

## Bureau of Indian Affairs

### TRIBAL CLIMATE RESILIENCE PROGRAM

CLIMATE CHANGE

Go to <http://www.bia.gov/> and select **Category: Climate Change**



Mainstreaming climate change considerations into all Bureau of Indian Affairs (BIA) activities, and supporting tribal goals to do the same, is a high priority for the administration and the Department of the Interior (DOI). Climate change will bring new challenges to Indian Country and Alaska Native Villages. The *President's Climate Action Plan* identified the BIA as the **lead agency** to support tribes as they address this challenge.



**Join! Monthly Calls to Leverage CRT for Tribal Climate Education**

**FIRST STEWARDS: Climate Circles, Resources, Videos Symposium**

**2014 3<sup>rd</sup> National Climate Assessment Indigenous Peoples / Places**

**Quick Start Guide U.S. Climate Resilience Toolkit Tribal Nations**

**NAU ITEP Tribes & Climate Change: Profiles, Events, Tools, News, DB**

**Attend! ITEP TCC Events Calendar of Conferences, Courses Webinars, More...**

**Pacific Northwest Tribal Climate Change Project & Network**

**Guidelines for Using Traditional Knowledges in Climate Initiatives**

**Funding! TCC Exhaustive Grants Guide, Programs, & Adaption Plans**

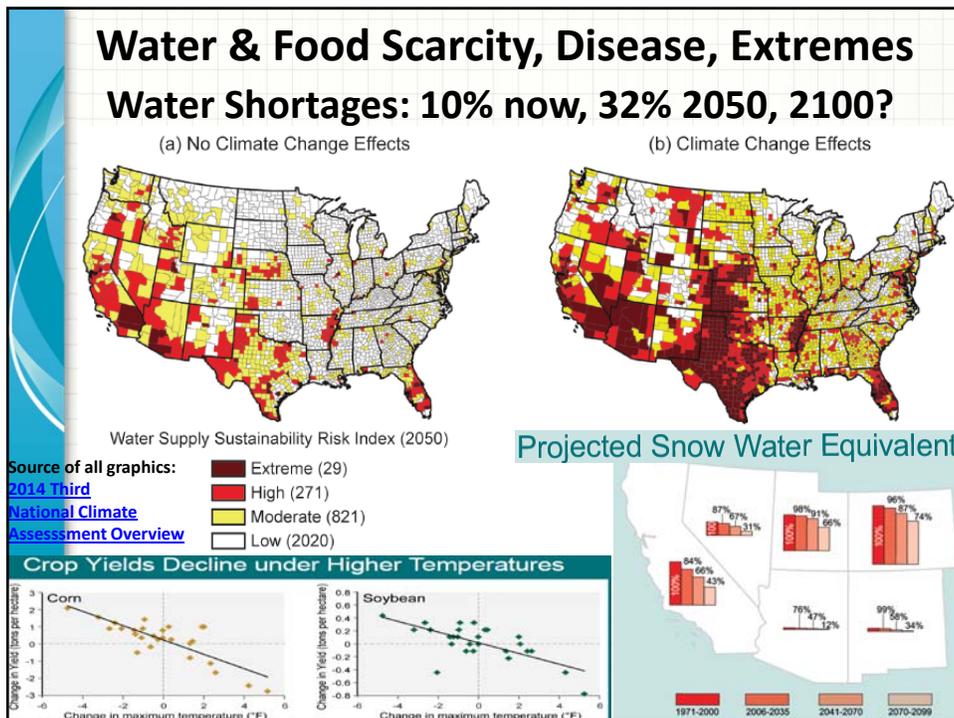
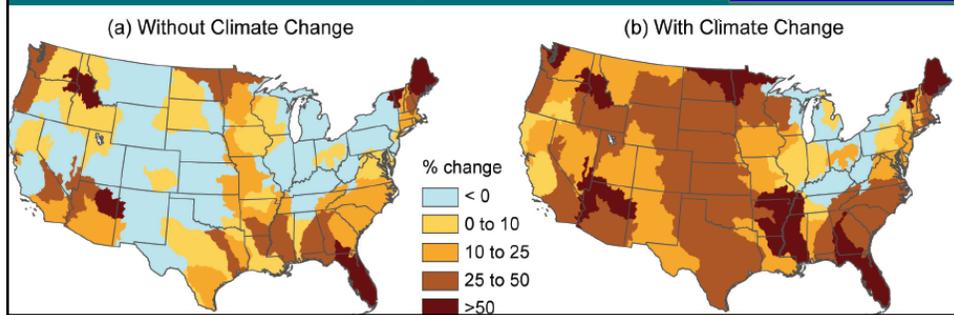
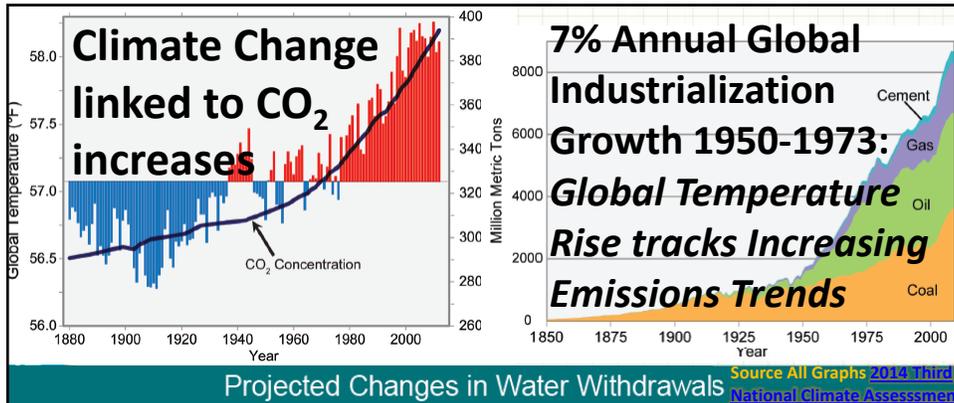
**Margaret T. Herzog, PE, PMP, PhD**  
IT / GIS Systems and Services

**Tribal GIS Conference**  
Thursday, 11/19 9AM

## CLIMATE CHANGE?! ISN'T THE WEATHER ALWAYS CHANGING?



Image from <http://350.org> of *Global Climate March* preceding [United Nations Framework Convention on Climate Change COP21](#) November 29, 2015



## Indigenous People Face Disproportionate Impacts of the Climate Crisis on Lifeways

Food Like Wild Rice Cannot Grow in Traditional Ranges



Infrastructure Falls Apart and Homes Sink in Alaska



Source of images:  
[2014 from National Climate Assessment Overview](#)



Karen Diver, Fond du Lac Band of Lake Superior Chippewa (FDLC) served on *Whitehouse Task Force on Climate Preparedness & Resilience* after being nominated by Great Lakes Intertribal Council. *FDLC* ratified the Kyoto Protocol in early 2007 and works to reduce energy use and build resilience.

## TRIBAL LEADERSHIP DESPERATELY NEEDED IN ADDRESSING THE CLIMATE CHALLENGE



<http://indiancountrytodaymedianetwork.com/2013/12/26/conversation-karen-diver-native-appointee-presidential-climate-change-task-force-152848>

## Dan Wildcat has issued a **RED ALERT** to all!

- Learn from non-“weeds” who’ve lived in symbiotic relationships with nature from time immemorial
- Deep awareness and communication with all living beings as relatives vs. reductionist science by discipline
- “Learning by doing”- everything is an experiment evolving in concert and pace with ecosystems of place
- Those in constructed reality forget about emergent properties of complex systems; even the smallest neglected interrelationship or feedback may impact
- No dualisms / dichotomies – many paths & ways
- Combat lack of imagination with INDIGENUITY!
- **Tribal GIS Professionals** must play their role!!

[Red Alert!: Saving the Planet with Indigenous Knowledge](#) by Professor Wildcat, Haskell Env Prog

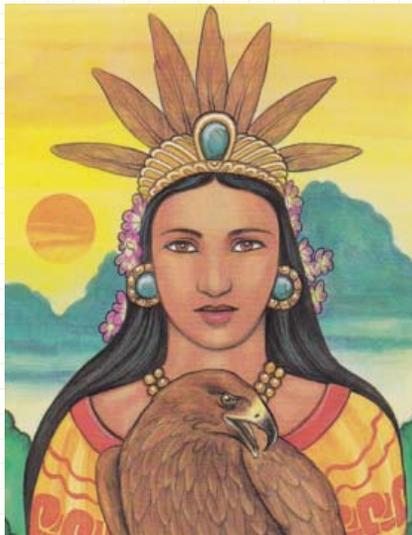
## Bring back the stories...

- COP21 Paris 11/30 - Delegates from 195 countries + EU bloc
- Cut CO<sub>2</sub> to achieve no more than a two degree overall rise
- Some islands will not survive even 1.5° increase

Christiana Figueres  
Coast Rica Leads!

Invoked ancient  
jaguar moon  
goddess **Ix Chel**

- Weaving
- Creativity
- Reason



*A Tapestry:  
Must be  
Woven  
Together  
From Our  
World's Great  
Diversity  
To Unite Us  
In Common  
Cause for Our  
Common  
Home*

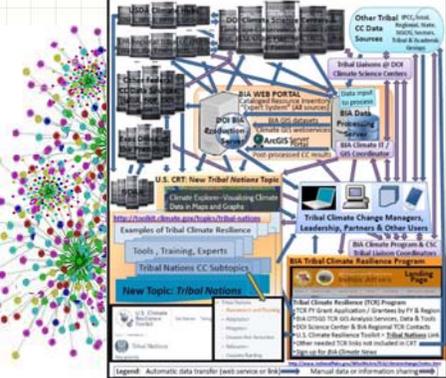


**DOI / BIA & FEDERAL  
GOVERNMENT SEEK TO FULFILL  
TRUST RESPONSIBILITY TO TRIBES  
AND ALASKA NATIVES BY  
PROVIDING SUPPORT  
FOR *TRIBAL CLIMATE RESILIENCE***

**Bureau of Indian Affairs**  
**TRIBAL CLIMATE RESILIENCE PROGRAM**



Program size has expanded 200% in the past year!



***Sean Hart*, DC Coordinator  
was responsible for entire  
program alone until 2015**



***Rachael Novak*  
became BIA's new  
Climate Science  
Coordinator in DC  
in July 2015**

***Margaret Herzog*, Denver, started  
February 2015 to build IT systems  
and GIS services with [BOGS support](#)**

**Bureau of Indian Affairs**  
**TRIBAL CLIMATE RESILIENCE PROGRAM**

US Department Of The Interior  
**Indian Affairs**

WEDNESDAY AUGUST 12, 2015

<http://bia.gov> **Category: Climate Change**

HOME WHO WE ARE WHAT WE DO NEWS CALENDAR DOCUMENT LIBRARY CONSULTATIONS HOW DO L... FAQs JOBS

**News Release**  
Assistant Secretary Washburn Announces Approval of Fond du Lac Band of Lake Superior Chippewa's Probate Code

Kevin K. Washburn  
Assistant Secretary  
Indian Affairs

Cobell Settlement FAQs Consultations Let's Move! FY 2016 Budget Information

NEWS SOCIAL MEDIA

WHAT WE DO  
**SERVICES OVERVIEW**  
The United States has a unique legal and political relationship with Indian tribes and Alaska Native entities as provided by the Constitution of the United States, treaties, court decisions and Federal statutes. Within the government-to-government relationship, Indian Affairs provides services directly or through contracts, grants, or compacts to 566 Federally recognized tribes.

CHOOSE A CATEGORY  
-- Click To Change Category --  
-- Click To Change Category --  
Budget & Finance  
**Climate Change**  
Energy & Economic Development  
Education

**Bureau of Indian Affairs**  
**TRIBAL CLIMATE RESILIENCE PROGRAM**

US Department Of The Interior  
**Indian Affairs**

**FY 2015 Tribal Cooperative Landscape Conservation Program**  
*Adaptation and Coastal Management Funding*

- Awards for Climate Adaptation and Ocean and Coastal Management Planning (pdf)

Funding of more than \$11M has been awarded to federally-recognized Tribes and Alaska Native Villages for climate adaptation and coastal planning and related travel support for Fiscal Year (FY) 2015 proposals submitted by April 24, 2015.

**FY 2015 Tribal Cooperative Landscape Conservation Program**  
*Internships and Youth Engagement Funding*

- Application Kit (pdf)

**Funding Proposals Under Review**  
*Management and Research Internships at*

June 22, 2015 are currently being reviewed with tribal, BIA programs, or colleges to perform data analysis, address ocean and Reviewers will evaluate each proposal based on review process is complete, applicants who proposal was successful or not. As with list of successful applicants will also be provided which could not complete their proposal funding cycle will be announced here and funding becomes available.

**CLIMATE CHANGE**

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Quick Start Guide U.S. Climate Resilience Toolkit  
First Stewards Climate Clinic, Resources, Video Symposium  
2014 9th National Climate Assessment Indigenous Peoples / Places  
Attend IIEP TCC Events Calendar of Conferences, Courses Webinars, More...

Pacific Northwest Tribal Climate Change Project & Network  
Guidelines for Using Traditional Knowledge in Climate Initiatives

Funding TCC Exhaustive Grants Guide, Programs, & Adition Plans

**FEDERAL RESOURCES**

- Executive Order 13653
- Climate Action Plan
- National Climate Assessment
- Climate Resilience Toolkit
- DOI Climate Science Centers
- DOI Landscape Cooperatives
- EPA Climate Change
- DOE Tribal Energy
- NIH Climate & Health
- USDA Climate Hubs

**CONTACT CLIMATE CHANGE**

- Provide Program Feedback

**Sign up for BIA Climate News using Feedback Form**

## Bureau of Indian Affairs

**Each RO has a designated climate contact**

**BIA Regional Offices, each includes a Regional Climate Contact!**

Region	Climate Contact	Email
Northwest Region	David Redhorse, NW RO	david.redhorse@bia.gov
Rocky Mountain Region	Jarvis Gust, RM RO	jarvis.gust@bia.gov
Midwest Region	Diane Mann-Klager, GPL RO	diane.mann-klager@bia.gov
Great Plains Region	Matt Anderson, MID RO	matthew.anderson@bia.gov
Western Region	Chip Lewis, WES RO	Charles.Lewis@bia.gov
Southwest Region	Joe Jojola, SW RO	joseph.jojola@bia.gov
Pacific Region	John Mosley, PAC RO	john.mosley@bia.gov
Southwest Region	Crystal Keys, SPL RO	crystal.keys@bia.gov
Southwest Region	Andrew Cadenhead, NAV RO	andrew.cadenhead@bia.gov
Southwest Region	Sierra Mendelko, EOK RO	sierra.mandelko@bia.gov
Southern Plains Region	Harold Peterson, EAS RO	harold.peterson@bia.gov
Southern Plains Region	Mark Kahklen, AK RO	Mark.Kahklen@bia.gov

## Bureau of Indian Affairs

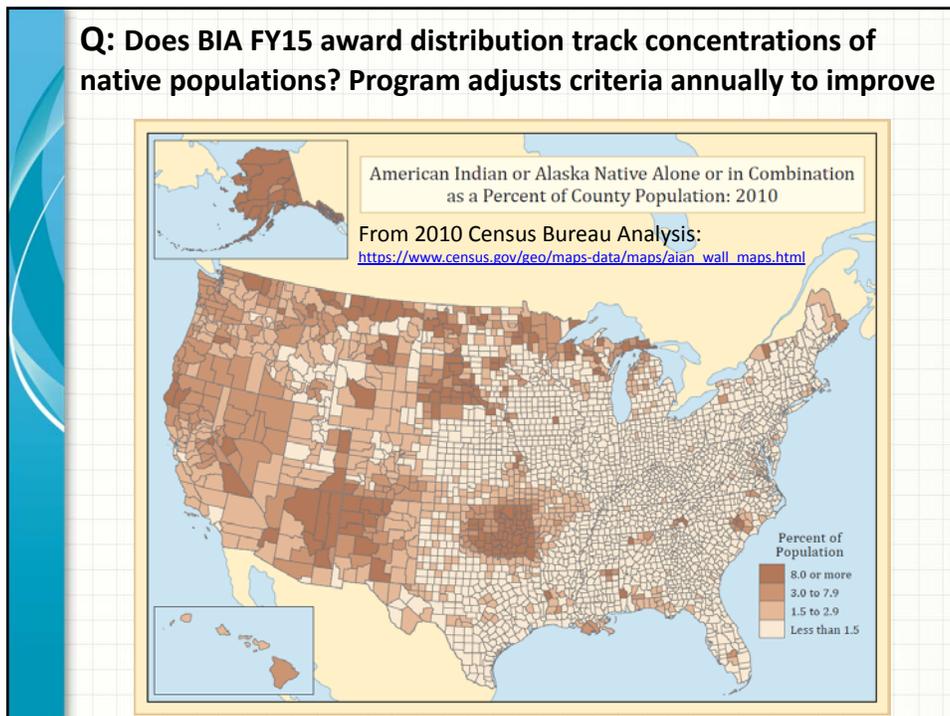
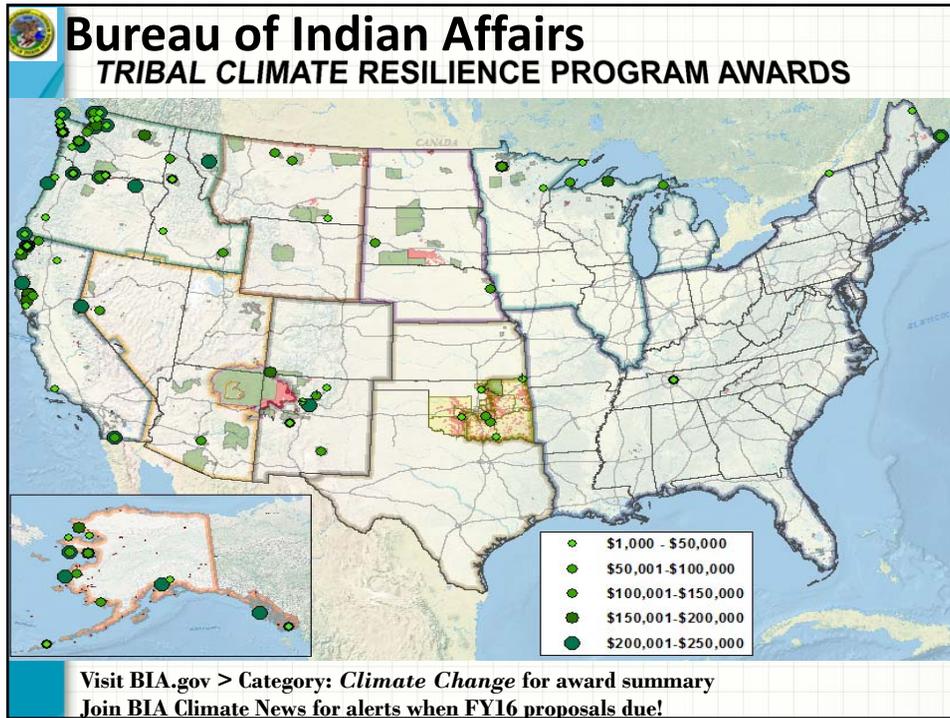
### TRIBAL CLIMATE RESILIENCE PROGRAM

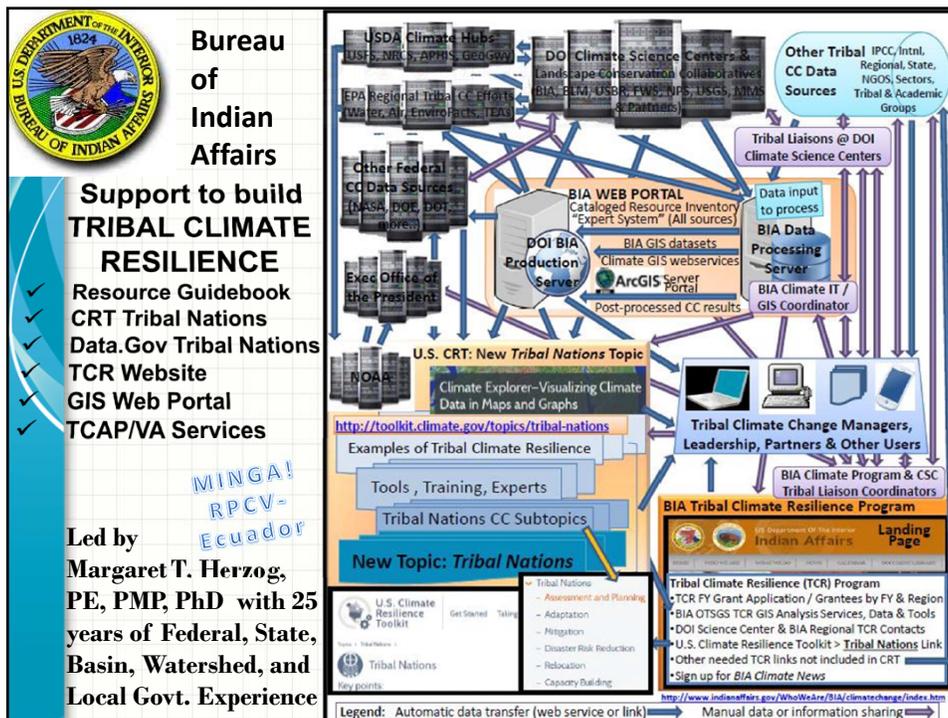
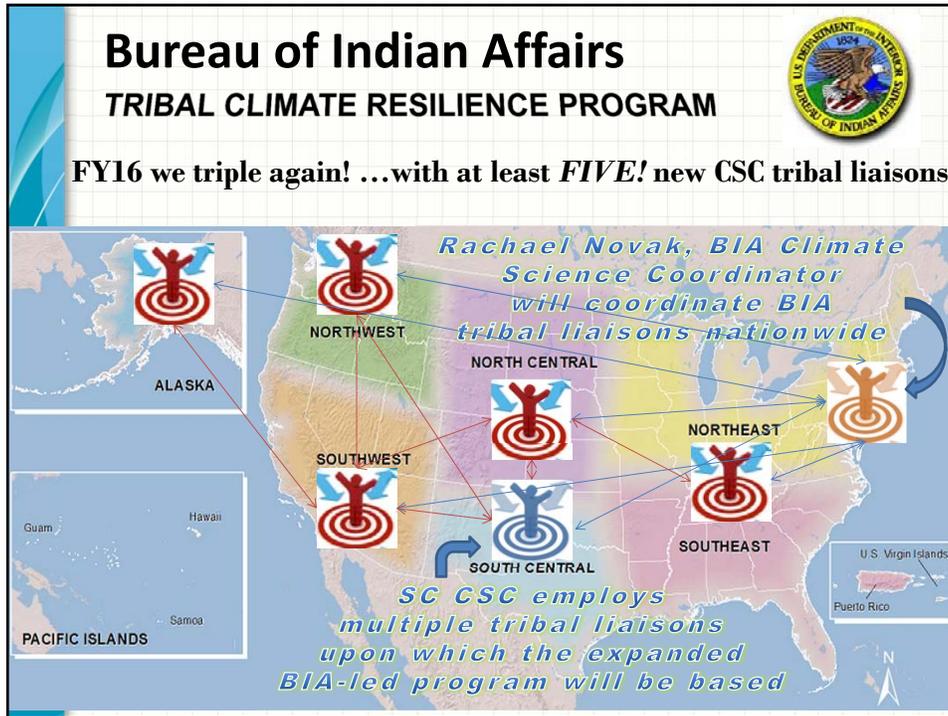
**In June, BIA Climate Program awarded nearly \$12M! for FY15**

**In August, over \$1M for interns/youth were awarded!**

**Visit BIA.gov > Category: *Climate Change* for full award summary**

**Join BIA Climate News for alerts when FY16 application kit has been posted**





**Bureau of Indian Affairs**  
**Branch of Geospatial Services (BOGS)**



**FREE! ESRI GIS Licenses, Training, and Help Desk**  
 (BIA.gov > Category: *Geospatial*)

**ArcGIS Product List**  
 The items in the ArcGIS [Product List](#) are available at no cost to approved applicants. System requirements for ArcGIS for Desktop versions Refer to [ESRI's System Requirements](#) for all versions of ArcGIS products.

**How to Obtain GIS Software**  
**New ELA members:** Contact the [BOGS Help Desk](#) for the [BOGS ELA Application Form](#) and a New Order Packet. An ELA coordinator will help you with your application.

**BOGS Geospatial Training**  
 The **Geospatial Training Schedule** is available. The BOGS provides GIS training to BIA offices and employees of [Federally Recognized Tribes](#).

[BOGS Help Desk](#) 877.293.9494.

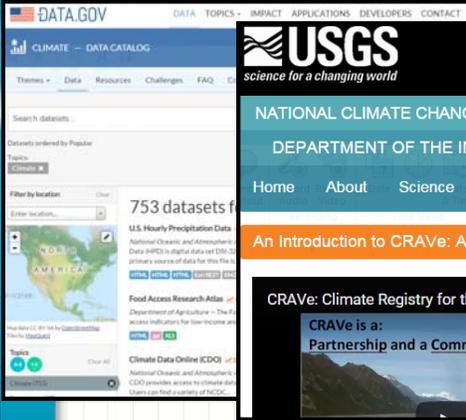
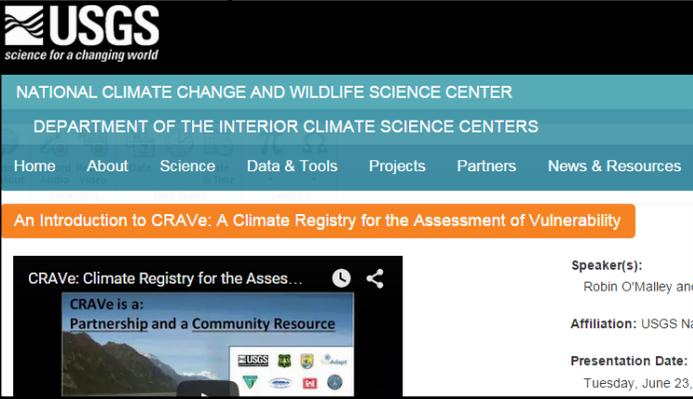
*BOGS also assists Margaret in [BIA Tribal Climate Web Portal](#) development!*

Visit the  
BOGS  
booth!

**Bureau of Indian Affairs**  
**TRIBAL CLIMATE RESILIENCE PROGRAM**



**Margaret can provide templates, climate data, resources, tools upon request to leverage FY15 awards most effectively!**

**USGS**  
 science for a changing world

**NATIONAL CLIMATE CHANGE AND WILDLIFE SCIENCE CENTER**  
 DEPARTMENT OF THE INTERIOR CLIMATE SCIENCE CENTERS

Home About Science Data & Tools Projects Partners News & Resources

An Introduction to CRAVe: A Climate Registry for the Assessment of Vulnerability

CRAVe: Climate Registry for the Asses...  
 CRAVe is a:  
 Partnership and a Community Resource

Speaker(s):  
 Robin O'Malley and

Affiliation: USGS Na

Presentation Date:  
 Tuesday, June 23.

**SCHEDULE IN-PERSON TODAY OR A WEBEX WITH MARGARET ON THE SIGN-UP SHEET (OR TCRP [ONLINE FEEDBACK FORM](#)) FOR LATER**

Margaret T. Herzog, PE, PMP, PhD  
BIA Climate Program, IT / GIS Systems & Services  
Margaret.Herzog@bia.gov

**BIA LEADS  
DEVELOPMENT OF  
TRIBAL NATIONS  
FOCUS IN GOVT-WIDE  
SYSTEMS**

**TRIBAL NATIONS & ARCTIC THEMES IN THE  
NASA CLIMATE DATA INITIATIVE @ DATA.GOV**

<http://www.data.gov/climate/tribal-nations/>

## Tribal Nations Theme Components

**Overview / Framing Questions**

**GIS Datasets for Indian Lands, Ceded Lands**

**Resources > Maps (interactive and printable)**

**Resources > Tools (by subtopic)**

**Resources > Featured Content**

**Mapping Challenges**

Organizes [Tools](#) and [Taking Action Stories of Resilience](#)

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## Tribal Nations Theme: Data

### Tribal Nations Data

Indian Lands datasets are difficult to correctly interpret, so please visit the [Bureau of Indian Affairs Frequently Asked Questions](#) to aid understanding. Other data sharing limitations to Tribal Nations data selection and thematic content are discussed in the framing questions.

#### Tribal Nations Data

[BIA Indian Lands Dataset \(Indian Lands of the United States\)](#)

[Indian Land Areas Judicially Established 1978](#)

Generally, climate data by themes here can be used by Tribal Nations in similar ways to other communities throughout the United States, except for differences in data selection and emphasis based on cultural values, experience, and unique ties to lands and resources:

**Arctic Theme** – Related data, tools, and featured content here may assist [Alaska Native communities](#), which comprise 229 of the 567 federally recognized tribes (about 40 percent).

**Coastal Flooding Theme** – Related data, tools, and featured content here may support Tribal Nations, Pacific Islanders, State tribes, and other communities living along the nation's coast to contend with [forced relocation](#) and other climate-related challenges associated with growing storm surge and coastal flooding as sea levels rise.

**Ecosystem Vulnerability** – Related data, tools, and featured content here may help Tribal Nations address climate impacts to the integrity and stability of ecosystems, which alters the processes, timing, and location of subsistence and cultural resources upon which Tribal Nations traditionally depend.

Organizes climate data by theme for easy access

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## Tribal Nations Theme: Map Gallery

### Tribal Nations Maps

The Tribal Nations Map Gallery includes printable PDF wall-map versions (24x36) of the Indian and Ceded Lands Web Services found in the data tab.

The Map Gallery also includes interactive maps from federal partners, intertribal groups, and a tribal climate map showcase of example work products to inform climate resilience efforts of tribes, Alaska Natives, and other diverse communities nationwide.



Indian Lands in the United States



Indian Land Areas Judicially Established 1978 and American Indian Reservations



DOE Tribal Energy Programs



Great Lakes Indian Fish and Wildlife Commission Maps



DOI Climate Science Centers



DOI Landscape Cooperatives



USDA Climate Hubs



USFS Tribal Connections - US Forest Service Indian Lands Map Viewer

**Interactive data access and printable maps**



## U.S. Climate Resilience Toolkit

Get Started | Taking Action | Tools

About | Contact | Funding Opportunities | FAQ | Search

Topics > Tribal Nations >

### Tribal Nations

**Key points:**

- *Climate change impacts are projected to be especially severe for many of the 567 federally recognized tribes in the United States that depend on traditional places, foods, and lifestyles.*

## TRIBAL NATIONS & ARCTIC TOPICS IN THE U.S. CLIMATE RESILIENCE TOOLKIT

<http://toolkit.climate.gov/topics/tribal-nations>

## Six Tribal Nations Subtopics *Strategies for Building Climate Resilience*

1. [Assessment and Planning](#)
2. [Adaptation](#)
3. [Mitigation](#)
4. [Disaster Risk Reduction](#)
5. [Relocation](#)
6. [Capacity Building](#)

Organizes [Tools](#) and [Taking Action Stories of Resilience](#)

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## Tribal Nations Tools

- [Guidelines for Considering Traditional Knowledges](#)
- [NWF Climate Smart Conservation](#)
- [NAU ITEP Adaptation Planning Toolkit](#)
- [ANTHC Local Environmental Observers Network](#)
- [\(Swinomish\) Indigenous Health Indicators](#)
- [ANTHC 7 Generations Community Env. Planning](#)
- [GWOW Guiding for Tomorrow Sci & TK Integration](#)
- [Ocean Acidification Curriculum Collection](#)
- [EPA Tribal-FERST Environmental Issues Solver](#)

### [Other Recommended Tools to Include???](#)

Please recommend other tribal tools to assist the nation

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## Tribal Nations SW Taking Action Cases



Mescalero Apache Tribe Adapts to a Warmer and Drier Climate



The Blue Lake Rancheria Tribe Undertakes Innovative Action to Reduce the Causes of Climate Change



Navajo Nation: Hotter, Drier Climate Puts Sand Dunes on the Move

**Please recommend other cases to expand innovation**

White Mountain Apache Wildfire Risk Reduction Case also in development ...

Contact Margaret ([Margaret.Herzog@bia.gov](mailto:Margaret.Herzog@bia.gov)) to showcase your case, too!

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## Seven Arctic Subtopics

1. [Arctic Oceans, Sea Ice and Coasts](#)
2. [Melting Glaciers, Snow and Ice](#)
3. [Arctic Weather and Extreme Events](#)
4. [Permafrost and Arctic Landscapes](#)
5. [Arctic Development and Transport](#)
6. [Arctic People and Ecosystems](#)
7. [Impacts Beyond the Arctic](#)

Announced in conjunction with President Obama's visit to AK Sept. 2nd

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## TCR Resource Guide Listing Pages

### Tribal Climate Resilience Resources

**Agencies**

- DOI**
  - Bureau of Indian Affairs (BIA) Climate Change Program
  - Climate Science Centers (CSCs)
  - Landscape Conservation Cooperatives (LCCs)
  - NCTC Climate Training
- EPA**
  - Climate Change Science (Cases, Indicators)
  - Impacts and Adaptation by Region or Sector
  - American Indian Environmental Office (Tribal Portal)
  - State and Local Climate and Energy Program
- DOE**
  - Tribal Energy Program Funding
  - Office of Indian Energy Policy and Program Assistance
  - BIA HEED Tribal Toolkits for Energy Development
  - EPA Climate Power Plan
- USDA**
  - Climate Hubs
  - USFS Climate Change Resources
  - NRCS Climate Change Adaptation to Variability
  - Office of Tribal Relations
- NOAA**
  - Indigenous Peoples, National Climate Assessment
  - Tribal Nations at U.S. Climate Resilience Toolkit
  - NASA Global Climate Change
  - NOAA Climate
- FEMA**
  - FEMA and Tribal Nations: A Pocket Guide
  - U.S. Army Corp of Engineers Tribal Nations Program
  - CDC Climate and Health Climate-Ready
  - CDC Climate Change Risks

[Provide Feedback >](#)

### Tribal Climate Change Resources

#### Tribal Resource Guide

Tribes    TCUs    Intertribal Groups

#### Tribes

Region	Agency	Tribe
Alaska	Alaska Regional Office	Agdaagux Tribe of King Cove
Alaska	Alaska Regional Office	Akiachak Native Community
Alaska	Alaska Regional Office	Aksik Native Community
Alaska	Fairbanks Agency	Alatna Village
Alaska	Alaska Regional Office	Algasicq Native Village (St. Mary's)
Alaska	Fairbanks Agency	Allakaket Village
Alaska	West-Central Alaska Agency	Angoon Community Association
Alaska	Fairbanks Agency	Anvik Village
Alaska	Fairbanks Agency	Arctic Village
Alaska	Alaska Regional Office	Asa'carsarmiut Tribe
Alaska	Fairbanks Agency	Atkasook Village (Atkasook)
Alaska	Fairbanks Agency	Beaver Village
Alaska	Fairbanks Agency	Birch Creek Tribe
Alaska	West-Central Alaska Agency	Central Council of the Tlingit & Haida
Alaska	Fairbanks Agency	Chalkyitsk Village
Alaska	Alaska Regional Office	Cheesh-Na Tribe
Alaska	Alaska Regional Office	Chevak Native Village
Alaska	Alaska Regional Office	Chickaloon Native Village
Alaska	Alaska Regional Office	Chignik Bay Tribal Council
Alaska	Alaska Regional Office	Chignik Lake Village
Alaska	West-Central Alaska Agency	Chikot Indian Village (Kukwan)
Alaska	West-Central Alaska Agency	Chilkoot Indian Association (Haines)
Alaska	West-Central Alaska Agency	Chinik Eskimo Community (Golovin)
Alaska	Alaska Regional Office	Chuloonawick Native Village
Alaska	Fairbanks Agency	Circle Native Community
Alaska	West-Central Alaska Agency	Craig Tribal Association
Alaska	Alaska Regional Office	Curyung Tribal Council
Alaska	West-Central Alaska Agency	Douglas Indian Association

## TCR Resource Guide: Agency Fact Sheet

### Tribal Climate Resilience Resources

#### Bureau of Indian Affairs (BIA)

#### Services

- [Link BIA Service 1](#)
- [Link BIA Service 2](#)
- [Link BIA Service 3](#)
- [Link BIA Service 4](#)

#### Funding

- [Link BIA Funding 1](#)
- [Link BIA Funding 2](#)
- [Link BIA Funding 3](#)
- [Link BIA Funding 4](#)

#### Training

- [Link BIA Training 1](#)
- [Link BIA Training 2](#)
- [Link BIA Training 3](#)
- [Link BIA Training 4](#)

#### Products

- [Link BIA Product 1](#)
- [Link BIA Product 2](#)
- [Link BIA Product 3](#)
- [Link BIA Product 4](#)

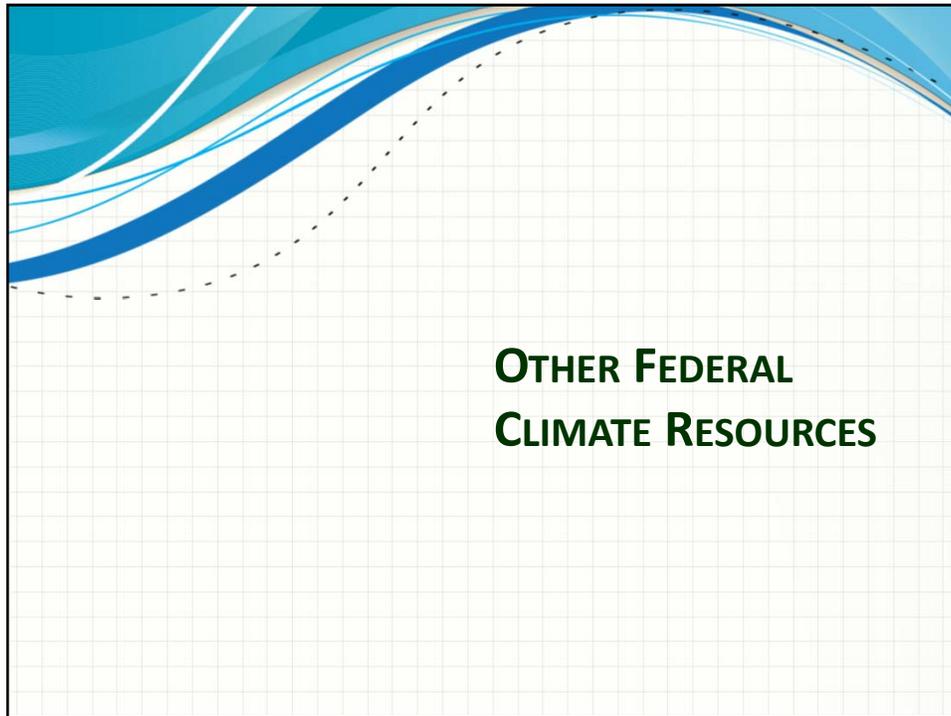
#### Tools

- [Link BIA Tool 1](#)
- [Link BIA Tool 2](#)
- [Link BIA Tool 3](#)
- [Link BIA Tool 4](#)

#### Examples

- [Link BIA Example 1](#)
- [Link BIA Example 2](#)
- [Link BIA Example 3](#)
- [Link BIA Example 4](#)

FY16 WHCNA Climate Subgroup Inventory      [Provide Feedback >](#)



**DOI Climate Science Centers and Tribes**

<https://nccwsc.usgs.gov/tribal-indigenous>

- ✓ BIA Tribal Climate Liaisons being placed in each CSC
- ✓ Tribal reps help guide [Advisory Committee on Climate Change and Natural Resource Science](#)
- ✓ Climate Research Projects and Training for Tribes
- ✓ Download data and research reports
- ✓ [Guidebook for Traditional Knowledges, and a Primer for Climate Change and Indigenous Peoples](#)
- ✓ Some TCUs and tribes serve in CSC consortiums
- ✓ Work with your CSC to ensure in reauthorization TCU, tribes or intertribal group is a consortium member



NATIONAL *fish, wildlife & plants*  
CLIMATE ADAPTATION STRATEGY

<http://www.wildlifeadaptationstrategy.gov>

- ✓ *Shared Solutions to Protect Shared Values*
- ✓ Seven Strategies to Ensure Resilient Ecosystems
- ✓ Video, Brochure, Full Report, Background Papers
- ✓ Taking Actions (Using the Strategy)
- ✓ Engagement (Getting Involved and Involving Others)
- ✓ Learn More about Impacts & Adaptation
- ✓ Adaptation Leadership Award Honors Innovators
- ✓ Case Studies by Region and Habitat Type
- ✓ Join Landscape Conservation Collaborative to assist!

### DOI Landscape Conservation Cooperatives (LCCs)

Find an LCC: <http://lccnetwork.org/map>



Landscape Conservation Cooperative Network

- Aleutian and Bering Sea Islands
- Appalachian
- Arctic
- California
- Caribbean
- Desert
- Eastern Tallgrass Prairie and Big Rivers
- Great Basin
- Great Northern
- Great Plains
- Gulf Coast Prairie
- Gulf Coastal Plains and Ozarks
- North Atlantic
- North Pacific
- Northwest Boreal
- Pacific Islands
- Peninsular Florida
- Plains and Prairie Potholes
- South Atlantic
- Southern Rockies
- Upper Midwest and Great Lakes
- Western Alaska

- LCCs may collect and analyze phenology data – how ecology is changing, bud bursts, shifting species
- LCCs may have one or more tribes on their steering committee or subcommittees to help prioritize projects
- LCCs assist tribes to coordinate efforts across larger areas, longer-term with more diverse stakeholders

## EPA Tribes & Climate Support

- EPA Tribal Portal <http://www2.epa.gov/tribal/>
  - iGAP funding, EcoAmbassadors, TSC, Alerts
- Tribal addition to Local Climate Action Framework
  - On-demand training, tools, resources, more.
- Tribal Green Building Codes  
<http://www3.epa.gov/region09/greenbuilding/codes/>
- Climate Indicators  
<http://www3.epa.gov/climatechange/science/indicators/>
- Tribal Pages (Not climate-specific, but tribal programs!)
- Climate Pages (Adaptation, Mitigation, Air, Water, Wastes)
- Regional Pages – contact your EPA RO Tribal Liaison



## USDA Tribes & Climate Support

- County Extension or Conservation Districts – may not be aware of tribal programs
- Contact your USDA Service Center
- Visit your NRCS District Office
- Contact the Regional Climate Hub
- Work with your USDA & USFS Tribal Liaisons

<http://forestadation.org>



**DOE Tribal Energy**  
<http://apps1.eere.energy.gov/tribalenergy/>

U.S. DEPARTMENT OF ENERGY Energy Efficiency & Renewable Energy

**Tribal Energy Program**

HOME ABOUT **PROJECTS** EDUCATION & TRAINING CLEAN ENERGY DEVELOPMENT GUIDE TECHNICAL ASSISTANCE FINANCIAL OPPORTUNITIES INFORMATION RESOURCES EVENTS

EERE » Tribal Energy Program » Projects

**Projects on Tribal Lands**

The Tribal Energy Program supports a variety of energy-related projects on tribal lands. Through these projects, tribes have built the institutional capacity to manage their energy needs, assessed the feasibility of energy efficiency and renewable energy installations. And they have demonstrated the viability of installing renewable energy systems on tribal lands.

To see a list of tribal energy projects [by state](#), select a state on the map below or from the list at the bottom of the page. Or see lists of projects by:

- [Tribal name](#)
- [Technology](#) (e.g., biomass, energy efficiency, solar, wind)
- [Fiscal year of award](#) (year when project was initially funded)
- [Project type](#) (e.g., feasibility study, deployment project, etc.)

Each project has a detailed description that includes a tribal contact for more information. If you're interested in how the Tribal Energy Program has funded projects over the years, see the [funding history](#).

**Tribal Energy Projects (2002–2014)**

DOE has invested \$48 million in 183 tribal clean energy projects valued at \$93.6 million. DOE's investments were leveraged by \$45.6 million in tribal cost-share. Tangible results of these investments include:

- Retrofitted 70 tribal buildings (representing more than 1.8 million square feet), saving tribes more than 10 million kilowatt-hours of energy and \$2.5 million per year
- Completed energy audits on more than 250 tribal buildings
- Helped move more than 580 megawatts of potential new renewable energy generation into development
- Supported tribes in assessing the potential for more than 4 gigawatts of new renewable energy generation
- Over 170 tribal members trained as part of these tribal energy projects

Read about Tribal Energy Program [Success Stories](#).

**IEED Tribal Toolkit / TEEI Clearinghouse**  
<http://www.bia.gov/WhoWeAre/AS-IA/IEED/DEMD/TT/index.htm>

**Tribal Energy and Environmental Information CLEARINGHOUSE**  
Environmental resources for tribal energy development  
Office of Indian Energy and Economic Development

Energy Resources Assessments/Monitoring Laws & Regulations

The Tribal Energy and Environmental Information Clearinghouse (TEEIC) provides information about the environmental effects of energy development on tribal lands.

The site includes information about energy resource development and associated environmental impacts and mitigation measures; guidance for conducting site-specific environmental assessments and developing monitoring programs; information about applicable federal laws and regulations; and federal and tribal points of contact.

**Energy Resources**  
Energy resource development, environmental impacts, legal requirements, mitigation measures, programs/incentives, and case studies.

- ▶ Biomass
- ▶ Carbon Sequestration
- ▶ Coal
- ▶ Geothermal
- ▶ Hydrokinetic
- ▶ Low-Head Hydropower
- ▶ Oil & Gas
- ▶ Solar
- ▶ Transmission
- ▶ Wind
- ▶ Efficiency & Conservation

**Assessments & Monitoring**  
How to prepare project-specific impact assessments, identify appropriate mitigation measures, and develop monitoring programs.

- ▶ Site-Specific Assessments
- ▶ Monitoring Programs

**Laws & Regulations**  
Federal laws and regulations applicable to energy development on tribal lands.

- ▶ Acoustics (Noise)
- ▶ Air Quality
- ▶ Cultural & Paleontological Resources
- ▶ Ecological Resources
- ▶ Energy Resource Development
- ▶ Environmental Justice
- ▶ More...

## FEMA and Tribal Nations: A Pocket Guide

<https://www.fema.gov/media-library/assets/documents/99643>

The screenshot shows the FEMA website's navigation menu with categories like 'Plan, Prepare & Mitigate', 'Disaster Survivor Assistance', 'Response & Recovery', 'Topics & Audiences', 'Blog, Newsroom, Videos & Photos', and 'About FEMA'. Below the menu is a search bar and social media links. The main content area features the title 'FEMA and Tribal Nations: A Pocket Guide.pdf', a brief description of the guide's purpose, and a call to action: 'See [Disaster Risk Reduction subtopic](#) in the Tribal Nations Topic in the U.S. Climate Resilience Toolkit'. A thumbnail image of the guide's cover is also visible.

## ITEP Adaptation Training, Tools, Resources

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

The screenshot displays the ITEP website's 'Events' section. It features a navigation bar with 'NORTHERN ARIZONA UNIVERSITY' and 'TRIBES & CLIMATE CHANGE ITEP'. Below the navigation is a menu with options like 'Basic Info', 'Tribal Profiles', 'Tools & Resources', 'Take Action', 'Events', 'Contacts', 'Search', and 'Home'. The 'Events' section includes a group photo of people outdoors and a text box asking if the user knows of any upcoming events not listed, with contact information for Susan.Wotkyns@nau.edu. At the bottom, there is a calendar for August 2015 with event listings for August 27th, 28th, and 29th.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	26	27	28	29	30	31
		Workshop: New Mexico Tribal Leader Forum and Commur	Training: Climate-Smart Conservation	Workshop: Springs Assessment and Climate Adaptation V		
2	3	4	5	6	7	8

## Expanded! Tribal Climate Change Resource Guide

<http://tribalclimateguide.uoregon.edu/>

**UNIVERSITY OF OREGON**

### Tribal Climate Change Guide

The Tribal Climate Change Guide is part of the Pacific Northwest Tribal Climate Change Project. For more information, visit: <http://tribalclimateguide.uoregon.edu/> November 2015 and is a beta version of our new online guide. We are still working on adding to the guide, including new information tabs. If you have any questions or updates for this guide, email: [kathy@uoregon.edu](mailto:kathy@uoregon.edu).

Funding
Adaptation Plans
Climate Programs
Climate Tools
Scientists
Literature
Climate Education
Climate Jobs
Events

### Funding

The Tribal Climate Change Funding Guide is intended to provide up-to-date information on grants, programs and plans that may assist tribes. For more information, visit: <http://tribalclimateguide.uoregon.edu/funding>. If you have any questions or updates for this guide, email: [kathy@uoregon.edu](mailto:kathy@uoregon.edu).

**Search by Keyword**

**Geography**

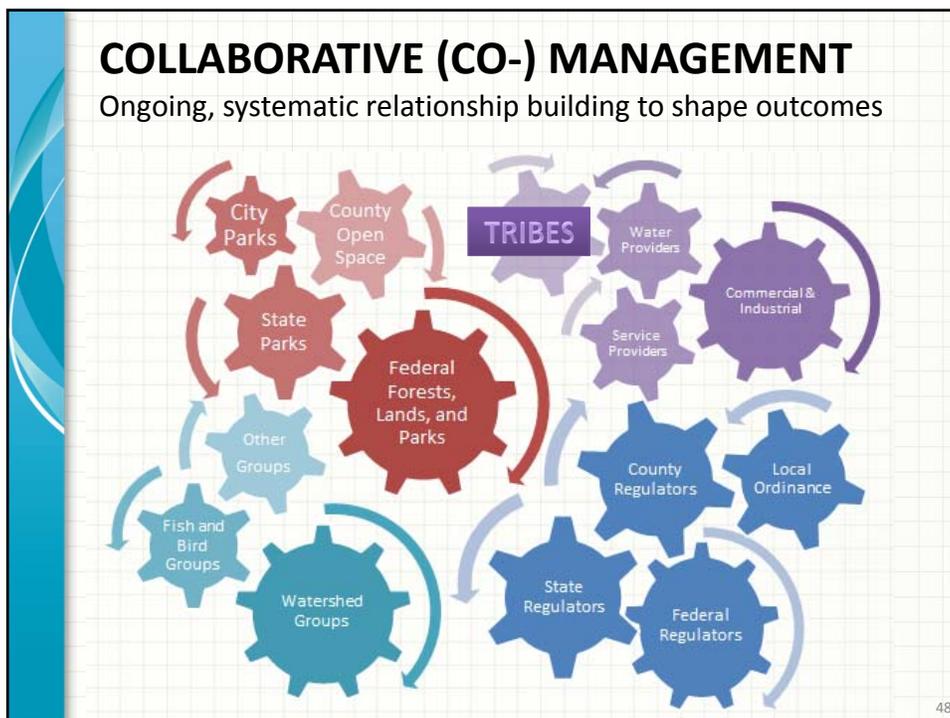
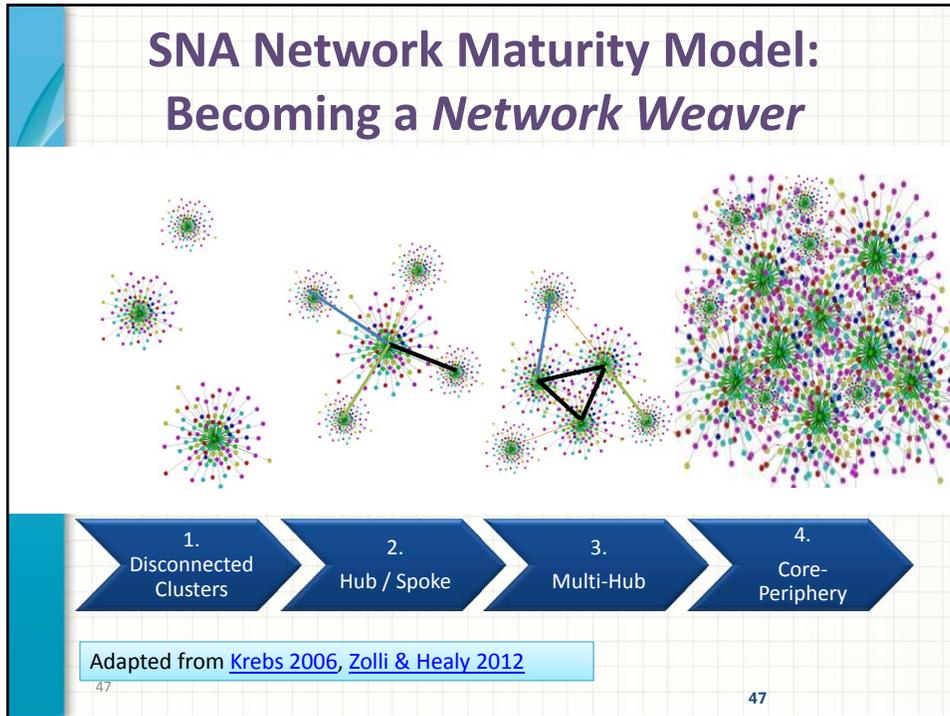
- Any - ▾

Apply

Reset

Title	Organization	Grant Deadline ▲	Description
NOAA 2016 Coral Reef Conservation Program International Coral Reef Conservation Cooperative Agreements	NOAA (National Oceanic and Atmospheric Administration)	11/19/2015	The NOAA Coral Reef Conservation Program (CRCP) provides matching grants for international solicitations that will support the NOAA Coral Reef Conservation Program's International Strategy. The International Strategy focuses on supporting existing regional efforts in four priority regions: the Caribbean, the Pacific, the Indian Ocean, and the Arctic. Two of these four priority regions will be Opportunity, the Wider Caribbean and Micronesia. In FY 2016, the CRCP will accept applications for a two-year project period focused on building international capacity for the effective ecosystem-b





## Indigenous People's Climate Change Working Group (IPCCWG)

- Dan Wildcat and Bull Bennett started the group
- Meet in the Spring and Fall
- Working Groups meet throughout the year more
- NASA ELO summer intern program prepares college students for climate careers (<http://kiksapa.com>)



[https://www.facebook.com/pages/Indigenous-Peoples-Climate-Change-Working-Group/205930409437836?hc\\_location=timeline](https://www.facebook.com/pages/Indigenous-Peoples-Climate-Change-Working-Group/205930409437836?hc_location=timeline)

## Southwest Tribal Climate Network – **NEW!**

<http://www.ccass.arizona.edu/nncap>



**Native Nations Climate Adaptation Program**

Native Nations Climate Adaptation Program  
*"Enhancing the Ability of Native Americans and their Nations to Meet the Climate Challenge"*

**Mission:**  
The Native Nations Climate Adaptation Program will build the capacity of The University of Arizona to work collaboratively in the western United States and Mexico with Native American tribes and indigenous populations to develop and implement solutions to their environmental concerns, especially those related to climate and climate change impacts.

**Primary Objectives for Haury Native Nations Climate Adaptation Program:**

**News**  
Now Hiring for Student Position  
Looking for solutions? ¿Está buscando soluciones?

**Highlights**  
Native Nations Climate Adaptation Program

**American Indian Higher Education Consortium (AIHEC)**

TRIBAL Colleges: *Educating, Engaging, Innovating, Sustaining*

Home Who We Are Who We Serve What We Do Our Stories

**Land and Place**

> **AI Kuslikis is working with NOAA and BIA to leverage Toolkit at TCUs**

reports

- 2015 Tribal ecoAmbassadors Program Summary
- 2013-2014 Tribal ecoAmbassadors
- 2011-2012 Tribal ecoAmbassadors
- Living Science
- Protecting Our Home

**EPA Tribal ecoAmbassadors**

The U.S. Environmental Protection Agency (EPA) seeks to strengthen partnerships with local communities to implement innovative solutions to today's most pressing environmental issues. Recognizing AIHEC's unique relationship and commitment to the 37 Tribal Colleges and Universities (TCUs) and the important role TCUs play within their communities, EPA has partnered with AIHEC to pilot the Tribal ecoAmbassador Program. The Tribal ecoAmbassador Program supports research in partnership with TCUs. One or more TCU professors are selected to serve as project ecoAmbassador, leading project staff and students in the use of funding and technical support from EPA to solve environmental problems most important to their tribal governments and communities. Together AIHEC and EPA aim to provide ongoing project support, promote environmental education, and find solutions to environmental problems in tribal communities.

**EPA Tribal ecoAmbassadors, USDA, and Other Partners**

<http://www.aihec.org/our-stories/landPlace.cfm>

**American Indian Science and Engineering Society (AISES)**

AMERICAN INDIAN SCIENCE AND ENGINEERING SOCIETY

Become a Member | Member Login

Stay Connected | Donate Now | Contact Us

About AISES Membership Our Programs Careers Scholarships & Internships News & Events Support AISES National Conference

Working to Increase the Representation of American Indians and Alaskan Natives in Engineering, Sciences and Other Related Technology Disciplines

**Power-Up Workshops**

Power Up workshops are designed to boost student engagement in science fairs and to improve the quality and quantity of science fair research and projects entered at the local, national, and international level. The target audience, for these ½ day workshops, is middle and high school students (grades 5 through 12) and their educators.

[Learn More](#)

> **Nat. Conf. Nov 19-21**

> **Student Internships, Scholarships, Mentoring**

<http://www.aises.org>

## First Nations Development Corp (FNDI)



First Foods, Gardens,  
Community Development  
[www.firstnations.org](http://www.firstnations.org)

- Also Works with TCUs and Foundations on Projects
- Helps Communities think through their problems together



### Food Sovereignty SUMMIT

This is a forum for sharing and collaboration to build healthy food systems within our com

October 26-29, 2015 • Radisson Hotel • Green Bay, WI

## The Evergreen State College Native Cases Project and Emory U. CASES Online

HOME ABOUT CASES TEACHING WITH CASES ASSESSMENT

# CASES Online

Creating Active Student Engagement in the Sciences

## ENDURING LEGACIES

# Native Case Studies

**FEATURED CASE STUDY**  
The Twilight Saga and the Quileute Indian Tribe: Opportunity or Cultural Exploitation?  
Barbara Leigh Smith  
This case explores the impact of a blockbuster series of books and films, "The Twilight Saga," on the Quileute Indian Tribe and the small town of Forks, Washington.

[READ CASE](#)

[EXPLORE CASE STUDIES](#)

Browse cases by [discipline](#), [alphabet \(a-z\)](#), [theme](#) or [featured tribe](#)

- Barbara, Linda, and Jean can help adapt [Tribal Nations cases](#) into case curriculum
- AIHEC Nikki Santos received training in June



**WHY NATIVE CASES?**  
Teaching with cases has great results!

- Students are more engaged in class
- Students demonstrate stronger critical thinking skills
- Students view issues from multiple perspectives
- Students develop positive peer relations
- Students develop a deeper understanding of content
- Non-Native students increase awareness of Native perspectives & issues
- Students feel curriculum is more culturally relevant

[Learn more](#) →

<http://nativecases.evergreen.edu/> & <http://www.cse.emory.edu/cases/>

## Early Career Climate Forum

https://www.eccforum.org

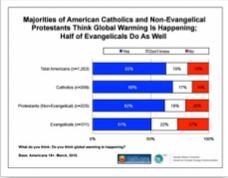


Early Career Climate Forum

Home Writers Blog Resources Forum Login

**Derived by students from DOI Climate Center Internship Climate Bootcamps**

**Any student interested in Climate can join!**



**Majorities of American Catholics and Non-Evangelical Protestants Think Global Warming is Happening; Half of Evangelicals Do As Well**

Group	Think Global Warming is Happening	Do Not Think Global Warming is Happening
Total Americans (n=2,000)	74%	24%
Catholics (n=1,000)	74%	24%
Protestants (Non-Evangelical) (n=1,000)	74%	24%
Evangelicals (n=1,000)	51%	48%

### Pope Francis and Re-Framing the Discussion on Climate Change

JUL 20, 2015 • ZACHARY SCHUSTER

The biggest climate change news of 2015 has come from a rather unlikely source: The Vatican of Rome. On June 18<sup>th</sup>, 2015, Pope Francis released his first encyclical, or papal letter, entitled "... more

Find us on  

**Tweets** 

 **ECCForum** @ECCForum 20h

IBM and NREL are developing free and better solar and wind forecasts for the continental US. [mashable.com/2015/07/21/wea...pic.twitter.com/P072sUKXof](http://mashable.com/2015/07/21/wea...pic.twitter.com/P072sUKXof)

https://www.eccforum.org/

## Adapting Climate Tools and Curriculum for Tribes



**cake**  
Climate Adaptation Knowledge Exchange

<http://www.cakex.org>

<http://scied.ucar.edu>

**UCAR** CENTER FOR SCIENCE EDUCATION

HOME TEACHERS STUDENTS LEARNING ZONE VISIT NCAR

Adaptation Workbook: An adaptation plan using your expertise, your judgment, and your land.

Use the Workbook

SEARCH CAKE





**Climate-Eval** <https://www.climate-eval.org>

Sharing good practices on climate change and development evaluation

Home About Us Blogs News & Events Studies 2014

**Framework for Monitoring and Evaluation**

By: Harris E. Sanahuja

Study on Framework for Monitoring and Evaluation

<http://www.usaid.gov/climate/>



**Alaska Native Knowledge Network**

Resources for compiling and exchanging information related to Alaska Native knowledge systems

Home About ANKN Publications Academic Programs Curriculum Resources Calendar of Events Announcements

Welcome to Alaska Native Knowledge Network

<http://ankn.uaf.edu>

**Attend! OACC**

**NextGen Science Standards**

56 Margaret T. Herzog, PE, PMP, PhD (720) 484-3353 Margaret.Herzog@bia.gov http://www.indianaffairs.gov/ovrover@bpcvclimatechange/indext.htm

Citizen Science and Community Monitoring Programs

CitSci.org <http://citsci.org> Welcome Guest! Login Register

Home About Projects Maps Data Services What's Being Measured

CitSci.org - Supporting the science you do!

188 projects	399,695 measurements	1,221 members	27,986 locations	759 protocols	Start a Project >
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Benefits Featured Project New Observations

<http://citizenscienceassociation.org/>

# Citizen Science Association

A community of practice for the field of public participation in scientific research.

**AIHEC wishes to develop a Tribal Climate CoP with TCUs hubs!**

57 Margaret T. Herzog, PE, PMP, PhD (720) 484-3353 Margaret.Herzog@bia.gov <http://www.indianaffairs.gov/WhoWeAre/BIA/climatechange/index.htm>

## BIA CLIMATE PROGRAM HIGHLIGHTS

## BIA Climate Program Highlights

- BIA is the designated federal lead agency to support tribes
- Federal agencies will work to improve coordinated tribal support
- BIA placing tribal liaisons in DOI Climate Science Centers (CSCs)
- Join! Your DOI Landscape Conservation Cooperatives (LCCs)
- BIA Climate Website, News, Portal, Services, Network Expanding
- **Sign up!** Schedule in person later today or by WebEx with Margaret later to discuss your needs as a group

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## Seven Generation Philosophy

*Building Resilience for Future Generations*

### Onondaga Nation, Chief Oren Lyons

*When you sit and you council for the welfare of the people, think not of yourself nor of your family nor even your generation. Make your decisions on behalf of the seventh generation coming. Those faces looking up from the earth, layer upon layer, waiting their time.*



#### ***The Future is Looking to Us***

Photo and Caption by Art Ivanhoff  
Bering Sea Alliance, LLC  
<http://www.beringseaalliance.com>

Quote from Lyons, O. April 2008. Oren Lyons: Looking Toward the Seventh Generation. Presentation, American Indian Studies Program, University of Arizona, Tucson, Arizona  
<https://nndatabase.org/db/video/oren-lyons-looking-toward-seventh-generation>

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**QUESTIONS?**

**SIGN UP FOR A 1ON1 TODAY!**  
**OR AS A FUTURE WEBEX**

**SIGN UP FOR A COPY OF THE PRESENTATION**  
**SIGN UP FOR BIA CLIMATE NEWS ALERTS**

## Bureau of Indian Affairs

### TRIBAL CLIMATE RESILIENCE PROGRAM

CLIMATE CHANGE

Go to <http://www.bia.gov/> and select **Category: Climate Change**

Mainstreaming climate change considerations into all Bureau of Indian Affairs (BIA) activities, and supporting tribal goals to do the same, is a high priority for the administration and the Department of the Interior (DOI). Climate change will bring new challenges to Indian Country and Alaska Native Villages. The **President's Climate Action Plan** identified the BIA as the **lead agency** to support tribes as they address this challenge.

**Margaret T. Herzog, PE, PMP, PhD**  
IT / GIS Systems and Services

**Tribal GIS Conference**  
Thursday, 11/19 9AM