PROJECT PROPOSAL. Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change. (updated version).

2014

Sustainable Development Working Group (SDWG)

ARCTIC COUNCIL

SUSTAINABLE DEVELOPMENT WORKING GROUP

PROJECT PROPOSAL

Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change

Endorsed by Senior Arctic Officials, October 22, 2013;
Subsequently updated to include additional Project Co-leads

Project Title:

"Arctic Adaptation Exchange: Facilitating Adaptation to Climate Change"

Lead Country/Project leaders:

Canada - Adaptation Platform Northern Working Group (Dr. D Lemmen – Natural Resources Canada and R. World – Yukon Climate Change Secretariat*)*

United States Of America - University of Alaska Fairbanks (Dr. L. Alessa) and U.S Department of State.

The Gwich'in Council International (GCI)

The Aleut International Association (AIA)

Objective of Project:

To develop an on-line information portal that: i) provides appropriate access to data, knowledge and decision-support tools needed by governments, industry, Arctic indigenous peoples and other residents to manage climate change risks; ii) enables the sharing of exiting tools and practical adaptation experiences including local and traditional knowledge across the Arctic, and; iii) facilitates the development of new practices and tools that support adaptation decision-making (e.g. arctic wide adaptive capacity indices). Through these functions the portal will enhance adaptive capacity and foster innovation, learning-by-doing, and the development of best practices. The portal will be designed to ensure that it is practical, scalable to resource availability, user-driven (to ensure that it can be easily maintained), and flexible to adjust to shifting priorities.

Rationale:

Throughout the circumpolar region, climate change presents risks to infrastructure, human health and safety, traditional ways of life and ecosystem productivity. It also presents possible opportunities for economic development, including resource development and tourism. Specific adaptation measures are often location and circumstance-specific, and can be informed by a growing body of research and practical experience being generated across the Arctic. That experience includes the development and application of new technologies which facilitate adaptation strategies and increase the capacity to respond to changes.

While access to relevant and usable knowledge and information can help drive enhanced adaption actions in the circumpolar region, this information is often scattered at the national or subnational level, does not always exist in forms useful to those who need it, or is difficult to access. Even within the Arctic Council, adaptation relevant information such as the Arctic Climate Impact Assessment, the Snow Water Ice and Permafrost in the Arctic project, and "living" databases such as the Arctic Biodiversity Data Service, is scattered through several Working Group websites and is often difficult to find.

A portal is website that provides a single point of access to different resources, and can both offer information to users and provide user-generated content using Web 2.0 functionalities. Existing regional and national websites and portals do not effectively leverage the wealth of adaptation knowledge present in the region. While the Arctic Portal does house information on a broad range of issues and the Nord-Star initiative, a research based consortium for Nordic countries, focuses on adaptation research, there is no network dedicated to adaptation for practitioners, decision-makers and communities in the circumpolar region. Hence there is a niche for a portal fostering collaboration and innovation through the learning and sharing of adaptation experiences among multiple levels of decision-makers, practitioners, and across arctic communities. A portal can also facilitate the development and refinement of decision-support tools, such as the University of Alaska Fairbanks development of adaptive capacity indicators. The Arctic Council, given its wealth of climate change impacts and adaptation research and opportunities to access the traditional knowledge of its Permanent Participants, is uniquely placed to fill this gap.

Alignment with Arctic Council work:

As highlighted in the Kiruna Declaration, the Arctic Council recognizes that adaptation to the impacts of climate change is a challenge for the Arctic, and that there is a need to increase the capacity of Arctic indigenous peoples and other residents, governments and industry to respond to and manage climate risks. The Declaration also commits the Council to continue addressing this need for capacity-building, including through an on-line information portal. This commitment responds to recommendations made by, among others, the recently completed Adaptation Actions for a Changing Arctic (AACA) parts A and B which both identify the need for mechanisms through which adaptation expertise, best practices and strategies that meet the unique needs and conditions of the Arctic can be shared.

The project aligns with the Arctic Council Sustainable Development Working Group's goals of advancing sustainable development and building capacity in the Arctic, and with the major activity area of adaptation to climate change, including facilitating practical community-based actions. In addition, work led by the University of Alaska Fairbanks on the development and sharing of adaptive capacity indices as part of this project has potential to link to ongoing indicator work undertaken by the SDWG.

Background:

Key stakeholders

Adaptation planning is an increasing priority for governments, communities, industry and individuals throughout the Arctic. Many countries have adaptation plans or strategies, either as stand-alone efforts or as part of broader approaches to address climate change. A growing number of communities have created adaptation plans (see AACA part B) and are in the process of starting to implement actions under those plans. Similarly, many Permanent Participant organizations are involved in community based work related to

adaptation. The rapid rate of climate change in the Arctic has resulted in a wide range of relevant actions, although these are not always recognized as being adaptive responses.

Stakeholder considerations

It will be important for stakeholders to understand that the portal is a tool to assist in adaptation planning, rather than a source of solutions. Initial response to the portal may be unenthusiastic, if it is only viewed as a vehicle for accessing static information sources. While this represents an essential foundation for the portal, its appeal for most stakeholders will be the ability to exchange practical adaptation experiences and learn directly from the experience of others. Furthermore, it is recognized that not all Arctic communities will be able to access the Portal due to connectivity issues. This is a concern and options need to be explored to allow sharing of experience with these communities, such as the use of existing local and national organizations to establish links between producers and users of knowledge.

Activities:

General considerations

A number of considerations will frame activities of the *Arctic Adaptation Exchange*.

1. **Learn from the experience of others.** Many other Information and Communications Technology (ICT) knowledge sharing portals have already explored the potential for closer collaboration, such as the sharing of content and joint search facilities to access documents. One example is the Climate Knowledge Brokers Group which includes 40 online initiatives, including many of the leading global and regional online portals dedicated to adaptation.

2. **Complement, not duplicate, existing resources.** The Arctic Adaptation Exchange portal will link content to other local, subnational and national adaptation websites and portals in the circumpolar region (see Annex 1), and to adaptation content available in websites and portals focusing on Arctic research (see Annex 2). This can be achieved through shared search facility[1] or automated content sharing. In this way the portal leverages existing information and knowledge, and creates scope for sharing between different communities. Linkages with other regional and international adaptation networks (see Annex 3) will also extend the reach of Arctic Council material.

3. **Design to address all priority needs.** The architecture of the portal should allow for all foreseeable uses to be accommodated. If time and resources do not allow all of these features to populated / completed at the same time, they would remain hidden. This is intended to provide maximum potential for future development and minimize the need for future redesign of the portal.

4. **Host the portal on an existing website** to be sustainable in the long term, and to avoid duplication of efforts. Several options for hosting the portal need to be considered, including the Arctic Council website (as part on-going efforts to enhance that site), the Arctic Portal, as well as websites within governments and research

[1] e.g. customized Google search on the Portal links users to other databases and websites

institutions. The scalable design and user-driven content (see below) will offer a degree of flexibility in terms of the host resources needed to maintain or expand the portal.

5. **Scalable content, room for future expansion.** It will take several years, and involvement of all Arctic Council States and Permanent Participants, for the portal to grow to its full potential, which could include appropriate sharing of relevant local and traditional knowledge. Initial emphasis would be placed on providing access to existing Arctic Council resources, with subsequent focus on the inclusion of web 2.0 tools to allow interactive exchange of experience and ideas.

   A series of features would be enabled in the following sequence:
   - Searchable access to all Arctic Council material (reports / databases) relevant to adaptation
   - A practitioners and researchers forum – allowing for the exchange of data and practical experience upon which current and future adaptation planning and action can draw from (at a range of scales, including at the community level). The University of Alaska Fairbanks Adaptive Capacity Indicators project will serve as a pilot for this function.
   - A compendium of decision-support tools, with links provided to sources of those tool
   - Access to national and international material

6. **Content is user-driven and protected.** Other than Arctic Council materials, all other content of the portal will be uploaded by individuals within Arctic Council States and Permanent Participants using low-cost web 2.0 technologies[2] and following established protocols. This does not preclude future investments in the portal, but will allow the portal to function usefully in the absence of such additional investments. Content quality control, security issues, and preservation of proprietary and intellectual copyrights for technological, local and traditional knowledge will be taken into account during the design of the portal.

Activity Phase 1 - Scoping

This phase involves making arrangements for the hosting of the portal and gathering the input needed to develop a portal blue print. Upon approval of the project, discussion with potential hosting organizations will take place (Arctic Council, Arctic Portal, etc.). Additionally, using the Peer Assist technique to tap into the experience of other portal developers, the project leaders will organize a webinar (or webinars) with leading experts in climate change adaptation knowledge platforms and networks. The webinar(s) will be an opportunity to get concrete advice and suggestions, to learn about knowledge sharing challenges and how to overcome them. Consultations will also take place to understand users' needs.

[2] This is an approach used by international portals such as WeAdapt where content is user-generated using low-cost web 2.0 technologies (http://weadapt.org/).

Outputs from the webinar(s), consultations with potential users and the portal host will inform development of a draft portal blue print to be discussed during a face-to face scoping meeting. The meeting will be used to define key elements of the portal, including intended audience focus and needs, editorial issues (how the content is organized, generated, and managed), and technology / delivery focus (links with host architecture, interface graphics, use of social network tools etc.).

Scoping will be used to ascertain needs, experience and relevant best practices by engaging:

- potential users of the portal - from community to regional scale
- potential information providers – including the research community and practitioners
- hosts of existing adaptation websites and portals (including the Arctic Portal)
- ITC knowledge experts
- Web designers

Activity Phase 2 - Portal Design and Communication Strategy

This phase would involve contracted work to design / develop the site, based on the general considerations listed above and the scoping process. Simultaneous with portal design will be the establishment of protocols for linking / adding content to the portal.

A user outreach plan will also be designed to introduce the value and utility of the portal prior to its launch. The plan, as part of a communication strategy, will create awareness, and encourage acceptance and positive anticipation of this new knowledge creation and exchange tool.

Activity Phase 3 – Populating and Launching the Portal

Initial focus will be placed on ensuring that all relevant Arctic Council information is easily accessible via the portal. All Working Groups identified key material through the AACA Part A project exercise. Further engagement of other Working Groups will likely be required to refine material and identify potential areas of collaboration. In addition, all Arctic Council States and Permanent Participants will be invited to propose content and linkages for populating of the portal in advance of its formal launch. The practitioners and researchers forum would be developed using the University of Alaska (Fairbanks) Adaptive Capacity Indicators project as a pilot.

Activity Phase 4 – Maintaining and expanding the Portal

The portal will be a dynamic tool that will continue to evolve in response to users needs and input. It will have been designed in a way to minimize the effort required for maintenance, with content being user-driven and/or automated. The portal will function in a way that can allow it to function for several years of minimal investment, but occasional updating to benefit from advances in web technologies would be desirable.

Based on other portals and websites experience, one of the most significant factors for anticipating and scaling costs is the extent of user-based functionality that is maintained over time (collaborative tools, special interest group functionality, user security functionality, user tracking tools, etc.). The host organization will have the flexibility to scale costs depending on the level of interactive content and dynamic exchange utilized.

Partners' contributions toward the project:

Canadian lead for the project will be the Adaptation Platform Northern Working Group, co-chaired by Natural Resources Canada and the Government of Yukon, and featuring participation of all territorial and several provincial governments, research institutions, and a number of federal government departments including Aboriginal Affairs and Northern Development Canada, Environment Canada and Transport Canada. The Northern Working Group provides an existing collaborative mechanism to facilitate engagement of this large body of expertise.

US leads for the project will be the University of Alaska Fairbanks and the U.S Department of State. The university is currently leading multi-year research on adaptation to a changing climate in Alaska and is building links with other research organizations across the Arctic.

Additional contributions, including from Arctic Council States and Permanent Participants but extending to communities, industry and research institutions, are key to the success of the Arctic Adaptation Exchange. All of these will be responsible for adding content to the portal (using established protocols) and using it as a mechanism to share their practical adaptation experience with other.

Outcomes:

The sharing of information and knowledge (including that generated by the various Arctic Council working groups), as well as practical experience enabled by this project, will result in enhanced adaptation planning, implementation of adaptation actions, and facilitate innovation informed by learning-by-doing across the circumpolar Arctic.

Deliverables:

By the end of the current Biennale (May 2015) the proposed program of activities will have delivered:

- An on-line information portal that provides access to adaptation data and knowledge generated by the Arctic Council's various working groups, and allows sharing of practical adaptation experiences across the Arctic.
- Protocols for populating and maintaining the portal
- Report on indicators of adaptive capacity across the Arctic, as an example of the utility of the practioners/researchers' forum.

Timeframe and Project Completion:

The first three activities of the proposed project are designed to be completed within the 2013-2015 timeframe during Canada's Chairmanship, while the legacy of the project (Phase 4) will extend indefinitely. Key milestones include:

- October 2013: project approval
- November 2013: Creation of a Project Advisory Committee, consultations with potential portal hosts, and a "Peer-Assist" webinar
- November to January 2013: Consultations to develop draft blue print
- February 2014: Scoping meeting in Anchorage, Alaska
- February to March 2014: Finalize blue print for portal
- March 2014: Update report to SDWG
- April to August 2014: Create a beta version of the portal (structure and basic site population) and a communication strategy
- August to October 2014: Test the beta version with target audiences, make modifications if needed
- November to January 2015: Populate the portal
- February 2015: Launch the Arctic Adaptation Exchange
- March 2015: Final report SDWG

Cost estimate and budget:

The cost of the portal is scalable based on its perceived value by users and availability of resources. The following represents a practical estimate of costs based upon the experience of other information portals. The specific budget items will be revisited in November 2013 based on the early findings of the scoping phase.

- Activity Phase 1 & 2 - Scoping and Portal Design: $250,000
- Activity Phase 3 – Populating and Launching the Portal: $150,000
- Activity Phase 4 – Maintaining the Portal: $50,000 (future expansion, if desired, would require additional resources). The scoping phase will identify how flexibility in financial planning can be incorporated in the portal design. For instance automated content sharing, which allows website to take interesting content from other sites and present it to others, could help keep maintenance costs minimal in years of resource constraints.

The total estimated cost of the project is $450,000. Additional support would enhance the utility and functionality of the portal.

Contributors:

i) Natural Resources Canada: $100,000 cash (activity 2 contract)
ii) University of Alaska Fairbanks: $210,000 cash and in-kind (activity 1 and 3 workshops)
iii) Yukon Government: $60,000 in-kind (activities 1, 2, and 3)
iv) Canada's Adaptation Platform Northern Working Group: $80,000 cash and in-kind (activities 1, 3, and 4)

Annex 1 - Examples of existing Arctic State climate change adaptation websites and portals

- Swedish Portal for Climate Change Adaptation
  http://www.smhi.se/klimatanpassningsportalen/Hur-forandras-klimatet

- Finnish Portal for Climate Change Adaptation
  http://ilmasto-opas.fi/en/

  - Norwegian Climate Change Adaptation Program
  http://www.regjeringen.no/en/dep/md/kampanjer/engelsk-forside-for-klimatilpasning.html?id=539980

  - Exchange for Local Observations and Knowledge of the Arctic (more on impacts of climate change)
  http://eloka-arctic.org/

  - The Nunavut Regional Adaptation Collaborative
  http://climatechangenunavut.ca/en/project/nunavut-regional-adaptation-collaborative

Annex 2 - Examples of existing Arctic State research websites and portals

- Arctic Change. US lead, presents recent indicators that describe the present state of the Arctic climate and ecosystem
  http://www.arctic.noaa.gov/detect

  - European Union Arctic Information Centre. International network of 19 leading Arctic research and outreach institutions from the various European Union Members States, and the EEA countries. The website is planned for 2014-15.
  http://www.arcticinfo.eu/en/features/25-upgrading-the-eu-s-communication-and-outreach-on-arctic-issues

  - ArcticNet. Research focus - Network of Centres of Excellence of Canada that brings together scientists and managers to study the impacts of climate change and modernization in the coastal Canadian Arctic.
  http://www.arcticnet.ulaval.ca/

Annex 3 - Examples of other regional and international climate change adaptation websites and portals

- WeAdapt, an online 'open space' on climate adaptation issues
http://weadapt.org/

- Climate-Adapt, the European Union's climate adaptation web-platform
http://www.climate-adapt.eea.europa.eu

- Africa Adapt
http://www.africa-adapt.net/

- Asia and Pacific Adaptation Knowledge Platform
http://www.asiapacificadapt.net/

- Adaptation Learning Mechanism
http://www.adaptationlearning.net/

- World Bank Climate Change Knowledge Portal
http://sdwebx.worldbank.org/climateportal/index.cfm

- UNFCCC Local Coping Strategies Database
http://maindb.unfccc.int/public/adaptation/