

## Climate Change Causes Habitat Loss and Species Extinction

Each species evolves to thrive in its own particular ecological niche – to live in a particular "home" with specific living conditions (including temperatures ranges and other plant and animal species). Some species are more adaptable than others. For example, rats and dogs can survive under many different conditions, but koalas can only live where there is eucalyptus, and pandas where there are bamboo. Human-caused climate change will alter temperatures, precipitation and sea level – wiping out some habitats and shifting others faster than many species can migrate.



A polar bear walks along the edge of 'the ice bridge' in the Robeson channel, near the border between Greenland and Canada. Polar bears are facing extinction as they are losing vast areas of their sea ice habitat due to global warming. 06/28/2009 © Nick Cobbing / Greenpeace

Unless we drastically reduce our greenhouse gas emissions, we can expect several factors to combine that will make the coming die out astonishingly severe. The climate is changing faster than at almost any time in our planet's history. Also, many ecosystems are already stressed by human activities – destructive logging, excessive grazing, over fishing, toxic pollution and the like. And expanding human development destroys habitats and impedes many species from migrating – superhighways effectively block land animals, for example.

Some studies have indicated that with a mid-range temperature rise of 1.8-2° C (3.2-3.6°F), a million species would be threatened with extinction over the next fifty years. This can only be avoided by rapid emissions reductions in the next few decades. There is still time to save many species, but it is fast running out. If temperatures go even higher, more species will be lost.

### **Some examples of species and habitats at risk:** **Coral Reefs**

Coral bleaching is a condition that can seriously damage and kill entire coral reefs. Corals contain microscopic algae called zooxanthellae, which provide the coral with food and give them their vibrant colours. Rising ocean temperatures cause corals to become stressed, and they expel the zooxanthellae and turn white or "bleach". If zooxanthellae do not return to the coral's tissue, the coral will die.

As little as a 1 °C (1.8 °F) increase in temperature above the summer maximum can cause corals to bleach. An example of this problem is Australia's world-famous Great Barrier Reef. At around 2,000 kilometres (1,243 miles) long, it is the world's largest reef. But in 2002, the reef experienced its worst-ever case of coral bleaching, with over 60% of the reef affected. Unless projected levels of climate change are slowed, much of the reef will be dead in decades. Deprived of their living homes, hundreds of species relying on the reef will also die out.

### **Polar Bears**

Arctic sea ice could disappear this century, and wild polar bears with it.

Polar bears are the world's largest land predator. They can go for long periods, even months, without eating, but need to build up fat to live through lean times. The polar bear does this mostly by eating seals they catch on the ice. Without the ice they can't get to their prey.

In fact, without sea ice, much of the Arctic ecosystem would change or collapse. Polar bears also use floating sea ice platforms for travel, and pregnant polar bears build snow dens for giving birth. Polar bears must also swim further and further to find ice on their hunting trips – putting them at risk of death by hunger and exhaustion.

### **Plants**

Like animals and insects, plant species require specific climates. You don't find yellow birch trees growing next to Saguaro Cactus, for example. Changes in precipitation and temperature will mean that some species can no longer survive where they are now growing. Also, like animals, plants are vulnerable to competition. As warming occurs, species that have adapted to

living in cooler climates can be pushed out of existence by newcomers better suited to the new temperatures.

Most plants can't migrate very quickly, compared to animals and insects. They are restricted by how far their seed or pollen can travel. Thus, the climate will change too fast for plants to migrate if current trends continue. Human barriers (such as farm and urban areas) will also impede plant migrations.

Many animals and insects need specific plants, or types of plants, as part of their habitat. So the loss of plant species will have a ripple effect, leading to more animal and plant extinctions.

### More info

- [PBS – Great White Bear](#)
- [Observed Impacts of Climate Change – Pew Center on Global Climate Change](#)
- [Climate Change and Biodiversity - The Intergovernmental Panel on Climate Change](#)

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