



**PAN-CANADIAN FRAMEWORK
ON CLEAN GROWTH AND CLIMATE CHANGE**

Forest Ministerial Progress Report



2019

TABLE OF CONTENTS

- 1. Introduction.....3
- 2. Overall Analysis of Progress.....5
- 3. Measure-by-Measure Summary Table..... 10
- 4. Annex: Measure-by-Measure Detailed Update..... 12
 - 4.1. Increasing stored carbon: protect and enhance carbon sinks 12
 - 4.2. Increasing the use of wood for construction..... 20
 - 4.3. Generating bioenergy and bioproducts..... 26
 - 4.4. Advancing innovation in GHG-efficient forest management practices..... 37



INTRODUCTION

On December 9, 2016, federal and most provincial and territorial governments adopted the Pan-Canadian Framework on Clean Growth and Climate Change (PCF). The PCF is an ambitious plan to reduce greenhouse gas (GHG) emissions, create clean jobs and growth, and increase Canada's resiliency to the impacts of climate change.

The PCF outlines how Canada will meet or exceed its target under the Paris Agreement of reducing GHG emissions by 30 percent from 2005 levels by 2030. The PCF was developed through a collaborative process by federal, provincial and territorial working groups in consultation with the public and Indigenous Peoples who will continue to be meaningfully engaged as the plan is implemented.

The PCF puts Canada on a path to meet its 2030 emission reduction target through four pillars:

1. Carbon pricing¹;
2. Complementary actions to reduce greenhouse gas emissions;
3. Adaptation and climate resilience; and,
4. Clean technology and innovation.

Through the PCF, federal, provincial, and territorial governments committed to report annually on progress to First Ministers. To meet this commitment, the Canadian Council of Forest Ministers (CCFM) along with nine other Ministerial tables have committed to producing annual progress reports on PCF actions within their portfolios. These reports feed into annual Synthesis Reports on overall PCF progress, which are delivered to First Ministers in late autumn each year.

The forest sector falls under the PCF's second pillar, *Complementary actions to reduce greenhouse gas emissions*, and supports the following actions:

1. Increasing stored carbon by protecting and enhancing carbon sinks;
2. Increasing the use of wood for construction;
3. Generating bioenergy and bioproducts; and,
4. Advancing innovation in GHG-efficient forest management practices.

¹ Saskatchewan, Ontario, and Alberta are challenging the constitutionality of the Greenhouse Gas Pollution Pricing Act.

Three of the forest-related PCF actions (1, 3, and 4) also fall within the agriculture portfolio. Progress on actions that relate directly to agriculture will be included in the PCF report from the Ministers of Agriculture. There is no significant overlap between the measures discussed in this report and those reported by the Ministers of Agriculture.

This is the third annual Forest Ministers' report on the PCF, and it builds on last year's report. Programs included in the 2018 report have been updated to reflect tangible progress, and many new programs have been added.



OVERALL ANALYSIS OF PROGRESS

Over the past year, federal, provincial, and territorial governments have made tangible progress on forest-related initiatives in support of the Pan-Canadian Framework on Clean Growth and Climate Change. This year's report covers over 50 initiatives demonstrating the progress and ongoing commitment in supporting both environmental and economic objectives. When reviewing these initiatives, three themes emerge clearly: the importance of partnerships and collaboration; the need for forest science to support policy and action; and a drive towards innovation to support clean growth and a low-carbon future.

Examples of policies and strategies include:

- Alberta's Carbon Offset System;
- British Columbia's development of policies to increase the use of low carbon and renewable materials in all public sector infrastructure projects;
- The CCFM's continued advancement of the Bioeconomy Framework for Canada;
- New Brunswick's Wood in the Construction of Public Buildings and Infrastructure Policy (i.e., Wood First Policy) and Forest Biomass Policy for sustainable biomass harvesting;
- Ontario's investment in the province's first cross laminated timber plant;
- Quebec's Wood Charter to increase the use of wood in construction and the Development Strategy for Québec's Forest Products Industry; and,
- The Yukon Biomass Energy Strategy.

The policies and measures summarized in this report demonstrate a commitment across the country to achieve emission reductions and carbon storage involving forests and use of wood.

The initiatives also reflect the importance of partnerships and collaboration in delivering on PCF commitments. These initiatives involve collaborations between multiple levels of government, universities and academics, industry partners, Indigenous representatives, not-for-profit organizations, and communities. Engaging with such a diverse group of stakeholders will help ensure that Canada's PCF actions support Canadians' diverse economic, cultural, and spiritual forest values.

Federal, provincial, and territorial PCF initiatives also reflect the importance of evidence-informed forest policy based on sound research. Governments continue to support forest science, including better data collection and modelling, both to monitor the effects of climate change and to predict these effects in different scenarios.

Together, this research will help Canadians to mitigate and adapt to the challenges posed by climate change. For example, the Jack pine Assisted Migration Experiment in Saskatchewan and Manitoba; Northern Prairie Forests Integrated Regional Climate Change Assessment; and Adapting New Brunswick's Forests and Ecosystems to Climate Change.

Additionally, at the 2019 meeting of the CCFM, jurisdictions unanimously agreed on a list of key priorities for the forest sector. These priorities include the need to collaborate on positioning Canada as a world leader in sustainable forest management and environmental stewardship, the need for a whole-of-government approach to wildland fire management and an understanding that innovation across the forest sector remains at the core of all CCFM discussions.

To this end, the initiatives highlighted in this report reflect continued investment in forest innovation and the transition to a low-carbon economy. Innovative uses of wood in construction, including tall-wood buildings, also continue to mature and accelerate. Together, these initiatives will foster a culture of innovation and help the forest sector to thrive in a low-carbon economy.

The sections below describe concrete results from selected initiatives organized by PCF action. See the Annex for a complete list of initiatives.

INCREASING STORED CARBON: PROTECT AND ENHANCE CARBON SINKS

Federal, provincial, and territorial governments will work together to protect and enhance carbon sinks, including in forests, wetlands, and agricultural lands (e.g., through land-use and conservation measures).

Trees grow by absorbing and storing CO₂ from the atmosphere, and carbon is also stored in dead biomass and soil. Sustainably managing forests is an important part of protecting and enhancing carbon sinks. In the last year, federal, provincial, and territorial governments have increasingly focussed on how forest management could be adjusted to increase carbon sinks and reduce GHG emissions by, for example, improving regeneration of forests after natural disturbances like insect infestations and fires.

- Alberta's Caribou Habitat Recovery Program made progress on caribou habitat restoration, and will contribute to ecosystem resilience and carbon sequestration. In 2017 and 2018, the program restored 204 km of legacy seismic lines, linear disturbances created when mapping oil reserves. In 2019, 420 km are expected to be treated.
- The \$1.4 billion Low Carbon Economy Leadership Fund, part of the \$2 billion Federal Low Carbon Economy Fund (LCEF) announced in the 2016 and 2017 federal budgets, was launched in June 2017. The Fund supports new and expanded provincial and territorial actions to reduce GHG emissions. One of the targeted sectors for the LCEF is enhancing carbon sinks and reducing GHG emissions in the forest sector, and funding continued to be provided for this in 2019. British Columbia, Alberta, Prince Edward Island and Quebec and Northwest Territories have received approval for funding for reforestation of forests following wildfires and insect infestations, other management practices, and/or afforestation. Prince Edward Island is currently enrolling new participants into its tree planting program, while Quebec carried out work under improved silviculture management on more than 14,000 hectares (ha).
- British Columbia's Forest Carbon Initiative, in part supported by the Low Carbon Economy Fund, aims to reforest areas lost to forest fires across British Columbia and to implement best practices that support healthy, resilient, and productive forests. The program will reduce emissions and sequester carbon while supporting jobs in rural communities.
- New Brunswick and Quebec continue to combat the spruce budworm epidemic in Eastern Canada. New Brunswick treated approximately 10,000 ha of hot-spot populations in 2019 using an early intervention strategy. This strategy involves a suite of integrated research, insect monitoring and treatment activities, through an innovative approach, to mitigate current and future outbreaks of the insect. Quebec treated over

438,000 ha on public land while treating an additional 9,000 ha on private land in 2019. Quebec continues to monitor and map the defoliation caused by the spruce budworm.

- Alberta continues to address mountain pine beetle outbreaks in Western Canada, treating 135,495 stems (trees) in 2019 for a total of 241,500 stems over two years. Early interventions and monitoring, reforestation, and treatment of affected areas will be ongoing in order to limit the damage to forest health and productivity. Saskatchewan continues to support control of the Eastern spread of Mountain Pine Beetle with financial support for Alberta's control efforts on the Western leading edge.
- Northern Prairie Forests Integrated Regional Climate Change Assessment is a collaborative NRCAn funded research project between the Saskatchewan Research Council, University of British Columbia, Forest Industry (i.e., Spruce Products Ltd., Louisiana Pacific Ltd., Edgewood Forest Products), and Federal and Provincial government partners (i.e., Natural Resources Canada, Manitoba, Ontario and Saskatchewan). Together, these partners are undertaking a regional climate change vulnerability assessment for forests, using the CCFM's Climate Change Vulnerability Assessment Framework. The goal of this initiative is to determine Saskatchewan and Manitoba forests' vulnerability to global warming, and to make recommendations to protect and enhance the role of these forests as an important carbon sink.

INCREASING THE USE OF WOOD FOR CONSTRUCTION:

Federal, provincial, and territorial governments will collaborate to encourage the increased use of wood products in construction, including through updated building codes.

Governments across Canada have long supported increased wood use for construction. Use of renewable solid wood products in building construction can store carbon long-term and, when they replace more emissions-intensive non-renewable building products, help to reduce GHG emissions. An urban landscape dotted with tall wood buildings and wood bridges would help reduce greenhouse gas emissions while benefitting Canada's forest sector and the resiliency of forest-based communities that depend on work in the sector.

- The federal Green Construction through Wood (GCWood) program, a four-year \$39.8 million initiative, was launched in October of 2017 to support wood-based research, development, education, and demonstration projects that increase the use of wood in infrastructure projects as a green building material. In 2019 GCWood launched its third call for expressions of interest, targeting Timber Bridges. Funding was announced in 2019 for The Arbour – Ontario's first mass-timber, low-carbon institutional building.
- The Atlantic Woodworks Initiative is a cooperative program led by the maritime Lumber Bureau with Support from Canada and the four Atlantic Provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island). It promotes wood as a preferred building material in Atlantic Canada through workshops, special programs and building and development industry events. In 2018-2019 this program was expanded to include PEI in promotional efforts.
- In addition to government programs, in 2019 many jurisdictions also continued to invest in research collaborations on wood building construction and wood product innovation through FPInnovations, a national public-private forest research institute.

GENERATING BIOENERGY AND BIOPRODUCTS:

Federal, provincial, and territorial governments will work together to identify opportunities to produce renewable fuels and bioproducts – for example, generating renewable fuel from waste.

Increasing the production of bioenergy and bioproducts contributes to GHG emissions reductions by decreasing reliance on fossil-fuel intensive alternatives. For example, harvest residues and other waste wood can be used for

energy in place of fossil fuels such as diesel, while forest bioproducts can be substituted for fossil fuel-intensive products such as steel and plastics.

- The 2017 federal budget included \$55 million over 5 years for the BioHeat stream of the Clean Energy for Rural and Remote Communities (CERRC) program, to support transitions from fossil fuel heating to bioheating. To date, the CERRC program has approved a total of 343 projects, of which 321 are located within Indigenous communities. Most of these projects will roll out over multiple years while some aim to be completed this year. CERRC will offer further rounds of funding over the course of its six-year duration. In Budget 2019, the government proposed to consolidate federal programs that help reduce diesel reliance in Indigenous, northern and remote communities, to help northern communities more easily access reliable and cleaner sources of energy.
- Jurisdictions are investing in research, development, and commercialization of innovations in using wood to help position Canada as a competitive market for advanced bioproducts, including biofuels. For instance, Yukon's Biomass Energy Strategy, approved in 2016, provided funding in 2017/18 for a number of First Nations to explore biomass opportunities and in 2018/2019 the Yukon government will continue to receive funding from the Natural Resources Canada Strategic Partnership Initiative to focus on providing planning, engineering and deployment support to First Nations.
- Alberta's Forest Industry Bioenergy and Bioproduct Projects continues to progress, with a number of initiatives to test the use of wood waste in the production of cement and the use of woody biomass and wood waste in power production. Key accomplishments in 2019, and late 2018, include the completion of a pellet production facility and the commissioning of a Thermal Energy System.
- Nova Scotia is also developing a Wood Energy heating solution for public buildings, which will reduce their reliance on fossil fuels. In 2019 a task group was established to identify suitable public buildings to convert fossil fuel heating systems to wood chip heating systems.
- The Government of Quebec continued the implementation of measures provided in the 2018-2023 Development Strategy for Quebec's Forest Products Industry. The initiative provides for a series of 11 objectives and 43 measures representing investments of over \$827 million.
- Ontario has a number of initiatives promoting the use of forest-based bio-products in power generation, including two with Indigenous Communities. A wood pellet plant is proposed by the Wikwemikong First Nation with construction tentatively slated for 2021-22. The Whitesand First Nation is pursuing an initiative to replace diesel power generation by constructing and operating a combined heat and power cogeneration plant and a wood pellet plant.

ADVANCING INNOVATION IN GHG-EFFICIENT FOREST MANAGEMENT PRACTICES

Federal, provincial, and territorial governments will work together to enhance innovation in GHG-efficient management practices in forestry and agriculture.

Finding new ways to harvest and use wood fibre to reduce emissions from forest and forestry operations and maximize the value derived from wood has become crucial to help mitigate climate change and transform the Canadian forest industry to a low-carbon economy. In a complimentary fashion, it is important to invest in innovative solutions to identify more GHG-efficient forest management practices enhances forests as carbon sinks while advancing economic transformation and competitiveness of the forestry industry.

- The CCFM is continuing to advance the implementation of its Forest Bioeconomy Framework for Canada, released in 2017. The Framework presents an integrated approach to meeting climate change mitigation commitments and advancing innovation in the forest sector for the long term. At the 2019 CCFM Ministers were presented with demonstrations of key developments under each of the four pillars of the Forest

Bioeconomy Framework for Canada. Following up on this, Ministers requested a report on progress in implementation of the Framework at its 2020 meeting.

- Through Alberta Innovates, Alberta Bio Futures (ABF) is currently supporting over 70 active forest, forestry and woody biomass related projects. These activities are aimed at diversifying the provincial economy and accelerating growth of Alberta's bioindustrial sector by taking advantage of emerging opportunities.
- In Saskatchewan, a collaborative project between the Ministry of Environment, the University of Saskatchewan and Mistik Management Ltd. Through this collaboration, they will be undertaking a case study utilizing the CCFM Climate Change Vulnerability Assessment Framework to build adaptive capacity within an industry setting for building resiliency and adaptation to impacts of climate change.

Overall, federal, provincial and territorial actions to support sustainable forest management practices, innovation and transformation have compounded climate change mitigation benefits, improving how Canada meets the challenges and opportunities that climate change presents to the forest sector.

MEASURE-BY-MEASURE SUMMARY TABLE

JURISDICTION	ACTIVITY
PCF ACTION: <i>Increasing stored carbon: protect and enhance carbon sinks</i>	
Multiple	Assessing climate change impacts on timber resource availability in western-central Canada: economic implications and mitigation
Multiple	Jack pine Assisted Migration Experiment
Multiple	Northern Prairie Forests Integrated Regional Climate Change Assessment
Multiple	Adapting New Brunswick's Forests and Ecosystems to Climate Change
Multiple	Spruce Budworm Early Intervention Strategy
Federal	Low Carbon Economy Fund (LCEF)
Alberta	Enhanced forest growth and reforestation of legacy natural disturbance on forested public land
Alberta	Alberta Mountain Pine Beetle Strategy
Alberta	Alberta Land-use Framework Planning
Alberta	Caribou Habitat Recovery Program
British Columbia	Forest Carbon Initiative (FCI)
Manitoba	Spatial Stimulation of Carbon Stocks in Manitoba's Peatlands
New Brunswick	Carbon sinks and offsets commitments under New Brunswick's Climate Change Action Plan
Prince Edward Island	PEI commitment of 7% Landbase protection under the Pathway to Canada Target 1
Prince Edward Island	Launch of new Carbon Capture Tree Planting Program
Quebec	Increasing carbon sinks through afforestation and reforestation
Quebec	Additional silviculture work to sequester carbon
Quebec	Development of knowledge and a tool adapted to the reality of Quebec's forest sector
Quebec	Québec's Wood Production Strategy
Quebec	Spruce budworm treatments on private and Crown land
PCF ACTION: <i>Increasing the use of wood for construction</i>	
Multiple	Renewed support for Atlantic Woodworks Initiative
Federal	Green Construction through Wood (GCWood) program
British Columbia	Increase the use of low carbon and renewable materials in all public sector infrastructure projects
British Columbia	Forestry Innovation Investment (FII) Wood First Program
New Brunswick	Wood in the Construction of Public Buildings and Infrastructure Policy
Ontario	The Made-in-Ontario Environment Plan promotes the use of wood for construction
Ontario	Establishment of a state-of-the-art, cross laminated timber facility in St. Thomas, Ontario
Quebec	Investments in FPInnovations research
Quebec	Prefabrication wood program : optimization and automatization (PWPOA)
Quebec	Continuous training program on the use of wood in construction
Quebec	Wood Building Demonstration Program
Quebec	Wood Charter
PCF ACTION: <i>Generating bioenergy and bioproducts</i>	
Multiple	Whites and First Nation Community Sustainability Initiative (CSI)

JURISDICTION	ACTIVITY
Multiple	Development of the Wìkwemikong First Nation's 150,000 metric tonne wood pellet plant using forest biomass in Nairn Centre
Multiple	Biomass energy project in Saskatchewan
Federal	Clean Energy to Reduce Reliance on Diesel in Remote Communities (CERRC) Program
Alberta	Alberta Carbon Offset System – Offset Generation
Alberta	Bioenergy Producer Program
Alberta	Forest Industry Bioenergy and Bioproduct Projects
British Columbia	Developing a Forest Biomass Supply Information System to support Bioproducts Development
New Brunswick	Forest Biomass Policy
Nova Scotia	Development of Wood Energy heating solutions for public buildings
Ontario	A thermomechanical-pulp biorefinery (TMP-Bio) project
Ontario	Biochar in Automotive Products
Ontario	Haliburton BioChar commercialization of organic carbon production from wood fibre product
Ontario	The Made-in-Ontario Environment Plan promotes the use of renewable forest biomass
Prince Edward Island	Expanding the use of biomass heat in public buildings
Quebec	2018-2023 Development Strategy for Quebec's Forest Products Industry
Quebec	Wood Innovation Program (WIP)
Quebec	Innovation Platform
Quebec	Residual Forest Biomass Program
Quebec	Support for innovative initiatives in pulp and paper plants
Quebec	Tax credit for the production of pyrolysis oil from residual forest biomass
Quebec	Tax measures to promote biofuel production in Quebec
Yukon	Yukon Biomass Energy Strategy
PCF ACTION: <i>Advancing innovation in GHG-efficient forest management practices</i>	
Alberta	Alberta - Emerging Clean Technology Partnerships
Alberta	Alberta Innovates Bio Energy Program
Alberta	Capital Investment Tax Credit (CITC)
Alberta	Emissions Reduction Alberta (ERA)
Saskatchewan	Climate Change Vulnerability Assessment in SFM– CCFM Framework
Saskatchewan	Forest Management Planning
Manitoba	Assessing Carbon Stocks in Forested Wetlands

ANNEX: MEASURE-BY-MEASURE DETAILED UPDATE

PCF ACTION: <i>Increasing stored carbon: protect and enhance carbon sinks</i>				
JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Multiple	<p>Assessing climate change impacts on timber resource availability in western-central Canada: economic implications and mitigation</p> <p>Collaborative NSERC funded research project between academia (i.e. Lakehead University, University of Winnipeg), Forest Industry (i.e. Resolute Forest Products Canada, Inc; Louisiana Pacific Ltd); and Federal and Provincial government partners (i.e. NRCan-CFS, MB, SK, AB, and ON) conducting a regional climate change impacts on western-central boreal forests.</p>	<p>Principle investigators, collaborators, partners, and students met at Lakehead University in late 2017 to discuss data access protocols and further clarified roles and responsibilities of all team members. Several important synthesis documents and study data analyses have been made/ published. All fieldwork data analysis and modelling are currently ongoing.</p>	<p>Completed all necessary and remaining fieldwork by April 2020.</p> <p>Economic data regarding the values of different biomass components have been corrected and will be used for non-spatial and spatial economic analyses and modelling of environmental change impacts.</p>	April 2020
Multiple	<p>Jack pine Assisted Migration Experiment</p> <p>The experiment was established in spring of 2015 by the Forestry and Peatlands branch of Manitoba Sustainable Development as part of a collaborative study between Manitoba and the Forest Service of Saskatchewan's Ministry of Environment. The main goal of this collaborative study is to explore the potential of various jack pine provenances from southerly-warmer areas to grow and survive north of their current range (i.e. southeast MB).</p>	<p>Replicated research trials have been established at three different sites (i.e. near Marchand, Menisino, and Stead). Field surveys (re-measurements) have been conducted once every year (i.e. 2015, 2016, 2017, and 2019) to monitor tree survival, growth, and health.</p>	<p>One more field survey will be conducted in 2019. Thereafter, re-measurements will be discontinued to one every five years.</p>	<p>This is a long-term study, and field monitoring of tree survival and growth will continue until the plantation reaches mature and old ages.</p>

<p>Multiple</p>	<p>Northern Prairie Forests Integrated Regional Climate Change Assessment</p> <p>Collaborative NRCAN funded research project between the Saskatchewan Research Council, University of British Columbia, Forest Industry (i.e. Spruce Product Ltd; Louisiana Pacific Ltd, Edgewood Forest Product); and Federal and Provincial government partners (i.e. NRCAN-CFS, MB, ON and SK) undertaking a regional climate change vulnerability assessment on forest using the CCFM's Climate Change Vulnerability Assessment Framework.</p>	<p>Principal investigators and collaborators at the Saskatchewan Research Council in Saskatoon in early 2019 to discuss data access protocols and further clarified roles and responsibilities of all team members.</p> <p>Vulnerability assessment using the NRCAN-CFS Adaptation guidebook approach is currently ongoing.</p>	<p>Complete the vulnerability assessment and write-up the project report by end of March 2020.</p>	<p>March 2020</p>
<p>Multiple</p>	<p>Adapting New Brunswick's Forests and Ecosystems to Climate Change</p>	<p>The NB Department of Energy and Resource Development has taken steps toward adapting the management of forest-based natural resources in the province through education, training, and forming partnerships; efforts which will continue in the coming years.</p> <p>Two collaborative research projects have begun with:</p> <ol style="list-style-type: none"> 1) NRCAN-CFS on identifying and integrating the impact of projected climate scenarios on stand level tree regeneration into forest management planning tools used by the NB Department of Energy and Resource Development. 2) The University of New Brunswick, NRCAN-CFS, and Northern Hardwood Research Institute on evaluating the cost and benefits of adapting to climate-induced changes in drought and wind regimes in New Brunswick forests. 	<p>Continue to define project efforts over the next 2-years in order to fulfill New Brunswick's commitments to adapt natural resources management to climate change.</p>	<p>Ongoing</p>

<p>Multiple</p>	<p>Spruce Budworm Early Intervention Strategy</p> <p>The federal and provincial governments, industry and academia renewed a 5-year funding partnership (2018-2022) to continue early targeted intervention against an outbreak of spruce budworm within Atlantic Canada. The goal of the strategy is to protect forest habitats, forest carbon sequestration, and forest-dependent economy from the impacts of widespread tree mortality. The key to the strategy is early detection of rising budworm populations and then treatment of these “hotspots” to prevent an outbreak.</p> <p>There is evidence that after 5 years of treatment, the Spruce Budworm Early Intervention Strategy in Atlantic Canada is having positive effects. Treatments have kept budworm populations from rising to levels that would result in damage causing tree growth loss and mortality.</p>	<p>Approximately 10,000 ha of hot-spot populations in New Brunswick were treated in 2019.</p>	<p>Continue early targeted intervention work, with actions including intensive monitoring efforts across the Atlantic region, applied research, communications, citizen science, and treatment of hot-spot populations in New Brunswick.</p>	<p>2025</p>
<p>Federal</p>	<p>Low Carbon Economy Fund (LCEF)</p> <p>Announced in federal Budget 2016 and Budget 2017 to support new provincial and territorial actions to reduce emissions, with a focus on new, incremental reductions while considering cost-effectiveness.</p> <p>One of the targeted sectors is enhancing carbon sinks and reducing greenhouse gas emissions in the forest sector.</p> <p>Under the LCEF, a \$1.4 billion Leadership Fund supports commitments by provinces and territories that have adopted the PCF, with each province or territory receiving a specific funding allocation.</p>	<p>The LCEF of Environment and Climate Change Canada launched in June 2017 with a call for initial submissions from provincial and territorial governments to the Leadership Fund (\$1.4B).</p> <p>By late 2018, Leadership Fund had approved over \$200 million for efforts to increase stored carbon or reduce emissions in forests through efforts in British Columbia, Alberta, Quebec, Prince Edward Island, and Northwest Territories. It had also supported use of forest harvesting residues for energy in Quebec.</p> <p>The federal government has put in place bilateral funding agreements with provincial/territorial governments for approved Leadership Fund projects and started to transfer funds based on</p>	<p>Continue to complete bilateral funding agreements under the Leadership Fund and transfer funds based on expenses incurred and funding agreements.</p> <p>Finalize funding decisions for forest related projects under the Low Carbon Economy Challenge and sign bilateral funding agreements with proponents for approved projects.</p>	<p>Budget 2017 specified the LCEF would operate 5 years to 2021-22.</p>

	<p>The remainder of the LCEF funds support the implementation of the PCF and the Low Carbon Economy Challenge, in which projects are selected from among those submitted by provinces and territories, municipalities, Indigenous governments and organizations, businesses and not-for-profit organizations.</p>	<p>expenses incurred and funding agreements.</p> <p>Forest industry projects related to fuel switching and/or fuel efficiency in mills and district heating were assessed for funding in late 2018 under the \$450 million Low Carbon Economy Challenge (Champions stream).</p>		
Alberta	<p>Enhanced forest growth and reforestation of legacy natural disturbance on forested public land.</p> <p>\$20 million is to be allocated to the project with 50% funded through Low Carbon Economy Fund (Leadership Fund).</p> <p>Program promotes management interventions in areas of natural disturbances and increased coniferous planting supports the recovery of the coniferous components of forests, which then supports greater carbon sequestration.</p>	<p>Implementation activities are aimed at initial planting treatments in 2019/2020.</p> <p>Program aims to treat approximately 8,600 ha through planting 12.1 million seedlings by 2022.</p>	<p>Continued Implementation of the program.</p> <p>Proposed 2019/2020 Treatment – 3,450 hectares + (subject to change depending on operational factors).</p>	<p>Completion expected in 2021-2022</p>
Alberta	<p>Alberta Mountain Pine Beetle Strategy</p> <p>Alberta Strategy targeted at reducing the spread and impact of the mountain pine beetle (MPB). MPB-infested stands show significant reductions in their ability to store carbon. This preventive program is aimed at reducing and slowing the MPB's impacts and potential eastern progression.</p>	<p>Level 1 Control Treatments (single tree)</p> <ul style="list-style-type: none"> Stems treated were either felled and burned, felled and peeled, or felled and chipped. <p>August 2017-August 2018: 106,005 stems treated² by the Province</p> <p>NOTE: 2017 estimate revised in 2019 reporting to include Forest Resource Improvement Association of Alberta (FRIAA) program treatments. 92,275 treated directly by the province and 13,730 treated through Forest Resource Improvement Association of Alberta (FRIAA) programs.</p> <p>August 2018-August 2019: 135,495 stems treated in the Province.</p> <ul style="list-style-type: none"> In 2018 – 102,552 treated directly by the province and 32,943 treated through Forest 		<p>Ongoing</p>

		Resource Improvement Association of Alberta (FRIAA) programs.		
Alberta	<p>Alberta Land-use Framework Planning</p> <p>The Land-use Framework (LUF) sets out a new approach to managing our province's land and natural resources to achieve Alberta's long-term economic, environmental and social goals. The LUF establishes seven new land-use regions and calls for the development of a regional plan for each. Currently 2/7 plans are approved.</p> <p>The regional plans dictate Land-use strategies that will influence carbon sinks in the province, establish new protected/conservation areas, and emphasize the need to sustain a vibrant forest sector.</p>	<p>Alberta saw the addition of 1,360,390 ha of new protected land in the boreal region in 2018:</p> <ul style="list-style-type: none"> • Kazan Wildland Provincial Park (WPP) Establishment (570,822 hectares of new protected land for a total of 659,397 ha) • Richardson WPP Establishment (264,727 ha of new protected land for total of 312,068 ha) • Dillon River WPP Establishment (191,545 ha) • Birch River WPP Establishment (331,832 ha) • Birch Mountains WPP Expansion (by an additional 1,563 ha) <p>Combining conservation/protected areas with sustainably managed forest lands should yield more carbon mitigation than either measure employed alone.</p> <p>The Kitaskino Nuwenëné Wildland Provincial Park was established in 2019 (161,880 ha of newly protected land)</p>	Continued development of uncompleted Regional Plans.	Ongoing
Alberta	<p>Caribou Habitat Recovery Program</p> <p>The purpose of the Program is to support the Recovery Strategy for the Woodland Caribou Boreal Population and the Recovery Strategy for the Woodland Caribou, Southern Mountain Population by providing funds for Eligible Activities. The Program is structured around projects that are made up of eligible activities aimed at the Program's purpose which may include: planning, monitoring, evaluation, reporting access management planning, Indigenous Knowledge collection, etc. This includes activities that measure, track and report on project activities and caribou habitat conditions for project management and outcomes measurement purposes.</p>	<p>Restoration of legacy seismiclines (linear disturbance)</p> <ul style="list-style-type: none"> • 70 km treated in 2017 • 134 km treated in 2018 	<p>Continued Implementation of the program.</p> <p>Current Proposed Treatment is 420 km in 2019.</p>	Ongoing

	Program is administered by the Forest Resource Improvement Association of Alberta (FRIAA).			
British Columbia	<p>Forest Carbon Initiative (FCI)</p> <p>Launched in early 2017, the FCI is being delivered by the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) to manage forest carbon and improve the sustainability of BC forests, communities and industry while mitigating the effects of climate change.</p> <p>The program invests in activities that generate greenhouse gas (GHG) benefits by increasing carbon sequestration including reforestation, fertilization, and tree improvement projects. This program also focuses on increasing utilization of forest waste and reducing slash pile burning to avoid emissions.</p>	<p>In early 2017, BC committed \$150 million to support the implementation of the FCI, demonstrating its support for the Pan Canadian Framework on Climate Change and Clean Energy (PCF).</p> <p>In late 2017, the federal Low Carbon Economy Fund (LCEF) announced support of \$140 million under the Leadership Fund. In March 2018, the agreement between the province of British Columbia and the government of Canada was finalized, which means a total of \$290 million in funding for eligible forest carbon investments from 2017/18 to 2021/22.</p> <p>Key FCI activities implemented in 2018/19 and early 2019 include:</p> <ul style="list-style-type: none"> • Incremental reforestation and fertilization through the Forests-for-Tomorrow (FFT) program. • Continued investments in fibre utilization through the Forest Enhancement Society of British Columbia (FESBC). • The FCI Provincial Reforestation and FCI Cariboo Wildfire Reforestation projects planted 1.2M and 150,000 trees respectively over approximately 600 ha. Planning, surveys, and prescriptions were conducted, and 11 M seedlings were sown for future planting. • Fertilization of 9,530 ha on the Coast to increase growth and carbon sequestration. Site surveys and prescriptions were also completed for future application areas. • Establishment of a Class A seed nursery to increase timber volume and carbon sequestration on the land base. 	<p>In 2019/20 and beyond, the province will continue to implement FCI activities aligned with the support provided by the LCEF Leadership Fund, including investments in alternatives to burning of wood waste and increased sequestration of carbon (reforestation, fertilization, utilization, tree improvement). The province will also seek to identify novel forest carbon activity types that yield positive GHG outcomes (e.g. forest health treatments).</p>	2021-22
Manitoba	<p>Spatial simulation of carbon stocks in Manitoba's peatlands</p> <p>Development of a spatial inventory of boreal peatland</p>	<p>Initial spatial inventory completed for eastern and central Manitoba; result is a 30m pixel-size raster dataset of carbon stocks (in tonnes) in peatlands.</p>	<p>Expansion of peatlands carbon inventory into western and northern Manitoba. Improvements, ground data collection, and validation continues based on the rapid</p>	Ongoing

	carbon stocks for the entire Province of Manitoba.		assessment protocol described above (Assessing carbon stocks in forested wetlands).	
New Brunswick	Carbon sinks and offsets commitments under New Brunswick's Climate Change Action Plan	New Brunswick's Department of Energy and Resource Development has incorporated a process to estimate carbon supply into stand level growth and yield development. Carbon supply has been added as a dashboard indicator during potential forest strategy development evaluation.	Continue to identify opportunities for increasing forest carbon sinks as part of New Brunswick's Department of Energy and Resource Developments sustainable forest programs.	Ongoing
Prince Edward Island	PEI has committed to protecting 7% of its landbase by 2020 under the Pathway to Canada Target 1.	Last year 198.5 ha were added to our natural areas network, bringing the current total to 3.6%	PEI will continue land acquisition, private land conservation agreements and support for indigenous protected and conserved areas. It will also review public lands for areas that could be protected and contribute to the 7% goal.	2020-12-01
Prince Edward Island	Launch of new Carbon Capture Tree Planting Program PEI has launched the new Carbon Capture Tree Planting Program, funded in partnership with the Federal Low Carbon Economy Fund. The program aims to create 285 ha of new forest over 4 years. The provincial Alternative Land Use Services Program (ALUS) will make one-time payments of \$650/ha to private landowners under this program.	Tree production in the provincial J. Frank Gaudet Tree Nursery has been expanded and the first planting is expected to begin Fall 2019. The program was advertised in spring 2019 and clients are currently being enrolled.	Moving forward, planting till take place in the fall of 2019. The program will also continue to enroll new clients in 2020.	2022/23
Quebec	Increasing carbon sinks through afforestation and reforestation The Government of Quebec has obtained \$50 million in funding from the Low Carbon Economy Leadership Fund over four years to increase the number of carbon sinks through afforestation and reforestation of areas in addition to its regular program. The funding is split evenly between private forests and Crown lands.	Three types of areas were identified: 1) Restoring the production of forests affected by the spruce budworm epidemic in the Gaspésie and Lower St. Lawrence regions. Planning for the sectors to be back in production by 2020 was completed and the seedlings ordered. 2) Increased productivity of spruce-moss and Ericaceae forests. Planning for the sectors to be back in production by 2020 is in progress. 3) Afforestation of wild land in private forests. Planning for the sectors to be back in production by 2020 was completed and the seedlings ordered.	1) Restore production in the sectors identified in the 2020 planning. Plan and restore production in the sectors for 2021. 2) Order the seedlings needed to restore production in 2020 by the end of 2018; plan and restore production in sectors for 2021. 3) Increased productivity of spruce-moss and Ericaceae forests The \$50 million envelope aims to increase forest carbon sinks through the reforestation of areas not included in Quebec's regular program. More than 14,000 ha of silviculture work will be done in	The project will end in March 2022.

			public and private forests to enable the sequestration of 1.6 million tonnes of carbon by 2050.	
Quebec	<p>Quebec’s Wood Production Strategy</p> <p>The fundamental aim of this Strategy is to produce more wood with the desired characteristics, at a competitive price, and based on profitable investments.</p> <p>One of the objectives is to “Help to increase carbon sequestration in the forest and in forest products.” One of the specific actions related to this objective is to “Identify the forest sector’s potential additional contribution to the achievement of Quebec’s greenhouse gas reduction objectives and targets.”</p>	<p>Québec’s Wood Production Strategy project was in public consultation with partners and Aboriginal communities in the summer of 2018. The final version of the Strategy is to be released in 2020.</p>	<p>Once Quebec’s Wood Production Strategy is released, appropriate measures will be implemented.</p>	<p>Final version of the strategy in 2020</p> <p>The regional strategies will be produced by 2021</p>
Quebec	<p>Spruce budworm treatments on private and Crown land</p> <p>The objective of these treatments is to reduce loss in productivity and decrease mortality of lands affected by the epidemic compared to an untreated reference area.</p>	<p>Extent of damage caused by outbreak was estimated. Planning for spraying private wood lots was carried out. Spraying on Crown land was continued (began in 2009). Quantify early emissions of CO2 avoided.</p> <p>Quebec continues to combat the spruce budworm. In 2019, Quebec used aerial spraying to protect susceptible stands on approximately 438,000 ha of public forests and more than 9,000 ha of small private forests.</p>	<p>Continued mapping of spruce budworm defoliation. First round of spraying on private wood lots was carried out in 2018. Spraying on Crown land will be continued.</p>	<p>Treatments will be ongoing until the end of outbreak.</p>
Quebec	<p>Additional silviculture work to sequester carbon</p>	<p>\$75 million over five years has been announced, in addition of the regular budget of silviculture.</p> <p>The silviculture work will increase the productivity of Quebec’s forests and thereby help reduce GHG in the long term through carbon sequestration.</p> <p>The proposed silvicultural work is:</p> <ol style="list-style-type: none"> 1) The conversion of total cuts into partial cuts; 2) The restoration of degraded forests; 3) The production of fast growing plants 4) The return to production of stands in an epidemic context 	<p>Planning of the implementation has started. For the first two years, \$16.1 million will be allocated to projects.</p> <p>More than 23 000 ha of silviculture work will be done in public and private forests.</p>	<p>March, 2023</p>

		<p>5) Closure of paths related o caribou</p> <p>One component enables external partners, including education and research forests, municipalities, and private forest development agencies, to carry out work.</p>		
Quebec	Development of knowledge and a tool adapted to the reality of Quebec's forest sector	<p>\$5 million over three years has been announced to develop knowledge and a tool to maximize the forest sector's GHG reduction potential.</p> <p>This work will be carried out through a close collaboration within the Quebec government to which will targeted Quebec's universities and others research institutes.</p>	Beginning of the research and planning.	March 2021

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Multiple	<p>Renewed support for Atlantic Woodworks Initiative:</p> <p>Atlantic Woodworks is a cooperative program led by the maritime Lumber Bureau with Support from Canada and 4 of Canada's Atlantic Provinces – New Brunswick, Newfoundland and Labrador, Nova Scotia and Prince Edward Island. It promotes wood as a preferred building material in Atlantic Canada.</p>	<p>Wood-based architectural design is celebrated, highlighted and promoted through workshops, special programs and building and development industry events.</p> <p>New in 2019, PEI has endorsed the Atlantic WoodWORKS program, and made a commitment of \$30,000 over three years to enhance the use of wood in construction, and the understanding of the values of wood construction by the construction industry and architects.</p>	<p>Expansion of the program to include PEI in promotional efforts in 2018-19.</p> <p>Continuing to build upon successes of mid-rise as affordable housing solutions in the Atlantic region and achieve the targets in the 3-year agreement to provide elements of new and emerging opportunities by placing emphasis on mass timber construction and the introduction of sustainable building practices.</p>	Ongoing
Federal	<p>Green Construction through Wood (GCWood) program</p> <p>Budget 2017 announced \$39.8 million to support projects and activities that increase the use of wood as a green building material in construction. The GCWood program supports Canada's transition to a more wood-inclusive construction industry by funding projects that encourage:</p> <ul style="list-style-type: none"> • Greater adoption and commercialization of wood- 	<p>The federal government announced the program in October 2017. Calls for Expressions of Interest for tall wood buildings, low-rise non-residential buildings, and timber bridges have all closed as of April 2019. The program received 57 applications over the three calls requesting over \$100 million in funding to construct nearly \$2 billion in projects. Several agreements have been signed and projects are underway.</p>	<p>Finalize agreements with the remaining shortlisted demonstration projects, and prepare for them to be announced and built in the next two to three years. GCWood is targeting the delivery of 15-20 demonstration projects under the program.</p> <p>Continue to provide ongoing support for the development of advanced training/education curriculum, design tools, and information products.</p>	Funding supports activities for 4 years to 2021-22

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
	<p>based products in the construction of innovative tall wood buildings, timber bridges, and low-rise wood commercial buildings.</p> <ul style="list-style-type: none"> • Replication of demonstrated innovative non-traditional wood-based buildings and timber bridges. • Research that addresses the gap in technical information needed to facilitate revisions to the 2020 and 2025 National Building Code of Canada (NBCC) to allow tall wood buildings beyond the current 6 storey limit. • Advanced wood education and development of design tools. 	<p>To advance wood education and training, the program funded the first phase of the education roadmap implementation, including a National Wood Education Workshop to discuss curriculum development priorities at college and university to help close knowledge gaps. The program also funded a workshop on life cycle assessment and another on building information modelling.</p> <p>The program supported research and development to facilitate changes to the 2020 edition of the National Building Code of Canada to allow for taller and larger wood buildings.</p>	<p>Support for preliminary R&D and code committee work for revisions to the 2025 edition of the National Building Code of Canada will commence.</p>	
British Columbia	<p>Increase the use of low carbon and renewable materials in all public sector infrastructure projects</p> <p>New projects align with existing government policy including:</p> <ul style="list-style-type: none"> • Requiring LEED Gold certification of new public sector facilities • The Greenhouse Gas Reduction Targets Act/Carbon Neutral Government Regulation • The Wood First Initiative (which includes the Wood First Act and Wood First Program) <p>BC Procurement Strategy, June 2018, commits government to creating a life cycle assessment framework to measure and report on embedded carbon in (some) building materials used in capital infrastructure projects</p>	<p>Use of Low Carbon/Renewable Materials in Public Sector Infrastructure projects initiated.</p> <p>Currently identifying and evaluating policy options and developing recommendations. Draft guidance materials developed</p> <p>Strategy released June 25, 2018. Details to be determined.</p>	<p>Seek input from industry partners on draft guidance materials.</p> <p>Identify and assess policy options to support increased use of BC wood.</p> <p>Work with stakeholders across government, including the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to design framework.</p>	Target launch fiscal 2019/20.
British Columbia	<p>Forestry Innovation Investment (FII) Wood First Program</p> <p>FII's Wood First Program focuses on advancing wood use in the province by positioning wood as a preferred building material through diversifying uses of wood in building design and construction, and supporting innovation in manufacturing.</p>	Ongoing	\$68M of total sales of wood in BC's non-residential and multi-storey/multi-family residential construction markets attributed to program interventions by 2018-19.	Program completion by 2020

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
New Brunswick	<p>Wood in the Construction of Public Buildings and Infrastructure Policy (i.e. Wood First Policy)</p> <p>New Brunswick's Climate Change Action Plan commits to reduce provincial buildings GHG emissions and encourage the use of wood products in construction, including through building codes, standards and procurement policies.</p>	Continued commitment to increasing the use of structural and appearance wood products in construction, based on a favourable lifecycle evaluation, for all publicly funded new building construction and major renovations.	The Wood First Policy will continue to be followed.	Ongoing
Ontario	<p>The Made-in-Ontario Environment Plan promotes the use of wood for construction</p> <p>Increasing the use of Ontario timber in building, construction and renovation to reduce greenhouse gas emissions and increase long-term carbon storage.</p>	Development of technical tools and resources, supporting education and training in wood construction and advancing mass timber building demonstration projects.	Promote the use of Ontario's Tall Wood Reference and finalize carbon calculator.	Ongoing
Ontario	Establishment of a state-of-the-art, cross laminated timber facility in St. Thomas, Ontario	Site selection, engineering and material sourcing has been completed.	Building and commissioning of the facility by 2020.	Commissioning 2020
Quebec	Prefabrication wood program : optimization and automatization (PWPOA)	This program support investment projects and studies by companies in the wood prefabrication sector. The program is accessible on the internet since November 1, 2019.	Dissemination of the program to the targeted clientele.	March 2022
Quebec	Continuous training program on the use of wood in construction	The aim of the Program is to enhance the ongoing training offer on wood and its use in construction. The total budget envelope of \$2 million comes from the Green Fund. The program has been accessible on the internet since November 1, 2019.	Dissemination of the program to the targeted clientele. The goal is to further develop wood construction skills and thereby increase wood use in the province of Quebec.	December 2020
Quebec	<p>Wood Building Demonstration Program</p> <p>Implementation of the Technological Showcase for Wood Buildings</p>	Program launched in December 2016 with a budget of \$11 million by 2018.	Continuation of the program and monitoring of supported projects	March 31, 2020

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
	Program for applicants with an innovative wood construction project or an innovative wooden solution in the non-residential or multifamily construction sector in Quebec.	<p>In 2018, the Program was approved in order to increase the number of mobilizing projects being carried out. As such, the program is now in effect until 2020. In addition, the list of eligible expenses has been enhanced and the admission rules have been adapted to projects submitted by municipalities and school boards.</p> <p>In 2019, the total budget of the program is now close to \$14.5 million.</p> <p>Since the beginning of the program, 13 projects have been approved for a total of \$7.3 million in funding.</p>		
Quebec	<p>Investments in FPInnovations research</p> <p>As part of cost-sharing agreements, each year the federal and provincial governments invest in FPInnovations' forest management and sustainability research. This research focuses on the design, engineering and provision of large wood structures and components for construction.</p>	<p>Example of how the government supports FPInnovations research:</p> <p>In March 2017, the Quebec Ministry of Forests, Wildlife and Parks also announced the allocation of funds to FPInnovations, for a total of \$4 million over four years to pursue its national collaborative research program.</p>	Quebec will continue to carry out FPInnovations projects in cooperation with its partners in 2019–2020.	March 2021
Quebec	<p>Wood Charter</p> <p>The purpose of the Quebec Wood Charter is to increase the use of wood in non-residential and multi-family construction in Quebec.</p>	<p>The Wood Charter: Taking Stock was unveiled at the Woodrise, an event held in Quebec City in September 2019. This review highlights many of the results achieved since the launch of the Wood Charter in 2015.</p> <p>The Wood Charter Taking Stock also presents the Quebec government's commitment to launch an even more ambitious version of the Wood Charter.</p> <p>The implementation of the Wood Charter measures is ongoing, including the following achievements in recent years:</p>	<p>A new Wood Charter should be launched in fall 2020</p> <p>Continue to implement Wood Charter measures.</p> <p>Updating and drafting of guidelines and explanatory guides on wood construction by the Régie du bâtiment du Québec.</p> <p>Support for modeling and optimization in the prefabrication sector.</p> <p>Support for the release of environmental statements for forest products; Target: Increase in the rate of wood use in non-residential and</p>	Ongoing

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		<p>Measure 1: Government Leadership:</p> <ul style="list-style-type: none"> • creation of a high-level interdepartmental committee on wood construction to ensure that departments and agencies set an example for the use of wood in construction projects funded in whole or in part by public funds; • allocation of financial assistance to Cecobois to develop and publish the tool for calculating GHG emissions. <p>GESTIMAT is now functional and accessible. It is a tool used to quantify, analyze and compare greenhouse gas emissions from a building's structural materials;</p> <ul style="list-style-type: none"> • annual reporting of the use of wood in Quebec public buildings. First annual report covering the period from 1 April 2016 to 31 March 2017 was completed. <p>Measure 2: Innovative Wood Construction:</p> <ul style="list-style-type: none"> • implementation of the Innovative Wood Solutions program; • creation of an advisory committee with the Régie du Bâtiment du Québec; • allocation of financial assistance for a feasibility study on the construction of a primary school in wood. <p>Measure 3: Training and Promotion:</p> <ul style="list-style-type: none"> • funding to universities to increase the availability of compulsory training on the use of wood in construction (e.g., hiring of teachers specializing in wood construction); • funding for Cecobois' activities; • funding for continued training in the use of wood in construction; • Support of an activity to facilitate labour market integration of foreign graduates specializing in timber construction. 	<p>multi-family construction, which could reach 32% in 2020.</p>	

PCF ACTION: *Increasing the use of wood for construction*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		<p>Measure 4: Research and Innovation:</p> <ul style="list-style-type: none"> • funding received from FPInnovations for various research initiatives; • renewal of support to the Université Laval’s Industrial Research Chair for environmentally responsible wood construction for five years, from 2018 to 2023. <p>Dissemination of the Strategy to partners and the public.</p> <p>Setting up a framework for monitoring, evaluating and reporting on the Strategy (indicators and targets).</p>		

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Multiple	Biomass energy project in Saskatchewan	The First Nations-owned Meadow Lake Tribal Council Bioenergy Centre will generate carbon-neutral green power using sawmill biomass residuals. It will be the first plant of its kind in Saskatchewan and is expected to produce 6.6 megawatts of baseload electricity. Funding of the project is made through the Investing in Canada Infrastructure Plan, Indigenous Services Canada, and Crown-Indigenous Relations and Northern Affairs.		
Multiple	<p>Whitesand First Nation Community Sustainability Initiative (CSI)</p> <p>The CSI will replace diesel power generation by constructing and operating a combined heat and power cogeneration plant and a wood pellet plant. The initiative also includes forest management of the Armstrong Forest to maintain healthy forests as a carbon sink.</p>	<p>Since 2009, Whitesand First Nation, Ontario, and Canada have invested \$10.4 million into the CSI, for project development costs, which includes planning, environmental, engineering, and other professional services.</p> <p>Power Purchase Agreement (PPA) – a renewable 20-year PPA contract executed March 2018.</p> <p>Construction of the industrial park was completed in December 2017.</p>	<p>Start construction drawings and procurement in Fall 2019.</p> <p>Phase 2 proposed construction of the cogeneration plant and pellet plant to start in Spring 2020.</p>	<p>Winter 2021-22: Bio-Economy Centre commissioning and operation.</p>

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Multiple	Development of the Wikwemikong First Nation 150,000 metric tonne wood pellet plant using forest biomass in Nairn Centre.	<p>Global Marketing Plan, Forest Resource Assessment and Site Assessment completed.</p> <p>Class 30 business plan, engineering and environmental planning completed.</p> <p>Regional marketing assessment of Northern Ontario completed.</p>	<p>Complete site environmental assessment.</p> <p>Complete Class 20 comprehensive business plan, engineering and environmental planning.</p> <p>Initiate development of fibre supply agreements, contracts, and letters of intent as appropriate.</p>	Tentative construction in 2021-22
Federal	Clean Energy to Reduce Reliance on Diesel in Remote Communities (CERRC) Program Budget 2017 provided \$220 million for this program, of which \$55 million is to support transitions from fossil fuel heating to bioheating.	<p>Intake and review of bioheating projects submitted for funding. The CERRC program solicited proposals from rural and remote communities in the spring of 2018. The BioHeat stream received 42 eligible proposals through Round 1, including 10 that covered multiple streams (combined BioHeat and Deployment or Demonstration streams). 22 projects were shortlisted, 17 of which have signed contribution agreements. The total funding allocated to those 17 projects is \$14.5 million.</p> <p>A second call for applications for the CERRC closed in February 2019 and the BioHeat stream received 43 applications (including 12 multiples) with a total funding request of \$103.1 million. 11 projects are moving forward.</p> <p>Overall, 31 of 33 projects are located in Indigenous communities.</p>	<p>Most approved Bioheat projects will roll out over multiple years while some aim to be completed this year (FY 2019-2020).</p> <p>CERRC BioHeat funding is fully allocated.</p>	Program funding provided for 6 years to 2023-24

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Alberta	<p>Alberta Carbon Offset System – Offset Generation</p> <p>The Alberta emission offset system is a regulatory program that enables facilities regulated under the Carbon Competitiveness Incentive Regulation (CCIR) to purchase and retire emission offsets to meet their emission reduction compliance obligations. CCIR will be replaced by an incoming Technology Innovation and Emissions Reduction Regulation that will be in place from January 1, 2020 going forward. Offset treatment and rules use are expected to remain constant between the two regulations.</p>	<p>Related Carbon offsets generated* that relate to forests and forestry.</p> <p>Protocol(s): Energy Generation from the Combustion of Biomass Waste/ Diversion of Biomass to Energy from Biomass Combustion Facilities 2017: 272,415 t CO₂eq offset credits generated (Estimate Revised in 2019) 2018: 231,866 t CO₂eq offset credits generated 2019: TBD</p> <p>Protocol: Energy Efficiency Projects 2017: 273,146 t CO₂eq offset credits generated (Estimate Revised in 2019) 2018: 99,870 t CO₂eq offset credits generated 2019 TBD</p> <p>Protocol: Anaerobic Treatment of Wastewater Projects (Protocol reporting added in 2019) 2017: 9,951 t CO₂eq offset credits generated 2018: 0 t CO₂eq offset credits generated 2019 TBD</p> <p>*Number of credits generated may shift depending on query date of Alberta Offset Registry as credits need not be reported in the year of generation and offsets can also be cancelled after being declared.</p>	Ongoing	Ongoing
Alberta	<p>Bioenergy Producer Program</p> <p>The Bioenergy Producer Program (BPP) is intended to support bioenergy production capacity in Alberta in order to reduce greenhouse gas emissions from the use of fossil fuel alternatives and create value-added opportunities with economic benefits.</p>	<p>October 2017 to March 2020</p> <p>Two existing stand-alone woody biomass power plants are to receive grants to a total \$16.096 million.</p>	Ongoing until 2020	March, 2020
Alberta	<p>Forest Industry Bioenergy and Bioproduct Projects</p> <p>Lafarge Cement will be testing the use of wood waste to replace natural gas in the production of cement.</p>	<p>Supported dialogue between forest company residual fibre producers and industries able to utilize material in bioenergy production.</p> <p>In May 2018 Pinnacle Renewable Energy completed a new pellet</p>	Continue to work with biomass proponents to utilize forest biomass to help reduce GHG emission from use of hydrocarbons.	Lafarge Cement: 2020

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
	<p>Capital Power is testing the use of woody biomass to replace the use of coal at their power plants.</p> <p>Pinnacle Renewable Energy Inc. is developing a pellet facility near Edmonton and will source biomass from regional mills.</p> <p>Tolko Industries in High level Alberta plans to install a thermal power plant to consume 80% of sawmill bark wood waste.</p> <p>Tolko Industries announced the building of a new pellet plant in collaboration with Pinnacle Renewable Energy. "Northern Pellet Limited" will be linked to the Tolko sawmill and use excess waste fibre. The plant is expected to be in production in late fall 2020.</p>	<p>production facility with an expected 400,000 tonnes of annual gross production.</p> <p>Tolko's Thermal Energy System is expected to be commissioned by late summer of 2019, slightly behind schedule partially due to wildfires in the area.</p>		<p>Capital Power: 2019-20.</p> <p>Joint Tolko/Pinnacle pellet plant, fall 2020.</p>
British Columbia	<p>Forest Biomass Supply Information System</p> <p>Development of a web-based, GIS enabled system to more accurately estimate residual biomass availability at regional scales throughout the province to support high-value bioproduct development.</p>	Under development. TSA level analysis underway.	March 2020 beta-version complete.	March 2022
New Brunswick	<p>Forest Biomass Policy</p> <p>This policy sets a framework within which companies are permitted to harvest forest biomass in a sustainable manner.</p> <p>Material harvested under this program is used either as a direct input to energy production or is used to produce fuel (e.g. pellets).</p>	<p>Continually Investigating large-scale projects for the production of bioenergy and/or biofuels. The raw input for these projects is intended to be a combination of forest biomass and low-grade pulp fibre, filling a gap in the market for these products.</p> <p>There are more than twenty New Brunswick facilities which already consume residual forest products (either forest biomass or sawmill residues) for the purpose of energy production and/or producing fuels. These facilities range from small-scale "biobrick" producers to the University of New Brunswick's</p>	One of the projects being investigated is expected to move forward. If market conditions are not favourable, the project will be put on hold until there is a viable opportunity.	Ongoing

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		central heating plant, which generates steam using forest biomass and other residual wood products.		
Nova Scotia	<p>Development of Wood Energy heating solutions for public buildings.</p> <p>Create a new market for lower grade wood fibre from private woodlands for heating public buildings. Create and/or sustain local employment opportunities across NS. Substitute fuel oil imports with local renewable more carbon friendly fuels that mitigate GHG. Support sustainable forest management and strengthen the provincial wood supply chain, especially for private woodlot owners. Long-term reliable, stable and predictable heating costs for public building. Allow better economics for forest managers to undertake sustainable forest management and silviculture in woodlots.</p>	Many government departments are supporting investigation of potential to heat government building with woodchip-based heating systems.	<p>Assessment of potential installations in various regions of the province is underway. Procurement protocols and business case assessments are being developed and reviewed.</p> <p>In January 2019, a cross-departmental task group from 11 departments was established to identify suitable public buildings (including hospitals, schools, offices, correctional facilities) located across the province to convert older fossil fuel heating systems to wood chip heating systems. Sites were assessed against established criteria, including the age of the current oil heat system, heating requirements of the building, land availability, proximity to other buildings and truck routes. An open procurement process (phase 1) is planned for August 2019 for contracted operations and services model from private sector contractors to design, construct, own and operate the heating plant and sells units of heat to the facility users. Incorporated the Nova Scotia Innovation Hub as a not-for-profit in March 2019. Co-hosted Atlantic BioCon (Atlantic Canada biorefining conference) in Halifax with BioNB.</p>	A phased implementation is planned over several years, building on lessons learned from phase 1 and adapting approach as needed for qualified public buildings province wide

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Ontario	<p>A thermomechanical-pulp biorefinery (TMP-Bio) project.</p> <p>It will provide a means of converting wood into a wide range of new and potentially high-value products.</p>	<p>In September 2018, construction began on a largescale pilot biorefinery plant, which will become a focal point for the further development and commercialization of bio-based products made from wood.</p>	<p>Commissioning of the new facility began in the second quarter of 2019, and once in full operation it will have the capacity to process 100 tonnes per year of hardwood chips. Having recently completed primary construction, the TMP-Bio facility is now into production. Two additional pieces of equipment are to be commissioned on or before end of July 2019. Next steps are to continue commissioning and testing. The process will produce two basic product lines: cellulosic or 2G sugars, and a high-quality form of lignin referred to as H-lignin.</p>	<p>The project is scheduled to complete in Q3 of 2020.</p>
Ontario	<p>Biochar in Automotive Products</p>	<p>Project leading to the commercialization of forestry products derived bio char as performance enhancing additives for the manufacture of automotive parts. This project successfully tested, developed and commercialized a performance enhancing additive, composed of Ontario-sourced biochar, for the manufacture of automotive products. This additive is now used regularly in Woodbridge's production line.</p>	<p>Ongoing use of bio-char and increase renewable content in polyurethane foams</p>	<p>Ongoing</p>
Ontario	<p>Haliburton BioChar commercialization of organic carbon production from wood fibre product</p>	<p>Pilot plant effectively demonstrated the feasibility of the process to produce organic carbon from wood for use in filtration and purification applications or as an industrial additive substitute for petro-chemical produced carbon black.</p>	<p>Working on quality improvements to meet client specifications 2019-2020.</p>	<p>Commercial operation at a production level of 14 tonnes per week by June 2020.</p>
Ontario	<p>The Made-in-Ontario Environment Plan promotes the use of renewable forest biomass.</p> <p>For example, in the steel industry and as heating fuel for northern, rural and Indigenous communities.</p>	<p>Support establishment of waste wood heating hubs and support the Canadian Carbonization Research Association.</p>	<p>Continue to facilitate and support projects.</p>	<p>Ongoing</p>

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Prince Edward Island	<p>Expanding the use of biomass heat in public buildings</p> <p>PEI is expanding its use of biomass heat in public buildings through awarding a tender for an additional 17 buildings (over and above the 29 currently heated by biomass). To ensure wood harvested for this purpose is done in accordance with PEI's forest management guidelines, a forest auditor has just been hired to complete pre- and post-harvest inspections.</p>			Ongoing
Quebec	<p>2018-2023 Development Strategy for Quebec's Forest Products Industry</p> <p>The main objective of the development strategy is to enable this sector to remain competitive and to contribute more to the prosperity of Quebec and its regions by supporting businesses in the innovation, modernization and development of new products and markets that will ensure that plants continue to operate. It is therefore meant to increase wood manufacturing to create wealth and to contribute widely to the fight against climate change.</p>	<p>June 2018: Announcement of the Strategy with an initial budget envelope of 827 million.</p> <p>The Strategy includes 11 objectives and 43 measures to address the various challenges facing the forest products industry. These revolve around five areas of intervention that are designed to enable this sector to remain competitive and to contribute more to the prosperity of Quebec and its regions through the following:</p> <ul style="list-style-type: none"> • innovation; • modernization and improvement of equipment and processes; • regulations and public policies; • the business environment; • the markets <p>Overall vision encompassed in this strategy: To 2023, the forest products industry:</p> <ul style="list-style-type: none"> • is a source of pride and a creator of wealth for Quebec's society; • is a world leader in wood fibre products that are the result of sustainably managed forests; • adapts, diversifies, modernizes and reinvents itself to keep up with global economic changes; and, contributes through its various sectors to the reduction of greenhouse gases (GHGs) and plays a key 	Continuation of the implementation of the measures provided in the Strategy.	2023

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		<p style="text-align: center;">role in the fight against climate change.</p> <p>In 2018-2019: Dissemination of the Strategy to partners and the public, setting up a framework for monitoring, evaluating and reporting on the Strategy (indicators and targets) and implementation of the measures provided in the Strategy.</p>		
Quebec	<p>Wood Innovation Program (WIP)</p> <p>The program is aimed at stimulating investments in innovative projects in the manufacture of forest products. This support is in the form of financial aid for studies or investment projects.</p>	<p>2019: Third increase of funds allocated to the program to reach a total budget of \$120 million until 2023. The additional budget will also allow companies in the forest products industry to realize projects with non-traditional partners, for example in the metallurgy or plastics industries, to accelerate research and development, commercialization of new products.</p> <p>The Government of Quebec's contribution is a key stepping stone to generate strategic investments from the forest products industry. To date, the close to \$66 million in grants have generated total investments of \$422 million (6.4 times more).</p> <p>These projects involve all sectors of the forest products industry: pulp, paper and bioproducts, panels, lumber, wood construction and bioenergy.</p> <p>Here are two examples of innovative projects supported by the Wood Innovation program:</p> <p>In September 2018, Uniboard Canada obtained a \$2.5 million grant from the Government of Quebec for its Mont-Laurier plant. The overall project, evaluated at \$18 million, will enable the company to develop an innovative drying technology through heat recovery, which will increase its effectiveness and result in fewer greenhouse gas emissions.</p>	Continuation of the Wood Innovation program and monitoring of supported projects.	March 2023

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		In January 2019, the Government of Quebec awarded a grant of \$1.5 million to Art Massif Structure de bois, a company from Saint-Jean-Port-Joli. The project, costing close to \$4 million, will allow the company's plant to implement a technology developed jointly with the Université Laval's Industrial Research Chair as well as develop new wood construction products and markets.		
Quebec	<p>Innovation Platform</p> <p>The objective of the platform is to support and accelerate the development of a new generation of panels and engineered wood composite products. The platform will support manufacturers from the product design phase through pre-marketing to the pilot manufacturing phase.</p>	<p>Announced in May 2017, the Government of Quebec is investing \$4 million to promote innovation, diversification and competitiveness in the panel industry.</p> <p>Since the beginning of the program, 4 projects have been approved for a total of \$0.6 million in funding.</p>	Continuation of the implementation of the innovation platform and its associated projects.	March, 2021
Quebec	<p>Residual Forest Biomass Program</p> <p>The Residual Forest Biomass Program is aimed at reducing GHG emissions and fossil fuel consumption by funding projects involving energy conversion to residual forest biomass.</p>	<p>A new standards framework for the Residual Forest Biomass Program came into effect on January 31, 2018.</p> <p>In order to continue carrying out projects, additional funds were allocated to the Residual Forest Biomass Program by the Government of Quebec in 2018.</p> <p>Moreover, an additional \$50 million from the federal government's Low Carbon Economy Leadership Fund was allocated to the program in 2017.</p> <p>In 2019, an additional \$30 million from the Government of Quebec was allocated to the program.</p> <p>For the 2013-2020 period, a total budget of \$150,7 M is planned for the program.</p>	Continuation of the program and monitoring of associated projects.	Program in effect until March 31, 2021, or until the budget is fully committed.
Quebec	<p>Support for innovative initiatives in pulp and paper plants</p>	In November, 2016, the Ministry of Forests, Wildlife and Parks announced the allocation of two financial assistance packages to	Continuation of projects.	March 2020

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		<p>companies in the pulp and paper sector of the Outaouais region, for implementation of innovative technologies:</p> <p>Allocation of financial assistance to Papier Masson WB Ltée. for the implementation of a new process in the production of wood fibre used in the manufacture of wood-plastic composite used in the manufacture of various products, including interior car doors panels.</p> <p>Allocation of financial assistance to Fortress Specialized Cellulose Inc. for the installation of a new system that will use birch wood to produce pulp for chemical processing, an ingredient used in the manufacture of many products used daily, including clothing, automobile parts and medical equipment.</p>		
Quebec	<p>Tax credit to support the production of pyrolytic oil from residual forest biomass</p> <p>This credit, set at \$0.08/L, is in effect from April 1, 2018, to March 31, 2023, and will allow for a transition once a Quebec regulation on minimum biofuel content comes into effect. The Quebec Economic Plan released in March 2018 forecasts a financial impact of \$6.9 million over five years for this tax measure.</p>	<p>The credit, set at \$0.08/L, came into effect in April 2018. It will allow for a transition once a Quebec regulation on minimum biofuel content comes into effect.</p> <p>The Quebec Economic Plan released in March 2018 forecasts a financial impact of \$6.9 million over five years for this tax measure.</p>	Application of the tax credit.	The tax credit will end March 31, 2023.
Quebec	<p>Tax measures to promote the production of biofuel in Quebec</p>	<p>As part of the Quebec Economic Plan released in March 2018, the Government announced that it would extend the tax measures ending March 31, 2018.</p> <p>The terms of these measures have also been amended to offer tax credits corresponding to the following fixed amounts:</p> <ul style="list-style-type: none"> • \$0.03/L for first-generation ethanol; • \$0.16/L for cellulosic ethanol; • \$0.14 /L for biodiesel. 	Application of tax measures.	Terms effective April 1, 2018 to March 31, 2023.

PCF ACTION: *Generating bioenergy and bioproducts*

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
		<p>This new approach takes into account biofuel performance in reducing GHG emissions. For the forest industry, producers of cellulosic ethanol from forest biomass will be able to better predict their incomes thanks to the fixed amount provided by the tax credit.</p> <p>These new terms provide for a transition once a Quebec regulation on minimum biofuel content comes into effect. The government estimates that the extension of these tax credits will represent tax assistance of more than \$34 million over five years for Quebec producers.</p>		
Yukon	<p>Yukon Biomass Energy Strategy</p> <p>Approved in 2016, the Biomass Energy Strategy outlines an approach for the expansion of biomass energy use in Yukon.</p>	<p>Completed two years of work with funding from the Natural Resources Canada Strategic Partnership Initiative (SPI) to support biomass development in Yukon.</p> <p>Year Two (2017/18) projects include:</p> <ul style="list-style-type: none"> • Strategic planning for Trondek Hwechin and Selkirk First Nation to develop a biomass economy. • Financial assessment of a district heating opportunity for Trondek Hwechin. • Evaluation of residential scale CHP feasibility for Kluane First Nation. • Year two of northern feedstock opportunity for Vuntut Gwitchin First Nation. <p>2018/19 projects include:</p> <ul style="list-style-type: none"> • Whitehorse and Southern Lakes forest resources management plan technical study 	<p>YG has negotiated a three year agreement with the Indigenous Forestry Initiative (NRCan), focusing on providing planning, engineering and deployment support to Yukon First Nations.</p> <p>2019/20 work will see continued emphasis on planning and policy development to support use of biomass energy in Yukon through wood supply and infrastructure development.</p>	Ongoing

PCF ACTION: Advancing innovation in GHG-efficient forest management practices

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
Alberta	<p>Alberta - Emerging Clean Technology Partnerships</p> <p>Fosters strategic technology partnerships between advanced technology enterprises, targeted jurisdictions and Alberta's innovation system.</p>	2017 – Funded projects - Bio battery – decentralized production of fuel from forest and agricultural waste – \$750,000 funding contribution - \$2,527,000 total project funding	Ongoing	Ongoing
Alberta	<p>Alberta Innovates - Alberta Bio Future(ABF)</p> <p>ABF is aimed at diversifying the provincial economy and accelerating growth of Alberta's bioindustrial sector by taking advantage of emerging opportunities. ABF is focused on increasing sustainability and reducing our carbon footprint by promoting use of Alberta's renewable resources. ABF provides funding in three strategic priority areas: research and innovation, product and technology commercialization, and equipment utilization.</p>	Alberta Bio Futures is currently supporting over 70 active forest, forestry and woody biomass related projects with associated total project funding over \$60,000,000. Total project funding refers to total value of the projects including ABF contributions, in-kind contributions, and other funding sources.	Ongoing	December, 2020
Alberta	<p>Capital Investment Tax Credit (CITC)</p> <p>The Capital Investment Tax Credit (CITC) is not sector specific and supports increased capital investment by businesses involved in manufacturing, processing and tourism infrastructure activities by providing a 10% tax credit for eligible expenditures over \$1 million. Budget 2018 extended the tax credit to 2021-22, providing \$30 million each year.</p>	This sector as of 2018 has been issued \$14.2M of the \$70.0M total available program tax credits. Recipient corporations have raised over \$168.99M in associated investment.	Ongoing	2022
Alberta	<p>Emissions Reduction Alberta (ERA)</p> <p>ERA is a not-for-profit corporation funded by the Government of Alberta that works with the government,</p>	Current Active forests and forestry related projects include: Genesee Wood Waste Biomass Co-Firing Project: Capital Power Multi-site Cement Industry Low Carbon Fuel Implementation and Supply Chain Optimization	Continued Calls for Proposals.	Ongoing

PCF ACTION: Advancing innovation in GHG-efficient forest management practices

JURISDICTION	ACTIVITY	STATUS / ACCOMPLISHMENTS	NEXT STEPS / TARGETS	END DATE / TARGET
	<p>industry and innovators to accelerate development of innovative technologies that reduce GHG emissions.</p> <p>Biological Resource Optimization is one of the focus areas for ERA investment which focuses on projects that address biological GHG emissions, including areas such as agriculture, forestry, and waste management.</p>	<p>Improved Construction of Roads and Pipelines to Minimize Impact on Peatland GHG Emissions</p> <p>Biological Plant Inoculants to Increase Carbon Sequestration in Alberta's Agriculture and Forestry Sectors</p> <p>Renewable Transportation Fuel Demonstration Project</p> <p>-Kraft Pulp Mill Flue Gas Energy Recovery Project -Alberta-Pacific Forest Industries Inc</p>		
Saskatchewan	<p>Climate Change Vulnerability Assessment in SFM – CCFM Framework</p> <p>Collaborative project between the Ministry of Environment, Forest Services Branch, The University of Saskatchewan and Mistik Management Ltd. Through this collaboration, they will be undertaking a case study utilizing the CCFM Climate Change Vulnerability Assessment Framework to build adaptive capacity within an industry setting for building resiliency and adaptation to impacts of climate change.</p>	<p>Case study and research has been completed and is in the draft report stages. The study and testing of the CCFM Climate Change Vulnerability Framework culminated in the completion of a Ph. D. dissertation (December 2018).</p> <p>Mistik Management Ltd. is utilizing the results to mainstream climate change adaptations into their existing best management practices protocols and management planning procedures.</p>	<p>Continue to collaborate with the provincial government and forest industry to expand adaptation tools and mainstreaming for SFM.</p> <p>To provide a more comprehensive representation across the boreal in SK, the climate change guidelines and adaptation manual from the Mistik study, is being incorporated into the vulnerability assessment currently underway with other SK industry partners (Weyerhaeuser and Edgewood)</p> <p>A comprehensive adaptation manual and guidelines document is scheduled for completion in March 2020.</p>	March, 2020
Saskatchewan	<p>Forest Management Planning</p> <p>Forest Management Agreement holders are legally required to address how climate change will impact their ability to achieve their management targets.</p>	<p>Four approved forest management plans which have a section which addresses the impact of climate change on their ability to achieve the targets set out in the plan.</p>	<p>Upcoming FMP Targets: Approve 2 forest management plans</p>	Fall 2019