



Live session at the IUFRO World Day (Talk)

# Plantation forestry to support the sustainable management of boreal forests - Examples from Eastern Canada

Task Force on Resilient Planted Forests Serving Society & Bioeconomy

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28 September 2021, 22:15 - 22:35 UTC

📍 Quebec City, Quebec, Canada (on the IUFRO World Day Map)

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## ABSTRACT

Forests play a critical role in addressing some of the biggest world challenges such as mitigating climate change, conserving biodiversity, and providing a variety of ecosystem services. Forests also have social and spiritual benefits and are key to cultural activities. Anthropogenic disturbances such as harvesting, and natural disturbances such as wildfire, are common in the boreal biome. They can have cascading effects on the capacity of forests to sustain provision of ecosystem services. Because it can mitigate these effects, successful regeneration is one of the keystones of sustainable forest management; it ensures that ecosystems submitted to stand-replacing disturbances go back to a forested state. Plantation forestry, including tree breeding and novel tools such as genomic selection, can support sustainable management of boreal forests in the face of climate change.

Plantations can provide high yields and offer the opportunity to select for species, genotypes, stand density, and spatial arrangements. They play a significant role in augmenting, maintaining or restoring forest productivity in boreal landscapes, adapting

forests to future conditions with trait selection and assisted gene flow, restoring and maintaining natural species, closed-forest landscapes and ecosystem functions, and sequestering carbon and supporting the bioeconomy.

#### KEYWORDS

- Sustainable Forest Management
  - Silviculture
  - Climate Change
  - Plantation Forestry

#### SPEAKERS



Dr. Nelson Thiffault

graduated in forestry from Université Laval in 1998 and earned a Ph.D. from the same university in 2003. He has worked for 15 years as a research scientist for the Quebec Ministry of Forests, focussing on the establishment and silviculture of conifer regeneration. Dr. Thiffault later joined the Canadian Wood Fibre Centre of Natural Resources Canada in September 2017, as a research scientist in silviculture and vegetation management. He is Adjunct Professor in four universities and Associate Editor for the Canadian Journal of Forest Research.

#### PROGRAM

Forests play a critical role in addressing some of the biggest world challenges such as mitigating climate change, conserving biodiversity, and providing a variety of ecosystem services. Forests also have social and spiritual benefits and are key to cultural activities. Plantation forestry, including tree breeding and novel tools such as genomic selection, can support sustainable management of boreal forests in the face of climate change.

This short session will provide examples of how plantations can play a significant role in augmenting, maintaining or restoring forest productivity in boreal landscapes, adapting forests to future conditions, and restoring and maintaining natural species.

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