



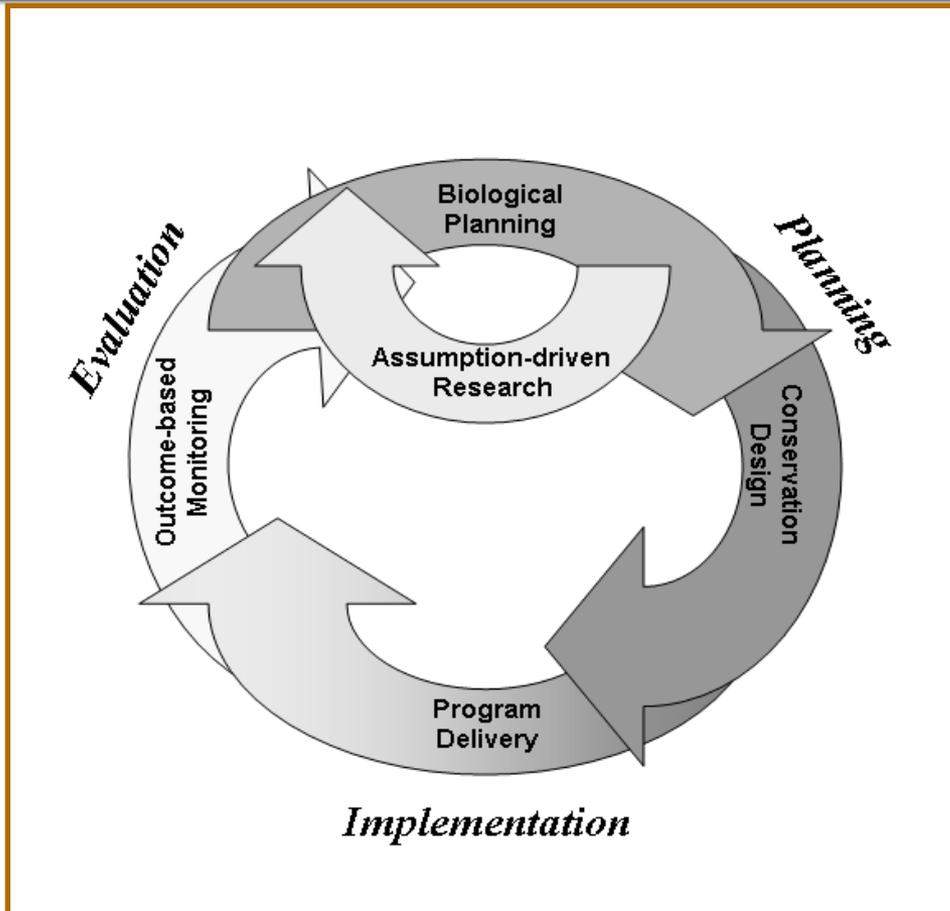
Landscape Conservation Cooperatives

Integration and Prioritization

of Science Support Needs

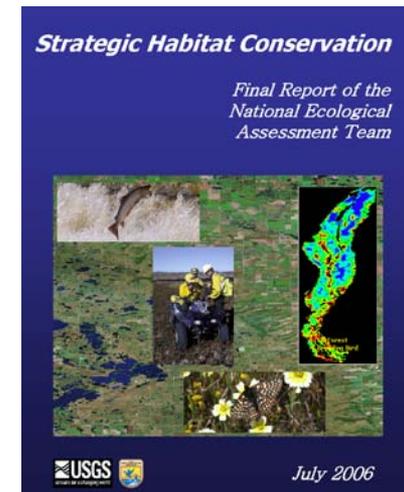
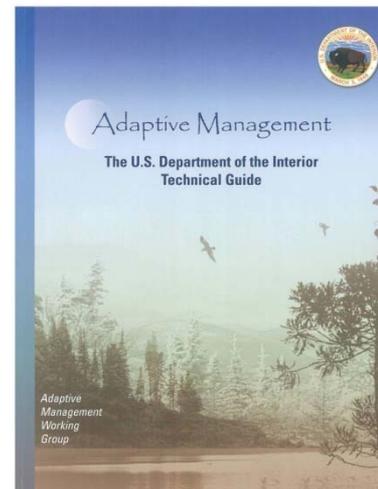


Outcome-based Adaptive Management



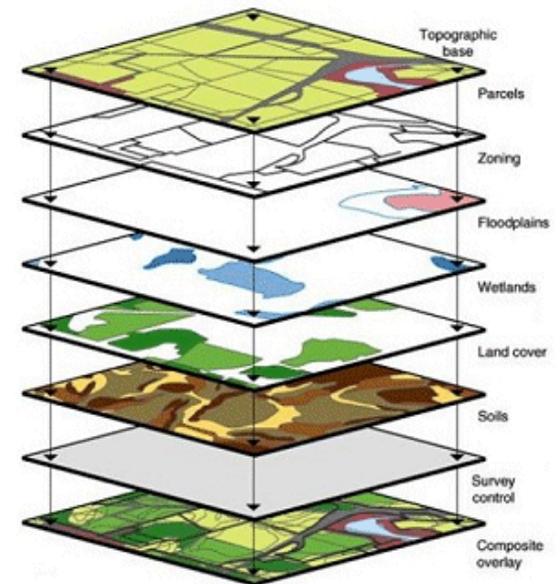
Strategic Habitat Conservation

- Adaptive, iterative approach to landscape conservation:
 - Biological planning
 - Conservation design
 - Conservation delivery
 - Monitoring and research



Role of LCCs

- Focus on landscape conservation
- Enhance effectiveness/efficiency
 - Support existing coalitions, cooperatives and partnerships
 - Share resources
- Add value
 - Collaborative scientific research
 - Shared scientific understanding
 - Common conservation goals
 - Coordinated conservation actions

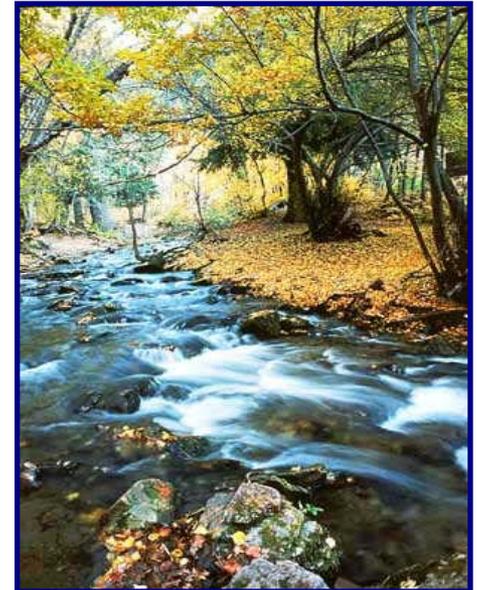


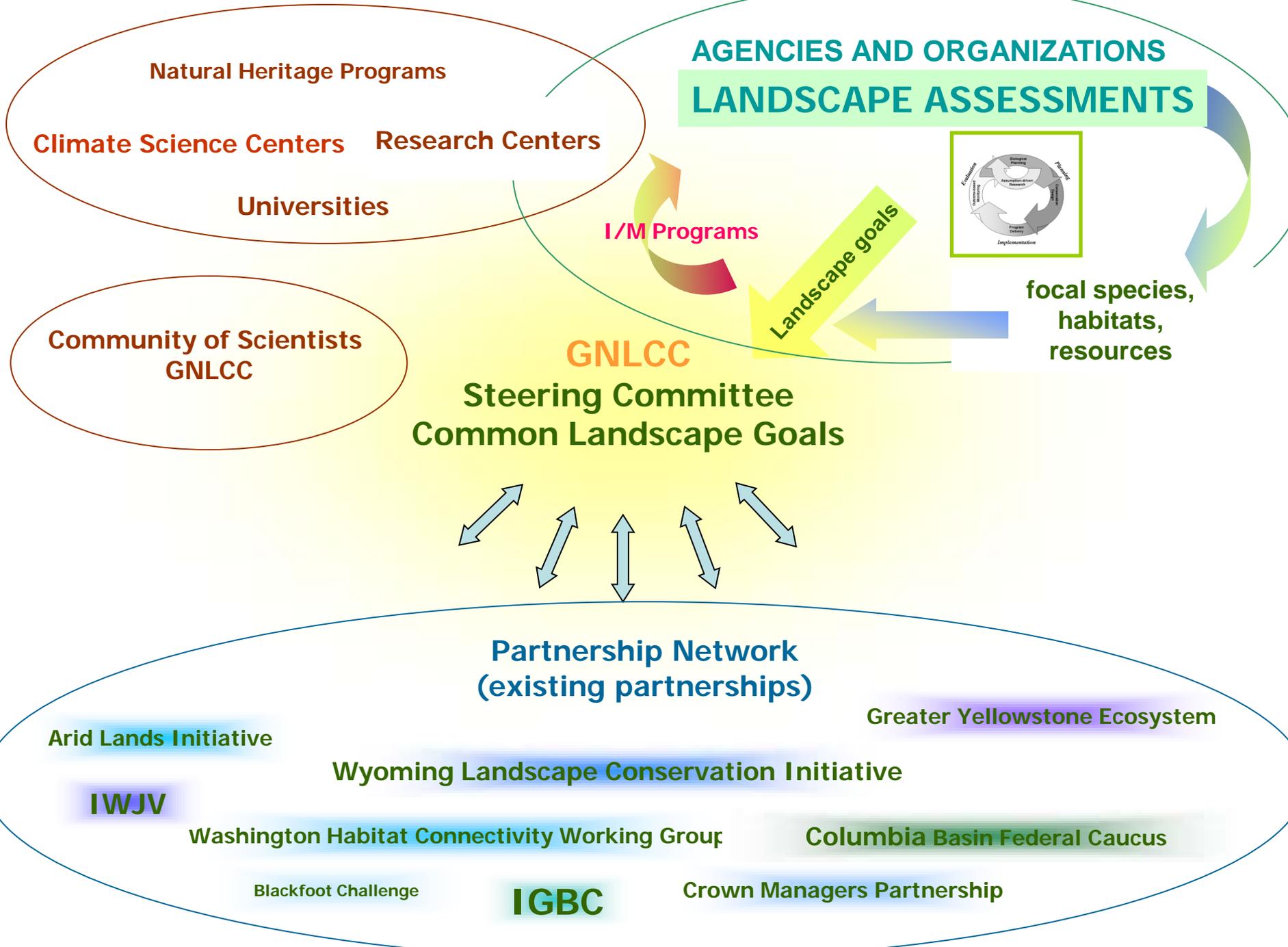
GNLCC GOAL

Goal Statement

Coordinate, facilitate, promote, and add value to large landscape conservation to build resource resilience in the face of climate change and other landscape-level stressors through:

- **SCIENCE SUPPORT**
- **COORDINATION**
- **INFORMING CONSERVATION ACTION**
- **MONITORING AND EVALUATION**
- **OUTREACH AND EDUCATION**





GNLCC FY2010

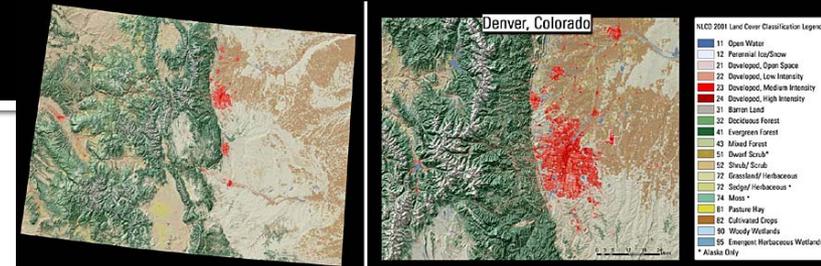
Preliminary Science Needs Assessment

How we determined FY10 priorities

Asked about science/info needs related to landscape conservation/stressors:

- Review of existing landscape initiatives
- Webinar Survey results (Nov 2009)
- Direct discussion with landscape partnerships
- ID existing efforts to leverage that meet GNLCC science and information needs

GNLCC Science Assessment Results



- Climate information (current and projected)
- Land Cover (e.g., Landfire, NLCD)
- Data mgmt/interfaces capabilities and tools
- Habitat Connectivity
- Vulnerability assessments – Water Resources
- Biological/Species monitoring/evaluation

Great Northern LCC FY2010

Projects supported by GNLCC Steering Committee

Water Resource Vulnerability Assessment

- Predicting Effects of Climate Change on Aquatic Ecosystems in the GNLCC: Combining Vulnerability Assessments, Landscape Genomics, and Modeling for Conservation
- Forecasting the impacts of climate change in the Columbia River Basin: Threats to fish habitat connectivity

Data Management and Interfacing

- Data Template (funded through FY09 FWS/USGS SSP)
- Synthesis project (Climate, Ecol Response, Organizational, I/M)
- State of Idaho WGA – DSS
- National Wetlands Inventory base data and digitizing parts of Idaho
- Intermountain West Joint Venture grid-based bird monitoring

Habitat Connectivity

- State of Washington Habitat Connectivity fine-scale/ ClimateWise analyses
- Interagency Grizzly Bear Committee Fine Scale Linkages in Northern Rockies
- Development of a Transboundary Decision Support System to Guide and Implement Conservation, Land Use, Energy, Transportation, and Climate Change Management and Monitoring
- Long-term Changes in Environmental Characteristics Required by Sage-Grouse Predicted under Climate Change

Plains and Prairie Potholes LCC FY2010

Projects supported by Steering Committee

- **Capture and Interpretation of Downscaled Climate Change Models to Benefit Avian Conservation**
- **Regional Assessment of Fish Habitat Condition for the Northern Great Plains portion of the PPP LCC**
- **Completion of the National Wetlands Inventory for the Northern Great Plains portion of the PPP LCC**
- **2nd Round of Proposals under assessment for June 17**

Great Plains LCC FY2010

Projects supported by GNLCC Steering Committee

Population and habitat assessment to inform predictive models

- Provision and inventory of diverse aquatic ecosystem-related resources for the GPLCC
- Implications of climate change for avian conservation in Great Plains landscapes
- Development of regional planning tools to assess the impacts of climate and land use change on a sensitive grassland bird

Risk & vulnerability assessments for priority species

- Consequences of stream fragmentation and climate change for rare great plains fishes
- Climate change and connectivity: assessing landscape and species vulnerability
- Climate change planning for the Great Plains: wildlife vulnerability assessment and potential for mitigation with grazing management
- Decision support for climate change adaptation in the GPLCC: Creating geospatial data products for ecosystem assessments and predictive species modeling
- Understanding the ecology, habitat use, phenology and thermal tolerance of nesting Lesser Prairie-Chickens to predict population level influences of climate change

Great Plains LCC FY2010

Projects supported by GNLCC Steering Committee (continued)

Landscape scale conservation strategies to direct management expenditures

- A method for mapping and delineating the potential impact of reduced streamflow through climate change on habitat distribution of the Arkansas River Shiner and Paddlefish

I&M protocols developed, refined to capture data on priority species

- Integrated monitoring within BCR's: creating a wildlife monitoring grid for the Great Plains Landscape Conservation Cooperative

Conservation genetics to improve conservation design in response to climate change

- Conservation status, genetics, and population vulnerability of Arkansas darter (*Etheostoma cragini*) in Colorado

Common Trends

Situational awareness among conservation practitioners

Thematic organization may be useful

Leverage and “knit together” ongoing landscape scale conservation efforts (data gap assessment)

Provide for foundational data platforms (covariates) across geographic area to support change projections and ultimately decision support tools