**Inter-American Development Bank (IDB) work on Cost and Benefits of Adaptation Options**

The IDB is supporting the Latin America and Caribbean region in several areas regarding the economic analysis of the costs of adaptation to climate change. This abstract presents only a sample of the on-going work and initiatives that the IDB has taken in this area.

One of the largest efforts is the support to the country studies on the economics of climate change. The *economics of climate change studies* provide country level information and recommendations on mitigation and adaptation actions based on evaluations that include, among others, the identification of mitigation and adaptation strategies and a cost-benefit analysis of these measures. The IDB, in coordination with ECLAC, has led studies in Mexico, Colombia, Peru and Bolivia (ECLAC is leading this effort in other countries in South America). Results of the Mexico study are now being integrated in the design and implementation of Mexico's climate change programs.

In terms of adaptation in the agricultural sector, three projects are being developed in this area. The "*adaptation to climate change of wheat and potatoes productive systems"* is aimed at fostering competitiveness of potatoes and wheat production systems under climate change in South America, through the selection and development of specific genotypes with higher tolerance to droughts and extreme temperatures. The project includes the development of a regional model to determine the impacts of climate change on these crops and the identification of vulnerable production areas in terms of temperature increases and droughts. The "*vulnerability reduction strategies in the agricultural sector in the southern cone"* project aims at identifying adaptation strategies through analyzing the vulnerability of production systems, developing climate scenarios, analyzing the vulnerability of production systems and identification and cost-benefit evaluation of adaptation alternatives. Meanwhile, the project *"adaptation of coffee planting to climate change"* tackles adaptation via advanced genomics. These three projects will generate relevant information in relation to some of the costs that countries will have to bare to adapt to anticipated effects of climate change in the agricultural sector in LAC.

In Central America, the IDB is supporting the analysis of the "*vulnerability to climate change of hydroelectric production systems"*, including case studies analyzing: i) change in water flow under various climate change scenarios, ii) direct and indirect economic impacts in energy production, iii) identification of possible adaptation measures, and iv) cost benefit analysis of different adaptation measures taking into consideration the high variability of water availability, including revenue/profit analysis of hydroelectric generation and financial and social barriers for the implementation of adaptation measures. This project will develop a methodology to evaluate the vulnerability to climate change of hydroelectric plants, including climate, hydrology and economic analysis.

The IDB is also supporting institutional capacity building for countries in the region in several areas. For example, in Panama the IDB is contributing to the preparation of a *Climate Change Action Plan* at the national level, which includes technical assistance for capacity building to measure the economic impacts of climate change. Moreover, the project includes a case study at the watershed level that will analyze the socio-economic vulnerability to climate change, and consequently, identify adaptation measures in priority sectors. This information will be used to elaborate land use and ecological Plans for selected watersheds.

The economic analysis of the impacts of climate change requires data on possible changes in temperature and precipitation at the local level. In this regard, the IDB is supporting a regional initiative on "*climate change modeling"* in partnership with The National Center for Atmospheric Research (NCAR). This initiative includes the collection, analysis and interpretation of climate data generated by climate system models, which will be used to support cost/benefit analysis of climate vulnerability reduction measures at the regional and local level.