

USARC 2011-12 Goals Report Highlights Recommendations for Arctic Research

by Fran Ulmer

Impacts from climate change are observable in many regions, but particularly in the Arctic. Many people, from policy makers to private citizens, are looking to arctic researchers for answers to a myriad of questions:

- How can research best provide information needed to support sound environmental and policy decisions?
- Are there new ways of conducting research that will increase understanding of arctic systems and reduce costs in areas from infrastructure and resource development to home construction?
- What kinds of specialized technologies and equipment should be developed and deployed to collect data and more fully understand change in the Arctic?

Over the last two years, the US Arctic Research Commission (USARC) has surveyed the arctic research landscape and convened discussions on a variety of important questions. The highlights are presented in its biennial publication, *Report on the Goals and Objectives for Arctic Research 2011-12 (Goals Report)*. The *Goals Report* may be found on the USARC website (www.arctic.gov) or by clicking [here](#).

In addition to specific examples of research currently underway, the report includes the advice and opinions of Alaskans and many others who actively engage in arctic research locally, nationally, and internationally. USARC Commissioners visited various academic institutions, government entities, rural villages and international locations with arctic relevance to gather the information contained in the *Goals Report*. We are grateful for the many individuals and groups who shared their knowledge and valuable insights about current or needed research.

The *Goals Report* highlights five central arctic research goals and makes recommendations for what we consider to be high priority arctic research endeavors for the nation:

1. Observe, Understand and Respond to Environmental Change in the Arctic, Arctic Ocean and Bering Sea

USARC Recommendation: Greater support for efforts to observe and understand the arctic environment and climate - how they are changing due to natural and human activities, and how we may better respond to future change. We must do more to synthesize scientific results and translate them into actionable information.

2. Improve Arctic Human Health

USARC Recommendation: Additional basic biomedical and behavioral research in arctic communities and continued community health analyses. We must also have a recurring assessment of intervention efforts, on a decadal scale, to help develop research priorities, review results, and guide the scaling up of successful local efforts into broader clinical interventions.

3. Assess Natural Resources

USARC Recommendation: Basic mapping and charting of arctic lands and waters to the standards achieved in the lower 48 states. We must also quantitatively assess mineral, energy, and living resources. Concomitant with this assessment, the Commission recommends gaining a greater understanding of the immediate and cumulative environmental, social, and economic impacts of developing these resources. Finally, the Commission continues to urge Senate ratification of United Nations Convention on the Law of the Sea (UNCLOS).

4. Advance Civil Infrastructure Research

USARC Recommendation: A research program on innovative technological and engineering solutions to support civil infrastructure that will withstand environmental change. Focus on building foundations; delivery of utilities, energy, and communication; and a transportation system that addresses land, air, and sea (e.g., deep-draft arctic ports). Also, if oil spills cannot be prevented, we must be prepared for them; the uniqueness of the Arctic requires specialized research.

5. Assess Indigenous Languages, Identities, and Cultural Research Needs

USARC Recommendation: An integrated arctic indigenous languages research plan that: conducts regular assessments to understand the extent and diversity of languages spoken by arctic indigenous peoples and the viability of those languages for future generations; document procedures to ensure that languages and place names spoken and given by people are recorded and preserved; and defines policy options and processes for language monitoring and preservation.

I want to encourage you to visit the USARC website at www.arctic.gov to review the report and other white papers that have been prepared in recent years. We invite comments about our work and thank you for sharing your ideas with the Commission.