

**STAP Progress Report: Local Knowledge and the Human Dimension in NSSI
Working Group**

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To the NSSI Oversight Committee

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for STAP of NSSI

Activity: Establish a STAP working group to study the challenges and opportunities of inclusion of local knowledge and the human dimension as a part of the NSSI.

Rationale: Social-ecological monitoring, research, and decision making are fundamental elements of any adaptive management process. In the context of the North Slope, these elements need to be undertaken at multiple scales and with good cross-scale linkages to provide for robust decisions. The need for an effective multi-scaled adaptive management process increases with the high uncertainty that comes with conditions of rapid change. The interactions of the drivers of change (i.e. land-use change, climate change, socio-economic change) add to uncertainty and, and thus the need for rich information and multiple perspectives. When functioning at multiple scales, enhancing collaboration, and facilitating social learning, this approach to management is called “**adaptive co-management.**”

At their first meeting, members of STAP of NSSI identified the need to examine the role of local communities in the NSSI adaptive management process, both with respect to how local knowledge can contribute to monitoring, research, and decision making and the extent to which social data are part of resource management. Since that meeting there have been subsequent discussions by STAP, including a formal presentation by Gary Kofinas (UAF) to STAP with input from Stacey Macintosh (BLM) and Sverre Pedersen (ADFG). Unfortunately there has been limited participation in STAP by North Slope community residents, although there has been North Slope Wildlife Department participation.

The wealth of knowledge held by North Slope residents represents an opportunity to NSSI. Older community residents bring a historical understanding of change. Active harvesting and the Inupiat worldview provide important insights, both in documenting emergent conditions of social-ecological change as well as in understanding its complexities in ways that are relevant to regional management and for resource governance by local communities. Generating hypotheses about change, capturing the socio-cultural significance of change, serving as an early warning systems, and enhancing the social learning aspects of adaptive management are but a few of the potential benefits of community involvement.

NSSI, with its focus on inter-organizational coordination and adaptive management, is a logical forum for investigating the options for enhancing the inclusion of local communities and the human dimension in a North Slope resource management process.

Proposed Action: The STAP of NSSI seeks NSSI Oversight Committee endorsement to support a small working group that will explore the role of local knowledge (also called local knowledge, traditional knowledge, indigenous knowledge) and the human dimensions as part of adaptive resource management on the North Slope. This working group will be composed of four to six experienced individuals who represent a range of community, agency, and research perspectives. The group will meet in conjunction with STAP meetings and more frequently if needed for a two-year period, and consider the following questions:

- What is the current use and utility of local knowledge in North Slope resource management decision making, including the NSSI process?
- How can local knowledge contribute to adaptive management?
- Is there a need for greater inclusion of local knowledge?
- What are best practices for inclusion of community knowledge in North Slope adaptive management?
- How can social and ecological sciences best contribute to this process?
- How are community data best managed to inform adaptive management and insure archiving?
- How can communities and agencies best improve their capacity to harness the benefits of community knowledge as a part of the NSSI?

A detailed scope of work will be developed by the Working Group once membership is selected.

Current Activities. There is already considerable experience on which to address these questions. Several programs, projects, and initiatives in monitoring, research, and decision making are underway that can inform the discussions of the working group. Here are a few examples:

- *Community-based observation systems:* There are community observation systems currently operational. For example the US-CANADA Arctic Borderlands (involving Kaktovik, Arctic Village, Venetie, and five Canadian communities) funded by USFW and NSF in AK and others in Canada) has been documenting local observations of social-ecological change for more than a decade. University researchers are establishing a coastal observation system, with one program currently operational in Wales focusing on changing ice conditions. BLM and ADFG are engaged in an on-going project focused on caribou use and health for Teshekpuk caribou. Monitoring of Beluga, Bowhead, and other important subsistence resources is currently part of regular activities of the North Slope Borough Wildlife Department.
- *Community participation in research:* Communities have been an important source of information for countless past research projects of the North Slope. MMS alone has funded more than 24 million dollars for social science research, much of it occurring on the North Slope and based on the contributions of community residents. Ecological research has also drawn on local knowledge. The National Science Foundation and other funding agencies interested in basic and applied science have involved communities in the research process, in some cases intensively, and included

community knowledge in a variety of ways. For example a recent MMS funded project engaged Nuiqsut fishers to generate hypotheses about the use, distribution and abundance of Arctic Cisco.

- *Community involvement in decision making:* Community residents and community organizations contribute community knowledge through public testimonies as part of standard public participation processes. In the last decade, EIS processes have included “traditional knowledge” to meet NEPA guidelines and improve understanding of subsistence and social-ecological processes. More regional processes, such as the North Slope Planning Process have also drawn on communities to inform decisions.

And while there is a history of community contributions in these three areas, there is limited understanding of how well these various activities are integrated and coordinated, and how effective the overall process is in informing regional decision making and enhancing the adaptive capacity of communities to cope with change.

Products: Progress on working group activities will be made to the STAP of NSSI. A final report with summary of discussions and recommendations will be presented in written form and through a presentation to STAP and the Oversight Committee upon completion of the effort.