



Climate Change & Biodiversity

The New Great Threat to Biodiversity

Climate change is defined as a variation either in the mean state of the climate or in its variability, persisting for an extended period, typically decades or longer. It encompasses temperature increases, and its impacts include sea-level rises, changes in rainfall patterns and increases in the frequency of extreme weather events. Biodiversity and climate change are closely linked, and each impacts upon the other: biodiversity is threatened by human-induced climate change, but biodiversity resources can also moderate the impacts of climate change on people and ecosystems.

According to the UN Intergovernmental Panel on Climate Change (IPCC), the average global temperature increased by about 0.76°C from 1850 to 2005, and global mean sea level rose by 12 to 22 cm during the last century. These changes affect the entire world, from low-lying islands in the tropics to the vast Polar regions. The IPCC projects a further increase in average temperatures between 1.4°C and 5.8°C by 2100. Possible impacts include: a further rise in global mean sea level and more people at risk from dangerous “vector-borne diseases,” such as malaria.

Why it is important:

- Scientific evidence indicates that climate change affects biological diversity.
- Climate change, according to the Millennium Ecosystem Assessment¹, is likely to become the dominant direct driver of biodiversity loss by the end of the century.
- Climate change is already forcing biodiversity to adapt either through shifting habitat, changing life cycles, or the development of new physical traits.
- Biodiversity plays a role in climate change adaptation and its mitigation. For example, the conservation of habitats can reduce the amount of carbon dioxide released into the atmosphere. Currently, deforestation is estimated to be responsible for 20 per cent of human-induced carbon dioxide emissions. Moreover, conserving mangroves and drought-resistant crops, for example, can reduce the disastrous impacts of climate change, such as flooding and famine.
- The poorest communities would find it most difficult to adapt to climate change and would thus be most vulnerable.

What the CBD is doing:

The impacts of climate change are of great concern to the Convention on Biological Diversity. At its fifth meeting, the Conference of the Parties (COP) highlighted the risks of climate change, in particular, to coral reefs and to forest ecosystems, and drew attention to the serious impacts of biodiversity loss on these systems and their associated livelihoods.

¹ The Millennium Ecosystem Assessment (MA) is an international work program designed to meet the needs of decision makers and the public for scientific information concerning the consequences of ecosystem change for human well-being and options for responding to those changes. Launched by United Nations' Secretary-General Kofi Annan in June 2001, it was completed in March 2005. Its findings and recommendations will help to meet assessment needs of the [Convention on Biological Diversity](#), Convention to Combat Desertification, the Ramsar Convention on Wetlands, and the Convention on Migratory Species, as well as needs of other users in the private sector and civil society.



In 2001, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) established an Ad Hoc Technical Expert Group (AHTEG) to assess the interlinkages between biodiversity and climate change.

At the seventh meeting of the COP, Parties were encouraged to manage ecosystems so as to fortify their resilience to extreme climate events helping to adapt to climate change. SBSTTA was requested to provide guidance for promoting synergy among activities to address climate change, combating desertification and land degradation, and activities for the conservation and sustainable use of biodiversity by seeking collaboration with the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD). Hence, in 2006, the AHTEG on biodiversity and adaptation to climate change produced a technical report providing such guidance to countries.

In 2006, at its eighth meeting, the COP highlighted the importance of integrating biodiversity considerations into all relevant national policies, programmes and plans in response to climate change, and to rapidly develop tools for the implementation of biodiversity conservation activities that contribute to climate change adaptation. The COP also noted the need to identify mutually supportive activities to be conducted by the secretariats of the three Rio Conventions (UNFCCC, UNCCD, and CBD), Parties and relevant organizations.

A number of activities have been implemented, with the generous contribution of the Government of Canada. These activities aim to provide technical and scientific guidance on the integration of biodiversity considerations within adaptation planning, the links between the conservation of forest biodiversity and climate change, including within the framework of reducing emissions from deforestation, and the links between biodiversity, water, wetlands and climate change.

For more information:

Climate change and biodiversity: <http://www.cbd.int/climate>

CBD COP decisions on climate change: <http://www.cbd.int/climate/decision.shtml>

Tools and guidelines: <http://www.cbd.int/climate/tools.shtml>

Adaptation: <http://adaptation.cbd.int>

Documents: <http://www.cbd.int/climate/documents.shtml>

