



## JOHN CABOT UNIVERSITY

### Faculty Call for Research Assistant Application

#### Part I – Outline of research project

**Academic field:** Development Economics, Environmental Econmocs

**Research topic:** Energy, ecosystems degradation and poverty

**Brief description of project and research assistant duties:**

Wood fuel is one of the major sources of energy in rural areas in several countries. In Nigeria, more than 40% of households use wood fuel for cooking (Nigeria GHS, 2019), while in Armenia more than 47% of households reported using wood fuel for heating (Armenia ILCS, 2023). Wood fuel use is considered one of the main sources of deforestation and forest degradation around the world (IPCC,2022). Energy transition to cleaner sources (such as natural gas or electricity) is ongoing, but mostly avaiable in urban areas while, at the same time, gas and energy prices have significantly risen given the current political context in Europe, which difficults the transition. Moreover, wood fuel use implies the allocation of time for collecting it, which imposes an opportunity cost for household members since they could devote this time to other income-generating activities. This reseach focuses on the identification of policies directed to alleviate energy constraints to rural households and reduce the use of wood fuel, or promote more sustainable wood fuel sources. To achive this objective, it is necessary to understand households' decision on the use of wood fuel, given both household and surrounding ecosystem conditions. It also aims at identifying the burden that wood fuel use imposes on natural ecosystems, as well as the value of forests services on wood fuel provision as a reservation good when energy prices rise, as in the latter years.

The research will be initially developed in Nigeria and Armenia, but it could be extended to other countries. The research assistant will mostly work with databases from household



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surveys, as well as macroeconomic information that will be used to calibrate the policy simulations.

**Sponsoring professor:** Rodrigo Salcedo Du Bois

**Professor's e-mail address:** rodrigo.dubois@johncabot.edu

**Semester of assistantship:** Fall 2025

### Part II – Mentoring plan

#### **Full description of research assistant's regular duties:**

- Manage household surveys databases (clean, manipulate, build new variables).
- Manage spatially explicit information (land use/land cover, precipitation, temperature, roads, population, etc.)
- Review relevant literature (Development Economics, Environmental Economics).
- Estimation of indicators using statistics and econometrics (specifically, microeconometrics).
- Perform simulations of policy scenarios.

#### **Description of the work to be completed by the end of the research assistant's 45 hours of work:**

Two reports related the use of wood fuel and ecosystems:

- One report with main descriptive statistics related to the use of wood fuel (one for each country).
- One report with relevant estimations that explain household's behavior on the use of wood fuel and simulation of policy scenarios (one for each country)

#### **Statement addressing how the faculty research will help the student research assistant develop their research skills:**

This research focuses on energy, ecosystems and poverty in developing countries. The understanding of these topics are key, not only for the design of policies that mitigate the effects of climate change, but also to promote the sustainable use of natural resources and poverty



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alleviation. Through this assistanship, students will develop not only microdatabases management skills, but also perform econometric estimations applied to policy design. These skills are key for working in academia, think-tanks and international organizations such as the World Bank and FAO.