Building A Coalition For Conservation Under Climate Change

Olivia E. LeDee
Forest and Wildlife Ecology
University of Wisconsin-Madison

Acknowledgments

Karl Martin and Michael Meyer, Wisconsin DNR

Christine Ribic, USGS Wisconsin Cooperative Wildlife Research Unit

Bill Karasov and Tim Van Deelen, UW-Madison

WI Department of Natural Resources, U.S. Fish and Wildlife Service, U.S. Geological Survey

Wisconsin Initiative on Climate Change Impacts and Climate and Wildlife Working Group members

UW-Madison, Department of Forest and Wildlife Ecology

Outline

I. Wisconsin Initiative on Climate Change Impacts
II. Wildlife Working Group
III. Reflections

Early Movement….

- Questions from state legislators
- Concerns expressed by natural resource managers

Joint meeting between UW-Madison and WI DNR scientists and managers (Summer 2007)


Pomplun

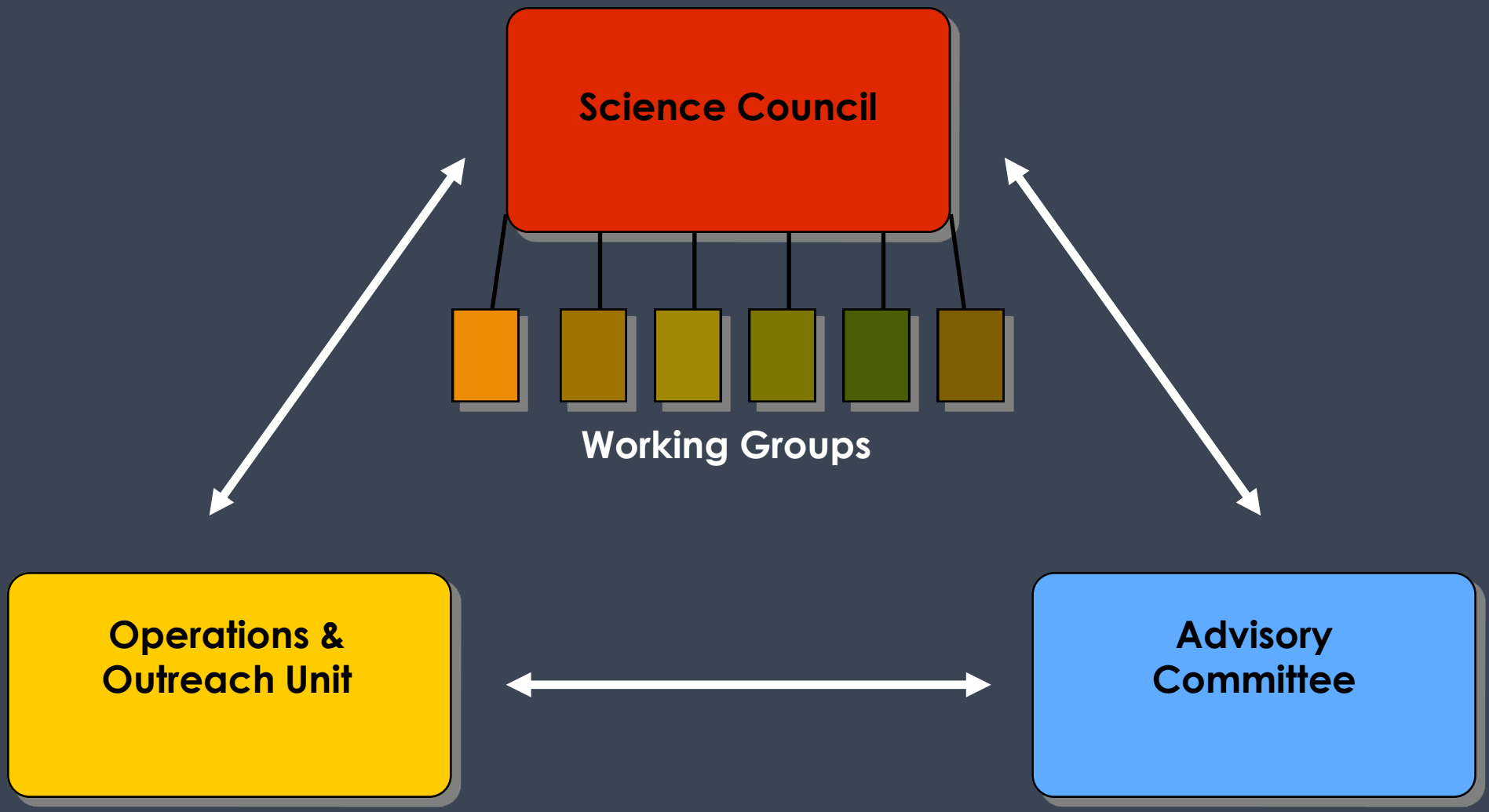

Pomplun

WISCONSIN INITIATIVE ON CLIMATE CHANGE IMPACTS

The University of Wisconsin,
The Wisconsin Department of Natural Resources
Other agencies and institutions

1) assesses and anticipate climate change impacts on specific Wisconsin natural resources
2) evaluate potential effects on industry, agriculture, tourism and other human activities
3) develop and recommend adaptation strategies

Structure


Science Council
Working Groups
Operations & Outreach Unit
Advisory Committee

Science Council

Representatives from UW System, the WDNR and other state and federal agencies, universities, NGOs and institutions

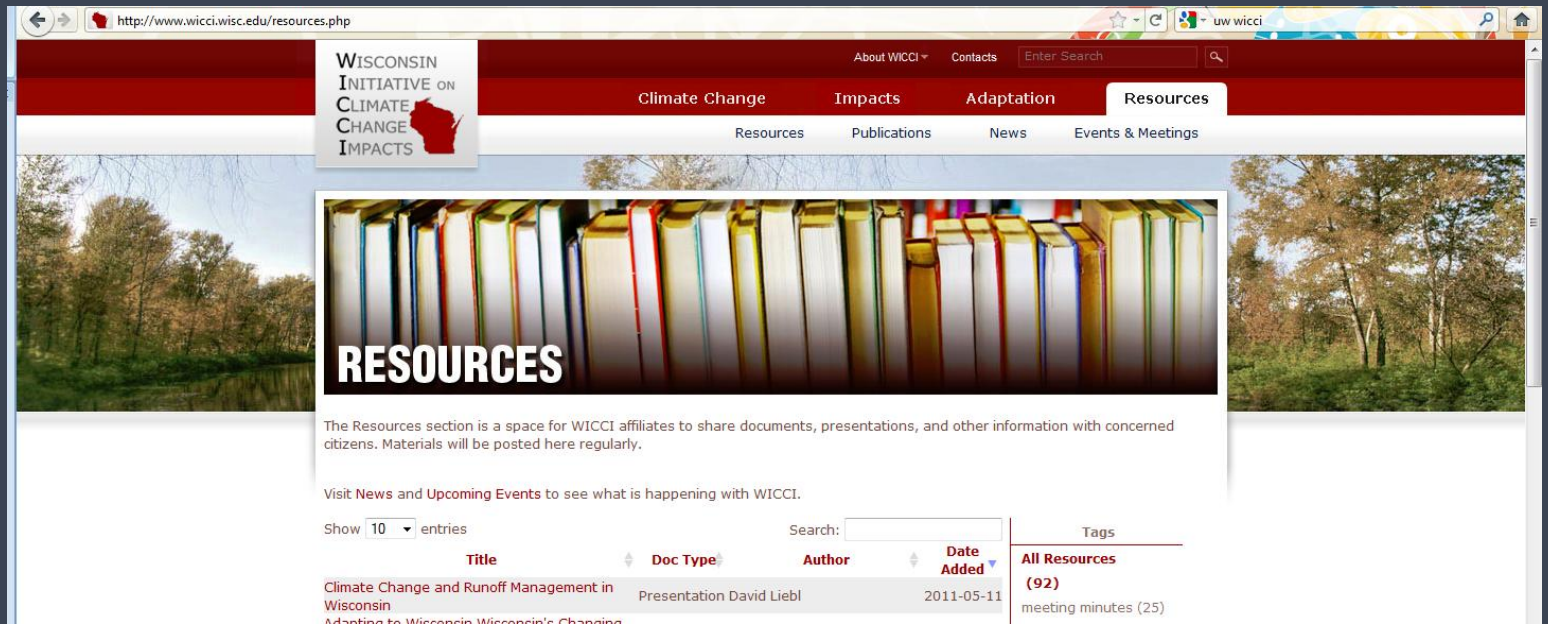
1) Identify critical or emerging scientific questions related to the mission of WICCI
2) Organize and coordinate Working Groups
3) Provide leadership on climate change impact issues in Wisconsin

Operations & Outreach Unit

Logistical support and performs outreach functions related to the mission of WICCI (Nelson Institute for Environmental Studies)

Advisory Committee

Representatives of business interests, non-governmental organizations, municipalities, agencies, and other stakeholders

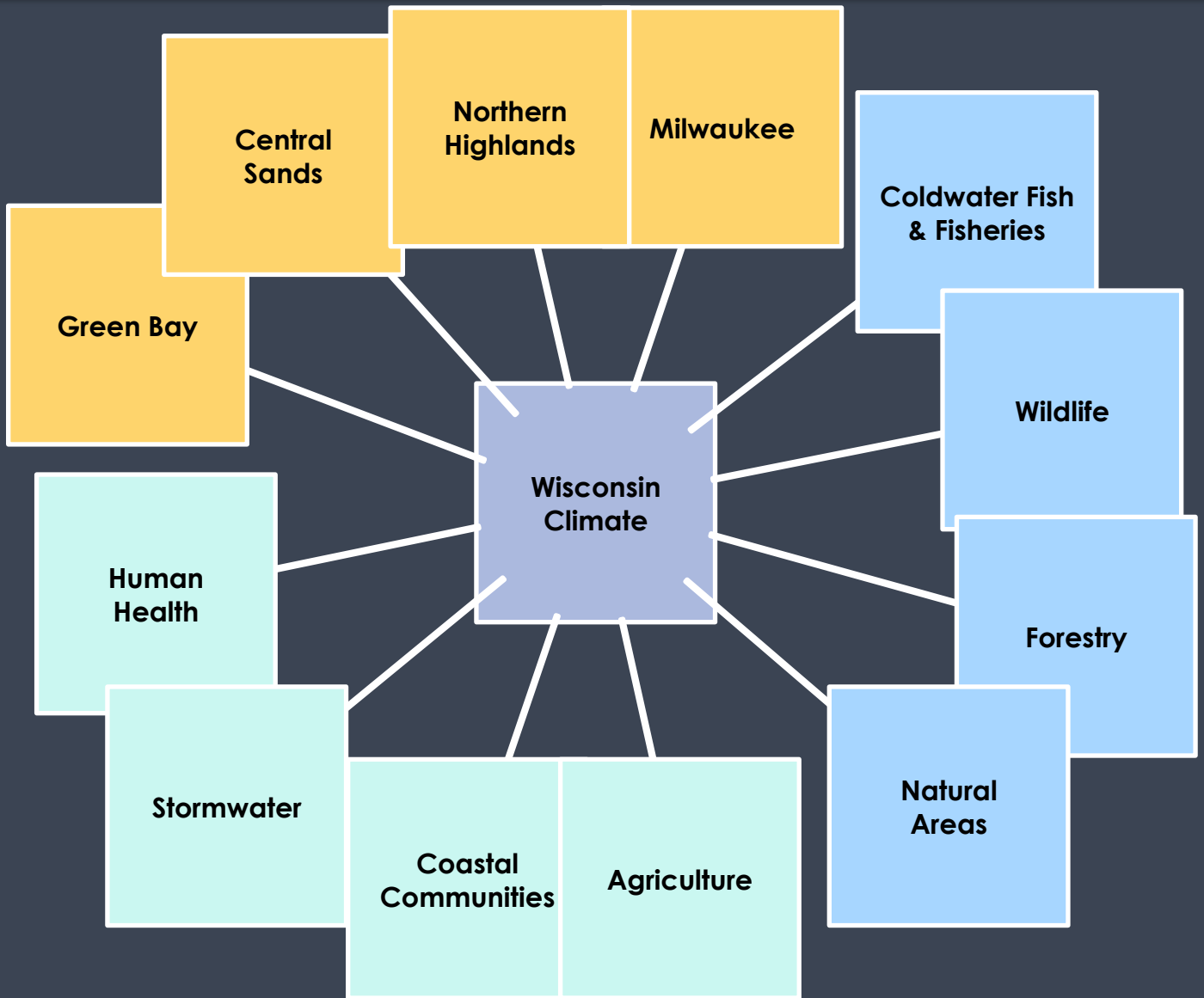


Working Groups

Scientists and practitioners from UW System, the WDNR and other state and federal agencies, universities, NGOs and institutions

1) Identify potential risks and vulnerabilities pertinent to topic area or region
2) Summarize existing information on climate change impacts
3) Identify data and research needed to assess future impacts
4) Recommend adaptation strategies

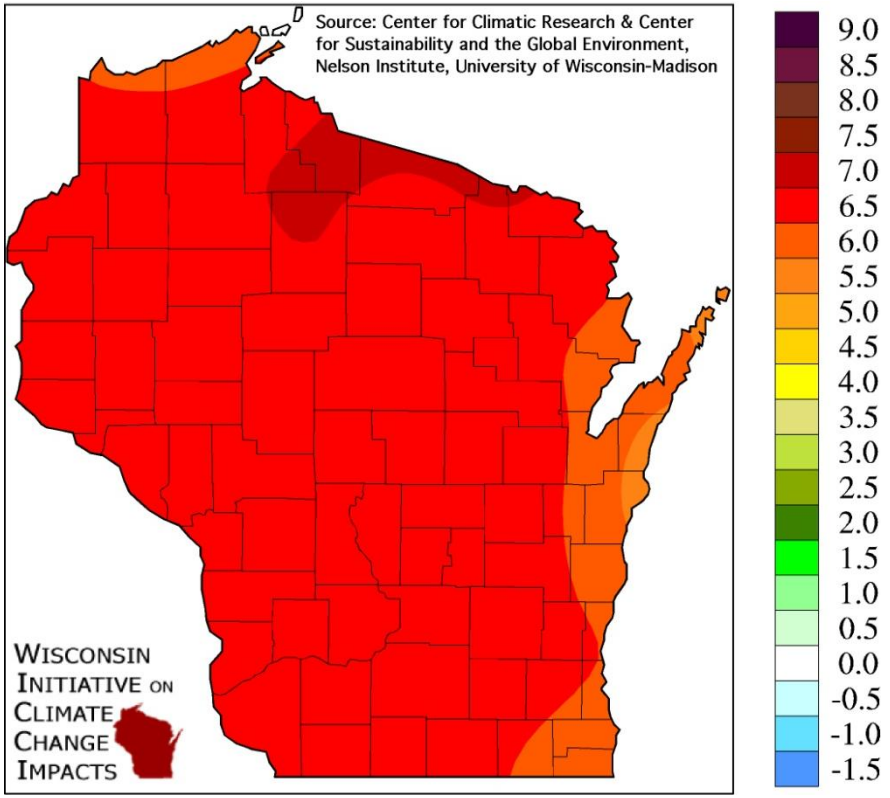
Working Groups



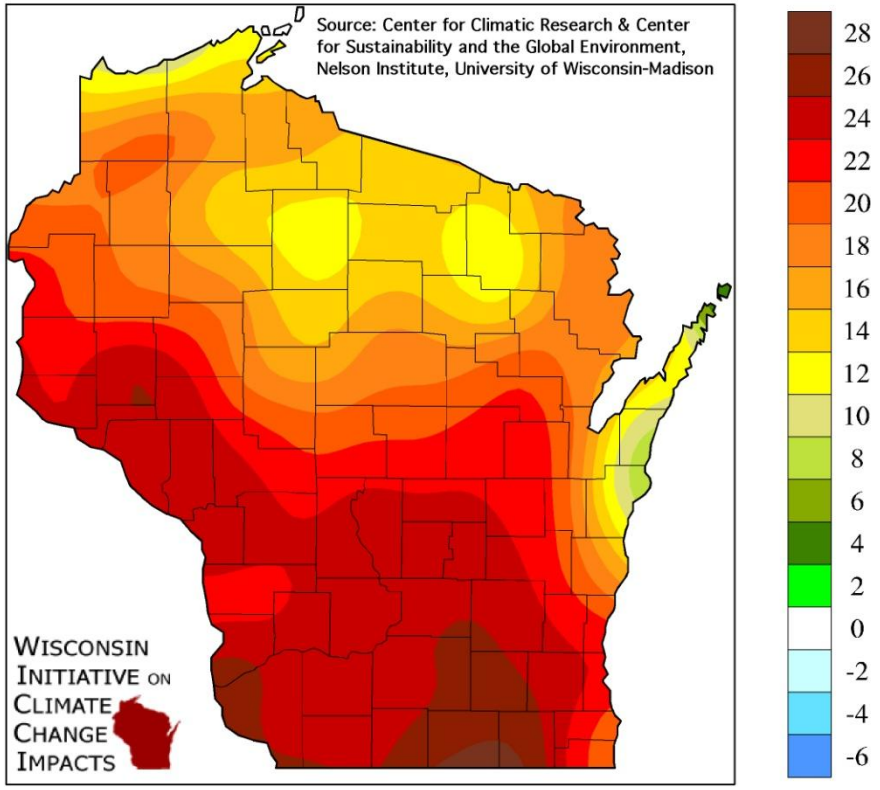
Climate

Scientists from UW Dept. of Atmospheric and Oceanic Sciences and Center for Climatic Research

Projected Change in Annual Average Temperature (°F) from 1980 to 2055



Projected Change in the frequency of ≥90°F days per year from 1980 to 2055



Wildlife

>40 scientists and managers from WI DNR, UW, USGS, FWS, TNC, USFS

Co-chairs: Karl Martin, Mike Meyer

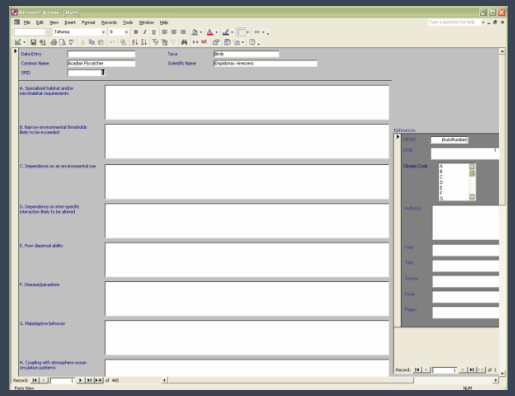
Research Associate: Olivia LeDee (joint funding)

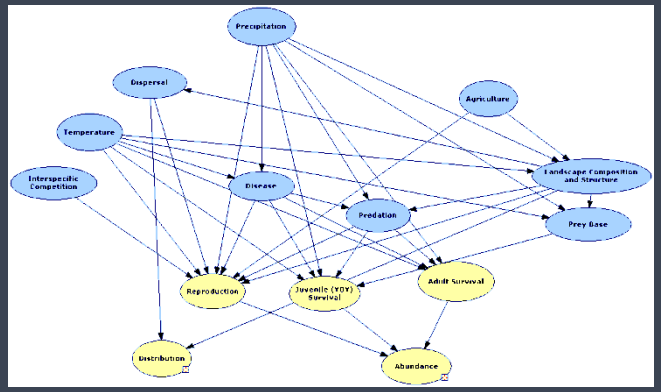
1) Outline current knowledge and identify information gaps
2) Conduct a risk assessment identifying likely threats to Wisconsin's wildlife
3) Develop adaptive management strategies

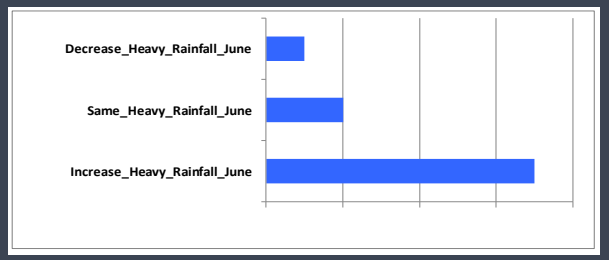
Objective I: What we know…

Objective II: Assessment

1) Screen 463 species for sensitivity to climate change
2) Produce detailed conceptual models for a subset of species
3) Quantify models where resources and data permit







To Date…

Stages of collaborative, structured process

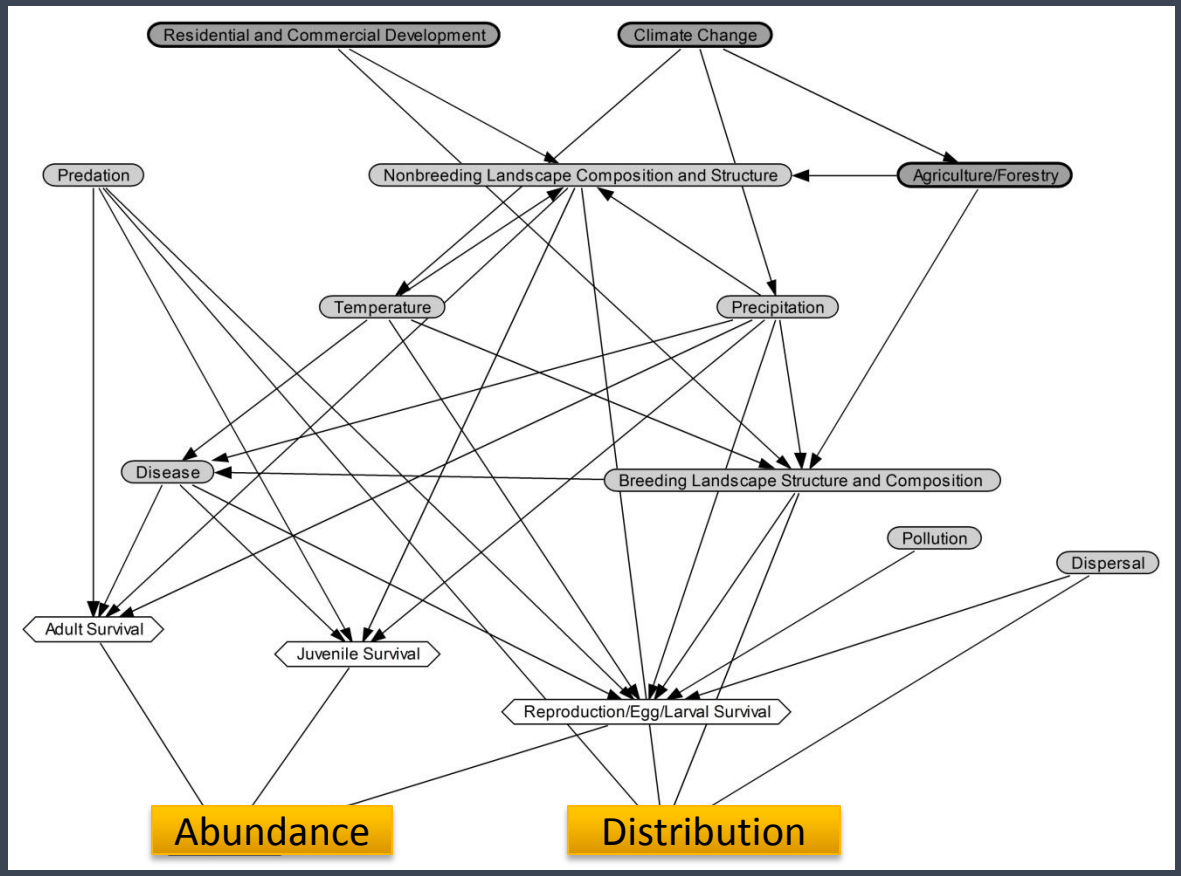
Stage I. Network Construction
Participants: modeler
Format: literature review
Product: alpha model

Stage II. Local Expert Review
Participants: modeler and 5-6 in-state experts
Format: in-person meeting with visual aid
Product: beta model

Stage III. External Expert Review
Participants: modeler and 2-3 national experts
Format: phone conference with each expert
Product: synthesis of comments

Stage IV. Reconciliation
Participants: modeler and in-state experts
Format: group email exchange
Product: final conceptual model

Final conceptual Bayesian network for the wood frog



Envisioning the future of wildlife in a changing climate: collaborative learning for adaptation planning. *Wildlife Society Bulletin* (2011, in press) Olivia E. LeDee, WH Karasov, TR Van Deelen (**UW-Madison**), CA Ribic (**USGS**-WI Cooperative Wildlife Unit), KJ Martin & MW Meyer (**WDNR**)

Objective III: Adaption Planning

Forthcoming, 2012

Challenges…

- Multiple disciplines
- Varied backgrounds/roles - researchers, managers, policymakers, and non-scientists
- Few-no structural incentives
- Intergenerational disparity
- Sharing of ideas – intellectual integrity
- Group formation and collaboration
- Expectations

What worked…

- Experience working together (i.e. trust)
- Funding (shared resources)
- Interdisciplinary experience
- Cross-agency supervisors
- Early input
- Regular meetings
- Institutional culture
- Longer timeline

Looking back…

- Climate Data → Assessment
- Poor integration of practitioners
- Poor integration of social sciences
- Process skills
- Working group overlap
- Reconcile conflicting findings
- Peer review
- Anticipate/prepare for conflict
- What happens after "the big event"

Successful collaboration…

1. Get good quality information
2. Mobilize and develop capable people from a spectrum of interests
3. Provide them with opportunities for interaction and exploration (and incentives)
4. Enable them to implements solutions in a way that mobilizes resources and shares ownership
5. Mix thoroughly, provide adequate resources, and stand out of the way

Wollendeck and Yaffe 2000