

**The World Bank**

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT  
INTERNATIONAL DEVELOPMENT ASSOCIATION

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*Re: World Bank Submission in Support of the Work Program on Loss and Damage under  
Enhanced Action on Adaptation*

Please find attached the World Bank submission on climate resilience, risk management and insurance in support of the work Program on Loss and Damage under the Cancun Adaptation Framework.

Sincerely,

Jane O. Ebinger  
Program Manager  
Climate Change  
Environment Department

## **World Bank Submission in Support of the Work Program on Loss and Damage under Enhanced Action on Adaptation**

1. Decision XX/CP.16 under para. 26 calls to establish a work program to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change. Parties and relevant organizations are requested to provide views and information on elements to be included in the work program, including the following:

- (a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events
- (b) Options for risk management and reduction; risk sharing and transfer mechanisms such as insurance, including options for micro-insurance; and resilience building, including through economic diversification
- (c) Approaches for addressing rehabilitation measures associated with slow onset events
- (d) Engagement of stakeholders with relevant specialized expertise

2. The analytical, technical, and knowledge products of the Bank (and wider community) can inform the operations and delivery of programs and projects that mainstream climate change and risk management into the development process. Please find below a summary of key information that could contribute to the discussion on the work program on loss and damage under enhanced action on adaptation.

3. The World Bank's **Global Facility for Disaster Risk and Recovery (GFDRR) supports disaster risk management and is increasingly taking an integrated approach to risk management - which includes climate adaptation aspects.** Some relevant examples include:

- (a) 31 Country Adaptation profiles (under development) are a first of a kind synthesis of climate adaptation profiles relevant to disaster response that are based on best available climate data. They are intended for fast and easy operational reference and will provide a basis from which practitioners can drill down for more refined information
- (b) GFDRR supports country-specific climate risk financing solution(s) while offering technical support and convening services at both the country and local community levels. This work builds on the innovations of the Caribbean Catastrophic Risk Insurance Facility, Multi-Cat Program in Mexico, Catastrophic Draw Down Option (in several Latin American and Caribbean countries), and Weather derivative programs.

Information on the GFDRR's country and regional programs, knowledge products and analysis is available at: <http://www.gfdr.org/gfdr/>

4. **The Pilot Program for Climate Resilience (PPCR), under the Strategic Climate Fund, provides additional insights on climate risk, financing and resilience building, responding to elements (a) through (d) of the COP decision.** A strategic program and investment plan has been approved in three single pilot countries (Bangladesh, Niger and Tajikistan) to date. Plans for the remaining countries in the PPCR program (6 single country and 2 regional programs in the Caribbean and Pacific) are anticipated to be approved before the end of 2011. These strategies and their investments will provide an opportunity to learn and showcase various applications of climate resilience - including risk management and insurance. Further information of the PPCR can be accessed at: <http://www.climateinvestmentfunds.org/cif/workingdocuments/1962>

**4. The World Bank has further supported analytical work that is relevant to resilience building, economic diversification and rehabilitation under elements (b) and (c) of the work program on loss and damage.** Some highlights are presented below.

- i. ***Economics of Adaptation to Climate Change (2010)*** is based on case studies in seven developing countries. It estimates the cost of adaptation for developing countries at between \$70 and \$100 billion annually over the period to 2050. It concludes that economic development makes economies less reliant on climate sensitive sectors and additionally provides resources to minimize climate risk. However, countries need to develop differently to make their economies more climate resilient.

Reference: *Economics of Adaptation to Climate Change Synthesis Report, 2010, The World Bank*

- ii. ***Assessing the Potential Consequences of Climate Destabilization in Latin America (2009)*** seeks to estimate the multiple consequences of potential climate impacts - some of which can be monetized while others are beyond the reach of standard economic tools. This report summarizes data on some of the damages induced by climate destabilization based on the portfolio of adaptation activities in the World Bank's Latin American region. This includes the impacts of hurricane intensification, glacier retreat, and increased exposure to tropical vector diseases, coral bleaching, and composite costs of climate change in the particularly vulnerable Caribbean Basin.

Reference: *Assessing the Potential Consequences of Climate Destabilization in Latin America, Latin America and Caribbean Region Sustainable Development Working Paper 32, ed. by Walter Vergara, The World Bank*

- iii. ***Convenient Solutions to an Inconvenient Truth: Ecosystem based approaches to climate change (2009)*** attempts to set out a compelling argument for including ecosystem-based approaches to mitigation and adaptation as a third and essential pillar in national strategies to address climate change. Ecosystem based strategies can offer cost-effective, proven and sustainable solutions contributing to, and complementing, other national and regional adaptation strategies. It discusses current efforts to address climate change that largely focus on reducing greenhouse gas emissions through cleaner energy strategies and on reducing the vulnerability of communities at risk through improved energy and water infrastructure.

Reference: *Convenient Solutions to an Inconvenient Truth: EcoSystem-based Approaches to Climate Change, Environment Department, 2009, The World Bank*

- iv. ***Biodiversity, Climate Change and Adaptation (2008)*** highlights projects and programs with biodiversity-climate change links such as projects that directly support biodiversity conservation in a range of natural habitats. Many of these habitats provide critical ecosystem services and can be an important buffer to climate change, providing low-cost options for adaptation and mitigation actions.

Reference: *Biodiversity, Climate Change and Adaptation: Nature-Based Solutions from the World Bank Portfolio, 2008, The World Bank,*

- v. ***Agricultural Development under a Changing Climate – Opportunities and Challenges for Adaptation (2009)*** discusses potential climate change impacts on agriculture. It examines the

causes of climate vulnerability, identifies investments to better climate-proof agriculture and describes how current efforts to support sustainable agriculture practices can address climate risk management.

Reference: *Agricultural Development under a Changing Climate: Opportunities and Challenges for Adaptation* y John Padgham, August 2009, Issue 1, The World Bank

- vi. ***Development and Climate Change: Stepping up Support to Developing Countries (2010)*** reports on the progress made by the World Bank Group on its Strategic Framework on Development and Climate Change in 2008. It can be accessed at: <http://siteresources.worldbank.org/INFOSHOP1/Resources/WDR4.pdf>
- vii. ***Natural Hazards, Unnatural Disasters - the Economics of Effective Prevention (2010)*** looks at disaster prevention, insurance and coping through an economic lens. Recognizing that lenses can distort as well as sharpen images the report draws from other disciplines: psychology, political science, nutrition science. It also examines how the intensities and frequencies of hazards in the coming decades will change with climate change, acknowledging all the limitations of data and science.

Reference: *Natural Hazards, Unnatural Disasters: The Economics of Effective Prevention*, United Nations & The World Bank, 2010, The World Bank.

- viii. ***Social Dimensions of Climate Change*** looks at pro-poor adaptation, local institutions, gender, and migration among other issues. It can be accessed at: [http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=23596](http://publications.worldbank.org/index.php?main_page=product_info&products_id=23596)