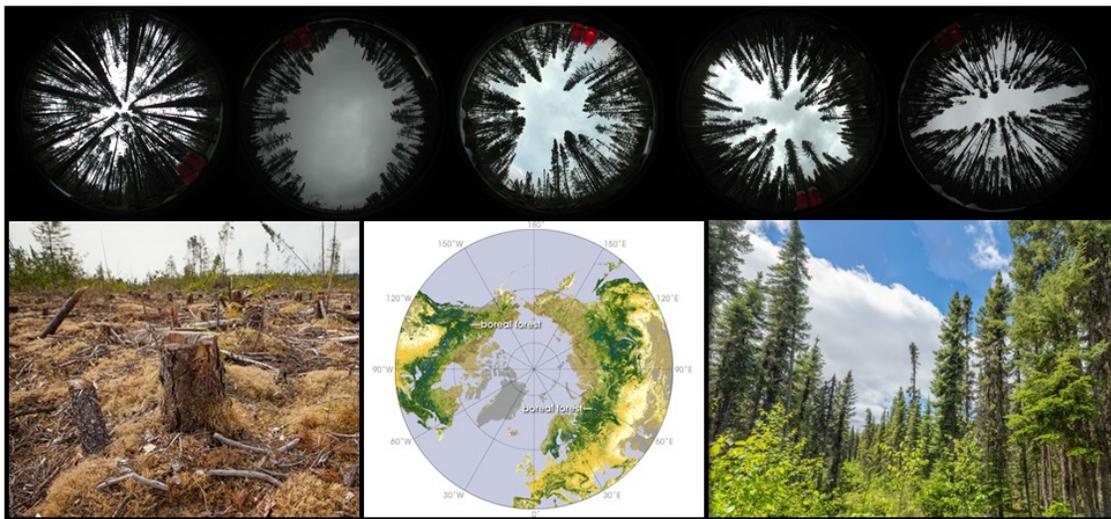


## Resilience facing Climate Change: Silvicultural diversification in Europe and North-America



### Background

A major challenge for forest management is the consideration of climate change in the planning strategies. Climate change effects on forest ecosystems depend on geographical (e.g. elevation and regional vegetation), climatic and stand characteristics (e.g. tree species composition and stand structure) factors. Silvicultural practices can be aimed at diversifying the forest structure and tree species composition to increase the adaptability and resilience of ecosystems facing climate change. It is therefore essential to know which are the current silvicultural practices in use in different countries to be able to identify the challenges of reaching adaptive and resilient forest ecosystems as well as developing new policies in forest management in the global change context. For this study we will focus on temperate and boreal forest ecosystems in Europe and North America.

*Keywords:* adaptability; climate change; forest policies; silviculture; sustainable forest management;

### Data

Data will be collected from existing sources such as the European Forestry Commission and the National Forest Database from Canada.

## Main goals

- To study the diversification of silvicultural treatments in terms of forest surface at the regional scale.
- To evaluate the tree species composition diversification (monospecific, mixed...).
- To evaluate the forest structure diversification (even-aged, uneven-aged or plantations stands).
- To identify the challenges in forestry in a climate change context.

## Work plan and methods

1. Thorough literature study
2. Contacting International Forest Institutions to obtain data.
3. Data base computation
4. Data exploitation: maps, graphs.
5. Statistical analyses to study the differences of silvicultural practises between countries
6. Ecological and forest management diagnosis in the global change context
7. Thesis writing
8. Scientific paper

## Requirements

A basic understanding of silviculture and forest management strategies is essential, as well as the capacity to write scientific texts in English. International experience, communication skills and research interest will be meriting.

## Extend

Master 60 credits (12 months)

## Contact

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