



INFORMATION ON THE COMPLETED PROJECT CONTRIBUTION AGREEMENT

Enhanced Forest Inventories for Silviculture

Canada's forests are both large and dynamic, requiring forest managers to rely on land-based, aerial and satellite technological systems to take stock of their stands. These systems are collectively known as enhanced forest inventory (EFI). EFI displays information graphically and numerically to help forest managers understand the quantity, quality and location of stands in a forest. EFI also displays the various characteristics of stands, such as overall health, trees-per-acre and tree diameter. These different characteristics are known as "attributes."

PROJECT TITLE

Integrating Enhanced Forest Inventories (EFI) and Annual Monitoring to Inform Silvicultural Planning

ORGANIZATION

Université Laval

CONTACT

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START DATE

April 1, 2020

END DATE

March 31, 2023

COLLABORATORS

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Professor Alexis Achim and his team are developing a framework to upgrade current enhanced forest inventory systems. This framework will rely on data from satellite and remote sensing technology such as LiDAR, which uses light pulses to create three-dimensional images. Professor Achim and his team will examine how inventory estimates can be updated over time. This will be done through regular observation of forest cover change and the integration of modelling projecting forest growth and yield.

The completed framework will:

- predict information about what forest attributes can be readily monitored over time
- indicate the accuracy of its prediction
- suggest how these forest attributes can be used to inform decision making
- provide the required datasets and data infrastructure to ensure forest managers can monitor the predicted attributes in a cost-effective manner

Accurate, user-friendly forest inventory systems are a benchmark of sustainable forest management in Canada. Understanding how forest resources change over time, with respect to forest management and climate change, is critical for reassuring the Canadian public that forests are managed responsibly. Professor Achim and his team's project aims to empower forest managers to understand their changing forest stands.