



PHD POSITION ON CARBON STOCKS IN BOREAL FORESTS

Title: Forest management impact on vegetal carbon stocks along a longitudinal gradient of boreal forest stands located near the northern exploitation limit

Context and project overview: Regarding climate change mitigation, Canada can benefit from a major asset in its vast swathes of boreal forests, natural carbon stockpiles whose exploitation can be guided toward a maximized carbon sequestration – both in situ and in harvested wood products. The development of such a strategy, however, requires far more knowledge regarding the effects of forest management on the carbon budget of forest stands, and taking into account that climate change itself may be detrimental to some areas but could also allow to put others in production. In order to address this lack of knowledge, the Chair in Forest Carbon Management is launching a coordinated data collection and field sampling campaign of forest carbon stocks and fluxes, in forest stands across Québec that are degraded or at risk of becoming so, located near the northern exploitation limit. These stands have known different disturbance histories, such as wildfires, clearcutting, partial cutting and planting with or without mechanical soil preparation. This specific project will focus on carbon stocked in vegetation and thus on the response of the aboveground component of forest stands, notably growth, regeneration and mortality of trees and understory following these different disturbances and along a longitudinal gradient. The ultimate goal is to better predict and thus optimize the results of different management strategies in these fragile areas.

Location: The selected candidate will become a member of the Forest Research Institute (IRF), working primarily in the town of Sept-Îles, home of a growing team of researchers and graduate students. Aside from the Côte-Nord, fieldwork will necessitate travels in the Abitibi-Témiscamingue and James Bay regions of Québec. Sept-Îles itself is a small town nestled in a bay on the northern shores of the Gulf of Saint-Lawrence. Its region is a paradise for seafood- and nature-lovers and practitioners of all kinds of outdoor activities: hiking, camping, sea or river kayaking, skiing, snowshoeing, fishing, sailing, whale watching, etc.

Financial support: Grant of 21 000\$/year for three years.

Starting date: January or May 2020

In order to apply: Send a resume, cover letter, grades and the name of two references to Xavier Cavard . A Master diploma or equivalent in ecology, biology or linked discipline is required, as well as a physical condition fit enough for prolonged fieldwork in remote forested areas.

Potential applicants must send the requested documents before October 30th 2019.