



COPENHAGEN 101: **ADAPTATION**

THE IMPORTANCE OF ADAPTATION MEASURES

The consensus of the scientific community is clear: The Earth's climate is changing with significant impacts on the planet's marine, freshwater and terrestrial ecosystems. The United Nations Environment Program recently examined 400 peer-reviewed scientific studies and found that current effects of climate change include:¹

- Widespread and accelerated melting of mountain glaciers in tropical and temperate latitudes, impinging on the livelihoods of more than 1.5 billion people who depend on runoff for freshwater, irrigation and hydropower.
- Ocean acidification that is degrading the health of shellfish—a source of income and food for billions of people—and coral reefs—critical to the economies of many coastal nations and essential for healthy marine ecosystems.
- Altered distribution and behavior of numerous marine, freshwater and terrestrial plants and animals, threatening the very existence of various species.
- Perennial drought conditions that suggest more persistent agricultural difficulty and water scarcity in Southern and Northern Africa, the Mediterranean, much of the Middle East, a broad band in Central Asia and the Indian subcontinent.

The evidence demonstrates that billions of people around the world already feel the effects of climate change, and the best scientific projections suggest that the climate will continue to change in even more profound ways. There is particular concern that the most significant effects of climate change are likely to be felt acutely in developing countries, which collectively have contributed least to the problem and have the most limited capacity to adapt. These trends help explain why a renewed global strategy for adapting to unavoidable climate changes will be a central issue when the parties to the U.N. Framework Convention on Climate Change meet in Copenhagen in December.

WHAT NEEDS TO BE DONE

A broad range of efforts are needed to ensure that countries are able to build human and physical capacity to anticipate, prevent and address unavoidable impacts associated with climate change.

They include:

- **Prediction.** Nations must develop capabilities to understand likely long-term climate impacts, better understand and track meteorological patterns, and forecast and assess risks and vulnerabilities.
- **Protection.** By anticipating the likely effects of climate change and then building resilience into development plans (including planned and needed infrastructure, water storage and agricultural requirements), nations and communities can dramatically reduce human and financial costs.
- **Emergency response.** Some of the most harmful climate consequences will be in countries with limited capacity to respond to extreme events. Effective adaptation efforts should enhance the response capabilities of the most vulnerable societies.

The most susceptible and least developed countries have major gaps in capacity and financing of adaptation prediction, protection and emergency response. Therefore, financing for adaptation will be a major issue in Copenhagen. Estimates vary widely regarding the scale of financial resources needed. The U.N. Development Program calculated adaptation costs at \$86 billion a year by 2015.² A recent World Bank assessment predicted annual adaptation funding needs of \$75 billion to \$100 billion.³

WHAT'S CURRENTLY BEING DONE?

Efforts have been launched under the auspices of the climate Convention and other multilateral bodies to initiate adaptation planning and response measures.

- **National Adaptation Plans of Action (NAPAs).** Efforts have been undertaken to develop plans for adaptation actions in the most vulnerable and least developed countries. Plans for 42 out of 49 eligible countries have been developed to assess pressing adaptation needs. These efforts have been supported through voluntary contributions totaling \$176 million to the Least Developed Country Fund established under the auspices of the Global Environment Facility, the Convention's financial mechanism.⁴ The NAPA process has identified 439 projects with a total cost of \$1.7 billion as urgent priorities

for implementation.⁵ Included are projects providing drinking water to coastal communities to combat increased salinity caused by sea level rise, exploring options for insurance to cope with enhanced climatic disasters and installing warning systems.⁶ In addition, there has been interest in broadening the scope of the NAPA assessments to include more developing countries.

- **The Adaptation Fund.** The Adaptation Fund was created by Parties to the Convention as a means of supporting implementation of climate resilience strategies. The Adaptation Fund is supported by a 2 percent levy on transactions under the Convention's Clean Development Mechanism. The fund is expected to generate between US\$106 million and US\$190 million in 2009–10.⁷ Depending on demand for and availability of certified projects (which are expected to be high), the levy could generate \$500 million to \$5 billion annually by 2030.⁸ These projects include capturing methane gas at landfills and developing wind and solar power.⁹
- **World Bank Climate Investment Funds.** Created in 2008, this initiative encompasses a range of dedicated funds and programs to help developing countries respond to climate change. The Strategic Climate Fund includes a Pilot Program on Climate Resilience that helps countries integrate adaptation considerations into mainstream development planning. As of June 2009, pilot programs were under way in nine countries.¹⁰

WHAT TO LOOK FOR IN COPENHAGEN

Developed and developing countries alike agree that rapid development of adaptation planning can help reduce the costs of future effects of climate change. They also agree on the need for vulnerability assessments and setting priorities for building climate resilience and adaptation planning into global development efforts.

There is no consensus, however, on the scale, availability and governance of resources needed for

adaptation planning. Developed countries tend to believe that existing institutions should be utilized and made coherent. Developing countries, in contrast, want a new, dedicated program under the auspices of the Conference of the Parties to guide all adaptation efforts. In addition, beyond the funds made available through the Convention's Clean Development Mechanism for the Adaptation Fund, developing countries will negotiate for predictable, dedicated funding flows in support of adaptation efforts.

Key issues at Copenhagen will include:

- **Creation of a dedicated adaptation body within the U.N. Framework Convention on Climate Change.** A separate and permanent entity will be proposed at Copenhagen to cut across traditional boundaries of several U.N. agencies and other multilateral bodies and unite the fragmented groups dealing with adaptation.
- **Rapid implementation of adaptation in vulnerable countries.** Pressure will be exerted to mobilize immediately the resources needed—some \$1.7 billion—to implement adaptation projects in the most vulnerable and least developed countries, as identified through the National Adaptation Plans of Action process.
- **Scale and source of adaptation finance.** Current funding for adaptation programs is widely seen as inadequate. Negotiators will grapple with how much and where financial resources for adaptation measures should be generated. They will also consider means of expanding coverage of the national adaptation plans beyond the least developed countries.
- **Insurance mechanism.** Parties will debate whether the Convention should adopt a risk insurance mechanism to help nations cope in the aftermath of climate-related disasters.¹¹
- **Technology transfer.** Adaptation plans will need complementary technology transfer to help develop, implement and enhance a country's existing technological capacity.

1 U.N. Environment Program, "Climate Change Science Compendium 2009," www.unep.org/compendium2009.
2 U.N. Development Program, "Summary of the Human Development Report 2007/2008," p. 26, http://hdr.undp.org/en/media/HDR_20072008_Summary_English.pdf.
3 World Bank, "Economics of Adaptation to Climate Change," <http://siteresources.worldbank.org/INTCC/Resources/EACCReport0928Final.pdf>.
4 U.N. Framework Convention on Climate Change, "The need for adaptation," fact sheet, July 2009, http://unfccc.int/press/fact_sheets/items/4985.php.
5 *Ibid.*
6 National Adaptation Plans of Action, NAPA Project Database, http://unfccc.int/cooperation_support/least_developed_countries_portal/napa_project_database/items/4583.php.
7 World Bank, Adaptation Fund trustee, "Potential Resources Available for the Adaptation Fund Trust Fund Through December 2010," p. 3, www.adaptation-fund.org/images/Doc_AFB.B.8.10_Potential_Resources_Available_for_the_AFTF_through_DEC_2010.pdf.
8 U.N. Framework Convention on Climate Change, "Investment and Financial Flows to Address Climate Change," p. 169, http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/background_paper.pdf.
9 UNFCCC, "The share of proceeds from the clean development mechanism project activities for the Adaptation Fund," <http://cdm.unfccc.int/Issuance/SOPByProjectsTable.html>.
10 "Pilot Program on Climate Resilience: A Targeted Program of the Strategic Climate Fund," http://siteresources.worldbank.org/INTCC/Resources/PPCR_r2.pdf.
11 Munich Climate Insurance Initiative, "Submission on insurance instruments for adapting to climate risks: A proposal for the Bali Action Plan," August 2008, www.unfccc.int/essential_background/library/items/3599.php?rec=j&piref=500004788#beg.

