



UNDERSTANDING AND MAPPING PRIMARY FORESTS IN CANADA

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BACKGROUND

Forests in Canada are the subject of a great deal of attention—in addition to being critically important to the livelihoods, economies and culture of Indigenous Peoples, they provide habitat to a wide range of species such as woodland caribou and are globally important for their ability to store large amounts of carbon. In addition, the temperate and boreal forests in Canada are important when it comes to supplying high-quality forest products and generating associated economic and social benefits, including at the local community level.

Forests in Canada contain some of the highest proportions of intact and primary forest remaining on Earth, although these are shrinking due to resource extraction (e.g. logging, oil and gas, mining), fragmentation (e.g. by road development), and effects of global climate change (e.g. increase in fire frequency and insect outbreaks). Significant and valuable work has been done to map intact forest landscapes, caribou habitat, high carbon stocks and other high conservation value forests in Canada.

The term “primary forest” has been increasingly used in Canada to define forests that merit special management approaches due to a combination of intactness, maturity and the ecological and social values that they maintain.¹ However, there are different views about what specific definitions and parameters should be used for primary forest mapping in temperate and boreal regions, both in Canada and globally. While some of the existing mapping efforts may include primary forests, there are no comprehensive maps that clearly delineate temperate and boreal primary forests.

ABOUT THIS PROJECT

Primary forest presence and extent (i.e. geographic coverage) are some of the characteristics to consider when identifying high conservation values for long-term forest ecosystem integrity and resilience.² To track progress against Canada’s biodiversity conservation targets and international commitments, it is important to have clarity around all high conservation values, including the definition and extent of primary forests in Canada. Clarity is also critical for public agencies at different levels, civil society organizations, consumer companies sourcing forest products, and other private sector actors, all of which are interested in managing forests. For example, in the absence of agreed definitions and maps for primary forest areas, companies that have committed to avoiding sourcing fibre from primary forests in Canada are left to use proxies or assumptions in ways that are inconsistent and might invite scrutiny from other interested parties.

Recognizing the importance of the concept of primary forests and the value in seeking clarity, WWF-Canada is taking a three-pronged approach as a starting point to address the need for rigorous and science-based mapping of primary boreal and temperate forests in Canada.

¹ <https://www.iucn.org/our-work/topic/forests/primary-forests-including-intact-forest-landscapes>

² <https://www.hcvnetwork.org/hcv-approach>

Specifically, WWF-Canada is supporting the following activities:

1. A review of the current state of knowledge for defining, identifying and classifying primary forests in Canada, including:
 - Definitions of primary forest and related terms from the scientific literature
 - Key concepts and criteria for defining primary forest
 - Considerations for mapping including datasets, operationalization, feasibility and limitations
2. The development and implementation by the University of Maryland's Global Land Analysis and Discovery (GLAD) laboratory of a method to map long-lived structurally mature tree cover that has not been completely cleared and regrown in recent history as observed in Earth Observation time series data. The GLAD team will produce:
 - A prototype map
 - A method that could be transferable to other high-latitude boreal and temperate forests globally

This map will be placed on the World Resources Institute (WRI) Global Forest Watch online platform. Following its release, the prototype map will be refined and verified, including through ground-truthing and case study applications, pending availability of additional funding.

3. Dialogue with a variety of stakeholders, policy makers and technical experts to collect feedback on the map and methods, their potential use and the scope for refinement. This includes engagement with Indigenous organizations, research organizations, corporations, government agencies and environmental non-government organizations. Engagement summary reports will be produced.

ANTICIPATED OUTCOMES AND NEXT STEPS

WWF-Canada and the project team will create resources that enhance our understanding of primary forests in Canada. Informing decision-making processes for different end users and other interested parties is an important motivation guiding this project.

Our goal is to have the results of this effort become a valuable addition to existing decision-support tools and discussions regarding forest conservation and management, forest fibre sourcing and land use planning decisions, including Indigenous Protected and Conserved Areas (IPCAs). We will make explicit the limitations and constraints associated with definitions, methods and map products.

The project is anticipated to produce reports and publications in accordance with the results of the above activities, informed by inputs from the engagement activities.

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PROJECT PHASES

Fall 2023 – Winter 2025

Development of GLAD prototype map

Spring 2024 – Summer 2024

Review of current state of knowledge

Fall 2024 – Winter 2025

Outreach and engagement

CONTACT

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