

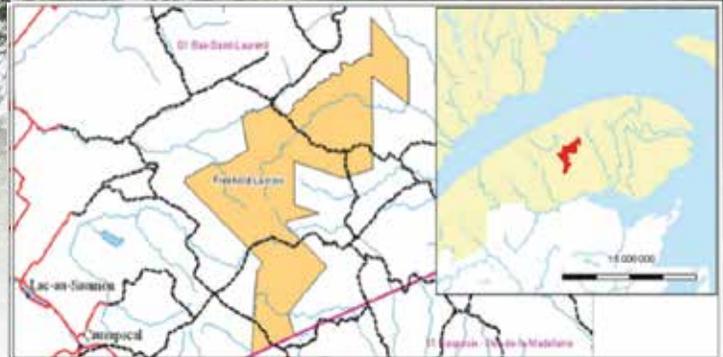


Commercial Thinning for Forest Health

In 2020, Dr. Jean-Martin Lussier and other researchers from the Canadian Wood Fibre Centre (CWFC) ventured out to Dunière forest on the Gaspé Peninsula in Québec. In the 60,000-hectare forest, you can find spruce, pine, fir, and larch trees.

This forest, like others in the Gaspé region, is affected by the eastern spruce budworm, a destructive caterpillar that feasts on trees like balsam firs and white spruce. Outbreaks of these pests weaken mature trees and usually end in mass tree loss. These outbreaks can result in significant timber shortages.

Only a small portion of Canada's forest is harvested every year – just 0.5 per cent. But climate change will worsen pest infestations, destroying valuable mature trees. As we learn



The Dunière forest is located on the Gaspé Peninsula in eastern Québec.

more about the effects of a changing climate, CWFC and its partners have found new forest management practices such as partial harvesting, more specifically commercial thinning, to help adapt to climate change and maintain the important flow of timber resources.

Thinning forests for forest health

Commercial thinning is a harvesting method that selectively cuts trees for timber, rather than clearcutting entire areas. It requires more groundwork, as foresters have to examine and select specific trees for harvest, but it can sustain



The eastern spruce budworm in larval and adult stage.

industries during difficult and destructive pest outbreaks.

The researchers suggest partial harvesting - in this case, thinning forests in 20-year increments during the natural pest disturbance periods. The result is a cost-effective and sustainable way to harvest trees and maintain resilient forests.

An economic assessment of commercial thinning found that while clearcutting is immediately more profitable, firms that implement thinning will see a higher return in the long-term - \$740 per hectare of forest per year.

If enhanced forest inventory tools such as LiDAR (a remote sensing method that uses light in the form of a pulsed laser to measure distances) is combined with commercial thinning, time and money are saved - an estimated \$32,000 a year in the Dunière forest alone.



The eastern spruce budworm defoliates trees, causing mass tree loss.

Forests benefit from thinning, too. As remaining trees get more room to grow, thinning encourages stronger trees and healthier forests. Plus, gradual forest thinning leaves species diversity unharmed. The white-tailed deer, for example, will occupy and feed in newly thinned forests.

Centuries of sustainable foresting to come

Even though Canada is home to just 9 per cent of the world's forests, Canadian forests make up 36 per cent of the world's certified sustainably managed forests. Commercial thinning can even out a forest's fibre supply so that its valuable wood can be harvested at a sustainable rate, despite forest pests and changing climates.

The Canadian Wood Fibre Centre's research provides the evidence to support the continued and expanded use of this additional tool in the sustainable management toolbox.

Learn more

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