

PHD POSITION IN LANDSCAPE ECOLOGY

Research project: Design and modelling of an Indigenous Protected and Conserved Area resilient to global changes

Program: PhD in Environmental Science

Location: Université du Québec à Montréal (UQAM)

Start date: Summer-Fall 2023.

Stipend: 25,000\$/year for 3 years

Supervisors: Dr. Elise Filotas (Université TÉLUQ) & Dr. Daniel Kneeshaw (UQAM)

We are seeking an excellent candidate to undertake a Ph.D. research project on designing and modelling an Indigenous Protected and Conserved Area resilient to global changes on the territory of the Atikamekw community of Manawan (Quebec, Canada). This project is part of a larger pan-Canadian project on the development of a novel resilient forestry. As such, it includes multiple opportunities to interact and exchange with other students and researchers across Canada.

Project summary:

The creation of Indigenous Protected and Conserved Areas (IPCA) is a key recommendation of the recent report by the Indigenous Circle of Experts. The Atikamekw community of Manawan wants to create an IPCA on its territory to ensure its sustainability. In support to this initiative, the Wildlife & Ecosystem team of the Centre for Territorial Resources (CTR) of Manawan is in charge of assessing its feasibility. The design of the IPCA must take into account multiple issues crucial to the community including Atikamekw culture and values, the ancestral management model resulting from family territories, the preservation of wildlife resources for hunting, fishing and trapping, and the protection and development of forest resources.

The goal of this doctoral project is to contribute to this initiative by developing, in collaboration with the CTR, a decision-support tool to assess the feasibility and opportunities of different IPCA scenarios. This project will be carried in close collaboration with another PhD student whose project focus on integrating indigenous knowledge and values in the design of this protected area.

As part of this project, the candidate will use a landscape-scale simulation model of forest dynamics (LANDIS-II) to quantify the benefits and trade-offs emerging from different IPCA scenarios. In particular, the student will be in charge of modelling and parameterizing IPCA scenarios and to assess their success in response to different global change scenarios (climate change, biotic disturbances, etc.) and TRIAD forest management strategies (intensity and spatial distribution of harvesting areas, plantations, etc.). The candidate will interact with other researchers and stakeholders involved on this landscape.

Expertise/ Profile required

- M.Sc. in biological sciences or related discipline
- Awareness and appreciation of indigenous views of the environment
- Strong quantitative or mathematical background
- Strong programming skills (*R*, *python*, *C* or *matlab*).
- GIS skills an asset.
- Independent, rigorous and excellent organizational skills
- Fluency in written and spoken English and/or French

To apply, please send a cover letter describing your research background, interests, and qualifications; a copy of your most recent transcript; plus, a complete curriculum vitae and contact information for at least two references to efilotas@teluq.ca and kneeshaw.daniel@uqam.ca.

Applications will be considered until the position is filled.

Only short-listed candidates will be notified.
