Climate Change and Biodiversity

Biodiversity is about **living things** and their relationships with each other

This includes **species**, **ecosystems** and the **ecological processes** of which they are a part

The **earlier arrival** of spring changes the **life cycles** of many plants that provide food and habitat for other species

Many species won't be able to **adapt** quickly enough to changes in their **environment**

Habitat fragmentation

happens when natural landscapes are broken up by development such as river dams and highways, which can interrupt migration routes

Phenological mismatches

happen when the life cycles of dependent species change and no longer match up

E.g., migratory species arrive at a site after their prey has passed

Northern ecosystems are vulnerable to habitat loss and could see an influx of new species and diseases from the south

More CO_2 in the atmosphere and higher temperatures could lead to **longer growing seasons** for forests

Climate change can cause

Range contraction

when already limited habitats change and shrink further

Habitat destruction

In **prairie ecosystems**, more droughts will likely harm the growth of natural grasslands

Climate change can lead to competition for resources among species, as well as bigger and more frequent **infestation outbreaks**

Hybridization

is the mixing of different but similar species, and can drive rare species to extinction or increase adaptability

Extreme storms and **rising sea levels** can cause coastal squeeze

Climate change causes harmful algae growth in **marine ecosystems**, which are also at risk of pollution, commercial fishing and wetland drainage

Preservation through adaptation

Protect - nature reserves and marine sanctuaries
Connect - wildlife crossings, bridges and corridors
Restore - selective fishing, animal breeding programs

For the whole Canada in a Changing Climate report, visit **Adaptation.NRCan.gc.ca**

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