University of Belize Environmental Research Institute (UB ERI)
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The University of Belize Environmental Research Institute (UB ERI) is an applied institute of the University of Belize with a mission to continuously build national scientific capacity for the effective management, sustainable use and conservation of Belize’s natural resources. With support from the Swiss Re Foundation, and with collaborators from the University of Southampton, and CATIE, the UB ERI is implementing the project “Climate Crossroads: Futures for People & Nature in Central Belize.”

Nature underpins society’s health and prosperity, and inspires and connects us to the world around us. Changing climate patterns will alter the state of nature and therefore affect our livelihoods, well-being, and quality of life. Understanding what impacts will occur and where can help in charting strategies for adapting to these changes. Through a participatory process, the UB-ERI will support local communities and stakeholders in Central Belize to identify how nature’s benefits may change with future climatic changes. This collaborative effort will empower them to start creating new visions and pathways that safeguard their livelihoods and way of life in the face of evolving environmental conditions.

Background: This project will present a case study to assess the local impacts of changes in BES within the Maya Forest Corridor (MFC) Landscape in central Belize, Central America. The MFC Landscape is a mixture of tropical broadleaf forest, riverine forest, and lowland savanna habitat in Central Belize (~92,000 acres). Communities within this landscape benefit from the many ecosystem services including: clean water, timber and non-timber forest products, food, flood control, & recreation. Interspersed in the MFC landscape are roughly 21 villages and a patchwork of privately owned lands, agricultural farms and cattle ranches.

The project will explore how changes in BES will impact the needs of surrounding communities and business interests by modelling changes in a suite of ecosystem services. Specifically this project will 1) Model changes in a suite of BES across the MFC Landscape under climate change scenarios 2) assess socio-economic impact for communities’ quality of life and local businesses and 3) produce a framework to assess impacts of BES changes on local economies to inform policy development.

The UB-ERI is recruiting for a qualified postdoctoral scholar to join the above project team.
JOB DESCRIPTION

JOB TITLE
Postdoctoral Scholar: Ecosystem Services (ES) Modeller

DIVISION
Academic Affairs (Research)

UNIT
University of Belize Environmental Research Institute (UB-ERI)

DUTY STATION
Belmopan, Belize

REPORTING RELATIONSHIP
Program Manager, Sustainable Landscapes

FUNCTIONAL RELATIONSHIP
UB-ERI Director, project partners

SUPERVISES
Student Assistants and Volunteers

AREAS OF RESPONSIBILITY
This position will directly support the UB-ERI’s Sustainable Landscapes Program activities. The Postdoctoral scholar will be responsible for implementing models to assess the impacts of future climate and/or development scenarios on a suite of ecosystem services within a pre-identified landscape in central Belize.

The postdoctoral scholar will develop a database for model input data, ensuring quality control and modern data management principles. They will develop and implement ES models, interpret results, translate implications to relevant stakeholder audiences, and co-produce scientific publications in collaboration with UB-ERI staff and project partners.

The position is for two years (with the second year contingent on adequate progress in the first).

SPECIFIC RESPONSIBILITIES
1. Data Management
   a. Source, collate, and perform quality control on data from relevant data sources
   b. Develop and maintain databases & associated metadata

2. Research
   a. Support experimental design for socio-ecological field data collection for model input
   b. Develop appropriate modelling approaches to quantify ecosystem services (productivity, resource use, intangibles) under current and anticipated future conditions
   c. Conduct relevant statistical analyses, model implementation and validation
d. Prepare and submit manuscripts for publication

3. Teaching/Training
   a. Willingness to collaborate with training of UB ERI staff, students, and local partners in data management and statistical analyses

4. Administration
   a. Keep records of activities and results of activities for reporting

POSITION REQUIREMENTS

Required qualifications

- A Ph.D. in ecosystem services/ecological modelling, environmental science, geography, social science, ecological economics, or a related field.
- Knowledge of theories and methods in social-ecological systems
- Strong quantitative and qualitative analytical skills including mixed methods analysis
- Methodological knowledge in ecosystem services models (e.g. InVEST, SWAT), GIS/geostatistics in R is expected
- Experience collaborating on, documenting, sharing and managing code with version control (e.g., Github)
- Excellent written and oral communication skills in English
- Publication record appropriate for the stage of career
- Strong analytical skills and an ability to learn quickly and to think outside the box. The work will be intellectually challenging and innovative

Preferred qualifications

- Experience with implementing appropriate methods to collect socio-economic/ecological data
- Experience working with collaborators from diverse backgrounds and with interdisciplinary teams
- Oral communication skills in Spanish is beneficial
- Research experience in Belize or the Latin American & Caribbean region

For more information please contact ivis.chan@ub.edu.bz