



CLIMATE CHANGE

What's happening with climate change in the FWS?

What our Strategic and Action Plans are about?

What's going on at NCTC?

Jay Slack





Several Approaches

- Strategic Habitat Conservation
- Structured Decision Analysis
- Adaptive Resource Management
- Science Capacity Investment
- Employee Education
- New Era of Conservation is Needed





Key Building Blocks

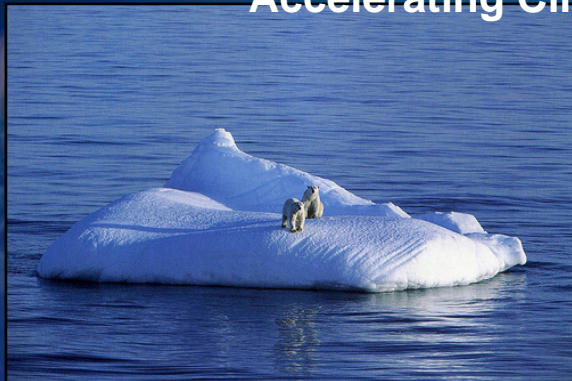
- Regional Climate Science Partnerships
- Landscape Conservation Cooperatives
- Filter of Climate Change
- Heightened Awareness
- Carbon Neutral by 2020
- SHC Business Model
- Stepping Up & Leading from the Front
 - Nat'l Fish & Wildlife Adaptation Plan
 - Nat'l Biological Inventory & Monitoring Partnership



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Rising to the Urgent Challenges of a Changing Climate

Strategic Plan for Responding to Accelerating Climate Change in the 21st Century



**"The supreme reality of our time is...the vulnerability of our planet."
-- John F. Kennedy, 35th President of the United States, 1963 --**





Strategic Plan & Action Plan

- **FY2009...**

- **Over 200 actions identified**
 - National Climate Team
- **Revised Strategic Plan/Action Plan released for public comment**
- **Climate Change Sharepoint Site**
- **Conservation Leadership Forum: Adaptation**
- **National Symposium – FWS Climate Change**

<http://sharepoint.fws.net/di/ccfy09ap/default.aspx>





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National Conservation Training Center



For delivery in FY2009/2010:

- New course: “Resource Management Implications of Climate Change”
- Existing courses: Enhancement and expansion of training in species and habitat modeling, structured decision-making, adaptive management, GIS and other critical skill areas.
- New multiple national-level climate change workshops and symposia for conservation leaders, practitioners and a broad array of diverse stakeholders.



Climate Change Training

- Who will need what skills?
- What is the most effective way to deliver this training?
- Who are the very best subject matter experts to help us?





NCTC climate change training

Six guiding principles:

Priority Setting

Best Science

Technical Capacity

Landscape Conservation/SHC

Global Approach

Partnerships



General employee training – Build awareness

Decision makers – Breadth of all issues





“Climate Change 101”

- New introductory course
- Current scientific understanding
- Implications on management of species and habitats
- Current policies and planning efforts





Monitoring and Modeling

- Predictive Distribution Modeling
- Principles of Modeling
- Population Viability Analysis
- Climate Envelope Modeling
- Monitoring/Sampling Design
- Monitoring Resources





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Adaptation Science

Wetland restoration

Coastal restoration

Habitat connectivity curriculum





Water Resources Science and Policy



- Aquatic Systems Design
- Hydrology
- Survey of Aquatic Habitats
- Water Resources Law and Policy
- Wetland Regulations
- Freshwater Biomonitoring



Environmental Decision Making

- Adaptive Management for Recurrent Decisions
- Structured Decision Making
- Ecological Risk Assessment
- Structured Decision Making



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Vulnerability Science

- Endangered Species Curriculum
- Threats Assessment
- Invasive Species Management





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Partnership and Collaboration

- **Interest-Based Negotiation**
- **Change Management**
- **Facilitation**





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Education and Outreach





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Questions?



<http://nctc.fws.gov/>