PHD POSITION IN LANDSCAPE ECOLOGY

Research project: Carbon dynamics in forest landscapes

Program: Ph.D. in Biology

Location: Université du Québec à Montréal (UQAM)

Start date: Fall 2022.

Stipend: 22,000$/year for 3 years.

Supervisors: Dr. Elise Filotas (Université du Québec) & Dr. Dominic Cyr (Environment and Climate Change Canada)

We are seeking an excellent candidate to undertake a Ph.D. research project on carbon dynamics in landscape forests in the context of climate change.

Project summary: Forests are important levers in the fight against climate change because of their ability to store carbon. However, climate change is compromising the capacity of forests to assume this role. Indeed, climate change modifies carbon dynamics within forest ecosystems and modifies natural disturbance dynamics, such as forest fires and insect outbreaks, which contribute to reducing carbon stocks. In Quebec (Canada), a major challenge for forest management in the context of climate change is therefore the design of strategies that take into account the dynamics of carbon and its variability across the territory. This PhD research project will determine novel management strategies and adaptation measures that insure the capacity of Quebec's forest to maintain its carbon stocks.

As part of this project, the candidate will use a landscape-scale simulation model of forest dynamics. S/he will develop management scenarios subjected to different climate conditions in order to evaluate their efficiency in maintaining carbon stocks. The student will present his/her results at international conferences and will interact with researchers from governmental agencies, including the Canadian Forest Service and Environment and Climate Change Canada. The latter is in charge of preparing Canada's official greenhouse gas inventory submitted annually to the United Nations Framework Convention on Climate Change.

Expertise/ Profile required

- M.Sc. in biological sciences or related discipline
- 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 **elise.filotas@teluq.ca** and **dominic.cyr@canada.ca**.

Applications will be considered until the position is filled.

Only short-listed candidates will be notified.