

State Agency Responses to the Challenges of Climate Change Impacts for Fish and Wildlife Resources (panel discussion summary)

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Introduction

State fish and wildlife agencies are responsible for the management of most of the fish and resident wildlife in our nation and have a critical interest in the potential impacts associated with climate change. Since climate change will either impact or has the potential to impact the wildlife resources for which they are responsible, state resource management agencies, tribes, and the federal agencies will all be challenged to manage populations and ecosystems in the face of these changes, and the uncertainty about how ecological systems will adapt. This two-hour panel discussion highlighted approaches and strategies that state fish and wildlife agencies are taking to address potential impacts and challenges associated with climate change on a variety of natural resource issues.

This paper summarizes excerpts of the presentations and discussion that took place during the panel. This workshop was sponsored by the Association of Fish and Wildlife Agencies, U.S. National Park Service, U.S. Geological Survey, and U.S. Fish and Wildlife Service.

Presentations

- “First Steps in Responding to Climate Change—One State Fish and Wildlife Agency’s Experience,” Dave Schad, director, Division of Fish and Wildlife, Minnesota Department of Natural Resources
- “Global Warming Impacts on Big Game Winter Habitat,” Jim DeVos, retired chief of research, Arizona Game and Fish Department
- “Trout in a Warming Environment: No Kitchen Door,” Fred Harris, chief deputy director, North Carolina Wildlife Resources Commission
- “It’s on the List: Global Climate Change Impacts on the Prairie Pothole Region,” Randy Kreil, chief, Wildlife Division, North Dakota Game and Fish Department
- “How Does Implementation of State Wildlife Actions Plans Help Us Manage for Climate Change?,” Martin Nugent, wildlife diversity program manager, Oregon Department of Fish and Wildlife
- “Nowhere to Run, Nowhere to Fly: Ecosystem Effects of Climate Change on Declining Herpetofauna,” Priya Nanjappa Mitchell, state agencies coordinator, Partners in Amphibian and Reptile Conservation

Summary

The Association of Fish and Wildlife Agencies (the Association) serves as the collective voice of North America’s fish and wildlife agencies at every level of government. It provides its member agencies and their senior staff with coordination services that range from migra-

tory birds, fish habitat, and invasive species, to conservation education, leadership development, and international relations. Each wildlife agency of the United States and all its territories are members, as well as the Canadian Provinces, Mexican states, and the federal wildlife agencies of both Canada and United States.

In 2003, the Association began working on carbon sequestration at the policy level and produced a white paper that focused on integrating conservation principles into guidelines for terrestrial carbon sequestration. The Association continues to remain engaged on this topic through its work on the reauthorization of the Farm Bill. In 2006, the Association took a larger step towards addressing climate change through the creation of a climate change subcommittee housed under the Energy and Wildlife Policy Committee. This subcommittee is chaired by Dave Schad (director, Division of Fish and Wildlife, Minnesota Department of Natural Resources) and has grown under his leadership. Putting this panel together is one of the first steps the subcommittee has taken to become more active on the topic.

Unlike many non-governmental organizations, academia, and some federal agencies, the state agencies are just beginning to talk about climate change. There are some state fish and wildlife agencies that have been leaders on climate change issues, but also others who do not yet have it on their radar. The challenge before all natural resource agencies and organizations concerned with fish and wildlife conservation is how to make relevant, to both managers and the public, the impacts of climate change on our ability to manage resources.

At the state level, one way of doing this is to increase the visibility of the issue among state fish and wildlife agencies. We need to be working collaboratively to create tools that will help natural resource agencies talk about the real and perceived impacts associated with climate change so that we can begin to address potential impacts in our management strategies. To accomplish this we need the kind of forum assembled today to start having this discussion with all of our partners to help identify those opportunities to work together on this issue. We may have different missions and do not always see eye to eye, but we have a common end goal, and we need to find ways to work together to achieve these goals.

The intent of this panel was to present the state wildlife agency perspective on climate change and the ways in which the states are starting to think about this issue. There were six presentations followed by time for discussion between the panel and the audience with the intent that we might as a group start to come up with some ideas on how to bridge this gap between our agencies, and some realistic ways in which we can start addressing this challenge.

Regardless of whether the discussions focused on specific taxa, a state agency perspective, or opportunities for collaboration through state wildlife actions plans, all the presentations and discussion session identified common themes to address climate change.

- There is a need for strong leadership from the natural resource agencies and a commitment to improving coordination and collaboration. When it comes to fish and wildlife conservation we need to be proactive now because it will be harder to make a case for fish and wildlife when other impacts are directly affecting human livelihood (e.g., loss of homes or damage due to flooding caused by sea level rise).

- Basic inventory and monitoring is needed to determine which resources are particularly vulnerable that will allow managers to reassess their efforts in light of potential climate change impacts.
- When it comes to mitigating impacts we need to improve resiliency of habitats and communities to prepare for unknown, unpredicted, and synergistic impacts. As one example, as distribution ranges of plant and animal species change and move into areas where they are not currently considered to be native, we will need to be adaptive in our management strategies and assess whether to treat these as invasive species, or to protect them if their natural range is now compromised.
- We need to find ways to build uncertainty into planning in order to address changing priorities. Managers may need to re-assign land conservation policies and the focus of land acquisition based on emerging climate science data.
- We need better tools to speak with the public. We need common messages to build momentum around action in order to avoid skepticism.
- We need to build on existing collaborative frameworks such as state wildlife action plans and national fish habitat actions plans to meet common goals for species and habitat conservation.

If we are going to build support for conservation we need to be working together to educate the public and engage constituents. To achieve this we will need experts to champion the cause and make the science more accessible. Even within our own organizations we need to be working to make climate change a priority in our agency activities, and foster a change in the culture of fish and wildlife management to allow for the opportunity to think long term. With so many management challenges before us it is critical that we work together to address these and associated synergisms with respect to climate change.