



INNOVATION ACTION PLAN 2016–2020



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INTRODUCTION

Historically successful as a low-cost commodity producer, the Canadian forest sector now faces an impetus to innovate to maintain competitiveness. Innovation in this sense refers to the commercialization of change, not just in products and technologies but also in business models, markets, applications for forest products and partnerships. It is through innovation that the forest sector will adapt to new economic, environmental and societal pressures, while taking advantage of emerging opportunities and building on the strengths of nontraditional players (for example, those in other industrial sectors, and small and medium enterprises). It is also through innovation that the forest sector will continue to provide the economic cornerstones of rural economies across the country, while facilitating Canada's transition to a green economy.

Over the past decade, a series of major milestones in forest sector innovation have taken place in Canada. In 2006, FPInnovations was created, the world's largest public-private forest research organization. Since that time, significant investments from industry and government, coupled with focused research at academic institutions and other research organizations, have enabled the scale-up and/or commercialization of a series of novel products—products completely different from the traditional offerings of the Canadian forest sector (for example, cellulose nanocrystals, engineered fibre mats, biogas). Based on renewable, sustainably produced biomass and often generating GHG emissions reductions and other environmental benefits, these clean technologies have the potential to improve the environmental performance of Canada's economy as a whole, offering both residential and industrial consumers greener energy and product options. In fact, the forest sector can provide a “triple play” of benefits: mitigating climate change, advancing clean technologies and innovation and supporting competitiveness and jobs. All of these results may be achieved through increased, not decreased, industrial production—offering a unique opportunity for social and environmental wins with no trade-offs required.

Despite impressive case-by-case successes and early technology leadership in several areas, challenges remain. The Canadian forest industry continues to be subject to intense competition from companies operating in countries where trees grow faster, labor is cheaper and, in many cases, environmental regulation is less stringent. Forests will continue to be impacted by climate change, with important implications for species at risk, pests and fire. The industry

will face growing scrutiny regarding its forest management practices, and will need to continue to demonstrate that it is a provider of environmental solutions to maintain public confidence. All of these factors fall within a context of tumultuous trade relationships, changing structures for academic and government research, significant market trends and the emergence of disruptive innovation throughout industrial sectors—often with ripple effects across entire economies. As a result of these challenges, entrenching innovation in Canada's forest sector is essential, both for its own long-term survival and that of the communities that depend on it.

THE KENORA DECLARATION ON FOREST INNOVATION, JULY 2015

In July 2015, the Canadian Council of Forest Ministers' (CCFM) National Forest Innovation Summit saw 46 stakeholders including federal, provincial and territorial ministers responsible for forests, and top industry executives, come together and agree to work on an action plan to advance innovation in the Canadian forest sector. The participants recognized that, while significant progress had been achieved, more work remained to ensure long-term economic significance for the forest sector and to realize this industry's potential as a climate change solution. This sentiment was reflected in the participants' joint commitment to the Kenora Declaration on Forest Innovation. Through this statement, Canada's forest sector stakeholders collectively agreed to continue to support and advance innovation in the forest sector via three central pillars: collaborating, engaging and mobilizing. As the mandate of each participating organization is different, implementing the Declaration will comprise a diverse suite of activities—in many cases extending beyond actors traditionally thought to be part of the forest sector. As such, the Declaration is valuable because it helps to align activities and focus efforts on common priorities as the players move forward on their respective agendas.

This document sets forth an Innovation Action Plan for the following four years whereby the CCFM and its member jurisdictions can contribute to the ongoing implementation of the Declaration on Forest Innovation. Midterm outcomes and indicators are proposed to track progress after two years. Each jurisdiction will carry out actions as applicable in their respective province or territory. The actions described will be undertaken to maximize competitiveness and sustainability in the Canadian forest sector, and, in doing so, capitalize on opportunities in the bioeconomy to

mitigate climate change and provide economic development opportunities in rural regions.

Pillar 1: Collaborating

The long-term success of the Canadian forest sector is a priority, not just for the forest industry but for its employees, governments, many nongovernmental organizations and researchers. As each stakeholder works toward this objective, collaboration on innovation is essential to maximize effectiveness, reduce duplication and realize benefits from the cross-pollination of ideas. Collaboration on innovation is further necessitated because some of the strongest competition faced by the Canadian forest industry comes from other industrial sectors and/or foreign forest product producers. In the face of these powerful competitors, the relatively smaller Canadian forest product producers must work cooperatively, where possible, to capture a bigger share of global markets.

Because it comprises representatives from federal, provincial and territorial governments, the CCFM is uniquely placed in terms of its role in supporting collaboration on innovation in the forest sector. With a small internal budget, yet broad representation and networks and significant policy capacity, the organization is well placed to act as a convener in this area and to advance strategic thinking via consultations with stakeholders. Moving forward, the CCFM and its member jurisdictions will

1. Explore opportunities to strengthen and better align governmental forest sector innovation initiatives in order to boost efficiency and maximize results.

Many Canadian governments have programs designed to support innovation in the forest sector, including the forest bioeconomy. Many of these programs have overlapping mandates and complementary administrative structures. In the future, the CCFM will work to identify options to strengthen such initiatives: capitalizing on operational efficiencies, co-funding and sharing resources and expertise to realize a greater number of key innovation projects and ensure efforts are better aligned toward common priorities (though recognizing that regional diversity may require different approaches). Through sharing experiences, ongoing communication with stakeholders and tracking related developments in other sectors, the CCFM will identify and pursue specific gaps along the innovation continuum while providing strategic guidance to inform the policy/program decisions of member jurisdictions.

MIDTERM OUTCOME: CCFM member jurisdictions' forest sector innovation efforts and projects are better aligned

INDICATORS:

- Consistency of high-level objectives and targets across CCFM members' innovation/competitiveness policies, programs and statements
- Number of existing or emerging federal/provincial/territorial initiatives, efforts and/or projects that are explicitly linked or jointly undertaken

Pillar 2: Engaging

To facilitate innovation in the forest sector, it is necessary to engage actors not traditionally involved in this area. This includes academic institutions and organizations because they represent important sources of R&D capacity and the highly skilled personnel that will enable forest industry facilities to be receptive to innovations as they emerge. It also includes other industrial sectors (for example, chemical, pharmaceutical and oil and gas sectors) because, in many cases, it will be these industries that will comprise the consumers of emerging bioproducts.

Engagement with nontraditional players and potential new entrants is also likely to be valuable in terms of the diversity of thinking such conversations can bring to the innovation agenda in an industry that remains largely focused on commodity production. Increasing exposure to diverse production arrangements, different approaches to meeting clients' needs, other industries' input considerations and the preferences of end users will help forest product producers better understand their own value propositions (i.e., what do they bring to the table) and familiarize them with achievable niches in emerging supply chains. For governments, this engagement will help to build understanding of the factors constraining forest sector innovation and enable a strong, cohesive and well-supported policy action moving forward.

As an established convener in this area, the CCFM and its member jurisdictions are well positioned to continue to engage nontraditional players and potential new entrants to the forest sector. This will be done by

2. Continuing discussion of pathways to support forest sector innovation (including that conducted by nontraditional players using forest fibre) by convening a campaign of engagement sessions with both governments and industry stakeholders to produce a Forest Bioeconomy Framework for Canada that could be adopted and implemented by jurisdictions accordingly.

For governments to play a meaningful role in supporting innovation in industries using forest fibre, frequent conversations with one another and with the evolving forest industry are required. To this end, the CCFM will host a campaign of sessions focusing on specific subsets of the issue. Opportunities include, but are not limited to, convening panel discussions at major domestic events, hosting subsequent forest innovation summits and/or preparing a coordinated Canadian presence at related international events. Through these conversations, the CCFM will garner the buy-in necessary to develop a successful Forest Bioeconomy Framework for Canada that would provide a tangible pathway forward for governments, while increasing policy certainty for all stakeholders.

MIDTERM OUTCOME: The CCFM, with the support of a broad range of stakeholders, is positioned to develop an effective Forest Bioeconomy Framework for Canada

INDICATORS:

- Number of conversations convened and summaries posted to the CCFM webpage
- Number of nontraditional partners that participated in CCFM-hosted discussions on forest sector opportunities
- Instances of external (non-CCFM) members calling for the creation of a Forest Bioeconomy Framework

3. Developing engagement strategies for key forest sector innovation stakeholders (including nontraditional stakeholders with interests in forest fibre), for example, the National Research Council (NRC), selected provincial/territorial research organizations, granting councils, key

intermediate producers from other industrial sectors, etc.

The National Forest Innovation Summit helped to demonstrate the significant potential contributions toward forest sector innovation that could be made by a series of actors that, for a variety of reasons, are currently relatively disconnected from the forest industry itself. The CCFM will develop and pursue targeted engagement strategies with these parties, seeking to connect them with opportunities in the forest sector, either via opening new communication pathways or by better leveraging existing fora (for example, FPIInnovations committees, the BioRenewable Deployment Consortium).

MIDTERM OUTCOME: The CCFM has developed effective engagement strategies for key forest sector innovation stakeholders

INDICATORS:

- Number of identified key stakeholders for which CCFM engagement strategies have been developed
- Degree to which key stakeholders were involved in the development of the engagement strategies (i.e., has a working relationship been developed, do regular meetings take place, do senior officials from the stakeholder organization support the engagement strategy?)

4. Developing a CCFM-hosted “Canadian Forest Fibre Open Innovation Platform” whereby external innovation providers can propose technology solutions to applied forest sector/bioeconomy technology issues as submitted by producers.

Open innovation platforms are growing in popularity, as companies increasingly look to outside parties to complement their internal innovation-related efforts to reduce costs and speed up results. Crowd-sourcing, one type of open innovation, has been demonstrated by a variety of players as an effective and cost-competitive option to identifying technology solutions to address real world issues (for example, [GE](#), [P&G](#), [Kraft](#), etc.), often

from nontraditional players and emerging entrepreneurs. To engage external innovation providers, the CCFM will explore the potential for the Council to host an Open Innovation Platform to which Canadian producers using forest fibre could post their technology issues for consideration by a vast range of global technology experts.

MIDTERM OUTCOME: The CCFM has created a functioning open innovation platform for the Canadian forest sector

INDICATORS:

- Existence of a CCFM-hosted forest sector open innovation platform
- Number of industry registrants
- Posting of “kick-off” technology challenges

Pillar 3: Mobilizing

Changing technologies, products, models of interacting with customers and community relationships are demanding a corresponding change in the profile of forest sector employees needed by Canada’s forest industry. Although multiple governmental mandates are implicated in this area, opportunities do exist for governments responsible for the forest industry. The CCFM and its member jurisdictions can help to mobilize the talent and technologies needed by the forest sector by

5. Facilitating stronger connections between academia, graduate students and forest product companies by collaborating with Mitacs.

Mitacs is a national not-for-profit research and training organization dedicated to advancing collaborations between industry, academia and governments of Canada. At present, Mitacs is the primary delivery agent for graduate level R&D internships in Canada and offers companies the opportunity to access highly skilled labor while making critical progress on applied R&D questions. However, since Mitacs is a general science organization not targeted at a particular industrial sector, the forest

sector remains underrepresented in terms of the number of internships undertaken. The CCFM will identify options for Canadian forest companies to better leverage the power of Mitacs and graduate students more broadly to mobilize the highly qualified personnel necessary for sustained large-scale innovation. This includes tracking changes in granting council programs and structures (especially as the forest sector transitions beyond the Forest Innovation by Research & Education network (FIBRE)), and supporting, where possible, opportunities for increased forest sector representation.

MIDTERM OUTCOME: CCFM members have established a relationship with Mitacs and a clear understanding of the post-FIBRE context for academic forest sector R&D

INDICATORS:

- Creation of a summary paper on the opportunity for increased forest sector involvement in Mitacs initiatives
- Level of familiarity of all CCFM members with relevant granting council programs, proposals and initiatives (for example, number of briefings to the CCFM)

6. Continuing to support the participation of Indigenous peoples in the forest sector.

Indigenous peoples play an important role in Canada’s forest sector as employees, business owners, providers of ecosystem knowledge and community stakeholders. As governments continue to emphasize economic development and relationship renewal, this role is expected to grow. Therefore, the Council will continue to support the participation of Indigenous peoples in the forest sector, with an emphasis on encouraging young Indigenous people to pursue careers in this sector. In addition, the Council will support conversations on topics including, but not limited to, tenure modernization, biomass/bioenergy opportunities, skills development and business capacity building to encourage forest-based economic prosperity in Indigenous communities.

MIDTERM OUTCOME: The CCFM has focused conversations to support the participation of Indigenous peoples in the forest sector

INDICATORS:

- Number of focused conversations convened by the CCFM on this topic
- Creation of a strategy to guide future CCFM action in this area
- Number of “Skills Award for Aboriginal Youth” scholarships delivered

CONCLUSION

Through the 2015 National Forest Innovation Summit, the CCFM was positioned as a leading voice in forest sector innovation in Canada. As the Council implements the Declaration on Forest Innovation, activities pursued will be most effective if rooted in this organization’s strategic advantages, namely, its capacity to convene key conversations and better align efforts across a diverse range of actors. This Innovation Action Plan is grounded in these advantages and presents six activity areas for the Council for the coming four years. By undertaking these activities, the CCFM can meaningfully contribute to advancing forest sector innovation in Canada to support climate change mitigation, long-term environmental sustainability, economic competitiveness and green jobs.