

NORTHERN ALASKA SCENARIOS PROJECT REPORT



CREATING HEALTHY SUSTAINABLE
COMMUNITIES IN ARCTIC ALASKA

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These are the participants who graciously gave their time, energy,
and ideas to shaping scenarios for creating healthy sustainable
communities in Arctic Alaska. The affiliations listed are those given
at the workshops (2015-2016). We thank them, again, for their work
with us. The project team list is similar, these are the affiliations
in 2015-2016. Please note that all four PhD students have now
graduated as of September 2017.

This report was compiled and written by: Amy Lauren Lovecraft,
Nancy Fresco, Doug Cost, and Berill Blair.

EXECUTIVE SUMMARY

What makes northern Alaska communities resilient? Building on the North Slope Borough's (NSB) *Healthy Communities Initiative* and the Northwest Arctic Borough's (NWAB) *Healthy Kotzebue, Our Future!* a team led by University of Alaska Fairbanks completed a study that brought together Arctic Alaska resident experts and researchers to develop scenarios for healthy sustainable communities by the year 2040. In times of rapid change, scenarios have been shown to help with strategic planning, adaptation, and problem-solving at the community level. At the beginning of the project, background research by the project team included Indigenous and local expert knowledge with a holistic systems approach to community resilience. It also highlighted the complex nature of change in Arctic Alaska. Figure A details the process – from beginning with identification and deliberation over the factors essential to community resilience through to the development of indicators to track a community's path into the future.

While it is not possible to predict the future in a series of three workshops, it is possible to explore what aspects of different likely futures might look like under diverse circumstances. Working with the ideas and deliberations of over fifty participants during 2015 - 2016, the research team developed a series of scenarios for community health and sustainability by 2040. In particular, three scenario outcomes were produced with the workshop participants' expertise that are plausible and internally consistent. In the future only one particular future will come to be; and it may be different from those contained in the report. However, as shown in past studies, scenarios analysis can aid people and organizations in better preparing for any one future by asking "what if" and considering what in a community matters most to carry into the future. This is a proactive approach to adaptation where local-scale actors can strategize how to best meet possible challenges rather than passively adapt to whatever happens.

To get to these scenarios, participants in Workshops 1 and 2 developed, deliberated, and refined a multitude of key factors down to twenty-one that are likely to have major influence in the future of health and sustainability in Arctic Alaska communities. The key factors cluster around five major themes or levers: local control over governance, sustaining natural resources, accessibility to markets, promoting education that integrates cultural values, and holistic well-being. For each key factor, drawing on the compiled background information and additional expert input, the team developed a series of future projections. These projections describe the range of possible trends centered around any particular key factor. For example, for sustainable energy, the future projections identified by the participants and the research team range from continued reliance on diesel-generated power to local control over alternative energy sources, or creation of large transmission lines for delivery of power from generation facilities on the North Slope and elsewhere (Figure A).

The workshops also revealed how different key factors are linked and interact with one another. For example, early in the process participants ranked climate change in the lower half of key factors in terms of importance. However, participants emphasized how changes in the climate and, in particular, access to subsistence resources controlled by snow, ice, and permafrost conditions have impacted the annual cycle of subsistence activities which in turn are linked to important community celebrations. Through the workshops and background research, indicators were identified that can help a community track and potentially anticipate important changes in relation to possible future scenarios. For example, when evaluating access to subsistence resources, indicators that are meaningful in terms of the condition of the permafrost are much more useful than standard measures like the air temperature over the course of a year. More than fifty indicators were identified for the key factors and future projections. The project team determined that

not all of these are currently tracked or monitored to help decision-makers in the region, and provided recommendations on how to address these policy and data gaps.

After Workshop 2, pairwise combinations of all the future projections for the different key factors were evaluated to determine which were most plausible and consistent with one another. From this analysis, the research team identified a number of future scenarios related to community health and sustainability. In Workshop 3 these scenarios were evaluated and participants imagined how these stories could play out in the coming decades. This combination of community members deliberating well-researched possible futures is powerful. It enables villages, boroughs, regions, organizations, and individuals to think about what sorts of forces are at work that can change the future. Scenarios can also demonstrate what may be beyond our control. For all the possible futures in Arctic Alaska there are four key drivers that seem to be tipping points making the key factors produce desirable or undesirable results: (1) the boom bust cycle of economies, (2) government relations, (3) community relations, and (4) largely external forces. Each of these drivers has elements that can be monitored, controlled, managed, or affected by local governments, organizations, or community members. Each also has aspects that individuals, regions, and in some cases even national policy cannot directly affect. Understanding what is subject to democratic political debate and change, such as policies related to education, intersectional engagement, and housing is important for residents now and in the future to shape their communities. At the same time, citizen science such as observations of climate change, tracking demographics, and monitoring subsistence animals may help communities to better determine their own futures.

Key conclusions: The results of the Northern Alaska Scenarios Project demonstrate the core values and key characteristics Arctic Alaska residents find significant to creating community resilience. The key factors, future projections, and possible scenarios of the project can help guide community action and policy. Potential social and environmental hazards can be identified via indicator tracking over time, based on the knowledge and data collected from the workshops. A few next steps would be to expand the indicators being identified and collected, in particular filling gaps where community members recognize an important trend but there is not yet a monitoring process in place; to create a holistic community resilience dashboard specific to Arctic Alaska needs; and to engage other locations in Alaska in similar scenarios workshops to look for shared concerns and strategies across regions.

