



Building capacity for tribal climate adaptation planning in Alaska: a post-training needs assessment

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Introduction. The Alaska Native Tribal Health Consortium (ANTHC) and Institute for Tribal Environmental Professionals (ITEP) provided 3 tribal climate adaptation planning trainings in Alaska from 2016 to 2017 (two jointly sponsored trainings in 2016 and 2017 and a 2017 training sponsored by ANTHC). This report summarizes findings from a web-based questionnaire distributed to tribal participants who attend these trainings to understand what additional resources and support they want to help their climate adaptation planning efforts. Findings are based on the analysis of 21 responses. The survey was sent out in June 2018 and received a 26% response rate. A reminder email and in-person phone call were used for non-responses. Of the 81 individuals who had attended the trainings, 47 were reached via phone or email, and 16 (20%) no longer were employed by their listed affiliation at the time of the training.

Participant backgrounds and motivation. Nearly all of the participants (91%) represented individual Tribal councils, villages, and communities. Nearly half of the participants (45%) had previously attended a climate adaptation planning training (ANTHC or ITEP, Alaska Institute for Justice, Zender Environmental, and a resilience summit). The reason most often identified as motivating participation was including climate adaptation planning in EPA Indian General Assistance Program (IGAP) workplans (23%; n=5). Other reasons included: wanting to learn about climate impacts to community health and food security in my and other communities, concerns about impacts to permafrost thaw, food security, and unsafe hunting and travel; currently writing tribal climate adaptation plans; wanting resources; learning about the climate adaptation planning process; personal invitation; and learning to author a plan “to ensure the plan properly represented the Tribe, its best interests and the true local conditions.”

Feedback on Trainings. Interacting with and learning from other Alaska villages was identified as “the most helpful” aspect of the training (n=4; 18%). This included learning from other communities on what is changing in their community, what these changes are impacting, and how they are dealing with these changes. Other “most-helpful” activities included: the hands-on process of making the plan with other communities (n=3; 14%); networking (n=2; 9%); and learning about a framework for developing the plan (n=2; 9%). Three recommendations to improve trainings included providing: follow-up trainings; more opportunities to discuss putting all elements into GAP workplans; and regionally focused trainings.

Climate adaptation planning activities since training. The majority of participants have engaged in additional climate adaptation-related activities since their last training (Figure 1). Learning-related activities happened the most, including attending workshops, conferences, and contacting other communities.

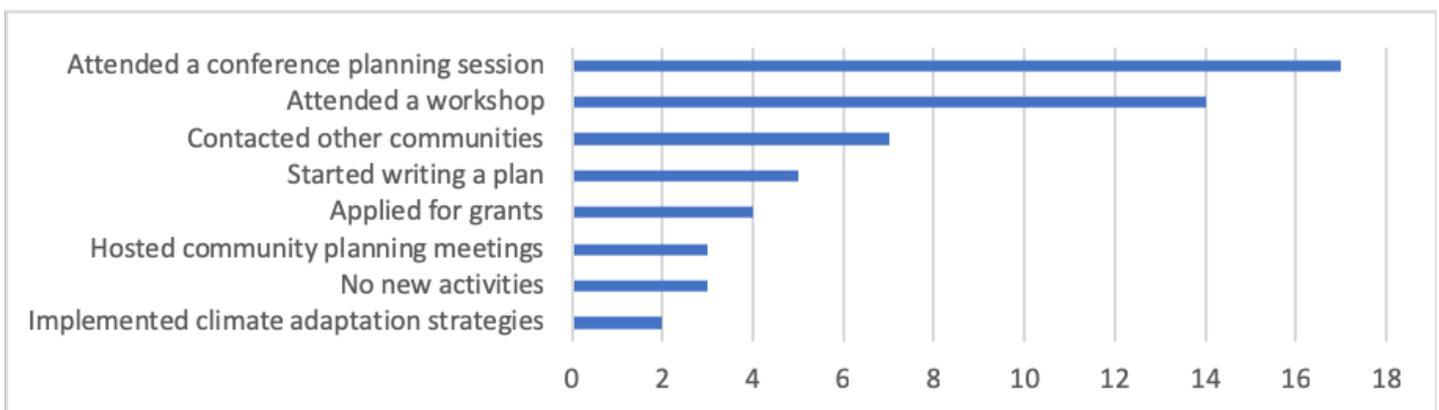


Figure 1: Climate adaptation planning activities since last training (n=21). Survey Question: What climate adaptation planning activities have you participated in since the ITEP, ANTHC training?

Progress on Tribal climate adaptation planning among trainees (n=20)

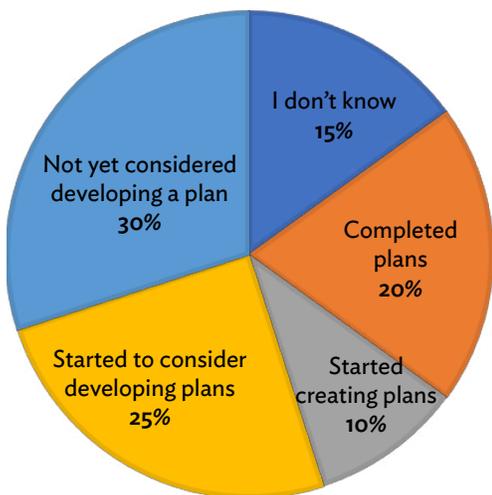


Figure 2: Status of tribal climate adaptation planning activities. Survey Question: Which statement best represents the progress of your tribes climate adaptation planning?

How climate change is getting addressed in tribal planning documents. Climate change is being incorporated into several plans (Figure 3), though EPA Tribal Environmental Plans are the documents most often used (n=11; 58%).

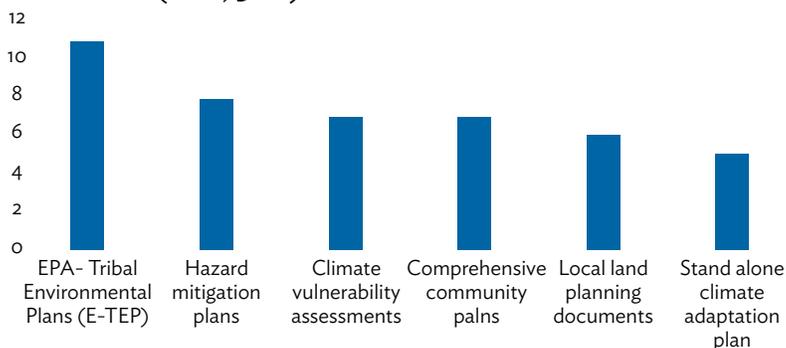


Figure 3: How climate is addressed in tribal planning documents. Survey Question: Is your tribe addressing climate adaptation in the following planning documents?

Planning across multiple boundaries and jurisdictions. Several agencies and organizations were believed to be important in supporting tribal climate adaptation planning (Table 1). Support from local tribal leadership, the community, and Tribal service organizations were believed to be among the most important elements.

Table 1: Relative importance of elements in climate adaptation planning (%). n= 17.

	Extremely Important	Very Important	Somewhat Important	Slightly Important	Not Important	I don't Know
Community support	47	35	12	0	0	6
Local tribal leadership	50	44	0	0	0	6
Regional Tribal non-profit	11	39	28	6	6	11
Regional ANCSA Corporation	11	28	28	6	11	17
State of Alaska*	17	44	17	0	11	11
Federal Government	28	50	11	0	0	11
Tribal service organizations (ITEP, ANTHC, AK Inst. for Justice)	47	41	6	0	0	6
Universities and Scientists	29	41	24	0	0	6

Table 1: Relative importance of elements in tribal climate adaptation planning. Survey question: Whether or not your tribe has included climate change adaptation into planning, how important is support for planning from the following groups? *Survey questions about the State of Alaska did not specify the agency nor department.

Respondents believed they had relatively higher levels of support for climate adaptation planning from local tribal leadership and the community than from their Regional Tribal non-profits and Regional ANCSA Corporation (Table 2).

Table 2: Level of support for tribal climate adaptation planning in your village (%). n=17.

	Full Support	Moderate Support	A Little Support	No Support	I don't Know
Community support	41	6	24	12	18
Local tribal leadership	47	12	6	18	18
Regional Tribal non-profit	12	18	18	24	29
Regional ANCSA Corporation	12	12	12	35	29

Table 2: Level of support for tribal climate adaptation planning across different groups. Survey Question: To what extent do you have support from the following groups for tribal climate adaptation planning in your village?

There were differences in the relative importance of and believed support from other organizations and agencies to support local level climate adaptation planning. The percentages provided in the bullets below combine multiple columns in Tables 1 and 2 (above). Of the participants who believed:

- **community support** was very or extremely important, 29% believed they didn't have their full or moderate support.
- support from local **tribal leadership** was very or extremely important, 24% believed they didn't have their full or moderate support
- support from **Regional Tribal non-profits** was very or extremely important, 24% believed they didn't their have full or moderate support.
- support from **Regional ANCSA Corporation** was very or extremely important, 18% believed they didn't their have full or moderate support.

The above differences between the believed importance of (Table 1) and level of support from (Table 2) the community, tribal leadership, Regional Tribal non-profits, and Regional ANCSA Corporations may be a barrier to climate adaptation.

Support desired for climate adaptation planning:

- **Regional Tribal non-profits:** regional trainings, hiring an individual to compare challenges across the region and document changes, providing climate data, and bringing trainings to the community.
- **Regional ANSCA Corporations:** land management, funds, support a coordinated approach to compare challenges across the villages in the region and address challenges, keeping villages informed with ongoing communication, and provide trainings with western professionals and local communities.
- ***State of Alaska:** funding (implementation, technical support, planning), more proactive and visiting the villages, provide climate data, do not interfere with local planning processes (n=1), and provide opportunities to integrate local plans into regional planning efforts.

**Survey questions about the State of Alaska did not specify which Department nor Division.*

Western Science in tribal climate adaptation planning

- Climate science information is not believed to be detailed enough for planning. Nearly a third of participants didn't know if it was detailed enough.
- More detailed and locally-specific climate science information is desired for planning.
- Climate science information in reports and presentations is viewed as difficult to understand for some, but not all respondents.
- Climate science information for my community is difficult to find and access for some, but not all respondents.
- Respondents are split nearly evenly on the belief that more information is needed on what changes in climate mean for their communities.
- Some individuals view that there is too much uncertainty in future climate projections for the information to be helpful and others don't see this as a problem.
- Nearly all respondents believed that their communities wanted input on understanding and applying climate information and data.

Table 3: Perceptions of western science for tribal climate adaptation planning (%). (n=17).

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree	I don't Know
Climate science information available for my community is too broad & not detailed enough.	13	19	31	6	0	0	31
More detailed and locally-specific western climate science is needed.	25	38	13	0	0	6	19
Climate science information in reports and presentations is difficult to understand.	6	25	19	13	13	6	19
Climate science information for my community is difficult to find & access.	0	19	25	19	13	13	13
I need more information on what changes in climate means for community concerns.	25	25	19	13	0	13	6
There is too much uncertainty in future climate projections for information to be helpful.	6	19	13	19	19	6	19
My community wants input on understanding and applying the climate information & data.	38	19	6	6	6	0	25

Table 3: Perceptions of western science for climate adaptation planning. Survey Question: Please rate your level of agreement with the following statements regarding including western climate science into climate adaptation plans.

Weather, climate, and environmental-related data needs

- More environmental data on local ponds in the village area. Water testing done for a certain pond for subsistence pike fishing during winter ice fishing months
- Connect the TEK world with the scientific world
- How much permafrost is left under the old village site
- Permafrost melting, erosion (coastal and riverine), contaminated sites, ocean acidification
- Updated information as our weather, climate and environment are changing fast. Our younger generation needs to stand side by side and know what is happening and learn at an early age. They are the future generation who will live to see it all and be affected. They need to be actively involved... they need to have plans
- Weather changes and reasons why fish are getting puss. Community members are unsure if they are safe for consumption. River ice is getting more unpredictable as to when to get on the ice due to warmer temperatures in the fall
- I still need to learn and understand the vulnerability matrix
- The relationship of long-term weather patterns on subsistence such as fishing and berries

Resources desired to help access, use, or summarize climate information better

- GIS Story Maps to describe the impacts of climate change on the environment
- Studies on remaining permafrost
- Document which areas on map that don't freeze till late into winter
- Information on healthy fish and unhealthy fish comparisons that would be helpful to put into our plan. And explanations of why we are finding white puss in more salmon now
- Climate change education materials for the community
- Lack of adequate internet access, not lack of information, is a barrier for rural Alaska Native communities in accessing relevant information
- In-depth training on the vulnerability matrix, it's hard to understand and put into a plan

Additional training or resources desired to help with tribal climate adaptation planning

- GIS, acquire drone to document areas that don't freeze right away
- We try to get educated more about climate change and get updates on the LEO network
- Reports, data collection, and documentation with images are needed. Take every opportunity to engage as we adapt with each change we face
- A similar training at ATCEM or AFE [to receive hands on training with experts] would help with writing plans, where we have scientists, etc., on hand. It is difficult to get western science input when we do not have them in our Village
- Maybe a refresher training
- A working group of people who are working on these plans that meet regularly so we could learn from each other
- I personally need more training on the plan itself and developing one
- More resources on how to take advantage of implementation strategies, funding and efforts locally and nationally
- I would like to see more assistance with implementation aspects, resources etc
- We need someone who will assist us in writing the plan that has great writing skills. Getting it written down after knowledge gained is difficult

- Today we have technology, we need to attend and eat up the info and pass it on to our communities. Be updated at all times. We need funds to travel and lodge, especially from the rural areas we come from in our great state

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Appendix A: ANTHC & ITEP Tribal Climate Adaptation Planning Trainings Photos



Figure 4: Participants discuss community concerns and vulnerabilities related to changing weather, climate, and environmental conditions (August 15-17, 2017).



Figure 5: Participants for an ANTHC and ITEP sponsored climate adaptation planning training (February 21-23, 2017).