

# The Strategic Habitat Conservation Framework

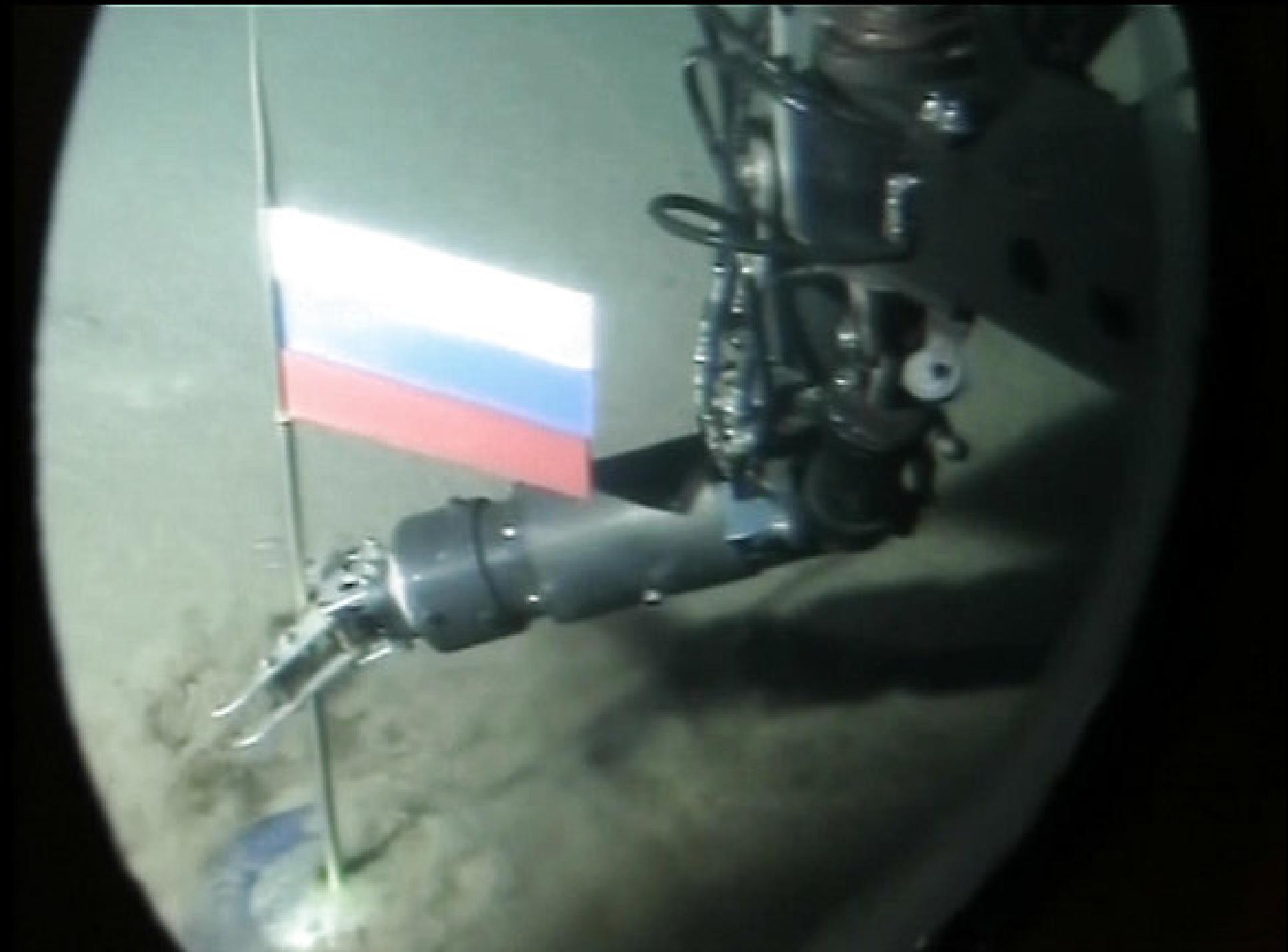
*Going From Good to Great:*

*The Role of the Project Leader in Shaping  
the Future of Conservation*

A Discussion With Participants in the FWS  
Project Leader Academy

National Conservation Training Center  
August 8, 2007





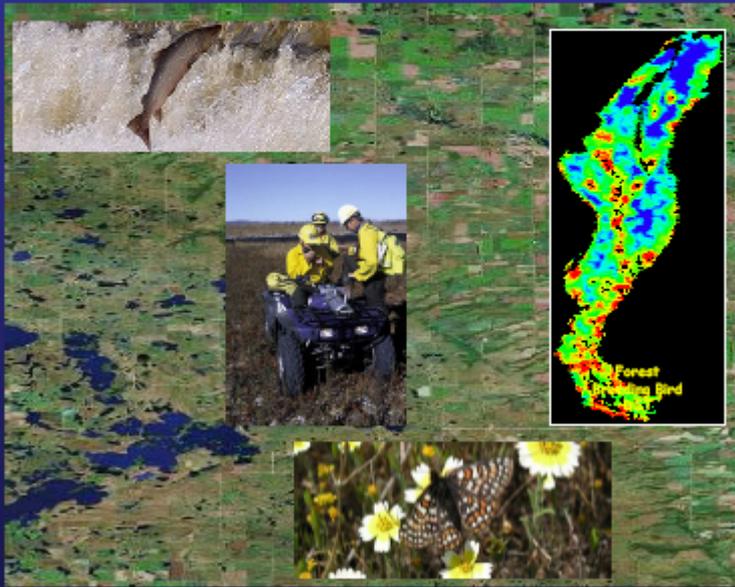
"The nature of conservation has changed ... [A]ctivity based conservation with an emphasis on 'more' gives way to the science of 'how much more' and 'where,' as we consider how best to pursue our mission."

Strategic habitat conservation: a report from the National Ecological Assessment Team (2006)

# Strategic Habitat Conservation...

## *Strategic Habitat Conservation*

*Final Report of the  
National Ecological  
Assessment Team*



July 2006

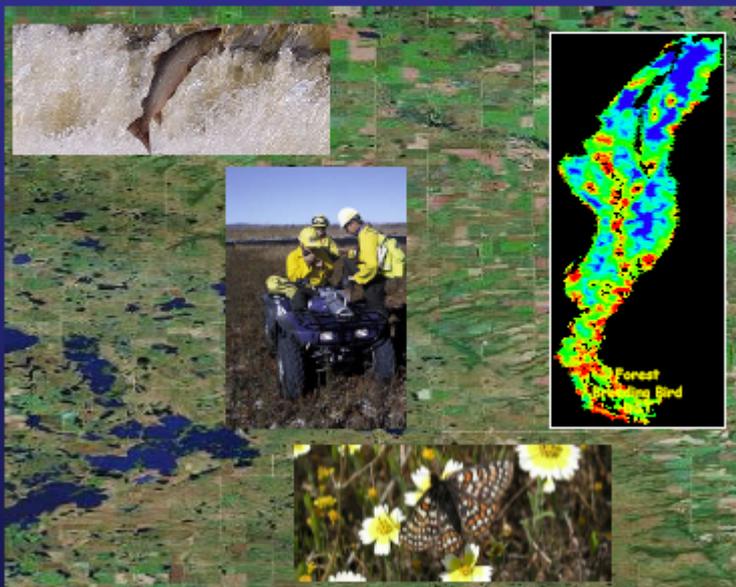
- An adaptive management framework for pursuing the Nation's conservation priorities.
- A functional aspect of shaping the future of conservation
- Refinement of the Service's Conservation Business Model
- A framework for strengthening science/management relationship

# The Strategic Habitat Conservation Framework

## Functional Elements

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Biological Planning

Conservation Design

Conservation Delivery

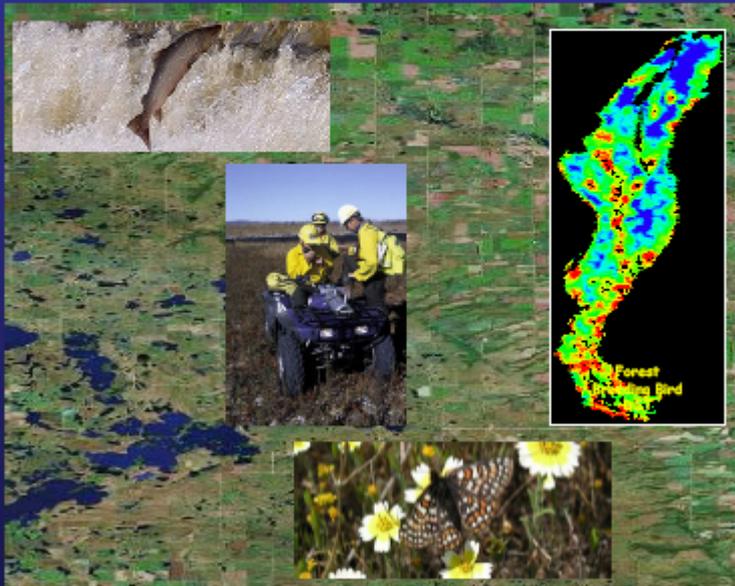
Decision-Based Monitoring

Assumption-driven  
Research

# In what manner "Strategic" ...

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- Focused on measurable biological outcomes (i.e., population goals)
- Supported by a science/management relationship that extends beyond research.
- Site-scale decisions linked to landscape-level conditions and objectives.
- Reflecting the interdependency of the conservation community in achieving biological outcomes at ecoregional scales.

# Why Strategic Habitat Conservation...

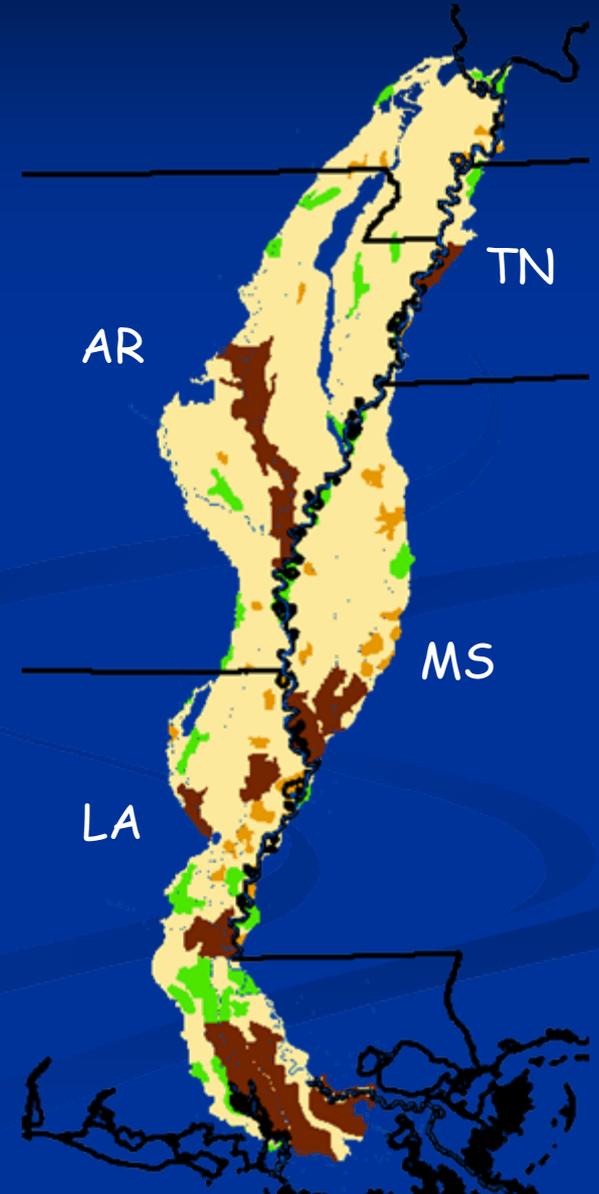
SHC is a response to changes affecting not simply the Service but the conservation community at large:

- A growing focus on the sustainability of systems, communities, and species as the overarching aim of conservation.
- An information technology revolution that is both supporting and driving an increasing ability to think and act at broad spatial scales.
- An increasing emphasis on accountability, biological as well as administrative.

# The Science/Management Relationship Anticipated by SHC - **Biological Planning**

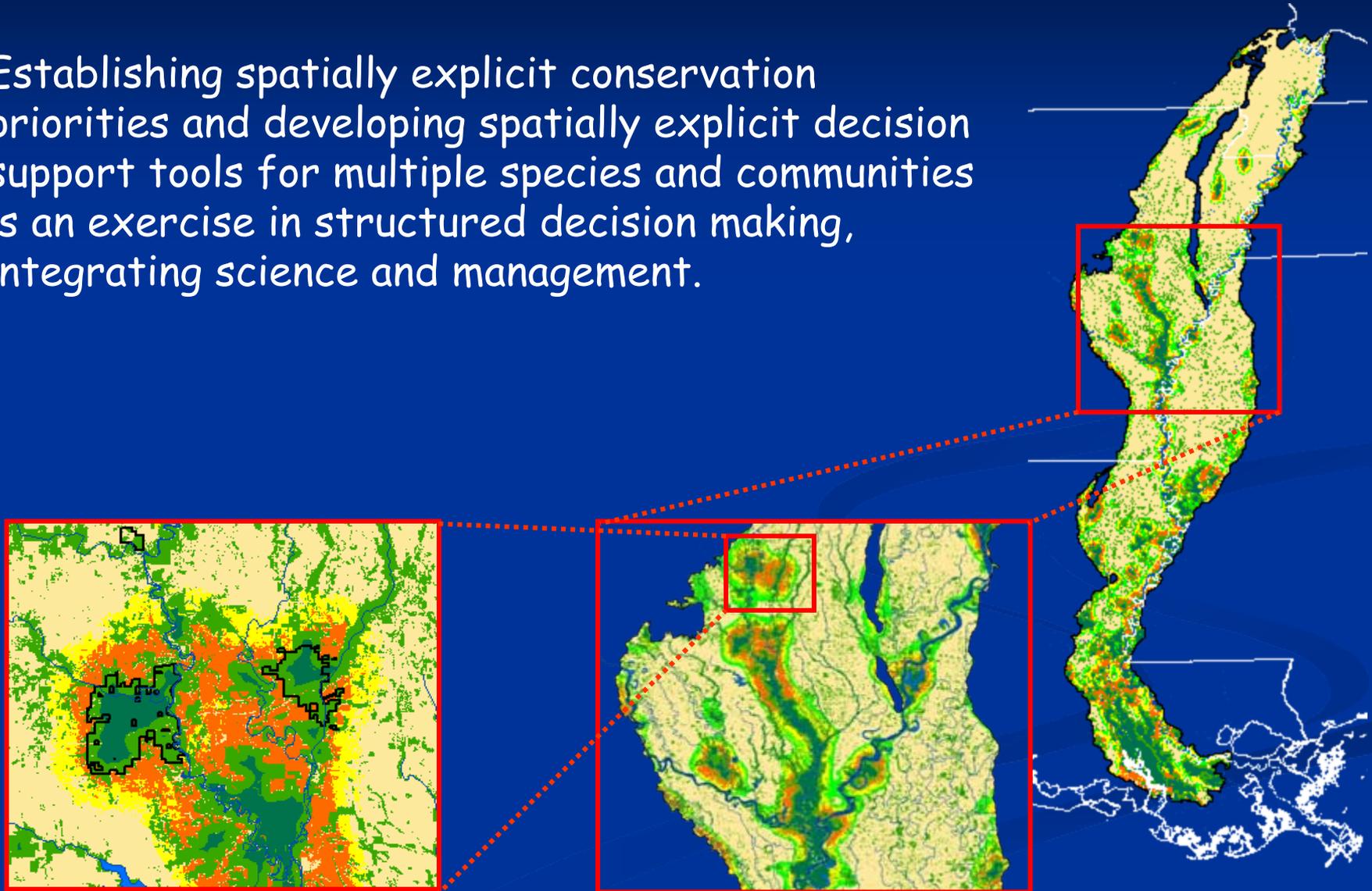
**Biological Planning**... The use of transparent, replicable procedures, predictive models, and spatially explicit landscape characterization to derive conservation objectives expressed as measurable biological outcomes.

Developing measurable biological outcomes is an exercise in science that must involve both manager and scientist.



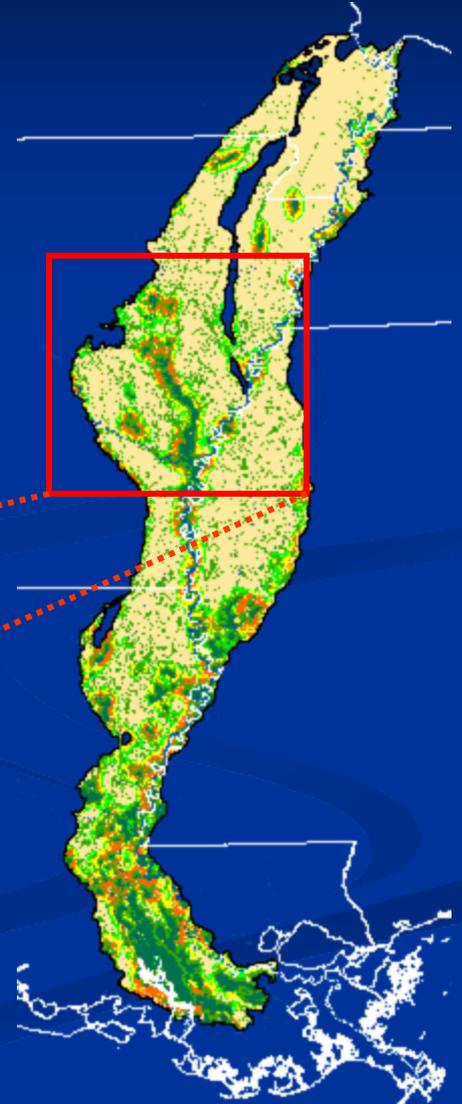
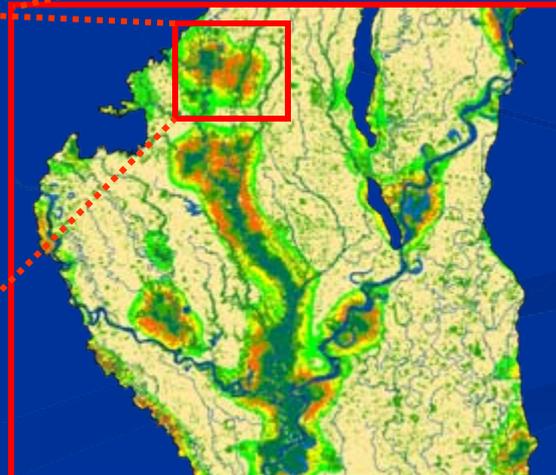
# The Science/Management Relationship Anticipated by SHC - Conservation Design

Establishing spatially explicit conservation priorities and developing spatially explicit decision support tools for multiple species and communities is an exercise in structured decision making, integrating science and management.



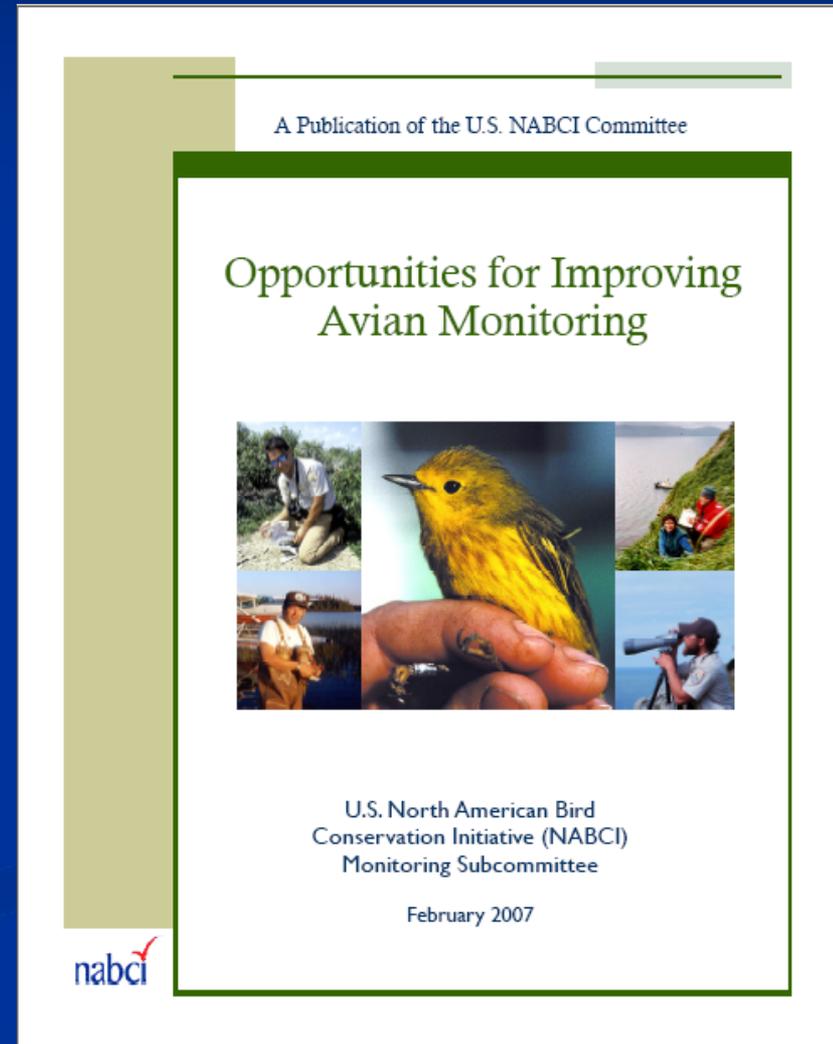
# The Science/Management Relationship Anticipated by SHC - **Conservation Delivery**

Targeted, coordinated delivery using scientific assessments of landscape sensitivity available to a broad range of partners.



# The Science/Management Relationship Anticipated by SHC - **Decision-based Monitoring**

- The Service need for monitoring extends beyond tracking accomplishments to evaluating outcomes at multiple spatial scales.
- The Service need in monitoring biological outcomes is shared by our key resource management partners.
- Monitoring biological outcomes at broad spatial scales requires rigorous sampling designs and protocols.



# The Science/Management Relationship Anticipated by SHC - **Assumption-driven Research**

Focus on biological outcomes requires the manager to explicitly state assumptions.



- Block size and Configuration
- Distance from Hostile Habitats



- Forest Composition & Structure
- Landscape Position & Wetness

Landscape and Site Scale Parameters  
Assumed to Affect Population Sustainability

# The Science/Management Relationship Anticipated by SHC - **Assumption-driven Research**

Explicitly stated assumptions translate into testable hypotheses.



- Block size and Configuration
- Distance from Hostile Habitats

- Birds in mature forest benefit from adjacent reforestation
- Birds on reforested tracts abutting mature forest have
  - Improved rates of colonization
  - Increased Productivity

Dan Twedt and Scott Somershoe  
USGS Patuxent Wildlife Research Center, Vicksburg, MS

# The Science/Management Relationship Anticipated by SHC - **Assumption-driven Research**

Moving beyond the "needs-response" paradigm  
to an adaptive management paradigm.



- Block size and Configuration
- Distance from Hostile Habitats

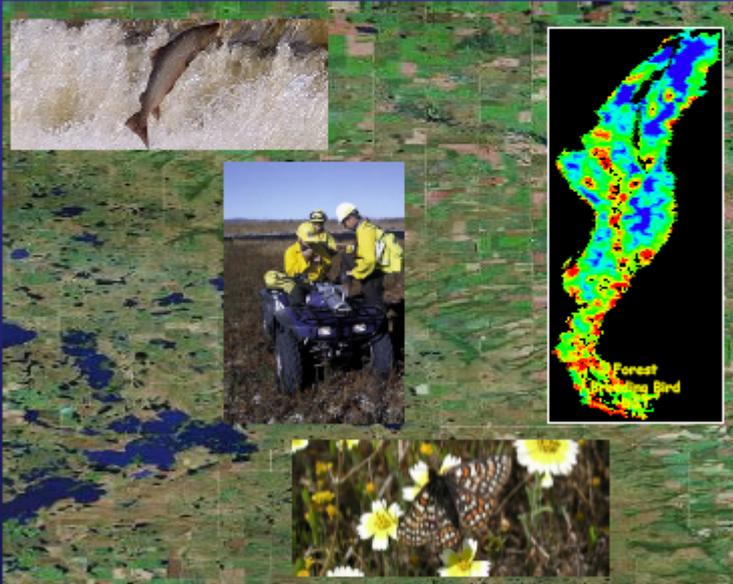
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# Why a More Complex Science/Management Relationship?

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Biological Planning

Conservation Design

Conservation Delivery

Decision-Based Monitoring

Assumption-driven  
Research

Science

# The Challenge of Changing Climate

What's your climate IQ?

# The Challenge of Changing Climate

- CO<sub>2</sub> = 379 ppm in 2005 (280 ppm pre-industrial)
- Methane = 1774 ppb in 2005 (715 ppb pre-industrial)
- T ↑ 0.74 C during past 100 yrs, T ↑ 0.65 C past 50 yrs
- 11 of past 12 years have been the warmest since 1850
- Arctic T increased at 2X global average
- Summer Arctic sea ice has shrunk at 7.4% per decade since 1978
- Mountain glaciers declined in both hemispheres
- Trend towards less snow at low altitudes
- Ocean T has increased to depths of at least 3000 meters
- Global sea level rise
  - 1.7 mm/yr during 20th century
  - - 3.1 mm/yr during 1993-2003

# The Challenge of Changing Climate

- "Climate change is the new Corps of Engineers." (Dan Ashe)
- "Societal adaptations - dams, reservoirs, biofuels, water transfers, etc - may be as significant to wildlife as the climate effects themselves." (Virginia Burkett)
- "Stationarity is dead." (Matt Larson)

# The Challenge of Changing Climate

- "We will be the government entities that will define the nation's response to climate and its effect on natural resources." (Mark Myers)
- "The things we will do together will help all of humankind." (Dale Hall)

# What is Strategic Habitat Conservation?

- It's the Directorate's flavor-of-the-month.
- This is ecosystem management all over again - here comes another reorganization!
- It's unrealistic - where's the funding!
- It's gobbledegoop.
- I don't care, cause it'll be gone as soon as a new administration comes along.

# What is Strategic Habitat Conservation?

- I need to learn more about this.
- I think, maybe, this could be a better approach to conservation.
- We are doing some of this already - maybe this is a chance to improve.
- This sounds a lot like approaches that TNC and other conservation organizations are taking.
- I don't know if this is it, but we need to do something different and better.

# What is Strategic Habitat Conservation?

- A scientific framework for determining, implementing and evaluating conservation priorities.
- Adaptive management.
- An element of a new conservation business model for the Service.
- A new way of thinking about conservation that allows us to deal with the issues of scale and accountability and effectively attack challenges like changing climate.

# The Role of the Project Leader

- Engagement
- Constructive Criticism
- Advocacy
- Action
- Leadership
- Take the Service from "Good to Great"

It's not the 15<sup>th</sup> Century Anymore -  
It's not even the 21<sup>st</sup> Century Anymore

"Do a little more each day than you think  
you possibly can."

-- Lowell Thomas