



Climate change

United Nations Environment Programme



An overview

Climate change is one of the major challenges of our time and adds considerable stress to our societies and to the environment. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale. Without drastic action today, adapting to these impacts in the future will be more difficult and costly.

Yet this response can also present significant opportunities. In its Climate Change sub-programme, UNEP works with countries to strengthen their ability to adapt to climate change, move towards low-carbon societies, improve understanding of climate science, and raise public awareness of the Earth's changing climate. The sub-programme is closely aligned with the Green Economy Initiative, which promotes cleaner investments and technologies as opportunities to reduce emissions, protect our planet's biodiversity and ecosystems, and alleviate poverty through green job creation.

All of UNEP's work on climate change is shaped by the negotiations process of the United Nations Framework Convention on Climate Change (UNFCCC). While negotiations continue towards reaching a legally binding agreement, the UNFCCC meeting in Copenhagen in 2009 has signaled the importance of immediate actions and the need to support developing countries in their mitigation and adaptation efforts. UNEP's sub-programme will provide these critical support services, and will also help countries prepare for and participate in the Cancun climate talks in November 2010.

In line with these actions, UNEP is scaling up its role and response to climate change under a new action plan that complements the Programme of Work for 2010-11. Three priorities have been identified as lead areas that match calls for international guidance, the urgent need for action at a national level on climate change and the organization's skill set, experience and mandate: **Ecosystem Based Adaptation, REDD+** and **Clean Tech**.

Our goals

The Climate Change sub-programme focuses on strengthening the ability of countries, particularly developing countries, to integrate climate change responses into national development processes. The sub-programme has four key goals:

- **Adapting to climate change:** UNEP helps countries reduce their vulnerability and use ecosystem services to build natural resilience against the impacts of climate change.
- **Mitigating climate change:** UNEP supports countries in making sound policy, technology and investment choices that lead to GHG emission reductions, with a focus on scaling up clean and renewable energy sources, energy efficiency and energy conservation.
- **Reducing emissions from deforestation (REDD+):** Working in partnership with UNDP and FAO, UNEP supports developing countries to reduce emissions from deforestation and degradation through supporting the development of REDD strategies, the testing of innovative REDD pilots including the consideration for co-benefits such as biodiversity and livelihoods and promoting sustainable forest management.
- **Enhancing knowledge and communication:** UNEP works to improve understanding of climate change science and raise awareness of climate change impacts among decision-makers and other target audiences.

Poverty alleviation

Climate change is a serious risk to poverty reduction and could undo decades of development efforts. While climate change is global, its negative impacts are more severely felt by poor people and poor countries. They are more vulnerable because of their high dependence on natural resources and limited capacity to cope with climate variability and extremes. Restoring and maintaining key ecosystems can help communities in their adaptation efforts and support livelihoods that depend upon the services of these ecosystems. Moving towards low-carbon societies can help reduce greenhouse gas emissions, improving human health and well-being and creating green jobs.



A photograph of a lush tropical forest. In the foreground, a large, vibrant green tree fern with multiple fronds is the central focus. Behind it, a dense canopy of various tropical trees and plants extends to a misty, forested mountain range in the background. The lighting is soft, suggesting an overcast day or a shaded forest interior.

UNEP is at the forefront
of global efforts to
address the climate
challenge and realize
its opportunities.

Our vision for 2010-2013

What if we could build green economies powered by clean and abundant energy? What if the most vulnerable communities were equipped with the knowledge, skills and resources to build resilience against extreme weather conditions? What if one of our planet's greatest natural carbon sinks, our forests, were managed as a critical long-term sustainable resource, rather than a short term source of profit? And what if decision-makers and the general public alike had better access to, and deeper understanding of the latest climate science?

UNEP's Climate Change sub-programme is working to make this vision a reality during the 2010-13 period of UNEP's Medium-term Strategy. UNEP is at the forefront of global efforts to address the climate challenge and realize its opportunities. Moving forward, UNEP's work will continue to support and complement the global climate negotiations process under the UNFCCC.

Building on knowledge and experience accumulated over three decades of leadership on climate change, UNEP's vision is based on delivering:

Resilience to a changing climate

Climate change will disproportionately affect many of the world's poorest populations, who are least prepared to deal with the consequences. With a primary focus on Africa, Small Island Developing States and mega deltas, UNEP's work in 2010-13 will continue to support countries to reduce vulnerability and build resilience to the impacts of climate change, focusing on incorporating the natural defences provided by ecosystems for adaptation.

Low-carbon societies

Supported by UNEP's expert guidance, countries can make sound policy, technology, and investment choices that reduce emissions and drive sustainable social and economic development. From assisting in the deployment and scaling up of cutting-edge clean technologies to helping remove financial and other barriers to transforming energy generation, UNEP helps developing countries to capitalize on the transition to the Green Economy.

Sustainable management of forests

UNEP's work on REDD+ represents a unique opportunity for combating climate change, biodiversity loss and environmental degradation while enhancing livelihoods across the developing world. The UN-REDD Programme with FAO and UNDP has grown fast in its first 18 months to become a leading provider of capacity support on REDD+. UNEP has and will continue to play a catalytic role in reducing the emissions from deforestation and degradation, and helping developing countries realise the opportunities in sustainably managed forests.

Understanding and awareness of climate science

Climate change is a complex issue. UNEP will communicate key messages on climate change clearly to ensure decision-makers, those who advise them, and the public all have access to relevant climate change science and information.



Delivering our vision

UNEP has more than 30 years of experience working on climate change. The sub-programme focuses on providing leadership in four areas:

1. Adaptation

UNEP's adaptation work focuses on incorporating planning, financing and cost-effective preventative actions into national development processes that are supported by scientific information, integrated climate impact assessments and local climate data. UNEP is supporting developing countries through four types of projects:

• **Ecosystem-based adaptation Flagship**

UNEP's EBA Flagship will help vulnerable communities adapt to climate change through good ecosystem management practices, and their integration into global, regional, national and local climate change strategies and action plans. The Flagship will be implemented in diverse ecosystem settings, including mountains, river basins, dry-lands and low-lying coasts. For example, UNEP is currently supporting the Government of Mali to restore Lake Faguibine. The shrinking lake has forced more than 200,000 people to abandon their traditional livelihoods, which revolved around agriculture, livestock, forestry and fishery. The ongoing project aims to quantify the potential of the lake's ecosystem services under varied climate change and human intervention scenarios. UNEP will work to restore the ecosystem functions of the lake, raise awareness on the prevention of conflicts between farmers and livestock keepers, improve management of grazing areas, and strengthen Mali's capacity to create a national policy dialogue on water and sustainable ecosystem services delivery for human well-being.

• **Ecosystem-based adaptation support**

Increasing the resilience of ecosystems empowers communities with natural defences against the adverse impacts of climate change. UNEP helps countries develop methods, tools and guidelines that assess ecosystem vulnerability and the economic value of their services, and pilots these adaptation approaches on the ground.

• **Impact and vulnerability assessments**

UNEP helps to conduct integrated impact and vulnerability assessments for national adaptation policy-setting and to integrate ecosystem resilience-building into national adaptation policies.

• **Adaptation capacity, policy and planning support**

UNEP enhances capacity and provides knowledge services for national adaptation policy-setting, legislation and planning and their integration into national sustainable development processes.

UNEP helps countries strengthen their ability to adapt to climate change and move towards low-carbon societies.

2. Mitigation

UNEP helps countries make sound policy, technology and investment choices that accelerate their transition towards low-carbon economies and societies. UNEP's focus is on clean and renewable energy sources, energy efficiency and energy conservation. UNEP also helps countries phase out obsolescent technologies and deploy cleaner ones, financed through public and private sources including the Clean Development Mechanism (CDM).

• **Clean Tech Flagship**

Many developing countries are at risk of being left behind in the coming "energy revolution" because they lack the readiness to choose and adopt new and more efficient technologies. UNEP's pioneering Clean Tech Flagship provides support to developing countries that want to make low-carbon and efficient energy technologies the foundation of their economies. The Flagship also helps ensure that national mitigation initiatives not only reduce emissions of greenhouse gases, but also create green jobs, enhance energy security, and reduce the other environmental impacts of conventional energy technologies.

• **Analysis of emissions reduction opportunities**

UNEP uses its expertise to develop national capacities for integrated analysis, and policies for GHG mitigation.

• **Deployment of clean technologies in developing countries**

UNEP works to promote the deployment of renewable energy and energy efficient technologies. Under the Indian Solar Loan Programme, for example, UNEP has partnered with two of India's largest banks to finance more than 20,000 solar lighting systems across the country.

• **Stimulating private sector involvement**

UNEP seeks to scale-up private sector investment in energy efficient goods, technologies and services and renewable energy supply.

Delivering our vision continued

3. REDD

The UN-REDD programme helps countries develop national strategies, financing approaches, and institutions that reduce emissions from deforestation and forest degradation. Beyond emissions reductions, these strategies aim to transform the forest sector and forested landscapes, while improving livelihoods, providing alternative development pathways, and supporting biological and cultural diversity. The goal of REDD is to halve current global deforestation rates by 2020.

• **REDD+ Flagship**

Through the innovative REDD+ Flagship, UNEP will play a leading role supporting developing countries as they prepare to participate in the programme, assisting them to make informed choices, engage investors, and understand all the benefits of sustainable forest management. Nine governments are currently implementing pilot REDD+ strategies and mechanisms, including Bolivia, Indonesia and the Democratic Republic of the Congo. A further 13 countries have joined as observers with the expectation of similar support when funds are available. This list is expected to grow.

• **Making the case**

By showcasing best practices around the world, UNEP is leading the business case for shifting forest uses and investments from short-term profit to long-term sustainable management.

• **Development of transformative national strategies**

National strategies to address deforestation need to involve other sectors. UNEP analyses and develops scenarios to help countries understand how REDD strategies can contribute to reducing other sources of emissions and protecting ecosystem services. UNEP also helps countries monitor and measure the results of their REDD initiatives.

• **Leveraging additional investment**

Without additional sources of forest carbon finance, demonstrating the value of preserving our planet's forests would be impossible. UNEP offers financial assessments, and mobilizes REDD+ finance based on these assessments.

• **Monitoring and learning**

UNEP works with international partners to monitor and collect data on REDD activities, and develops tools to educate and showcase learning from countries participating in the programme.

UNEP's work on climate change matches calls for international guidance, the urgent need for national action and the organization's skill set, experience and mandate.

4. Knowledge and communication

Audiences all over the world are increasingly exposed to negative climate change stories. Drawing on its strengths as a science-based organization, UNEP works with partners to provide policymakers, the private sector and the general public with access to information on effective climate change solutions.

• **Scientific support**

UNEP helps to develop better climate data and make it available to a wide range of stakeholders to inform adaptation and mitigation policies.

• **Climate negotiations assistance**

UNEP assists climate change negotiators and stakeholders in articulating and refining their policy positions for the intergovernmental process within the framework of UNFCCC.

• **Communication and outreach**

UNEP seeks to ensure decision-makers, their advisers, and the public all have access to relevant climate science and information. UNEP promotes best practice by communicating successful climate change programmes. For example, many governments and stakeholders have requested an annual snapshot of how science has been evolving since the publication of the IPCC's landmark fourth assessment. In advance of the panel's next assessment in 2014, UNEP developed a Climate Change Science Compendium in 2009. The Compendium presents some of the exciting scientific findings, interpretations, ideas and conclusions emerging from 400 major peer-reviewed research publications since 2006.



Our key projects

| Project title | Project brief | Geographic scope | Budget (2010-2011) |
|---|---|----------------------------|-------------------------------------|
| Adaptation | | | |
| Vulnerability and Impact Assessments for Climate Adaptation | Building capacity and strengthening knowledge through integrated vulnerability and adaptation assessments that use scalable methodologies and tools. | Regional, national | \$4.3 million |
| Adaptation Capacity, Policy and Planning Support | Providing a solid knowledge base and institutional and policy frameworks that enable integration of ecosystem-based adaptation options into national planning processes. | Global, regional, national | \$5.5 million |
| Support for Building Resilience of Vulnerable Ecosystems | Assisting developing countries to build the resilience of ecosystems that are most vulnerable to climate change, and maximize ecosystem services for adaptation. | Global, regional, national | \$5.5 million |
| Flagship on Ecosystem Based Adaptation | Helping developing countries to build resilience through ecosystems-based adaptation measures. | National | \$100 million (over the next 5 yrs) |
| Mitigation | | | |
| Support for Integrated Analysis and Development of Framework Policies for GHG Mitigation | Through this project UNEP will support: (i) macro-economic and sectoral analyses to determine opportunities and potentials for GHG reductions in specific countries, (ii) technology needs assessments and technology action plans, and (iii) building capacity of government officials responsible for climate change mitigation policy. | Regional | \$6.5 million |
| Support For the Deployment of Clean Technologies in Developing Countries | Accelerating the commercialization, deployment and diffusion of climate mitigation technologies through better policies and programmes, while also allowing expanded access to cleaner energy in the poorest developing countries. | Global, national | \$4 million |
| Stimulating Private Sector Provision of Cleaner Energy Goods and Services | Mobilising private sector investment in climate mitigation to build skills amongst industry decision-makers, and introduce innovative financial mechanisms for low-carbon goods and services. | Regional | \$3.4 million |
| Flagship on Clean Tech Readiness | Helping developing countries to build 'readiness' for clean technology uptake and scale-up (attracting and effectively using public and private finance). | National | \$61 million (over the next 5 yrs) |
| REDD | | | |
| Readiness and Implementation Support Package for REDD+ and Other Land Based Emissions | Providing a platform for developing countries to significantly reduce their forest and land based emissions and access performance based financing to contribute to achieving national developmental goals in a sustainable and equitable manner. | Global, national | \$20 million |
| Flagship on REDD + | Helping countries to factor in co-benefits of REDD to enhance the overall sustainability of REDD and to reduce risks to it. | National | \$200 million (over the next 5 yrs) |
| Knowledge and communication | | | |
| Scientific Support Package for Global and National Climate Change Information | Enhancing communication of science-based information, scientific capacity to address key knowledge gaps (particularly in data-scarce regions of the developing world), and improving the general understanding of and access to climate science. | Global, regional, national | \$3.7 million |
| Climate Negotiators Support project | Supporting climate change negotiators with the latest scientific data from the IPCC and other sources, background materials and briefs from UNEP and its partners on technical issues debated within UNFCCC and on the current negotiation status. | Global, regional, national | \$4.3 million |
| Climate Communication and Outreach Project | Raising awareness, disseminating climate science, and conducting outreach to a wide range of stakeholders, as well as communicating successful climate change programmes to encourage action and best practice. | Global | \$11 million |

Factsheets in this series

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