

Frequently Asked Questions

National Fish Wildlife and Plants Climate Adaptation Strategy

What is the National Fish, Wildlife, and Plants Climate Adaptation Strategy?

The *National Fish, Wildlife, and Plants Climate Adaptation Strategy (Strategy)* is a framework for unified, nation-wide action to safeguard the Nation's fish, wildlife, and plants and the important services they provide in a changing climate. Developed by federal, state, and tribal agencies with responsibility for managing wild living resources, the *Strategy* outlines the goals, strategies, and actions needed to reduce the vulnerability and increase the resilience of fish, wildlife, and plants in a changing climate. The Strategy builds on growing efforts of federal, state, tribal agencies, and non-governmental entities to understand, track, and reduce impacts of a changing climate on the nation's valuable fish, wildlife, and plants.

Why do we need the *Strategy*?

The nation's species and habitats are already showing changes consistent with a warming climate, such as changes in abundance, distribution, and timing of reproduction. These and other impacts (e.g., spread of invasive species, diseases) are expected to increase with continued warming of the earth's surface temperatures, with serious consequences for the many U.S. communities and economies that depend on fish, wildlife, and plants. Taking action now can help reduce the vulnerability of natural systems and assist public and private decision makers from many different sectors to enhance the sustainability of fish, wildlife, and plants in a changing climate. This *Strategy* outlines goals, strategies, and actions needed over the next five to ten years to reduce impacts and increase the resiliency of fish, wildlife, plants, and the communities and economies that depend on them.

What is the timeframe of the *Strategy*?

The first iteration of the *Strategy* focuses on actions that can be taken or initiated in the next five to ten years. Because the science is constantly growing and our understanding of how living resources will respond to climate change, this adaptation *Strategy* will be revisited, refreshed, and as necessary, revised in the future, using information from the U.S. National Climate Assessment and other sources.

Where did the idea for the *Strategy* come from?

In 2009, Congress asked the President's Council on Environmental Quality (CEQ) and U.S. Department of Interior (DOI) to develop a national climate adaptation strategy to help safeguard fish, wildlife, and plants in a changing climate. CEQ and the U.S. Fish and Wildlife Service (FWS) (acting on behalf of DOI) then invited the National Oceanic and Atmospheric Administration (NOAA) and state wildlife agencies to help lead the development of the *Strategy*. In 2010, the Interagency Climate Change Adaptation Task Force endorsed development of the *Strategy* as a key step in advancing U.S. efforts to adapt to a changing climate. The Government Accountability Office (GAO) and many other organizations have also called for development of adaptation strategies to help reduce impacts of climate change on the nation's valuable natural resources and communities that depend on them.

How was the *Strategy* developed?

Development of the *Strategy* was led by a Steering Committee that included government representatives from 15 federal agencies, five state fish and wildlife agencies, and two inter-tribal commissions. The Steering Committee included representatives from California, Washington, Wisconsin, New York, and North Carolina fish and wildlife agencies to ensure broad representation of state-level fish and wildlife concerns. A Management Team comprised of representatives from DOI, NOAA, the Association of Fish and Wildlife Agencies (AFWA), CEQ, and tribal entities guided the effort and provided staff support to the Steering Committee. More than 90 researchers and managers from a diversity of natural resource management agencies across the country participated in drafting the *Strategy*.

What does the *Strategy* call for?

The *Strategy* identifies 7 key steps (goals) to help safeguard the nation's fish, wildlife, and plants in a changing climate. These 7 goals are:

Goal 1: Conserve habitat to support healthy fish, wildlife, and plant populations and ecosystem functions in a changing climate.

Goal 2: Manage species and habitats to protect ecosystem functions and provide sustainable cultural, subsistence, recreational, and commercial use in a changing climate.

Goal 3: Enhance capacity for effective management in a changing climate.

Goal 4: Support adaptive management in a changing climate through integrated observation and monitoring and use of decision support tools.

Goal 5: Increase knowledge and information on impacts and responses of fish, wildlife, and plants to a changing climate.

Goal 6: Increase awareness and motivate action to safeguard fish, wildlife, and plants in a changing climate.

Goal 7: Reduce non-climate stressors to help fish, wildlife, plants, and ecosystems adapt to a changing climate.

How was public, tribal, and agency input evaluated and incorporated?

The *Strategy* was developed with input from a wide variety of sources, with multiple opportunities for public input, including:

- A series of Conservation Leadership Forums, and listening sessions were held in 2009 and 2010.
- Tribal consultation on the *Strategy* was initiated in April 2011.
- Public input for drafting the *Strategy* was solicited via a Federal Register Notice in June 2011.
- Federal, state, and tribal agencies were invited to review the *Strategy* and provide comments to the Management Team in November 2011.
- A 45-day public review and comment period on the draft strategy was conducted from January 20, 2012 to March 5, 2012. Five public workshops and two webinars were held around the country during the public comment period.
- Seven workshops and an online webinar focused on tribal engagement were held in early 2012.

During agency review, comments were received from 17 federal agencies, 15 state agencies, and 2 tribes and tribal commissions. During the public review period, comments were received from 54,847 individuals, 51 non-governmental organizations, and 17 governmental entities.

Comments were also received from five tribes. Of the comments, the vast majority were supportive. More than 2,500 comments were substantive. All comments received during all reviews (agency, tribal and public) were categorized, evaluated on the merits, and incorporated or addressed in the final *Strategy* where appropriate.

How is this *Strategy* different from other efforts?

This *Strategy* is the first nation-wide, joint adaptation strategy by the three levels of government (federal, state, and tribal) that have primary authority and responsibility for the living natural resources of the United States.

How does the *Strategy* relate to other climate adaptation efforts?

The *Strategy* fits into the broader context of federal, state, and tribal climate adaptation efforts. It is being coordinated with other cross-cutting strategies and plans, such as the *National Ocean Policy* and the *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate* (aka the Freshwater Action Plan). The *Strategy* complements these other efforts by focusing on fish, wildlife, and plant adaptation throughout the U.S. and contains several strategies and actions that are consistent with the other plans. The *Strategy* is intended to work in harmony with State Wildlife Action Plans and state climate adaptation plans. An increasing number of tribes also are creating adaptation plans that the *Strategy* will help to inform.

How will the *Strategy* be implemented?

There are a variety of efforts already underway to implement the *Strategy*. Government and non-government partners at local, state, regional levels are already taking action to understand, track, and reduce impacts of a changing climate on the nation's living resources and the communities that depend on them. The *Strategy* outlines several key next steps to support these and other implementation efforts:

1. Federal, state, and tribal governments and conservation partners can incorporate the appropriate goals, strategies, and actions of the *Strategy* into their own plans and actions at all levels.
2. Federal agencies with programs that affect fish, wildlife, plants, and key habitats can incorporate appropriate elements of the *Strategy* into their agency adaptation plans and activities.
3. Landscape Conservation Cooperatives and other regional, inter-jurisdictional collaboratives will serve important roles in implementing the *Strategy*.
4. The *Strategy* calls for an inter-jurisdictional coordinating body with representation and staff support from federal, state, and tribal governments to be established to promote and evaluate implementation of the *Strategy* and report progress on an annual basis.

What are some examples of climate impacts on fish, wildlife, and plants?

Waterfowl

Ducks and geese are flying south along the great North American flyways weeks later than they did a few decades ago, forcing the multi-billion dollar waterfowl hunting industry to adapt. Meanwhile, both conservationists and hunters worry that a warmer, drier climate will adversely affect the enormously productive prairie pothole ‘duck factories’ in Montana, North Dakota, South Dakota and Minnesota on which much of the nation’s waterfowl rely for nesting.

Salmon

These species which require cold, fast-flowing streams and rivers to spawn are being affected by warming and by reduced stream flows caused by less snowmelt. Just a 1.2 °F increase in water temperatures causes coho salmon eggs to hatch six weeks earlier—which reduces their survival rate. Higher temperatures have enabled a harmful salmon parasite to invade Alaska’s Yukon River, causing economic harm to the fishing industry and indigenous communities. Climate change is expected to impact major commercial and recreational fishing industries, as well as indigenous cultures that depend on salmon for their traditional ceremonial and cultural practices.

Lodgepole pine

Millions of acres of lodgepole pine and other trees have been killed across the West by an epidemic of mountain pine beetles. The reason: Warmer winters have enabled more beetles to survive the winter, while warmer summer temperatures have enabled the tiny insect to complete more generations per year and expand its range northward.

Oysters

In 2007 and 2008, two major West Coast oyster hatcheries discovered that their oyster larvae were dying due to higher acidity in the water being pumped from the sea into their facilities. The hatcheries solved the immediate problem by testing the ocean water and pumping it in only when acidity was lower. But as the oceans absorb more CO₂ from the air, the waters become more acidic, so the problem will escalate.

Butterflies

Climate change has brought a mismatch between the life cycle of the Edith's checkerspot butterfly and the timing of the growth and flowering of the plants the caterpillars and adult butterflies depend on. That has caused the butterfly’s population to crash in some areas, especially those along the southern range.

Commercial Fisheries

Most of the major commercial and recreational fish stocks along the east coast have shifted their distributions northward during the past 40 years with increasing ocean temperatures, which in turn is impacting the commercial fishing industry.

Where can I get more information about the *Strategy* and other efforts?

More information on the *Strategy* and other efforts related to safeguarding fish, wildlife, and plants in a changing climate is at the *Strategy* web site: www.wildlifeadaptationstrategy.gov