The Land, Environment and Development lab (www.lendevlab.com) at the Department of Geography of McGill University (Montreal, Canada) is looking for a motivated individual to join us as a Master student in September 2026, for a project co-supervised by Prof. Yann le Polain de Waroux (Geography) and Prof. Fiona Soper (Biology). The successful applicant will examine the climate resilience of Emberá Indigenous agriculture in Panama's Darién region, using a fieldwork-based, mixed-methods approach.

Background: Swidden-fallow agriculture has long been practiced by Indigenous communities throughout Central and South America. In this system, cultivation rotates through areas of secondary tropical forests over intervals of up to 30 years, facilitated by annual burning coinciding with predictable climate patterns. Once thought to be problematic because of the use of fire, it is now increasingly recognized that these practices create a mixed-age forest mosaic that supports high biodiversity, facilitates soil carbon storage, and allows for natural renewal of soil fertility– all without encroaching into primary forests. However, rotational burning requires a period without rainfall during the dry season. This dry period is no longer occurring reliably every year, which is disrupting the planting calendar and threatening the community's food security. Climate models predict increasing variability, which will likely worsen those challenges. Faced with this uncertainty, Indigenous communities are forced to consider replacing swidden-fallow systems with permanent conversion of forests to cash-generating land-uses, such cattle ranching.

Project: In this context, the proposed project for this position centers on understanding challenges to the swidden-fallow agricultural system in the Darién region of Panama. Specifically, the project will aim to 1) develop a qualitative understanding of the dynamics and key climate vulnerability points of the swidden system, as perceived by the Emberá community, and 2) develop an understanding of the conditions that lead to the permanent conversion of forestland to other uses, such as cattle ranching. The project will take place in and with the Emberá community of Manené in the Darién region of Panamá, a community with ongoing research collaborations with McGill. The project results will inform the (co-)design of further research find solutions to current challenges to Emberá agriculture.

Requirements:

- GPA > 3.5 or notable relevant work experience
- Willingness to conduct extended fieldwork (2-3 months) in very remote areas
- Upper-intermediate level (B2) in Spanish (following the CEFR framework)
- We will prioritize candidates with experience with surveys or other ethnographic methods and demonstrable travel and/or fieldwork experience in Latin America

Conditions: The lab will provide a stipend to cover living expenses in Montreal and Québec tuition. The student will be expected to apply for additional funding.

Contact: If you are interested, please get in touch as early as possible and send your grade transcripts, CV, and a short cover letter to yann.lepolaindewaroux@mcgill.ca and fiona.soper@mcgill.ca. Full applications to the Department of Geography are due on January 15, 2026, for guaranteed consideration. More can be found online on McGill's Graduate Programs in Geography & graduate studies and applications at McGill.