



---

## **How weather Change Influences Biodiversity**

*Gokul Satheesh*

Christ university Kengeri

---

### **Introduction**

Biodiversity is known as the different types of life forms on Earth which includes all plants, animals, microorganisms, and their genes. However, the fast change in climate is causing rapid changes to habitats, threatening survival of species and interrupting environmental stability. Rise in temperature, harsh weather conditions and trade ecosystems are putting huge pressure on vegetation. This article describes how change in climate is affecting biodiversity and how it will affect the future of living organisms on our planet.

---

### **1. Bio diversity loss**

One of the most immediate outcomes of climate change is the loss of adequate habitats. As temperature in the world increases, many species are forced to emigrate to regions which are as cold as their original habitat. For example, polar bear hunts seal by using sea ice, but due to melting ice, its habitat is getting destroyed, leading to shortage of food and the decrease of populations. Similarly, coral reefs, which is a habitat for huge number of marine species, are getting destroyed because of oceans heating up and due to contamination of water causing large scale coral destruction.

---

### **2. Species migration and extinction dangers**

Many species are changing their pattern of migration due to climate change. Birds, bugs and mammals are moving and migrating towards the top poles or altitudes to find optimal temperatures. However, not all the species can migrate and adapt to the climate change which leads to extinction and endangerment of species. The most affected species are the amphibians because they are highly sensitive to temperature fluctuations. Costa Rica's golden frog is assumed to have gone extinct because of temperature fluctuations.

---

### **3. Imbalance of food chain in ecosystem**

Climate change is affecting the balance of food chains. The rising temperature affects the reproductive cycle of prey species which affects the predator population as well. For example, Arctic foxes depend upon lemmings as a source of food, however as temperature increases lemmings' population also decreases which also decreases the population of arctic foxes. Additionally, seasonal shifts are causing flowers to bloom early than usual which results in mismatch in species interactions and leaving pollinator like bees without food to survive.

---

### **4. Oceanic acidification and marine biodiversity**

The oceans take in a large part of the CO<sub>2</sub> which is released into the atmosphere resulting in acidification of oceans. This impacts marine organisms, especially those with calcium carbonate shells such as includes corals, mollusks and positive plankton species. As these organisms struggle to live on, the complete marine food chain is disturbed and thus the population of fish is decreased which causes huge trouble to people who are living on the income which they get from fishing.

---

### **5. Rising number of extreme weather events**

Climate changes are increasing the intensity of natural disasters such as hurricanes, wildlife fire and droughts which severely impacts the ecosystem and also leads to shortage of water. The 2020 Australian wildfires burned millions of hectares of land which also killed and displaced nearly three billion animals. Extended droughts are also causing water shortages for both humans and animals, forcing them to survive in limited water supply.

---

## Conclusion

Climate change is one of the biggest threats to biodiversity. Most species are not and with the destruction of habitats, the ecosystems of change, and the alteration of weather patterns many are facing extinction despite some possible adaptation. Shoring up biodiversity demands urgent action worldwide, which includes lowering greenhouse fuel emissions, protecting vital habitats and promoting sustainable practices. And over close weather change, we are going to support retain the bright diversity of life that makes Earth a beautiful