

## Strategic Planning for Climate Change

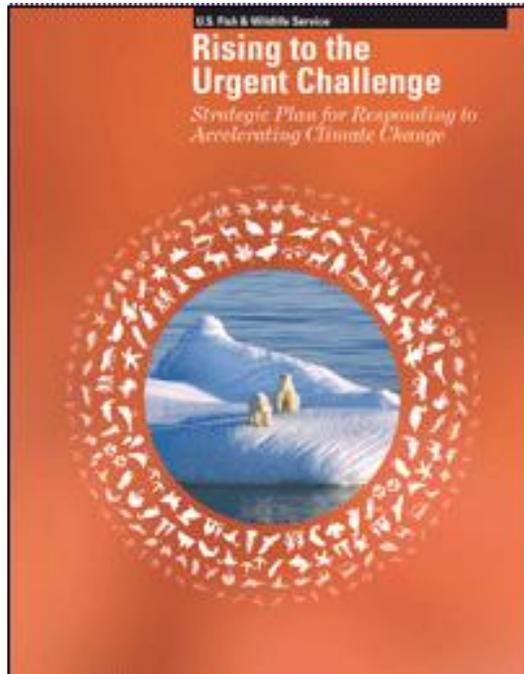
### U.S. Department of Interior Planning Efforts



DOI Secretarial Order No. 3289 provides provides a framework to coordinate efforts among Interior bureaus and to integrate and leverage science and management expertise with partners (<http://www.doi.gov/whatwedo/climate/strategy/index.cfm/index.cfm>). Landscape Conservation Cooperatives and DOI Climate Science Centers form the cornerstones of this integrated approach to climate-change science and adaptation. Each has a distinct science and resource-management role but also shares complementary capacities and capabilities. The Department committed to bringing new resources to the table to meet climate change challenges:

- *Climate Change Impact Science:* Regional Climate Science Centers and Landscape Conservation Cooperatives will conduct and communicate research and monitoring, improving our understanding and forecasting of climate change impacts and vulnerabilities. They will support strategic decisions in response to those vulnerabilities, with CSCs providing centers for basic climate change science associated with broad regions of the country and LCCs focusing more on applied science at the landscape level.
- *Data Integration and Dissemination:* This effort will support the integration of our nation's scientific database, improving availability and dissemination of climate change impact and vulnerability information, and access and decision-support to scientists, resource managers, decision makers, and the general public through [www.data.gov](http://www.data.gov) and other appropriate mechanisms.
- *Enabling Science-Based Adaptation Strategies:* By providing integrated scientific and technical capacities to support cultural and natural resource managers, they will be able to design and implement strategic and adaptive responses to changing climate.

The U.S. Fish and Wildlife Service's Strategic Plan and for Climate Change (2009; <http://www.fws.gov/home/climatechange/strategy.html>) first presented the concept of Landscape Conservation Cooperatives. The FWS and DOI established the network of LCCs to guide the Department's responses to climate change and the attenuating impacts of other large-scale stressors that interact with climate drivers. Conservation paradigms are shifting nationally as a result of climate change influences and there is an urgent need to form partnerships that have large geographic visions for activities to be planned and sustained over longer time periods. The U.S. Fish and Wildlife Service has adopted three key strategies to address climate change: Adaptation, Mitigation, and Engagement.



**Adaptation** is defined by the Intergovernmental Panel on Climate Change (IPCC) as an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. For the Service, adaptation is planned, science-based management actions that we take to help reduce the impacts of climate change on fish, wildlife, and their habitats. Adaptation forms the core of the Service's response to climate change and is the centerpiece of our Strategic Plan. This adaptive response to climate change will involve strategic conservation of terrestrial, freshwater, and marine habitats within sustainable landscapes.

**Mitigation** is defined by the IPCC as human intervention to reduce the sources or enhance the sinks of greenhouse gases. Mitigation involves reducing our "carbon footprint" by using less energy, consuming fewer materials, and appropriately altering our land management practices. Mitigation is also achieved through biological carbon sequestration, the process in which CO<sub>2</sub> from the atmosphere is taken up by plants through photosynthesis and stored as carbon in tree trunks, branches and roots. Sequestering carbon in vegetation such as bottomland hardwood forests or native prairie grasses can often restore or improve habitat and directly benefit fish and wildlife.

**Engagement** involves reaching out to Service employees, local, national and international partners in the public and private sectors; key constituencies and stakeholders; and everyday citizens to join forces and seek solutions to the challenges to fish and wildlife conservation posed by climate change. By building knowledge and sharing information in a comprehensive and integrated way, the Service and its partners and stakeholders will increase our understanding of global climate change impacts on species and their habitats and use our combined expertise and creativity to help wildlife resources adapt in a climate-impacted world.

### States' Planning Efforts



State Wildlife Action Plans prepared by natural resource agencies describe monitoring species and their habitats, monitoring the effectiveness of the conservation actions proposed, and adapting these conservation actions to respond appropriately to new information or changing conditions, including climate change. Eleven of the fifteen states within the AppLCC have adopted Climate Action Plans (<http://www.c2es.org/us-states-regions/policy-maps/action-plan>) and key climate-response legislation has been passed in those and other states nationwide (<http://www.c2es.org/us-states-regions/key-legislation>). Many important policy changes have also occurred at the state-level in response to changing climate (<http://www.c2es.org/us-states-regions/policy-maps>). Multi-state and regional climate partnerships have been developed in many areas of the country (<http://www.c2es.org/us-states-regions/regional-climate-initiatives>). In addition, the Association of State Fish and Wildlife Agencies (AFWA) posts reports on actions by state agencies to respond to climate change ([http://afwacclimatechange.blogspot.com/2009\\_12\\_01\\_archive.html](http://afwacclimatechange.blogspot.com/2009_12_01_archive.html)) and AFWA released this guidance document for updating State Wildlife Action Plans to include threats from changing climate conditions

[http://rapidlibrary.com/files/afwa-voluntary-guidance-incorporating-climate-change-swap-pdf\\_ulztb8zx8ei89on.html](http://rapidlibrary.com/files/afwa-voluntary-guidance-incorporating-climate-change-swap-pdf_ulztb8zx8ei89on.html)).

## Tribal Planning Efforts



A report released by EPA (Author: Keith Rose, January 6, 2010; <http://www.tribesandclimatechange.org/>) states *“Tribal Nations will likely be one of the most heavily impacted populations in North America by Climate Change due to several factors including an intimate, long-standing relationship with the land, limited and relatively non-diverse economies, poor energy security and transportation options, and the practice of subsistence activities in many communities. These characteristics of Tribal Nations make them more vulnerable or sensitive to the impacts of Climate Change. The most likely tribal resources effected by Climate Change are ecosystems, natural resource, human health and energy production and use.”* The InterTribal Climate Change Working Group released a white paper on August 13, 2009 regarding adaptation and mitigation responses that might assist Tribes in coping with climate impacts (<http://www.tribesandclimatechange.org/>). Please refer to the website hosted by the Institute for Tribal Environmental Professionals for more information (<http://www4.nau.edu/tribalclimatechange/>).