



United Nations
Educational, Scientific and
Cultural Organization

Organisation
des Nations Unies
pour l'éducation,
la science et la culture

Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura

Организация
Объединенных Наций по
вопросам образования,
науки и культуры

منظمة الأمم المتحدة
للتربية والعلم والثقافة

联合国教育、
科学及文化组织

UNESCO and Climate

Bureau of Public Information

UNESCO and Climate

An increasing body of observations gives a collective picture of a warming world and other changes in the climate system.¹ Society must work to understand, predict, mitigate and adapt to changes in our environment and the resources we depend on for life. UNESCO provides a unique forum for addressing climate and its impacts on the environment, society, and culture.

While climate is not an official program of UNESCO, UNESCO invests considerable resources in climate-related programs and activities. Climate activities are carried out in some 30 programs in all sectors of UNESCO, managed by approximately 50 staff members. With programs in the natural and social sciences, culture, communication and education, UNESCO provides a unique forum for addressing climate change and its interaction with human society.

UNESCO's Role in the UN System

In partnership with the United Nations Framework Convention on Climate Change, which works with governments to stabilize greenhouse gas emissions, and the WMO-UNEP Intergovernmental Panel on Climate Change, which provides a regular global assessment of climate and its impacts, UNESCO plays a unique role by facilitating the necessary research and monitoring to understand how climate impacts will affect resources and societies who depend on them, and by assisting its Member States to develop solutions for adaptation and mitigation strategies. UNESCO's programs cover a wide range of activities in environmental science, adaptation and protection, mitigation, coordination of climate observing systems, education, economics, and renewable energy. UNESCO's natural and cultural World Heritage Sites represent irreplaceable sources of life and inspiration, and this global heritage may require special protection from climate impacts in order to preserve these unique sites for future generations. The World Network of Biosphere Reserves provides opportunities to link climate mitigation

with biodiversity conservation and poverty reduction through bio-carbon sequestration projects that bring in new financing resources through the emerging carbon markets. UNESCO's education role is crucial for communicating sound and unbiased information about climate to Member States and the general public, especially to the next generation of global citizens.

Although UNESCO climate programs have been developed largely independently of one another, many synergies exist, giving UNESCO the potential to become a leading player in facilitating critical links in the carbon-climate-human system.

Impacts on our environment and human society may be severe

The balance of evidence suggests that most of the warming we have experienced over the last 50 years can be linked to emissions of greenhouse gases resulting from human activities such as the burning of fossil fuels¹ (e.g., hydrocarbons such as coal, oil, and natural gas). Some changes can already be seen, such as decreased snow and ice cover, sea-level rise, changes in precipitation patterns, and the extent and severity of extreme temperatures. It is estimated that temperatures will continue to rise between 1.4° to 5.8°C by the year 2100 relative to temperature in 1990. The high end of this warming range is equivalent to the temperature changes the Earth experiences during transitions from glacial to interglacial periods, but occurring over a period of only 100 years. Impacts could be severe (see *box, next page*).

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If timely actions are not taken, impacts will be global and severe in many areas:

- Melting glaciers will both increase flooding and decrease water supplies for nearly one-sixth of the world's population;
- Agriculture and food production is likely to be seriously affected through declining crop yields, leaving millions unable to produce or purchase sufficient food;
- Vector-borne diseases such as malaria and dengue fever could become more widespread;
- In the middle of this century, nearly 200 million people may become permanently displaced owing to sea-level rise, increased flooding, and severe drought;
- Ecosystems will be particularly vulnerable, with 15-40% of species potentially facing extinction after only 2°C of warming.

Source : Stern, Nicolas, *A report to the UK Prime Minister and the Chancellor of the Exchequer on the Economics of Climate Change*, Cambridge University Press, 2006. (Available on line at www.sternreview.org.uk).

While there is cause for concern, the conclusion of the recent UK review on the economics of climate change and development (the Stern Report) is optimistic:

“There is still time to avoid the worst impacts of climate change, if we act now and act internationally. Governments, businesses and individuals all need to work together to respond to the challenge. Strong, deliberate policy choices by governments are essential to motivate change. But the task is urgent. Delaying action, even by a decade or two, will take us into dangerous territory. We must not let this window of opportunity close.”

Research is underway to determine what greenhouse gas stabilization levels would be required to avoid the worst climate impacts, and intergovernmental mechanisms are in place to reduce our global emissions of greenhouse gases and to find new sources of cleaner energy. However, even with these mechanisms in place, the response time required for Earth's climate system to establish a new equilibrium will be slow, and the effects of anthropogenic climate change will persist for many centuries.

UNESCO's programs are aimed at assisting Member States to understand, combat and adapt to these rapid alterations in our environment and the resources we depend on for life.

To Find Out More

1. The 3rd Assessment Report of the Intergovernmental Panel on Climate Change (including policymakers summaries available in 6 languages):
http://www.grida.no/climate/ipcc_tar/wg1/index.htm

UNESCO Climate Programs web site :
<http://ioc3.unesco.org/unesco-climate/>

The Stern Report on the Economics of Climate Change:
www.sternreview.org.uk

To contact the UNESCO Climate Club (informal coordination group):
climateclub-ioc-en@lists.unesco.org