

# DFG Climate College: Lecture #4

The National Response: What are other state and federal partners doing?



Arpita Choudhury, Association of  
Fish and Wildlife Agencies



Richard Kearney, U.S. Fish and  
Wildlife Service



# Reminder: Course Project

## Not your ordinary project!

- Collaborate with colleagues
- Integrate climate change into your work
- Host a climate change brown bag



# DFG Climate College: Lecture #4

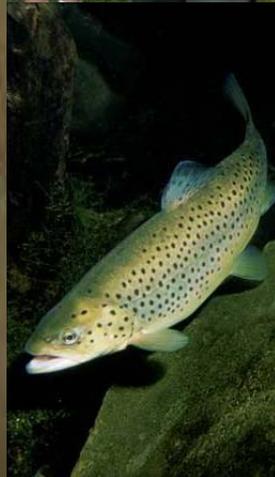
The National Response: What are other state and federal partners doing?



**Arpita Choudhury**  
Association of Fish and Wildlife  
Agencies

**The State of State Climate  
Adaptation Activities**



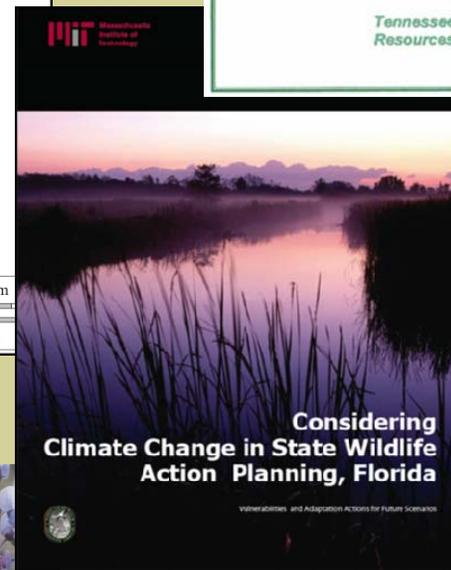
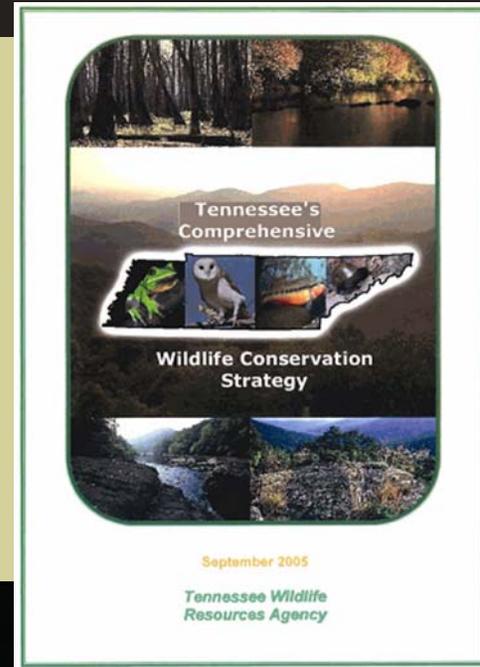
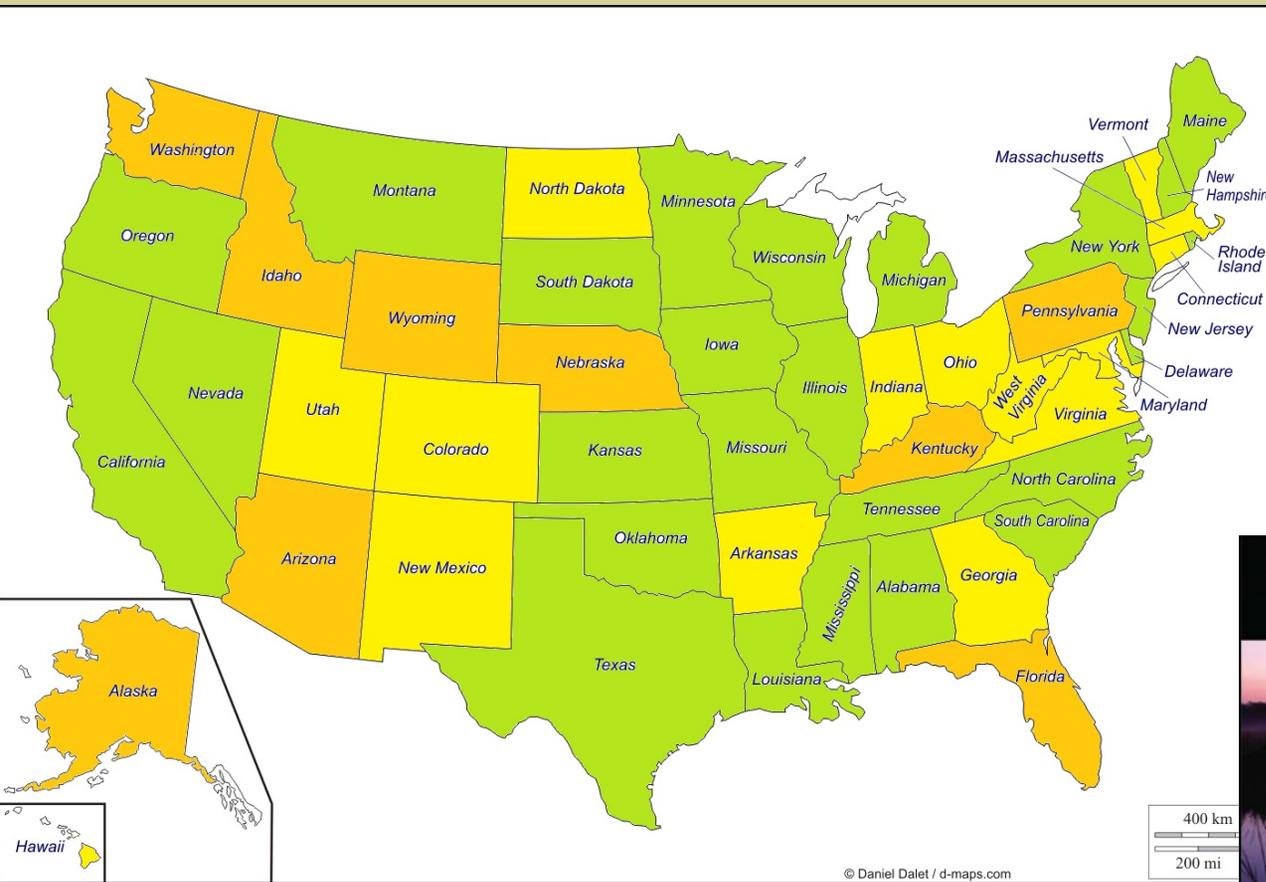


# The State of State Climate Adaptation Activities

**Aspita Ghoshhury**  
**APWA Science & Research Liaison**



# State Wildlife Action Plans



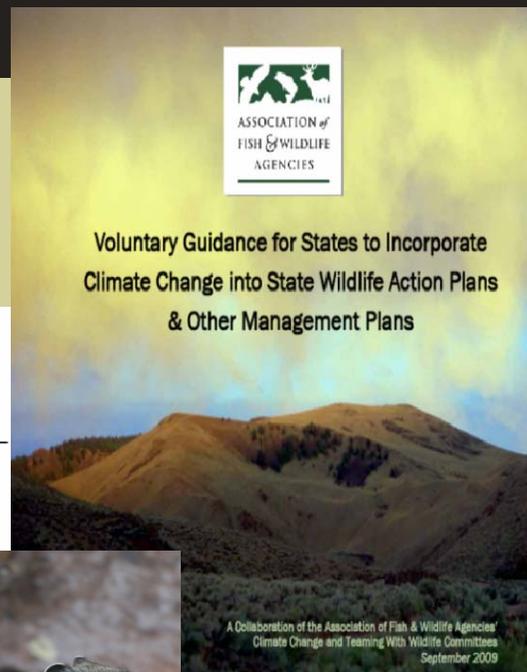
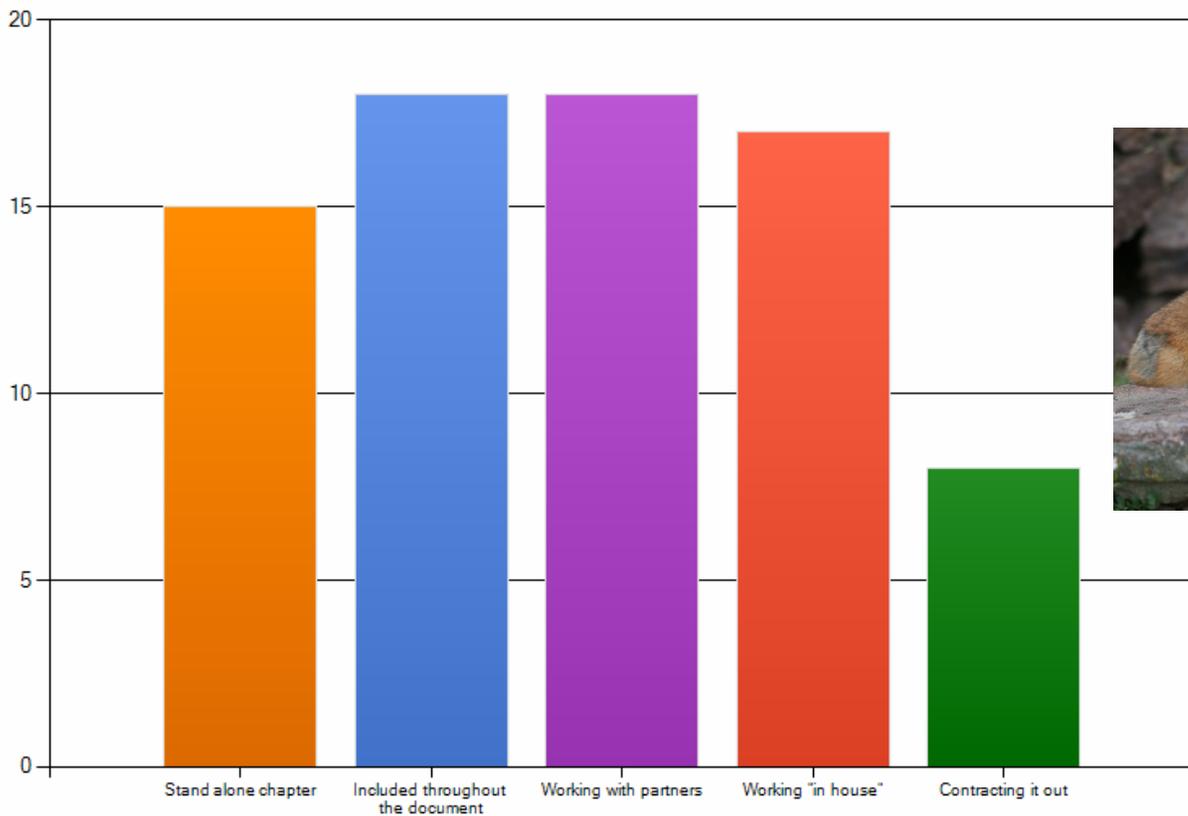
Incorporating Climate Change into State Wildlife Action Plans: Orange States-Completed; Green States-In Process; Yellow States-Not Yet



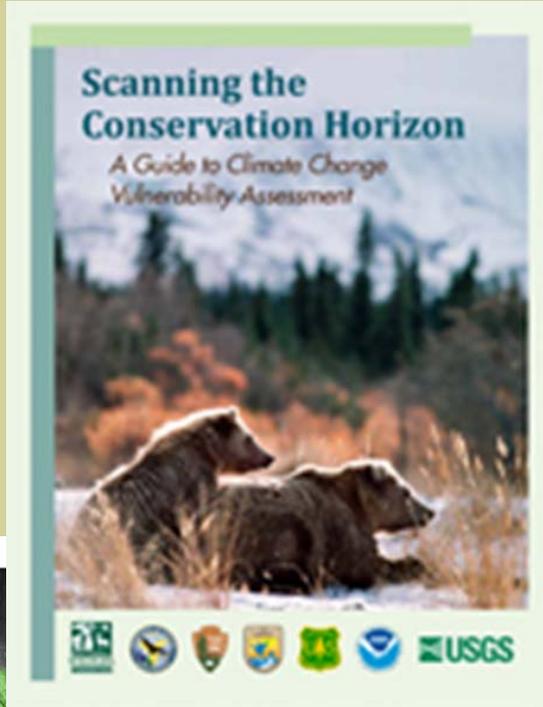
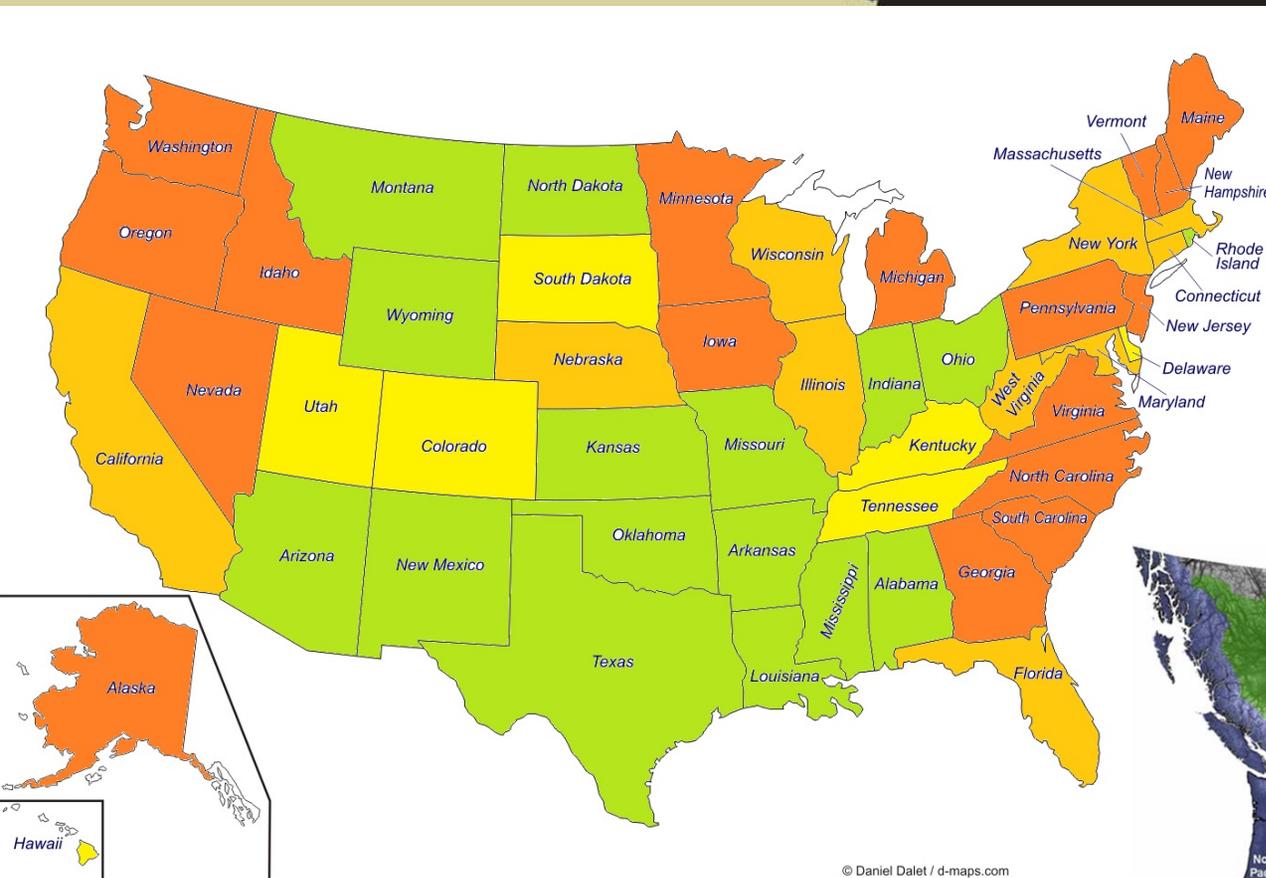
# State Wildlife Action Plans

## *As a Platform for Adaptation*

If so, how is your agency updating their State Wildlife Action Plan for climate change?  
(Choose all that apply)



# Vulnerability Assessments

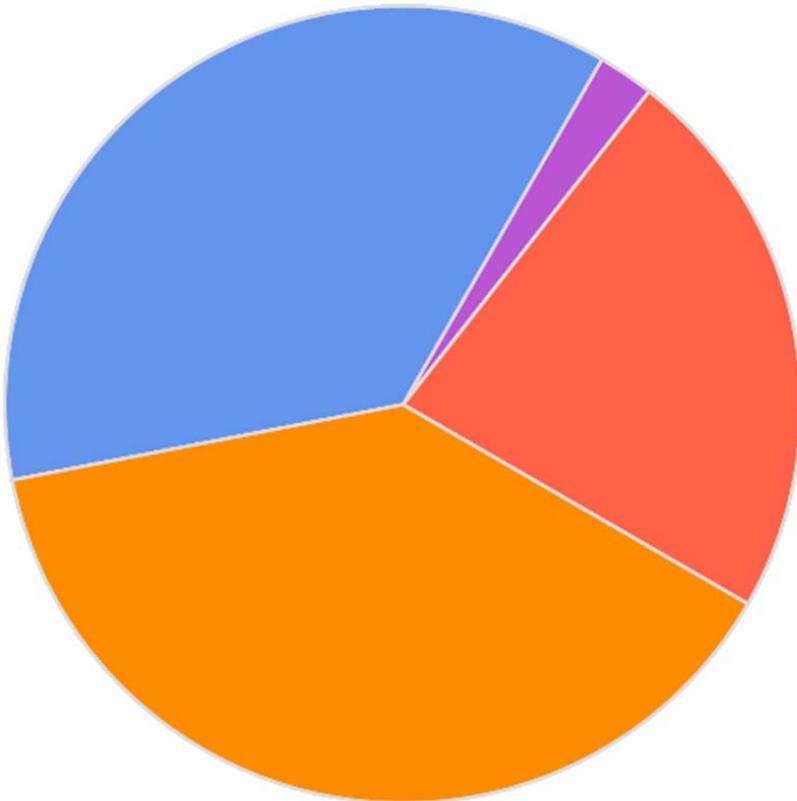


Vulnerability Assessments: Light Orange States-Completed; Dark Orange States-Under Way; Yellow States-Determining Process; Green States-Not Yet



# Vulnerability Assessments

If the answer is yes, what process was used? (Choose all that apply)



Guidelines for Using the  
NatureServe Climate Change  
Vulnerability Index



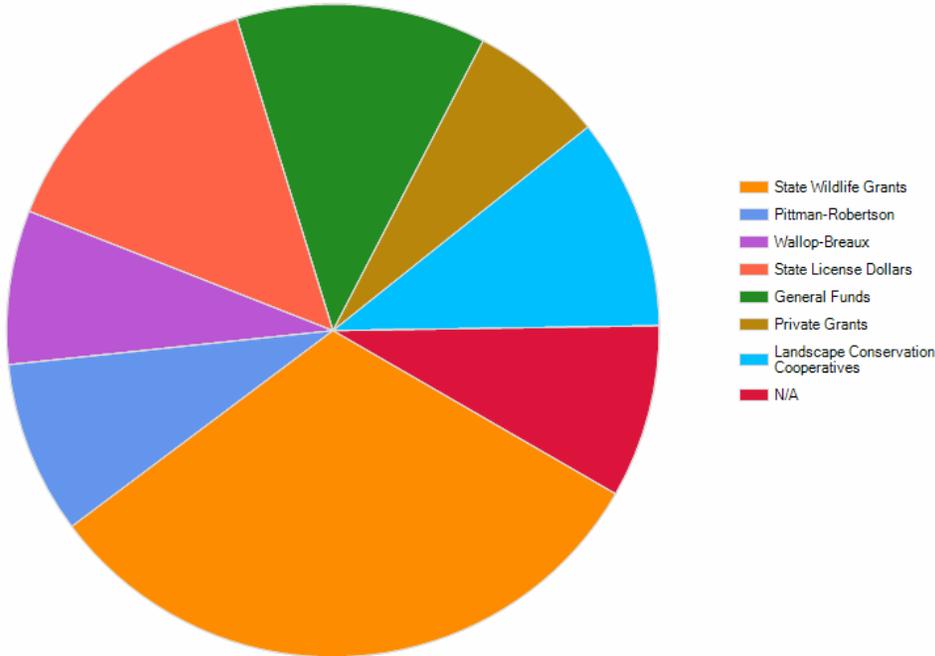
-  NatureServe Vulnerability Index
-  Expert Panel
-  USFS SAVS System (System for Assessing Vulnerability of Species to Cl...)
-  Self-Developed Framework or Index



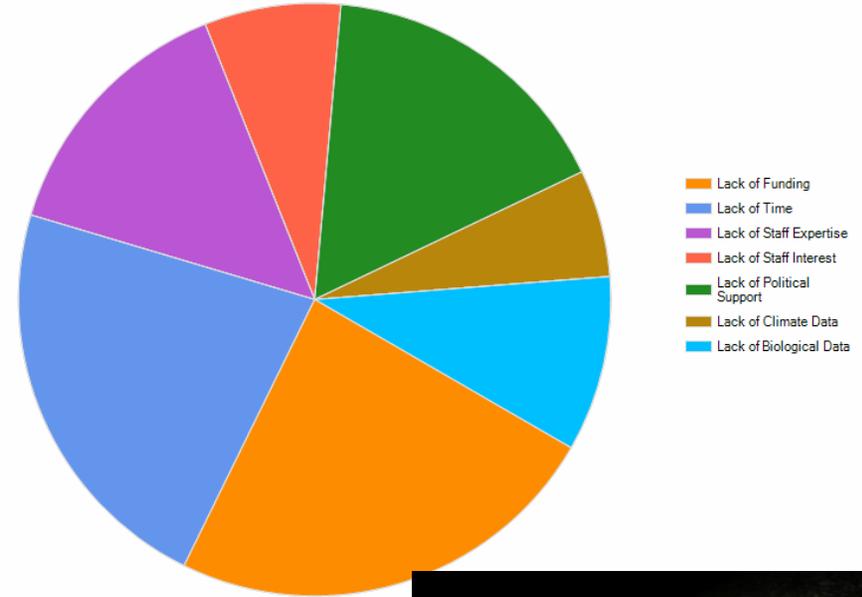


# Challenges & Barriers

How does your agency fund climate change work? (Choose all that apply)



What are the challenges/barriers that are holding your agency back from doing climate change work? (Choose all that apply)



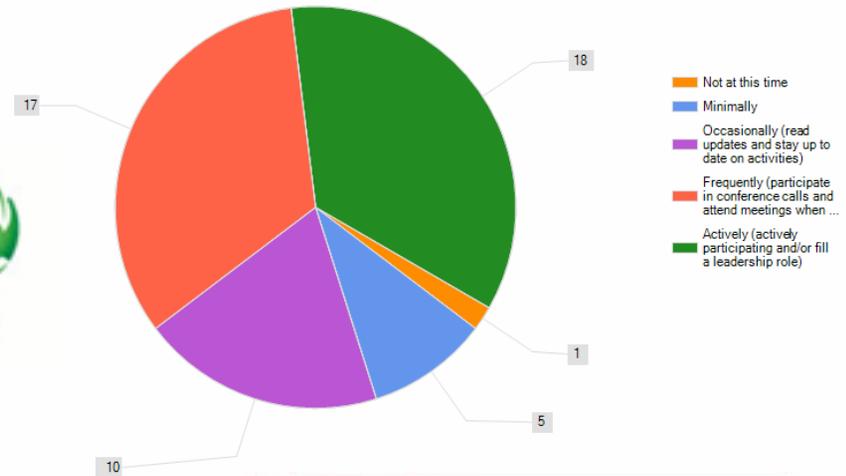
# Partnerships

## A Future Conservation Landscape to Sustain Fish and Wildlife in the Southeast

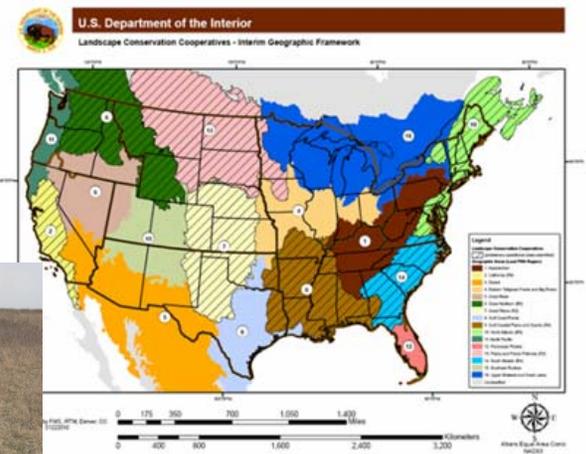
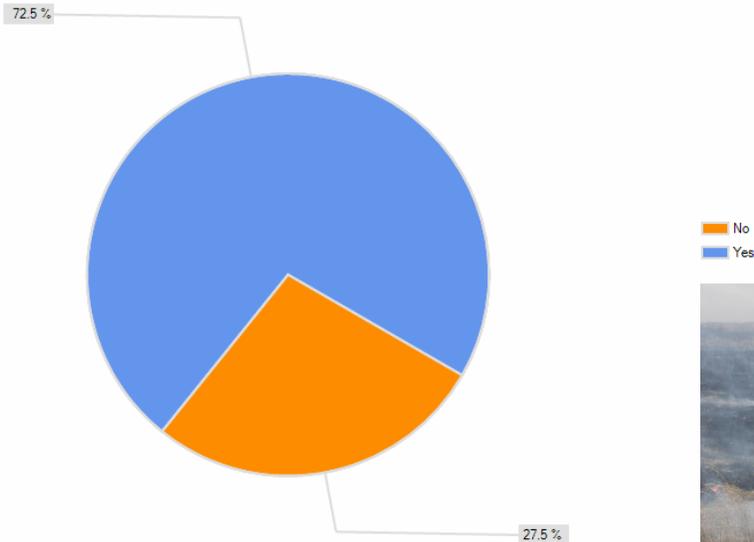
A Briefing Document for SEAFWA Directors



## Is your agency working with the Landscape Conservation Cooperatives?

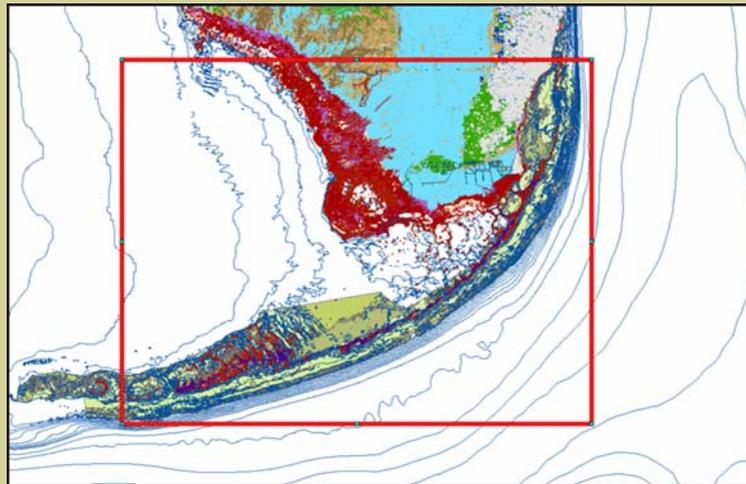


## Is your agency involved in collaborative climate change projects with conservation partners (federal, state, NGO, academia, etc...)?



# FWC Climate Projects

- Developing Climate Change Adaptation Strategies for Florida
- Alternative Futures Under Climate Change for the Florida Key's Benthic and Coral Systems
- Predicting and Mitigating the Effects of Sea-Level Rise and Land Use Changes on Imperiled Species and Natural Communities in Florida
- SLRP – The Development and Implementation of the FWC Sea Level Rise Program



# Wisconsin Climate Change Initiative

## WISCONSIN'S CHANGING CLIMATE:

### IMPACTS AND ADAPTATION

The first report of the Wisconsin Initiative on Climate Change Impacts

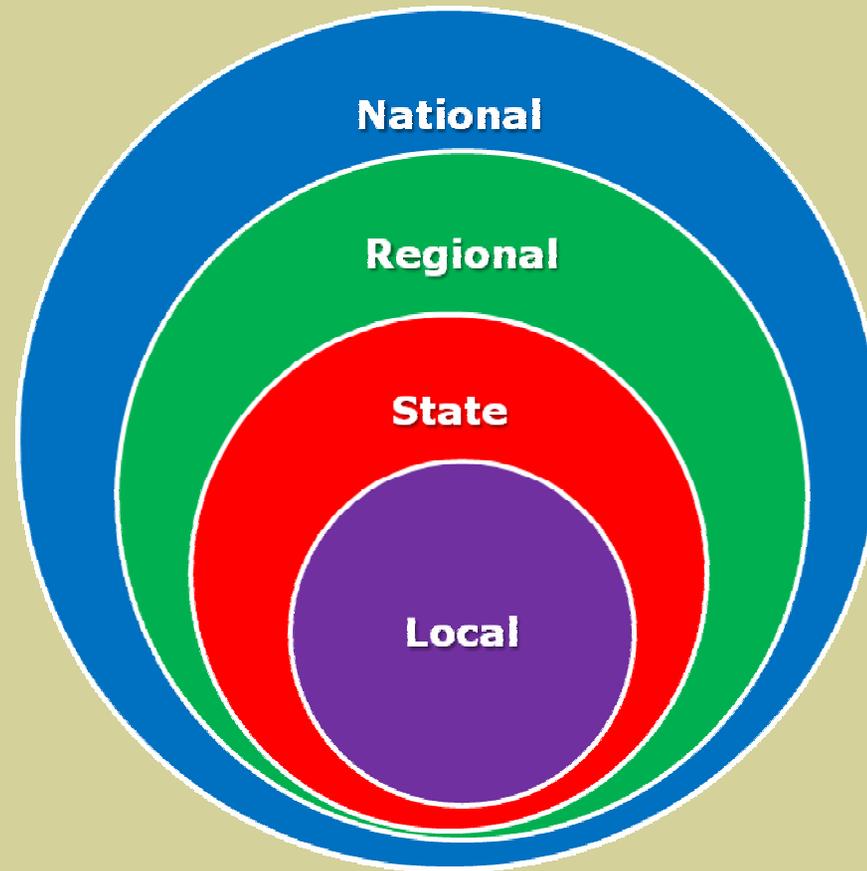
2017

## Working Groups

- Agriculture
- Central Sands Hydrology
- Coastal Communities
- Coldwater Fish & Fisheries
- Forestry
- Green Bay
- Human Health
- Milwaukee
- Plants & Natural Communities
- Soil Conservation
- Stormwater
- Water Resources
- Wildlife



# Growing Adaptation Framework





# NATIONAL *fish, wildlife & plants* CLIMATE ADAPTATION STRATEGY

## Goals:

- Conserve habitat
- CS management
- Increase capacity
- Adaptive management
- Increase information
- Motivate action
- Reduce stressors

## Outcomes:

- Collaboration
- Coordination
- Integration
- Understanding
- Larger scales
- Efficiency
- Effectiveness
- Resilience
- Adaptation





[achoudhury@fishwildlife.org](mailto:achoudhury@fishwildlife.org)



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The National Response: What are other state and federal partners doing?



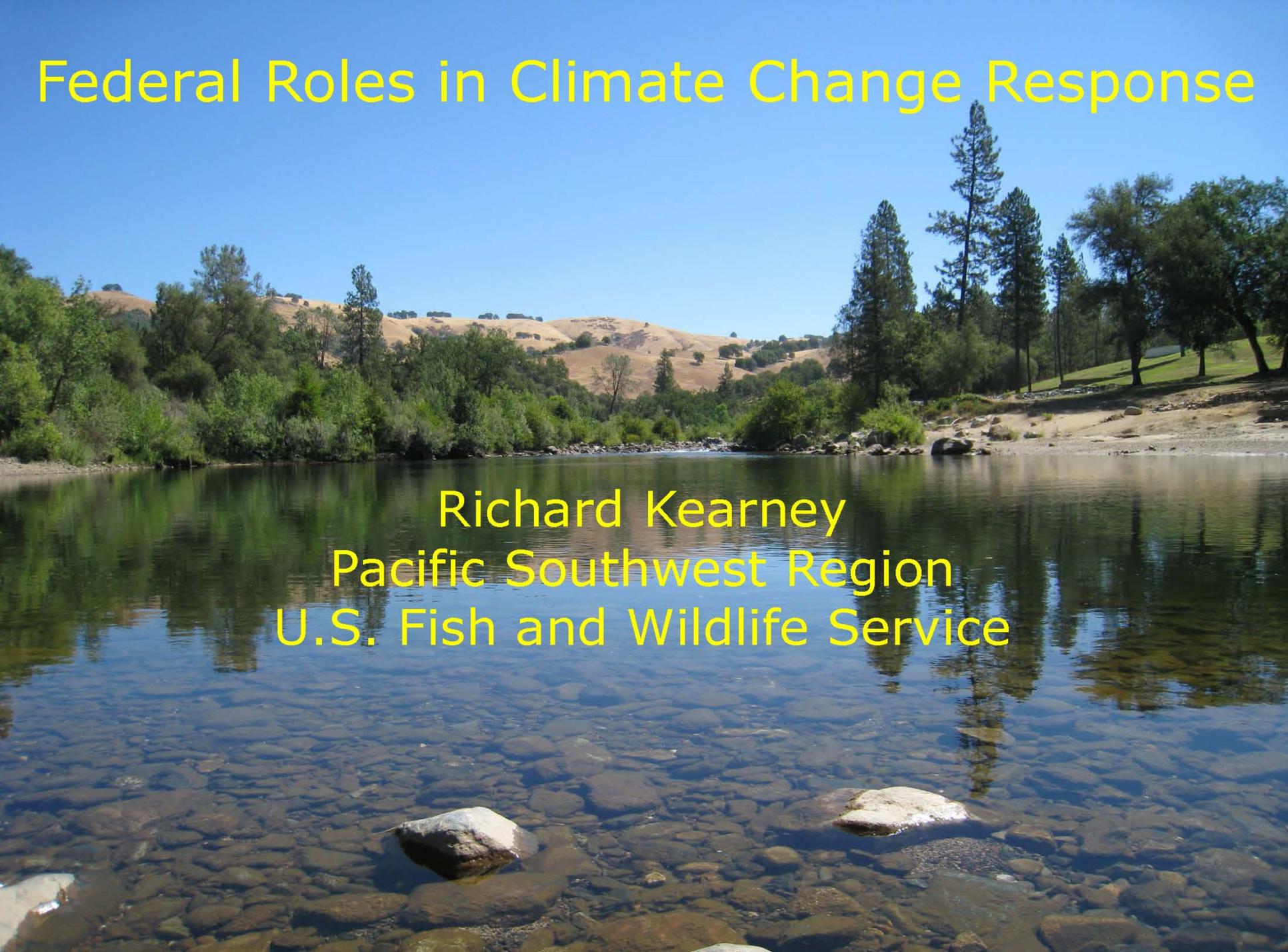
**Richard Kearney**  
U.S. Fish and Wildlife Service

**Federal Roles in Climate  
Change Response**



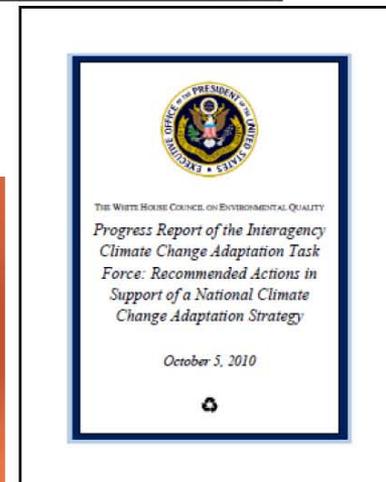
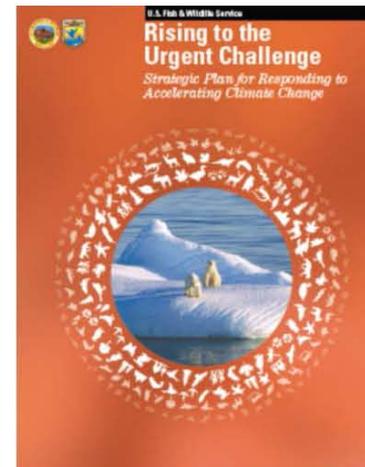
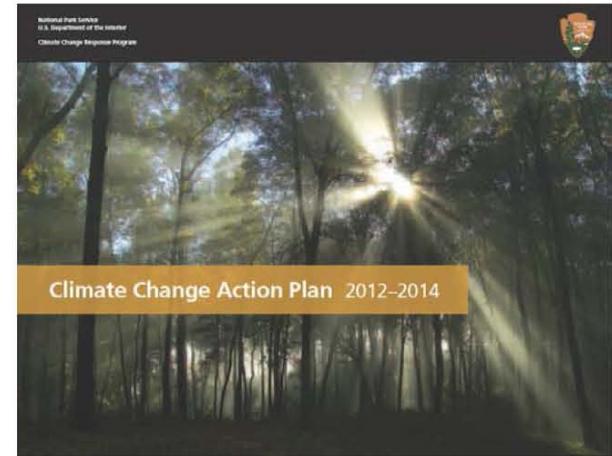
# Federal Roles in Climate Change Response

Richard Kearney  
Pacific Southwest Region  
U.S. Fish and Wildlife Service



# Federal Roles in Climate Change Response

- Coordinate National Efforts
- Carry Out Federal Law and Policies
- Manage Federal Lands and Programs
- Provide Support to States



# Coordinate National Efforts

## White House Council on Environmental Quality

- Develops Coordinated Federal Response Strategies
  - Interagency Climate Change Adaptation Task Force
- Reducing and Monitoring Emissions
  - Managing Fresh Water Resources
  - Protecting Human Health
  - Safeguarding Natural Resources
  - Science for Decision Making
  - Other Strategies

### **Federal Actions for a Climate Resilient Nation**



**Progress Report of the Interagency  
Climate Change Adaptation Task Force**

**October 28, 2011**

# Carry Out Federal Laws and Policies

- National Environmental Policy Act
  - Clean Water Act / Clean Air Act
  - Endangered Species Act
  - Fish and Wildlife Coordination Act
- 
- Establish Federal Conservation Programs/Authorities
  - Provide Financial Resources for Managing Federal Lands and Programs

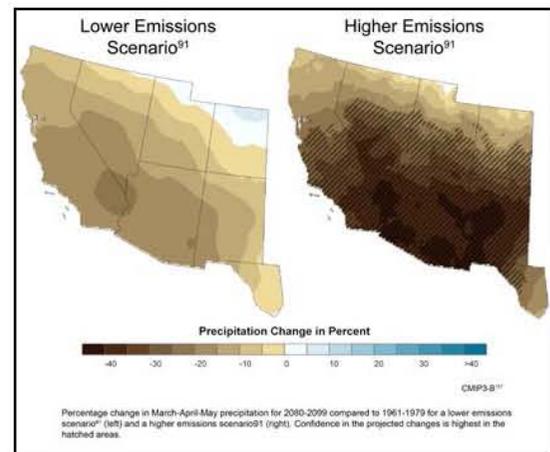
# Manage Federal Lands and Programs

## US Global Change Research Program

- 13 Departments & Agencies Working Together to Provide Science Information relating to Climate and Global Change
  - Adaptation Science
  - Climate Services
  - Communication and Education
  - Fundamental Research
  - Integrated Observations
  - Modeling
  - National Climate Assessment
  - Support to Human Health
- Regional Climate Assessments

For More Information:

[www.globalchange.gov](http://www.globalchange.gov)



# Manage Federal Lands and Programs

## Department & Agency Climate Programs

- NASA – Satellite-based Earth Observation Systems
- EPA – Greenhouse Gas Emissions / Water Quality Effects
- DOD – Climate Change Impacts on Base Operations
- USDA – Climate Effects on Food and Fiber Resources
- DHHS – Climate Effects on Human Health
- DOT – Climate Change Impacts on Transportation
- DOE – Climate Change Effects on Energy Resources

# Manage Federal Lands and Programs

## Department & Agency Science Programs

- NOAA – Ocean/Climate Research, Modeling, Monitoring
  - Ocean and Coastal Climate Applications
  - National Integrated Drought Information System
  - Regional Integrated Sciences and Assessments
    - California-Nevada Applications Program  
(<http://meteora.ucsd.edu/cap/>)
- USGS – Research/Monitoring Effects on Natural Resources
  - Climate Effects Network / Land Change Science
  - Carbon Sequestration
  - National Climate Change & Wildlife Science Center
    - Southwest Climate Center  
(<http://www.doi.gov/csc/southwest/index.cfm>)



# Manage Federal Lands and Programs

## Applied Science / Management Programs



- DOI – Landscape Conservation Cooperatives (LCCs)
  - Self-directed Partnerships of Public & Private Conservation Org'ns
  - Develop Science Information, Tools & Data for Conservation Planning
  - Full-time Staff to Support Coordination
  - Boundaries Based on Ecoregions
  - Priorities Set by Steering Committee
  - Promote Shared Conservation Goals





*Poppies*

### News & Events



#### NEWS

Results from Sea-Level Rise Research Support Marsh Habitat Conservation  
*October 12, 2012*

#### EVENTS

2013 2nd Rangeland Science Symposium and 8th Annual Rangeland Coalition Summit  
*January 24, 2013 | UC Davis*

The Western Section of the Wildlife Society Annual Conference  
*January 29, 2013 | Doubletree by Hilton Hotel in Sacramento, CA*

[More news and events »](#)

### Our Projects



The LCC has funded 25 collaborative projects to support the application of climate science to landscape conservation.

[Decision Support Tools & Data](#)

[Monitoring & Modeling Methods](#)

[Population & Habitat Assessments](#)

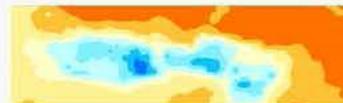
[Vulnerability Assessments](#)

[Conservation Planning & Design](#)

[All projects](#)

[More projects »](#)

### CA Climate Commons



The **California Climate Commons** provides access to climate change data and related resources, information about how it was developed, and the opportunity to communicate with others about applying climate change science to conservation in California.

Search the Commons to discover the results of research funded by the California LCC and how these projects are making a difference in conservation!

[Go to the Commons »](#)

Search our site

Search

[Webinars](#)

[Steering Committee Meetings](#)

[Strategic Plan](#)

[Other LCCs](#)

SIGN UP FOR EMAIL UPDATES FROM CA LCC

# Support to States

- Technical Assistance Programs
  - Natural Resources Conservation Service
  - USFWS - Partners for Fish and Wildlife
  - NOAA Coastal Zone Management
  - NPS Rivers, Trails & Conservation Assistance Program
  - USDA-FS Forest Stewardship & Forest Legacy Program



# Support to States

- Grant Programs

- FWS Fish / Wildlife / Habitat Conservation Grants
- NOAA Coastal and Estuarine Land Conservation
- Farm Bill Conservation Program (NRCS)
- WaterSMART Water Conservation Program (USBR)
- National Fish and Wildlife Foundation (NFWF)



# Summary

There's a broad array of federal and federally-sponsored climate change programs now underway.



# Summary

These programs may be able to assist you with the information, tools and resources you need to achieve your conservation mission.

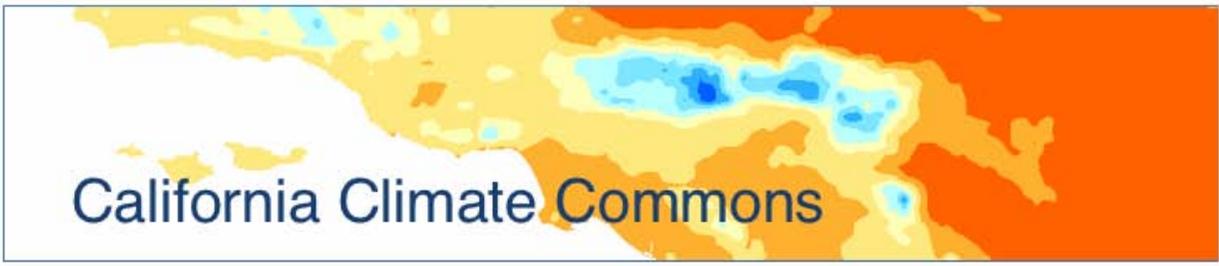


# Summary

The key to success lies in partnership.  
Working together, we achieve more than  
working apart!







# California Climate Commons

[Home](#)[Datasets](#)[Documents](#)[Web Resources](#)[CA LCC Projects](#)[Articles](#)[Forums](#)[Hosted Datasets](#)

Search the Commons

User login

Username \*

Password \*

- [Create new account](#)
- [Request new password](#)

## Welcome to the California Climate Commons

The Commons offers a point of access to climate change data and related resources, information about the science that produced it, and the opportunity to communicate with others about applying climate change science to conservation in California.

Start here or use the tabs to access the Commons library:

- **Datasets:** spatial and other types of data
- **Documents:** journal articles, reports, and manuscripts
- **Web Resources:** websites that offer tools and services
- **Projects:** CA LCC-funded climate change research projects
- **Articles** highlighting important concepts, projects, tools, and datasets
- **Help** using the Climate Commons

You may also:

- **Sign up** for your own Commons account
- **Get more information** about the Commons effort.
- **Contact** [✉](#) the Climate Commons Team

A project of the

California Landscape  
Conservation Cooperative

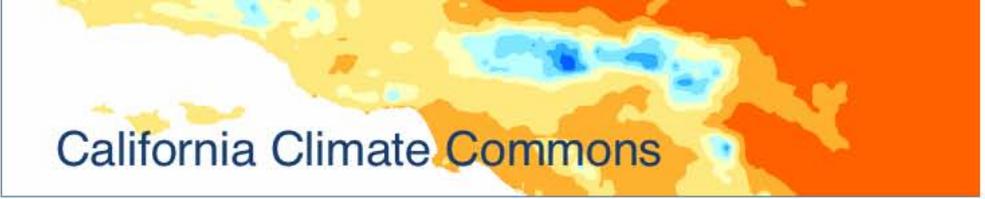


### Recent Additions to the Climate Commons

[Climate Smart Conservation:  
Focus on the San Francisco Bay  
Area](#)

[Resources for Conducting a  
Vulnerability Assessment](#)

[Resources for Evaluating the  
Impacts of Sea Level Rise](#)



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Dataset

## Magnitude of Climate Change

Data Variables in this Dataset

- [Delta \(1970-2000 vs 2038-2070\) - Standardized Euclidean Distance](#)

### Commons Hosting

**Climate Commons Hosting Status:** Available

*(You must be logged in to view and download hosted datasets)*

### Basic Information

**Full Title:** Environmental Change Network: Local Climate Change

**Description:**

These maps display the magnitude of projected future climate change in relation to the interannual variability in late 20th century CA climate. The maps show the standardized Euclidean distance between the late 20th century climate at each pixel and the future climate at each pixel. The standardization puts all of the climate variables included on the same scale and down weights changes in future climate which have had large year to year variation historically. Warmer colors indicate greater climate change and cooler colors indicate less extreme climate change.

**Creator:** PRBO Conservation Science

**Publisher:** PRBO Conservation Science

**Subject:** [climate change](#)

**Data Type:** [Downscaled climate model](#)

**Spatial Resolution:** 800m

**URL:** <http://data.prbo.org/apps/ecn/index.php?page=ecn-areas-of-change-map>

**Date Issued:** 2011

**Peer Reviewed Dataset:** No

### Parameters / Choices

*A dataset often contains many geodata layers representing the same kind of measurement, but for different values of some parameters - time periods, models or scenarios, different species, etc. A value*

# DFG Climate College: Lecture #5

Go Big or Go Home: Collaborative Partnerships in a Changing Climate



**Diana Craig**  
U.S. Forest Service



**Emily Young**  
San Diego Foundation

January 15, 1:30-2:30

