



MAPPING CANADA'S CARBON LANDSCAPE

We now know the location of billions of tonnes of ecosystem carbon in Canada. Here are WWF-Canada's recommendations for action.

A new study by WWF-Canada scientists, and led by researchers at McMaster University's Remote Sensing Lab, reveals the location of massive amounts of ecosystem carbon in Canada — across all terrestrial systems and at depths of up to two metres. The findings should form a foundation for conservation actions that will result in greenhouse gas reductions by preventing the release of carbon stored in nature, and creating greater potential to absorb additional atmospheric carbon in the future.

To achieve a pathway to net-zero and a 1.5°C future, it is critical to protect and steward ecosystem carbon stores. In Canada — and around the world — this must be done in a just and equitable way that recognizes and advances the rights of Indigenous Peoples, including supporting Indigenous governance, cultures and knowledge systems. There is an opportunity and responsibility to act urgently to advance a new form of conservation that delivers meaningful and lasting impacts that benefit climate, nature and people.

All levels of government need to take urgent and meaningful action. WWF-Canada is actively working to support the following initiatives and seeks opportunity for collaboration with government and other actors to help make Canada a global leader in protecting and managing ecosystem carbon.

RECOMMENDATION 1

Avoid the conversion and degradation of large stores of carbon in nature by:

- a. Creating protected and conserved areas designed to maximize carbon storage.
- b. Legislating that environmental impact assessments by all levels of government take into account the presence of ecosystem carbon stocks and quantify and consider carbon emissions associated with the conversion and degradation of carbon stored in nature.
- c. Managing areas of high-carbon stocks to allow continued storage of carbon and an enhanced ability to absorb it in the future.

RECOMMENDATION 2

Establish and fund a Carbon Guardians program to support interested Indigenous communities and governments in the monitoring and measurement of ecosystem carbon.

RECOMMENDATION 3

Develop a set of financial mechanisms — defined and supported collaboratively by Indigenous nations and communities, financial institutions, governments and responsible businesses — to support stewardship of carbon storage in nature.

RECOMMENDATION 4

Ensure that Canada has a clear framework for international carbon reporting and accounting for nature-based climate solutions by:

- a. Including targets for avoided emissions as part of Canada's Nationally Determined Contributions.
- b. Improving monitoring and reporting of emissions from ecosystem carbon storage areas, especially for peatlands, as part of Canada's international emissions reporting.

RECOMMENDATION 1

Avoid the conversion and degradation of large stores of carbon in nature by:

- a. Creating protected and conserved areas designed to maximize carbon storage.

The protection of ecosystem carbon stores must be a priority. We need to ensure those protections are in “the right places” — areas of high importance for wildlife as well as carbon storage and sequestration. To demonstrate global leadership, all levels of government should integrate climate change mitigation and biodiversity benefits into relevant policies, programs and legislation for protected areas and land management to make them more effective as nature-based climate solutions. These efforts have to uphold the principles of the UN Declaration of the Rights of Indigenous Peoples, and the principle of Free-Prior-and-Informed consent, and be led or supported by Indigenous nations and communities in a way that advances their priorities and self-determination. Indigenous Protected and Conserved Areas (IPCAs) may be central to achieving these outcomes.

- b. Legislating that environmental impact assessments by all levels of government take into account the presence of ecosystem carbon stocks and quantify and consider carbon emissions associated with the conversion and degradation of carbon stored in nature.

It is essential to evaluate the carbon footprint of proposed projects — the potential for emissions if landscapes are degraded, and increased absorption if they are maintained — and the impact they will have on our national climate and biodiversity targets. Integrating Indigenous rights, governance and knowledge into environmental permitting processes and impact assessments is critical for transformational change.

- c. Managing areas of high-carbon stocks to allow continued storage of carbon and an enhanced ability to absorb it in the future.

Leadership is needed across all sectors and regions to create and implement new policies and programs that maximize the climate change mitigation benefits of management activities in carbon-dense ecosystems. Natural ecosystems can continue to sequester and store carbon through proper management. Enhanced management of working landscapes can accomplish the same.

RECOMMENDATION 2

Establish and fund a Carbon Guardians program to support interested Indigenous communities and governments in the monitoring and measurement of ecosystem carbon.

Large carbon storage areas are found in Indigenous territories across Canada as a result of a millennia of responsible management by Indigenous Peoples. We need to recognize, elevate, and prioritize Indigenous stewardship, including supporting dedicated efforts to measure and monitor carbon stewarded by Indigenous peoples. Creating and resourcing Carbon Guardians could further support efforts to advance Guardians programs in Canada and globally.

RECOMMENDATION 3

Develop a set of financial mechanisms — defined and supported collaboratively by Indigenous nations and communities, financial institutions, governments and responsible businesses — to support stewardship of carbon storage in nature.

Investment in new financial mechanisms (both market and non-market) that deliver sources of livelihoods and well-being for local and Indigenous communities is key to sustaining long-term protection and stewardship of important carbon storage areas. Investments should directly support communities to help achieve equitable, effective and just conservation outcomes, including through additional funding, regulatory support and collaboration.

RECOMMENDATION 4

Ensure Canada has a clear framework for international carbon reporting and accounting for nature-based climate solutions by:

- a. Including targets for avoided emissions as part of Canada’s Nationally Determined Contributions (NDC).

Canada’s updated NDC commits to further reducing emissions and acknowledges the role nature and protected and conserved areas can play. But it falls short of including a specific emissions reductions goal derived from avoided conversion, or from future carbon sequestration from protected lands. An enhanced NDC and supplementary documentation with additional specifics for NbCS is key. Targets and accounting associated with avoided conversion must account for the principles of imminent threat and additionality.

- b. Improving monitoring and reporting of emissions from ecosystem carbon storage areas, especially for peatlands, as part of Canada’s international emissions reporting.

Canada’s peatlands cover more than 12 per cent of the country and hold about a quarter of global peatland carbon. They also contain the greatest densities of carbon in the analysis but are not sufficiently included in reporting through National Inventory Reports (NIR). Comprehensive and accurate accounting of emissions from the degradation of ecosystem carbon should be included within the NIR — in particular, improved monitoring and reporting of peatland emissions.

For more information, contact:

James Snider, Vice President, Science, Knowledge and Innovation, WWF-Canada
science@wwfcanada.org

To learn more: wwf.ca/carbonmap/

WWF® and ©1986 Panda Symbol are owned by WWF®.
All rights reserved.