

CLIMATE

Dying B.C. forests flooding air with carbon

Analysis finds pine beetle epidemic, logging, caused rise in greenhouse gas emissions

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B.C.'s forests emitted more carbon than they absorbed between 2003-2012, a dramatic change from the previous decade, an analysis by the Sierra Club of B.C. shows.

The province's forests released an estimated 256 million tonnes of carbon dioxide into the atmosphere between 2003 and 2012. In the previous 10-year period, they absorbed 441 million tonnes from the atmosphere, according to a report released this month by the environmental group.

Key factors were the mountain pine beetle epidemic, which peaked in 2005 and killed vast tracks of lodgepole pine in B.C.'s Interior, and an increase in wildfires across B.C. When trees die and decay, or burn, they release carbon into the atmosphere.

Carbon is also released through logging and slash-burning of logging waste.

The net effect has been that B.C.'s forests which have absorbed carbon in the past now expel carbon to the atmosphere.

University of Northern B.C. forestry scientists said the Sierra Club analysis is in general sound.

Forest emissions are not officially tallied as part of B.C.'s carbon emissions which were 63 million tonnes in 2013, primarily from use of fossil fuels.

Sierra Club forest and climate campaigner Jens Wieting said the dramatic change in carbon dioxide emissions from forests should be a wake-up call to the provincial government to change how forests are managed so the focus is on policies that store carbon rather than on logging.

The data indicates carbon emissions from logging have stayed relatively constant, while emissions from wildfires increased nearly sevenfold between 2003 and 2012.

However, carbon emissions from logging remain the highest source, at 495 million tonnes of carbon dioxide during the past decade (through the loss of carbon in growing trees but also from the soil), even after accounting for carbon stored in wood products, and nearly twice as much as the 271 million



Sierra Club report says several factors are in play in forests' changing from absorbing carbon to emitting it.

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JENS WIETING

SIERRA CLUB CAMPAIGNER

tonnes from wildfires.

During the same period, the amount of carbon dioxide absorbed by B.C.'s forests was estimated to be cut nearly in half to 592 million tonnes.

Wieting said there's an opportunity to preserve more carbon by reducing clearcut logging and preserving old-growth forests, saying B.C. forest management is making climate change worse.

The Sierra Club said the B.C. Liberal government should implement a five-year, \$1-billion plan to restore the health of the province's forests.

Wieting also suggested the province move toward a system where the amount of timber harvesting allowed and provincial timber fees reward logging that preserves carbon storage.

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that our forests will literally disappear step by step because losing carbon means losing biomass, and overall less and less healthy forests,” he said.

The Ministry of Forests did not dispute that the province's forests had turned into a carbon source from a carbon sink.

But in an emailed response, forestry ministry spokesman Greig Bethel said that was a result mainly of the pine beetle epidemic and increased emissions from wildfires. The province's forest management strategy was not responsible for increased carbon emissions, he said.

In response to the Sierra Club's call for a \$1-billion program, he said the province already has in place forestry health programs, including a program to restore

forests hit by wildfire and the pine beetle. Since 2005, \$348 million has been spent on the program.

The province has also enabled projects that can sell carbon credits, and spends millions suppressing wildfires, said Bethel.

University of Northern B.C. forestry professor Phil Burton said the Sierra Club analysis and interpretations are in general sound, though a big unknown is the fate of carbon from logged trees.

While establishing young, healthy, densely-packed forests with reduction of wood waste can reduce atmospheric carbon, it is also important to conserve old-growth forests as they have immense amounts of carbon stored in them, said Burton.

In the areas hardest hit by the beetle attack, the province increased logging levels to cut the dying trees and replant forests.

University of Northern B.C. forestry professor Art Fredeen said research has shown it may be better for carbon storage to not log beetle-attacked stands, particularly if they are reasonably well-stocked with live trees.

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