Habitat Recovery and Conservation Plans –

An urgency to adjust To the new normal

Presentation by

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Integrating the Social and Biological Sciences

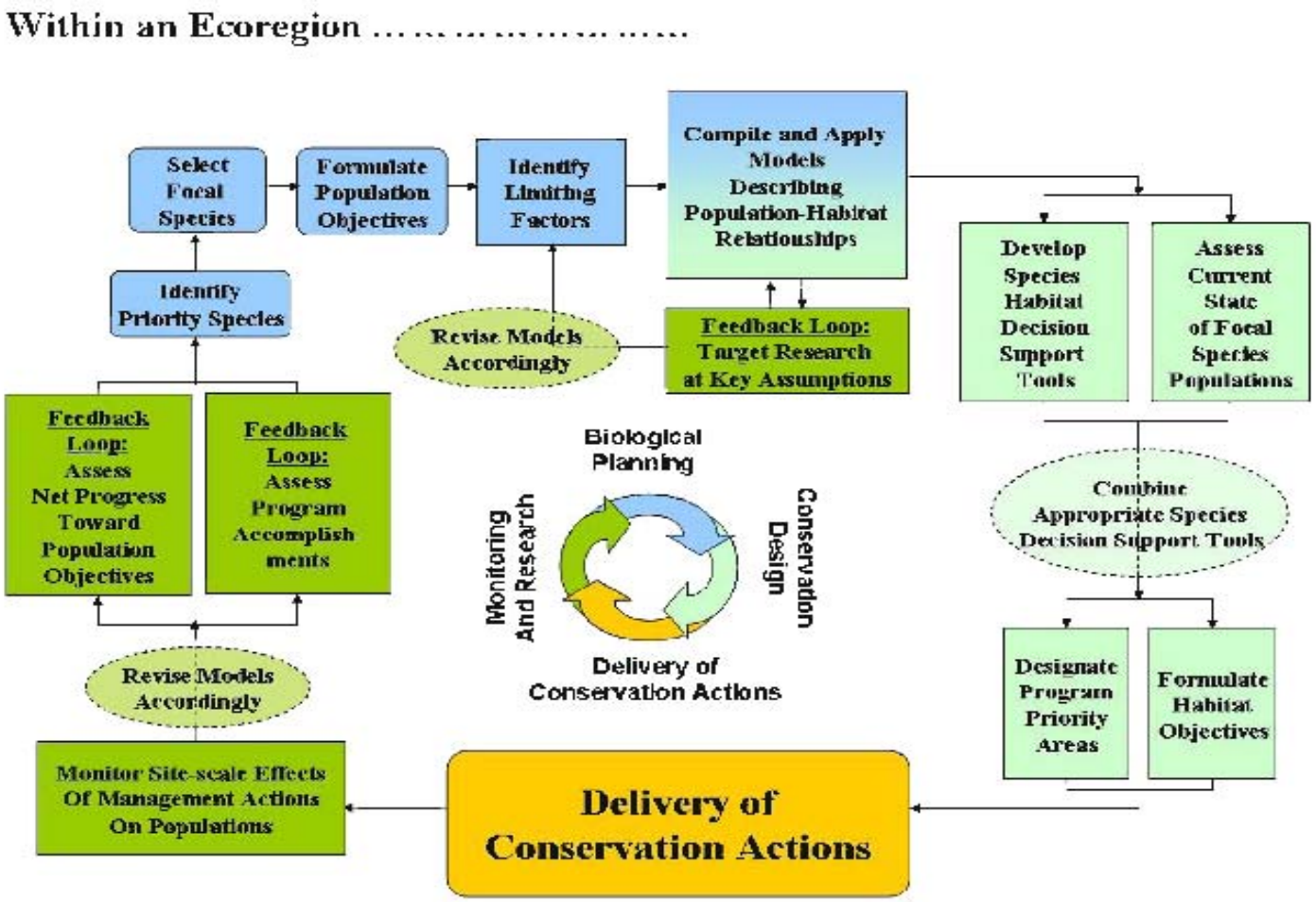
Urgency Exacerbated by Climate Change

- Exponential influence of perturbations
- Short timeframe to assess and adjust
- "Known unknowns" Former Secretary of Defense what's his name

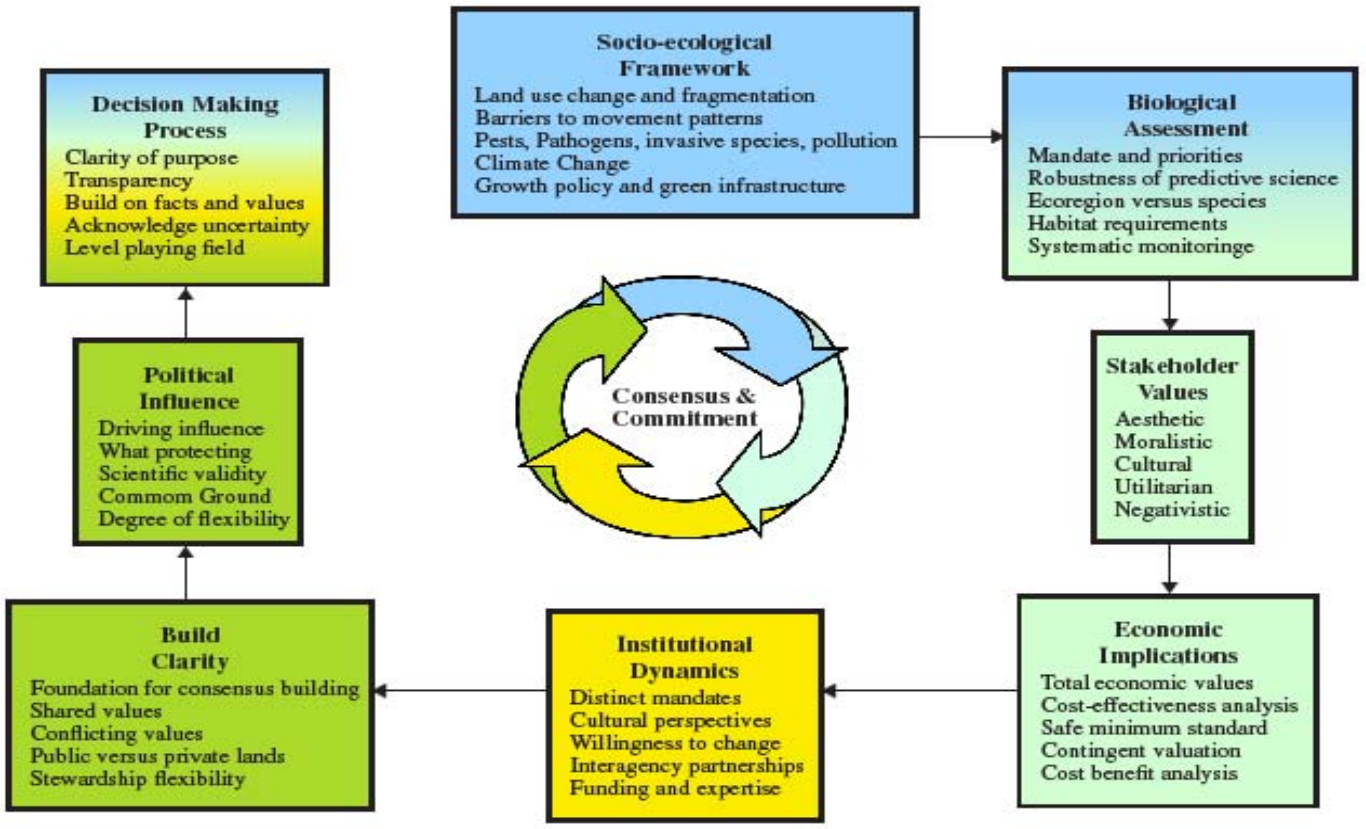
Emerging Collaborative Strategy

- Agencies are adjusting to native invasives
- Institutional culture shifts to bigger picture
- Engaging more partners
- Building consensus on decision-making

Strategic Habitat Conservation Diagram



Steps to the Integrate the Biological & Social Dimensions



The Socio-ecological Framework

Start with the big picture
such as the SAMAB assessment inspired
EPA Southeastern Ecological Framework

- Land use change and fragmentation
- Barriers to movement patterns
- Pests, pathogens, invasive species
- Growth patterns and policies such as:

  Sustaining species movement corridors

  Protecting areas of species richness and diversity

  Green infrastructure

  Cluster development

  Alternative energy sources

Biological Assessment

Evolving to reflect the new normal

- Broadened mandate and priorities
- Robustness of predictive science
- Applying standards for data documentation, analysis, storage and controlled access
- Bio-region scale versus single species
- Ecosystem(s) incorporating several vulnerable species
- Systematic monitoring of ecosystem processes, functions and population dynamics

Stakeholder Values

Balancing relevance with influence

- Ensure *equitable inclusiveness* among stakeholder participation in the planning, analysis, and decision-making process that evaluates alternative conservation strategies to sustain the species/ecosystems of concern
- Maintain a *holistic and nonpartisan perspective* of the social considerations and consequences of alternative species conservation strategies under consideration
- *Maximize* an array of *social and economic benefits* to the degree practical without compromising the species conservation goal
- Establish and maintain an *institutional framework* for sustaining the chosen conservation strategy

Social Assessment Process

An understanding of perspectives – a foundation for consensus

- Content analysis of literature and social observation – *scope out the playing field*
- Interview respected community/issue leaders – *identify key stakeholder perspectives*
- Conduct focus groups – *find out how different factions interact on key divisive issues*
- Conduct open public meetings – *orchestrate to avoid a confrontational atmosphere*
- Conduct public surveys – *a helpful but limited tool*

Economic Considerations

Consider both market and non-market perspectives

- Avoid reductionist techniques such as Contingent Valuation that tend to marginalize or distort the incorporation of other social dimensions
- Estimate the economic consequences, both market and non-market based, for stakeholders, including considerations of environmental justice
- Efficiently allocate resources for species conservation in order to meet legal requirements within economic constraints
- Determine when compensation assistance with economic adjustment is appropriate for stakeholders economically affected by policies
- Anticipate stakeholder reactions to policy choices and willingness to collaborate

Decision-making Objectives

Achieving consensus and long term commitment

- Maintain clarity of purpose
- Conduct good faith communications
- Maximize stakeholder benefits while meeting conservation objectives
- Be explicit about assumptions
- Level the playing field
- Identify, apply and sustain a viable implementation strategy

Decision-making Strategies

An iterative process

Facilitate stakeholder cooperation to build a sustainable conservation strategy

- Social networking - *identify values and goals*
- Joint fact finding - *listen and learn*
- Social learning – *both social and biological dimensions*
- Learning by doing - *both success and failure*
- Contingent valuation – *multidimensionality of values*
- Conflict resolution – *if all else fails*

Applying these Principals to Developers

A Habitat Conservation Plan to protect 10 aquatic species in the upper Etowah Watershed

- A partnership of academic, regulatory and development interests was formed
- Socio-ecological analysis was conducted
- Sustainable habitat requirements were defined
- Standardized restrictions on building permit applications were implemented
- Monitoring of habitat/species conditions and permitting process sustained for the long term

Applying these Principals to Oil & Gas Industry + Ranchers

A Habitat Conservation Plan to protect the Lesser Prairie Chicken in the Southeastern Great Plains Prairie

- One of the first achievements of its kind -BLM
- Formation of the NM-LPC Task Force
- Oil and Gas industry supports 28,000 jobs
- Never contentious due to collaborative process
- LCD population decline was not understood
- But industry devised a strategy to significantly reduce the size of its footprint on the prairie and has consistently contributed funding to conduct research to understand LCD ecology

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Project Report

Peine, J., J. Albritton, R. Wishart, L. Mynatt, S. Malley, C. Price, K. Franzreb, T, Herbert, M. Stevens, and T, Burley. 2009. Habitat Restoration and Conservation Prioritization Tool for the Endangered Species Act. Institute for a Secure and Sustainable Environment. Knoxville: The University of Tennessee.