

The Department of Geography, University of Bonn, Germany, offers a PhD position within the WASCAL Project (West African Science Service Center on Climate Change and Adapted Land Use www.wascal.org) on

Water Resources in West Africa under Climate and Land Use Change

WASCAL

Climate change is one of the most severe challenges to rural Africa in the 21st century. West Africa is facing an urgent need to develop effective adaptation and mitigation measures. WASCAL (<http://www.wascal.org/>) is a large-scale research-focused program designed to help tackle this challenge and thereby enhance the resilience of human and environmental systems to climate change and increased variability.

Objectives

The main objective is to analyse and to quantify climate and land use change effects on water related ecosystem services, water resources and management decisions at the watershed scale. To achieve this goal, simulation models able to consider feedbacks between soil-vegetation-hydrology driven by climate information will be adapted and applied. Modeling will be based on data derived from common experimental research watersheds.

Your tasks will be:

- Analysis of local feedbacks between soil, vegetation, atmosphere, and hydrosphere under Climate Change as a prerequisite to understand and quantify impact of local scale land use change on climate. This includes the installation of a hydro-meteorological measuring network in the research areas in West Africa.
- Development, calibration, validation, and application of simulation models able to consider climate and land use change from local to watershed scales as a prerequisite for integrated assessment and management.
- Quantification of scenarios with calibrated and validated models.
- Quantification of uncertainties in environmental modeling at the watershed scale.

Requirements

We are looking for a highly-motivated and self-reliant candidate with a master (or comparable) degree in Geography or a related field (e.g. Geo-Ecology, Hydrology) with a profound knowledge on hydrological processes. We expect the willingness to spend longer periods in West Africa (Burkina Faso, Ghana, Benin) and to organize samplings campaigns self-reliantly. Candidates should furthermore possess the ability to work in a team. The position requires expertise in Arc-GIS and modeling. We expect the willingness to closely collaborate with colleagues from other work packages within the research program and with partners and stakeholders in West Africa. A high level of written and spoken English and at least basic skills in French are a prerequisite.

The position

Subject to financial approval from the donor, we offer a three-year scholarship as a doctoral student. During this time, the doctoral student will be based in Bonn (Germany) and the field work will be done in West Africa. The position is available from 1st of March 2012. Evaluation will begin in January 2012 and continues until position is filled.

The University of Bonn is an equal opportunity employer and particularly welcomes applications from women candidates. Please address applications (CV including photograph, diploma/master thesis or other example of your work, two references with names and addresses of the referees, cover letter including a statement of research interests and achievements) via email to: Prof. Dr. Bernd Diekkrüger, Meckenheimer Allee 166, 53115 Bonn, Germany, b.diekkrueger@uni-bonn.de. Please note that only shortlisted candidates will be contacted.