

# Rising to the Climate Change Challenge



Foresters and Researchers are taking on Climate Change together — FEBRUARY 2023



The site of a tree planting project led by Central Chilcotin Rehabilitation Ltd., a joint venture company owned by the T̓sideldel First Nation (Alexis Creek First Nation) and the Tl'etinqox Government (Anaham First Nation). Photo credit: Dennis Owen / Globe and Mail

## A Global Challenge with Local Solutions

Climate change is a global challenge of our time, and it will require action at many levels all around the world. The government of British Columbia (BC) is committed to making meaningful contributions to this effort. The **CleanBC Plan** outlines measures being acted upon, and the **Climate Preparedness and Adaptation Strategy** strives to keep communities, infrastructure, and ecosystems safe and resilient to future climate events, such as wildfire, floods, and extreme heat.

**Forests are recognized by BC, Canada, and the United Nations as an important part of the climate change solution.** Healthy trees and ecosystems absorb greenhouse gases, provide cooling shade, provide habitat, mitigate flood risk, and in some cases can be a source of climatically-beneficial bioenergy. With their mandate to manage BC's forests in alignment with Indigenous Peoples, the BC Ministry of Forests and the Office of the Chief Forester are leading the way to not only ensure our forests are healthy and resilient but also to manage our forests to reduce greenhouse gases. FESBC is honoured to collaborate with these talented and dedicated people.

**368** TOTAL  
TONNES

of carbon sequestered by 2050 by  
one planted hectare of coastal forest\*  
= the total annual emissions of 75 cars.

\*planted in 2021

The equivalent of  
**14,400** LITRES

of gasoline burned when  
40 cubic metres of wood fibre  
are burned in a slash pile.

**55** TOTAL ADDITIONAL  
TONNES

of greenhouse gases sequestered  
over 10 years by one hectare  
of coastal forest fertilized.



Forest Enhancement  
Society of British Columbia

Learn more about Nature Based Forestry Solutions  
to take action against climate change.





## A Message from Chief Forester, Shane Berg

"We are fortunate in British Columbia (BC) to have people with skills, expertise and world-class forest management experience turning their full attention to addressing the challenges of climate change. Recognizing the urgency, and embracing a leadership role, over the past year the Province of BC has invested in growing internal expertise and capacity and putting climatic ecosystem data into the hands of forest practitioners and managers. Our team is constantly promoting innovative solutions and supporting new partnerships to ensure that BC's forests are healthy and resilient."



# FORESTRY

## A PART OF THE GLOBAL SOLUTION

### COLLABORATION

1

**International:** The Paris Agreement was adopted in 2015 with the goal to limit global warming to preferably 1.5 degrees Celsius. The Agreement is significant because it is a commitment that brings all nations into a common cause to undertake ambitious efforts to take action on climate change and adapt to its effects.

2

**National:** Canada has developed a strategy to meet its Paris Agreement obligations. Forest-related solutions to reduce emissions or enhance carbon sequestration can be achieved through the use of long-lived wood products, bioenergy from waste wood, and planting trees through the 2 Billion Trees program.

3

**Provincial:** the Province has made significant investments on climate action, \$150 million of which has been invested through FESBC in forestry projects with 4.2 million tonnes of carbon sequestered or emissions prevented. The estimated value of these carbon benefits to society is \$210 million\*.

\*based on the carbon tax in January 2023

# Insights from the Minister



**Hon. Bruce Ralston**  
Minister of Forests

@BruceRalston

“The Forest Enhancement Society of BC supports First Nations, community forests, rural communities, and many others who take on projects to contribute to the Province’s key commitments to strengthen forest health and ecosystems, while creating good jobs in communities across the province. FESBC, along with their project partners, are making significant progress to enhance forest resiliency to wildfire and climate change for the lasting benefit of British Columbians. We are building on this foundation through a new investment of \$50 million so FESBC can deliver projects that get fibre to pulp and value-added mills while also reducing emissions and safeguarding communities from wildfire.”

## A Research-based Approach to Forestry



**Dr. Robbie Hember**

PhD PAg  
Forest Carbon Modeller

British Columbia faces tough questions about how our forest sector will play its part to fight climate change. Working with partners across government and industry, I aim to deliver a Forest Carbon Summary that summarizes the carbon benefits from forest conservation, improved harvest practices and scheduling, enhanced silviculture, improved harvest waste management, and long-lived and recycled wood products. The efforts are focused on understanding the land use and forest management decisions that build synergy between the bioeconomy and conservation of resilient wild forest ecosystems. These outcomes will help us understand our accomplishments and steer future policy and practices towards effective and balanced solutions. The solutions to these complex problems will only come from the trial and error of bold practitioners that must be paired with rigorous analytical evaluation.



Photo Credit: Dennis Owen / Globe and Mail



**Dr. Caren Dymond**

PhD Forestry, Forest Carbon and Climate Change Researcher

All the products we use as a society have carbon footprints and the footprint for many wood products is better than many alternatives. To get a better sense of the storage and emissions of carbon from construction projects, we have produced a Wood Product Carbon Calculator. With collaborators at the University of Calgary and Environment Consulting, Adaptive Management, we are working to update the calculator and produce a model for use when simulating landscapes. We have also analyzed the carbon dynamics of partial harvesting experiments in the Interior’s cedar-hemlock forests. Partial harvesting can provide a climate benefit over clear-cutting because partial harvesting leaves many trees green and growing as carbon sinks which reduces future risks from climate change and provides habitat for many wildlife species.



Photo Credit: Kalesnikoff



**Dr. Colin Mahony**

PhD RPF, Team Lead of the Future Forest Ecosystems Centre

As a Forester and climatologist, I am motivated by a strong connection to BC’s people and ecosystems and a concern for how they are being impacted by climate change. The resilience of BC’s forests is crucial to our air quality, public safety, drinking water, and many other ecosystem services. Understanding how climatic disruption will affect ecosystems is essential to protecting these values. This is why I have been collaborating to develop the Future Forest Ecosystems Centre (FFEC). The FFEC is a team of ecologists, climatologists, and data scientists who forecast climate change risks to BC’s forest ecosystems and translate these forecasts into decision-support tools. Our goal is to help planners, practitioners, and Indigenous knowledge holders foster ecosystems that are more resilient to climate change.



**1 MILLION CUBIC METRES**

of solid wood waste utilized for pulp products rather than burned in a slash pile = the avoided emissions of 93,000 cars off the road for one year.



“We’re working with partners like FESBC, First Nations and local communities to ensure forest ecosystems are resilient to climate impacts, support diverse habitat for wildlife, and absorb and retain as much carbon from the atmosphere as possible. By taking action now, we’re building a more sustainable forest economy that benefits people across B.C.”

—Hon. George Heyman

Minister of Environment and Climate Change Strategy

 @GeorgeHeyman



Photo credit: Dennis Owen / Globe and Mail

## A Big Task with an Optimistic Outlook

BC has vast areas of forests. The management of our forests has evolved as our needs have changed over time—from Indigenous Peoples living in harmony with the land, to commercial forestry, and now the need to take climate action. We need to do many things at the same time in many places: ensure forests are resilient to future climate change, pests and wildfire, reduce community risks to wildfires and floods, reduce greenhouse gases, provide quality wildlife habitat, create bioenergy to reduce fossil fuel usage, and create sustainable economic opportunities for Indigenous and non-Indigenous people through a mix of traditional and innovative new ventures, such as the development of a bioeconomy for BC.

This is a big job, but we can be optimistic because there are creative and talented people throughout BC in urban and rural areas, in governments, communities and the forest industry who will continue to work together in concert with other people around the world to take meaningful action on climate change.

FESBC would like to gratefully acknowledge the financial support of the Province of British Columbia through the Ministry of Forests. These projects were funded in part by the Government of Canada.

## Learn More

If you’d like to learn more about the Forest Enhancement Society of BC and how people in British Columbia’s forests are helping create climate change solutions, reduce wildfire risk, and keep workers employed through our funded projects, connect with us!



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