

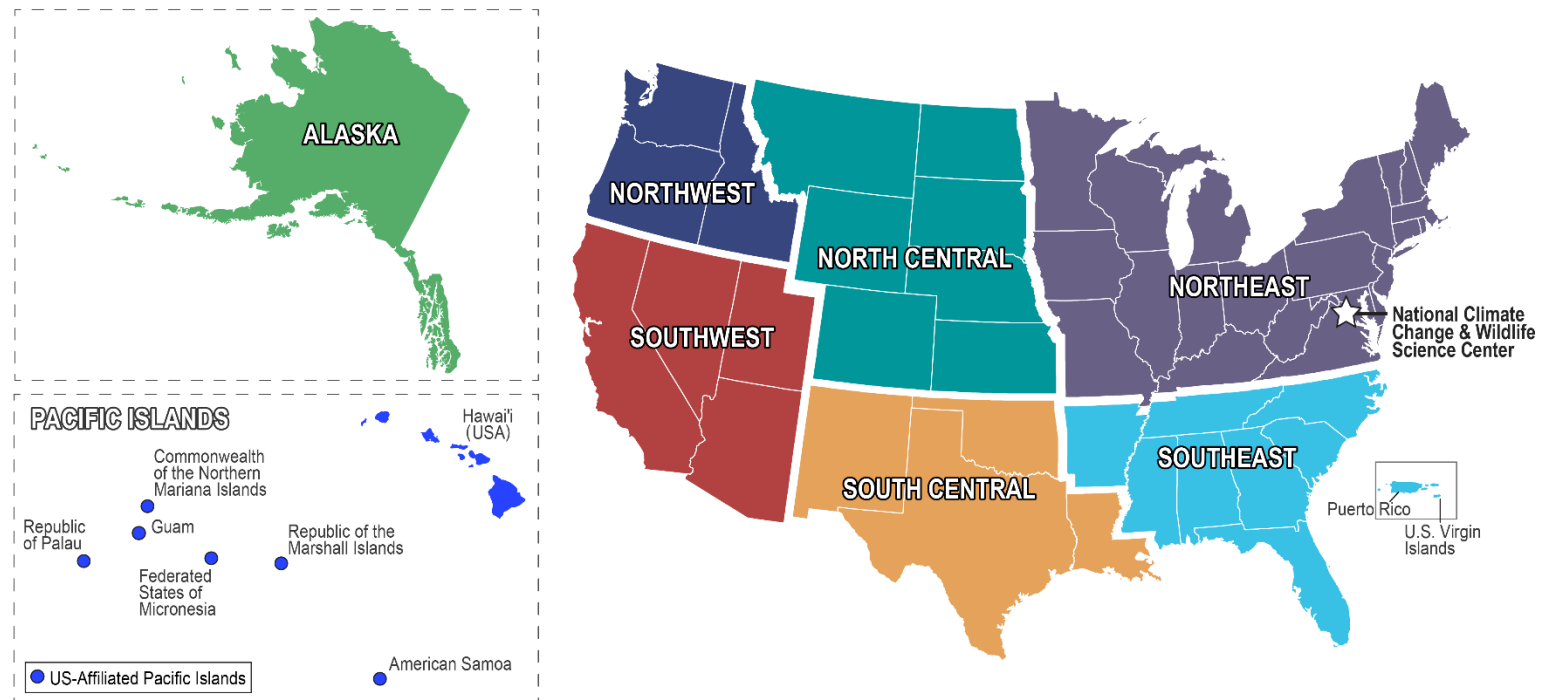


NORTH CENTRAL
**CLIMATE
SCIENCE**
CENTER

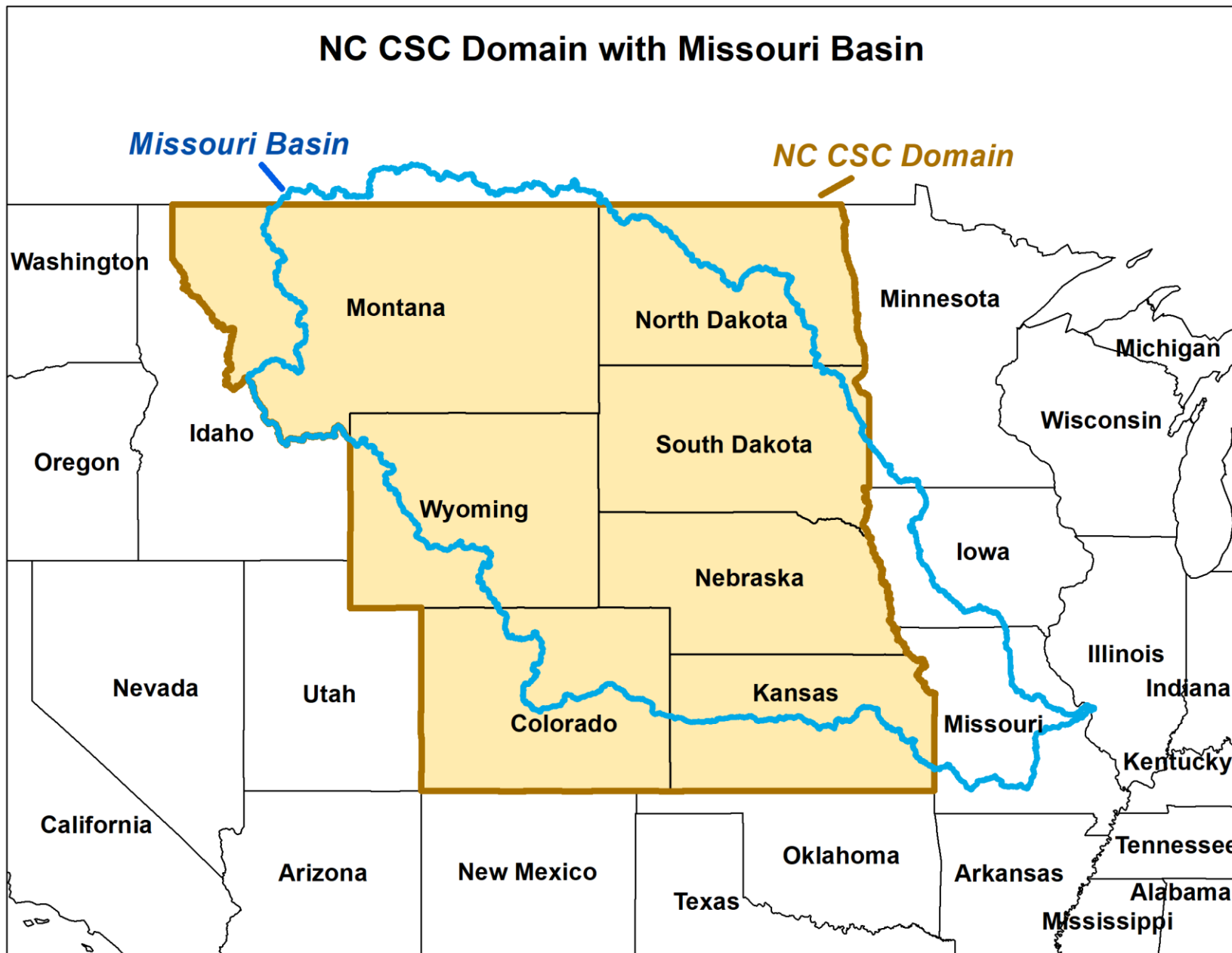
Strategic Planning at the North Central Climate Science Center

- Federal + university consortium
- Established 2011 as part of 8-center network
- Small staff >> deep bench
- ~\$2.0 million per year (smaller than most CSCs)
- Natural / cultural / DOI resources
- “Actionable science”

Colorado State University (CSU)
 University of Colorado (CU)
 Colorado School of Mines (CMC)
 University of Nebraska-Lincoln (UNL)
 Iowa State University (ISU)
 University of Wyoming (UW)
 Montana State University (MSU)
 University of Montana (UM)
 Kansas State University (KSU)

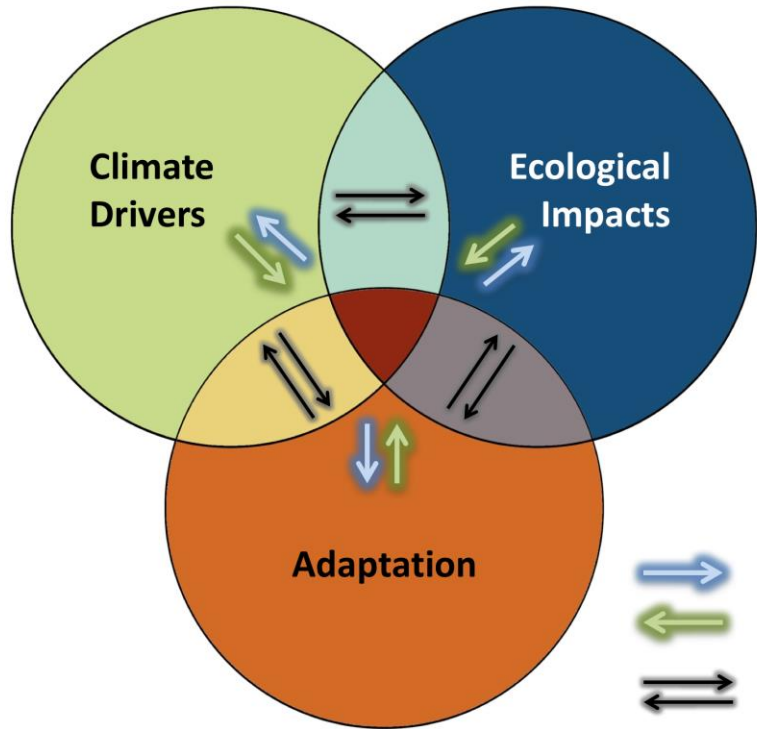


NC CSC Domain with Missouri Basin






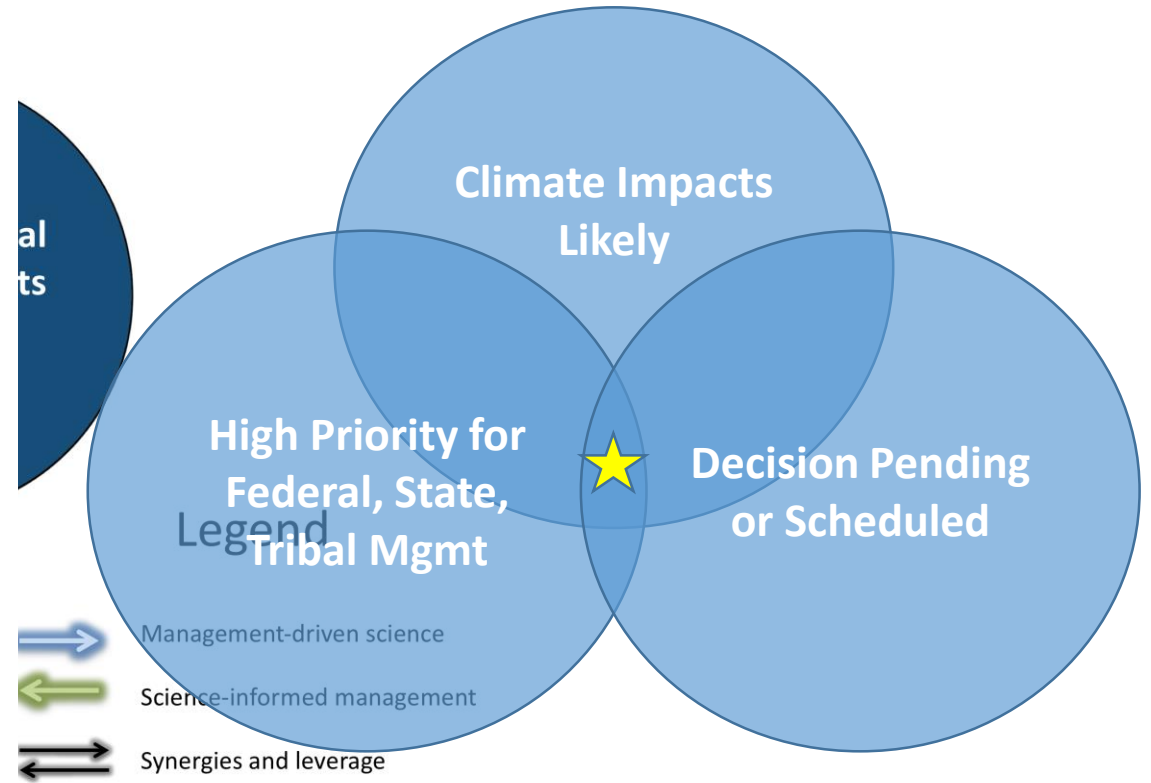
Strategic planning – North Central CSC








Legend

-  Management-driven science
-  Science-informed management
-  Synergies and leverage



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Core Products and Services from NC CSC

- **Climate data**
 - Maps, time series graphics, gridded data
 - Consultancy on model, emissions, and downscaling choices
- **Remote sensing products and analysis**
 - Including expertise on drought, fire, and phenology data sets
- **Ecological response modeling**
 - Habitat suitability and species distribution modeling
 - Simulation modeling (state-and-transition and agent-based)
- **Integrated approach to socio-ecological systems**
 - Interdisciplinary social science-driven co-production of climate-responsive adaptation science
- **Scenario planning for management decisions**
- **GIS services to combine data and models**
- **Training**
 - Regional offerings of National Conservation Training Center courses
 - NASA remote sensing, simulation modeling
 - “Hands-on” as part of research projects

**Co-developed solutions
leading to actionable
science**

Example: Resilience in southwest Colorado

- Led by USGS Fort Collins Science Center in partnership with the Colorado Natural Heritage Program, The Nature Conservancy, the Mountain Studies Institute, and the University of Montana
- Focused on San Juan and upper Gunnison river basins
- Used narrative climate scenarios to engage with stakeholder community
- Developed an adaptation toolkit specifically tailored for species and landscapes of local concern



Example: White Bark Pine in the Greater Yellowstone Region



- Led by Montana State University in coordination with the Greater Yellowstone Coordinating Committee
- Examined habitat suitability across the region under future climate scenarios
- Evaluated range of management alternatives and developed recommendations for creating a strategy under uncertainty
- Resulted in climate-informed management of White Bark Pine communities

Example: Drought preparedness on the Wind River Indian Reservation

- Co-Led by National Drought Mitigation Center and Colorado State University in partnership with the Wind River Tribal Water Engineer, the High Plains Regional Climate Center, the National Integrated Drought Information System, Wyoming EPSCoR, and many others
- Developed qualitative and quantitative location-specific decision tools to support drought preparedness
- Enhanced capacity in the Tribal Water Engineer's office through formal and informal training

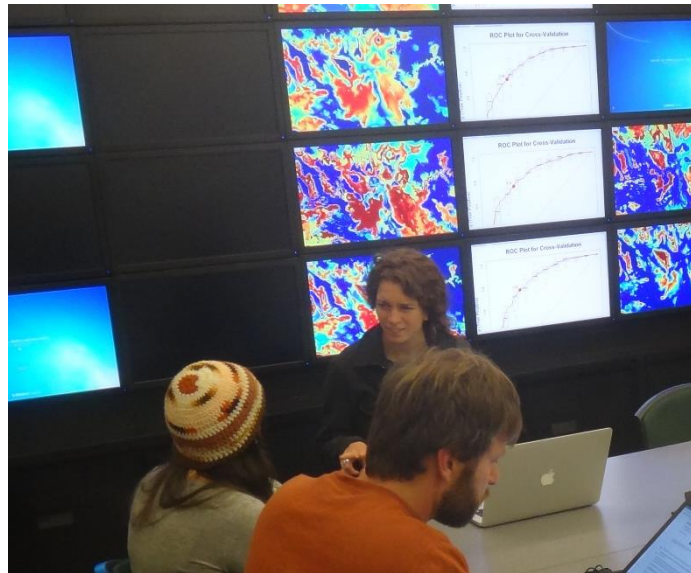
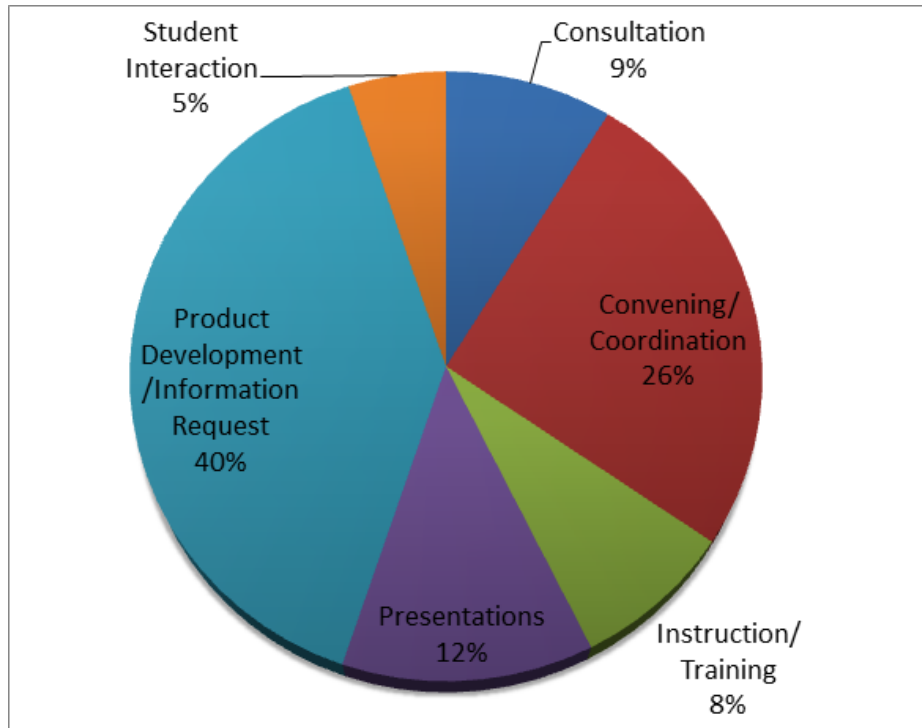


Received National Fish, Wildlife, and Plants 2017 Climate Adaptation Leadership Honorable Mention award for broad partnerships

Community support 2012-2017: n=136

Includes a wide range of services:

- Organizing or steering committees for regional meetings
- Presenting guest lectures
- Consulting on research methods
- Contributing letters of support
- Providing summaries of historical and projected climate data and information
- Advising university students



Questions for our Management Partners

- What are the most important decisions in your agency that will require climate-related information?
- What would be the ideal distribution of resources among: *science, communications, capacity building, convening*.
- What are the most useful formats / products – how do you best take information in?
- Should *drought and water availability* continue as the central theme of NC CSCs science?
- What type of guidance would facilitate identifying, evaluating, and selecting among adaptation options?

Questions for our Science Partners

- What (*fundamental, foundational, deep*) science questions hinder our ability to respond to management challenges ?
- What tools and techniques have we developed that could move towards *operational* mode?
- What strategies / resources are available to increase *synthesis* production?
- What guidance could we develop to support managers' identifying, evaluating, and selecting among adaptation options?

Strategic planning – North Central CSC



Questions?
Comments?
Slides you want to see again?

THANK YOU

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