

University of Idaho – Tropical Agricultural Research and Higher Education Center (CATIE)

Turrialba, Costa Rica/ Volcánica Central-Talamanca Biological Corridor Team

PhD Assistantship Announcements

Interdisciplinary PhD Research Assistantships in Sustainable Production, Sustainable Rural Livelihoods, and Resilience of the Volcánica Central-Talamanca Biological Corridor, a crucially important Mesoamerican landscape.

Up to five Ph.D. research assistantships will be available to join a collaborative team working on aspects of sustainable production, conservation, and sustainable rural livelihoods within the Volcánica Central-Talamanca Biological Corridor, in Turrialba, Costa Rica. The linked dissertation projects will work in a region that faces a variety of natural resource management problems and where regional social and economic needs create pressure to increase ecosystem services. With funding from the National Science Foundation's Integrative Graduate Education and Research Traineeship program (IGERT), fellows will pursue disciplinary research important for the overall theme, and work together to identify and address interdisciplinary issues critical for effective policy development, management planning, and implementation. The team will interact with members of five other IGERT-sponsored student/faculty teams pursuing similar objectives in other ecosystems in which sustainability and conservation in the face of changing conditions and pressures is desired.

PhD Assistantship in Entomology and Landscape Ecology. Seeking a highly motivated and qualified student to pursue studies on communities of introduced pests and native insects in coffee agroforestry systems (CAFS). Research will focus on determining 1) how coffee management practices influence the colonization, persistence, and movement of key invasive pests in the landscape, 2) how the spatial arrangement of CAFS and forest fragments within the landscape impact the movement of agricultural pests and beneficial organisms, and 3) how trends in changing landuse patterns affect movement of pests and beneficial organisms. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as rural sociology, natural resource economics, soil science, and hydrology and watershed management. Contact Nilsa Bosque-Pérez (nbosque@uidaho.edu), Sanford Eigenbrode ([sanforde@uidaho.edu](mailto:sanford@uidaho.edu)), and Fabrice De Clerk (fdeclerck@catie.ac.cr).

PhD Assistantship in Hydrology and Watershed Management. Seeking a highly motivated and qualified student to pursue the study of hydrological sciences in mixed landuse watersheds. The broader research focus will be on impacts of landuse and climate change on ecosystem services and environmental quality. As a component of the work the student will assess water infiltration and storage in tropical soils. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as entomology, landscape ecology, soil science, rural sociology, and natural resource economics. Contact Jan Boll (jboll@uidaho.edu) and Jeff Jones (jjones@catie.ac.cr).

PhD Assistantship in Sustainable Rural Livelihoods. Seeking a highly motivated and qualified student to pursue the study of 1) rural livelihood dynamics of smallholders, and 2) to determine the extent to which livelihood dynamics may influence landuse change decisions and are shaped by market forces and the overall political-legal and institutional framework. A mix of quantitative and qualitative methods will be used to determine livelihood security and potential trade-offs between conservation and development goals, and to identify viable options for minimizing the trade-offs. As a component of the work the student will identify reactive or proactive adjustments to the livelihood strategies in response to perceived or anticipated effects of climate change. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as entomology, landscape ecology, hydrology and watershed management, soil science, and natural resource economics. Contact J.D. Wulfhorst (jd@uidaho.edu) and Dietmar Stoian (stoian@catie.ac.cr).

PhD Assistantship in Natural Resource Economics. Seeking a highly motivated student with strong quantitative skills to pursue the study of 1) conflicts and rights-development for ecosystem services and production goods originating from forestry and other competing landuses in the biological corridor, 2) the role of civil society and communities in addressing forest tenure and other use rights in policy processes, and 3) agreement costs for achieving good governance and landscape relevance of riparian protection areas in private lands within the corridor. Other potential areas of research include 4) valuation of ecosystem's services and natural resources, and 5) incentive compatibility of natural resource management alternatives. The research will be conducted using a variety of empirical approaches including but not limited to econometric analysis and optimization frameworks. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as entomology, landscape ecology, rural sociology, soil science, and hydrology and watershed management. Contact Guillermo Navarro (gnavarro@catie.ac.cr), Levan Elbakidze (lElbakidze@uidaho.edu), and Francisco Alpizar (falpizar@catie.ac.cr).

PhD Assistantship in Soil Science. Seeking a highly motivated and qualified student to pursue the study of soil science. Research will focus on soil properties and processes within the context of landuse and management practices in the biological corridor. As a component of the work the student will also help develop remote soil mapping techniques for the tropics. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as entomology, landscape ecology, rural sociology, natural resource economics, and hydrology and watershed management. Contact Paul McDaniel (paulm@uidaho.edu) and Eduardo Somarriba (esomarri@catie.ac.cr).

This unique graduate education program will provide students:

- Team-based interdisciplinary education
- International perspective
- Broad geographic and ecological exposure
- Participation in integrated interdisciplinary teams
- Cross-cultural experience

Requirements: Applicants must be American citizens or permanent residents of the USA. Successful applicants must have obtained a research-based M.S. degree in a discipline of relevance to the project, and demonstrate interest and/or experience in team-based projects. Students will join the program to begin course work at the end of July 2010.

Review of applications will begin Dec 1st 2009 and end Jan 4th 2010. Earlier applications are highly encouraged. Interviews of top applicants will be conducted at the University of Idaho campus in March 2010.

For application information visit the web site:
<http://www.students.uidaho.edu/gradadmissions/IGERT>

For information on our previous IGERT project visit the web page:
<http://www.cals.uidaho.edu/igert/>

For information on the University of Idaho College of Graduate Studies see:
<http://www.uidaho.edu/cogs/>

For information on the Joint Doctoral Program between UI and CATIE go to:
<http://www.uiweb.uidaho.edu/catie/>

For information about CATIE visit: <http://www.catie.ac.cr/>