



INFORMATION ON THE COMPLETED PROJECT CONTRIBUTION AGREEMENT

Predictive Soil Mapping in British Columbia

A forest is considered to be a carbon sink if it absorbs more carbon from the atmosphere than it releases. Forest plant life absorbs carbon from the atmosphere and deposits it in forest biomass (trunks, branches, roots and leaves), in dead organic matter (litter and dead wood), and in soils. This process of carbon absorption and deposition is known as carbon sequestration.

PROJECT TITLE

Developing predictive soil mapping approaches to support enhanced forest resource inventories and evaluate soil carbon sequestration in British Columbia

ORGANIZATION

Dalhousie University

CONTACT

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START DATE

April 1, 2020

END DATE

March 31, 2023

Mitigating the effects of climate change and managing Canada's soil sustainability will require a clear understanding of how to identify opportunities to draw carbon into soil and out of the atmosphere. Professor Brandon Heung and his team's project will begin to address this need. They are creating relatively high-resolution predictive soil maps. These maps display information on the soil carbon sequestration potential of British Columbia's forests.

Professor Heung and his team will begin by creating a data repository with information on the soil of British Columbia's forests. This will be done using existing datasets from provincial, federal and academic sources. The team will employ machine-learning—a technique using computer systems that can adapt without following specific instructions—to fill gaps in the existing data.

They will then use their data repository to create a range of high resolution (25 – 100m) predictive digital soil maps. These maps will be more accurate and precise than what is currently available. Ultimately, they can be used to develop methods of assessing the soil carbon sequestration potential of different areas of British Columbia's forests. Their maps will provide forest managers with crucial information to ensure they manage British Columbia's forests sustainably.

COLLABORATORS

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