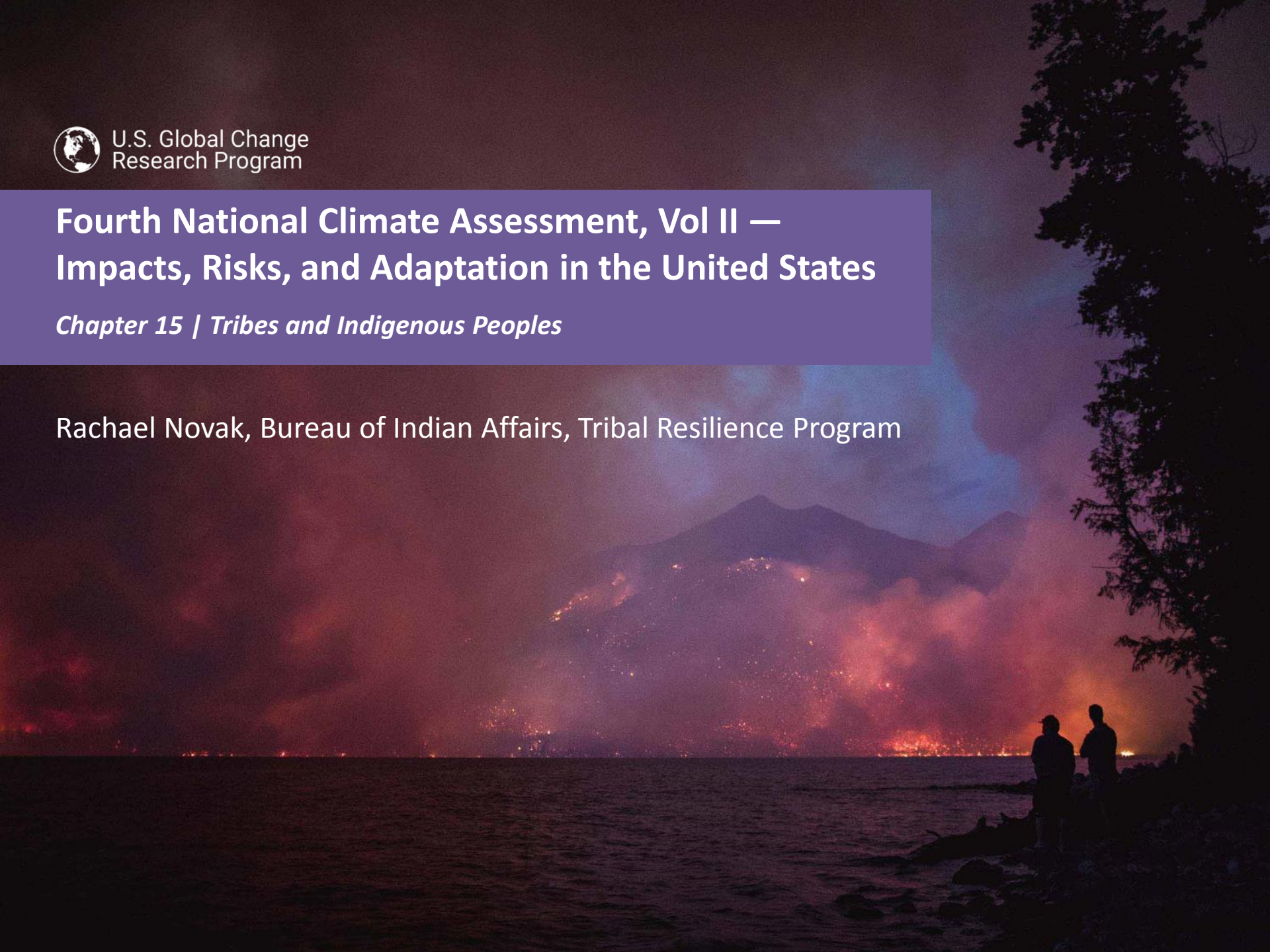


Fourth National Climate Assessment, Vol II — Impacts, Risks, and Adaptation in the United States

Chapter 15 | Tribes and Indigenous Peoples

Rachael Novak, Bureau of Indian Affairs, Tribal Resilience Program



15 State of the Sector

Setting the stage

- Diverse and distinct political and cultural groups and populations.
- May be affected by climate change in ways that are similar to others, but can also be affected uniquely and disproportionately.
- Histories and shared experience engender distinct knowledge about climate change impacts and adaptation strategies.
- Traditional knowledge systems can play a role in advancing understanding of climate change and in developing more comprehensive climate adaptation strategies.

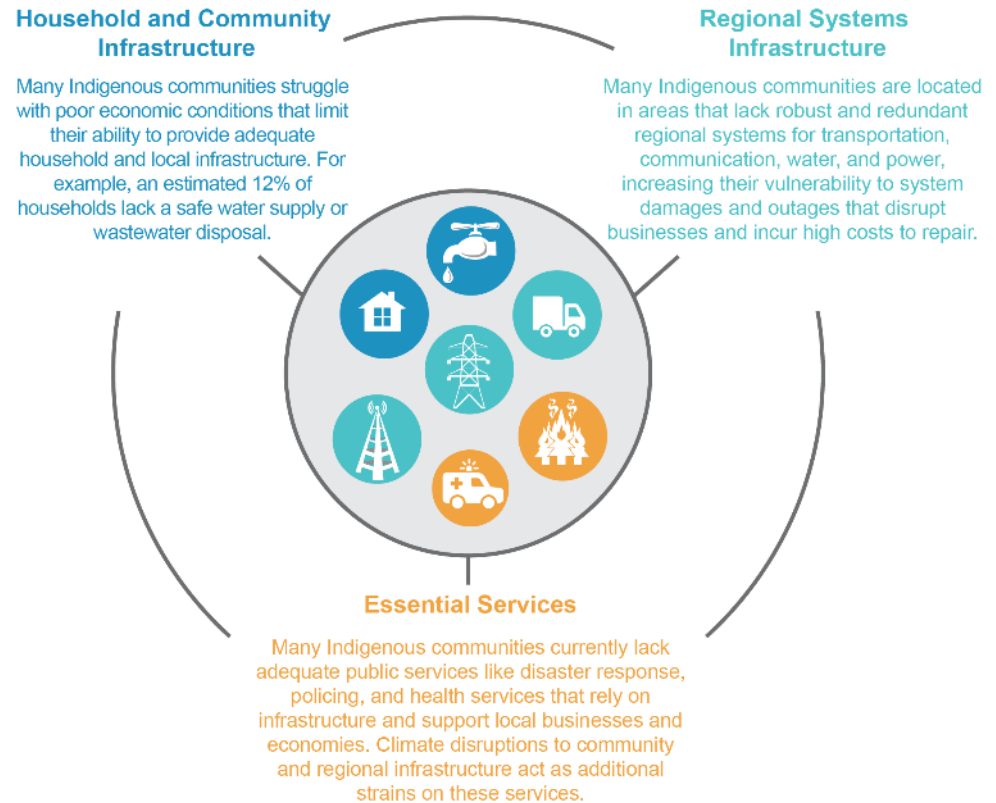
15 Key Message #1

Indigenous Livelihoods and Economies at Risk

Climate change threatens Indigenous peoples' livelihoods and economies, including agriculture, hunting and gathering, fishing, forestry, energy, recreation, and tourism enterprises. Indigenous peoples' economies rely on, but face institutional barriers to, their self-determined management of water, land, other natural resources, and infrastructure that will be impacted increasingly by changes in climate.

Fig. 15.2: Infrastructure and Economic Vulnerabilities

Communities' economic potential and livelihoods rely on infrastructure and the essential services it delivers, and many tribes and Indigenous communities already face acute infrastructure challenges that make them highly vulnerable to climate impacts.²² Indigenous peoples along the coasts and in the islands, the Southwest, and Alaska have experienced the most extensive infrastructure-related impacts thus far (Ch. 8: Coastal; Ch. 20: U.S. Caribbean; Ch. 25: Southwest; Ch. 26: Alaska; Ch. 27: Hawai'i & Pacific Islands). *Source: USGCRP.*



15 Key Message #2

Physical, Mental, and Indigenous Values-Based Health at Risk

Indigenous health is based on interconnected social and ecological systems that are being disrupted by a changing climate. As these changes continue, the health of individuals and communities will be uniquely challenged by climate impacts to lands, waters, foods, and other plant and animal species. These impacts threaten sites, practices, and relationships with cultural, spiritual, or ceremonial importance that are foundational to Indigenous peoples' cultural heritages, identities, and physical and mental health.

15 Key Message #3

Adaptation, Disaster Management, Displacement, and Community-Led Relocations

Many Indigenous peoples have been proactively identifying and addressing climate impacts; however, institutional barriers exist in the United States that severely limit their adaptive capacities. These barriers include limited access to traditional territory and resources and the limitations of existing policies, programs, and funding mechanisms in accounting for the unique conditions of Indigenous communities. Successful adaptation in Indigenous contexts relies on use of Indigenous knowledge, resilient and robust social systems and protocols, a commitment to principles of self-determination, and proactive efforts on the part of federal, state, and local governments to alleviate institutional barriers.



Fig. 15.3: Isle de Jean Charles, LA, and Kivalina, AK

These photos show aerial views of (left) Isle de Jean Charles, Louisiana, and (right) Kivalina, Alaska. As projections of sea level rise and coastal inundation are realized, many impacted communities are confronting political, ecological, and existential questions about how to adapt. Photo credits: (left) *Ronald Stine*; (right) *ShoreZone* ([CC BY 3.0](#)).



Fig. 15.4: Community Planning

Some tribal communities at risk of displacement from climate change are actively planning whole-community relocation strategies. As part of the resettlement of the tribal community of Isle de Jean Charles, residents are working with the Lowlander Center (a local, nongovernmental organization), the State of Louisiana, and others to finalize a plan that reflects the physical, sociocultural, and economic needs of the community. *Photo credit: Louisiana Office of Community Development.*

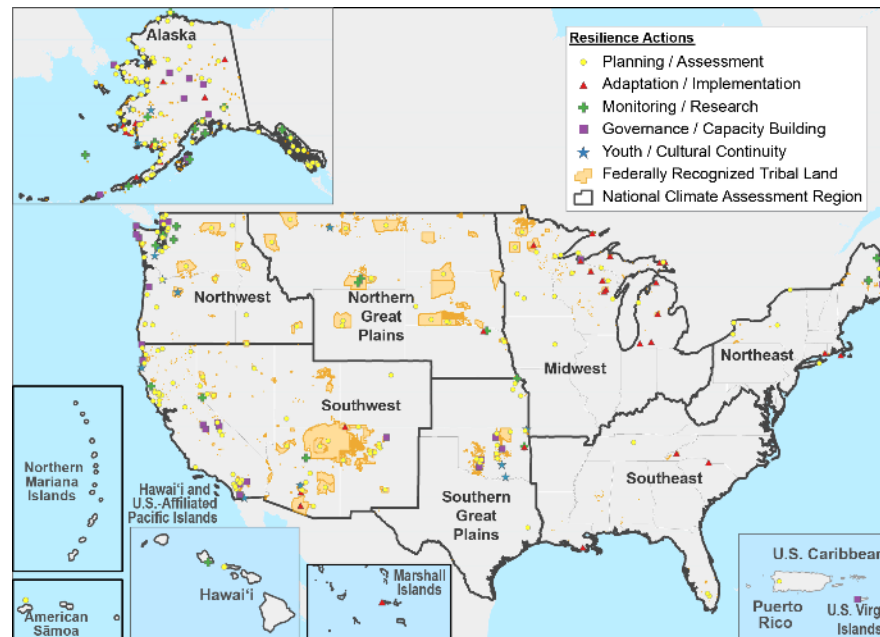


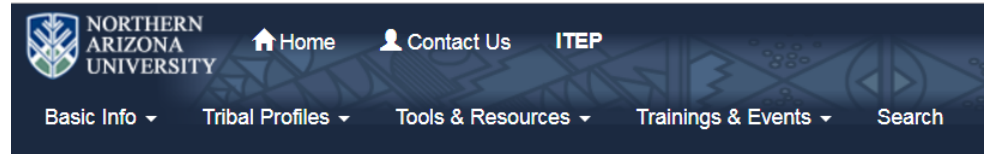
Fig. 15.1: Indigenous Peoples' Climate Initiatives and Plans

Many Indigenous peoples are taking steps to adapt to climate change impacts. Search the online version of this map by activity type, region, and sector to find more information and links to each project: <https://biamaps.doi.gov/nca/>. To provide feedback and add new projects for inclusion in the database, see: <https://www.bia.gov/bia/ots/tribal-resilience-program/nca/> (currently link is down, please email: resilience.news@bia.gov if the previous link doesn't work). Thus far, tribal entities in the Northwest have the highest concentration of climate activities (Ch. 24: Northwest). For other case studies of tribal adaptation activities, see both the [Institute for Tribal Environmental Professionals' Tribal Profiles](#),¹ and Tribal Case Studies within the [U.S. Climate Resilience Toolkit](#).^{2,3} Source: Bureau of Indian Affairs.

Indigenous Peoples Terminology for NCA4

The authors contributing to NCA4 content relating to Tribes and Indigenous Peoples and developed a glossary of terms to maintain consistency across the NCA4 and explain usage. Not definitive or exhaustive

Find more on the ITEP website:
<http://www7.nau.edu/itep/main/tcc/Mindmap/Reports>



Climate Change Reports and Case Studies

- [Indigenous Peoples Terminology for NCA4](#)

- Indigenous peoples
- Subsistence
- Indigenous Knowledges
- Frontline Communities
- Indian
- Sovereignty
- Tribal Lands
- Ceded Territories
- Self-determination
- Treaty Rights
- Colonialism
- Settler Colonialism
- Federal Indian Trust Responsibility
- Historical Trauma

15 Chapter Author Team

Federal Coordinating Lead Author

Rachael Novak, *U.S. Department of the Interior, Bureau of Indian Affairs*

Chapter Lead

Lesley Jantarasami, *Oregon Department of Energy*

Chapter Authors

Roberto Delgado, *National Institutes of Health*

Elizabeth Marino, *Oregon State University—Cascades*

Shannon McNeeley, *North Central Climate Adaptation Science Center and*

Colorado State University

Chris Narducci, *U.S. Department of Housing and Urban Development*

Julie Raymond-Yakoubian, *Kawerak, Inc.*

Loretta Singletary, *University of Nevada, Reno*

Kyle Powys Whyte, *Michigan State University*

Review Editor

Karen Cozzetto, *Northern Arizona University*

15 Acknowledgments

USGCRP Coordinators

Susan Aragon-Long, *Senior Scientist*

Allyza Lustig, *Program Coordinator*

Recommended chapter citation

Jantarasami, L.C., R. Novak, R. Delgado, E. Marino, S. McNeeley, C. Narducci, J. Raymond-Yakoubian, L. Singletary, and K. Powys Whyte, 2018: Tribes and Indigenous Peoples. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA. doi: [10.7930/NCA4.2018.CH15](https://doi.org/10.7930/NCA4.2018.CH15)

Read the full chapter

<https://nca2018.globalchange.gov/chapter/tribes>

nca2018.globalchange.gov