



INSPIRING AMERICANS TO PROTECT WILDLIFE FOR OUR CHILDREN'S FUTURE.

Fact Sheet

GLOBAL WARMING

CONFRONTING



The Polar Bear: The Canary in the Coal Mine

As climate change melts sea ice, the U.S. Geological Survey projects that two thirds of polar bears will disappear by 2050. This dramatic decline in the polar bear is occurring in our lifetime, which is but a miniscule fraction of time polar bears have roamed the vast Arctic seas.

The polar bear is the proverbial “canary in the coal mine” of the serious threat global warming poses to wildlife species around the world, unless we take immediate and significant action to reduce global warming pollution. According to the Nobel Laureate scientists of the Intergovernmental Panel on Climate Change (IPCC), 20-30% of plant and animal species face an increasingly high risk of extinction if temperatures increase by about 3 to 4 degrees Fahrenheit, which could happen by the end of the century if we don't take significant action now.

Already, fish and wildlife species around the world are being impacted by climate change:

- Coral reefs around the world are experiencing widespread bleaching due to increased ocean temperatures and acidity, a phenomenon virtually unknown before the 1980s; 16% of the world's coral were extensively damaged in 1997-1998.
- Staghorn and elkhorn coral are now listed as threatened species under the Endangered Species Act due in part to climate change.
- The Pacific coast marine ecosystem is being dramatically affected by climate change. Zooplankton – the base of the marine food web – has declined 70% there, putting virtually every marine species in that ecosystem at risk. Fish larvae have declined by 50%, and seabirds have declined by 30% in less than 30 years.
- Amphibians around the world are already declining due primarily to disease associated with climate change. Some 22 of the world's amphibian species have become extinct since 1980. The golden toad was the first documented victim of global warming in the 1980s, driven extinct by the loss of moisture in its rainforest habitat, caused by a rise in sea surface temperatures in the central western Pacific.
- An indicator of what could happen to many species, 80% of historical populations of the Edith's checkerspot butterfly in the southern end of the species' range in California and Mexico have disappeared due to the combined effects of climate change and habitat fragmentation.

The projections for future effects to wildlife species due to global warming are foreboding:

- Scientists project that a majority of coral reefs around the world will face extensive coral bleaching within the next 20-40 years if climate changes continues unabated.
- The breeding habitats of many Arctic shorebirds and waterfowl are expected to decline by up to 50% based on global temperature increases of about 1.1 degrees Fahrenheit.
- Nearly 50% of critical salt marsh and 84% of tidal flats along the coast of Florida could be lost with just a 15-inch rise in sea level.



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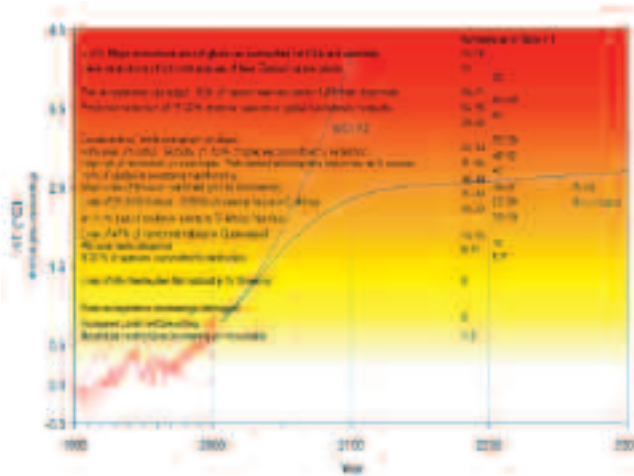
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- The prairie pothole region of the northern Great Plains, which annually produces 50% of the continent's waterfowl, is threatened with a dramatic loss of critical wetlands as temperatures rise and soil moisture declines.
- In the Apalachicola Bay of Florida, crabs, shrimp, oysters and flounder may be unable to survive past this century due to rising temperatures making the area unsuitable for them.
- Invasive species problems will be exacerbated as habitat disturbance from climate change enhances invasive species' ability to 'outcompete' native populations. As the freeze zone moves northward with climate change, invasive species such as fire ants are also expected to move northward.



Compendium of projected risks due to critical climate change impacts on ecosystems for different levels of global mean annual temperature rise from pre-industrial levels (IPCC, 2007). The upper line projects "business as usual" while the lower line projects significant reductions in carbon dioxide and other greenhouse gas emissions, with subsequently lower ecosystem impacts.

Solutions

There are solutions! Despite the grim projections of climate change impacts to our natural world, it is not too late to take action. The sooner we act, the better. In fact, it is imperative that we take significant action now to reduce global warming pollution by 2% per year through 2050, which will help avoid worst case scenarios of wildlife impacts and species extinctions.



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The National Wildlife Federation supports:

- A 2%-per-year reduction in U.S. global warming pollution – the action most scientists say is necessary to avert catastrophic climate change.
- Mandatory caps on global warming pollution such as carbon dioxide.
- Use of funds for wildlife conservation from the sale of carbon credits.

Policy Solutions in the U.S. House

The Safe Climate Act of 2007 and Climate Stewardship Act of 2007 – legislation that would cut global warming pollution by 2% per year – encourages alternative energy innovation, and generates significant funding for wildlife

Policy Solutions in the U.S. Senate

America's Climate Security Act, the Global Warming Pollution Reduction Act of 2007, and the Climate Stewardship and Innovation Act of 2007 – would both reduce global warming pollution, and generate significant funding for wildlife.

References

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