

**GOVERNMENT OF CANADA RESPONSE TO RECOMMENDATIONS IN THE STANDING COMMITTEE ON
NATURAL RESOURCES REPORT:**

**“VALUE-ADDED PRODUCTS IN CANADA’S FOREST SECTOR: CULTIVATING INNOVATION FOR A
COMPETITIVE FOREST BIOECONOMY”**

August 22, 2018

INTRODUCTION

The Government of Canada has reviewed the report of the Standing Committee and thanks its members for their efforts in developing this report. The Government also wishes to extend its thanks to the numerous witnesses who provided expert testimony to the Committee, providing the members with a diversity of perspectives on the forest bioeconomy.

The Government of Canada agrees with all of the Committee's recommendations. The Government's response to the specific recommendations follows, and will outline federal science, programs and engagement mechanisms that both respond to the recommendations and help to drive the development of a competitive forest bioeconomy in Canada.

The forest industry has declined in relative importance in recent years, owing in part to technological change reducing the markets for the formerly lucrative pulp and paper sectors of the industry. This, in combination with the effects of the Great Recession, led to the industry's nadir in 2009. Recent years have seen a return of the forest industry. 230,000 people are now directly employed by the forest industry, a number that has stabilized after years of decline. Job losses in some sectors have been offset by gains in others. Meanwhile, the industry is showing signs of sustained and growing profitability.

The forest industry is *leading* the way in the burgeoning bioeconomy; helping to reduce greenhouse gas emissions and advance Canada's sustainable development goals toward a low-carbon economy.

Investments in research and advanced technologies have led to the development of innovative wood, pulp and paper products, driving new sources of revenue that are keeping Canada's forest industry competitive, even as markets for traditional forest products fluctuate. Through the redesign of industrial processes, a host of bioproducts is becoming part of Canada's forest product mix as well. The production of advanced materials, green chemicals and renewable energy sources is helping Canada become a leader in the green economy and develop new product markets both at home and abroad.

The Committee has also noted the importance of the forest bioeconomy to generate new opportunities in Canada's rural and remote communities, including Indigenous communities. This would include helping communities make a shift from reliance on diesel to local biofuel solutions for heat and power generation in their communities.

Recognizing the need for policy coherence on the forest bioeconomy, Canadian Forest Ministers, under the leadership of the Honourable Jim Carr, Minister of Natural Resources and 2017 Chair of the Canadian Council of Forest Ministers (CCFM), unanimously ratified, in September 2017, *A Forest Bioeconomy Framework for Canada*. The goal of the framework is to increase the use of forest biomass throughout the economy as well as to meet other priorities including the objectives of the Pan-Canadian Framework on Clean Growth and Climate Change, clean technology innovation, green infrastructure, and green job creation.

In developing the Framework, in 2016, the CCFM launched an engagement campaign to garner input from Canadians on their vision for Canada's future bioeconomy. Over 350 stakeholders from a wide range of backgrounds contributed input through facilitated dialogues, regional outreach and an online survey. Dedicated outreach to Indigenous peoples during the cross-country engagement also took place and National Indigenous leaders were invited to meet with the Minister of Natural Resources at the 2017 CCFM meeting where the framework was ratified to discuss pressing issues, including the CCFM framework.

This framework is also a clear signal that the Government, and all CCFM members, are ready in a spirit of collaboration to tackle the forest sector's ongoing challenges, while ensuring the vibrancy and character of Canada's forests for generations to come.

As the Standing Committee's report indicated, however, the Canadian forest-sourced bioeconomy has yet to reach its full potential. The Government of Canada, through its forest science, programs and collaborations with provinces, territories, academia, industry, nongovernmental organizations and Indigenous peoples, is supporting the continued transformation of the sector.

STANDING COMMITTEE RECOMMENDATION #1: *The Committee recommends that the Government of Canada work with industry, research institutions, Indigenous governments and communities, and provincial/territorial governments to sustain and improve Canada's forest management policies and practices, by:*

- a) continuing to study, address and adapt to short- and long-term climate change impacts, including forest fires, pest infestation and variations in forest temperatures and biodiversity;*
- b) maintaining sustainable forest management policies and practices, according to the most recent scientific evidence; and,*
- c) supporting innovation in forest operations, including harvesting practices that maximize the utilization of unused, underused and/or at-risk forest resources, within the allowable harvesting limits.*

GOVERNMENT RESPONSE:

The Government of Canada agrees with this recommendation. In 2016, the Government of Canada led national-level conversations with over 140 experts from 80 different organizations, including academia, provincial and federal government agencies, research institutions and non-governmental organizations to better define its role as a forest science provider. Following these conversations, the Government restructured the science portfolio of the Canadian Forest Service (CFS) of Natural Resources Canada around climate change mitigation and adaptation, wildfire, forest pests, sustainable forest management, cumulative effects of natural resources development in forests, and fibre solutions to develop the bioeconomy.

Some of the key initiatives being carried out under this restructured science portfolio include

the ongoing Forest Change program, through which the CFS provides much needed information for decision-makers about the impacts of climate change on Canada's forests and on how to adapt to changing climate conditions. In coming years, regional assessments will be conducted in collaboration with provincial and territorial governments, as well as Indigenous governments, to better understand climate change impacts in local contexts and develop specific adaptation tools. Further, through Budget 2018, the Government of Canada committed to providing up to \$74 million over the next four years, to prevent the spread of spruce budworm, enabling governments, academia, industry and other stakeholders to continue to work together to implement a novel early intervention strategy to protect our forests and support the economy. Finally, through a close partnership with Canadian Interagency Forest Fire Centre (CIFFC), the Government of Canada through the CFS provides strategic and policy advice on national fire management issues, working to minimize undesirable social and economic impacts while maintaining the benefits from wildfire, under the Canadian Wildfire Strategy.

The CFS has championed cutting-edge science on forest carbon-budget modeling that has reshaped national perceptions on the importance of forests, and our management of them, in addressing climate change. This includes changing our forest management practices on forest residual disposal in order to curtail emissions and simultaneously develop biofuel solutions to reduce our demand for non-renewable fuels.

Through the delivery of science, the Government of Canada provides a critically important national perspective on forest issues, and undertakes critical long-term, large-scale research and data collection. To maintain sustainable forest management policies, and practices, the Government of Canada will continue to share its science with provinces and territories, as well as Indigenous governments, who are responsible to implement sustainable forest management on Crown lands.

The Government of Canada, through the Canadian Wood Fibre Centre (CWFC), works in close collaboration with provinces and territories, universities and other research centres, professional associations, Indigenous and rural communities to develop and deploy the most recent scientific research and emerging innovations that help sustain an innovative and prosperous forest-based bioeconomy. With particular attention to unused, residual or waste fibre, the CWFC works collaboratively to understand what fibre is best suited for traditional and innovative wood products and processes, how to locate and "map" these resources, and ultimately how best to ensure biomass availability through greater efficiencies and use, within the allowable harvesting limits.

The Government of Canada, through Environment and Climate Change Canada's Low Carbon Economy Leadership Fund, is also supporting provincial and territorial efforts to manage their forests, including harvesting practices, to contribute to greenhouse gas emission reduction targets, in line with commitments under the Pan-Canadian Framework on Clean Growth and Climate Change. Among the Leadership Fund targeted areas is support for provincial/territorial projects aimed at enhancing carbon sinks and reducing emissions in the forest sector. Notably, the Leadership Fund will contribute \$140 million to the Province of British Columbia towards

forest management activities that reduce emissions and sequester carbon. This is in addition to \$150 million that the provincial government has allocated to its Forest Carbon Initiative, which will restore forests damaged by disease and wildfire, avoid emissions from burning slash after harvesting, and increase fibre recovery.

STANDING COMMITTEE RECOMMENDATION #2: *The Committee recommends that the federal government work with Indigenous governments and communities, as well as industry, research institutions and provincial/territorial governments, to develop policies and programs that encourage more investment in value-added manufacturing, including targeted and culturally appropriate support for Indigenous businesses that harvest value-added products and standing forests.*

GOVERNMENT RESPONSE:

The Government of Canada agrees with this recommendation. The Government of Canada, through its Indigenous Forestry Initiative (IFI), collaborates with Indigenous communities to support tangible forest-based economic development across Canada. Since 2011, this program has supported more than 70 projects in over 110 Indigenous communities with 57 partners to advance their respective economic development interests in the forest sector.

More recently, through the Softwood Lumber Action Plan, the IFI's core, on-going \$1 million per year allocation was increased by \$10 million over 3 years (2017-18 through 2020-21). In 2017-18, the IFI supported 30 projects focused on clean technologies and the emerging bioeconomy, forest use and management, as well as focused on supporting Indigenous business development including value-added products. In 2017-18, the IFI was over-subscribed by \$3.2 million. Through the increased funding for this program, the Government of Canada is expanding its partnerships with Indigenous communities to increase their involvement in this dynamic sector, through targeted and culturally appropriate support.

Under the Investments in Forest Industry Transformation program (IFIT), the Government supports Canada's forest sector in becoming more economically competitive and environmentally sustainable. By "de-risking" new technologies and encouraging broader adoption of these technologies across the industry, IFIT supports forest industry transformation through a more diversified portfolio of value-added products and markets. The Government also supports policies and programs to encourage investment in wood-based construction, including mid-rise and tall buildings. This includes efforts to support codes and standards to institutionalize engineered wood construction in a number of applications, through the Green Construction through Wood (GCWood) program as well as numerous industry and research partnerships. In addition, the use of wood in Government construction, to reduce greenhouse gas emissions, was enabled through the amendment of the *Department of Public Works and Government Services Act*.

The Government of Canada is also building on the engagement undertaken to develop the CCFM's Forest Bioeconomy Framework for Canada. At the time, the Government engaged with

over 350 stakeholders from Indigenous governments and communities, as well as industry, research institutions and provincial/territorial governments. Through the CCFM Innovation Committee, the Government continues to partner with provinces and territories in delivering activities under this framework.

STANDING COMMITTEE RECOMMENDATION #3: *The Committee recommends that the federal government work with industry, research institutions, Indigenous governments and communities, and provincial/territorial governments to improve the economic competitiveness and innovative capacity of value-added manufacturing in the Canadian forest sector, by:*

- a) supporting regional forestry clusters that integrate primary, secondary and tertiary value-added supply chains;*
- b) investing in talent and skills development programs, especially in rural areas, including targeted and/or culturally appropriate programs for women, Indigenous peoples and minorities;*
- c) providing financial incentives to support the development of transformative forest product innovations and low-carbon products and technologies with high economic potential, especially through the commercialization gap;*
- d) developing performance-based standards and favouring policies that prioritize public safety, cost competitiveness and greenhouse gas emission reduction, according to the most recent scientific evidence and industry market research; and,*
- e) supporting workforce development initiatives, including industry skills development and industry-specific regional immigration programs and policies to allow for long-term regional sustainability.*

GOVERNMENT RESPONSE:

The Government of Canada agrees with this recommendation. Through the Forest Innovation Program (FIP), the Government supports pre-commercial research and development of new technologies and products, such as those related to bioenergy, nanotechnology and next-generation forest products. The FIP is the federal contribution arm to FPInnovations, Canada's world leading forest innovation research organization co-funded by the Government of Canada, industry and the provinces. Government of Canada FIP funding has enabled research and development of more than 40 forest products or process innovations. Developments in new bioproducts and advancements in mid-rise and tall wood building construction are just some of the examples of the high-value products generated under FIP.

To address the commercialization gap, a number of these technologies developed under FIP are now being commercialized under the Investments in Forest Industry Transformation program (IFIT). The IFIT program offers non-repayable contributions to successful applicants in the Canadian forest industry to implement innovative, first-in-kind technologies in their facilities. The goal of the program is to provide funding for projects at the pilot to commercialization phase, with the intent of helping these technologies get to market. To date, IFIT has successfully

funded 28 projects involving mostly world-first technologies, with 75 percent of projects creating new products or diversifying proponents' product offerings.

The Government of Canada, through its CWFC, also supports regional forestry clusters across the entire fibre supply chain through its "dispersed by design" structure. The CWFC supports a strong national forest sector built on regional specificities and needs, as it is located across CFS' regional centres. Together, the CWFC and regional stakeholders ensure that the entire forest-based supply chain and manufacturing sector has the fibre-based building blocks required for an innovative, prosperous and sustainable Canadian forest sector.

The forest sector transformation in Canada has not been limited to making changes in technology, products and markets. These changes are also improving Indigenous peoples' access to forest resources and increasing their control over decisions about how forests are used, harvested and managed. In order to take advantage of these opportunities, a skilled Indigenous workforce is needed with a strong focus on partnership and talent and skills development. The IFI supports the development of a skilled Indigenous workforce through support for forest based economic development projects. These projects have focused on capacity training, skills development, and investment in supporting and growing Indigenous businesses.

Transformation is also important in our built environment which is a significant contributor to greenhouse gases. Wood based construction, including mid-rise and tall wood buildings, can sequester carbon and life-cycle analysis has demonstrated their effectiveness in helping to meet Canada's climate change targets. The Government of Canada will continue to support codes and standards work to institutionalize engineered wood construction in a number of applications. These R&D activities will primarily be promoted through the Green Construction through Wood (GCWood) program and numerous industry and research partnerships in Canada. This program is designed to encourage greater use of wood in construction projects in Canada and catalyze a broader awareness of, and domestic capacity for, innovative tall wood buildings, timber bridges and low-rise wood commercial buildings. Budget 2017 provided funding of \$39.8 million over 4 years under the Pan-Canadian Framework on Clean Growth and Climate Change, starting in April 2018, to increase the use of mass timber as a greener construction material in buildings and public infrastructure projects.

Over the last 15 years, NRCan funded extensive R&D activities in support of codes and standards to facilitate expanding use of wood in the domestic and international construction markets. The codes and standards activities and its associated R&D work have been led by key Canadian research organizations such as the National Research Council (NRC), Canadian universities, industry associations and by FPInnovations (an innovation hub for the forest sector involving the industry, governments, universities, suppliers, collocated with the Government of Canada's Laurentian Forestry Centre). As a result of this work, the National Building Code of Canada (NBCC) recognized wood construction to six storeys in 2015 and work is underway to recognize engineered wood construction to ten storeys for the 2020 NBCC.

Investments are being made by the Government to reduce greenhouse gas emissions at the community level through the use of wood-based biofuels for heat and power, which are paving the way for diesel-dependent, off-grid and Indigenous communities to transition off diesel. Support for capacity building and socio-economic development is a cornerstone of transformational change in communities. Through its Clean Energy for Rural and Remote Communities (CERRC) program, the Government of Canada will fund initiatives in capacity development, demonstrations and deployment to reduce the use of diesel in rural and remote communities.

STANDING COMMITTEE RECOMMENDATION # 4: *The Committee recommends that the Government of Canada work with industry, Indigenous governments and communities, and provincial/territorial governments to support biofuel projects in diesel-dependent, off-grid communities, including targeted and culturally appropriate support for Indigenous peoples.*

GOVERNMENT RESPONSE:

The Government of Canada agrees with this recommendation. Rural and remote communities in Canada rely heavily on fossil fuels to produce electricity and heat. Increasingly more communities are looking to local forest resources as a way to reduce diesel use, provide economic development opportunities and create a pathway towards energy security.

To reduce reliance on diesel in rural and remote communities, the Government of Canada is supporting the use of clean energy solutions through various initiatives. The Northern Responsible Energy Approach for Community Heat and Electricity program, also called the Northern REACHE program, funds renewable energy and energy efficiency projects in Canada's three northern territories. Budget 2017 provided \$53.5 million over ten years, starting in 2018-19, to implement renewable energy projects in off-grid Indigenous and northern communities that rely on diesel and other fossil fuels to generate heat and power. This funding complements the \$400 million Arctic Energy Fund administered by Infrastructure Canada, which is specific to the territories to help improve energy security in the North by replacing or upgrading aging fossil fuel energy infrastructure.

The Clean Energy for Rural and Remote Communities (CERRC) program, launched in February 2018, is a key priority of the Government, with approximately \$220 million in funding for initiatives to reduce reliance on diesel in rural and remote communities, the majority of which are Indigenous. Under this program, the Government of Canada's Canadian Forest Service is leading the first wave of projects, with direct linkages to supporting the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change.

The CERRC program funding will support projects to demonstrate and deploy renewable energy technologies, implement energy efficiency solutions and, build community skills and capacity. \$55 million of this funding will support reduced fossil fuel use, through the installation or investigation into the feasibility of biomass fuel for combined heat and power systems for community and/or industrial applications. Under this program, Capacity-Building Activities to

support development and delivery of knowledge and skills in an effort to reduce diesel dependency that go beyond a specific project are also considered.

STANDING COMMITTEE RECOMMENDATION # 5: *The Committee recommends that the federal government continue to facilitate the market access of Canadian forest products in domestic and international markets:*

- a) through market-access policies, such as the Expanding Market Opportunities and Green Construction through Wood programs (or similar programs);***
- b) through government procurement policies, such as Bill C-354, An Act to amend the Department of Public Works and Government Services Act (use of wood) – at the date of tabling of this report, the last stage completed by Bill C-354 was Concurrence at Report Stage in the House of Commons;***
- c) by supporting the research and development of value-added product applications (i.e., “market pull” strategies), in collaboration with industry, Indigenous governments and communities, and/or provincial/territorial governments; and,***
- d) by continuing to promote Canadian forestry products, technologies and practices in international trade missions.***

GOVERNMENT RESPONSE:

The Government of Canada agrees with this recommendation and will continue to provide targeted investments that create new market opportunities both within and beyond Canada’s borders. To date, the Government of Canada has been highly successful in developing new markets in new places, such as China, and for new end-uses, such as mid-rise buildings. Through our numerous partnerships with the provinces and industry, the Government seeks to build on this track record to help the forest sector adapt to an increasingly globalized marketplace while capitalizing on emerging products opportunities, including bioproducts, by:

1. Expanding offshore markets to new destinations with high demand potential, focusing on key offshore markets and advocating the sector’s interests in free trade agreements and the resolution of trade disputes and trade irritants. Through its Expanding Market Opportunities (EMO) program, the Government of Canada provides co-funding to industry associations for market development initiatives and supports in-market industry representation through a network of offshore offices. These activities promote Canadian forest products, technologies and practices in international trade missions.
2. Developing new end-uses for forest products in the non-residential and mid-rise construction markets of North America by driving building code acceptance of taller wood buildings and interventions in the regulation of new construction products.
3. Opening up new markets for innovative forest bioproducts, including providing market development and advocacy support, especially to meet the needs of SMEs, and providing business development support in conjunction with other programs

- (e.g., Industrial Research Assistance Program, Export Development Canada, Regional Development Agencies).
4. Leverage NRCan science to ensure market access by growing public and consumer confidence in the sector's environmental reputation (including removing non-tariff trade barriers). This will continue to demonstrate Canadian leadership and expertise by developing and supporting knowledge-exchange partnerships between international experts on critical issues.

These investments will catalyze interest in new applications of forest-derived fibre and the advantages of building with wood and will help to achieve a diversified forest industry, maintaining jobs and economic prosperity.

The Government of Canada is continuing its efforts to advance the market and regulatory uptake of tall wood buildings in Canada. The Green Construction through Wood (GCWood) initiative was announced in October 2017. This program aims to support the increased use of engineered wood in infrastructure and non-traditional construction projects, such as tall wood buildings, low-rise commercial buildings and bridges.

In 2017, the Honourable Jim Carr, Canada's Minister of Natural Resources, met with China's Vice-Minister of Housing and Urban-Rural Development, Yi Jun, to reaffirm the two countries' agreement to support the development of eco-cities in China using Canadian wood products and technology. Under this initiative, about 100 town homes were built to establish new Sino-Canadian eco-districts and to construct tall wood structures using Canadian wood products and energy efficient technologies.

The Standing Committee on Natural Resources supported Bill C-354, on March 27, 2018, and presented it to the House on April 16, 2018. This act amends the *Department of Public Works and Government Services Act* to require the Minister of Public Works to consider any reduction in greenhouse gas emissions and any other environmental benefits and may allow the use of wood or any other thing — including a material, product or sustainable resource — that achieves such benefits.

Further to this, a \$40 million research program at the National Research Council of Canada and an \$11 million program at the Standards Council of Canada are well underway to integrate climate resiliency into building and infrastructure project design, standards and building codes. This research will provide training to design professionals and inform future construction work in Canada.

To support research and development, the Government of Canada has created the Transformative Technologies Program, delivered by FPInnovations, which has a component that delivers support to the value-added wood sector in a variety of capacities to the provinces. In 2017-18, over 100 small and medium sized enterprises received technical expertise on process improvements, assistance with equipment justification, advice on product standards, and information on market solutions to problems related to manufacturing.

The EMO program also provides support to organizations that produce value-added products. A new program element was added at the most recent program renewal to support export-readiness of secondary manufacturers. The EMO maintains a library of market studies and strategies, available to industry to inform their market development efforts. The EMO program also provides funding to promote Canadian forest products. This is typically in the form a mission, bringing together various levels of Canadian governments with their off-shore counterparts, and provides industry representatives with networking opportunities. Missions provide an opportunity to highlight Canadian wood building systems and other Canadian forestry products to create important relationships with foreign markets.

CONCLUSION

This proposed Government Response describes concrete actions, policies and programs, either underway or planned, that address all of the Committee's recommendations. The Government agrees with all of the Committee's recommendations, which are well-aligned with the Government's current direction on the bioeconomy, the low carbon economy and clean technology innovation. Natural Resources Canada, as per its mandate, is working to address the Committee's recommendations through its science, through the delivery of ongoing external-facing programs, and through collaboration.