

## OFFER | PhD PROJECT

### EFFECTS OF EARTHQUAKES ON CULTURAL LANDSCAPES IN CENTRAL NEPAL: INCREASING PREPAREDNESS WITHIN LOCAL COMMUNITIES

**Context and objectives:** Natural disasters profoundly affect ecosystems, damage property, affect human health, wellbeing and livelihood, and often cause human fatalities. Low income countries are particularly vulnerable to natural disasters, which reduce access to land and natural resources essential to livelihoods and wellbeing. Himalayan ecosystems are particularly susceptible to frequent earthquakes and secondary stressors (e.g., landslides, floods). For example, the 2015 Gorkha earthquake in Nepal cleared more than 23 000 ha of forests, destroyed about a million buildings, killed 9 000 people and injured 23 000 more.

The general objective of this project is to understand how cultural landscapes in Nepal are affected by - and vulnerable to - earthquakes, in order to increase preparedness within local communities. Specifically, the project aims to:

1. Build on the ecosystem services framework to compare the value (for local people) of landscapes that were affected or not by the 2015 earthquake in Central Nepal to identify priority areas for restoration;
2. Identify which cultural keystone species are most vulnerable to earthquakes in order to develop risk reduction forest management strategies;
3. Work with local communities to elaborate restoration and management scenarios to increase earthquake preparedness.

The project will involve various methods such as interviews, workshops and participatory mapping.

The results will be useful to local communities, governmental agencies, and community forest user groups (CFUGs) in Nepal wishing to increase the resilience of social-ecological systems in response to natural disasters. The methodology will be replicable in other areas where local communities are vulnerable to natural disasters.

**Working conditions:** The project should start in fall 2024 or winter 2025. A scholarship of \$20 000 per year for three years will be provided.

**Supervision:** The project will be under the cosupervision of Professors Hugo Asselin (UQAT; Indigenous studies) and Yadav Uprety (Tribhuvan University; Botany), in close collaboration with local communities in Nepal. The thesis will be under a cotutelle arrangement, including stays in Canada and in Nepal.

**Experience sought:** We are looking for a candidate who holds a master's degree (or equivalent) in either environmental sciences or social sciences. The candidate must speak and understand both English and Nepali. French proficiency, while not mandatory, will be considered an asset.

The candidates must submit their application (motivation letter, CV and names of two references) to Dr. Asselin by email ([hugo.asselin@uqat.ca](mailto:hugo.asselin@uqat.ca)). The evaluation of CVs will continue until a candidate is selected.