

Summary of the Evaluation of the Green Construction through Wood (GCWood)

About the Program

The GCWood program aims to enhance greenhouse gas (GHG) mitigation opportunities in Canada's building construction industry, as part of Canada's commitment to address climate change. This objective is delivered through three program components: (i) contribution funding to demonstration projects that use innovative wood and hybrid construction design; (ii) research, technology transfer, tools, and education activities, and (iii) encouraging revisions to building codes, including the National Building Code of Canada (NBCC). These activities are intended to catalyze long-term transformational change in which sustainable wood products become a common building material, leading to long-term GHG emissions reductions.

The GCWood program is delivered by the Canadian Forest Service (CFS) Trade, Economics, and Industry Branch. The total program envelope was \$55 million (M) over 5 years program (2018-2023). The program's direct spending over the evaluation period of 2018-2019 through 2021-22 is \$35.59M.

What the Evaluation Found

Relevance

The evaluation found that the GCWood program is relevant. It had significant support from industry upon its creation and it aligns with the needs of the CFS for ongoing research, technology transfer and education surrounding mass timber and hybrid construction designs (particularly through demonstration, testing and building code change). The program is consistent with the federal government's roles and responsibilities to enable innovation by de-risking investment, and it aligns with NRCan's mandate to support the use of wood and the creation of value-added products as well as its targeted efforts towards Canada's climate change commitments.

Design and Delivery

The GCWood program was delivered as intended and in an efficient manner within its available funding envelope. With its governance structure and program processes clearly defined and effective, the program delivery model is sound. Design strengths of the program included the engagement of a variety of stakeholders during program planning and the implementation of balanced coverage across the different components included under the program (i.e., different categories of demonstration projects, education initiatives, research and development (R&D), and work on code changes) has proven to fill identified gaps.

Effectiveness

The program has met or is on track to achieve its planned immediate and intermediate outcomes. The program succeeded in the production and provision of information and tools for wood use in construction projected

to those directly involved in the sector. All other planned activities and outputs related to the immediate outcomes have been completed or are reasonably forecasted to be completed by target dates. With regard to intermediate outcomes, demonstration projects have progressed. These examples of tall-wood and commercial low-rise buildings and bridges are expected to contribute to further adoption and commercialization of wood in construction in Canada. Also, the evaluation found strong evidence that the program has made significant contributions towards revisions to the NBCC including new provisions to allow tall-wood buildings up to 12 storeys and the program played a key role in having more than 20 other Canadian jurisdictions adopt these code changes. The evaluation could not determine progress towards the ultimate outcomes (i.e., the carbon sequestration targets or impact on the commercialization of wood).

External Factors

There were external factors outside the control of the program that impacted the ability of the program to fully achieve its long-term outcomes. COVID-19 and other external industry factors such as supply chain issues and the effect of increasing materials cost caused delays in the timelines of most demonstration projects. The complex code environment created additional external factors which slowed the expected changes in the building codes and impacted or delayed the program's achievement of expected replication of demonstration projects.

Lessons Learned

There are some inconsistencies in the recording of data and potentially some gaps in the identification of necessary indicators to measure progress. Hence, the evaluation has identified a need to revisit the program's performance framework, including the opportunity to

incorporate GBA Plus considerations (e.g., through Indigenous engagement and data collection) into a future iteration of the program. Also, there is room to expand the reach of the program's engagement to a wider audience including public sector decision-makers, practitioners, and entities that commission construction projects, in addition to other adjacent sectors, such as the insurance and finance industries. Finally, to continue making an impact, there is opportunity for an expansion in the types of demonstration projects the program funds, as well as developing better strategies to mitigate the impacts of external industry factors.

Recommendations	Management Response and Action Plan
<p>1. CFS should develop and implement an engagement strategy to increase the reach of the program towards its efficiency and effectiveness:</p> <ul style="list-style-type: none"> • Increase the communication of GCWood activities and outcomes among stakeholders. • Broaden the scope of the GCWood outreach to include non-traditional stakeholders such as insurance, finance and public sectors who have impacts on the successful implementation of the program. • Increase efforts towards the dissemination of all GCWood knowledge and research products to a wider audience. 	<p>Management response: Agreed. As the GCWood program is ending on March 31, 2023, and is currently undergoing efforts toward renewal, we will consider options to address this recommendation. Elements in future programming could include increasing human resources to action this recommendation, circulating a quarterly newsletter to communicate key activities and outcomes to program stakeholders; and funding to develop and disseminate knowledge and research through a website platform marketed to key target audiences in close collaboration with other provincial and industry partners.</p> <p>Position responsible: ADM, CFS</p> <p>Timing:</p> <ul style="list-style-type: none"> • Six months following approval of program renewal (No later than December 31st,

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	<p>2023): develop an implementation strategy and plan for enhanced communications activities; and</p> <ul style="list-style-type: none">• One year after all authorities in place (No later than June 30, 2024): establish new communications vehicles (i.e., newsletter and website platform).
2. [REDACTED]	<p>Management response: [REDACTED]</p>

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<p>3. The program should update its performance measurement framework:</p> <ul style="list-style-type: none"> • Include indicators about uptake and impact of educational resources, knowledge products and tools; • Establish targets that will help capture progress against longer-term outcomes such as code evolution; and • Clearly identify and justify the methodology and assumptions for targets (especially the potential for replicability). 	<p>Management response: Agreed. As the GCWood program is ending on March 31, 2023, and is currently undergoing efforts toward renewal, we will consider how to address this recommendation. A renewed GCWood program shall: work with AEB's performance measurement team to improve the performance measurement framework of the GCWood program; include indicators on uptake and impact of educational resources, knowledge products and tools; establish an intermediate target to help capture progress against the longer-term outcome of code evolution; and clearly identify and justify the methodology and assumptions for targets (especially the potential for replicability).</p> <p>Position responsible: ADM, CFS</p>

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