Forest Innovation Program-Canadian Wood Fibre Centre

Guide to the Application for a contribution to the Forest Innovation Program--Canadian Wood Fibre Centre

1. Context

As part of the [Forest Innovation Program, the Canadian Wood Fibre Centre](#) (CWFC) supports research, development and knowledge exchange activities in Canada's forest sector to pursue the forest sector's ongoing transformation and to ensure its competitiveness.

1.1   About the Canadian Wood Fibre Centre

The Canadian Wood Fibre Centre (CWFC) is a branch within [Natural Resources Canada (NRCan), Canadian Forest Service](#) (CFS) with employees distributed across Canada.

In 2006, CFS created the CWFC as a new research unit with the goal of being the national authority on Canada's wood fibre production and characterization along the forest value chain to support the competitiveness of the Canadian forest sector. The purpose of the CWFC is to integrate closely with [FPInnovations](#), a not-for-profit national forest research institute, and to provide innovative solutions that add value to the Canadian forest sector. CWFC research builds on strong collaborations with provinces, industry and universities to achieve well targeted, high-value results that will ultimately lead to increased economic benefits for Canada's forest sector.

Today, FPInnovations and the CWFC provide the intellectual core capacity required to deliver a comprehensive research program that spans the entire forest value chain, from tree genomes to the final consumer products market.

2. CWFC objectives

The CWFC supports and furthers scientific research activities that contribute to the competitiveness of the Canadian forest industry. Its objectives are to develop, improve and share wood fibre-related knowledge and tools in two research areas in support forest management decisions: Resource Characterization and Resource Production.

2.1 Resource characterization

Resource Characterization research focuses on the development of forest inventory and evaluation tools and techniques to more accurately quantify, assess, and understand the principal fibre attributes of Canada's forests and to provide tools for forest managers to make better decisions. It encompasses research on semi-automated tree species identification, improving the resolution of enhanced forest inventories, predictive productivity models, growing the forest inventory, understanding wood fibre characteristics, characterizing woody residuals for economical harvest, conversion, and utilization.

Ultimately resource characterization research strives to understand how quality wood fibre is created, valued, and optimized generating a modern intelligent forest inventory enabling forest managers to sustainably and competitively utilize Canada's forest resources.

2.2 Resource production

Resource Production research focuses on tools and applications that contribute to future forests of added value using genetics, genomics, biotech, or new silvicultural techniques. Research focuses on forest genetics and genomics to accelerate the production of trees with desirable traits, somatic embryogenesis as a reproductive technology, and multi-varietal forestry as an implementable system. The resource production research area develops, implements, and transfers innovative technologies to end-users that facilitate the testing of management decisions or interventions quantifying the impact on future fibre production, quality, cost or value. Methods are being developed to provide feedstock for the transformation of the sector.

For a full description of CWFC's research areas, see Annex II, Detailed description of the CWFC research.

3. Eligible research recipients and projects

3.1 Eligible recipients

Eligible recipients can include the following:

- Universities, colleges, and other academic institutions;

- Provinces;

- Enterprises that produce forest products and have existing forest product manufacturing facilities located in Canada;

- Enterprises that supply materials, products, or services to forest products enterprises defined above; and

- Not-for-profit research institutions.

3.2 Eligible projects and activities

Eligible projects must clearly demonstrate that they support the CWFC objectives as outlined in Section 2.

3.2.1 Resource characterization and resource production

Funding can be directed towards research projects addressing either Resource Characterization or Resource Production as described in Section 2. Eligible activities in this category can consist of field work, technical and laboratory work, computer modelling and economic analysis.

3.2.2 Knowledge exchange

Knowledge exchange plays an important role in ensuring that research results are delivered to the forest sector in a timely and comprehensive fashion. Knowledge exchange activities emphasize collaborative problem-solving through the sharing of scientific, technological and organizational knowledge to support mutual learning and knowledge uptake by the forest sector.

Eligible projects in knowledge exchange will be national in nature but regional in delivery. Activities should follow the adoption pathway starting with raising awareness to a broad audience, generating interest in a more selected audience, and supporting the adoption decision in a targeted audience.

Activities can consist of, but not limited to, conferences, workshops, case studies, knowledge exchanges products (hard copy, electronic or virtual), regional collaborations and e-lecture series.

For all eligible projects, other relevant activities that meet Program objectives may be deemed eligible for funding, and would be considered on a case-by-case basis.

3.3 Eligible costs

Eligible costs will be directly related to CWFC objectives and will include the following:

- Salaries and benefits, including full time, term and contract employees of the recipient engaged in the execution of projects (for contribution agreements with FPInnovations only direct salary is eligible);

- Professional and technical services such as, but not limited to research, consulting, engineering, trades, and laboratory services;

- University research services (for example, non-salary related costs associated with laboratory analysis, storage, etc);

- Material and Supplies up to $10,000 per item;

- Travel, including meals and accommodation;

- Publication, printing, and other media services and

- PST, HST and GST net of any rebate to which the recipient entitled; and

- Overhead (eligible overhead costs will be a percentage of eligible costs reimbursed per project not to exceed 15%. Recipients will be required to substantiate overhead costs). （Overhead expenditures are: administrative support provided directly to the project by the proponent's employees, valued on the same basis as professional staff time, heat, hydro, telecommunications expenditures, and other operating expenditures, provided they are directly related   to   the   project.)

Costs incurred prior to execution of a contribution agreement will not be eligible for reimbursement.

4. Funding

4.1 Funding limit

NRCan is looking to support between 15 and 20 projects. The total funding available to all projects is $700,000.

All project activities must take place in the 2016–2017 fiscal year (April 1, 2016 to March 31, 2017). The start date for eligible costs to be reimbursed by NRCan begins once the contribution agreement is signed by the department. The eligible cost end date will be no later than March 31, 2017.

4.2 Funding allocation

Funding allocations will be determined based on the relative contribution of the proposed work to:

- The achievement of the CWFC objectives and
- The dollar amount requested by the applicant and overall funds available.

Preference will be provided for proposals that:

- Clearly demonstrate that the project can be completed within the fiscal year,
- Leverage additional funds from other sources and
- Clearly demonstrate that they will achieve greater benefits for external stakeholders and value for money for NRCan.

Other factors that may be taken into consideration include:

- Regional distribution of funding,
- Strong demonstration of working collaboration with NRCan and
- Representative funding across Canada.

NRCan also reserves the right to negotiate amounts requested by applicants based on the criteria above. Other project proposals received throughout the year will be assessed using the criteria above dependent on availability of funds.

4.3 Stacking provisions

Assistance will be provided for projects only at the minimum level to further the attainment of stated Program objectives and expected outcomes.

Approved projects will be eligible for total government assistance not to exceed 100 percent of total eligible costs. The federal portion of this government assistance can also not exceed 100 percent.

Applicants will be required to identify all sources of funding, including contributions from other federal, provincial/territorial, municipal and industry sources at the beginning and end of the project.

4.4 Subcontracts

A recipient must accept the following under any contribution agreement signed with NRCan:

- It shall not subcontract all or any part of the project except as provided in the Proposal.
- It shall notify and obtain written consent of the Minister for any contract that it enters into with a third party to undertake work on the Project where the estimate of the cost of the work to be performed exceeds **twenty percent (20%)** of the Contribution, and the notice shall include a description of the extent and nature of the contracted work, the identity of the contractor, and the estimated cost of the contracted work.

4.5 Basis of payment and reporting

Payments will be made based on a reimbursement of eligible costs incurred and measurable, pre-defined project milestones documented in signed progress reports.

In accordance with the Treasury Board Directive on Transfer payments, advance payments may be permitted where requested by the recipient and based on an assessment of their need, risk levels and cash flow requirements.

NRCan may withhold a percentage from each payment until all reporting and financial conditions are met.

A recipient will be required to provide the following standard reports (templates provided by NRCan) for the duration of the project:

- Progress reports at mid-year and year-end including updated budgets;

- Financial reports outlining eligible costs incurred with every claim for payment;

- Reports against performance measures established in the contribution agreement at mid-year and year-end; and

- A final narrative report once the project is complete that describes how the project has contributed to the achievement of the objectives, the benefits and the key performance indicators established in the agreement

Further reporting requirements may be requested of recipients in specific contribution agreements; however, these will be negotiated. Regular communication between NRCan and recipients will be implemented to monitor progress.

5. Recipient audit

NRCan may undertake a financial audit of eligible costs incurred by a recipient. As a result, recipients will be required to maintain all financial records regarding any funded project for a minimum of three years after the project completion date.

6. Application and review process

6.1 Application schedule

The following is the schedule for the application process:

Request for Project Proposals Issued: February 24, 2016
Final date for submission of Project Proposals: April 11, 2016
Initial eligibility assessment: April 14, 2016

Applicants being given further consideration will be contacted for negotiation of funding. Note: Contribution Agreements cannot begin before April 1, 2016 nor continue beyond March 31, 2017.

The above schedule is subject to change. Any changes will be communicated via this website.

6.2 Submitting a contribution proposal

To apply for a contribution, submit a completed application to CWFC's project mailbox.

The deadline for submitting applications is **no later than 11:59 p.m. PDT, April 11, 2016**.

6.3 Application

The application will include, but not limited to:

- A detailed description of the project, including objectives, deliverables, expected outcomes and time frames and costs;
- Identification of how the project supports the objectives of the CWFC;
- Identification of lead participant and other collaborators, government, organizations or agencies and contractors participating in the project;
- A description of the financial plan including the identification of all sources of funding and
- A method of measuring performance in terms of research outcomes.
- Team capacity to deliver the proposed work; and
- Total funding requested and leveraged from other identified sources, both cash and in-kind with evidence of support, assessed against project deliverables and timeline

The application form can be found here: Application for a contribution to the Forest Innovation Program-Canadian Wood Fibre Centre.

6.4   Proposal review and selection process

All research and knowledge exchange project proposals will be subject to an evaluation committee that will review each proposal for completeness, relevance and adherence to the criteria below.

Research and knowledge exchange project applications will be reviewed and assessed by NRCan with consideration of the following:

6.4.1   Completeness

All sections of the application form/proposal template (Section 6.3) must be completed, including the signature block. Failure to provide all the necessary information in the form may lead to the rejection of the proposal;

6.4.2   Eligibility

Eligibility of recipients, activities and costs (Section 3);

6.4.3   Relevance

Proposed projects must be relevant to the objectives of the CWFC (Section 2.1). For example:

- Will the project advance or enhance the knowledge in the areas of, but not limited to, enhanced forest inventory, bio residues, genomic/genetic research, characterization of wood fibre?
- Does the project offer any tools, techniques or applications to enhance forest management decision making?
- What level of knowledge exchange opportunities does the project support to reach end users? Are the appropriate knowledge exchange products and techniques utilized?

Applicants are encouraged to submit letters of engagement from end users detailing their need for the proposed research or application and their level of engagement in the project.

7. Contact us

Please direct all applications and questions to the CWFC project mailbox.

Questions received regarding the application process will be posted on our Q&A site for the benefit of all potential applicants and to ensure transparency and fairness in the application process. We will not include any identifying information in these questions and the pages will be updated as questions are received and answered.

Annex I - Important links

Background information

For more information on the FIP or any of the organizations referenced in this request for proposal, please visit the following web sites:

Natural Resources Canada (NRCan)
Canadian Forest Service (CFS)
Forest Innovation Program (FIP)
Canadian Wood Fibre Centre
FPInnovations

Application form

The application form can be found here: Application for a contribution to the Forest Innovation Program-Canadian Wood Fibre Centre.

To apply for a contribution to the Forest Innovation Program-Canadian Wood Fibre Centre, submit a completed proposal to CWFC's project mailbox.

For brevity, we refer in this document to the CWFC's project mailbox. If necessary, the full address of the mailbox is:

NRCan.canadian_wood_fibre_centre-centre_canadien_sur_la_fibre_de_bois.RNCan@canada.ca

Annex II - Detailed description of the CWFC research areas

The CWFC focuses on delivering a portfolio of research, applications, and knowledge exchange activities in two core areas: Resource Characterization and Resource Production. The following are some examples of the research in each area:

Resource characterization

This core area facilitates collaboration to develop cost-effective enhanced inventory of large forest areas at spatial resolutions that will support policy and business decisions at strategic, tactical and operational levels. This work builds on significant progress over the past six years using both aerial and terrestrial LiDAR, high-resolution digital imagery, and statistical modeling capability.

Areas of research under Resource Characterization include:

Improved methods for forest inventories

Sampling, estimation, and spatial data management are all vital components to Enhanced Forest Inventories. The use of new and existing technologies and procedures will be investigated for their relevance to improve their operational use in forest management inventory and planning.

Cost-effective improvement of the accuracy of forest resource inventories

Improvements in sensors and processing will be investigated to reduce the cost of adopting remote sensing technology for forest inventory while improving the precision of the information provided and broadening the applications the information is applied to.

Remote tree species determination

Research will advance the ability to remotely identify tree species in a consistent, objective and automated fashion in Enhanced Forest Inventories.

Site prediction

Knowing the productivity characteristics of the site that underlies a forest allows forest managers to more efficiently and effectively allocate silvicultural investments and mitigate environmental impacts. Research will provide methods to spatially predict and map soil and site conditions.

Growing the inventory

Forests are non-static entities. Understanding and predicting future wood supplies are fundamental to good forest management. Research will link spatial productivity predictions with growth and yield knowledge to generate better inventory projections.

Fibre attributes

Knowledge about the characteristics of wood fibre is essential to directing the right wood to the right mill at the right time. Research will develop methods to spatially characterize the intrinsic fibre characteristics of the current and future fibre resource.

Sustainability indicators

Good forest management includes addressing aspects such as wildlife habitat assessment and identification, ecological indicators, flood risk management, stream channel protection, and slope stability. Research in these and other areas will provide information and guidance on deriving wood products in a sustainable and environmentally responsible way.

Resource production

This core area develops and implements innovative technology to help produce, from the future forests, an improved supply of wood with desirable fibre attributes. This core area will focus on understanding, forecasting and optimizing the future availability of stand, tree and fibre attributes that determine the suitability for, value of, and cost of harvest and transformation into marketable final products.

Areas of research under Resource Production include:

Marker-assisted genetic selection

The driving force behind forest genomics research, marker-assisted genetic selection significantly reduces the time it takes to identify and select trees with desirable characteristics. Research will continue to operationalize and advance the technology.

Reproducing seedlings with desirable characteristics

Accelerated replication techniques for forest production can reproduce seedlings for planting with desirable characteristics. Research will continue to improve the technology.

Forest restoration and rehabilitation

Afforestation can significantly boost fibre production while reducing fibre demands on natural forests. Restoration and rehabilitation research will continue on appropriate sites and conditions.

Short-rotation woody crop systems

Bio-energy, pulp, and bio-refinery product streams can use a specific fibre supply of renewable resources. Research will continue into short rotation woody crop systems with industrial applications.

The utilization of forest biomass

The forest sector can diversify its portfolio of forest products within Canada's emerging bio-economy. Research will help facilitate the formulation of policy, access to emerging markets, and forest sector transformation by quantifying the harvesting and use of forest biomass.

Fibre attribute yield curves

Specified fibre attributes can enable decision-makers to examine the effects of forest management strategies on the future value of the forest rather than just on future volume. Research will continue to develop yield curves that provide value projections rather than just volume projections.

Balance current and future value

Within partial cutting systems, decision-makers need to balance the current value of harvested timber with the future value of residual growing stock. Research will investigate the long-term optimization of partial cutting silvicultural systems.

Optimal silvicultural treatments

Including fibre attributes as a response variable to the environment a tree grows under, such as silvicultural regime and stand and site conditions, allows linkages to be established to commercial wood fibre characteristics in stand models. Research will investigate understanding the linkage between silvicultural practices, stand conditions and climate with commercial wood fibre properties.

Long-term experimental sites

Data from long-term experimental sites are the foundation for building and validating models that are used to optimize forest treatment decisions. Work will continue to gather, collate, and analyze long-term data sets allowing CWFC to capitalize on historical research investments of CFS and partners while supporting the development of innovative products.

Questions and answers

What are the intellectual property considerations?

All Intellectual Property that arises in the course of the project shall vest in, or be licensed to the recipient. The recipient will grant Canada a non-exclusive, irrevocable, world-wide royalty-free license in perpetuity to use the data and information contained in reports and modify such reports and documents for non-commercial government purposes.

Are there environmental assessment considerations?

Projects under the FIP will be assessed as per the Canadian Environmental Assessment Act and other applicable legislation prior to funding being released to a Proponent.

Are there Aboriginal consultations?

NRCan will undertake aboriginal consultations for projects under the FIP as needed on a case by case basis. In determining the need to undertake aboriginal consultations for a project, NRCan will consider both the duty to consult as well as good governance practices and will do so based on available Departmental and Federal guidance, and in consultation with departmental advisors and legal services. Any aboriginal consultations required for a particular project will be completed prior to funding being released to a Proponent.

What if I have other questions?

Questions received regarding the application process will be posted on our Q&A site for the benefit of all potential applicants and to ensure transparency and fairness in the application process. We will not include any identifying information in these questions and the pages will be updated as questions are received and answered.