Environmental Justice Webinar Series for Tribes and Indigenous Peoples

Advancing Traditional Knowledge in Federal Decision-Making

March 23, 2022

*Please note that this webinar will be recorded and posted on EPA's webpage for public access.



Panelists

- Natalie Solares, Pacific Region Technical Assistance Specialist, Intertribal Agriculture Council
- Demarus Tevuk (Inupiaq), Lead Researcher, Native Neighborhood Community Study;
 Research Contractor and Co-facilitator for Tribal Water Security Project Webinar Series
- Clarita Lefthand-Begay, Assistant Professor, Information School, Director of the Tribal
 Water Security Project, University of Washington
- Gretchen Goldman, Assistant Director for Environmental Science, Engineering, Policy, and Justice, White House Office of Science and Technology Policy
- Wenona Wilson, Senior Tribal Policy Advisor, Region 10, U.S. EPA
- Danny Gogal, Tribal and Indigenous Peoples Program Manager, Office of Environmental Justice, U.S. EPA (Facilitator)

Advancing TEK in California for Traditional Land Management

Natalie Solares
Pacific Region Technical Assistance Specialist
Intertribal Agriculture Council

www.Indianag.org



The Intertribal Agriculture Council

About Us: Founded in 1987, the IAC is a national 501c3 that supports all 574 federally recognized Native American Tribes and Alaska Native Villages.

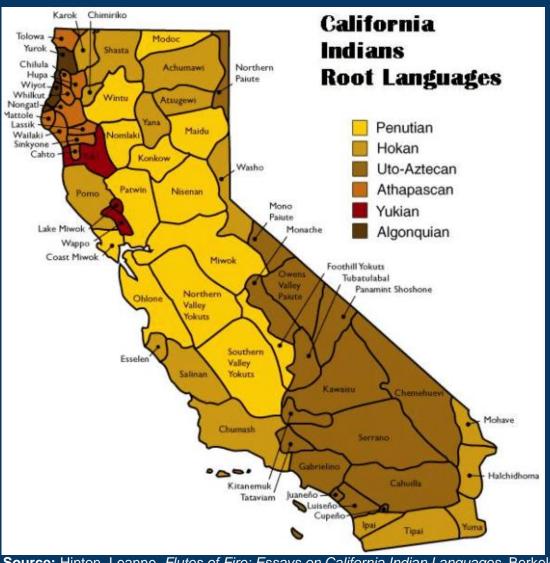
Our Mission: To to pursue and promote the conservation, development and use of our agricultural resources for the betterment of our people.



California Tribes



109 Federally recognized Tribes~80 Unrecognized California Tribes



Source: Hinton, Leanne. *Flutes of Fire: Essays on California Indian Languages.* Berkeley, CA: Heyday Books, 1994.

California Native History





POWER

- NATIVE AMERICANS EVERYWHERE ARE RESILIENT!
- CALIFORNIA NATIVE AMERICANS HAVE SURVIVED COLONIZATION AND
 ASSIMILATION BY THE SPANISH MISSION SYSTEM AND AMERICAN GOVERNMENT.
 DESPITE THE GENOCIDE THAT THEY HAVE BEEN THROUGH, THEY HAVE KEPT
 THEIR CULTURE AND RELIGIONS ALIVE.
- RECOGNIZE NATIVE AMERICAN PEOPLES AS RESILIENT AND RESISTANT AS BOTH THEIR PEOPLE AND CULTURE HAVE SURVIVED AGAINST ALL ODDS.



IAC & California NRCS



The IAC and California NRCS have a unique relationship and partnership

The State Conservationist and Agency in CA have Tribal priorities at the top of their list and are responsive to bettering their delivery of services to Tribes

Tribal Advisory Committee is essential



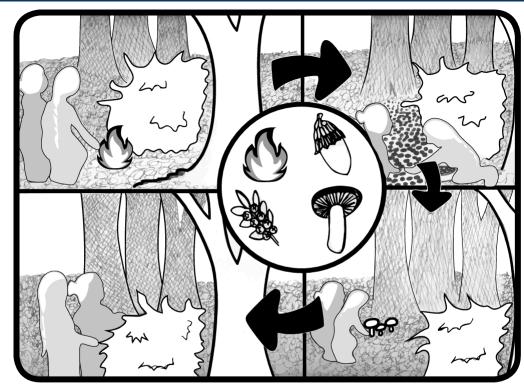
Using Existing Programs for TEK



Forests as a garden

Understanding the programs the Agency has to offer and using the malleability to address traditional foods and plant management Tribal needs

IAC & NRCS formed an agreement to explore the applicability of conservation planning within traditional plant management scenarios



This image is based on the traditional agroforestry systems of Northern California tribes who use fire, pruning, and other management practices to produce acorns, huckleberries, mushrooms, and more for both people and wildlife. Illustration by Colleen Rossier.

Source: USDA Agroforestry Notes May 2014

Cultural Burning in California

California Tribes adapted to live with naturally occurring wildfires but have shaped their landscape through cultural burning practices

The ecosystems and tribes evolved to rely upon fire and have developed through natural and empirical observations a set of cultural practices surrounding its use.

The last century of fire suppression has threatened the landscape with devastating high severity fires that have drastically increased in frequency in recent years



Source: Good Fire Current Barriers to the Expansion of Cultural Burning and Prescribed Fire in California and Recommended Solutions. Sara A. Clark, Andrew Miller, Don L. Hankins.



Source: USAToday

Cultural Burning in California



The benefits of cultural burning to the landscape long known by tribes, have been documented using the best available science and are shown to be an essential component in reducing the risk of high severity wildfires as well as generating benefits throughout the ecosystem, given that they are performed with awareness of the relevant cultural competencies including seasonality, vegetation, and indicator species.

To best benefit the ecosystems and uphold Trust Responsibility to tribes, federal, state, and other governments and agencies should seek to integrate, facilitate, promote, consult, and pay for cultural burning practices and cultural fire practitioners whenever possible



Danny Manning (Greenville Rancheria Tribe Member and Assistant Fire Chief)

Traditional Knowledge: Ethics, Protocol & Context

Demarus Tevuk, Iñupiaq

Lead Researcher, Native Neighborhood Community Study

Research Contractor and Co-facilitator for Tribal Water Security Project Webinar Series

Knowledge is a Journey

- Inupiat "Real People"
- Traditional Values
- Practice sustainability during plant harvest



Avoiding Cultural Appropriation

- Unfortunately, rely on generalizations
- Appropriation occurs when cultural elements are removed from their cultural context
 - Key differences between Indigenous culture and Western/European cultures
- Keep the original cultural context intact
- Include AND PAY traditional knowledge holders in every step of the process: evaluation, research, analysis, implementation, and maintenance



Context of Knowledge Systems

Traditional Knowledge (TK)	Scientific Ecological Knowledge (SEK)	
Abstract	Concrete	
Qualitative	Quantitative	
Inclusive	Exclusive	
Intuitive	Intellectual	
Holistic	Reductionist	
Spiritual (social values)	Clinical (value free)	
Coexistence	Control	
Diachronic (long time series and place oriented)	Synchronic (short time series and broad generalities)	
People are part of nature (reciprocity)	People apart from nature (competition)	
Communal knowledge based on insights collected by practitioners (transferred generation to generation)	Individual knowledge data collected by specialists/ researchers (shared by publication)	
Action	Content	

Source: Mason et al. 2012. "Listening and learning from traditional knowledge and western science: A dialogue on contemporary challenges of forest health and wildfire." *Journal of Forestry*.

Western Science, Scientific Ecological Knowledge (SEK)

Characteristics of SEK:

- Clinical: value-free, culture-free
- Individual/institution own information
- Reductionist: components, removed from system
- Quantitative, intellectual data

Nothing exists in a culture-free bubble:

- Ideas that are actually culturally-linked are presented as fact/theory but they have not been scientifically tested
 - IE nature as competitive, mystery of altruism

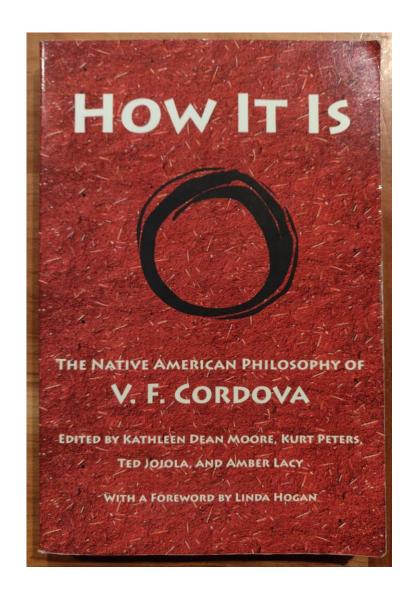
Native American Philosophy

Native Worldview

- Humans a key part of nature
- Nature is abundant, changing & giving
- Every person, creature has a role to play
- Space is spherical
- Time is cyclical

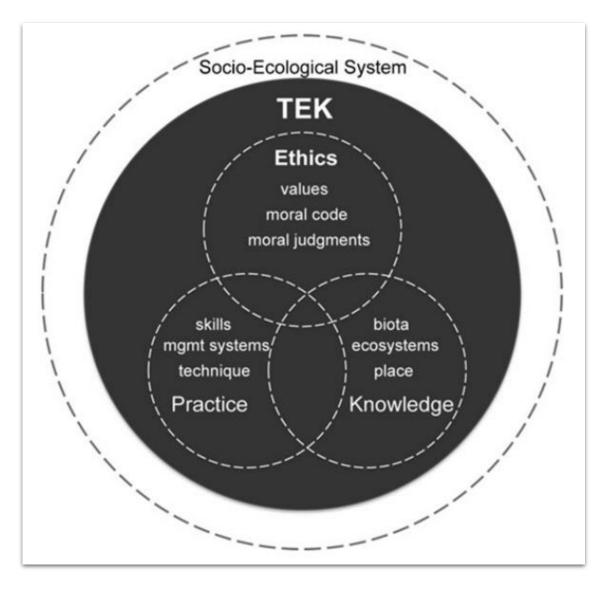
Western Worldview

- Humans apart from nature
- Nature is static & constrained
- Hierarchy determines role
- Space is linear
- Time is sequential



Traditional Knowledge Components

- Action is the objective
- Values, context, protocol
- Ethical science



Source: Reo NJ, Whyte KP. 2012.

Native Science, Traditional Ecological Knowledge (TEK)

Characteristics of TEK:

- Value-informed, culture context
- Community-owned, prove right to information
- Holistic, intact systems thinking, relationality
- Qualitative, intuitive data

Highly contextual, complex responses:

- Knowledge holders ask further questions: who's asking, why, when, where, family
- Information only applicable for each condition

Views of Sustainability

System	Objective	Knowledge	Sustainability
Western Science	Clinical	Content	Goal
Native Science	Ethical	Action	Path

- Equal and complementary knowledge systems
- Western science's culture focuses on innovation, view of sustainability is an unknown future state
- Native science states that sustainability is an ancient concept, knowledge system includes the guidance to practice sustainability

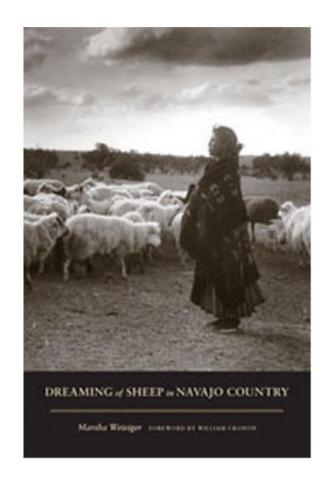
Traditional Sustainable Values

- > Relationship-building
- > Respect
- Responsibility
- Reciprocity (sharing)
- Appreciation
- Low Consumption
 - "Accept only what you need"



How Values are Shared, Reinforced

- ➤ Values are taught to the younger generation
- Creation Stories
- Lead by action
- > Social norms
- > Ceremony



Traditional Sustainable Values Guide Us to Sustainability

Creating abundance & stability in nature for the health of ourselves and our animal and plant relatives

Sustainable Seattle: We define sustainability as the ancient and enduring practice of creating richness in natural resources, attuning to nature's environmental indicators, and providing equitable access to health, food, shelter, and economic wealth for all people.

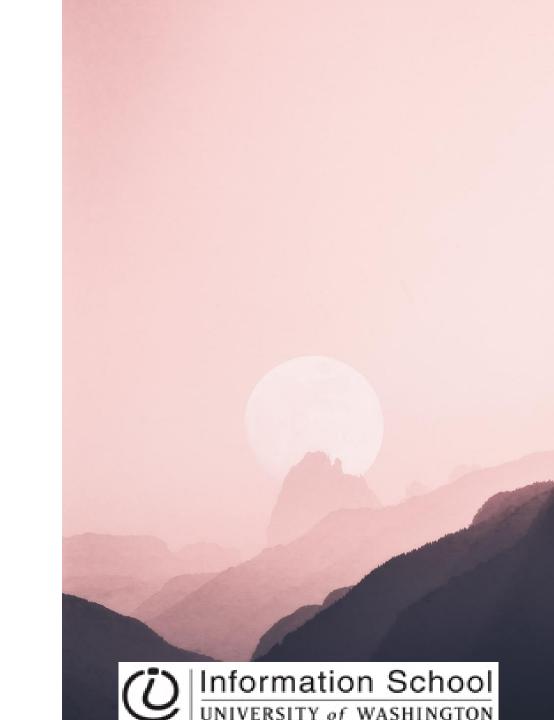
How do we incorporate TEK into federal decision-making?

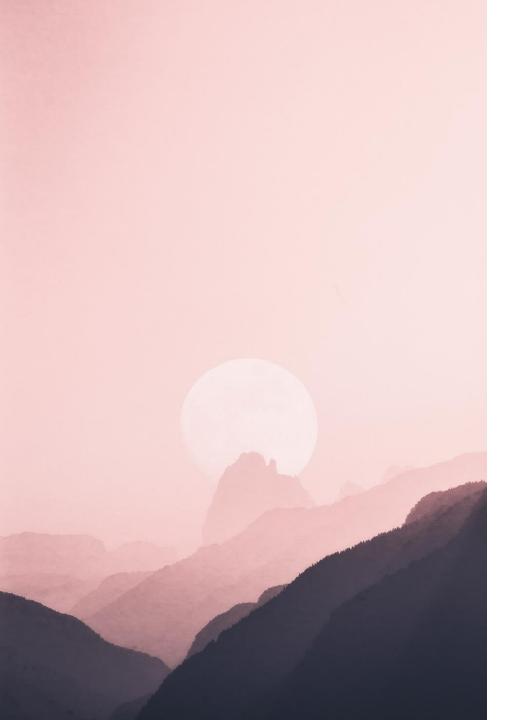
Clarita Lefthand-Begay, PhD
Clarita@uw.edu

Assistant Professor

University of Washington

March 22, 2022



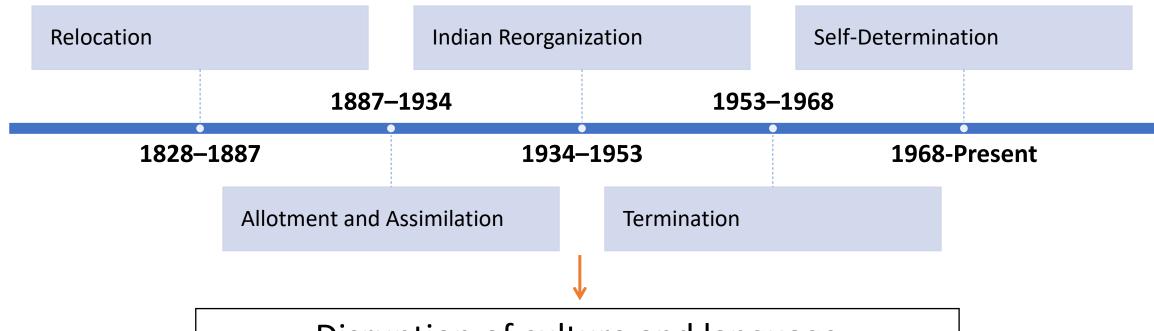


Overview

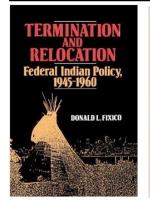
- Indigenous Systems of Knowledge (ISK) in the United States
- Concerns about public use and access to ISK
- Mechanisms for protecting traditional knowledge

- Tribal Nations in the United States
 - 574 federally recognized tribes
 - Many other non-federally recognized tribes
 - American Indian and Alaska Native land cover 4% of the land and composes < 1% of the population

Federal Indian Policies



Disruption of culture and language



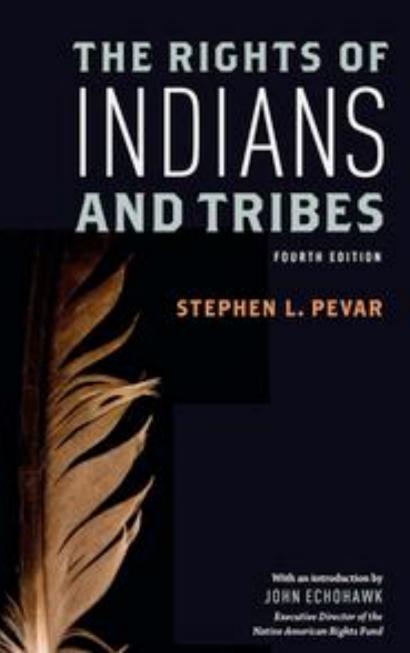








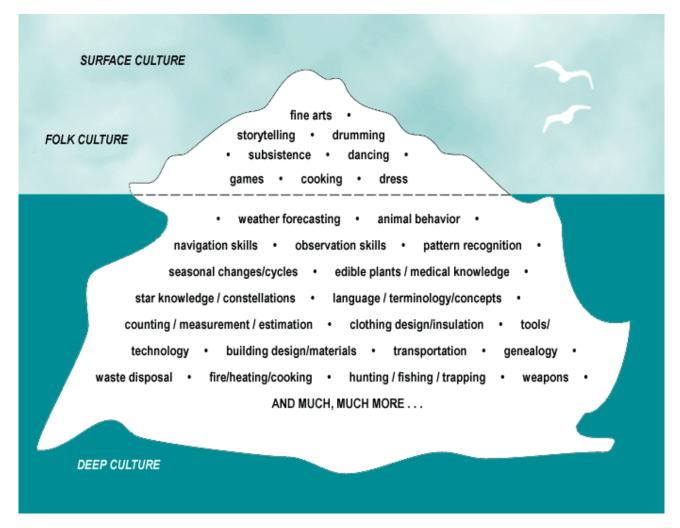
Adapted from Pevar, Stephen L. *The Rights of Indians and Tribes*.



Federal Indian Policies

"Some commentators liken the federalIndian relationship to a pendulum that has shifted back and forth between attempts to annihilate tribes during certain periods of time and attempts to support tribal self-government and autonomy at other times."

What is Indigenous systems of knowledge?



THREE FUNDAMENTAL CONCERNS

GATHER, USE, STORE

OWNERSHIP

BENEFITS TO TRIBE





The Navajo Long Walk to the Bosque Redondo



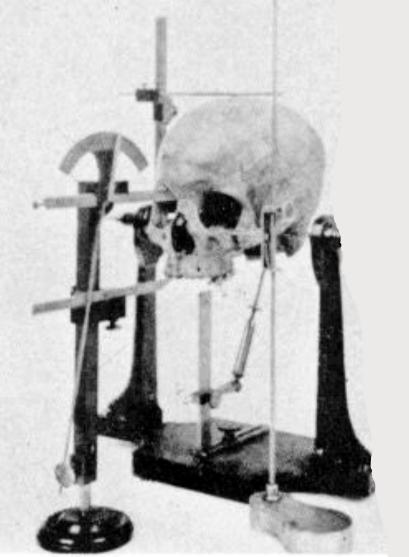


Historical Relationship with ISK

- Natives seen as:
 - Objects of science or inquiry
 - Absent of any contributable knowledge

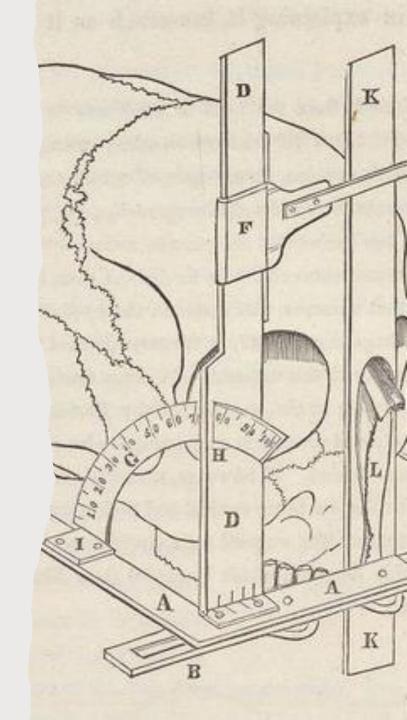
Champagne, D., & Goldberg, C. (2005). Changing the Subject: Individual versus Collective Interests in Indian Country Research. *Wicazo Sa Review*, *20*(1), 49–69.

Historical Relationship Between Researcher and Native Peoples



Craniometry

- Skulls were measured and weighed to prove that "primitive' minds were smaller than the European minds
- Flawed methods were used to determine that Europeans were superior to any other group

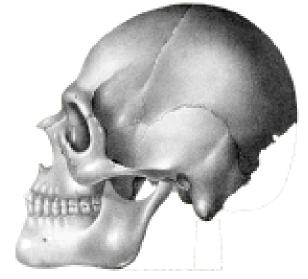




Samuel Morton's Crania Americana

By the 20th century, anthropologists flooded the reservations, seeking to record valuable cultural data about Native Americans before they became extinct.

Crania Americana



A COMPARATIVE VIEW OF SKULLS OF VARIOUS ABORIGINAL NATIONS OF NORTH AND SOUTH AMERICA

SAMUEL GEORGE MORTON, M.D.

WITH A NEW INTRODUCTION BY JANE E. BUIKSTRA, PLD.

PROFESSOR OF BROARCESCOLOGY, AREZONA STATE UNIVERSITY

H.U.S., Memb. Secontif. Sees. of Washington; Cor. Memb. Sec. Rtal. Antropologia, Etnologia, e Psicologia Comp., Florence. (Plate XII.)

It is a well-known fact that for many years past the majority of descriptive anthropotomists, in describing the skull, have divided the bones composing it into those of the face and those of the skull. So that if we adopt the nomenclature of Dr J. Barnard Davis, the valuable and interesting specimen which forms the subject of this paper would be considered a calvaria, as it lacks the lower maxilla. According to this authority, too, a cranium was regarded as being composed of the entire number of bones of the head and face, while the calvaria was made up of the bones of the skull alone. In these days, when the knowledge of the general structure and physiology of vertebrates has become absolutely indispensable to the anatomist, be his particular line of research what it may, such artificial landmarks are gradually becoming obsolete.

At the best of times Navajo Indian skulls are difficult objects to obtain, so I considered myself particularly fortunate when some time during the early autumn of 1885 the present specimen came into my possession. It was collected by a young man on one of their burial grounds upon the hills in the vicinity of Fort Wingate, New Mexico, and handed to me immediately afterwards to make such use of it as I saw fit.

This skull is from a male subject of about forty years of age, who came to his death by a gun-shot wound of the head. The results of this fatal injury are not far to seek in the specimen, and they may be seen in part in my illustrations of it in the Plate.

We find the large wound of entrance has pierced the left outer angle of the supraoccipital bone, and destroyed the adja-

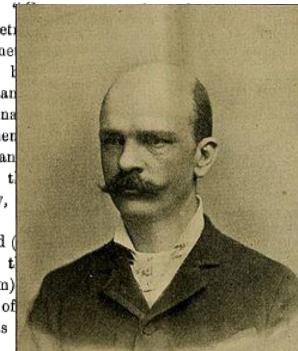
States Army Medical Museum, this extensive and unrivalled collection of several thousand specimens had in it but twenty-two, perfect or imperfect, Navajo Indian skulls.

At present this collection is not available to me, but from the excellent catalogue in question, I am enabled to select certain data of the highest value for comparison with similar observations made by myself upon the specimen in hand.

Of the twenty-two skulls alluded to I have chosen eight as nearly perfect ones as possible, and of the same sex as our subject, with a slight variation in age. From the data afforded by these in the catalogue, the averages exhibited in the subjoined table, for comparison with corresponding ones in our specimen, have been computed. Very wisely, Dr Otis adopted the metric system in all of his measurements, and the same is employed here. At the headings of the several columns of the table I have used certain abbreviations; among these, where

an explanation seems necessary, cranial capacity in cubic centimeto taken (in my case) with a steel mer periphery of the figure formed to through the glabella, the occiput, an F is facial angle; L is longitudinal highest point of occipital prominent measured from the middle of the an magnum to the highest point on to zygomatic diameter; and finally, parietal diameter, or the breadth.

During the time Dr Otis lived (
to see many of the human crania the charge of that part of the Museum)
by which the internal capacity of tained; but since then methods have been adopted.

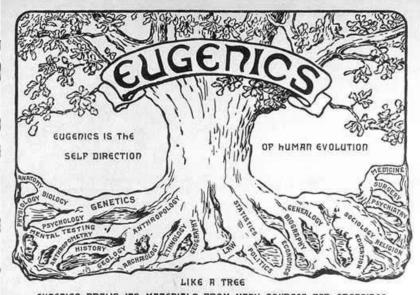


BLUDIUN peop

Health Officia! Praise Court in Upholding Sterilization Law

WASHINGTON, May 5 .- (INS) -- An improved race of americans is on its way as a result of the Sugar

With to aws to s will be gra defectives were rigor the nation



Native American denounces ice," Indian bills, sterilization

As 400 perticipents of to Washington, D.C. "The Longest Walk" seaded into Wichita, Kan., Lee Brightman, Sloux Indian and a coordinator of the protest march, was in Santa Cruz speaking to a small group of Native

gren

47, told the local Indians. 'is to support 'The Longest

Native Americans are alarmed at a recent surge of what they call anti-Indian legislation being introduced inthe U.S. Congress, Brightman said. He specifically cited H.R. 9054, which calls for the "The biggest thing we termination of the Bureau can do now." Brightman, of Indian Affairs and an a woman stepped forward

In his speech Brightman decounced the The walk began Feb. 11. Indian Health Services for is Sacramente with about what he called the forced went to school with had

aterilization of young Indian women.

"They've taken away a God-given right," he said. "They prey on young Indian women."

As Brightman cited statistics showing that approximately 15,000 Indian women had been sterilized from 1975 to 1976. from the audience and volunteered that it had

'Most of the girls I

them 'you can always gettle and highway patrols have another operation and have caused problems for the it reversed.' And that's all walkers. Three women

raised on a reservation in said.

the Indians gathered there; us," Brightman said. to organize and "stop this". Recording artists John

\$200 to \$300 a day for food the murch.

"The doctors would telling. Snow, high altitudes have had babies on the walk. Some students in pewa-Cree Indian, was Colorado had actually quit

"People were thrilled Brightman called one that they got to walk with

Denver and Country Joe Brightman said "The McDonald have made Longest Walk" is costing offers to hold benefits for

INFORMED CONSENT

Regulations require that the following information be conveyed to each subject:

- An explanation or description of
 - purposes of the research
 - study procedures
 - any risks or discomforts to the subject
 - any benefits to the subject
 - how the confidentiality of records will be maintained
- A statement that participation is voluntary
- A list of contacts for participants
 - who have questions about the research and their rights
 - who need to report a research-related injury

Indigenous Research Ethics Requirements: An Examination of Six Tribal Institutional Review Board Applications and Processes in the United States

Nicole S. Kuhn, Myra Parker, Clarita Lefthand-Begay

First Published April 1, 2020 Research Article Find in PubMed Check for updates



https://doi.org/10.1177/1556264620912103

Article information ~



Abstract

Tribal Institutional Review Boards (TIRBs) in the United States assert their rights within sovereign nations by developing ethical research processes that align with tribal values to protect indigenous knowledge systems and their community from cultural appropriation, exploitation, misuse, and harm. We reviewed six TIRB applications and processes to gain a better understanding about their requirements and research ethics. We located 48 activated and deactivated TIRBs in a database, mapped them in relation to tribal reservation lands, and then conducted in-depth content analysis. Our analysis demonstrates the importance of building relationships, becoming fully acquainted with the TIRB's operating environment before seeking research approval, and issues related to tribal data management practices.



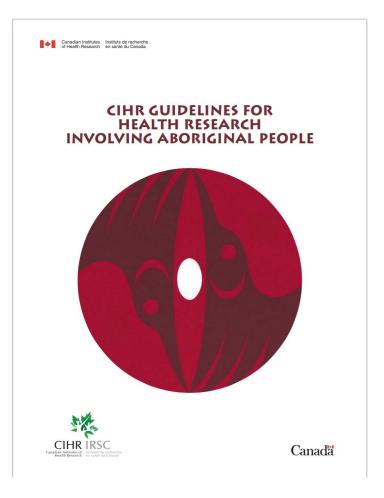
Guidelines for Indigenous Populations





Guidelines for Ethical Research in Australian Indigenous Studies

2012







The UNDRIP

...states that indigenous peoples, "have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions" (U.N. 2007, Article 31).

Federal Indian Policies

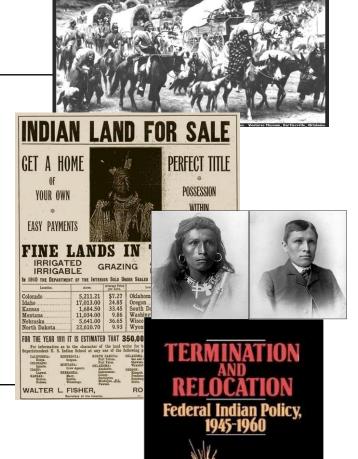
• 1828-1887: Relocation

• 1887-1934: Allotment and Assimilation

• 1934-1953: Indian Reorganization

1953-1968: Termination

• 1968-Present: Self-Determination



Disruption of culture and language

Seven Generations

The Iroquois

"In our way of life, in our government, with every decision we make, we always keep in mind the seventh generation to come. When we talk upon the Earth, we always plant our feet carefully because we know the faces of our future generations are looking up at us from beneath the ground." --Larry Echohawk



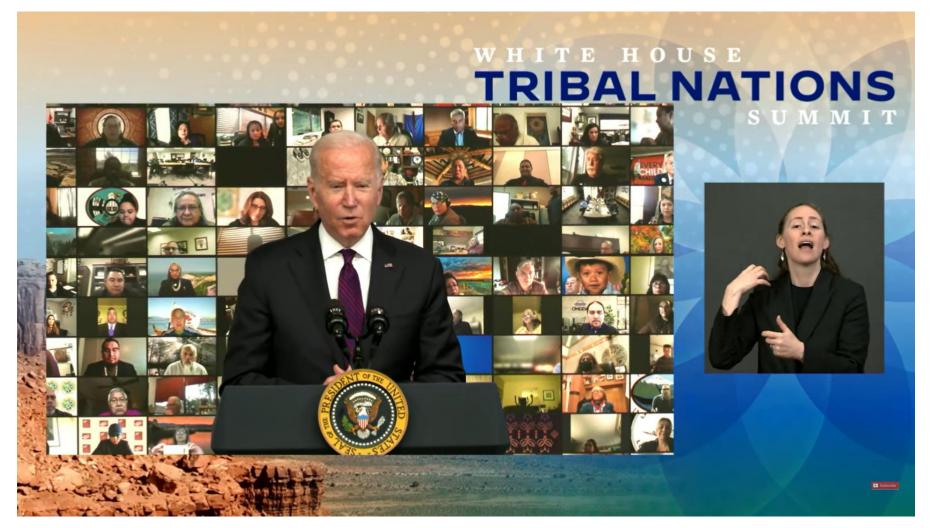
The Biden-Harris Administration's Commitment to Strengthening Relationships with Tribal Nations

"It is a priority of my Administration to make respect for Tribal sovereignty and self-governance, commitment to fulfilling Federal trust and treaty responsibilities to Tribal Nations, and regular, meaningful, and robust consultation with Tribal Nations cornerstones of Federal Indian policy."

Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships, January 26, 2001



Elevating Indigenous Knowledge in Federal Decisionmaking





OSTP-CEQ Memorandum on Indigenous Knowledge in Federal Decisionmaking



EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C.



November 15, 2021

MEMORANDUM FOR THE HEADS OF DEPARTMENTS AND AGENCIES

FROM: Eric S. Lander Lander

President's Science Advisor and Director, Office of Science and Technology Policy

Brenda Mallory (Fred Malley

Chair, Council on Environmental Quality

SUBJECT: Indigenous Traditional Ecological Knowledge and Federal Decision Making

Background

President Biden is committed to strengthening the relationship between the Federal Government and Tribal Nations and to advancing equity for Indigenous people, including Native Americans, Alaska Natives, Native Hawaiians, and Indigenous peoples of the U.S. territories. These commitments include ensuring that Federal agencies conduct regular, meaningful, and robust consultation with Tribal officials in the development of federal research, policies, and decisions, especially decisions that may affect Tribal Nations and the people they represent.

Consistent with the Administration's additional commitment to scientific integrity and knowledge- and evidence-based policymaking,² the White House Office of Science and Technology Policy (OSTP) and the White House Council on Environmental Quality (CEQ) issue

- White House Memorandum issued November 2021
- Memo includes a commitment and process to elevate IK in decisionmaking across the government
- White House Guidance for Federal Agencies to be released later this year
- Tribal Consultations
- Public and Expert Input opportunities

Developing Guidance for Federal Agencies on Indigenous Knowledge

- Interagency Working Group with more than 25 agencies represented, including:
 - Department of the Interior
 - USGS, FWS, BIA
 - Department of Commerce
 - NOAA
 - Department of Defense
 - Army Corp of Engineers
 - Department of Labor
 - Department of Energy
 - State Department
 - Department of Justice
 - Department of Education
 - Department of Transportation

- White House Council on Native American Affairs
- US Department of Agriculture
- Health and Human Services
 - IHS, CDC, NIH
- Homeland Security
 - FEMA
- Environmental Protection Agency
- National Science Foundation
- Advisory Council on Historic Preservation
- Smithsonian Institution
- National Archives and Records Administration

Developing Guidance for Federal Agencies on Indigenous Knowledge

Focus areas of:

- 1. Definitions, examples, and background
- 2. Collaboration and relationship building
- 3. Data sovereignty, confidentiality, and right to decline
- 4. Relationship with western science, research methods
- 5. Federal laws, regulations, and processes

- ITEK Guidance may include elements such as:
 - Best practices on how to collaborate with Tribal Nations and Native communities around ITEK application to achieve mutually beneficial outcomes
 - How to address Government-wide challenges around ITEK, such as navigating Federal laws and interagency processes
 - How to appropriately respect the knowledge holders' rights to decline participation in efforts to collaborate.

Tribal Consultation & Engagement

- Government-to-Government Consultation with Federally Recognized Tribes (April 5 and April 29)
- Listening Sessions & Community Engagement: Communities, Academia, and Tribal Organizations
- Native Hawaiian and Pacific Islander Community
 Roundtables



Tribal Consultation & Engagement

HE WHITE HOUSE



Announcing Tribal Consultation and Public Input Opportunities on Indigenous Traditional Ecological Knowledge in Federal Policy

MARCH 07, 2022 • OSTP BLOG

By: Alondra Nelson, Deputy Assistant to the President, Deputy Director for Science and Society, Office of Science and Technology Policy

Brenda Mallory, Chair, Council on Environmental Quality



Questions to Guide Input

- What would you like Federal employees to know about ITEK?
- How would you like to work with Federal departments and agencies in the future to ensure that ITEK properly informs Federal processes and policies? What challenges do you foresee?
- What terminology should be used (e.g., Indigenous Knowledge, Traditional Ecological Knowledge) when referring to this body of work in Federal contexts?
- Are there **existing guidance documents**, agreements, or practices of how ITEK should be elevated in Federal processes and policies?
- How do you recommend ITEK be represented in the development processes and content of <u>National Climate Assessment</u>?

Tribal Consultation & Engagement

Public Listening Session:

- When: Friday, April 8, 2022, 3:00-5:00 pm EDT
- Who: Knowledge holders, practitioners, environmental stewardship managers, spiritual leaders, elders, and others with experience or interest in ITEK and Federal government decision making
- Register:

https://pitc.zoomgov.com/webinar/register/WN_nYHMg0SzSB-lqsEb6XLpgg



Written comments can be submitted to ITEK@ostp.eop.gov by EOD May 5.

Closing Thoughts

 Wenona Wilson, Senior Tribal Policy Advisor, Region 10, U.S. EPA

Questions and Answers Period & Evaluation

- Please type your questions in the chat box.
- We would appreciate your feedback on the webinar and ask that you complete the short online survey. Link posted in the Q and A pod: https://forms.gle/gkAYxo3kAz6e3LyE6

Contacts

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