

Global Warming

Circling the globe just below the Arctic region in Canada, Alaska, Russia, and Scandinavia, the global Boreal Forest is the world's largest land reservoir of carbon. This "carbon bank" stores 22 percent of all carbon stored on the earth's land surface, and almost twice as much carbon per unit area as tropical forests.

Canada's Boreal Forest stores an estimated 208 billion tons of carbon in its widespread forest and peat ecosystems—the equivalent of 26 years worth of global carbon emissions from the burning of fossil fuels at 2006 levels. It also sequestered an average of 205 million tons of carbon per year between 1920 and 1989, roughly equivalent to Canada's annual emissions.

Fire and insect depredation are a natural and critical part of a healthy Boreal ecosystem, but global warming already is exacerbating this natural cycle, causing increased greenhouse gas emissions. Industrial activity also increases emissions by removing forest biomass, changing hydrology, and physically damaging soils. While carbon emitted by natural processes varies year to year, we must limit emissions resulting from human activity.

Letting the Carbon Out of the Bank

Logging in Canada releases on average 33 million tons of carbon into the atmosphere each year, not counting carbon stored in harvested wood products. This is equivalent to approximately 16 percent of Canada's annual greenhouse gas emissions.

Oil and gas activities and peat extraction release significant amounts of stored carbon into the atmosphere. In the Alberta Tar Sands, an oil deposit covering a region the size of Florida and second in size only to the oil reserves of Saudi Arabia, oil production not only deforests land, disturbs peat and wetlands, and changes local hydrology, it also generates almost three times as much greenhouse gas per barrel as conventional oil production. Greenhouse gas emissions from Tar Sands production are projected to increase by approximately 500% by the year 2016.

Peat extraction in Canada emitted 7.74 million tons of carbon between 1990 and 2000, mostly due to the decomposition of extracted peat after being removed from this secure carbon pool. Large scale drainage and flooding of peat lands for mining or hydroelectric development also results in substantial emissions from this otherwise long-lived carbon pool.

Protect the Carbon

Proper planning by Canadian governments can ensure protection of this ecosystem and the species that depend on it—while maintaining its carbon storage benefits. The Boreal Forest Conservation Framework, supported by conservation, industry, and First Nations organizations, sets out a vision to protect 50% of the Boreal in large interconnected areas, and is the only proposal that ensures a large portion of the ecosystem and the carbon stored there is protected.

[Read this factsheet on the connection between global warming and the Boreal Forest >](#)

[Click to see maps showing carbon storage in Canada's Boreal Forest >](#)