

## Climate Change and Wildlife

In the past, climate change occurred so slowly that wildlife had time to adjust. Today, shifts in temperature, seasons, and weather are happening too quickly for some species to adapt. Instincts cultivated over thousands of years are becoming obsolete. Key habitat elements — food, water, shelter and space — are also declining or disappearing. So how are different groups of wildlife responding to the impacts of climate change?



### Birds

Climate change is already having an impact on birds. In response to changes in temperature and precipitation, many species are shifting their ranges, migrating sooner and bearing young earlier than in the past. Migratory birds are also particularly vulnerable to climate change effects, because they depend on multiple habitats and sites. Unfortunately, those that are unable to relocate or adapt to changing conditions are at risk of becoming locally extinct.

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### Mammals

Climate change impacts all parts of an ecosystem, and mammals are no exception. Some mammals have very specific climatic adaptations, such as requirements for snow, sea ice or temperatures within a narrow range for hibernation. Species, such as Snowshoe Hare, that seasonally change their colouration to better camouflage within their environment are also at risk from increased predation as a result of decreased snow cover from earlier melt.

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### Insects

Climate has a direct influence on insect development, reproduction and survival. Since insects can only survive within certain temperature ranges, many have migrated into new ecosystems. With warming winters, the cold spells needed to limit the growth and reproduction of insect pests, such as Mountain Pine Beetle, are scarce. The shifting ranges of insects over time may also lead to increased risk of exposure of insect-borne diseases, such as Lyme disease and malaria.

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### Fish

Warmer temperatures caused by climate change will influence the abundance, migratory patterns and mortality rates of wild fish stocks and determine what species can be farmed in certain regions. Fish that live in the cold upper waters of the Pacific Ocean, such as Chinook Salmon, are at risk of the rising water temperatures in their habitat, which have a major impact on their ability to migrate to specific areas to spawn and feed.

For additional resources visit:

[CanadianWildlifeFederation.ca/Education](https://CanadianWildlifeFederation.ca/Education)



## Reptiles & Amphibians

Reptiles and amphibians are cold-blooded, which means that they cannot generate their own body heat and rely instead on the environmental temperature, making them susceptible to climate change. For most turtles, warmer incubation temperatures result in more female hatchlings, which could impact the long-term viability of a species. Reptiles and amphibians are also at risk from climate-related habitat loss. Those that rely on ephemeral (temporary) wetlands may see these critical habitats dry up before they can reproduce.

## What Can You Do?

### Learn more about local species

Do you know which wildlife species are at risk in your area? Wildlife is all around us, but most of us know little about why many species are at risk or how we can help. Start by learning more about imperiled wildlife in your province or territory. A great place to start is by checking out Canada's [Species at Risk Public Registry](#) where you can search for wildlife by location and animal group.

### Connect with conservation groups in your community

Once you know more about species at risk in your area, take some time to see what conservation projects are already happening near you. There may already be a project that you can support! Connect with your local municipality, parks departments, non-profits, land trusts and watershed groups. From wildlife research to habitat conservation and restoration, there are lots of conservation projects already underway across Canada that you can support through volunteering, fundraising or awareness building projects.

### Spread the word

Share your newfound knowledge about wildlife and conservation with your friends and family! By educating others about species at risk in your area, and sharing how they too can get involved, you can help empower more people to make a difference.

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