



## RISING VOICES

### **Adaptation to Climate Change and Variability: Bringing Together Science and Indigenous Ways of Knowing to Create Positive Solutions**

“I am a descendent of many nations and I am learning to balance those perspectives. The organization and language I am rewarded from nature includes the things I hear, the things I see, the things I observe, the relationships of the buffalo and the bird, the mosquito and the blood, the fish and the water...we survive into the future because in the present we recognized the voice of our past and we learned, which allowed the opportunity for the future to vote. We are strengthened. We adapt. Ultimately, we all do better in pursuit of this perfection in today's changing environment. Hau Mitaku Oyasini! (To all my Relations!)”  
– Cody Joel Gibson, July 2, 2014 (Rising Voices II Workshop participant)

Over seventy participants in *Rising Voices* convened for a second time at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado on June 30-July 2, 2014 to discuss what the science, information, support and research needs are of Indigenous communities to facilitate respectful and appropriate adaptation solutions to climate change and variability. *Rising Voices* is a community of engaged Indigenous leaders, Indigenous and non-Indigenous environmental experts, students, and scientific professionals across the United States, including representatives from tribal, local, state, and federal resource management agencies, academia, tribal colleges, and research organizations.

Participants came together from across the nation – including Hawai'i and Pacific Islands, Alaska, Northwest, Southwest, the Plains, Midwest, Gulf states, and Northeast – for a rich and honest discussion regarding the complex climate change challenges facing Indigenous peoples, current adaptation and mitigation strategies, protection of Indigenous knowledge, sustainable Indigenous practices, and political and institutional barriers. Many of the Indigenous communities represented at *Rising Voices* are already contending with a changing climate, including displacement of Native Alaskan villages and Native Gulf Coast communities due to rising sea levels, loss of sea ice, and/or extreme hurricane activity. Additionally, severe droughts are impacting many tribes, including tribes in the Southwest and the Great Plains, which are resulting in water scarcity for domestic, agricultural, and livestock use. Climate change impacts on Indigenous peoples are particularly significant, disruptive, and deeply felt in that they affect not only the environment but also traditional, cultural, and spiritual livelihoods, practices, and beliefs. Moreover, many of the challenges and threats to indigenous lifeways and territories are a direct and indirect result of the world's desperate expansion of the industrial extraction and combustion of fossil fuels.

Based on the key messages highlighted in the third U.S. National Climate Assessment's "Indigenous Peoples, Land, and Resources" chapter, the conversations were focused on adapting to the following

risks: changing relationship with traditional plants and animal relatives; water quality and quantity; declining sea ice; health and livelihood hazards; and forced relocation. The discussions emphasized trust, respect, and recognition of responsibilities, especially the need to build a process based on relationships, improve relationships between agencies and communities, and create place-based solutions that includes space for local dialogue on input. Together, participants engaged in a conversation that contributes action-oriented solutions to the occurring physical and social regime changes and allows for long-term capacity building and increased resilience.

Based on the workshop discussions, participants submitted a list of recommendations to the *Presidential State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience*:

**Near-term actions:**

- **Migration: Convene a Climate Migration Task Force.** A Federal Task Force on Climate Migration would address the identified need to establish a legal mechanism, institutional framework, and financial support to directly support marginalized communities (Indigenous and non-Indigenous) who are facing displacement due to climate change impacts and who desire to migrate safely and with dignity. Because many Indigenous communities are urgently threatened with displacement, we strongly recommend that this be considered as a **near-term action**.
- **Youth and Veterans: Create a Climate Change Corps to enhance capacity building of youth leaders and returning Veterans.** The capacity of our youth needs to be enhanced through mentorships, scholarships, and internships with local federal agency affiliate offices (for example, in the County Extension offices with the USDA; in tribal Housing Authorities with HUD; in the National Renewable Energy Laboratories with the DOE, in restoring National Parks with the DOI, AmeriCorps, Conservation Corps, etc.). The Climate Change Corps, supporting both community youth and returning Veterans, could ensure the persistence and implementation of such capacity to strengthen resilience amongst Indigenous and non-Indigenous communities across the country for the **near- and long-term**.

**Long-term actions:**

- **National Climate Assessment: Establish a permanent and formalized structure for Indigenous participation in the U.S. National Climate Assessment.** Determine a mechanism for continued and expanded Indigenous engagement and support for long-term collaborative partnerships that sustain assessment activities, including respectful science support and data collection in collaboration *with*, not *on* or *for*, Indigenous communities. Important Indigenous led literatures and guidelines documents already exist and can be used for advising the Task Force on this recommendation.
- **Water rights: Establish an institutional framework to ensure support for tribes to define and utilize their water rights.** Tribes need legal, financial, engineering, and scientific support in water rights adjudication, litigation, and settlement, such as financial support to fund infrastructure and engineering and scientific support to adequately quantify available surface and ground water, water use, water use projections, storage/transport options, and infrastructure development. Tribal governments need to participate in timely water settlement deliberations for all uses. An independent review process should be established to provide information on how settlement discussions are progressing and ensure that the kind of support required to facilitate agreement is provided.
- **Collaboration to Address Climate Change Impacts on Water: Establish basin-level regional processes for federal, state, local, and tribal governments to develop and implement cohesive**

**strategies for addressing impacts of climate change on water quality and quantity.** Climate change impacts on surface and ground water will profoundly affect human health, public safety, economies, ecological functions, and cultures. Collaboration is needed among a wide variety of tribal, federal, state, regional, and local entities with jurisdiction over water to manage surface and groundwater conjunctively and in an integrated manner and to contend with upstream and downstream impacts of climate change on water.

- ***Traditional Ecological Knowledge (TEK):*** To the extent agreed by Indigenous knowledge holders, map the TEKs, places, resource uses, and histories of coastal and other (e.g., drought afflicted) Indigenous communities as a resource guide for climate change impact and adaptation efforts, especially cross-community collaborations. Indigenous people have a rich knowledge of their environment that is important for filling in lack of data and for developing adaptation and sustainable strategies.
- ***Indigenous Perspectives:*** Support inclusion of Indigenous perspectives, insights, and knowledge in federally-appointed and/or agency-led assemblies concerned with natural resources, environmental management, and policy, such as the National Ocean Council's efforts to improve the health of our oceans, coasts, and Great Lakes. The free, prior, and informed consent (FPIC) of Indigenous peoples should be respected when these assemblies are formed and engagement with Indigenous peoples be continued.
- ***Education:*** Support and enhance relations between education institutions and agencies to foster educational content and activities that address climate change, variability, adaptation, and mitigation in all levels of academic education (i.e., K-12, colleges, and universities), as well as for general public education. Youth are the future and need to be involved in learning about climate change and addressing impacts and solutions.
- ***Collaborative Research:*** Have Indigenous communities most impacted by a changing climate be co-investigators in climate change research. This includes helping to set a U.S. research agenda that addresses the unique priorities, contexts, and experiences of Indigenous communities and invites community members' participation as partners. Resources need to be allocated and managed by Indigenous community leaders to enable that participation, including resources to support training, workforce development, data gathering and management, the purchase of appropriate equipment, and the incorporation of research results into community planning.
- ***Conference and Partnerships:*** Establish an annual event for Indigenous communities to come together with researchers working on climate change. The *Rising Voices* I and II workshops provide a model that could be applied for such an annual event. These events could be used as "mileposts" to collaborate and report on the recommendations and activities listed above.

To learn more or become part of the Rising Voices movement, please contact Heather Lazrus ([hlazrus@ucar.edu](mailto:hlazrus@ucar.edu)), Julie Maldonado ([jkmaldo@gmail.com](mailto:jkmaldo@gmail.com)), Bob Gough ([gough.bob@gmail.com](mailto:gough.bob@gmail.com)), or Jeffrey Morisette ([morisettej@usgs.gov](mailto:morisettej@usgs.gov)).

**Rising Voices website:** <http://www.mmm.ucar.edu/projects/RisingVoices>

