



Fact sheet: The need for adaptation

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The world's climate is changing and will continue to change at rates unprecedented in recent human history. The impacts and risks associated with these changes are real and are already happening in many systems and sectors essential for human livelihood, including water resources, food security, coastal zones and health.

Developing countries, especially those that are least developed, and the poorest communities, are the most vulnerable. In these vulnerable countries and communities, the impacts of climate change pose a direct threat to people's very survival. However, the devastating effects of extreme events, temperature increases and sea level rise have consequences for all of us, particularly the poor, and will only worsen in the future.

Impacts highlighted by the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC 2007) include:

- Worldwide, approximately 20-30% of plant and animal species are likely to be at increased risk of extinction if increases in global average temperature exceed 1.5-2.5°C;
- Widespread melting of glaciers and snow cover will reduce melt water from major mountain ranges (e.g. Hindu Kush, Himalaya, Andes), where more than one billion people currently live;
- In 2008 alone, more than 20 million people were displaced by sudden climate-related disasters. An estimated 200 million people could be displaced as a result of climate impacts by 2050;
- Climate change currently contributes to the global burden of disease and premature deaths. Adverse health impacts will be greatest in low-income countries, including from heat stroke, malaria, dengue and diarrhoea.

Adequate attention must be given to respond to the impacts of climate change that are already occurring, while at the same time preparing for future impacts. In this connection, it is most urgent to ensure adequate and rapid support to the most vulnerable countries and communities. Increased investment in adaptive capacity, such as strengthening the ability of countries to reduce disaster risk, will safeguard economic progress already made and increase the climate resilience of economies on the way to achieving overall development goals.

Next to building climate-resilient economies, economic diversification is another good way of creating buffers against climate shocks and for safeguarding development gains made to date.

In this context, there is an urgent need for an integrated policy response to the climate change and development challenge.

Adaptation and sustainable development

Climate change has the potential to push developing countries back into the poverty trap and to undo many achievements that have been made to date with regard to the Millennium Development Goals (MDGs).

Climate change impacts on all aspects of sustainable development. Future vulnerability depends not only on climate change, but also on development pathways. Sustainable development can reduce vulnerability.

The implementation of adaptation needs to be integrated into national and international sustainable development priorities, as well as into national and sectoral development plans.

Steps for effective implementation strategies at the national level include:

- Enhancement of the scientific basis for decision-making
- Strengthening methods and tools for the assessment of adaptation
- Education, training and public awareness on adaptation, including for young people
- Individual and institutional capacity-building
- Technology development and transfer; and promotion of local coping strategies
- Appropriate legislation and regulatory frameworks, which promote adaptive-friendly action
- An adaptive planning process that covers different time-scales and levels (e.g. national, regional) and sectors

Using climate change, including adaptation, as a driver to undertake activities with multiple benefits can catalyze progress in achieving a country's sustainable development goals. Many countries are starting to take concrete action towards adaptation to climate change. Such action needs to be expanded and integrated into national and sectoral planning to ensure that sustainable development and adaptation are mutually enhanced.

Options for responding to adaptation needs to date

Adaptation options are many, including:

- Behavioural change at the individual level, such as the sparing use of water in times of drought

- Technological and engineering options such as increased sea defences or flood- proof houses
- Risk management and reduction strategies such as early warning systems for extreme events
- Promotion of adaptive management strategies
- Development of financial instruments such as insurance schemes
- Promotion of ecosystem management practices, such as biodiversity conservation to reduce the impacts of climate change on people, e.g. by conserving and restoring mangroves to protect people from storms

Funding for adaptation

Adaptation needs sufficient and sustained funding so that countries can plan for and implement adaptation plans and projects. Funding is required for all

developing countries to develop national adaptation plans and for these to exist at all levels: local, sub-national and national.

Many estimates for financing adaptation actions have been produced in recent months. While it is difficult to ascertain their accuracy given that they involve future costs, it is safe to say that funding requirements for adaptation are likely to run to several tens of billions of dollars annually.

More information is available in the technical paper reviewing the existing literature on the potential costs and benefits of adaptation options (<http://unfccc.int/resource/docs/2009/tp/02r01.pdf>)

Without sustained funding, adaptation responses are likely to be limited to ‘reactive’ action, such as short-term emergency relief or humanitarian aid. Furthermore, humanity will face increased costs and greater risks in the future, including:

- Large-scale population movements, with the number of environmentally displaced persons outgrowing the number of ‘traditional refugees’.
- Conflict due to competition over scarcer resources such as water, food and energy

Current Official Development Assistance (ODA) is insufficient to cover the adaptation needs. This funding gap becomes clear when looking at current available funding for adaptation. Calculations indicate that available per capita money for adaptation in developing countries ranges from between 3 cents per annum to USD 3.82 per annum. It is critical that start-up funding for adaptation actions in developing countries, as laid out in the Copenhagen Accord, be made available to address the most urgent adaptation needs.

Current efforts under the UNFCCC

- It is critical that the implementation of adaptation be brought forward on policy agendas.
- Developing countries need to receive increased and sustained assistance to adapt to the impacts of climate change.
- The climate change regime has to deliver sustained and sufficient funding for the implementation of large-scale adaptation initiatives to prevent funding being largely limited to 'reactive' funding, e.g. short-term emergency relief. Reactive funding would be unsupportive of sustainable development approaches and be very costly. (It is estimated that one US dollar invested in anticipatory measures can save up to 7 US dollars in future relief costs.)
- Foster appropriate enabling environments to ensure effective and efficient provision of capacity-building, technology and funding.

The UNFCCC commits all Parties to formulate, implement, publish and update adaptation measures, as well as to cooperate on adaptation. It provides for a variety of support mechanisms for adaptation implementation in developing countries, including measures on:

- The provision of funding
- Insurance and technology transfer
- Scientific and technical assistance for all Parties to enhance their knowledge base

National Adaptation Programmes of Action (NAPAs) are currently an option for Least Developed Countries and provide a rigorous assessment of urgent adaptation needs in LDCs. As of October 2010, 44 out of 49 NAPAs had been submitted. In total, 467 projects have been identified, and their total aggregate cost is USD 1.7 billion.

Significant support from the international community is needed to implement the projects identified in the NAPAs, such as early-warning systems, disaster risk reduction, improving food security and water resource management. As at October 2010, donor countries have made contributions and pledges to the LDC Fund of around USD 292 million. More information on countries, projects, donors and a Q & A on LDC's can be found **here** (unfccc.int/4751)

The five-year Nairobi work programme (2005-2010) on impacts, vulnerability and adaptation to climate change (NWP) has the objective of assisting all countries in understanding and assessing impacts, vulnerability and adaptation and making informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability. It provides a structured framework for knowledge sharing and collaboration among Parties and organizations.

During the last five years, the Nairobi work programme has been successful in fulfilling its objective and achieving its expected outcomes. In particular, the programme has proved to be an

important knowledge-sharing and learning platform on adaptation and an effective mechanism for enhancing cooperation among a wide range of adaptation stakeholders and for catalyzing adaptation actions in all regions and sectors. As of October 2010:

- 195 organizations are partners to the Nairobi work programme, of which 32 are from the private sector
- 9 calls for action highlighting priority actions to support adaptation, that respond to gaps and needs identified under the NWP, have been produced under the guidance of the Chair of the SBSTA. The calls for action are based on discussions during workshops and expert meetings.
- 133 action pledges have been received from 51 organizations
- Online compendia and databases, including the **Adaptation Practices interface** -a gateway to information on adaptation practices worldwide and the **Compendium on methods and tools** to evaluate impacts of, and vulnerability and adaptation to, climate change.

More information on activities, partners and pledges can be found **here** (unfccc.int/nwp)

The Adaptation Fund

The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Adaptation Fund is to be financed with a share of proceeds from clean development mechanism (CDM) project activities and funds from other sources. The share of proceeds amounts to 2% of certified emission reductions (CER) issued for a CDM project activity. At the end of July 2010, the AFB had around USD 160 million available to support adaptation. By the end of 2012 total potential resources from CER monetization is expected to be around USD 350 million.

The Adaptation Fund is managed by the Adaptation Fund Board (AFB) with the Global Environment Facility (GEF) providing secretariat services to the Board, and the World Bank serving as the trustee of the Adaptation Fund. The AFB is composed of 16 members and 16 alternates and it meets at least twice a year.

The first two adaptation projects over USD 14 million were approved by the Board in September. While the project from Honduras employs an established practice of using a Multilateral Implementing Entity (UNDP) to improve water management and reduce vulnerability; the project from Senegal makes use of the ground-breaking direct access modality, i.e. it uses a National Implementing Entity (Centre de Suivi Ecologique) to combat coastal erosion exacerbated by climate change and rising sea levels.

More information on the Adaptation Fund, including the AFB, projects and programmes, and implementing entities can be found **here** (www.adaptation-fund.org/)

Negotiations on the future post-2012

Parties to the UNFCCC have already highlighted the most important elements that might be part of an enhanced multilateral response to climate change up to and beyond 2012. Adaptation was identified to be one of the five key building blocks (shared vision, mitigation, adaptation, finance and technology) of a future climate change deal.

The importance of adaptation was reiterated in the Copenhagen Accord, which emphasizes that enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa.

Under the negotiating process towards Cancun, countries made progress in defining a comprehensive adaptation framework, which will enable all countries to share knowledge and lessons learned from adaptation and developing countries to develop and implement adaptation measures supported through scaled-up financial support, technology and capacity-building. The final elements of the framework remain to be agreed through the negotiations.

Parties have emphasized that adaptation and mitigation need to be accorded the same level of importance. Adaptation does not replace mitigation of greenhouse gas emissions. On the contrary, both adaptation and mitigation need to be pursued in parallel during the same period of time, thus complementing each other, and they need to be implemented through sufficient financing and appropriate technology.

For further background information see:

UNFCCC 2007 publication-Climate Change: Impacts, vulnerabilities and adaptation in developing countries.

http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/txt/pub_07_impacts.pdf

UNFCCC 2009 publication- Action Pledges: Making a difference on the ground. A synthesis of outcomes, good practices, lessons learned, and future challenges and opportunities
http://unfccc.int/resource/docs/publications/09_nwp_action_pledges_en.pdf

UNFCCC 2010 publication-Adaptation Assessment, Planning and Practice. An overview from the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change

http://unfccc.int/files/adaptation/nairobi_work_programme/knowledge_resources_and_publications/application/pdf/an_overview_from_the_nairobi_work_programme_on_impacts_vulnerability_and_adaptation_to_climate_change.pdf