

## CLIMATE CHANGE AND CANADA'S FOREST SECTOR

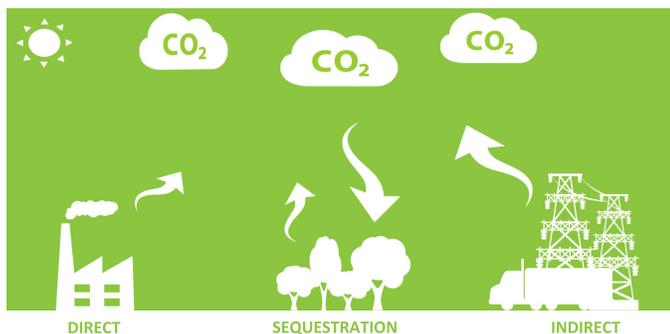


Canada's forest products industry punches above its weight when it comes to mitigating climate change. Our forests play a critical role in the global carbon cycle — absorbing tremendous amounts of carbon dioxide (CO<sub>2</sub>) from the atmosphere and storing it in trees and soil.

These same forests, and our sustainable management of them, are strongly affected by climate change. An increasing number of forest fires and insect outbreaks, like the mountain pine beetle, are linked to climate change.

Canada's sustainable forest management must help mitigate and adapt to climate change. The U.N. Intergovernmental Panel on Climate Change recognizes that in the long term a sustainable forest management strategy, aimed at maintaining or increasing carbon stocks while producing an annual sustained yield of timber, will generate a significant mitigation benefit. Running more energy-efficient mills, practising sustainable forest management, and storing carbon in harvested wood products are ways Canada's forests can help solve a global problem.

As custodians of 10 per cent of the world's forests, Canada's forest sector is serious about its responsibility to maintain this critical global ecosystem. Our stewardship focus works to mitigate climate change, because keeping forests healthy means more greenhouse gases are stored in trees and soils - not the atmosphere.



### LEADERSHIP ON CLIMATE CHANGE MITIGATION

From ensuring that every harvested tree is regenerated and the carbon stock rejuvenated to continuously shrinking the environmental footprint of our mills, our members have a track record of success in mitigation. And with 100% of our members' forest tenures certified to rigorous third-party standards, we are dedicated to maintaining healthy forest cover. In fact, Canada leads the world in third-party certified forests with 163 million hectares or 43% of the global total, largely because of the commitments made by FPAC members.

Canadian forest products facilities have steadily become cleaner with new focus and ambition to reduce their environmental footprint. They have modernized equipment, realized energy efficiency gains, and optimized their on-site generation of green energy — enough, by now, to power the entire city of Calgary. Moreover, since 2000, the Canadian forest products industry has eliminated the use of coal and cut oil use by more than 90%. Meanwhile, pulp and paper mills have slashed greenhouse gas emissions by nearly 70% since 1990.

On top of the substantial gains already made, FPAC members are committed to continuous improvement when it comes to climate change. FPAC has committed to the goal of industry-wide **carbon-neutrality by 2015** without the purchase of carbon-offset credits — a world first. In 2012, FPAC began a further 35% improvement in its environmental footprint with the launch of **Vision2020** — an aggressive set of environmental, human resources and economic targets.

## WOOD PRODUCTS OFFER BENEFITS IN A CHANGING CLIMATE

A sustainable forest products industry doesn't just maintain forest cover – it also stores carbon in long-lived wood products like timber framing or books. Many of these wood products can replace other carbon-intensive materials such as steel or concrete. Numerous detailed life-cycle assessments have shown the [climate benefits of using wood](#) instead of concrete or steel in residential and low-rise construction.

Using wood in short-lived products like wood pellets for bioenergy can also help mitigate climate change by reducing the need for other energy sources like fossil fuels. Burning wood for energy emits carbon, but the next generation of trees will store it again as they grow — think of this like a round-trip ticket. By contrast, burning fossil fuels for energy gives carbon a one-way ticket to the atmosphere. FPAC's world-leading [bio-pathways](#) work on new bioproducts suggests we can do even more by greening the supply chains of countless (non-forest) products used every day.

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## WELL-POSITIONED TO ADAPT TO CLIMATE CHANGE

Forestry has always required careful and sustainable planning that looks to the wood supply needs of future generations. Canada's foresters are no exception, drawing on a long history of world-leading research to inform their practice of sustainable forest

management — a science-based approach that monitors results and adjusts management based on a system of criteria and indicators. That means today's forest managers are well placed to integrate long range climate adaptation concerns into their day-to-day forest management planning.

This planning is, by definition, complex. There is a lot of variability in how forests will adapt to climate change. Warmer summers, for example could boost tree growth on boreal forest sites with plentiful available water but simultaneously have a negative impact on drier sites. Governments are playing a key role in helping the sector meet these information challenges, and working hand-in-hand with centers of research excellence like the Canadian Forest Service is critical to our climate adaptation leadership.

## THE CHALLENGE OF ADAPTATION

An agile, innovative forestry sector can react to unforeseen events. For example, the industry responded to the massive mountain pine beetle infestation in B.C. by adapting harvesting plans to help control the infestation and salvage the affected timber, modified its manufacturing processes to adjust to the drier wood, and seized tremendous export growth potential in China. In fact, Canada's forest products exports to China leapt by 1300% (2003 to 2011).

New climates mean new challenges for species at risk and forest management. Forests can 'move' through seed dispersal, but numerous studies have shown that optimal growing environments will move an order of magnitude faster. Consideration between these climate zone shifts and species reliance on productive and functional ecosystems is essential when determining recovery actions for species at risk. The wildlife species ranges will not remain static. Assisted migration of tree species and responsive, climate-conscious criteria and indicators for species at risk are important parts of adapting our sustainable forest management to climate change.



FPAC advocates on behalf of the forest sector. FPAC is also working to realize the ambitious goals of Vision2020 to help the industry transform with innovative new products, diversified markets, enhanced environmental credentials and a skilled workforce. FPAC is proud to represent Canada's largest producers of forest products.

All FPAC members are signatories of the Canadian Boreal Forest Agreement. Our members are responsible for 66% of certified forest lands in Canada. Third-party certification of member companies' forest practices is a condition of membership in the Association — a world first.