



Arctic Observing Open Science Meeting

17 – 19 November 2015

Seattle, Washington, USA

Parallel Session Summary

Human Dimensions of the Arctic

Session Chairs: Mia Bennett and David Payer

Overview. The Human Dimensions in the Arctic session had seven presentations on a wide range of topics, including demographics and climate, management of Arctic data, social indicators, Russian Arctic communities in transition, paleo-archaeology, and maps. Each presentation was followed by a brief Q&A and discussion, while a more overarching discussion occurred after all seven presenters had spoken. The session chairs attempted to structure the discussions around the three questions provided by AOOSM organizers, but the questions were not always conducive to discussing advances in the social sciences and human-related issues in the Arctic. Still, in keeping with the organizers' intent, a summary of our wide-ranging conversation is divided accordingly.

Question 1: What scientific or operational advances have been facilitated by the network(s) of Arctic observations?

Participants questioned whether a functional observation network currently exists in the Arctic social sciences, and further wondered whether such a network was even possible. The Marine Science Network was given as an example of a scientific research network, but nobody could identify an equivalent network for social scientists – only specific projects such as the Arctic Social Indicators Project (discussed further below). One researcher commented that networked social science data are complex, and stressed the concept that “Knowledge Lives in Places”. Since so much of these data are place-specific, creating networks may be good for comparing and contrasting metadata, but networks of observations are not necessarily as insightful as they might be in the biophysical sciences. Participants cautioned that generalizing inferences derived from location-specific data may lead to fallacious conclusions.

Another participant emphasized that membership in networks is not the ultimate goal; rather, the network itself has to have an end purpose. That purpose can be better refined and targeted by involving indigenous peoples in research networks. Discussants noted that many research efforts are overly academic and detached from the communities they are studying. This underscores the need to examine existing research interfaces and do a better job of bringing indigenous peoples into the conversation in a systematic, universal way. Through these more integrated research networks, researchers can work directly with members of indigenous communities to select monitoring targets.

Direct involvement of indigenous peoples in observing networks should not be limited to the communities in which they reside. As an example, one presenter discussed a meeting at the National Snow and Ice Data Center in Boulder, Colorado where attendees included 15 indigenous people. This was an important achievement because even though indigenous peoples often desire to get involved and assist with monitoring in Northern communities, they typically have limited capacity to participate in meetings held outside their communities. The researcher stated, “We need the people who define the North to be defining the networks and have research be generated by the people living up there. We’re still largely looking at the region from the outside.” Cooperation with indigenous peoples and local residents in the North can help foster Arctic observing networks in the social sciences that are less top-down, and that examine the region from within rather than from outside.

In recent years, headway has been made in building networks that include Arctic indigenous people, which in turn has facilitated science and operations in the region. Additionally, research protocols are now coming from various indigenous groups. For instance, the Inuit Circumpolar Council (ICC) has been providing more input, helping to define science objectives that better meet the needs of local residents in the Arctic. One example was raised concerning the ICC’s forthcoming publication on food security, which was only written after ICC members visited Inuit communities. Scientists working alone could not have accomplished this work; the involvement of the ICC with their local knowledge and community connections was crucial to the project’s success.

Question 2: What opportunities exist to address new science questions, operational challenges, or questions of Arctic communities through enhanced collaboration and a robust interagency observing system?

Our discussion focused on enhancing collaboration in Arctic observing systems between scientists and local communities rather than between agencies and/or scientists. Several experienced researchers emphasized that longstanding engagement and collaboration with Arctic communities is important so that research questions can be appropriately framed. Relationships need to be established and maintained over time to successfully perform research in Arctic communities. As one researcher emphasized, “The key is to shape questions together with Arctic people so that they understand why it’s important and why we’re doing the research we’re doing.” This is particularly relevant to research that focuses on sensitive topics such as substance abuse, suicide and loss of cultural identity. Shaping questions together, building mutual trust, and identifying gaps and needs allows the foundation of community-driven, participatory research. Although the task is difficult, it is not impossible, and it was repeatedly emphasized that it is necessary. Researchers can take advantage of existing regional networks, such as within the Northwest Arctic Borough, to help them in this endeavor.

In addition to formulating the research topic to be locally meaningful, researchers should be aware of local perceptions of them as scientists. They should also be attuned

to the problem of “burnout” among the Arctic peoples and communities they are studying. Several participants mentioned that researchers put sizeable demands on Arctic people’s time. There is consequently a real need for scientists to become economical in the contacts they make with indigenous peoples for data-collection purposes. This can be achieved partly through networking, which allows researchers to become more efficient in the demands they are making of people.

The flip side of the problem of researchers placing high demands on their subjects’ time is that investigators often spend only limited time in their communities. This can create feelings of resentment among local people. To avoid this situation, reiterating the notion that Arctic researchers need to strengthen ties with Arctic peoples, researchers need to become trusted members of the community rather than fly-in, fly-out scientists who exacerbate the problems associated with studying the Arctic from the outside. Moreover, it was emphasized that if financially feasible, living in the Arctic as a researcher allows you to do things that you couldn’t do otherwise and gain a deeper sense of understanding of social issues in the region that only come with time. Of course, the current funding structure for social sciences is not always amenable to long-term stays in communities of interest, a problem that must be remedied at the level of the funding agency. Scientists can possibly work around this by including long-term stays in their grant proposals.

Greater efforts should also be made to report results of studies back to communities, in a manner that is respectful and accessible. “Closing the loop” in this manner is essential for conducting long-term observing in the social sciences.

One researcher mentioned that funding for social-sciences research may be easier to obtain in Europe, suggesting that North American scientists could benefit from enhanced collaboration with European institutes, thereby inserting themselves into European research networks to access more resources to study Arctic communities and social-science issues.

Question 3: How have observing activities contributed to the science needs of mission agencies or stakeholders?

Participants discussed the Arctic Social Indicators Project (ASIP), which is part of the Arctic Human Development Project. ASIP attempted to identify measurable indicators of human well being and determined that economic well-being, health, and population were relatively easy to measure. In contrast, levels of self-determination (for indigenous peoples), language, and ties to nature were more difficult.

Several recent projects have examined archaeological records and cultural heritage together. During this session, two of the seven presentations focused on this topic. The presenters demonstrated that it is possible to involve communities and stakeholders so that both scientists and locals are engaged in, and enthusiastic about, the preservation

taking place. In the North Slope Borough, for instance, this type of research helped create positive change by getting an oil and gas company's risk assessment to include the recognition that the culture was at risk due to eroding shorelines and the potential loss of archaeological heritage embedded within. Communities are not always enthusiastic about observing and/or research projects occurring in their area, however; for instance, carrying out genetic studies on archaeological finds can be very controversial. In contrast, many Arctic residents are more accepting of modern genetic work.

More work is needed on methodologies underpinning social science observing activities in the Arctic so that they can better meet the science needs of both mission agencies and stakeholders. Data collection in the Arctic is often difficult because of obvious factors such as the harsh climate and high costs. Less obvious problems also create challenges, however. For instance, much social sciences work relies on telephone surveys, but residents in the North are more likely to be difficult to reach by land-line telephone, and the area codes for the more commonly used cellular phones are not necessarily tied to geographical location. This exemplifies how the Arctic is "kind of a blank map" with regards to social science methods commonly used elsewhere.