

OUTPUT/ACTIVITIES:

Workshops

These workshops are training workshops which will be geared towards building the capacity of the ERI and stakeholders (government agencies and environmental NGOs) in Belize. The training will focus on the use of hydrological models and climate model outputs as a way of being able to iteratively assess potential impacts as soon as new datasets (model inputs) become available.

Other (brochures, publications, videos, briefings)

- Development of informational brochures about the project's principal activities and objectives, and major findings.
- Publication of the project's results via the ERI's and CATHALAC's websites .
- Online publication of the training materials used in the training workshop, to allow other stakeholders locally, regionally and internationally to be able to apply the research methodology in other locations.
- Development of short videos to be broadcasted online regarding an introduction to the project, and a summary on the project's major findings and outcomes.
- Development of an information brief to be shared with the local media for wider dissemination of the project results to the general public .



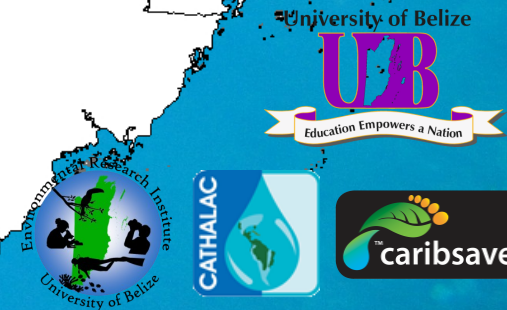
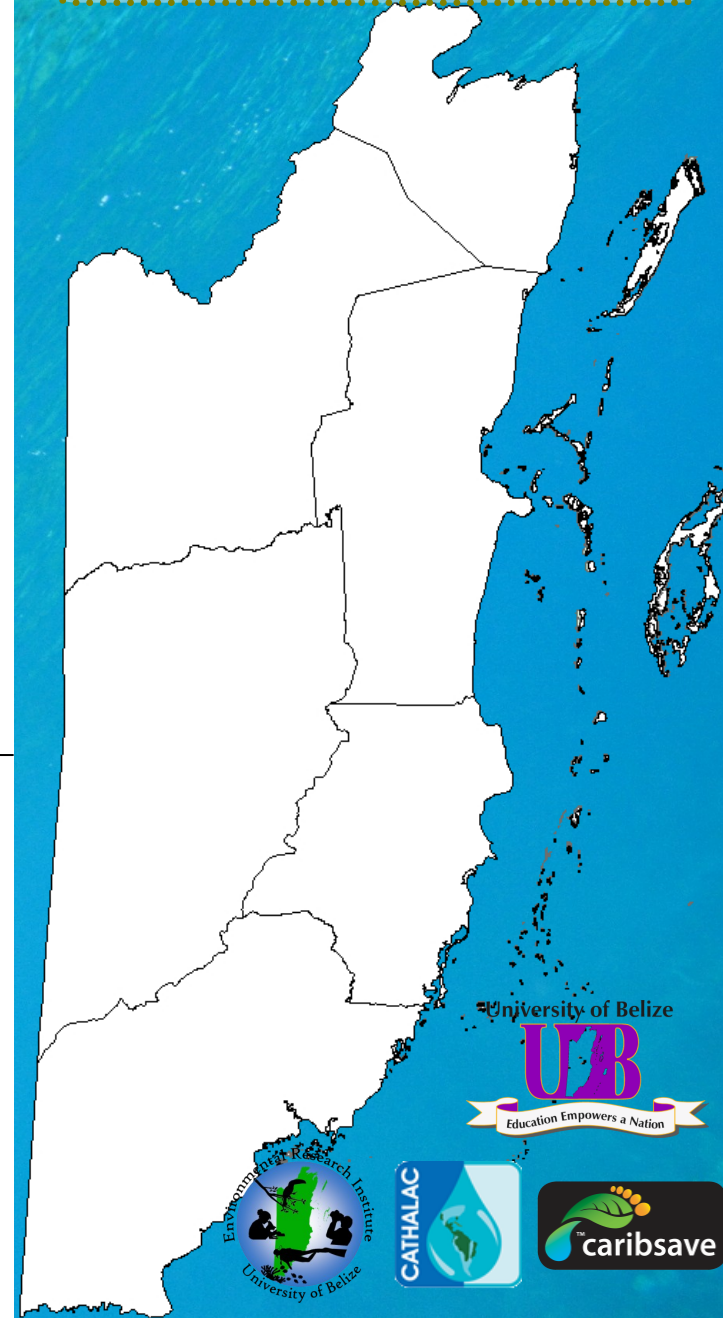
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Assessing the potential impacts of climate change on Belize's water resources



SPECIFIC OBJECTIVES:

- I. Determine the current demand for and supply of water (water balance) in Belize's major and minor watersheds
- II. Assess future supply and demand, against the range of future land use scenarios and future climate change scenarios
- III. Examine how water quality might change as a result of climate change and land use change scenarios
- IV. Determine which areas are highly vulnerable to climate change and to what magnitude
- V. Support the development of national-level policies on adaptation to climate change
- VI. Develop sustained capacity within Belizean institutions to iteratively model / assess climate change impacts on water resources and in other sectors
- VII. Contribute to the regional body of knowledge on the potential impacts of climate change

PROJECT DURATION: 15 Months

RESPONSIBLE ORGANIZATIONS: Environmental Research Institute (ERI) and Water Center for the Humid Tropics of Latin America and the Caribbean (CATHALAC)

GOAL: To utilize modelling to assess the potential impacts of climate change on the supply and demand for water and water quality in Belize, across different climate change and land use change scenarios.

RESEARCH QUESTIONS:

The overall focus of this project is to determine how climate change will likely impact the quality and quantity of Belize's water resources, using Belize's major and minor hydrographic basins (watersheds) as the unit of study. While downscaled climate change scenario data are available for Belize (e.g. PRECIS data available through the efforts of the CCCCC), the potential impacts of climate change on Belize's water resources have not been studied in any great detail. This study proposes to examine those impacts by answering the following specific research questions:

1. What is the current demand for and supply of water in Belize's major and minor watersheds, and how is such supply and demand likely to change across the range of future land use change scenarios and climate change scenarios?
2. Based on such land use change scenarios and climate change scenarios, which areas are highly vulnerable to climate change and to what magnitude?

OUTPUT/ACTIVITIES:

Journal Article

This journal article will highlight the main findings of the study.

Summary for decision-makers

The summary will provide recommendations for climate change adaptation policy and activities in light of the results of the modeling.

Technical Report

This report will present the results of the modeling for a technical audience and will document the range of possibilities in terms of climate change's potential impacts on Belize's water resources.

Events/Conference

A presentation of the results will be given at the 8th Annual Natural Resources Management Symposium in Belize.