Climate Change Risks could cost Developing countries up to 19% of GDP by 2030

Report says action on climate adaptation may significantly reduce losses and increase economic sustainability.

Monday, September 14, 2009 - A report from the Economics of Climate Adaptation Working Group released today indicates that climate risks could cost nations up to 19% of their GDP by 2030, with developing countries most vulnerable. The report concludes, however, that cost effective adaptation measures already exist that can prevent between 40 and 68 percent of the expected economic loss with even higher levels of prevention possible in highly target geographies.

The report, titled "*Shaping Climate-Resilient Development*", offers a comprehensive and replicable methodology to determine the risks that climate change imposes on economies. It provides a set of tools for decision makers to adopt a tailored approach for estimating these costs based on local climate conditions, and for building more resilient economies. These tools do not include estimates or measures for emissions reduction, which would need to be examined separately.

By determining a location's total climate risk – calculated by combining existing climate risks, climate change and the value of future economic development – and using a cost-benefit analysis to create a list of location specific measures to adapt to the identified risk, the Working Group was able to evaluate current and potential costs of climate change and how to prevent them. The methodology was tested in localities within eight different countries (China, United States, Guyana, Mali, United Kingdom, Samoa, India, and Tanzania), which together represent a wide range of climate hazards, economic impacts, and development stages.

The working group estimated expected economic loss for the eight different case study regions leveraging natural catastrophe risk modeling techniques assuming current GDP growth estimates, under three different climate change scenarios – today's climate (assuming that there is no additional impact from climate change); moderate climate change (based on the average forecast of climate change for the particular hazard in the location studied); and high climate change (based on the outer range of the climate change considered possible by 2030). The methodology is applicable in any setting where society must consider risk. For example, in Florida the report estimates an annual expected loss of $33 billion from hurricanes – more than 10 percent of GDP - under a high climate change scenario.

Overall findings from the eight case studies showed that easily identifiable and cost effective measures – such as improved drainage, sea barriers, and improved building regulations, among many others - could reduce potential economic losses from climate change for all regions. In fact, most could deliver economic benefits that far outweigh their costs – with adaptation measures that on average cost less than 50 percent of the economic loss avoided.

In Maharashtra in India, researchers evaluated the loss associated with drought, which amounts to 30 percent of the state's food and grain production – even without climate change. This loss would severely impact the 15 million small and marginal farmers. By 2030, a significant drought could lead to a countrywide agricultural loss of more than $7 billion, and impact the income of ten percent of the population. With droughts historically occurring every 25 years, extreme climate change could change that to once every eight years. The case study determined a number of measures that could protect crop production and farmers' incomes in Maharashtra including expanded drip and sprinkler irrigation, drainage construction, improved soil techniques, and crop engineering. In fact, Maharashtra can eliminate much of its expected drought loss by 2030 through low-cost measures with benefits that often exceed their cost.

About the Economics of Climate Adaptation (ECA) Working Group

The ECA Working Group was formed in September 2008 under the initiating sponsorship of the Global Environment Facility in coordination with UNEP to develop a framework to assist in the design of climate-resilient economic development strategies. Swiss Re, a leading global reinsurer, was a lead contributor to the research. McKinsey & Company, a global management consulting firm, drove the analytical execution and contributed to the fact base of the report. Sponsorship and key guidance was provided by ClimateWorks, an international network of foundations focused on achieving low-carbon development; the European Commission; the Rockefeller Foundation, which brought its deep experience of building climate resilience in developing countries; and Standard Chartered Bank, a global bank with a strong emerging market footprint.

The full report can be downloaded at: http://www.swissre.com

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