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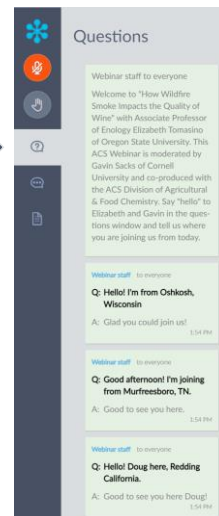
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Type them into the questions box!



"Why am I muted?"

Don't worry. Everyone is muted except the Presenter and the Host. Thank you and enjoy the show.



1

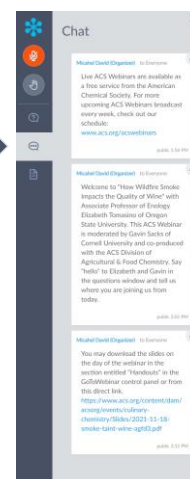
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Announcements and hyperlinks from our team



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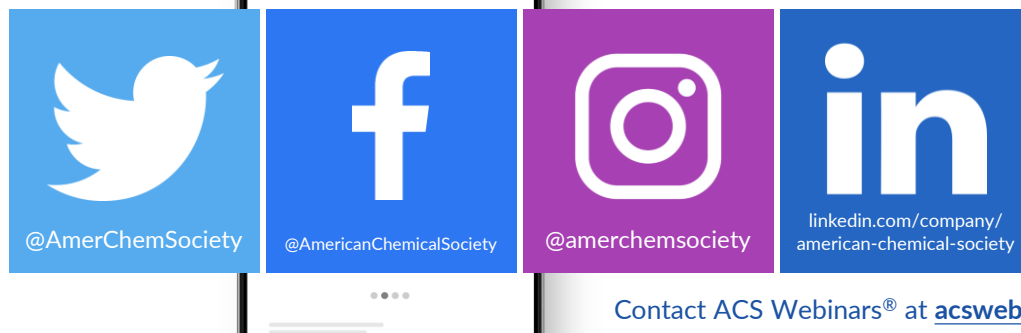


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A science podcast by the American Chemical Society about things small in size but BIG in impact.



Sam Jones, PhD
Science Writer & Exec Producer



Deboki Chakravarti, PhD
Science Writer & Co-Host

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A Career Planning Tool For Chemical Scientists



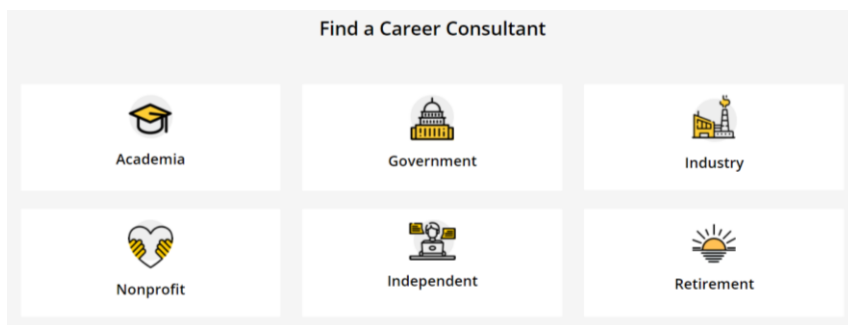
ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. **ChemIDP** tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

<https://chemidp.acs.org>

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Career Consultant Directory

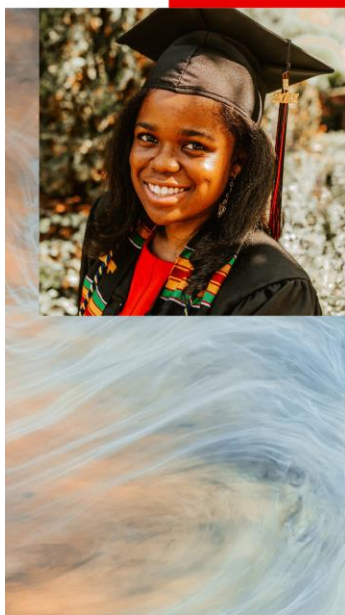


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- Consultants provide personalized career advice to ACS Members.
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ACS Scholar Adunoluwa Obisesan

BS, Massachusetts Institute of Technology, June 2021
(Chemical-biological Engineering, Computer Science & Molecular Biology)

“The ACS Scholars Program provided me with monetary support as well as a valuable network of peers and mentors who have transformed my life and will help me in my future endeavors. The program enabled me to achieve more than I could have ever dreamed! Thank you so much!”

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The Office of Diversity, Equity, Inclusion & Respect (DEIR) is the central hub at the American Chemical Society that coordinates, supports, and guides all efforts by staff, members, and governance toward Strategic Goal 5, “Embrace and Advance Inclusion in Chemistry.” The Office of DEIR at ACS is committed to empowering everyone, irrespective of lived experience and intersectionality of identities, to fully participate in the chemistry enterprise. The Office of DEIR welcomes comments, suggestions, and questions around issues of diversity, equity, inclusion, and respect from members at any time. Please do not hesitate to reach out to the Office through this form.

Please do not hesitate to reach out to the Office of DEIR at diversity@acs.org

<https://fs7.formsite.com/acsdiversity/ACSMemberFeedback/index.html>



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ACS Career Resources



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<p>ACS Professional Education Charter and training opportunities from leading experts to help you learn and advance your career.</p>	<p>ACS Leadership Development A suite of tracks, live and online courses for growing your leadership skills in today's global economy.</p>	<p>ACS Institute An online learning center that offers a virtual collection of learning and training resources taught by leading experts.</p>
<p>Virtual Classrooms Brought to you by ACS Career Pathways™, live online sessions offer useful expertise to help you reach your next goals.</p>	<p>ACS Webinars Hundreds of webinars presented by subject matter experts in the chemical enterprise.</p>	<p>Career Events Free webinars and networking opportunities for mid-career chemistry professionals.</p>
<p>ACS 4th Campaign Free events where students can meet with top researchers, hear your story from ACS editors and get career tips.</p>	<p>Facilities for Faculty Workshop An annual meeting for professionals focused on research in faculty positions in the chemical enterprise.</p>	<p>Career Kick-Starters Workshop A one-day career development workshop for graduate students and postdoctoral fellows.</p>

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<p>ACS Career Pathways™ Helping building your career through design careers in industry, higher education, government and beyond for yourself.</p>	<p>Career Consultants Personalized consulting services to help you make strategic career decisions and find success in your job search.</p>	<p>ChemIDP™ ACS's Personal Development Plan tool for graduate students and postdoctoral fellows.</p>	<p>Résumé Review Experts help you evaluate & revamp your résumé to help you stand out from the crowd and get your dream job.</p>
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Register for a 2022 Virtual Office Hour

7 APR	How to Write a Resume ○ April 7, 2022	5 MAY	Careers in Government ○ May 5, 2022
2 JUN	Entrepreneurship ○ June 2, 2022	7 JUL	Networking ○ July 7, 2022
4 AUG	Is Grad School Right for Me? ○ August 4, 2022	1 SEP	Leadership and Soft Skills Development - What You Need to Advance in Your Career ○ September 1, 2022

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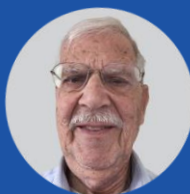
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Adapting to Climate Change: Insights from Indigenous Peoples



DOROTHY PHILLIPS, PhD

Director-at-Large, ACS Board
of Directors



OLIVER MOLES, PhD

Project Team Leader,
American Association for the
Advancement of Science



NIKKI COOLEY, MFstry

Co-Manager, Tribes and
Climate Change, The Institute
for Tribal Environmental
Professionals



MARY SABUDA, PhD

Science Policy Fellow,
Government Affairs, Office of
the Secretary and General
Counsel, ACS

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Science and Human Rights Coalition

- The AAAS Science and Human Rights Coalition is a network of organizations and individuals who work together to advance universal human rights through science and technology.
- Since 2009 the Coalition has been reaching across disciplines and building partnerships with the human rights community to show how science and technology can improve human rights for everyone.
- Today the Coalition actively works to promote education, outreach, and service by the STEM community in the name of human rights.

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Areas of Coalition Activity



Science and Human
Rights Coalition

- Protecting the welfare of scientists at home and abroad
- Developing tools for the science and technology communities
- Outreach to the human rights community
- Creating educational resources
- Advancing the right to benefit from science
- Addressing intersections of ethics and human rights
- Scientific, engineering and health associations and individuals in these fields are welcome to join us

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Webinars to Date



Science and Human
Rights Coalition

- **2021 Webinars – Scientific Collaborations with Human Rights Organizations and Issues**
 - **May 4:** Community Science – Local Knowledge and Scientific Tools Joining Forces to Document Urban Health Hazards.
 - **October 27:** Documenting Sexual Violence: Furthering Reporting and Prosecution.
 - **December 7:** Evolving Perspectives on Anthropology and Human Rights.
- **2020 Webinar – Scientific Collaborations with Human Rights Organizations and Issues**
 - **Nov. 19:** Equity Flattens the Curve: The Importance of Diverse Populations in Combating COVID-19.

www.aaas.org/coalition/projects/sciencecollabs

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Webinars to Date



Science and Human
Rights Coalition

- **2019 Webinars - Scientific Collaborations with Human Rights Organizations**
 - **March 7:** Data in Service to Humanitarian Relief Abroad.
 - **May 21:** Skills to Succeed: Approaches to Blending Science and Human Rights.
 - **July 17:** The “Science Factor” in Human Rights Litigation: Engineering a Legal Solution for a Threatened Historic Mexican Town.
 - **Oct. 17:** Measuring Change in Social Norms within Gender-Transformative Programing.
- **2018 Webinars - Innovations in Human Rights Program Evaluation**
 - **April 17:** Outcome Harvesting to Assess Efforts to Reduce Child, Early and Forced Marriages in India.
 - **May 15:** Humanitarian Responses to Restore the Well-being of Refugees in Ecuador.
 - **June 20:** Measuring Shifts in Power in Favor of Women.

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Webinars to Date



Science and Human
Rights Coalition

- **2017 Webinars - Evaluation 101 for Human Rights Organizations: How do we know if we are making a difference?**
 - **April 20:** Insights into how change comes about and how to measure it.
 - **May 20:** Designing Evaluation Studies.
 - **Nov. 2:** Participatory Methods to Answer Different Evaluation Questions.
 - **Dec. 7:** Scientific Partnerships for Human Rights Program Evaluations.

• All these webinars are archived at Scientific Collaborations with Human Rights Organizations within the AAAS Coalition website.

– www.aaas.org/coalition/projects/sciencecollabs

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Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

How familiar are you with climate change strategic plans and practices by indigenous peoples?

- I am completely unaware and would like to learn more
- I am somewhat familiar and have read about some of these tribal plans and practices
- I am familiar with the tribes as well as some of these plans and practices
- I would consider myself an expert and perform these plans and practices with tribes

* If your answer differs greatly from the choices above **tell us in the chat!**

21

21



NIKKI COOLEY, DINÉ

- Kinyaa'aanii Diné'é > Towering House People
- Lók'aa' Diné'é > Reed People
- Tó ahéedliinii Diné'é > Water that Flows Together People
- Tl'izí łaní Diné'é > Manygoats People
- BS & MS in Forestry & Traditional Knowledges
- Shepherd, gardener, parent, daughter, protector, recovering river guide

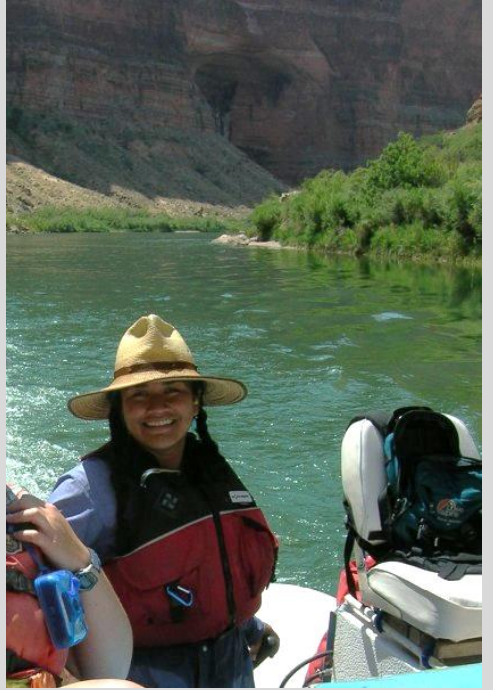
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Welcome to the ITEP Tribes & Climate Change Program



- [2021 STACC Report Now Available](#)
- [Webinar Recording](#)



- [Tribal Profile Climate Change 202: Tribal Hazard Mitigation Planning Cohort](#)



- June 1, 2021
- [Inhabitants Panel Discussion Recording](#)
- [Film Trailer](#)



- [Find out more information.](#)



- [Indigenous Peoples Terminology for the Fourth National Climate Assessment](#)



- [Stay Tuned For more information](#)



- [Arctic Rivers Project](#)

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What do we do?

TRAININGS

- CC101: Adaption Planning
- CC202: Advanced Adaptation
 - Planning Tribal Haz. Mitig. Planning

OUTREACH

- Conferences/Summits/Forums
- Webinars, Newsletters, Tribal Profiles
- National Tribal & Indigenous Climate Conference (NTICC)

RESEARCH & WORKING GROUPS

- Association of Fish & Wildlife Agencies
- EPA National Advisory Committee
- Southwest Fire Climate Adaptation Partnership
- National Climate Assessment

TECHNICAL ASSISTANCE

- Individual requests from Tribes, Media, etc.
- Tribal CC Adap. Toolkit
- Funding Announcements
- Adaptation Plans

CC ADVISORY GROUP

Tribal
Federal
Academic

INDIVIDUAL WORK

- Conference planning Arctic Rivers Project
- Swinomish Indian Tribal Community, Health Modules

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Climate Change Impacts



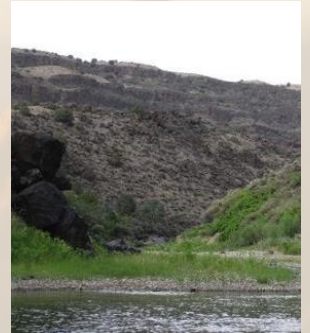
Storm surge, southern California. Photo credit: US Geological Survey



Dead ponderosa in Jemez Mountains of NM. Photo credit: Craig D. Allen/USGS



Salmon drying on a rack in Alaska. Photo credit: David Bezaire and Susi Havens - Bezaire



Rio Grande, NM. Taos Pueblo on right.

ENVIRONMENT

LANGUAGE

SONGS

CULTURE

MEDICINE

FOOD

TRADITIONS

PRAYERS

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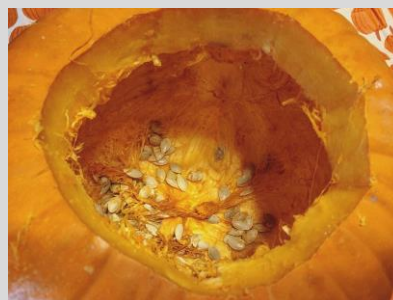
WAYS OF LIFE

LANGUAGE

PRACTICES



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Tó eí íiná
Water is Life

Nahásdzáán Nihimà
Mother Earth

Yádithit nihi táá
Father Sky

Naadlooshii nihi k'ei
Animals = Relatives

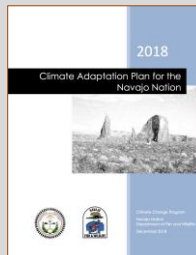
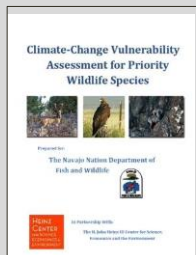
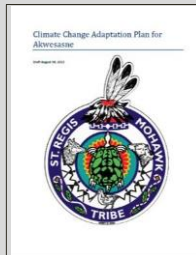
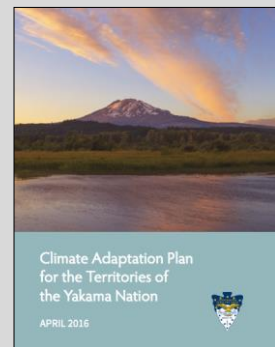
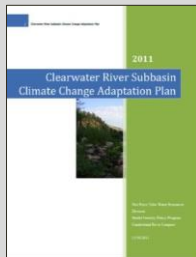
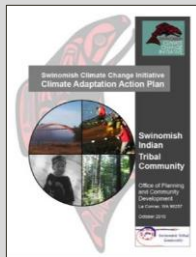
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WE HAVE ALWAYS ADAPTED, WE HAVE TO ADAPT EVEN FASTER.

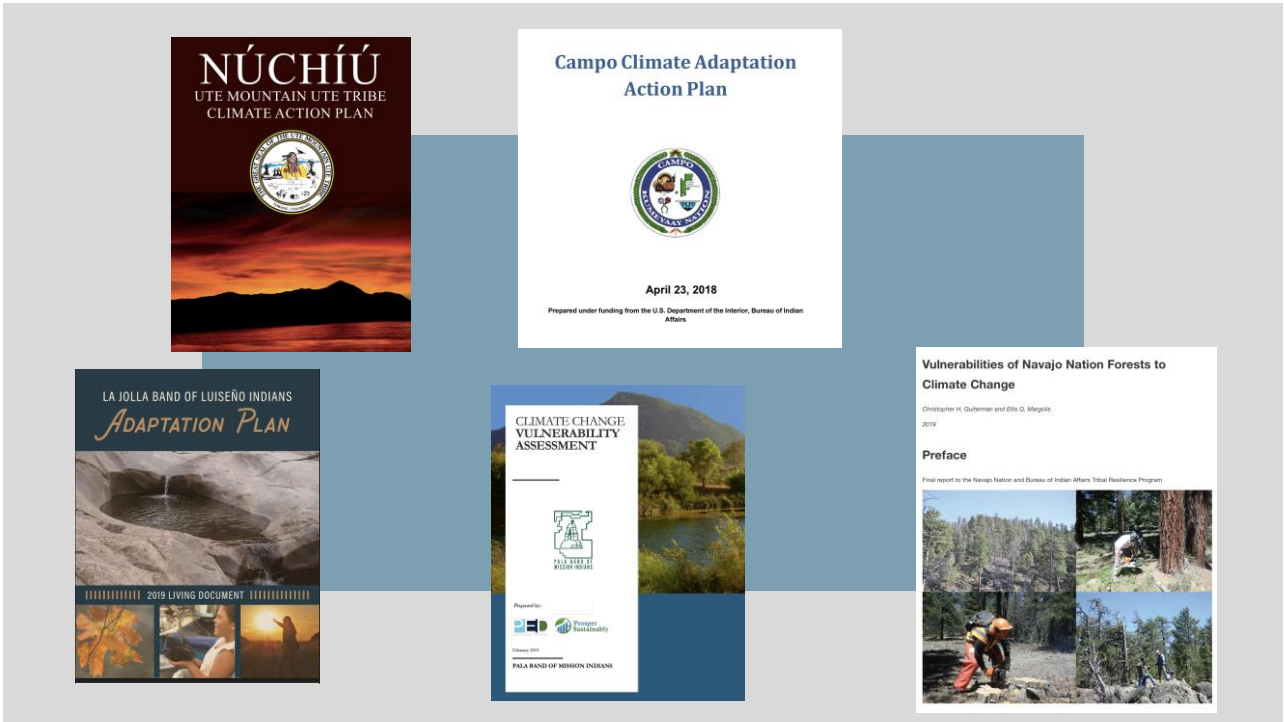
ELDER

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Tribal Adaptation Plans & Assessments




34





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2018

Climate Adaptation Plan for the Navajo Nation



Climate Change Program
Navajo Nation
Department of Fish and Wildlife
December 2018

Navajo Nation

- Water
- Feral Horses
- Communication
- Enforcement & Compliance
- Pollution, Air Quality & Illegal Dumping
- Grazing Management

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Swinomish Tribe

- 2007: passed resolution to create a climate initiative
- Indigenizing BRACE (building resilience against climate effects)
- E-learning module to educate people on health impacts
- 13 Moons First Foods and Resources curriculum



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Aroostook Band of Micmacs - Maine

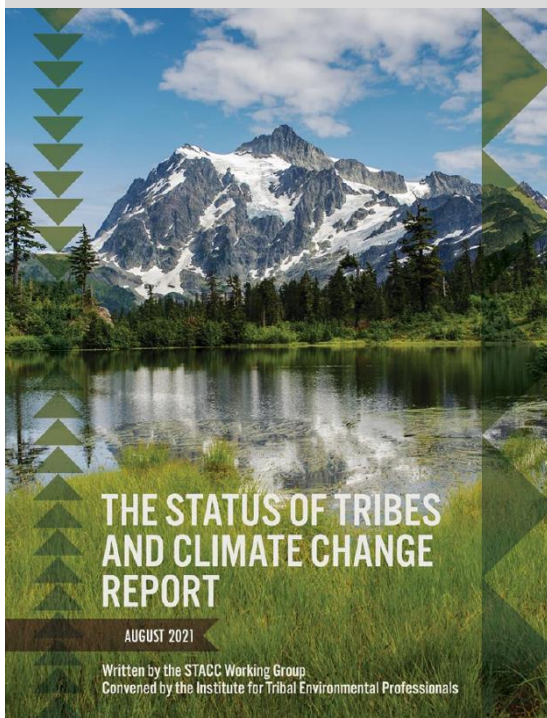


- Tribal Fish Hatchery
- Tribal Greenhouse & Gardens
- Food sovereignty
- Youth Engagement



Local students get a tour of the hatchery

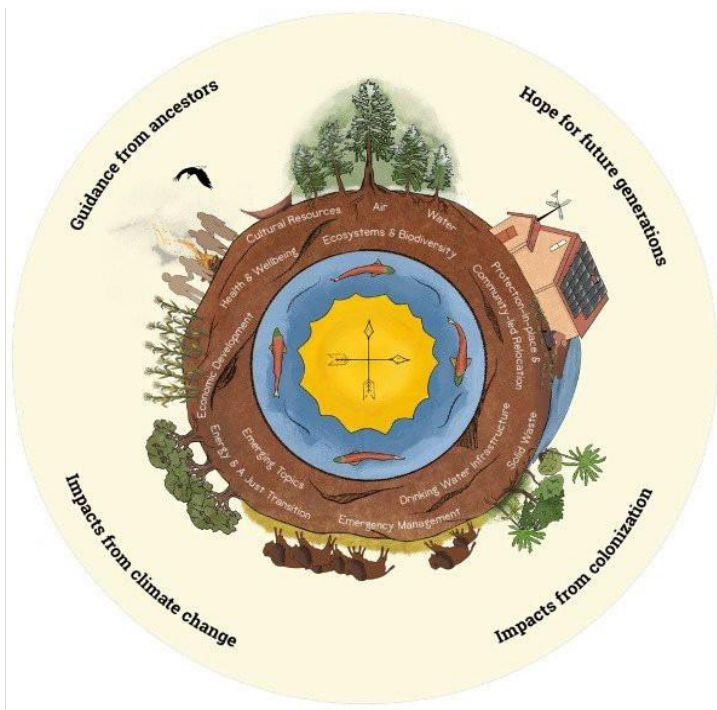
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• 2 Sections 12 Chapters

- 90 Authors
- 34 Narratives
- Specific To Indigenous Nations
- www.Nau.Edu/Stacc2021

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- Depict worldview of Tribal Nations/Indigenous communities
- Interconnectedness
 - chapter titles
- Significant species, symbols, regional considerations
- Outside, historical influences
- *Leads: Coral Avery & Molly Tankersley*

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Report Audience, Steering Committee, & Authors

- *Audience:* NCA authors, federal and state agencies and decision makers, NGOs, and Tribal managers/leaders/community members
- *Steering Committee:* over 25 members
- *Authors:* over 90, including 34 personal narrative authors

41



Photos courtesy of ITEP's STACC Report

Narratives



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Southeast Alaska Tribes Face Climate Change w/ Partnership

→ *Kari Lanphie*



- Aquatic toxins
- Harmful Algae Blooms (HABs)
- Impacting subsistence foods

- Toxins testing on shellfish
- Plankton collection
- Outreach
 - Social media
 - Listserv
 - Newsletters
- Southeast Alaska Tribal Ocean Research (SEATOR)



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Water Eastern Shawnee of Oklahoma *Debbie Dotson

"Eastern Shawnee of Oklahoma's Climate Change & Water Quality Challenges"

(page 98)

- Water quality
- Temperature changes
- Severe drought, recording flooding
- Severe tornado events
- Record decrease in water levels
- Blue algae & ground water well testing, monitoring
- Bacterial sampling events
- Staff training, community outreach, info. material

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Drinking Water Infrastructure

Chickasaw Nation & Choctaw Nation of Oklahoma

★ April Taylor

"Chickasaw Nation and Choctaw Nation of Oklahoma Leading the Way in Implementing Water Adaptation Projects" (page 142)

- Unpredictable precipitation events
 - ◆ Flooding, erosion, pollutants in runoff
- Increasing temperatures
- Water scarcity
- Water adaptation strategies
- Multi-jurisdictional partnerships
 - Identify alternative groundwater supplies
- Drought contingency plans

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Ecosystem & Biodiversity

Power to the People: Fire as Land Management

→ Elizabeth Azuz from the Yurok Tribe, Cultural Fire Management Council



Photo credit: culturalfire.org



Photo credit: Kiliij Yuyan

Elizabeth Azzuz of the Cultural Fire Management Council opens a fire-training exchange, or TRES, on Yurok lands in 2019. She holds angelica root and wormwood, which are used to light a first, ceremonial fire.

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Key Messages & Recommendations

Respect and uphold Tribal sovereignty & self-determination.

Tribal sovereignty and self-determination help to counteract historical trauma, disproportionate climate change impacts, and vulnerability, and are strong themes in the Recommendations across all chapters. The remedial dynamic of recognizing and respecting the pre-existing right of self-determination of Tribes should be acknowledged.

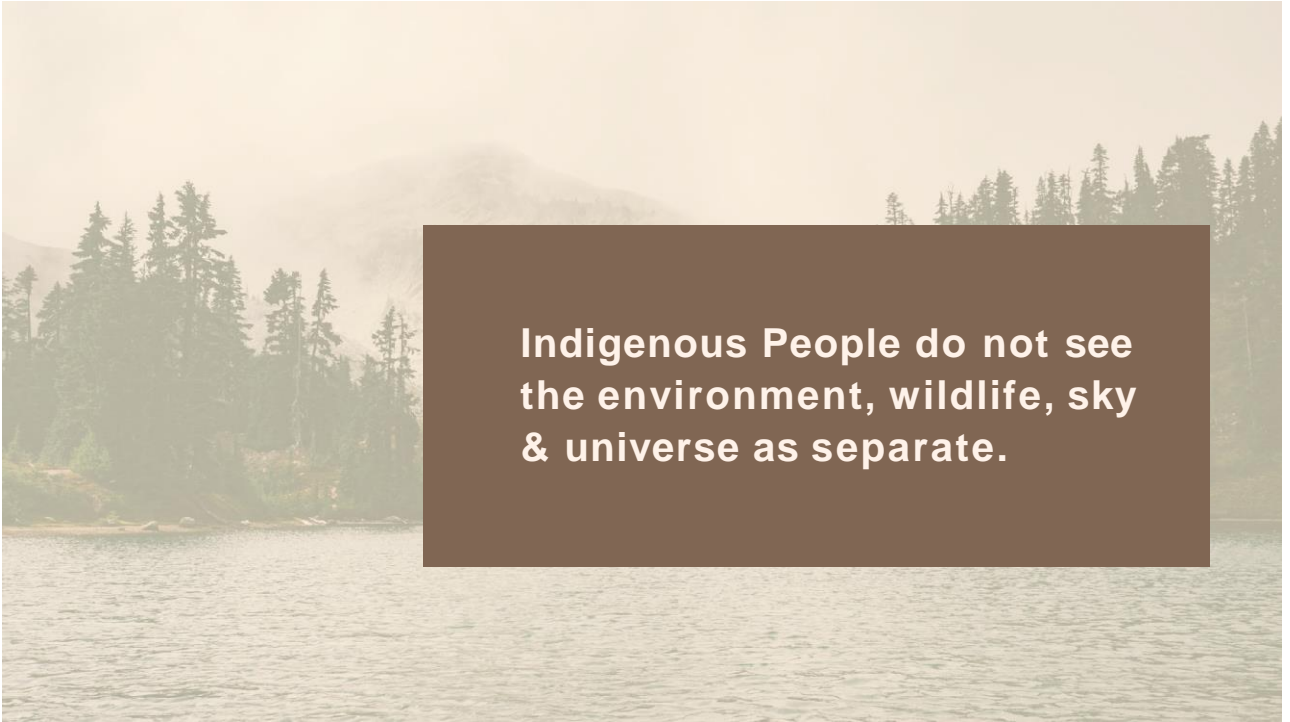
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Key Messages & Recommendations

Integrate holistic responses in line with Tribal values.

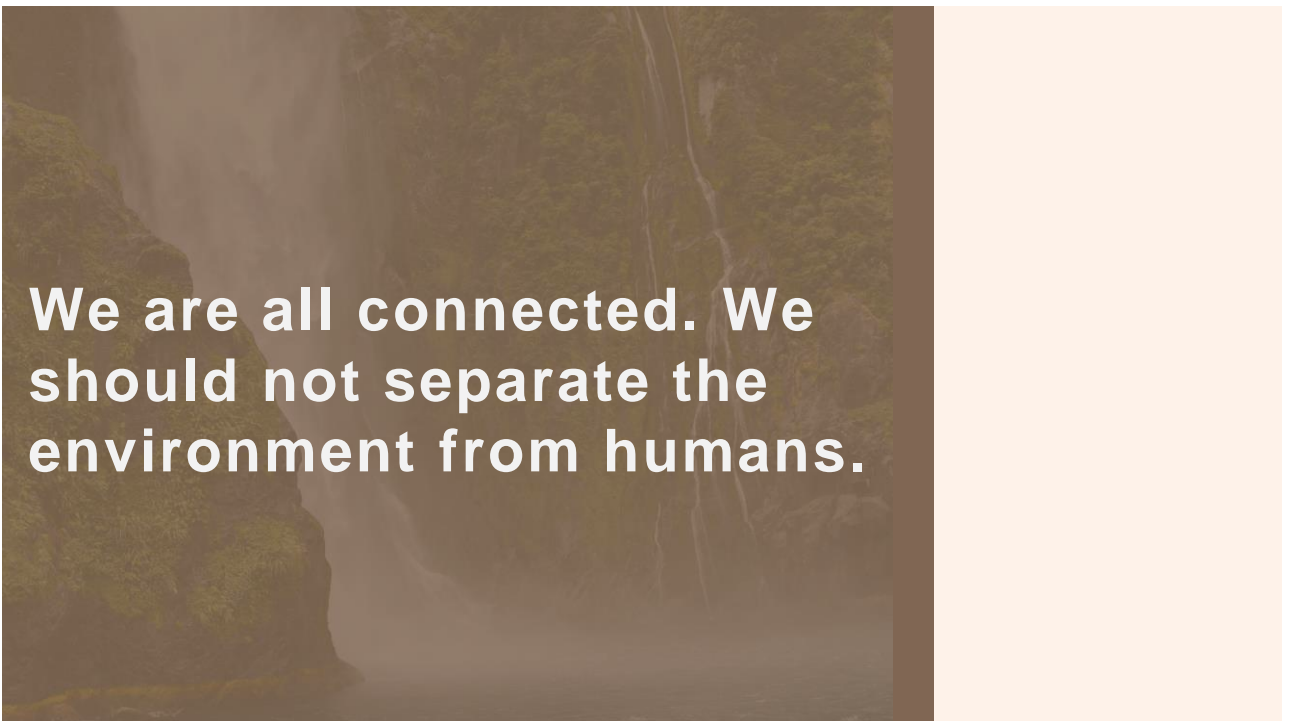
Tribal worldviews, experiences, and responses embody interconnectedness. Cascading impacts from, and holistic and interconnected responses to, climate change are addressed throughout the STACC Report.

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**Indigenous People do not see
the environment, wildlife, sky
& universe as separate.**

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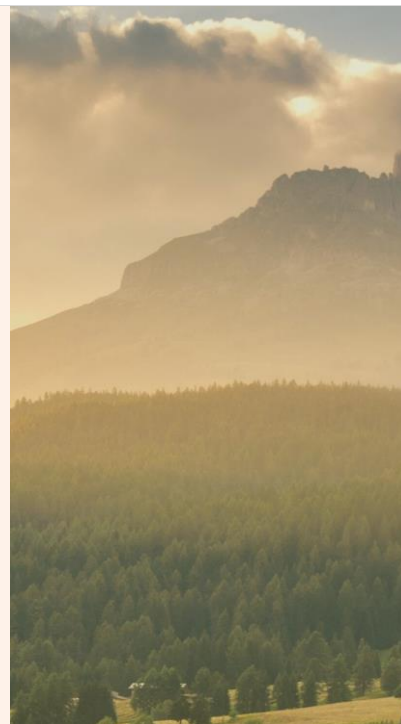
**We are all connected. We
should not separate the
environment from humans.**

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CONTACT

nikki.cooley@nau.edu

<http://www7.nau.edu/itep/main/tcc/>



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ACS Government Affairs



Public Policy

Legislative Advocacy

Federal Affairs

Member Engagement

"The American Chemical Society (ACS) acknowledges that climate change is real, presents serious risk for civil society and business, and that human activity is the primary cause."

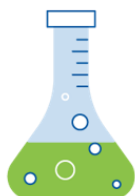
-- ACS Global Climate Change Position Statement

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- Free workshop released in 2020 – *Available now!*
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- Climate change is a complex and increasingly devastating problem that impacts everyone and everything on Earth.
- Scientists & engineers are uniquely situated to communicate the science of climate change and advocate for solutions.
- This workshop explores the science behind climate change, describes ways to talk about climate change with different audiences and provides actionable options for advocacy on climate change solutions.



Brief Outline



- The science of climate change
- Societal and environmental impacts
- Climate change mitigation and adaptation strategies & technologies
- Resilient voices of climate change
- ACS' climate change policy statement
- U.S. government and climate change; Global efforts
- Climate change communication strategies
- Advocacy alerts



ACS Climate Change Advocacy Workshop



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**THE LIVE Q&A IS
ABOUT TO BEGIN!**

Keep submitting your questions
in the questions window!

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Mike Russell Erik

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