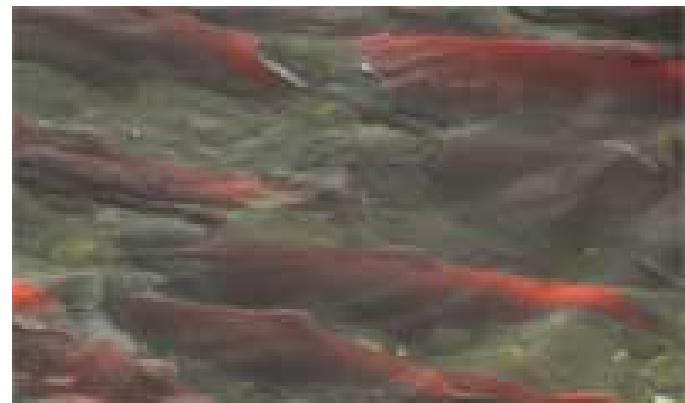




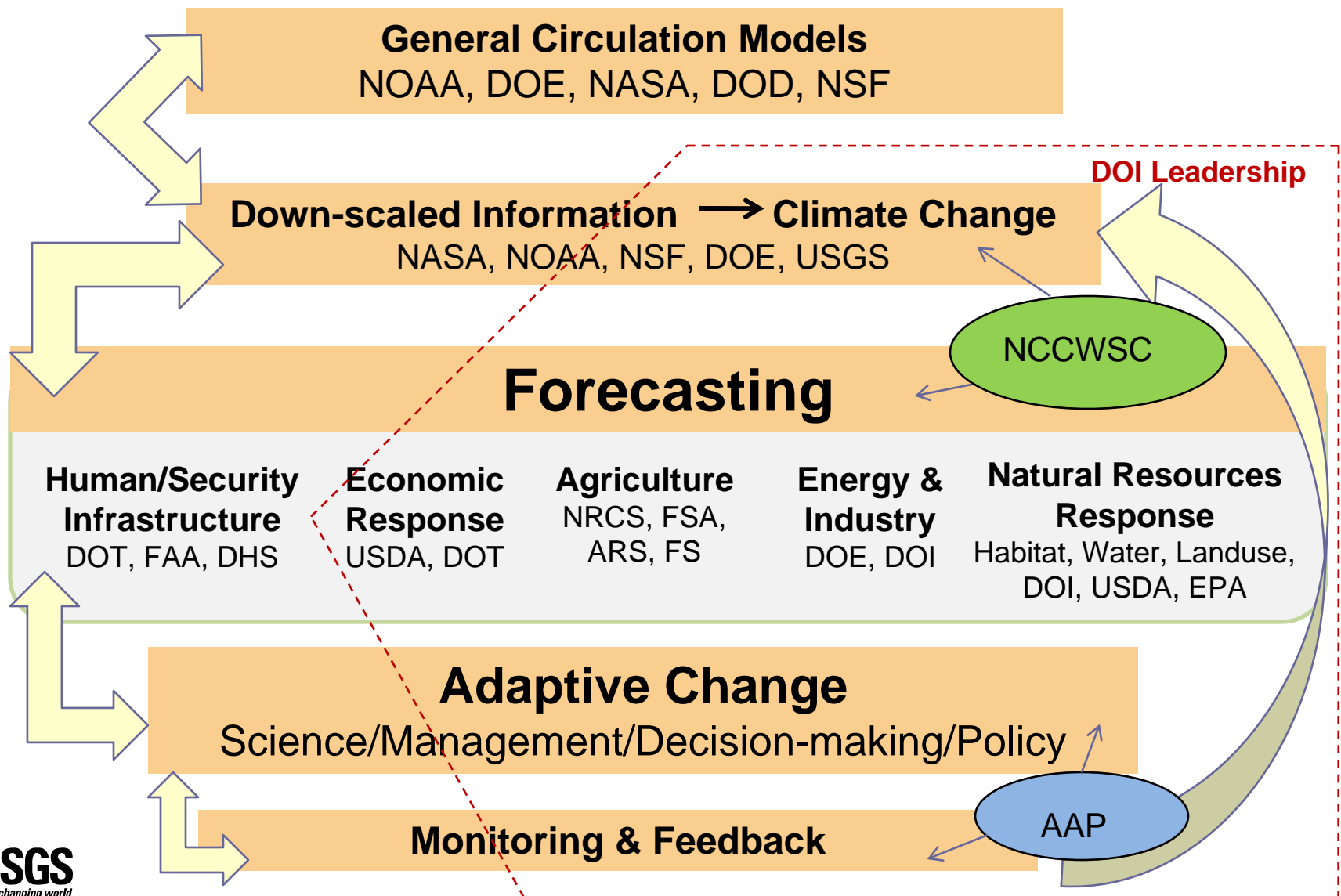
USGS Global Change Science National Climate Change & Wildlife Science Center

Dr. Susan D. Haseltine
Associate Director for Biology

MAFWA Meeting
June 29-30, 2009
Peoria, IL



Climate Adaptation Strategy



USGS Global Change Science Development

- **National Climate Change and Wildlife Science Center (NCCWSC):** A partnership to sustain fish & wildlife communities in natural systems
- **Climate Effects Network:** A vision for a national climate early-warning system
- **Carbon Sequestration:** Geological and biological approaches to understanding the fluxes, sequestration and impacts on human and natural systems

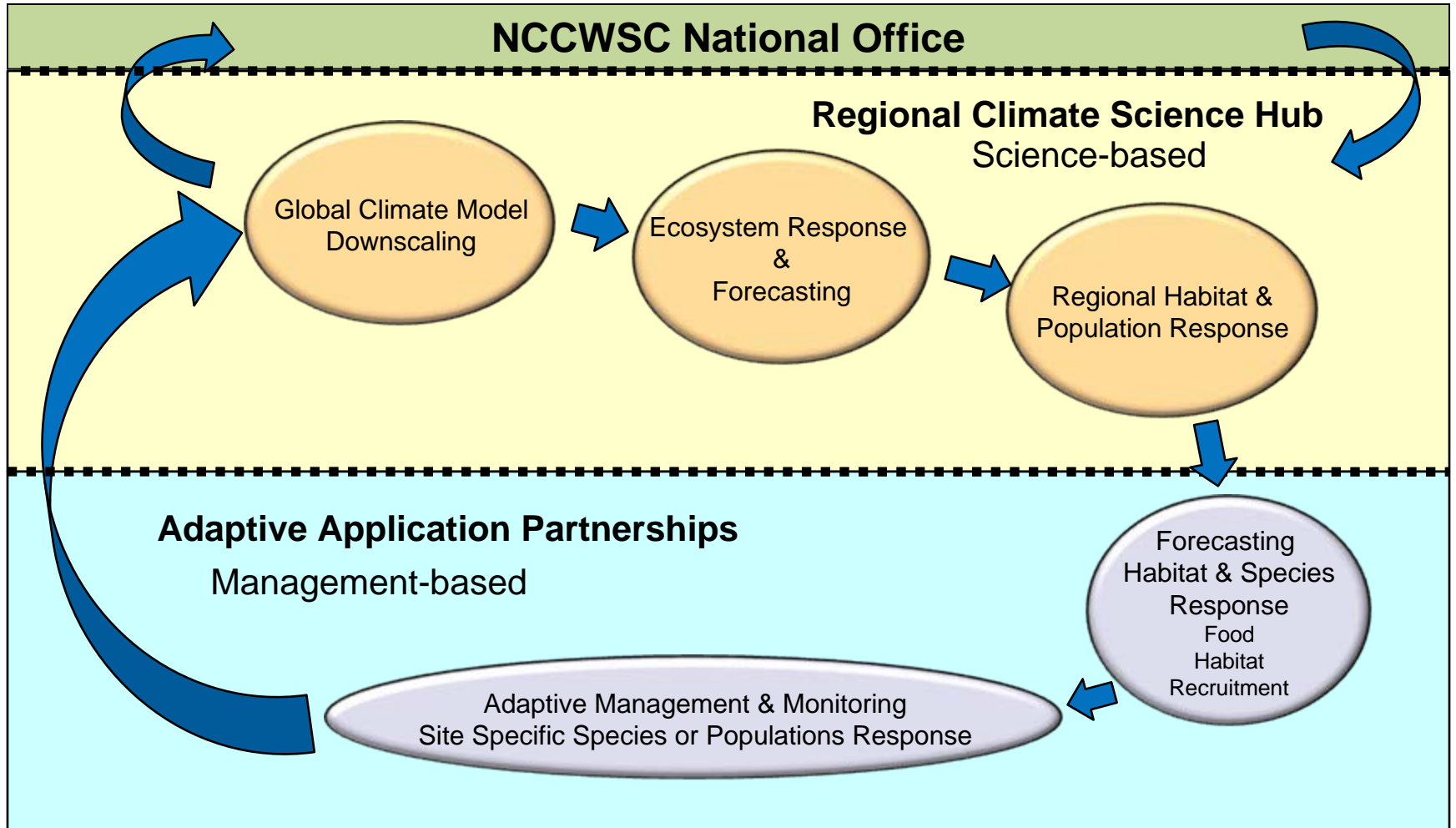


National Climate Change & Wildlife Science Center

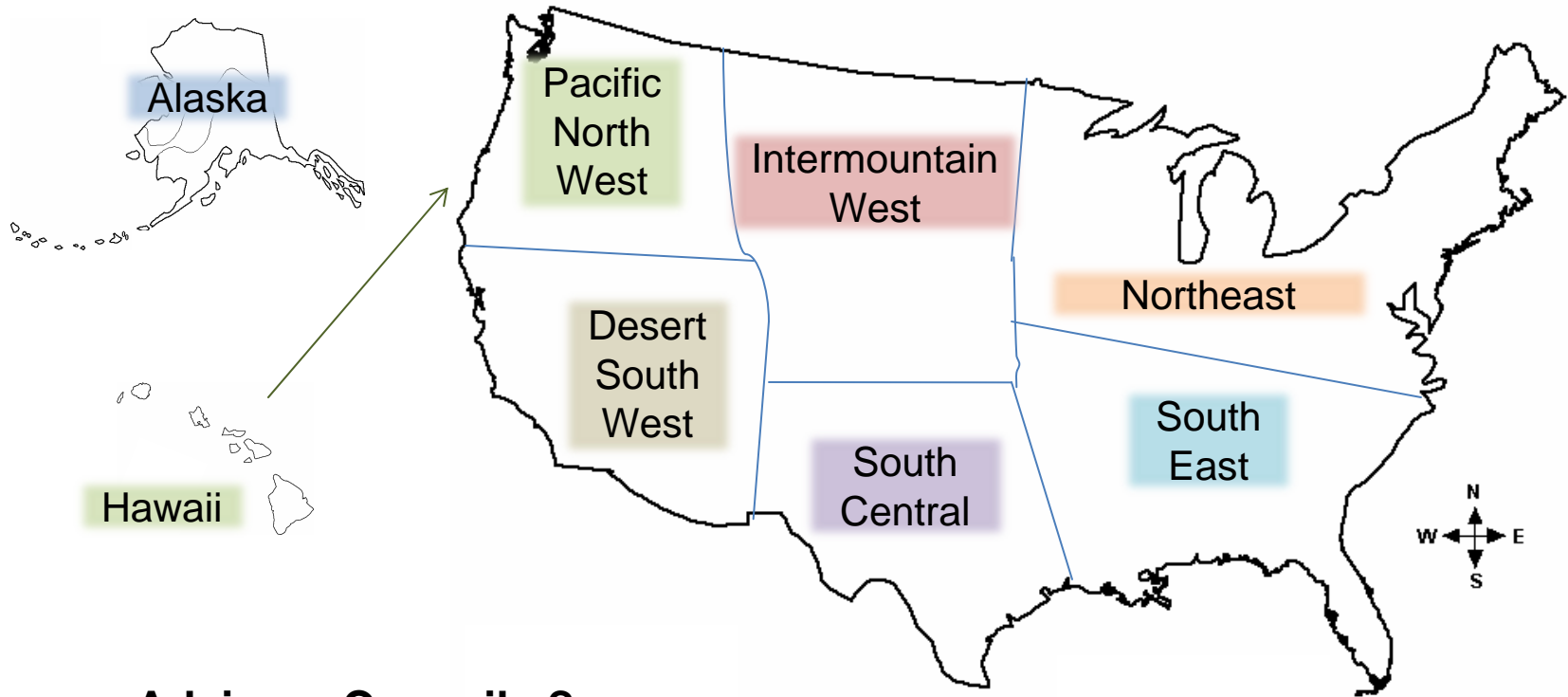
- **Forecasts fish & wildlife change through:**
 - Down-scaled climate models and derivative products
 - Integration with ecological & habitat models
 - Defining population and habitat responses at appropriate scales
 - Developing response options in an adaptive monitoring framework
- **Joint decision-making with Federal, State and NGO communities**
- **National and regional focus on adaptation/impacts**



NCCWSC APPROACH



Regional Climate Science Hubs



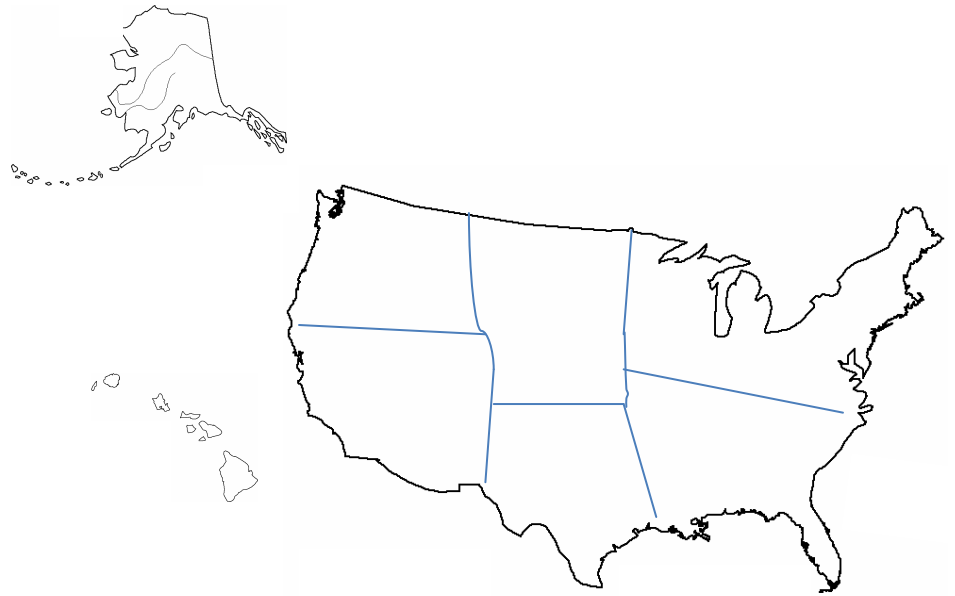
Advisory Councils ?



Regional Climate Science Hubs

Partnerships are key

- Cover the Nation (7 or 8)
- Science-based
- University hosted
- Ecological & political boundaries
- Self-generating
 - Covering multiple AAP's/LCC's



Adaptive Application Partnerships

- Four to six per Hub
- Landscape/geography-based
- Partnership-led
- Regional Climate Science Hub Outputs:
 - Combination of expression w/other landscape drivers
 - Geographic expression of ecological & habitat nodes from RCSH's at management scales
 - Priority management goals and time frames



Adaptive Application Partnerships

- USGS Commitments
 - Research & Modeling
 - Adaptive response forecasts including other drivers
 - Monitoring protocols
- USGS Benefits
 - Strengthening RCSH output
 - Builds traditional strengths
 - Partners with other expertise
 - Leverages resources
 - Feeds CEN & other monitoring needs



SE Regional Pilot

- **Demonstration project:** integrates climate change science with habitat and species response models to assess impacts on avian and aquatic species
- Cast predictive models calibrated from data gathered during recent decades
 - NOAA Climate data
 - Remote sensing data
 - USGS - BBS & MAPS data
 - Downscaled climate models
 - Watershed modeling



NCCWSC Next Steps

- RFP for Climate Adaptation Science
- RFI to Universities – Host Interest
- Final National Workshop – Strategic Plan
- Staffing: National Office & Regional Hubs
- Advisory Boards
- Management Application & Science Partnerships



End Game

Managing toward the Future

- Altered biological communities
 - Effective monitoring
 - Partnerships leading to synergy
 - Common transparent information base
-

Culture change

