

DOI Climate Science Centers & The National Climate Change and Wildlife Science Center

Support for Resource Management Decisions

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USGS National Climate Change & Wildlife
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Washington, DC
September 18, 2013

Secretarial Order 3289

Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources (9/14/09)

... the United States Geological Survey (USGS) has been developing regional science centers ... currently known as "regional hubs" of the National Climate Change and Wildlife Science Center...



The Climate Change & Energy Response Council will work with USGS and other Department bureaus to rename these regional science centers as Regional Climate Science Centers and broaden their mandate...



The National Climate Change & Wildlife Science Center

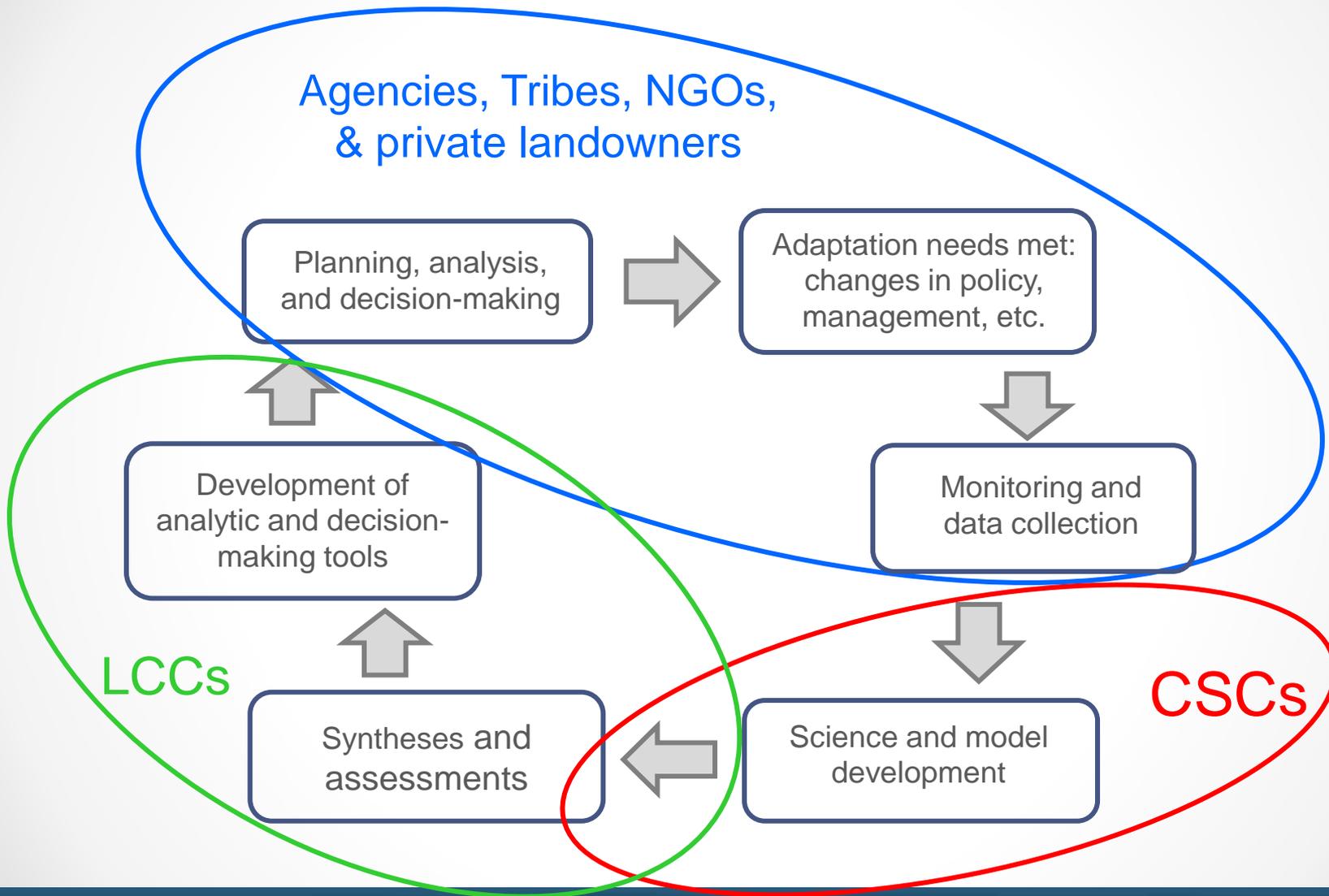
- **Mission**

Provide **natural resource managers** with the **tools and information** they need **to develop and execute management strategies** that address the impacts of climate change on **fish, wildlife, and their habitats**

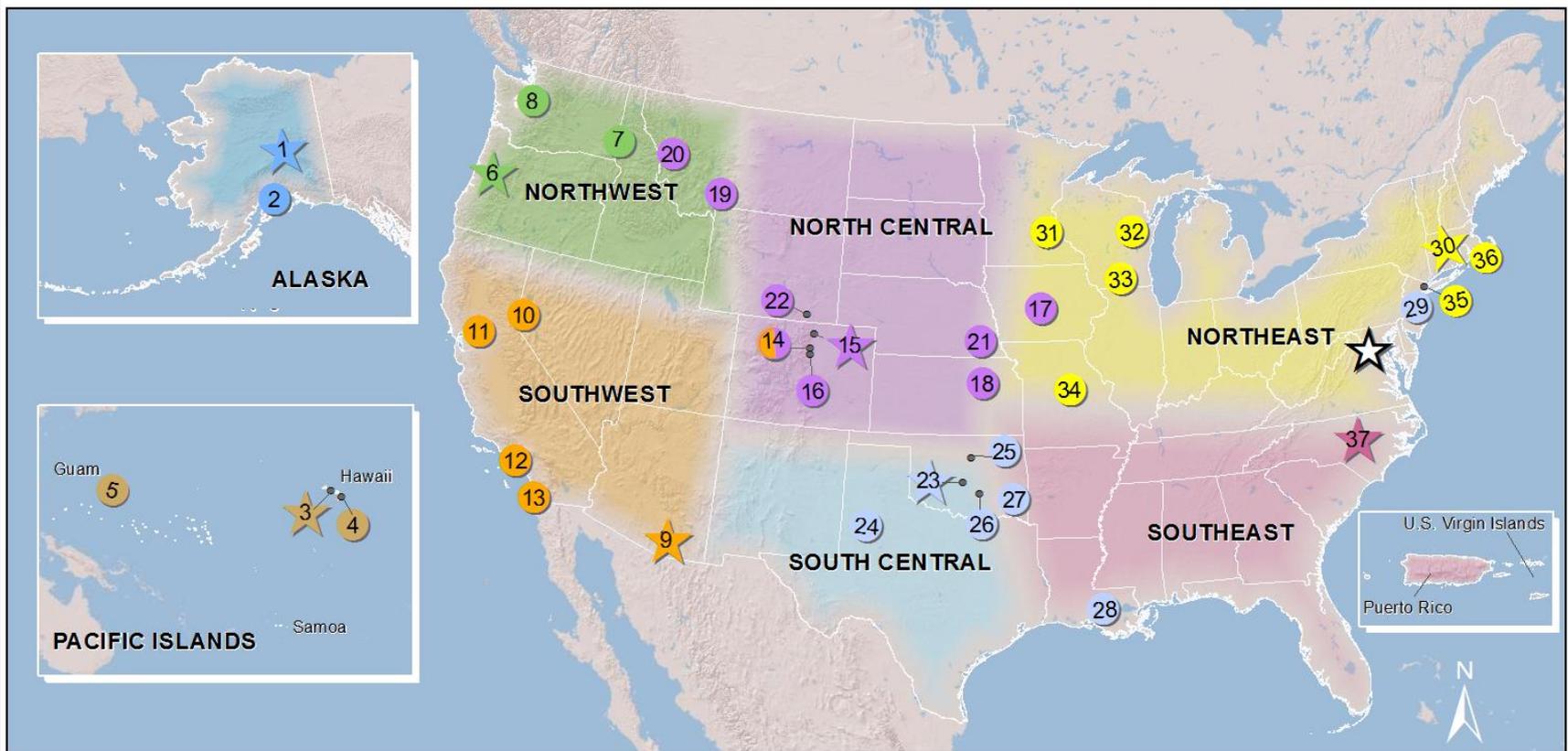
- **Focus on climate change adaption & impacts**

“Adjustment in natural or human systems in response to actual or expected climatic change effects, to moderate harm or exploit beneficial opportunities”

Climate Change Adaptation Conceptual Model



NCCWSC & DOI Regional CSC's



Actionable Science

U.S. Global Change Research Program:

- Provide “**usable** information on which to base policy decisions...”
- Knowledge that could be “readily usable by policymakers attempting to formulate effective strategies for preventing, mitigating, and adapting to the effects of global change”

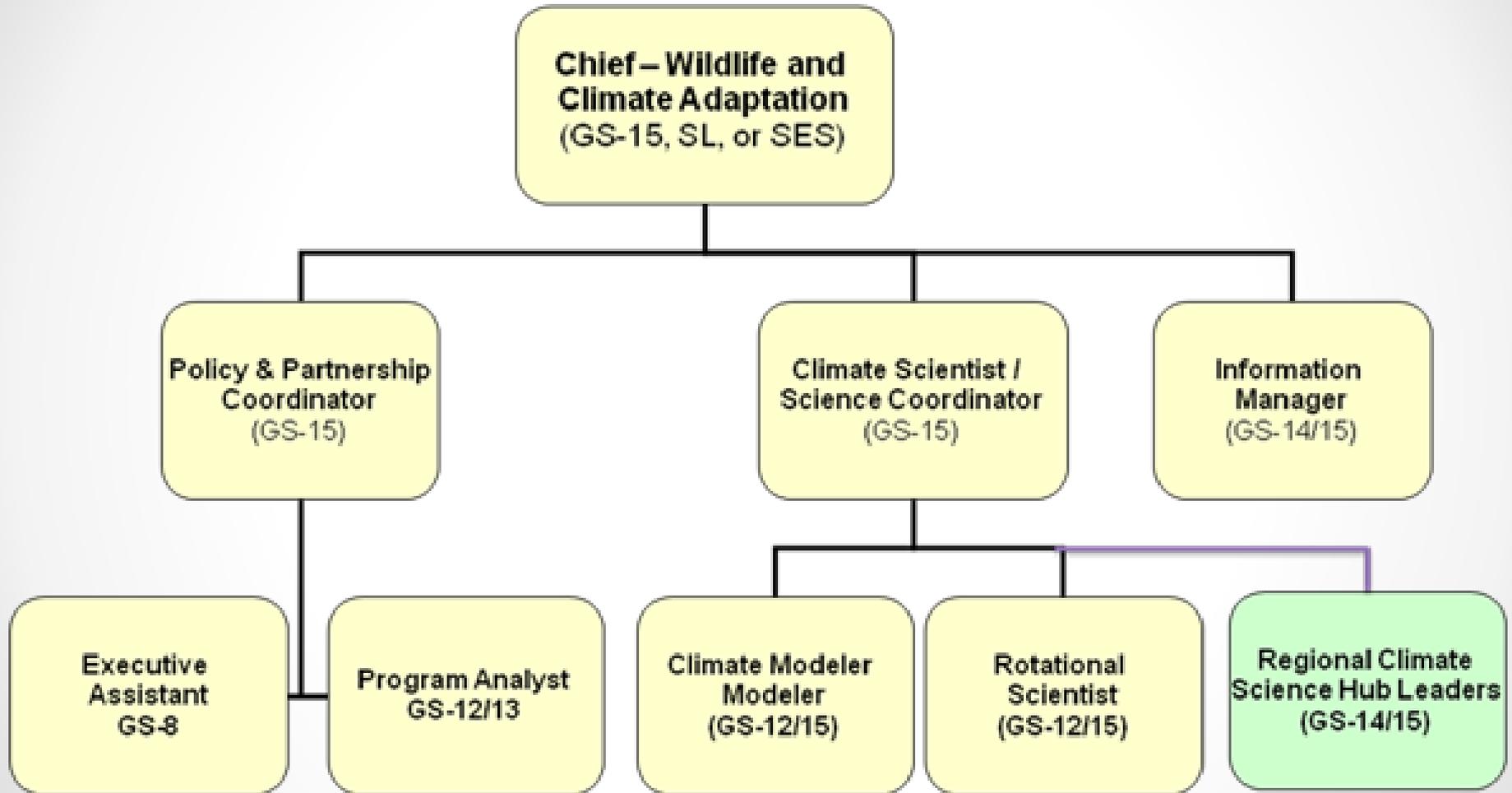
(U.S. Congress, 1990)

Actionable Science

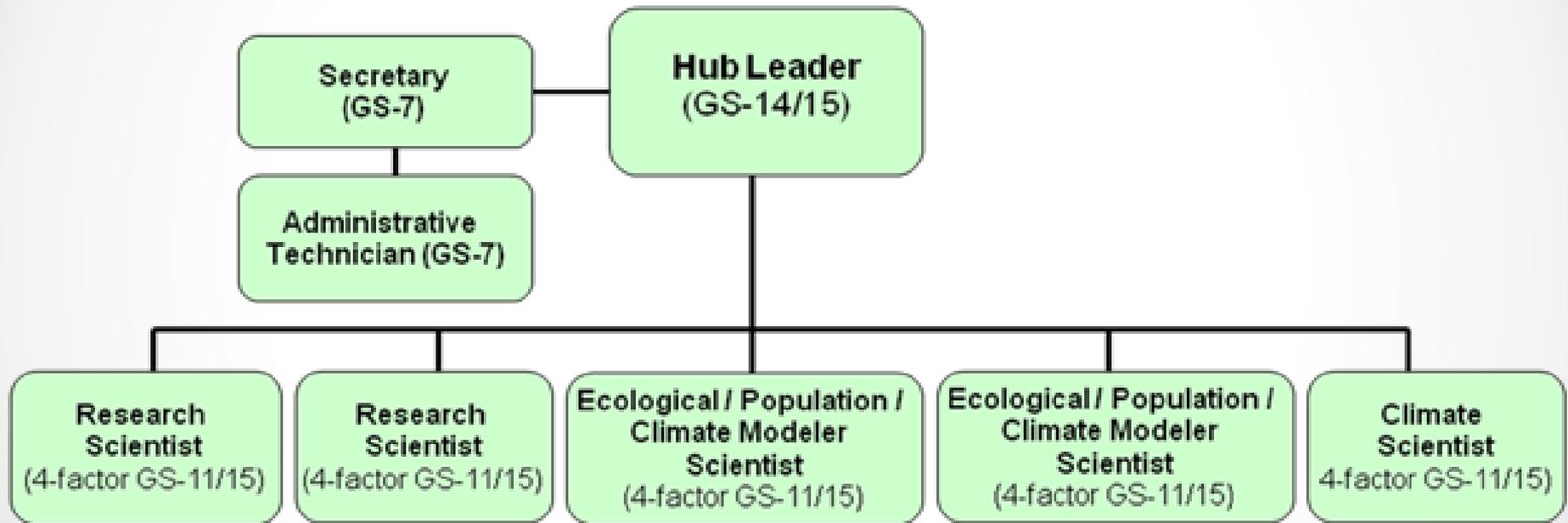
Science results leading to knowledge that meets constituent needs

- Policy relevant – NOT prescriptive
- Directly reflects expressed constituent needs
- Understandable to users
- Available at needed times/places
- Accessible through media available to the user community
- Users and producers working together from the start
- Evaluation of success: science usefulness to society?

NCCWSC Staffing Plan



Potential USGS Component of DOI CSC



2010 DOI CSCs

Alaska CSC – Located at the University of Alaska - Fairbanks in Anchorage

- University of Alaska - Fairbanks PI – Scott Rupp
- USGS Director – Stephen Gray

2010 DOI CSCs

Southeast CSC – Located at North Carolina State University

- North Carolina State PI – Damian Shea
- USGS Director – Gerald McMahon

2010 DOI CSCs

Northwest CSC – Located at Oregon State University; Consortium of Oregon State University, University of Washington, and University of Idaho

- Administrative Home – Oregon State University
- Oregon State PI – Phil Mote (also PI for NOAA RISA)
- University of Washington PI – Eric Salathé
- University of Idaho PI – Steve Daley-Laursen
- USGS Director – Gustavo Bisbal

Example CSC Stakeholder Advisory Committee - NW



Columbia River Inter-Tribal Fish Commission



US Army Corps of Engineers



The National Climate Change and Wildlife Science Center (NCCWSC)

2011 DOI CSCs

North Central CSC – Located at Colorado State University; Consortium of Colorado State University, University of Colorado, Colorado School of Mines, Iowa State University, University of Montana, University of Nebraska-Lincoln, Kansas State, Montana State, and University of Wyoming

- Colorado State PI – Dennis Ojima
- USGS Director – Jeff Morisette

2011 DOI CSCs

Southwest CSC – Located at the University of Arizona; Consortium of the University of Arizona, University of California–Davis, University of California–Los Angeles, Desert Research Institute (Nevada) & Scripps Institution of Oceanography, University of Colorado

- University of Arizona PI – Jonathan Overpeck
- USGS Director – Steve Jackson

2012 DOI CSCs

Northeast CSC – Located at the University of Massachusetts-Amherst; Consortium of University of Massachusetts-Amherst, College of Menominee Nation, Columbia University, Marine Biological Laboratory, University of Minnesota, University of Missouri at Columbia. University of Wisconsin-Madison

- University of Massachusetts PI - Rick Palmer
- USGS Director – Mary Ratnaswamy

2012 DOI CSCs

Pacific Islands CSC - Located at University of Hawai`i-Manoa; Consortium of University of Hawai`i-Manoa, University of Hawai`i-Hilo, and University of Guam

- University of Hawai`i-Manoa PI - Kevin Hamilton
- USGS Interim Coordinator – Dave Helweg

2012 DOI CSCs

South Central CSC – Located at the University of Oklahoma, Consortium of the University of Oklahoma, Texas Tech University, Louisiana State University, The Chickasaw Nation, The Choctaw Nation of Oklahoma, Oklahoma State University, and NOAA's Geophysical Fluid Dynamics Laboratory

- University of Oklahoma PI – Berrien Moore
- USGS Director – Kim Winton

DOI Climate Science Centers

A New Paradigm

- Linking Physical, Biological, and Social Science
- Scenario/Forecasts of Future Possibilities
- Link Research, Modeling, Synthesis, and Monitoring in a Landscape/System Perspective
- Science Collaboration/Resource Management Collaboration
- Stakeholders Set Priorities/Provide Review & Feedback – Actionable Science
- Share Data and Information



NCCWSC & CSC Science Priorities

Science Infrastructure and Capacity Building Goals

1. Collaboration, Communication and Translation of Science Results to Managers, Stakeholders and the Public interested in Climate Change Activity.
2. Creation of a shared information and data management platform.
3. Educate and train a core of climate scientists that will provide expertise in the future.
4. Evaluate the impacts of the NCCWSC-CSC enterprise.

NCCWSC & CSC Science Priorities

Science Goals

1. Assess and synthesize our state of knowledge about climate and land use change impacts to DOI natural and cultural resources.
2. Perform vulnerability assessments of species and ecosystems.
3. Understand the social-ecological impacts of climate and land use change.
4. Understand the interactions between climate and the physical, biological, and chemical forces that influence the structure and functioning of ecosystems and the goods and services they provide.

Thank you

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