United Nations Decade on Biodiversity

Living in harmony with nature

Climate Change

Levels of greenhouse gases in the atmosphere are rapidly increasing, warming the Earth's surface and lower atmosphere. Higher temperatures lead to climate change that includes effects such as rising sea levels, changes in precipitation patterns that can produce floods and droughts, and the spread of vector-borne diseases such as malaria. Some areas may benefit from changes in the climate. Others, including many areas in least developed countries, small island developing states, and Polar Regions may suffer greatly.

There is ample scientific evidence that climate change affects biodiversity. Climate change, according to the Millennium Ecosystem Assessment, is likely to become the dominant direct driver of biodiversity loss by the end of the century. It is already forcing biodiversity to adapt either through changing habitat, life cycles, or development of new physical traits. This, in turn, will affect vital ecosystem services for all humans, such as air and water purification, pollination and production of food, decomposition and nutrient cycling, carbon sequestration.

Biodiversity can also help reduce the effects of climate change. The conservation of habitats, for example, can reduce the amount of greenhouse gases released into the atmosphere. Moreover, conserving healthy ecosystems can reduce the disastrous impacts of climate change such as flooding and storm surges while genetic resources can help people adapt to increased crop disease.

If we act now to reduce emissions and implement ecosystem-based approaches to adaptation, we can address the risk of species extinctions and limit damage to ecosystems. We can preserve intact habitats and reduce other threats to biodiversity, especially those sensitive to climate change; improve our understanding of the climate change-biodiversity relationship; and view biodiversity as a solution to climate change.

UNEP

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www.cbd.int/climate

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Fast Facts

- Greenhouse gases act like the glass roof of a greenhouse by trapping heat and warming the planet. The main greenhouse gasses are: water vapour, carbon dioxide, tropospheric ozone and methane
- Human activities, such as burning of fossil fuels and unsustainable land management, add to the natural emissions of greenhouse gasses in the atmosphere
- Deforestation is responsible for about 20% of human-induced carbon dioxide emissions
- Average global temperature from 1850 to 2005 increased by about 0.76ºC. A further increase of 1.4°C to 5.8°C is projected by 2100
- Global mean sea level rose by 12 to 22 cm during the last century
- It is estimated that each degree rise in temperature will place an additional 10% of species at increased risks of extinction
- Conservation of habitats reduces the amount of greenhouse gasses released into the atmosphere and helps communities adapt to climate change

Learn More

Intergovernmental Panel on Climate Change (IPCC) ▸ www.ipcc.ch

United Nations Framework Convention on Climate Change (UNFCCC) ▸ http://unfccc.int

United Nations Convention to Combat Desertification (UNCCD) ▸ www.unccd.int

The Ramsar Convention on Wetlands ▸ www.ramsar.org

The World Bank ▸ www.worldbank.org

International Union for Conservation of Nature (IUCN) ▸ www.iucn.org

The Millennium Ecosystem Assessment (MA) ▸ www.millenniumassessment.org

The Report of the Second Ad Hoc Technical Expert Group (AHTEG) on Biodiversity and Climate Change ▸ www.cbd.int/doc/publications/cbd-ts-41-en.pdf

Database of ecosystem-based approaches to adaptation ▸ http://adaptation.cbd.int

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