



UNITED NATIONS

ECLAC

TERMS OF REFERENCE FOR
WATER SECTOR EXPERT

REVIEW OF THE ECONOMICS OF CLIMATE CHANGE IN THE CARIBBEAN
PHASE II

Background

In spite of various initiatives, Latin American and Caribbean (LAC) countries continue to experience challenges in addressing the Millennium Development Goals. Additionally, the impending economic impacts of global climate change on developing countries and in particular small island economies are indeed cause for concern. In this regard, the importance of data in planning and adapting to the expected economic impacts of climate change has been recognized and some countries have already launched national studies. As they evolve, it is of critical importance to develop data-collecting activities to determine these impacts in the Caribbean, conducted with a view to ensuring that adequate sources of information are available to inform development planning. This project seeks to estimate the costs of adapting and mitigating key sectoral elements of climate change based on climate change scenarios for the next 100 years and to identify and assess the expected economic impacts that may result from the projections. It is expected that at the end of this project key decision-making stakeholders in Latin America and the Caribbean would be aware of impending climate change as well as the projected impacts on the economies of their countries and be so empowered to take collective action in planning for these impacts. In this regard regional climate change policies should be integrated into the development of national action plans to address changes that are expected to be associated with impending climate change.

This phase of the project will be executed by ECLAC, through its Subregional Headquarters for the Caribbean, over a two year period. It will benefit the National Water Agencies and research centres and Finance and Environmental Ministries in the Caribbean. ECLAC will be the lead agency managing the project with technical support from the Caribbean Community Climate Change Centre (CCCCC) and a Project Review and Project Steering Committee overseeing the project implementation.

Objectives

In consideration of the anticipated impacts of climate change on Caribbean countries and economies, it would be appropriate to raise public awareness of these impacts by building on the body of existing knowledge to inform preparation of strategies for adaptation and mitigation. As such, ECLAC recognises the preliminary work that has been achieved in the Phase I of the Review of the Economics of Climate Change (RECC) initiative and considers it expedient to add to that information. In this regard, the objectives of this phase of the RECC for the Caribbean are:

- (a) To collect relevant data on the agricultural sector in selected Caribbean states to estimate the costs of identified and anticipated impacts with and without impacts associated with climate change;
- (b) To present an economic analysis of CC related impacts on the agricultural sector over the next 90 years based on various carbon emissions trajectories under a business as usual (BAU) scenarios and a scenario with adaptation measures

Expected Outputs

It is expected that a regional, coordinated approach to addressing climate change in the Caribbean would be reiterated and would build on the achievements of the Caribbean Community Climate Change Centre (CCCCC). More specifically, the following outputs would be achieved:

- (a) States of the Caribbean would be informed about accomplished and ongoing initiatives with a view to developing strategic linkages and fostering collaboration among all relevant organizations and institutions in the development of strategies for adaptation and mitigation to meet the needs of the Caribbean region;
- (b) The capacity of technical experts from participating countries would be enhanced in order to better equip them to influence the negotiations for the post-2012 Kyoto Protocol negotiations taking into consideration the specific needs of the Caribbean Region;
- (c) The outputs of the meeting would serve to build on existing awareness among policy makers, of the impacts of climate change and would advance the policy agenda for Caribbean countries.

Scope of Work

The consultant will be expected to provide data and analysis of information pertaining to the water sector in the specific Caribbean state. He/she will be expected to work in close collaboration with ECLAC as well as with the CCCCC.

Activities will include

A. Literature review. This would encompass the following:

- Examine the relevant literature on the water sector to obtain information and data that would inform the report;
- Review the findings of previous studies and data;

B. Data collection and analysis

- Estimate the water balance including water availability and use, potentials, consumption by uses, and unmet demand;
- Create a baseline and various water demand scenarios;
- Estimate of runoff and future water availability related to the different climatic and socioeconomic scenarios;

- Identify the main risk factors and factors (climatic and non-climatic) that increase the sector's vulnerability;
- Assessment of policies to conserve water, reduce water use and enhance supply, including technologies like desalination;
- Assessment of water pollution and sanitation;
- Conduct an economic assessment on the water sector with and without CC related impacts and extreme events;
- Assessment of adaptation actions and future adaptation options. Estimation of costs and benefits of adaptation; and
- Identification of investment opportunities in water harvesting and efficient water management.

More specifically the following are necessary:

Characteristics of the data:

- Annual series with the widest possible scope;
- Official series;
- Series at constant prices with base year as recent as possible;
- Not all the series should have the same frequency;
- These requests are the minimum. This list is not exhaustive, in the case that more information is available; all the options may not be pursued if there is not available information;
- There must be consistency between series;
- The series must be submitted in EXCEL in the requested order with the commentaries in Word;
- Each series must include the reference to its source.

Series:

1. National water availability and national water availability (cubic meters per person).
2. Rains, evaporation-transpiration and filtering.
3. Regional distribution of water availability including Rains, Evaporation-transpiration and filtering. The regional data should allow running some econometric estimation.
4. Water demand:
 - 4.1. National water demand;
 - 4.2. Water demand by sectors: For example: domestic, agricultural, industrial;
 - 4.3. Water demand by regions. Series consistent with income and price variables. The regional data should allow running some econometric estimation;
5. National and regional water prices:
 - 5.1. Water fees.
 - 5.2. Water costs.
6. Series by regions of rains, evaporation and temperature. Similar classification for information on income and prices by regions;
7. Build a vulnerability index for water consumption

C. Reporting

- Prepare a draft report in Microsoft Office 97-2000, using Font Times New Roman 12;
- Obtain comments from the lead consultant and the CCCCC and incorporate these comments into the report;
- Finalise the report for submission to ECLAC by 14 August 2010.

Deliverables:

Key outputs will include:

- By 31 May 2010, a 1st draft national report that would present the available data for the state;
- By 15 July, a 2nd draft national report incorporating preliminary comments from stakeholders;
- By 14 August, a final report that would incorporate the comments of relevant stakeholders from the Caribbean.

The study and all other related work produced by the consultant during the execution of this consultancy will be the exclusive property of ECLAC.

Duration

- The contract will be for 6 months for the period 15 February to 14 August 2010.

Salary:

The consultant shall receive a remuneration of US \$ 6,000 for the whole period of the contract to be paid in 2 installments. The first installment of 40% will be paid after submission and acceptance of the first draft by 31 May 2010 by ECLAC and the CCCCC, and 60% will be paid with completion of the reports and once the reports are finalized and approved by ECLAC and the CCCCC and after the incorporation of comments and suggestions from various stakeholders by 14 August 2010. In the course of field work missions and for presentations at meetings, the consultant shall receive a Daily Subsistence Allowance (DSA) per night of stay in the country where work is being conducted, according to prevailing United Nations rates. ECLAC shall cover all travel-related expenses (air fares and terminal expenses only and DSA per night) during the course of the mission.

Qualifications

Education

University degree in econometrics with a focus on water management or any other relevant field is necessary.

Work Experience

At least 5 years of professional experience in the area of scientific work or any other relevant work area (either in teaching, policy formulation at government, regional and international level, or academic research) with a focus on quantitative aspects of the water sector. Experience in data collection and a strong research background are necessary. Experience working in a research capacity on climate-change related issues such as economic valuation of climate change data, climate change adaptation and mitigation will be a strong asset.

Languages

Fluency in written and spoken English; working knowledge of Spanish will be an asset.

Competencies

Ability to work as part of a multi-cultural team; strong communication skills including an ability to facilitate consensus in meetings and consultations; ability to present complex concepts and technical studies in a clear, concise manner and to adapt language, tone, style and format to match the audience; excellent writing skills.