

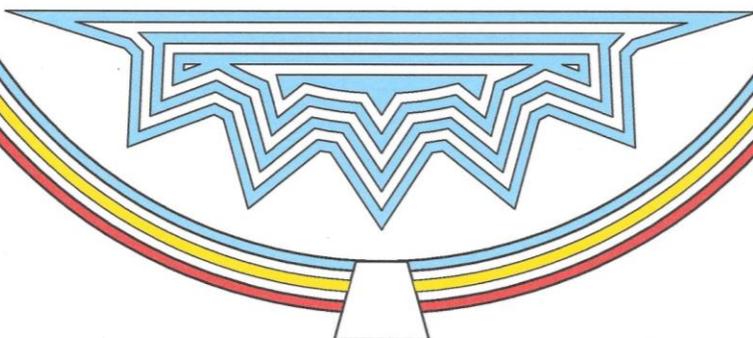
**Traditional Knowledge Guidelines**

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**Climate Change & Indigenous Peoples:  
A Primer**

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**Executive Summaries**



**Prepared for the  
Advisory Committee on Climate Change & Natural Resource Science  
May & September 2014**

This guide was originally published as Appendix VI and Appendix VII of the Report to The Secretary of the Interior from the Advisory Committee on Climate Change and Natural Resource Science (March 30, 2105) with facilitation and logistical support from the Meridian Institute (<http://www.merid.org/>). The Advisory Committee on Climate Change and Natural Resource Science (ACCCNRS) was chartered by the Department of the Interior (DOI) in September 2012 to advise the Secretary of the Interior on the establishment and operations of its National Climate Change and Wildlife Science Center (NCCWSC) and the Climate Science Centers (CSCs). ACCCNRS is a federal advisory committee comprising representatives of federal agencies; state and local governments, including state membership entities; nongovernmental organizations, including those whose primary mission is professional/scientific and those whose primary mission is conservation and related scientific and advocacy activities; American Indian tribes and other Native American entities; academia; individual landowners; and business interests.

The [full report](#) can be accessed from the ACCCNRS page of the National Climate Change and Wildlife Science Center website: <https://nccwsc.usgs.gov/acccnrs>

From more information on the National Climate Change and Wildlife Science Center and the eight regional Climate Science Centers please visit: <https://nccwsc.usgs.gov/>

This document consists of two executive summaries; the full documents are available at: <https://climatetkw.wordpress.com/>

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## Table of Contents

### Section I:

**Climate Change and Indigenous Peoples: A Primer -- Executive Summary ..... 5**

**Purpose ..... 5**

**Forward ..... 5**

### Section II:

**Traditional Knowledges Guidelines – Executive Summary ..... 11**

**Guidelines for Considering Traditional Knowledges in  
Climate Change Initiatives ..... 11**

**Workgroup Participants ..... 11**

**Federal partners involved with reviewing and commenting on  
this document ..... 12**

**Executive Summary ..... 12**

**Principles for Engagement ..... 13**

**“Cause No Harm” ..... 13**

**Free, Prior and Informed Consent ..... 14**

**Guidelines Considering Traditional Knowledges in Climate Initiatives ..... 15**

**Summary of Guidelines and Actions ..... 15**

***Guideline 1:* Understand key concepts and definitions related to TKs .... 15**

***Guideline 2:* Recognize that indigenous peoples and holders of TKs  
have a right NOT to participate in federal interactions around TKs ..... 16**

***Guideline 3: Understand and communicate risks for indigenous peoples and holders of TKs* ..... 17**

***Guideline 4: Establish an institutional interface between indigenous peoples, TK holders, and government for clear, transparent and culturally appropriate terms-of-reference, particularly through the development of formal research agreements* ..... 18**

***Guideline 5: Provide training for federal agency staff working with indigenous peoples on initiatives involving TKs* ..... 19**

***Guideline 6: Provide specific directions to all agency staff, researchers and non-indigenous entities to ensure that protections for TKs requested by tribes and knowledge holders are upheld.* ..... 20**

***Guideline 7: Recognize the role of multiple knowledge systems* ..... 21**

***Guideline 8: Develop guidelines for review of grant proposals that recognize the value of TKs, while ensuring protections for TKs, indigenous peoples, and holders of TKs* ..... 22**

## Section I: Climate Change and Indigenous Peoples: A Primer

### Executive Summary

Below is the executive summary excerpted from, "Climate Change and Indigenous Peoples: A Primer." The full Primer is available at <http://climatetkw.wordpress.com/>.

### Climate Change and Indigenous Peoples: A Primer

The information presented in this report is believed to current as of the time of production. The information, law, and policies involving Indian tribes and indigenous peoples are in a continual state of flux, both domestically and internationally.

Prepared for the Advisory Committee on Climate Change and Natural Resource Science  
May 2014

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#### **Purpose**

Provide tribal perspectives on foundational information on Climate Change, Indigenous Peoples, and Tribes to the Advisory Committee on Climate Change and Natural Resource Science on three major topics: 1) the impact of climate change on tribal and Indigenous Peoples; 2) relationships between Indigenous Peoples and the Federal-Government; and 3) the availability of funding to support the participation of Indigenous Peoples in federal climate initiatives.

#### **Forward**

A Primer and TK Guidelines have been produced to provide foundational information to the Advisory Committee on Climate Change and Natural Resources Science (ACCCNRS) on intergovernmental relationships and science when engaging Tribal and Indigenous Peoples in federal climate change initiatives.

#### **Executive Summary**

To indigenous peoples, climate change is not about theories, obtuse mathematics, fancy graphs, model abstractions, statistics, voluminous reports, media hype, slogans, or dire

projections for a distant future. It is reality. They experience it every day in countless ways because of their economic and cultural dependence on place and natural resources. As noted by workgroups II and III in the April 2014 Fifth Assessment prepared by the International Panel on Climate Change and Chapter 12 of the May 2014, National Climate Assessment, indigenous peoples among the most vulnerable human populations to climate change. Sea level rise, dead zones, ocean acidification, melting glaciers, invasive species, drought, severe storm events, wildfire, invasive species, and infestations from insects and disease among the many manifestations of local, regional, national, and global causal factors that are disrupting the ecological process that lie at the very core of their lifeways.

For indigenous peoples, the impacts of climate change extend beyond the physical environment to their responsibilities as governments and cultural continuity. Indigenous peoples have their own inherent governmental structures, powers and special rights and interests in land, natural, and cultural resources. Yet their role in climate governance is being ignored. They are rarely recognized or even acknowledged as having a legitimate need to be at the table as full partners when climate policies and programs are being developed and implemented.

The governments of indigenous peoples take many forms, from federally-recognized tribes to self-recognized communities. Each form of governance has different implications with attendant responsibilities and processes for federal entities when engagement in climate change initiatives is sought. For example, federal entities are required to undertake consultation on a government-to-government basis with federally-recognized tribes and to fulfill fiduciary responsibilities for lands and resources held in trust by the United States for the benefit of Indians.

There is great diversity in the organizational structures of tribal government and the roles of written and customary law and cultural traditions and practices. Legal rights and responsibilities of tribal governments vary widely as well. Some have reserved treaty-protected rights and co-management authorities for shared resources like fish, wildlife, and water. Some have rights established by Executive Order or Statute. Others have neither. Because the governments and cultures of indigenous peoples are distinctively different, federal entities must be especially careful to avoid stereotyping and “one size fits all” approaches and work with indigenous communities with awareness, respect and sensitivity, whether undertaking research, implementing programs, or responding to emergencies. The Primer provides suggestions for interacting with indigenous peoples generally and in emergency situations.

Indigenous peoples have gained intimate, intergenerational understandings of interconnections between people and the environment gained through thousands of years of living with the land, learning how to prepare and adapt to change in order to survive. These understandings and rules of governance for their sharing are commonly referred to as Traditional Knowledge(s) or TKs. Because TKs are uniquely kept and shared within indigenous communities, access and use must be arranged separately with each indigenous community. A companion piece to this Primer provides some general guidelines to help inform keepers and would be users of TKs of helpful principles and protocols.

The experience, science, and wisdom of indigenous peoples can add a critical local dimension as the world seeks to develop effective policies and programs to contend with climate challenges. The need for and value of including TKs and local observation to inform understanding and devise climate strategies are becoming increasingly acknowledged.

TKs and western science are founded in fundamentally different, culturally-determined world views and values. TKs reflect long-term, holistic perspectives in which everything is interconnected, i.e., man is a part of nature. In contrast, western science reflects a short-term, segmented perspective that tends to result in segmentation and isolation, i.e., that man is a part from nature. These different cultural underpinnings lead to vastly different views on the value and importance of science and information to decision-making. To indigenous peoples, science informs decision processes that include consideration of economic, cultural, and environmental implications for today and future generations in a holistic, integrated fashion. In contrast, western societies often put science in a subservient role narrowly focused on isolated cause-effect relationships and short-term cost-benefit consequences of individual decisions. This difference in world views affects attitudes towards science.

Indigenous peoples have long understood the folly of trying to dissect the world into component parts and attempting to view science in isolation from economics, law, policy, and culture. The controversy that has festered for nearly two decades over the remains of *The Ancient One* (aka Kennewick Man) serves as a prime example of the conflict that can result from the mélange of tribal rights, science, law and culture. The Native American Graves Protection and Repatriation Act requires ancestral human remains and cultural artifacts to be returned to Tribes for reburial. Scientists oppose repatriation and reburial of *The Ancient One*, asserting that further study can provide valuable information on ancestral origin, diet, and the source of a stone point found in

the hip. Tribes argue that the remains should not be treated as an object of scientific curiosity, but rather should be reburied as a sacred ancestor.

Indigenous communities value information and data in the context of implications for their economies, lifeways, and cultures. The rights and interests of indigenous governments also create needs for special types of information from climate science. For example, decisions of indigenous communities are usually made at relatively small, local scales so there is a need to: (a) access downscaled information from regional data and models along with information on uncertainty; and (b) provide a means to upscale, i.e., understand how local decisions will interact at the landscape, regional, and even global scales to evaluate their effects on the resources and values of interest. Another example illustrates how science may be called upon to inform decisions regarding interactions between the special rights of indigenous communities and impacts of climate change. Climate change is expected to result in sea level rise, more violent water surges and changes in meander of river beds with increased frequency and intensity of storm events; since tribes often own shorelines to mean high water lines and river meander areas, information may be needed to evaluate implications of potential conflicts between tribal and individual property rights arising from climate change impacts. Another example is the information needed by tribal governments to evaluate implications of federal actions or policies affected by conflicts of interest between duties relating to the trust responsibility and general administration of agency programs and missions or the implications of shifting the conservation responsibility for ESA listed species onto tribal lands due to habitat deterioration in other areas.

TKs and western science each have their own strengths and weaknesses; neither is superior to the other. Braided together, both can retain their own identity while strengthening the whole body of knowledge regarding climate science.

Because of the heightened awareness that traditional knowledge has potential commercial value, the need for international protection of the rights and interests of indigenous peoples is receiving increasing attention. For example, the United Nations Convention on Biodiversity and Declaration on the Rights of Indigenous Peoples (UNDRIP) contains tenets intended to discourage unprincipled exploitation of the traditional territories and knowledge of indigenous peoples, such as the need for Free, Prior, and Informed Consent (FPIC).

Tribal communities typically suffer from disparities in infrastructure, capacity, economic development, health, and social services. Their ability to substantively engage in climate initiatives is greatly affected by confusing bureaucratic and administrative

structures and the lack of federal funding to support capacity development and active participation. Moreover their ability to collaborate is often impeded by agency administrative restrictions, such as information technology policies and procedures that affect access to data, analysis, and file sharing.

Funding available to the Bureau of Indian Affairs (BIA) and federally recognized tribes continues to fall far short of that provided to other entities within the Department of the Interior. In FY12, less than \$200,000 was provided to support BIA and tribal involvement in Interior's \$200 million Cooperative Landscape Conservation and Adaptive Science (LCAS) program, and that meagre funding was repurposed from a realty account. In FY13, the less than \$1 million made available to support participation by the BIA and 566 federally recognized tribes was also not new funding, but was rather repurposed from other BIA accounts. This modest amount of funding supported a single staff position and a competitive grant program. The FY14 operating budget for the BIA provides nearly \$10 million for participation in LCAS and other climate related activities, along with youth initiatives and landscape management improvements. The President's FY15 budget proposes just under \$10 million for BIA and tribal participation in climate-related initiatives. In addition to inequitable funding for participation in the LCAS, federally recognized tribes are not eligible to receive funding from several sources available to states and other entities.

There are huge and growing demands for tribal participation on at least ten federal climate planning strategies and a plethora of ever increasing federal, state, regional, international, academic and non-governmental fora and processes, such as landscape conservation cooperatives, climate science centers, conferences, workshops, and climate hubs. Yet the availability of adequate, dedicated funding to support tribal involvement is rare. The proliferation of climate-related processes is overwhelming. Few, if any, tribes have the capacity, the resources, staff, and expertise, to engage in climate change activities on their own behalf.

Tribes must have both technical and political capacity to engage in climate change initiatives. They must have access to western science and the ability to incorporate the wisdom, insight, and TKs from their own communities into decision processes. Their governments must be able to bring special legal and political rights and interests to local, regional, national, and international fora to help overcome impediments to the development of a collaborative framework to address climate change.

The long, proven history of balanced stewardship of indigenous peoples can help build partnerships across political jurisdictional that reconcile views among a multitude of

divergent interests. Federal climate initiatives and indigenous peoples stand to benefit greatly by working together to establish and support the development and implementation of viable approaches for addressing the diverse and difficult economic, social, and ecological challenges confronting climate change.

Land and resources are integral to the cultures and economies of tribes and indigenous peoples. As climate change affects local ecological processes, generations of place-based knowledge within their communities can provide information and guidance for preparation, adaptation, and mitigation. Moreover, tribes and indigenous peoples have unique political status as governmental sovereigns, own substantial quantities of land and resources, possess reserved rights on large areas of federal land, and have co-management authorities and responsibilities for shared resources. Federal, state, and regional entities in landscape scale climate initiatives will need to encourage and support the substantive engagement of tribes and indigenous people. This primer is intended to provide information to help participants in landscape level processes fulfill needs for knowledge exchange and build partnerships with tribal communities.

## Section II: Traditional Knowledges Guidelines – Executive Summary

Below is the executive summary excerpted from, “Guidelines for Considering Traditional Knowledges in Climate Change Initiatives.” The full document is available at:

<https://climatetkw.wordpress.com/>.

### Guidelines for Considering Traditional Knowledges in Climate Change Initiatives

Prepared for the Advisory Committee on Climate Change and Natural Resource Science

The information presented in this report is believed to be current as of the time of production. The document is a work in progress. The workgroup anticipates revising it over time.

*September 2014*

These Guidelines have been developed by a group of indigenous persons, staff of indigenous governments and organizations, and experts with experience working with issues concerning traditional knowledges.

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### **Executive Summary<sup>1</sup>**

There is increasing recognition of the significance of how traditional knowledges (TKs) can inform our understanding of the impacts of climate change and strategies for adaptation and mitigation. And yet there are potential risks to indigenous peoples in sharing TKs in federal and other non-indigenous climate change initiatives. We intend the term indigenous peoples to designate the diverse populations in the U.S. who could interact with federal and non-indigenous climate change initiatives in ways that involve TKs, whether in the U.S. they are federally-recognized, state-recognized, or unrecognized. We refer to "indigenous peoples" and "tribes" interchangeably in this document, unless we are talking about a specific group or a specific status related to recognition.

These guidelines are intended to examine the significance of TKs in relation to climate change and the potential risks to indigenous peoples in the U.S. for sharing TKs in federal and other non-indigenous climate change initiatives. Although it is common to refer to "traditional knowledge(s)" as individual pieces of information, this term also refers to traditional "knowledge systems" that are deeply embedded in indigenous ways of life. These guidelines use the phrase "traditional knowledges" deliberately in plural form because knowledges are emergent from the symbiotic relationship of indigenous peoples and places - a nature-culture nexus. Tribes and indigenous peoples use "knowledges" to emphasize that there are diverse forms of traditional knowledge and knowledge systems that must be recognized as unique to each tribe and knowledge

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<sup>1</sup>This Executive Summary synthesizes the key information from the full report on *Guidelines for Considering Traditional Knowledges in Climate Change Initiatives*. The full report includes detailed information for each of the guidelines, as well as complete citations and an annotated bibliography of relevant sources.

holder. These guidelines should be used to inform the development of specific protocols in direct and close consultation with indigenous peoples.

Federal agencies and national climate change initiatives are recognizing the significance of TKs, and are proposing and funding collaborative efforts between indigenous communities and federal and non-indigenous climate change entities in ways that involve TKs. This interaction requires an understanding of how individual tribes and knowledge holders choose to share or not to share TKs.

### **Principles for Engagement**

The guidelines focus on a two principles: “Cause No Harm” and “Free, Prior and Informed Consent.” These principles are described in detail below and are intended to guide the motivation, character and intent of collaborative climate initiatives undertaken by government agencies, research scientists with tribal communities, and TKs holders. Broadly, these principles recognize that each tribal community has its own laws which guide and structure how different facets of TKs are treated by tribal and non-tribal entities, and more broadly regulates interactions between parties. Sharing of TKs is governed by principles and values of an indigenous community, which defines an equitable and productive relationship. Key issues discussed in these two principles include the collective custodianship of TKs, custodianship by knowledge holders, and the secret, sacred, cultural and individual privacy associated with TKs.

#### **“Cause No Harm”**

- The “Cause No Harm” philosophy involves identifying and avoiding risks that could lead to loss of or misappropriation of TKs. Specifically, identify risks to natural and cultural resources in regards to intellectual property interests that may come from sharing TKs.
- Define the roles and responsibilities of all partners clearly and carefully
- Define what information will be shared
- Establish use, ownership and means to interpret or share information at the outset of the project
- Respect, Trust, Equity and Empowerment

Principles for collaboration between tribes, TK holders, federal agencies and others that are intended to guide collaboration and the creation of mutually beneficial relationships between tribes and TK holders and outside researchers and/or government agencies include integrity, validity, fairness and equity, respect and recognition. Finally, the principles include a discussion of traditional rights, sovereign status of American Indian Tribes, the Nation of Hawai’i and Alaska Native Tribes, the trust obligation of

the federal government, the inadequacy of current intellectual property law, and international agreements to protect indigenous peoples and TKs from exploitation.

The principle of "first, do no harm" (principle of *primum non nocere*, principle of non-maleficence) is a core ethical principle in medicine and law, and appears in the ethical guidelines of many professional societies in many other disciplines. A prime directive of the Hippocratic Oath, it is the duty not to cause harm to others through any intervention (a negative duty). This is interpreted as having the duty to ensure that actions benefit everyone involved (a positive duty). Medical procedures, policy interventions, knowledge exchanges and other actions are regarded as being acts of deliberate choice, and choices can have both beneficial and detrimental consequences for which one can be held ethically, morally or legally responsible. The principle is an admonishment to look carefully at potential consequences of decisions to act to ensure that all are made better off, while no one is made worse off. It is closely linked to the principle of beneficence, or the duty to do good, and the principle of due care, all foundations to good stewardship and right relationships.

### **Free, Prior and Informed Consent**

The United Nations Declaration of Rights of Indigenous Peoples (UNDRIP), as well as other intergovernmental organizations and international forums recognize the concept of Free, Prior and Informed Consent (FPIC) as a fundamental right of indigenous peoples when negotiating or entering into agreements with governments, businesses and others. Following is a summary of each of these terms, which are more fully defined in the full Guidelines.

- **Free:** This term ensures procedural fairness in negotiations.
- **Prior:** This term ensures that, procedurally, indigenous peoples should be involved from the beginning. For undisclosed TKs, prior refers to a process to obtain consent before it is accessed.
- **Informed:** This term ensures substantive fairness in negotiations. Existing treatments of the meaning of "informed" have emphasized the need to address costs and benefits, risks and opportunities.
- **Consent:** This term ensures that processes for obtaining consent should first affirm the right of indigenous peoples to decline to engage in mobilizing TKs for

cooperative projects, and saying "no" should have no legal implications for respecting indigenous rights and interests or fulfilling trust obligations.

### **Guidelines Considering Traditional Knowledges in Climate Initiatives**

These guidelines are intended to provide specific measures that federal agencies, researchers, tribes and TK holders can follow in conceptualizing, developing, and implementing climate change initiatives involving TKs. The actions in these guidelines are not comprehensive, and are not in any way intended to supersede the obligation of federal agencies to consult tribes and TK holders with whom they are collaborating or amend or modify any agreements that may exist between tribal governments and federal entities. These guidelines are intended to promote the use of TKs in climate change initiatives in such a way as to benefit indigenous peoples, promote greater collaboration between federal agencies and tribes, and increase tribal representation in federal climate initiatives. These guidelines are a work in progress.

### **Summary of Guidelines and Actions**

#### ***Guideline 1: Understand key concepts and definitions related to TKs.***

Terms such as traditional knowledge are coined in non-indigenous academic and policy circles, and often do not fully reflect the ways in which indigenous communities refer to, or think of, their knowledge and lifeways. However, these terms may be helpful in providing agencies and researchers with greater understanding of issues that tribal people are facing regarding their own knowledge systems, climate impacts, and impacts to TKs resulting from climate initiatives.

#### **Actions for agencies and researchers:**

- Respect and seek to understand the unique conception each individual tribe has of their own knowledge system(s). Recognize that tribal experts and TK holders are the authorities of their own knowledge systems, and deserve to be treated as such.
- Find out how to follow communication protocols and respectfully identify authorities in order to develop an appropriate approach for working with TK systems in a partner community (e.g. what are common terms used in the community? What types of questions are appropriate for outsiders to ask? Who is a contact person/go-between in the community who will help educate researchers?)

- Be humble and open to getting advice from those who know the communication protocols and how to identify authorities.

Actions for tribes and TK holders:

- If you choose to share information about TKs, clearly articulate conceptions of your knowledge system with the expectation that your people's TKs will be respected and held as valid. Make personnel and/or resources available to aid researchers and agency staff in educating themselves about your community's approach toward working with non-tribal people on projects involving TK.

**Guideline 2: Recognize that indigenous peoples and holders of TKs have a right NOT to participate in federal interactions around TKs.**

Indigenous individuals are holders of TKs. It is the right of the individual to withhold sharing information. However, indigenous governments and individual holders of TKs within these communities must work together to decide when it is appropriate to share TKs or bring TKs to non-indigenous initiatives.

Actions for agencies and researchers:

- Respect the right of indigenous governments and/or TK holders to withdraw participation and access to TKs at any time during the collaborative process. Some reasons for withdrawing participation may not be evident to those not operating within a given TK system.
- Explain in a non-biased manner the risks and benefits of sharing or not sharing information in a given climate initiative BEFORE attempting to enter into any partnership with a tribal community. Inform the indigenous government and/or TK holder of risks "on your end," e.g., agency's lack of ability to protect information from FOIA requests.
- Support tribal judgment about when/if to share TKs. Support and back tribal partners as they make decisions about whether/how to share information.

Actions for tribes and TK holders:

- Be explicit about the choice not share TKs with agency or other partners, and your right to not disclose information about your tribe's knowledge systems.
- Find out if the tribe or community has a protocol for accessing and asking about knowledge. If you choose to share information about TKs, make sure that

agencies or other partners have conformed to the protocols of your tribe for ethical research, such as review by a tribal council, tribal institutional review board, or cultural committee, among other possible relevant institutions that vary from community to community.

***Guideline 3: Understand and communicate risks for indigenous peoples and holders of TKs.***

TKs in a climate change context occur in a spectrum from the highly secret and sacred to daily observations of phenomena useful for identifying climate impacts and adaptation actions. The open exchange and co-production of knowledge may be beneficial to all stakeholders and rights holders, and may be desired by indigenous peoples. But exchanges carry risks as well, particularly for indigenous peoples and the nature of their knowledge systems and cultural resources. Currently, there are few protections for indigenous peoples who share TKs with federal partners to ensure that TKs will remain the right and property of indigenous peoples or knowledge holders. There may also be inadequate protections for the resources (e.g., culturally-important species) associated with TKs. Therefore, it is critical that federal agencies, and most importantly TK holders, have a balanced understanding of the risks as well as the benefits of bringing TKs into climate change initiatives.

Actions for agencies and researchers:

- Determine the extent to which TKs involving confidential or sensitive information can be protected from unauthorized public disclosure because of federal mandate (e.g., without express legislative authority, TKs recorded in written or electronic form provided to federal entities are subject to FOIA requests).
- Research your agency/organization's codes and policies regarding the publication or dissemination of TKs gathered for projects.
- Inform tribes/TK holders about potential risks of disclosure. It is the obligation of agency staff and researchers to share information about what risks the project poses "on their end."
- Research existing intellectual property and copyright laws in your country, as they pertain to your research/project results. Will data from the project be subject to appropriation? How will this information be protected?

Actions for tribes and TK holders:

- Identify risks to natural and cultural resources and intellectual property interests.
- Identify potential violations or conflicts related to TKs, risks of overexploitation of resources associated with TKs.
- Clearly state what risks you find acceptable, and what risks are not acceptable/must be avoided. If there are risks to natural and cultural resources because of intellectual property concerns, determine whether the tribe would like to share your TKs.
- Consider recording TKs orally in the indigenous language and storing this information within a tribal entity, such as a Tribal Historic or Cultural Preservation Office in order to preserve confidential or sensitive information.
- Consult your tribal attorney regarding the understanding of potential risks.

***Guideline 4: Establish an institutional interface between indigenous peoples, TK holders, and government for clear, transparent and culturally appropriate terms-of-reference, particularly through the development of formal research agreements.***

Federal agencies have a trust responsibility to federally-recognized tribes, and must ensure that TKs are brought to climate change initiatives in an ethical, respectful, and protective manner that responds to the needs of each individual tribe. Terms-of-reference are commonly formalized through explicit research agreements that spell out conditions prior to the start of the research, and methods for fairly resolving conflicts are identified once the research has started. Tribes can specify conditions during the FPIC process. Although these processes may differ among tribes, common issues are identified below.

Action for agencies, researchers, tribes and TK holders:

- The Department of Interior should undertake concerted efforts to support the engagement of tribes and indigenous peoples in federal climate-related science investments, including the capacity to access and benefit from the services provided by CSCs, LCCs, and NCCWSC.
  - When appropriate and only with the Free, Prior and Informed Consent of indigenous peoples and knowledge holders, decision-makers should consider and utilize western science and TKs.
  - Collaborate with project partners to develop pre-determined methods for each step of bringing TK into climate change initiatives. Questions to address might include:

- What are the appropriate goals and objectives for the project?
- How will TKs holders be involved as equal partners?
- How will TKs be identified for the project? Will federal staff request information? Will TK holders offer up information that they feel is relevant?
- How will TKs be shared within the project team? Who will have access to information?
- How will TKs be stored for safekeeping? What confidentiality measures will be employed and enforced? Who will oversee these? Who will be responsible in the event that these measures fail?
- What obligations within the tribal community will accompany the TKs that are involved in the project, if any?
- Who will enforce these standards? What means will TKs holders redress potential grievances? What are the penalties for the measures failing?

***Guideline 5: Provide training for federal agency staff working with indigenous peoples on initiatives involving TKs.***

Federal agencies and other non-indigenous entities seeking to work with indigenous peoples and knowledge holders that have access to TKs must adequately train staff that will be interacting with indigenous peoples. This training should include what TKs are, how TKs differ from western science, the risks to indigenous peoples and knowledge users/holders when TKs are shared with non-indigenous entities, and how staff can ensure that they do not place indigenous peoples, TKs, or TK-associated resources at risk. This training should also clarify what legal or other protections may be afforded to TKs under FOIA, related statutes, and applicable federal policy. Federal or other climate efforts should provide funding for training for tribal partners.

Actions for agencies and researchers:

- Provide training on community standards, protocols, and legal rules for all project team members participating in projects related to TKs.
- Allocate resources to train staff about TKs, and ongoing issues regarding the sharing and protection of TKs, and existing models guiding collaborative projects between non-indigenous researchers and holders of TKs.
- Provide funding for tribal partners to train and advise agency staff on how to work with tribes on issues related to TKs.

Actions for TK holders/tribes:

- Train tribal staff and TKs Holders on protocols needed to govern the sharing and protection of TKs.
- Inform and train the Tribal Legal Office of potential project and potential risk.

***Guideline 6: Provide specific directions to all agency staff, researchers and non-indigenous entities to ensure that protections for TKs requested by tribes and knowledge holders are upheld.***

Agencies and research organizations should prepare their staff for interactions with tribes and TK holders to ensure that their staff members are able to carry out their jobs in an ethical and respectful manner, and to promote partnerships between tribes, TK holders and non-indigenous entities. This preparation will promote an iterative process between researchers and tribes, as well as the potential for co-production of knowledge about climate change issues.

Actions for agencies and researchers:

- If the indigenous government or knowledge holder requests protection for TKs that may be shared, agency staff should not write down or electronically record confidential or sensitive information.
- Consult with indigenous governments to develop an appropriate research agreement detailing the nature of the research/ knowledge exchange. Agreements should<sup>2</sup>:
  - Be developed collaboratively through equal standing.
  - Be based on FPIC and mutually agreed terms, goals and understandings.
  - Acknowledge contributions by TK holders.
- Outline expected risks and benefits.
- Clearly disclose any constraints or limitations regarding the ability to protect sensitive or confidential information before seeking access to TKs. Specify what measures will be taken to protect sensitive or proprietary information (understanding that there are often legal limits, to what protections can be provided by Federal agencies to any information that is submitted to them or that is shared with others, such as under FOIA).

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<sup>2</sup> See Appendix I of the full guidelines for more detail (<http://climatetkw.wordpress.com/>).

- Use appropriate language when referencing the role and content of TKs in climate change initiatives.
- Consider sharing data and information with indigenous peoples to support indigenous efforts and indigenous use of TKs *without the expectation* that indigenous peoples will share TKs in return.
  - Focus on the value of the beneficial outcomes that come from use of TKs as opposed to a focus on knowledge exchange.
  - Implement the principle of co-protection to the fullest extent possible. Co-protection refers to measures that protect both TKs and their associated tribal trust resources. Any actual exchanges of any particular traditional knowledge should take place in the context of safeguards that take into account legal, economic, cultural and cultural resource issues.
  - Work to establish a long-term relationship with indigenous peoples built on respect, mutual benefit, and extends beyond current understandings of professional obligations.
  - Provide recognition, policy guidance and education for the public and agencies to promote understanding and respect for TKs and associated resources to build a relationship based on trust and respect.
  - Consider the use of proxies in knowledge sharing. For example, indigenous peoples may share the results or outcomes without sharing sacred knowledge.

Actions for Tribes, TKs holders, federal agencies and researchers:

- Detail how data will be collected and stored and specify rules for access, ownership and control, if any will exist.
- Take special caution in the creation of databases of TKs, which should be only compiled or made available through Free, Prior and Informed Consent. Databases may provide benefits, for example, in bringing together traditional knowledge of past weather patterns to fill in gaps in the scientific record and lead to culturally appropriate solutions. But there are cultural issues and risks as well, for example through loss of control or ownership over the knowledge.

**Guideline 7: Recognize the role of multiple knowledge systems.**

Agencies and research organizations should recognize the role and interaction of TKs and multiple knowledge systems in climate change research and adaptation and vulnerability assessments. These entities should also recognize multiple knowledge

systems may exist within one tribe and among different TKs holders. These knowledge systems may conflict with one another. The agencies and research organizations need to work closely with all parties to ensure that all TKs is protected and credited appropriately.

Actions for federal agencies, researchers, tribes and TKs holders:

- Develop measures of success for projects from multiple perspectives/knowledge systems—define parameters of success from both western science and TKs.
- Ensure that each the contributions of tribal partners are recognized in final products, publications, and efforts to publicize projects.
- Create opportunities for partnerships involving TKs in climate change initiatives only when it is requested by and includes leadership of tribes in the development of these programs.
- Ensure that all collaboration with TK holders occurs according to principles of FPIC.

Actions for Tribes and TKs holders:

- Develop an internal protocol/processes that ensures that all participants in these projects are informed of risks, benefits, and anticipated outcomes.

***Guideline 8: Develop guidelines for review of grant proposals that recognize the value of TKs, while ensuring protections for TKs, indigenous peoples, and holders of TKs.***

Many federal, state and other grant programs are including criteria in proposal review that recognizes and awards points to applicants that incorporate TKs within their proposals. While this demonstrates awareness of the importance of TKs in climate change initiatives, it may pose a risk to indigenous peoples and knowledge holders who are unaware of potential abuse or misappropriation of TKs.

Actions for federal agencies and grant reviewers:

- The grant and materials produced (e.g., reports, videos) should recognize the sovereign rights of indigenous peoples to control access to, and the use of, their traditional knowledge and the right to give or deny access to it based on their right to FPIC according to their own traditions and processes.

- The grant should, where appropriate, include reference to a human subjects protocol and approval from the appropriate Institutional Review Board.<sup>3</sup>
- The grant should follow the appropriate indigenous research protocols established by individual tribes to guide research involving tribes or knowledge holders.
- Federal grants should not require that all data collected during the grant period be presumed to be under the ownership of the federal government. TKs should not be disclosed without the Free, Prior and Informed Consent of the indigenous government and knowledge holder, even when generated under a grant period funded by the federal government. The grant should clearly articulate that if indigenous peoples and their knowledge holders disclose TKs in written form then TKs would currently be subject to disclosure through FOIA. If funding entails a requirement to disclose based on Federal rules associated with publicly funded research, then alternative sources of funding should be sought for activities related to the collection of TKs if indigenous governments or knowledge holders do not wish TKs to become publicly available.
- The grant should demonstrate that there is substantial tribal leadership and tribal legal representation in the conception and project management of the grant.
- The grant should demonstrate substantial benefits and minimal risks to tribes for the proposed projects.
- Agencies could consider a tiered approach to grants, with an initial disbursement for attempting to obtain FPIC, including tribal consultations and risk and opportunity assessment, with another tier only for projects that have obtained FPIC and meet IRB requirements, where appropriate.

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<sup>3</sup> An institutional review board (IRB) is a committee that has been formally designated by institutions to approve, monitor, and review research that involves humans. The Association for the Accreditation of Human Research Protection Programs, Inc. (AAHRPP) accredits high-quality human research protection programs in order to promote excellent, ethically sound research. Through partnerships with research organizations, researchers, sponsors, and the public, AAHRPP encourages effective, efficient, and innovative systems of protection for human research participants. Agencies should promote the revision of human subjects protocols to accommodate specific tribal issues, for example regarding collective tribal consent.