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

CALIFORNIA DEPARTMENT OF FISH&GAME

CLIMATE SCIENCE PROGRAM

Reminder: Course Project

Not your ordinary project!

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

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Arpita Choudhury
Association of Fish and Wildlife Agencies

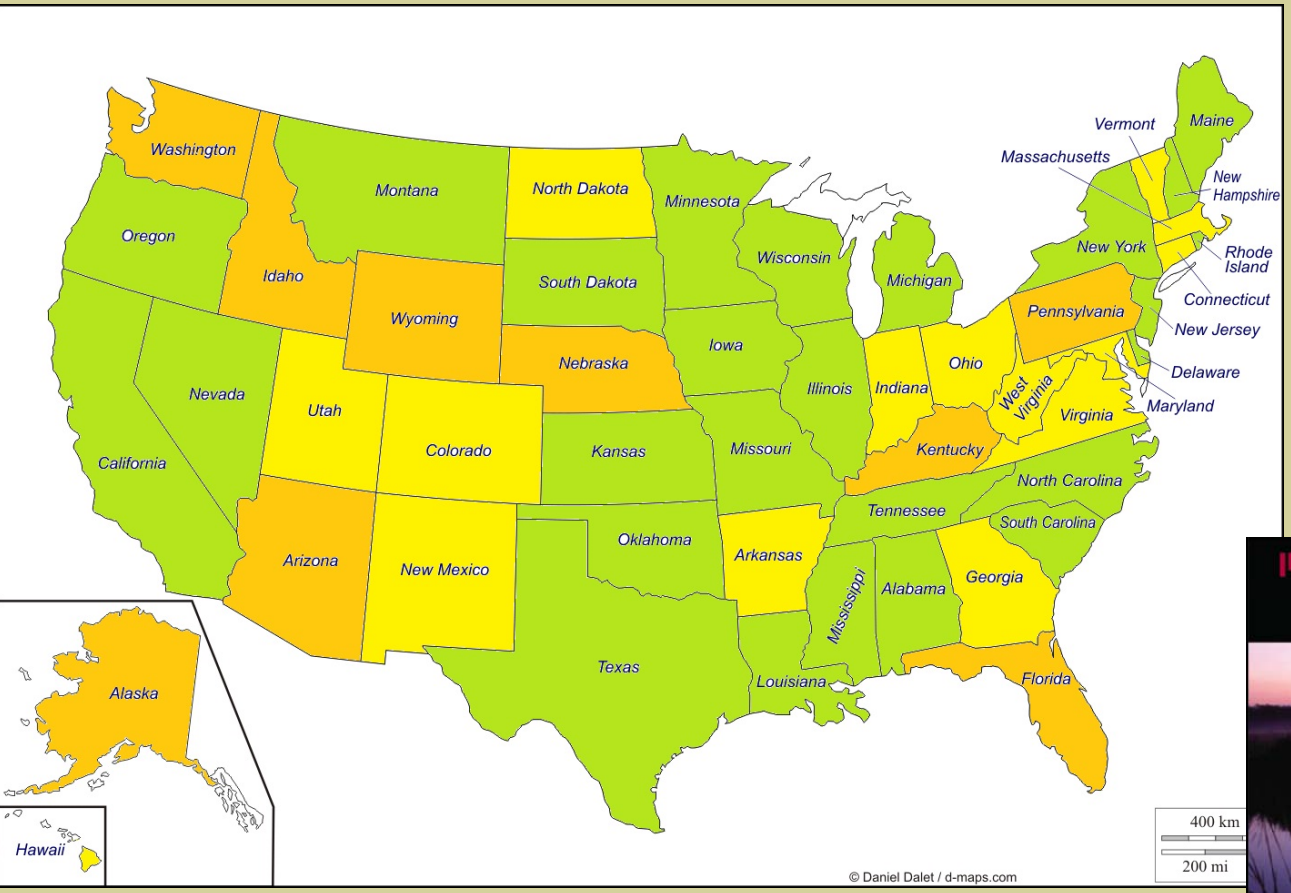
The State of State Climate Adaptation Activities

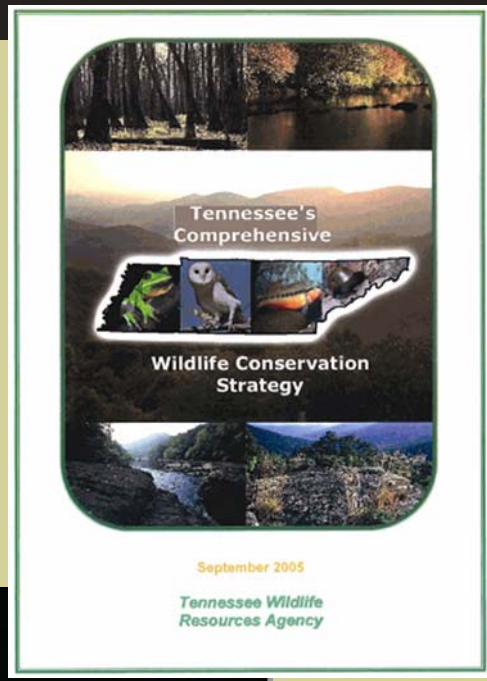
ASSOCIATION of FISH & WILDLIFE AGENCIES

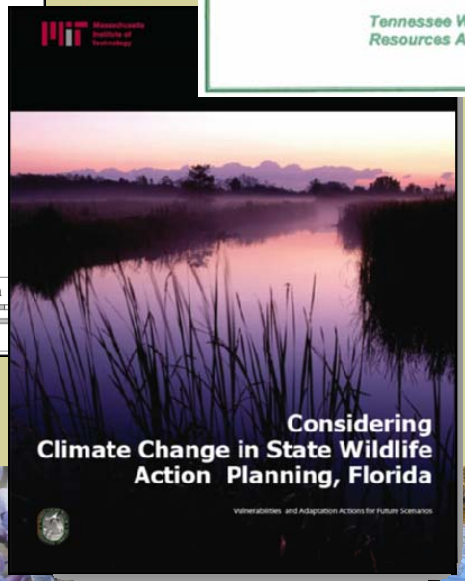
The State of State Climate Adaptation Activities

Arpita Choudhury
AFWA Science & Research Liaison

State Wildlife Action Plans



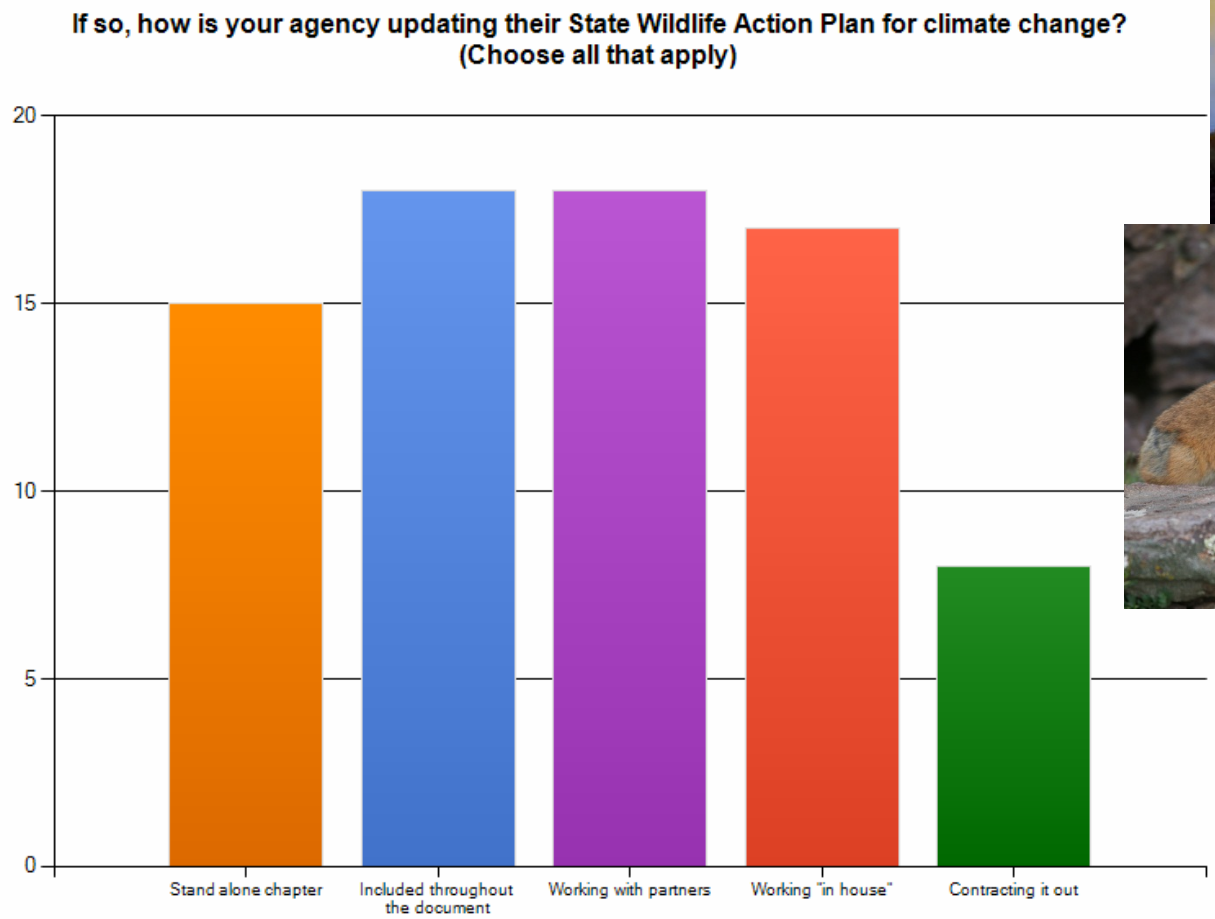


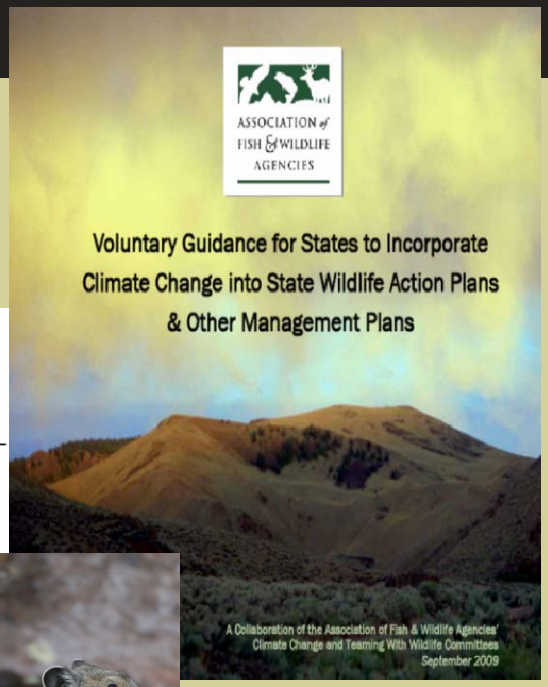


Incorporating Climate Change into State Wildlife Action Plans: Orange States-Completed; Green States-In Process; Yellow States-Not Yet

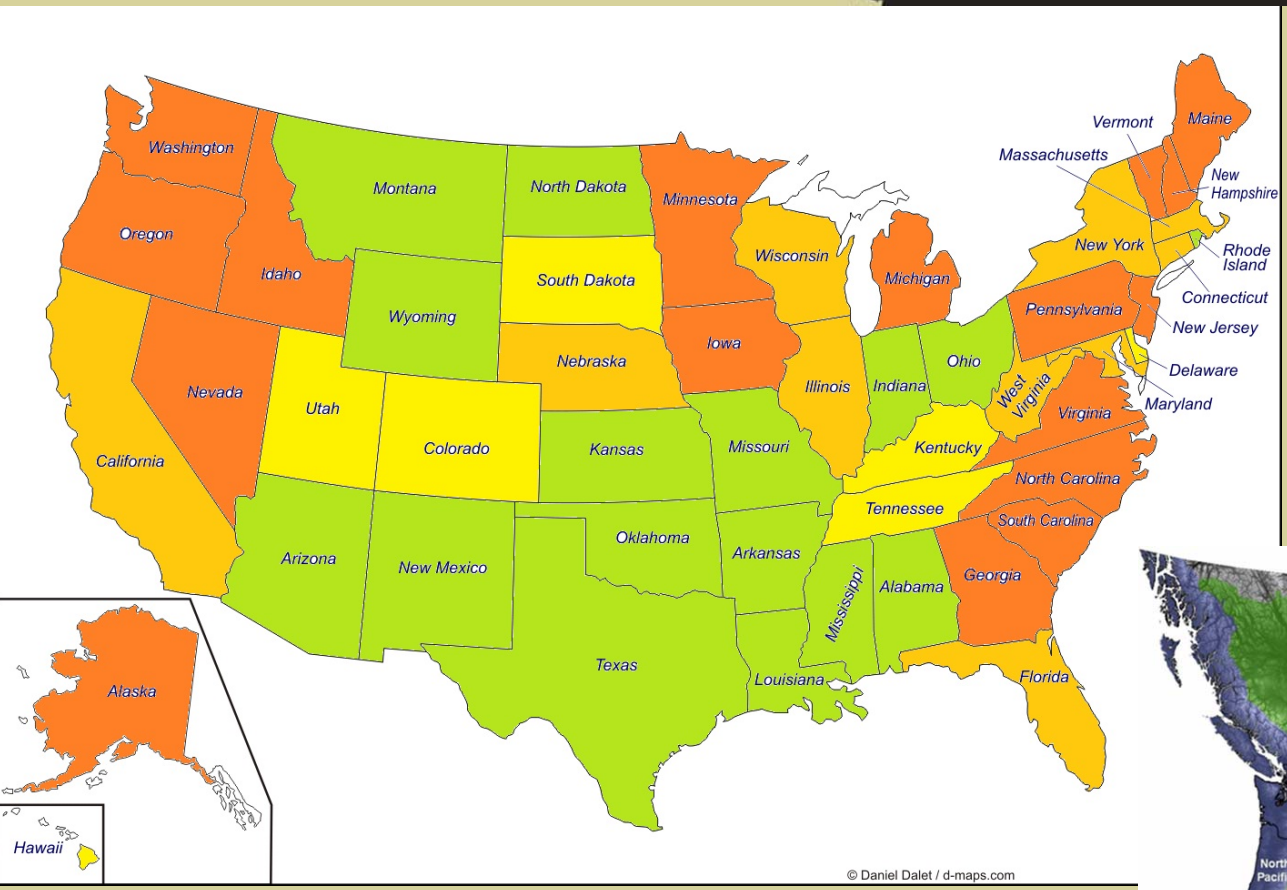
State Wildlife Action Plans

As a Platform for Adaptation

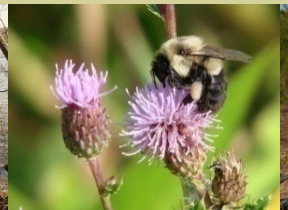




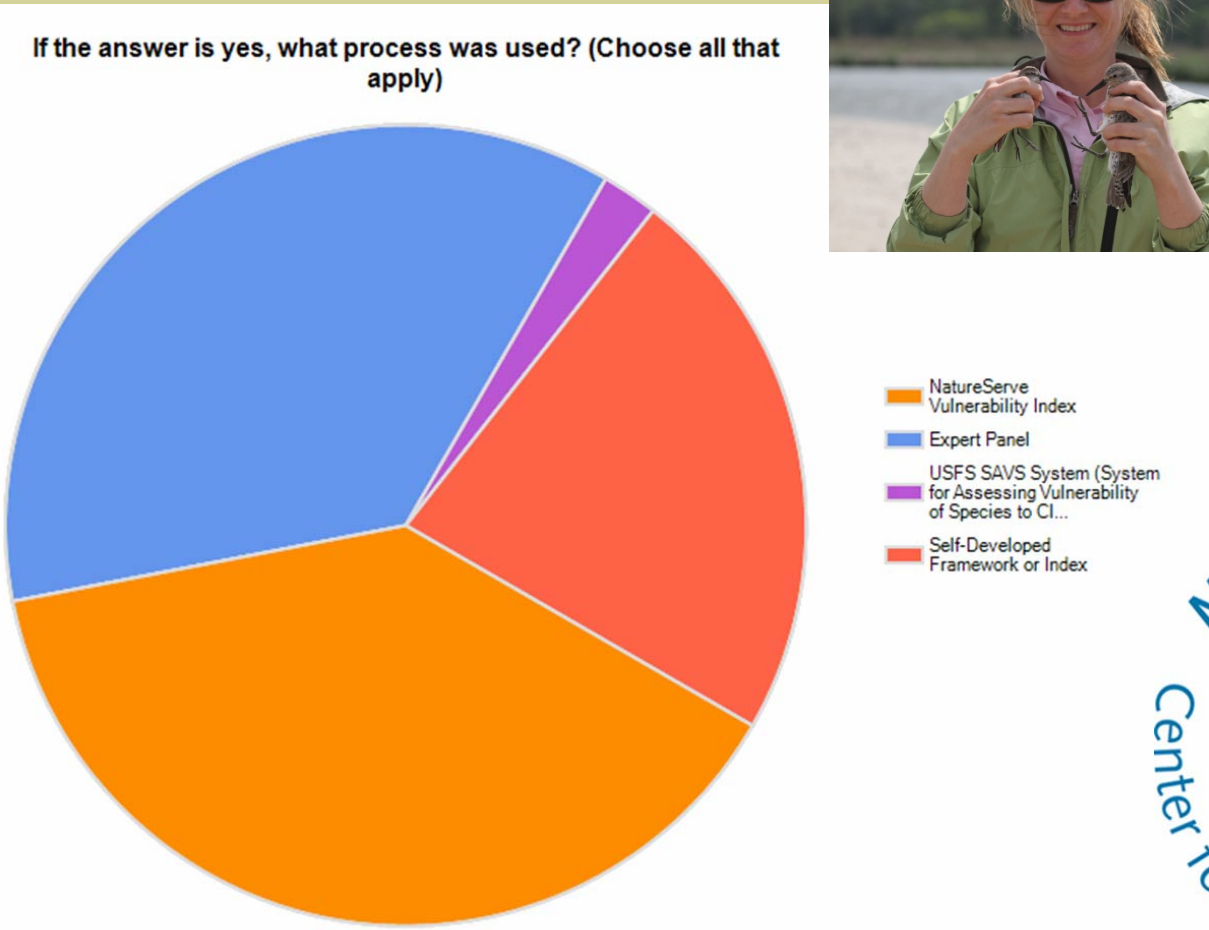
Vulnerability Assessments

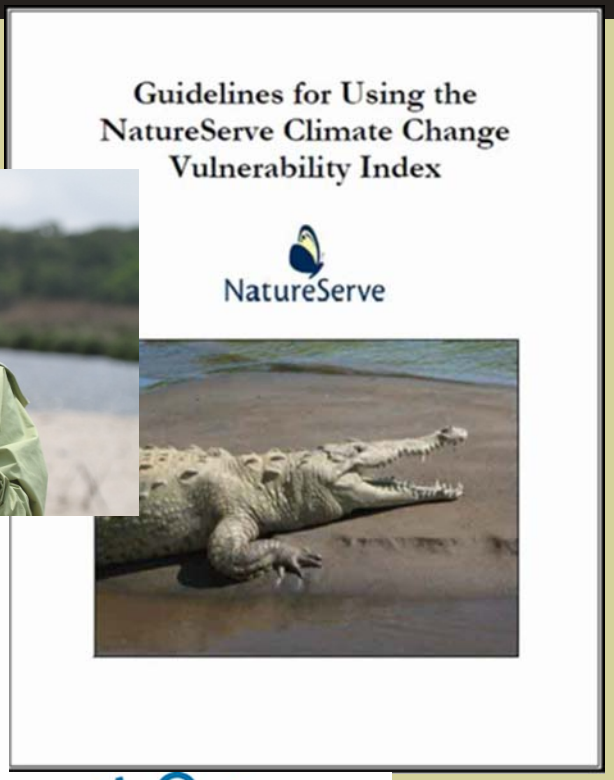


Vulnerability Assessments: Light Orange States-Completed; Dark Orange States-Under Way; Yellow States-Determining Process; Green States-Not Yet



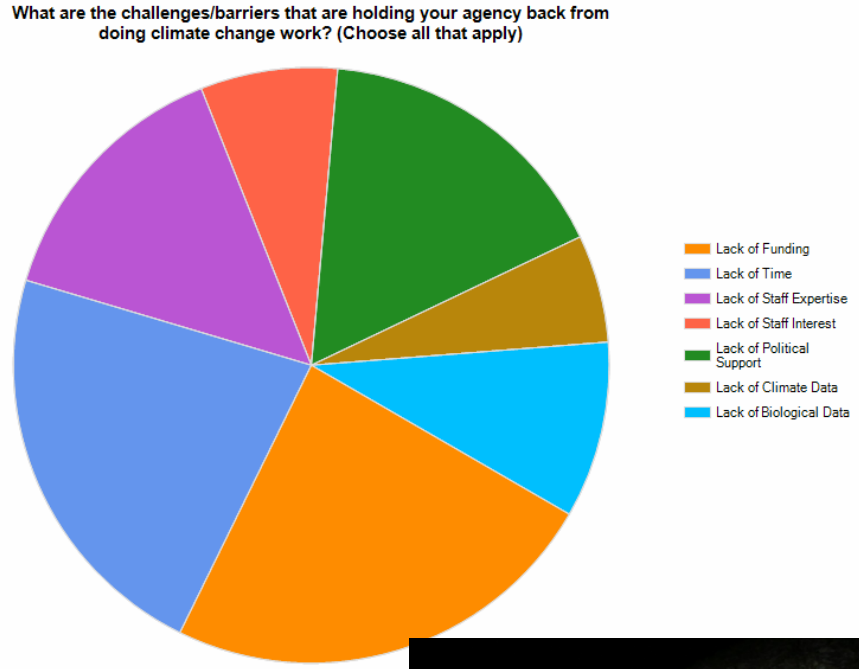
Vulnerability Assessments

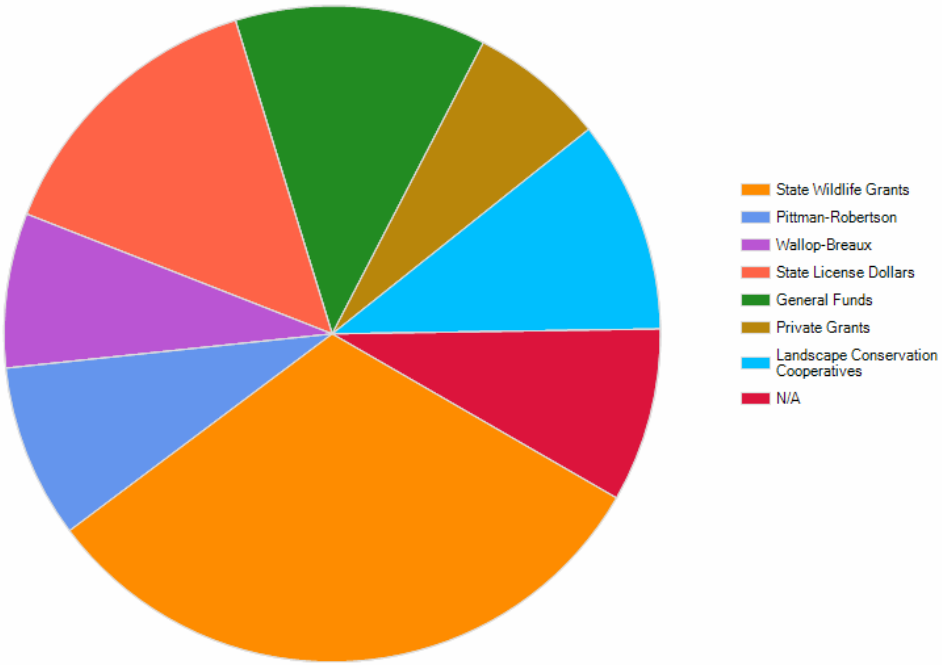




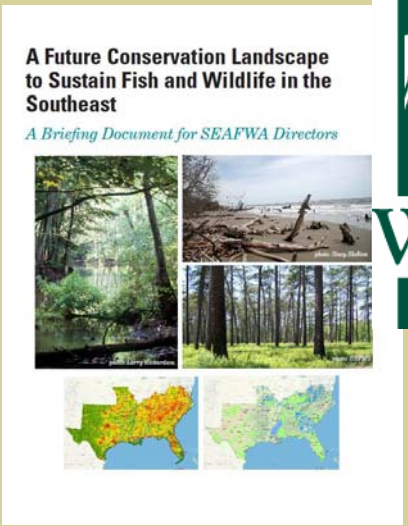
MANOMET Center for Conservation Sciences

Challenges & Barriers



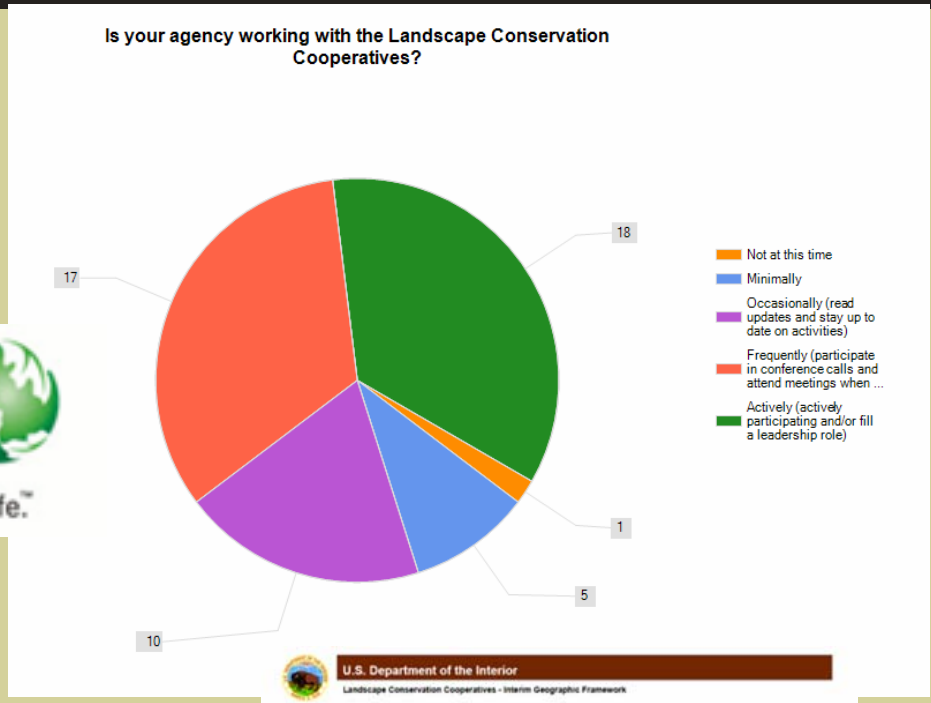


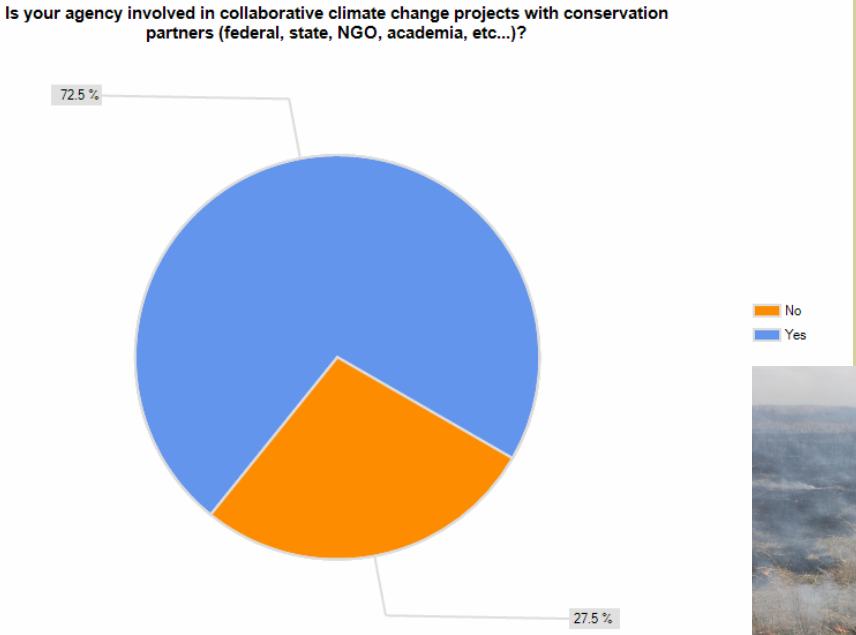
Partnerships

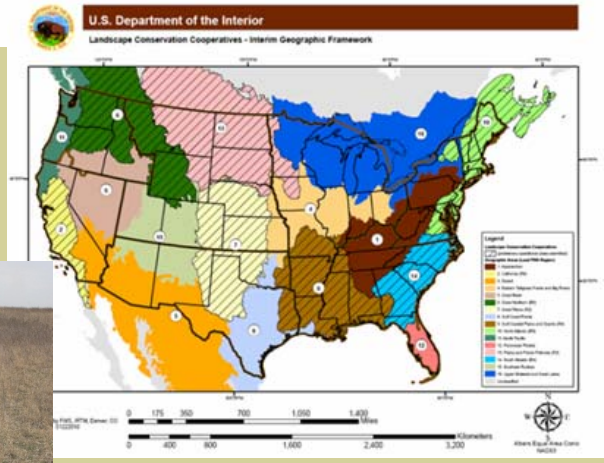


NATIONAL WILDLIFE FEDERATION®

The Nature Conservancy
Protecting nature. Preserving life.™

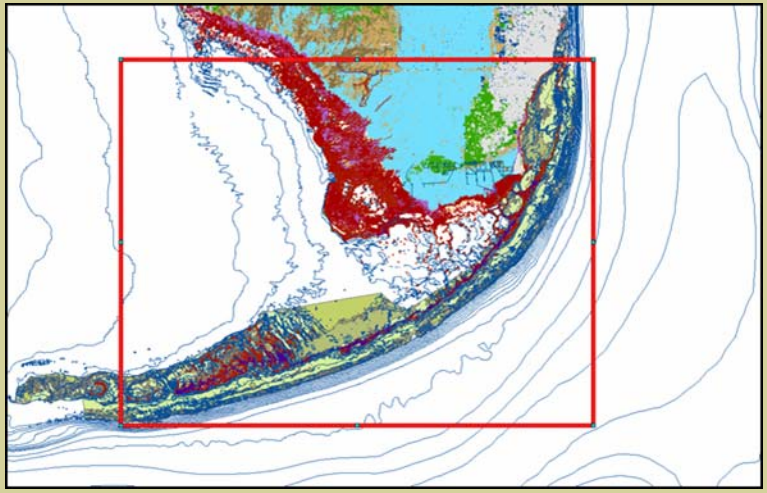






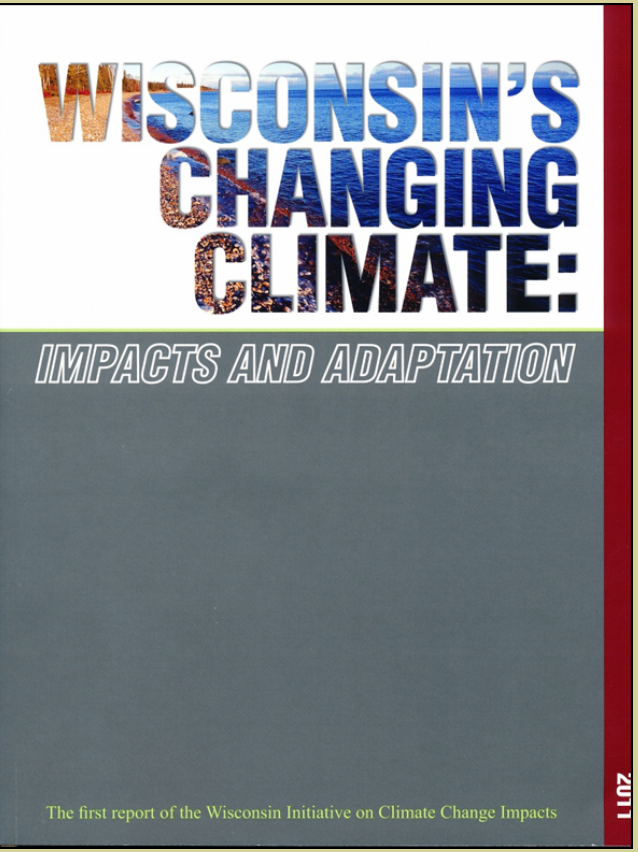
FWC Climate Projects

- 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



GeoAdaptive
Spatial Technologies • Strategies

Wisconsin Climate Change Initiative



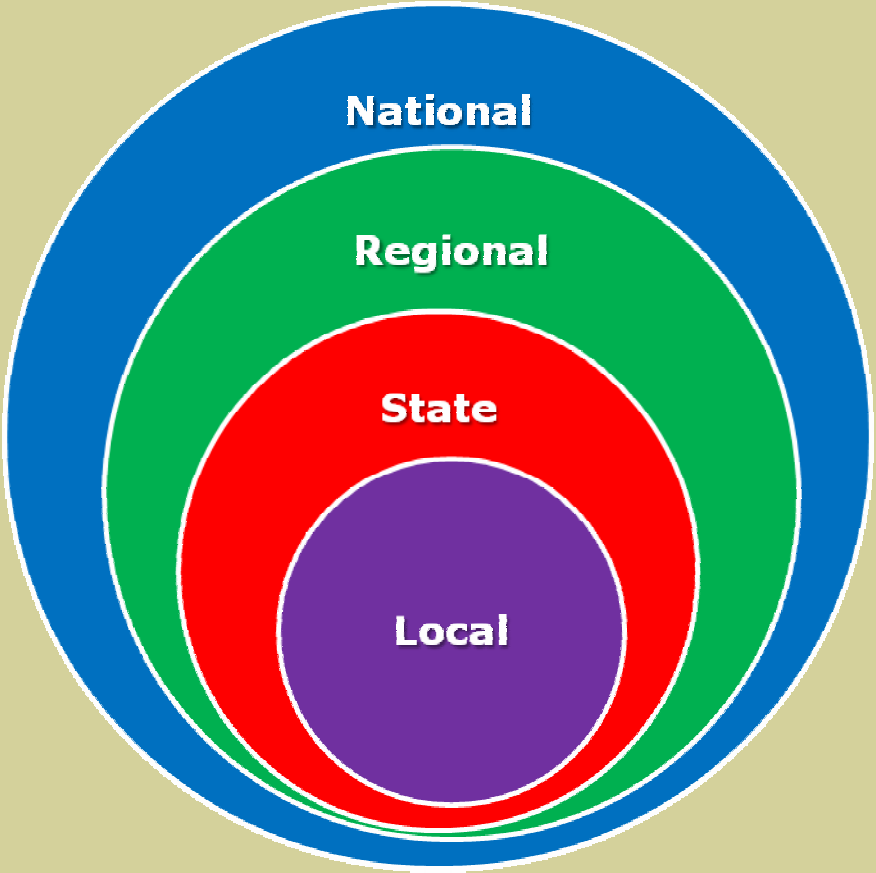
Working Groups

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

THE NELSON INSTITUTE FOR ENVIRONMENTAL STUDIES
University of Wisconsin-Madison

WISCONSIN DEPT. OF NATURAL RESOURCES

Growing Adaptation Framework



NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY

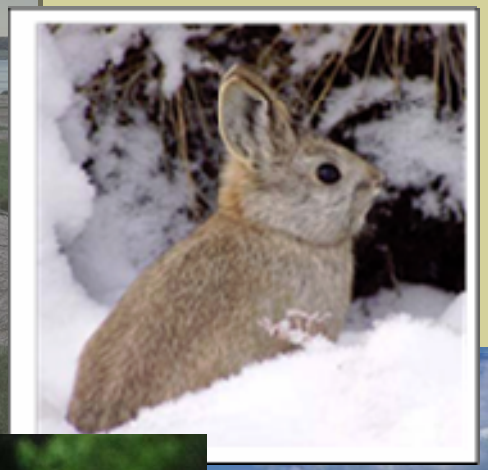
Goals:

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



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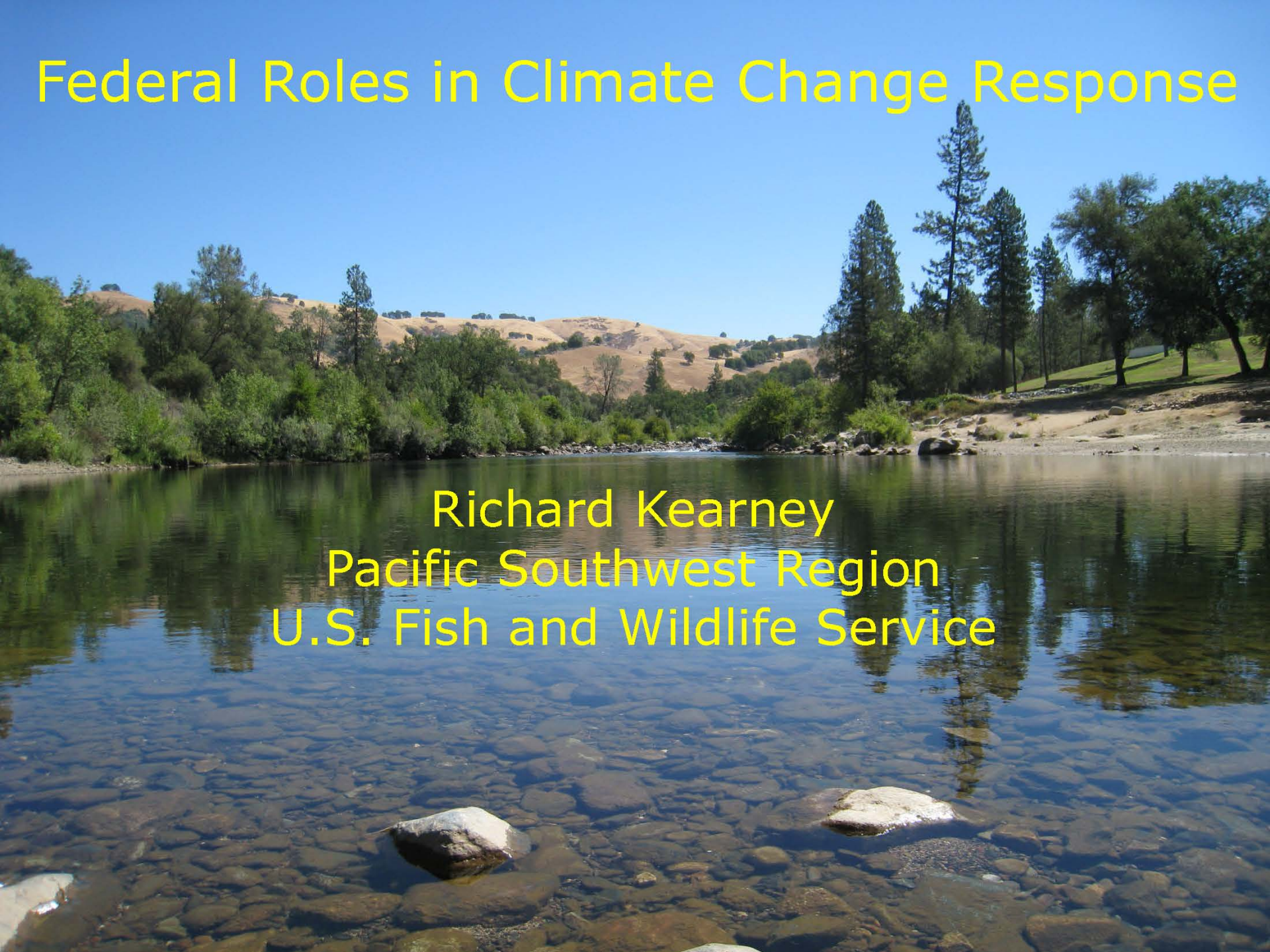
Richard Kearney
U.S. Fish and Wildlife Service

Federal Roles in Climate Change Response

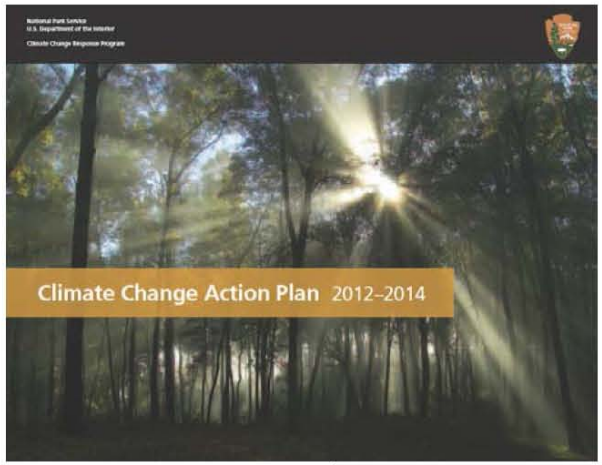
Federal Roles in Climate Change Response

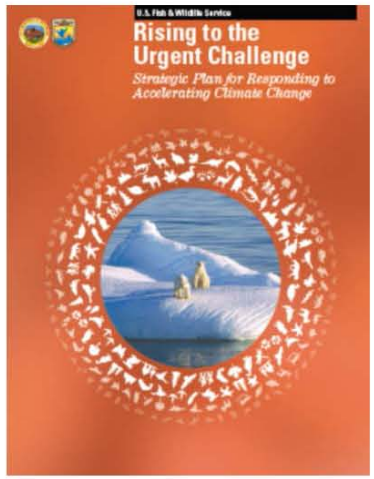


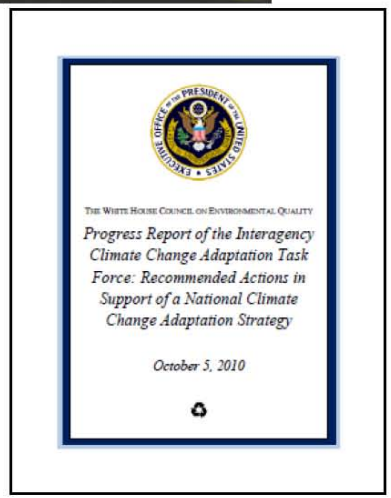
Richard Kearney
Pacific Southwest Region
U.S. Fish and Wildlife Service

Federal Roles in Climate Change Response

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





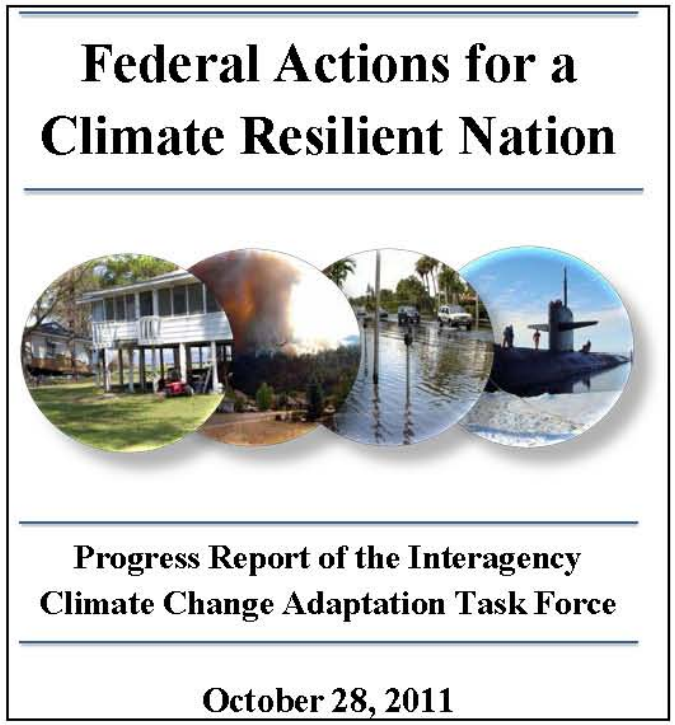


Coordinate National Efforts

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



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

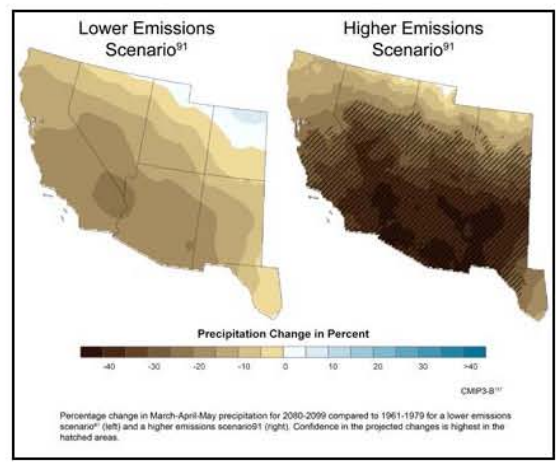
– Provide Financial Resources for Managing Federal Lands and Programs

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

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

CA LCC California Landscape Conservation Cooperative

About Us | Projects | Resources | News & Events

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

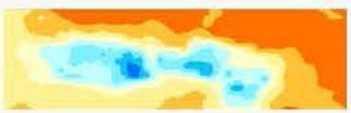
Vulnerability Assessments

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

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Home | Contact Us | Site Map

Informing and promoting integrated science, natural resource management and conservation across ecosystems to address impacts of climate change and other stressors.

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

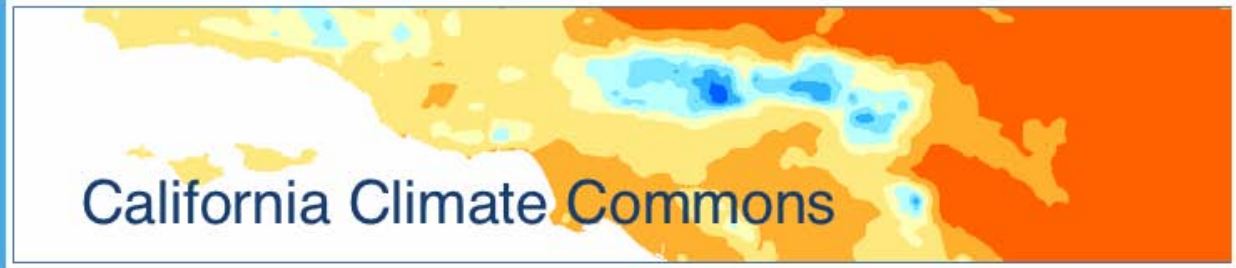
There's a broad array of federal and federally-sponsored climate change programs now underway.

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!



Home | Datasets | Documents | Web Resources | CA LCC Projects | Articles | Forums | Hosted Datasets

Search the Commons

Search

User login

Username *

Password *

- Create new account
- Request new password

Log in

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

CA LCC

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

Search the Commons

Search

User login

Username *

Password *

- Create new account
- Request new password

Log in

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
Subjects: 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