Effects of Paludification on Tree Productivity over the Clay Belt Region

Mahedi Hasan Limon, Valentina Buttò and Osvaldo Valeria

Université du Québec en Abitibi-Témiscamingue, Institute de recherche sur les forêts, Canada

limm05@uqat.ca

A. Introduction

- Paludification is a natural process that refers to the accumulation of soil organic layers that can restrict the growth of trees, and a decline in forest productivity.
- It is especially problematic in the Clay Belt, where it has facilitated the transformation of productive forests into forested peatlands.
- It is essential to better understand this relationship to determine the direct and indirect effects of some variables at regional and global scales that drives forest productivity.

B. Objective

General Objective

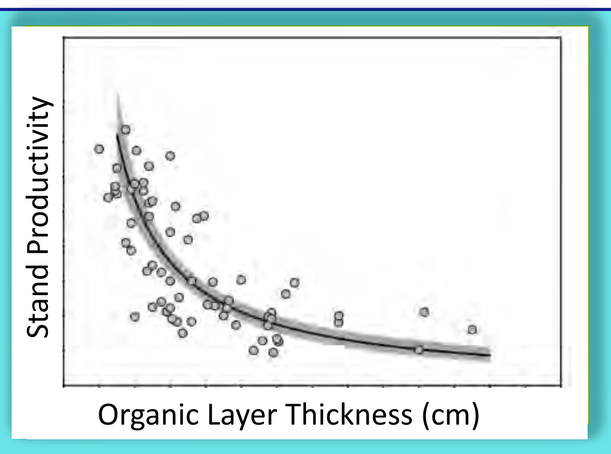
Identifying the main drivers that influences the productivity of the Canadian clay belt forest.

Specific Objectives

Identifying the different factors (biotic and abiotic) influence the forest productivity within the Clay Belt.

To understand the relationships between forest productivity and organic layer thickness (OLT).

C. Hypothesis

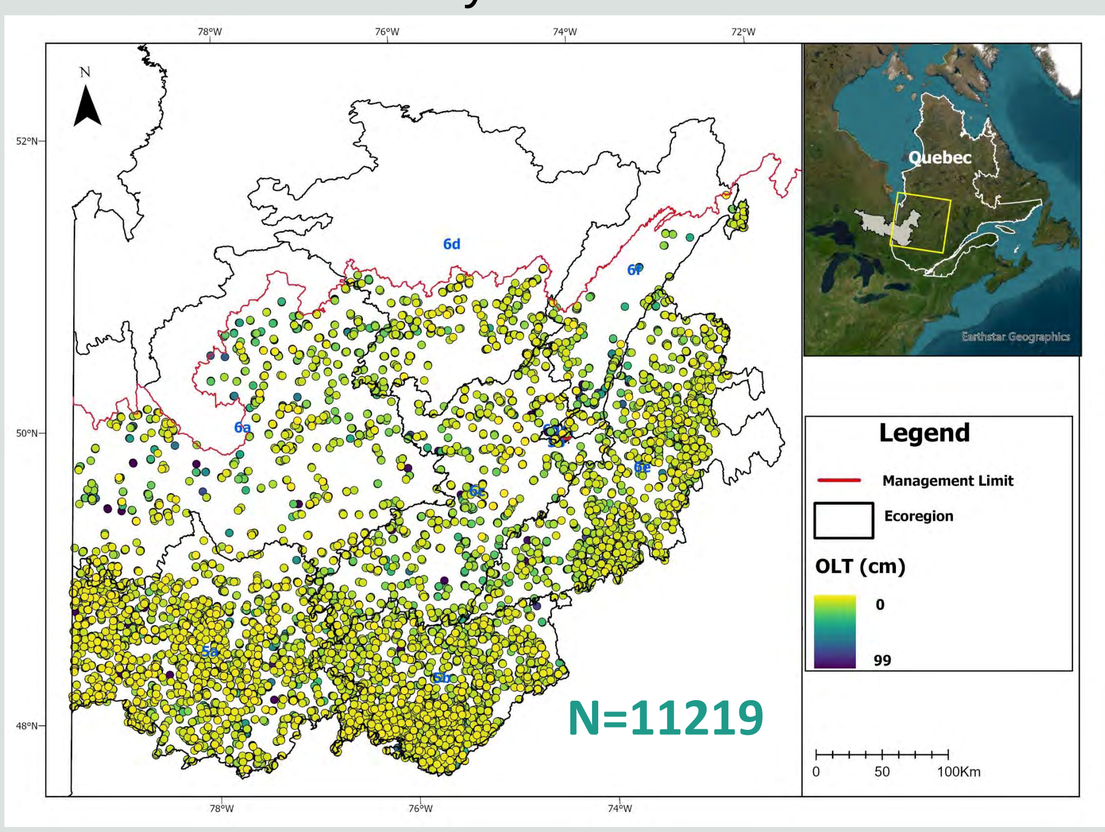


We hypothesize that dominant spp. of each stand will have variable productivity level based on their different ecological needs.

We also expect topographical factors will also have direct or indirect influence on productivity.

D. Methodology

Study Area



Data Acquisition

Previous field-based forest inventory programs

Forêt Ouverte

Inventory Plots

OLT (cm)

Vegetation Data
Volume, Basal Area, Density

Productivity

Topographic Variables

Slope

Aspect

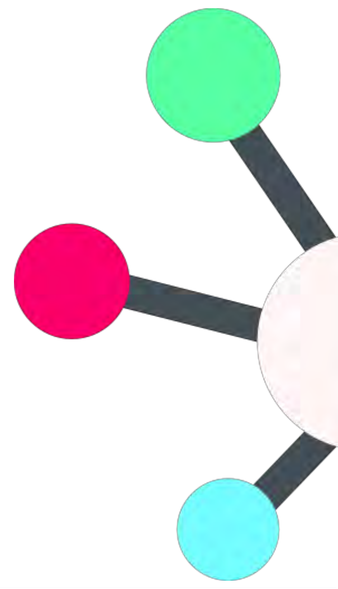
Elevation

Statistical Analyses

- Random Forest
- Stepwise Multiple Linear Regression

E. Contributions

- Help better understanding of the factors that may affect productivity.
- Facilitate forest management by identifying areas that are prone to paludification.



UQAT Université du Québec en Abitibi-Témiscamingue

cef Centre d'étude de la forêt

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