the North over the next two decades and identification of key gaps in our understanding of and planned adaptation to such change;
(3) Joint identification of common values, best practices and need for further information by stakeholder groups (with potentially competing or conflicting interests);
(4) Synthesis of the North by 2020 activities and findings in the form of (i) an academic product, such as a final technical volume resulting out of meetings and expert visits at UA, (ii) a product with broad appeal that shows how change and adaptation in the North carry lessons for the rest of the globe (popular science book/documentary), and (iii) a range of other intermediary products including publications, multi-media and web-based information sources and direct interaction;
(5) Joint development of an action plan to address the most pressing issues beyond IPY-4 and to enhance and extend the planning and policy options at the local all the way up to the global level;
(6) Creation of international partnerships and networks of experts, stakeholders and local residents that includes the young generation of future leaders and carries the momentum and legacy of North by 2020 beyond IPY-4.

The initiative North by 2020 is thus seen as a step-wise approach towards implementation of a Forum for Local and Global Perspectives on the North that would exist well beyond IPY-4, both in its aims and activities. We propose a combination of external experts from science, policy-making and business working in concert with UA professionals to initiate a crucial dialogue about the next generation of questions concerning sustainability, survival, and improvement of the human condition in the North. The intent of such a group will be to engage both the academic as well as the stakeholder community and think broadly across economic sectors and academic disciplines in order to provide answers to pressing and difficult questions through scenario building, critical thinking, and visionary leadership in the service of others. We anticipate the Forum to distill and synthesize complex interdisciplinary information, to be made available to different stakeholder groups and the public in the most effective fashion, including the products and outcomes identified above.
North by 2020: Forum for Local and Global Perspectives on the North

Figure 1: Schematic outline of the Forum framework and activities

Major themes

The broad themes that are being addressed in the context of the Forum for local and global perspectives on the North include the following:

- Communities and infrastructure in a changing coastal environment
- Coastal and offshore oil and gas development: Balancing competing interests through enhancing information and synthesis
- Changing land and water use
- Resilient communities: Health, food security and communication in a changing North
- Sustainable development of marine living resources
- The interface between indigenous, local knowledge and western science
- Complex systems and the North

The fifth theme is seen as a thread that runs through all of the North by 2020 activities and is central to the Forum’s aim of integrating local expertise and wisdom into adaptation and response at all levels. The sixth theme explores the ways in which the science of complex systems (as applied to Arctic physical, biological and socio-economic systems) can help the initiative meet its goals.

While these major themes provide a framework for the specific activities during the IPY-4 and beyond, they are too broad to be addressed comprehensively. In a collaborative effort between stakeholders, outside experts and the UA community, the early stages of the Forum for Local and Global Perspectives on the North will be
dedicated to identify those areas and tough questions most relevant and in need of innovative, effective solutions. This process is outlined in more detail below, but preliminary discussions between stakeholders and the academic community have identified several critical sub-themes that need to be addressed and are tractable. These include a focus on (1) coastal and marine oil and gas development and potential strategies in reconciling competing interests by local communities, industry and government, (2) innovative and integrated approaches to address the challenges posed to coastal communities and infrastructure in adapting and responding to coastal erosion, (3) competing interests and demands for land use in a landscape evolving under climate change, (4) water availability in a melting, drying Arctic.

**Forum organization and implementation**

To achieve the goals outlined above, the Forum will combine punctuated events over the course of the IPY (March 2007 to March 2009) aimed at fostering the dialog within the university, key stakeholders and the public at large. Between these events the IPY community at the University (as defined below) will work with outside experts to create pertinent products growing out of these events as well as document the initiation of pilot projects that project beyond the IPY-4. The nature of the Forum is such that ideally it can be thought of as a roving, two-year summer school that is open to all (including those outside the University walls) and is encouraging of open, penetrating and entertaining discourse. Specifically, we envisage the following components to the Forum:

1. **Expert visitor program:** Building on the outside interest and opportunities that IPY-4 will create, not least through synergistic effects, the University will host about half a dozen outside high-profile authorities with interest and expertise in the major themes identified above. These experts will give public presentations, both to the university and to the community at large addressing the challenges and opportunities for their respective area of expertise and provide a vision for North by 2020. Ideally, these visits should include presence at a minimum of two campuses (including rural campuses). In addition, University resources in distance delivery and education will provide broader coverage throughout the State. To ensure a substantive benefit from these visits beyond a valuable, but often routine “speaking tour” a concerted effort is necessary to (i) engage the visitors for the period of at the very least one week, preferably three to four, (ii) provide for opportunities of an open discourse that involves key stakeholders and the public at large, and (iii) leave a legacy by developing and involving an IPY stakeholder community at the University (see below) that engages the visitors in a discussion that synthesizes complex interdisciplinary information and results in an appropriate array of products ranging from traditional publications to multi-media and web dissemination.

2. **Community forums:** As outlined in the University’s IPY development plan, the issues address by the Forum are shared across the entire population and beyond U.S. borders. Hence, a dedicated effort to entrain the community and key stakeholders into the discourse is required and will take the form of community forums. These are planned in a prominent location and will bring together panels of representatives of different
stakeholder groups, the public, the university and the distinguished visitors to discuss key questions centered around the themes identified above. The concept for these events will be modeled on the highly successful, though smaller-scale AAAS Arctic Roundtables.

(3) **Building a University of Alaska IPY Stakeholder Community**: There already exists a core group of faculty, students and staff at the University that is well attuned to the opportunities that the IPY has to offer. The Forum aims to facilitate exchange within this engaged group and the broader University (across campuses!) and to create a forum within the university that fosters thinking beyond disciplines and outside of the box. Key players in these activities will be the UA Presidents Professors as well as the IPY Postdoctoral Fellows and their mentors. Informal but somewhat regular meetings of this group and other interested participants will help develop ideas and questions raised during the visits and community forums and provide continuity through the IPY and beyond. This group would help with the development of legacy products and a smaller subset may be involved with active pursuit of associated opportunities in the form of group collaborations, proposal submission and other activities. By entraining members of all UA campuses this group would also foster cross-semination and synergies throughout the statewide UA system.

(4) **Action plans, pilot projects and activities beyond IPY-4**: For the most promising and pressing issues, the Forum activities are expected to lead to the development of action plans and pilot projects that allow the participants to provide tools and solutions for preparing and adapting to projected change. It is expected that a handful of topics will be identified and that members of the University IPY Stakeholder Group will become more active in pursuing more detailed work on these issues in collaboration with key stakeholders and interested members of the public. Based on the level of interest and success (as gauged, e.g., by outside funding support), these activities could build on the Forum idea and lead towards the development of a virtual campus-wide center that specifically addresses key issues pertinent to sustainable development in the North (taking an approach similar in idea, though not in scale, to that of Columbia University in developing the Earth Institute, www.earthinstitute.columbia.org).

Appendix I to this document provides an outline for more detailed planning of such activities for a specific sub-theme that may serve to guide planning efforts in some of the other areas.

**Partnerships and linkages**

The Forum is not seen as an entity or construct that is meant to compete with ongoing activities but rather has a vision of bringing together various groups and strands of activities in ways that a once-in-a-generation opportunity such as the IPY can help foster and initiate. Out of the open, constructive exchange and free thinking promoted within the context of *North by 2020* we see substantial synergistic benefits accruing to the University as well as the State and the international community interested in the North.
Implementation and governance

A schematic outline of the different components of Forum activities as well as the management and governance is outlined in Figure 2. The core constituents of the Forum itself would be the Visiting Authorities and a (sub)set of the IPY Fellows (postdocs, graduate students) and their mentors, the UA President’s Professors and UAF IPY Committee Members. This group would be varying in composition depending on which of the themes is addressed. Each of the themes would be associated with a set of activities and products or legacies that would involve (1) a meeting (international, topical, format modeled on a variation of the Gordon Research Conferences, www.grc.org, to foster open, cutting-edge discussions) and synthesizing different perspectives (Linkages), (2) smaller-scale activities that result in the building of networks and partnerships and integrate the long-view by involving students, stakeholders and the local community (Building Partnerships), and (3) academic discourse that leads to synthesis and appropriate products (print, multi-media and online dissemination) that point the way to the Future (North by 2020) and serve as both legacy and guiding lights beyond the IPY-4.

Figure 2: Schematic outline of Forum structure, governance and activities

For each theme a different group of interested faculty, post-docs and students would get together and provide guidance on the Forum activities. At the same time, an
outside facilitator would play a significant role in guiding the activities, ensuring that the outcomes meet the goals and represent the broader stakeholder perspective. Coordination of these different activities would be achieved by North by 2020 Executive Committee that works with the different groups representing the major themes to keep things on track.

Ultimate oversight would rest with the UAF IPY Executive Committee and the Research Subcommittee. The Science Advisory Committee would play an important role in keeping the overall project on a scientifically and academically viable track and provide links into the scientific community at large.
Appendix 1

Draft outline of planning and sequence of events for an example of a specific Forum sub-theme (Coastal and marine oil and gas development: Reconciling competing interests by local communities, industry and government through responsible development)

**Step 1: Broad delination of theme and relevant sub-theme**
- Informal discussion within IPY Research Subcommittee, key faculty & post-doc contributors, outside experts and stakeholders
- Outcome: Identification of sub-theme and group of UA stakeholders, preliminary identification of outside stakeholders, preliminary identification of funding sources etc.
- Completed by December 2006

**Step 2: Refinement of sub-theme, preliminary identification of goals and outcomes, preliminary identification of key partners and people**
- Workshop 1: Within UA bring together group of interested faculty, students, post-docs to define and identify key aspects of theme, goals, partners etc.; ensure participation of rural campuses, UAA and UAS and consider inviting facilitator or key North Slope contact (January/February 2007)
- Share information about plans and solicit input from other potential partners, stakeholders and interest groups at suitable meetings or conferences
- Outcome: Rough planning for goals, timing, participants and activities during main stage of effort (Step 4 below) in place
- Completed by late spring/early summer 2007

**Step 3: Further refinement following up on Step 2 (may not be required in all cases)**
- Workshop 3 (in general optional, included here because of planned meetings that may be of relevance during summer/fall 2007): Arrange for brief half-day meeting alongside Joint Industry Program (JIP) and MMS Oil-spill response workshop to further refine planning activities with national/international group
- Outcome: All information to prepare for Step 4 (main activities) are in place and preparations on Stage 4 should commence
- Completed by fall 2007

**Step 4: Main stage of activities: Forum meeting, visit by outside authority to UA**
- Visiting authority at UA with various campus visits, interaction and collaboration with UA IPY Stakeholders (see details in main body of planning document), refinement of goals and process for main forum meeting; public outreach talks and interaction with local stakeholders
- Main Forum Meeting with stakeholders, UA experts, outside experts, visiting authority under guidance of facilitator; products of the meeting are listed in main body of the planning document
- Digestion of Forum meeting by UA stakeholder group and visiting authority with work starting on preparing key products

**Step 5: Completion of activities**
- Synthesis, generation of various products (details see main planning document) with involvement by UA IPY Stakeholders and visiting authority
- Core IPY group at UA extracts information for main general-interest book product
- Interested stakeholders at UA and beyond work on follow-up activities growing out of action plan and other products, including specific case study work, integration of outcomes into research and teaching program etc.
- Completed by Spring 2009