

# NORTHERN ALASKA SCENARIOS PROJECT REPORT



CREATING HEALTHY SUSTAINABLE  
COMMUNITIES IN ARCTIC ALASKA

# PARTICIPANTS

Rosemary Ahtuanguaruk, North Slope Borough  
Joel Alowa, Maniilaq Association  
Will Anderson, Kikiktagruk Iñupiat Corporation  
Tim Argetsinger, NANA Regional Corporation  
Hannah Atkinson, Northwest Arctic Borough,  
National Parks Service  
Roland Booth, North Slope Borough, Point Lay  
Trina Brower, ASRC, UAF Student  
Roxanne Brower, ASRC  
Peggy Cowan, North Slope Borough School District  
Heather Dingman, North Slope Borough  
Cheryl Edenshaw, Northwest Arctic Borough School District,  
Alaska Technical Center  
Helium Edwardsen, Ukpeaġvik Iñupiat Corporation-Science  
Simon Ekak, Olgoonik Corporation  
Rob Elkins, North Slope Borough  
Kaare Erickson, North Slope Borough  
Elizabeth Ferguson, Northwest Arctic Borough  
Anthony Fonua, North Slope Borough Police Department  
Glenn Gray, Northwest Arctic Borough Consultant  
Qaiyaan Harcharek, North Slope Borough,  
Dept. Wildlife Management  
Chris Hatch, Northwest Arctic Borough VSPO Program  
Dorothy Henry, North Slope Borough, Point Lay  
Heather Hopson, North Slope Borough, UAF student  
Anne Jensen, Ukpeaġvik Iñupiat Corporation - Science  
Fred Kagak, Olgoonik Corporation  
Alice (Kangas) Sage, North Slope Borough School District, Kiita  
Kat Keith, Northwest Arctic Borough,  
Remote Solutions, LLC  
Ralph King, Northwest Arctic Borough School District  
Jacqui Lambert, Native Village of Kotzebue  
Doreen Lampe, Iñupiat Community of the Arctic Slope  
Doreen Leavitt, North Slope Borough  
Maija Lukin, Maniilaq Association and City of Kotzebue  
Ingemar Mathiasson, Northwest Arctic Borough  
Sharon Mathiasson, Northwest Arctic Borough  
Brenton Nayakik, Olgoonik Corporation  
Chloe Naylor, Northwest Arctic Borough  
Lucy Nelson, Maniilaq Association  
Desirae Roehl, Alaska Native Tribal Health Consortium  
George Oleman, Iñupiat Community of the Arctic Slope  
Linda Saito, NSB School District  
Harold Rougeux, Maniilaq Association  
Tiffany Scott, NANA Regional Corporation  
Amanda Sialofi, Ilisagvik College  
Fred Smith, Northwest Arctic Borough  
Diana Solenberger, Ilisagvik College  
Steve Sumida, Pribilof Aleuts Incorporated  
Brittany Sweeney, Selawik National Wildlife Refuge USFWS  
Michael Thomas, Ukpeaġvik Iñupiat Corporation  
Eddie Ungudruk, Olgoonik Corporation  
Travis Upicksoun, Olgoonik Corporation  
Denali Whiting, Northwest Arctic Borough, UAF student  
Jane Winzer, Maniilaq Association

# PROJECT TEAM

Dr. Amy Lauren Lovecraft, UAF Political Science and  
Arctic and Northern Studies at UAF  
Dr. Hajo Eicken, International Arctic Research Center at UAF  
Nils Andreassen, Institute of the North  
Dr. Marc Mueller-Stoffels, Alaska Center for Energy and Power at UAF  
Dr. John Walsh, International Arctic Research Center at UAF  
Dr. Nancy Fresco, Scenarios Network for Alaska+Arctic  
Planning at UAF  
Dr. Denny Lassuy, North Slope Science Initiative  
Berill Blair, UAF PhD student, Natural Resources and  
Sustainability at UAF  
Douglas Cost, PhD student, Cross-Cultural Studies at UAF  
Richard Hum, UAF PhD student, Communications at UAF  
Kevin Hillmer-Pegram, UAF PhD student,  
Resilience and Adaptation at UAF  
Dr. Josephine-Mary Sam, International Arctic Research Center at UAF  
Team consultant: Trina Brower, UAF undergraduate  
in Political Science at UAF

The point of contact for questions about the project or this report is  
Amy Lauren Lovecraft.

Email: [alovecraft@alaska.edu](mailto:alovecraft@alaska.edu)  
Phone: 907.474.2688.

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.

