Natural Resources Canada | Ressources naturelles Canada

Guide to the Application for a contribution

Forest Innovation Program–Canadian Wood Fibre Centre

2019–2020

Canada

1. Context and objectives

As part of Forest Innovation Program (FIP) of Canadian Forest Service (CFS), the Canadian Wood Fibre Centre (CWFC) supports research, development and technology transfer activities in Canada's forest sector to advance Government of Canada priorities in forest sector innovation and growth.

An important part of the CWFC is its contribution agreement program. A contribution is a transfer payment subject to performance conditions specified in a funding agreement, is to be accounted for, and is subject to audit. For more information on contributions, please consult the Government of Canada's Policy on Transfer Payments.

In 2019-2020, the CWFC has $522,000 of funding available to support new contribution agreement projects that take place within the fiscal year (April 1, 2019 to March 31, 2020).

Please note that due to limited funding available for 2019-2020, the CWFC will fund projects related to specific priorities. For more details on these priorities, see section 3.

Funding decisions will be based on the relative contribution of the proposed work to the achievement of CWFC program priorities and objectives, the amount of funding requested and overall funds available. For more information on funding details, see Sections 2.4 and 4.

1.1 About the Canadian Wood Fibre Centre

The CWFC is a research branch within the CFS and the department of Natural Resources Canada (NRCan), with employees located throughout the country. The CWFC works in close collaboration with stakeholders, in particular FPInnovations, to bring together federal government priorities with the research needs of the Canadian forest sector.

This collaborative operating model enables the CWFC to:

- Enhance the relevance of CFS work by aligning federal research with the forest sector, including industry;
- Facilitate the rapid uptake of government research;
- Design sustainable fibre solutions for the generation of clean energy, bioproducts and biomaterials; and
- Develop tools to mitigate and adapt to a changing climate.

In support of its research portfolio, the CWFC also operates the Petawawa Research Forest.

1.2 CWFC objectives

By developing tools and practices that forest managers and fibre end-users can use to support sustainable processes and products, the CWFC supports the forest sector's contributions to a low-carbon economy that helps mitigate climate change and increase the resilience of Canadian forests.

The CWFC is responsible for the CFS's program ***Developing sustainable solutions for the fibre***, which maintains a strong focus on outreach activities to ensure rapid uptake of the processes and products that are developed.

This program has three key fibre-related research areas:

- Tools and Techniques to Identify, Measure and Optimize the Use of Wood Fibre Attributes (1);
- Next Generation Enhanced Forest Inventory (2); and
- Growing Resilient Forests for a Sustainable Fibre Supply(3).

Each of the research areas is described below. For additional details on each area and its sub-component(s), see Annex II.

1. **Tools and Techniques to Identify, Measure and Optimize the Use of Wood Fibre Attributes**
   This research area includes the sub-component "Decision-support tools for the identification of particular fibre attributes and prediction of changes (1.1)". This research area advances the ability of foresters and other stakeholders to identify and measure important wood fibre characteristics. Improved tools and techniques enable more reliable predictions of how wood fibre properties are affected by various treatment options.

2. **Next Generation Enhanced Forest Inventory**
   This research area includes the subcomponent "Next generation tools and techniques for enhanced forest inventory (2.1)". This research area will provide foresters and other stakeholders with more current, accurate and precise forest inventories than are now possible to create. Such inventories – viewed here collectively as an overall "next generation enhanced forest inventory" –give a more complete and precise picture of the volume, location and characteristics of forest timber resources. Tools to support the next generation enhanced forest inventory contribute to better strategic and operational planning.

3. **Growing Resilient Forest for a Sustainable Fibre Supply**
   This research area includes three sub-components and contributes to protecting Canada's wood fibre supply to meet future needs and changing conditions. New silvicultural strategies, tools and techniques help foresters establish forest stands that can tolerate the risks posed by a changing climate. This research area also supports the production of fibre for value-added products in the future, and looks for solutions to mitigate timber supply shortages expected over the next 20–30 years in some regions of Canada.

1.3 Government of Canada priorities in the forest sector

Through its research objectives and annual contribution program, the CWFC seeks to advance the following Government of Canada priorities in the forestry sector:

- Mitigating and adapting to the impacts of a changing climate on Canada's forest resources;
- Supporting forest-based innovation (with an emphasis on growing the bioeconomy);
- Creating economic growth and job opportunities in indigenous and rural communities; and
- Supporting the diversification of forest sector products and markets.

2. Application Form

2.1 Applicant information

2.1.1 Type of organization/Legal entity (section 2.1.4 in the application form)

Eligible recipients for contributions under this allocation include:

- Universities, colleges, and other academic institutions;
- Provinces and territories;
- For-profit enterprises that produce forest products and that have existing forest product manufacturing facilities (for examples, pulp, paper, or lumber mills) located in Canada;
- For-profit enterprises that supply materials, products, or services to forest products enterprises defined above;
- Not-for-profit forest sector organizations; and
- Not-for-profit research institutions (including FPInnovations).

2.2 Authorities and Contacts

2.2.1 Project lead and authority (section 2.2 in the application form)

This is the official contact for notices in the Agreement and should be someone of sufficient level that can receive any notices of Amendment or Default as well as route requests for claim information, etc.

2.2.2 Authorized signatory (section 2.3 in the application form)

This is the individual(s) authorized to sign on behalf of the Legal Entity to enter into agreements to legally bind that organization.

2.2.3 Other key contacts (section 2.4 in the application form)

If applicable, please provide the contact information of your organization's specialist who might assist you with managing a Contribution Agreement (e.g. finance staff who will help you submit an invoice, contract specialist who will help you understand the terms of the agreement, etc.).

2.3 Project information

2.3.1 Overview (section 3.1 in the application form)

For a proposed research project or knowledge transfer/technology transfer project to be eligible, it must clearly demonstrate how it supports the objectives and priorities of the CWFC.

Project proposals will describe the forest sector need it is addressing and for whom, along with the objectives and how the project addresses or advances one or more of the CWFC program priorities.

2.3.2 Project outcomes (section 3.2 in the application form)

Project proposals will describe the expected benefits and outcomes, including where the benefits occur, to the applicant organization, to its stakeholders, to end-users and to Canada, and will also describe the method of measuring performance against project outcomes.

2.3.3 Work plan (section 3.3. in the application form)

Project proposals will describe the activities and/or tasks to be undertaken to achieve the objectives of the project, including the anticipated completion date of each activity/task and whether it is considered a milestone.

2.3.4 Detailed work plan (section 3.3.1 in the application form)

Eligible activities can consist of field work, technical and laboratory work, computer modelling, social and economic analysis. The description of each activity should include:

- The experimental design, sampling design, statistical analysis techniques and procedures, and specification of any tools, instruments and laboratory facilities that will be used;
- If a subcontractor will be hired to complete the activity, please describe it and mention the percentage of work they will perform; and
- If external collaborators will be involved in the activity, please describe this.

2.3.5 Proposed knowledge transfer/technology transfer projects and activities

Knowledge transfer/technology transfer plays an important role in ensuring that research results are delivered to the forest sector in a timely and comprehensive fashion. Knowledge and Technology transfer 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.

Applicants are encouraged to include a knowledge transfer/technology transfer component or plan for their project in the application form (section 3.1.6. or in the description of a specific activity).

Recipients will be encouraged to present orally results following the conclusion of the contribution agreement. While this is not a formal requirement, dissemination of research results is beneficial for proponents and stakeholders.

2.3.6 Other projects and activities

For all eligible projects, other relevant activities that meet program objectives may be deemed eligible for funding, and will be considered on a case-by-case basis. Such activities could, for example, focus on social acceptability.

2.4 Budget information

2.4.1 Funding allocation

Contributions will be made primarily to not-for-profit organizations, and will be non-repayable.

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

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

CWFC reserves the right to negotiate amounts requested by applicants based on the criteria above.

2.4.2 Funding requested (section 4.3 in the application form)

Eligible expenditures will be directly related to the project 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;
- Capital equipment that is depreciable with a purchase price of $10,000 or more (any capital equipment purchased through the contribution funding will not become an asset of Canada at the end of the project);
- Travel, including meals and accommodation;
- Publication, printing, and other media services;
- PST, HST and GST net of any rebate to which the recipient is entitled;
- Patent fees and other costs related to registering intellectual property; and
- Overhead expenditures which are defined as administrative support provided directly to the project by the recipient's employees, valued on the same basis as professional staff time, heat, hydro, stationery, telecommunications expenditures, and other operating expenditures,

provided they are directly related to the project. Recipients will be required to substantiate overhead costs.

- Overhead for recipients other than FPInnovations: Eligible overhead costs will be a percentage of eligible costs reimbursed per project not to exceed 15%. **Overhead is calculated as 15% of the total value of eligible expenditures and not 15% of the total value of the requested budget.**
- Overhead for FPInnovations: Eligible overhead costs are to be determined with the use of an overhead factor (multiplier) applied to direct salary costs eligible under a given agreement.

Expenditures incurred prior to execution of a contribution agreement will not be eligible for reimbursement. The eligible expenditure period will begin on the date of signature by Canada (i.e. the date when the contribution agreement is signed by both the recipient and NRCan), and ends no later than March 31, 2020.

The applicant may request funds for the monitoring and management of the project as well as the dissemination of results by 31 March. The cost associated with preparing the application is not an eligible expense.

2.4.3 Leverage from other organizations (section 4.4 in the application form)

Project proposals will list other contributors (including the applicant) along with type of organization and the activities it will conduct as well as the amount of its contribution both in cash and in-kind by eligible expenditures.

In-kind contributions are non-cash items of support (e.g. buildings, equipment, use of facilities, datasets, labour, goods, and secretarial services) that are provided to the funded project by interested parties such as recipients, private or corporate donors, departments, or other government bodies. The value of the in-kind contributions should be supported by a basis of valuation, be verifiable and it should be tracked by the proponent.

Please note that the direct participation (in kind or cash) of an NRCan employee in a project is not permitted in this program.

If the project proposal is part of a larger project, set of projects or an existing initiative, please describe the context in your application. In the application, please indicate only the activities and deliverables for which you request funding through our program. In order to fairly assess all applications, please make sure that other contributions (including the applicant) are those related to the project request and not to a larger project, a set of projects or an initiative.

3. Proposal evaluation

Priority may be given to proposals that:

- Fund activities other than just the payment of a postdoctoral salary;
- Clearly demonstrate that the project can be completed within the fiscal year;
- Include end-user support letters;
- Leverage additional funds from other sources; and
- Clearly demonstrate that they will achieve greater benefits for external stakeholders and value for money for the Government of Canada.

Other factors that may be taken into consideration include:

- Regional distribution of funding representative across Canada;
- Strong demonstration of working collaborations;
- Technology and knowledge transfer;
- Multiple partnerships; and
- Fund activities related to the Petawawa Research Forest.

For 2019-2020, the CWFC is seeking to support:

- **Knowledge transfer/technology transfer project proposals** in all three research areas of the *Developing sustainable solutions for the fibre* program; and

- **Research project proposals** in the two of its three research areas:
  - **Next Generation Enhanced Forest Inventory (2)**; and
  - Growing Resilient Forests for a Sustainable Fibre Supply (3), sub-component "**Sustainable supply of wood fibre for bio-economy opportunities (3.3)**".

  Examples of expected research topics:

  - Implement Enhanced Forest Inventory (EFI) methods at tree- and plot-level using remote sensing data, targeted to forest practitioners.
    - For example, the deliverables could aim to provide practical support in estimating tree-level attributes from terrestrial LiDAR, calibrating plot-level estimates of volume and diameter distribution, or generating point cloud data from airborne photography.
    - Note that upon request, a series of CFS methods and datasets for facilitating the development and testing phases of projects can be made available. Non-CFS datasets can also be used;

- Characterize and match wood feedstock types with innovative conversion approaches and end-products;
- Assess forest management and wood fibre use approaches that best contribute to climate change mitigation benefits; and
- Assess **social acceptability** of the use of forest biomass as feedstock for low-carbon bio-fuels or bio-products.

For additional details on each research area and its sub-component(s), see Annex II.

All proposals will be evaluated by a committee that will review each submission for completeness, relevance and adherence to the criteria below.

3.1 Completeness

All sections of the application form must be completed, including the signature block and date. Failure to provide all the necessary information in the form may lead to the rejection of the proposal. Please respect the maximum number of words per section and describe acronyms the first time they are used. With the exception of letters of support, additional attachments may not be considered. Letters of support must be submitted by the deadline for submission of projects.

The application form is available in French and English. Please request the form in the language of your choice.

3.2 Eligibility

Proposals must meet the eligibility requirements including type of recipient, type of activities, and amount requested.

3.3 Project Management Capacity (section 4.2 in the application form)

Proposals will be assessed based on evidence that the project team has the necessary capabilities, experience and qualifications to deliver the project, including demonstrated experience (communication skills, budget management skills, etc.) with similar work. Proposals will also be assessed on the feasibility of the project's successful outcome.

A recipient who is unable to spend their funds must notify NRCan as soon as possible. Note that unspent funds cannot be transferred to the next fiscal year.

3.4 Relevance

Proposed projects must be relevant to the objectives and priorities of the Government of Canada and the CWFC. For example:

- Will the project advance or enhance knowledge in the areas of, but not limited to, enhanced forest inventory and bio residues?
- Does the project offer any tools, techniques or applications to enhance forest management decision-making?
- What level of knowledge transfer/technology transfer opportunities does the project support to reach end-users? Are the appropriate knowledge transfer/technology transfer products and techniques utilized?
- How will the proposed project help support economic growth and jobs in indigenous communities and rural communities?

Proposals will also be assessed based on benefits to Canada, industry stakeholders and the Canadian forest sector.

3.5 Collaboration, leverage and mobilization

Proposals will be assessed on the involvement of external partners and collaborators, including external resources available to support the project, such as financial support.

Applicants are encouraged to submit letters of support from end-users detailing their need for the proposed research or application. Letters of support from the Canadian Forest Service (CFS) are not eligible (e.g. letter of support from CWFC or from another centre such as the Pacific Forestry Centre). Letters of support from an NRCan area, other than the Canadian Forest Service, are eligible (eg CANMET).

In order to be considered in the evaluation of projects, letters of support must be submitted before the proposal submission deadline.

4. 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 expenditures. The total federal government portion of this 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.

5. 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; and
- It shall notify and obtain written consent of NRCan for any other new contract not originally included in the proposal 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.

6. Basis of payment and reporting

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

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 for the duration of the project:

- Progress reports at mid-year and year-end including updated budgets;
- Financial reports outlining eligible expenditures 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 of results when 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.

Regular communication between CWFC and recipients will be implemented to monitor progress. Recipients will be encouraged to present results orally following the conclusion of the contribution agreement. While this is not a formal requirement, dissemination of research results is beneficial for proponents and stakeholders.

7. Performance measurement

The Forest Innovation Program has several key performance indicators in order to measure the success of the program, one of which is the number of new products and/or processes (such as new tools or techniques) developed or in the process of being developed by March 31, 2020. In order for the program to report against this key performance indicator, research project proposals describe the new product(s) or processes that it will develop and at what stage of development or completion by the end of the process, for which will be included in the agreements successful proposals and could include:

- Number of new forest product innovations adopted by industry;

- Economic impact of forest products, processes and technology innovations adopted by Canada's forest sector;
- Number of regulatory changes introduced and/or modified;
- Number of science-based research products or technical materials/tools (i.e. workshops, seminars) produced and/or distributed; and
- Number of science-based research/technical reports produced.

8. Recipient audit

NRCan may be requested to undertake a financial audit of eligible expenditures 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.

Annex I. Important information, dates and links

a. Background information

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

- Natural Resources Canada (NRCan): http://www.nrcan.gc.ca/home
- Canadian Forest Service (CFS): http://www.nrcan.gc.ca/forests
- Forest Innovation Program (FIP): http://www.nrcan.gc.ca/forests/federal-programs/13137
- Canadian Wood Fibre Centre: http://www.nrcan.gc.ca/forests/research-centres/cwfc/13457
- FPInnovations: https://fpinnovations.ca/

The list of previously funded projects over the past two fiscal years can be found on the Forest Innovation Program web page. Recordings of 2017-2018 project presentations are available on the CWFC website.

b. Application form

- To request an application form, please email nrcan.cwfc-ccfb.rncan@canada.ca
- Submit a completed proposal to CWFC's mailbox: nrcan.cwfc-ccfb.rncan@canada.ca

c. Application schedule

The following is the schedule for the application process:

- Request for project proposals Issued: November 16, 2018
- Final date for submission of project proposals: 11:59 p.m. Pacific Standard Time, Friday, December 20, 2018
- Initial eligibility assessment and acknowledgment of receipt: December 31, 2018
- Funding decisions will be communicated on February 6, 2019

Applicants being given further consideration will be contacted for negotiation of funding. Note: contribution agreements cannot begin before April 1, 2019 nor continue beyond March 31, 2020.

The above schedule is subject to change. Any changes will be communicated via the FIP and CWFC website.

d. Service standards

In the administration of funding contributions under the FIP, NRCan is committed to the following service standards:

- Reviewing applications and informing applicants of funding decisions within 31 business days after application deadline;

- Sending a contribution agreement to applicant for signature within 60 business days of advising applicants of funding decisions;
- Having signed amendments in place within 60 calendar days of receiving an acceptable request; and
- Issuing payments within 30 calendar days of receiving a complete invoice.

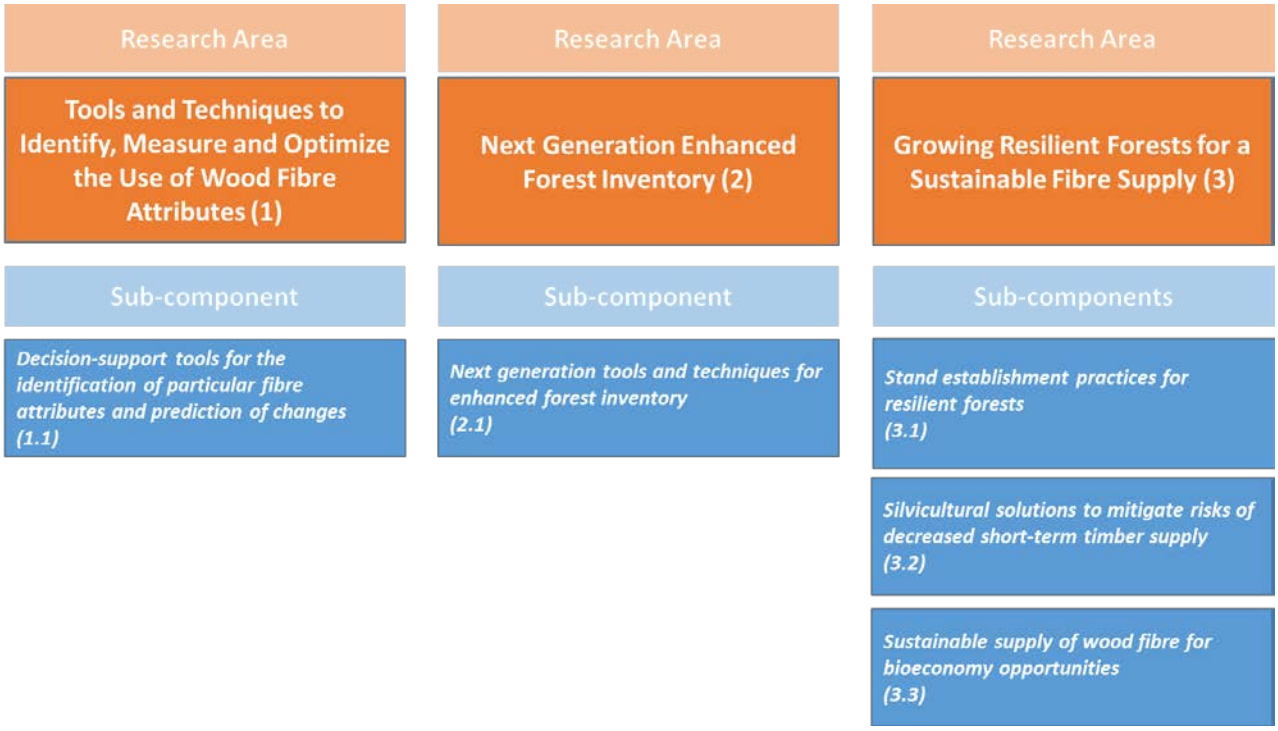
e. Contact us

Please direct all applications and questions to the CWFC's mailbox.

Annex II. Detailed description of the CWFC research areas

The CWFC elaborates tools and processes for forest managers and fibre end-users to support sustainable processes and products. In doing so, the CWFC supports the forest sector's contributions to a low-carbon economy that helps mitigate climate change and increase resilience of Canadian forests. The ***Developing sustainable solutions for the fibre*** program under CWFC's responsibility maintains a strong focus on outreach activities to ensure rapid uptake of the processes and products that are developed.

The ***Developing sustainable solutions for the fibre*** program



Research Areas

There are three key fibre-related research areas to this program:

- Tools and Techniques to Identify, Measure and Optimize the Use of Wood Fibre Attributes(1);
- Next Generation Enhanced Forest Inventory (2); and
- Growing Resilient Forests for a Sustainable Fibre Supply (3).

1. Tools and Techniques to Identify, Measure and Optimize the Use of Wood Fibre Attributes

This research area includes the sub-component "Decision-support tools for the identification of particular fibre attributes and prediction of changes (1.1)". This research area advances the ability of foresters and other stakeholders to identify and measure important wood fibre characteristics.

Improved tools and techniques enable more reliable predictions of how wood fibre properties are affected by various treatment options.

Wood fibre attributes are the biological, physical and chemical characteristics of a tree that affect its value for commercial purposes. These characteristics are influenced by forest practices and changes in climate. How these characteristics are valued depends on market conditions.

Expected Outcomes:

- Greater economic return through optimized wood fibre use
- Future forests able to withstand stresses of a changing climate to supply valuable wood fibre
- Increased resilience of forest-based communities

2. Next Generation Enhanced Forest Inventory

This research area includes the subcomponent "Next generation tools and techniques for enhanced forest inventory (2.1)". This research area will provide foresters and other stakeholders with more current, accurate and precise forest inventories than are now possible to create.
Such inventories – viewed here collectively as an overall "next generation enhanced forest inventory" – give a more complete and precise picture of the volume, location and characteristics of forest timber resources.

Tools to support the next generation enhanced forest inventory contribute to better strategic and operational planning. These tools and the products they generate:

- Facilitate precision planning and management of Canada's wood fibre supply by enabling forest managers to make better-informed decisions using models that spatially predict forest stand productivity;
- Help reduce operational costs through improved planning; and
- Help avoid the risk of costly errors by providing reliable information for a variety of important management and planning variables.

The enhanced inventories can also incorporate forest ecosystem service values, such as wetlands, wildlife habitat and species richness. Such information better enable forest managers to take into account how all those values contribute to healthy, resilient and productive forests.

Expected outcomes:

- Enhanced information about Canada's forest resources
- Detailed baseline information for tracking effects of changing climate and valuing forest carbon
- Integration of social and environmental values into forest management planning
- Operational uptake of next-generation enhanced forest inventory tools

Examples of current research initiatives include:

- Enhanced forest inventory techniques
- Aerial LiDAR and forest inventory monitoring

3. Growing Resilient Forests for a Sustainable Fibre

This research area includes three sub-components and contributes to protecting Canada's wood fibre supply to meet future needs and changing conditions.

New silvicultural strategies, tools and techniques help foresters establish forest stands that can tolerate the risks posed by a changing climate. This research area also supports the production of fibre for value-added products in the future, and looks for solutions to mitigate timber supply shortages expected over the next 20–30 years.

Work includes research into enhancing tree breeding through the use of genomics, and into assisting the migration of trees as their ranges move with changing climate. Innovative silvicultural strategies are being designed and adapted to the characteristics of the current forests and value chains.

Expected outcomes:

- Increased resilience and productivity of Canada's forest resources
- Improved forest sector health
- Support for the development of a low-carbon economy
- Increased resilience of forest-based communities
- Enhanced social licence for the continued management of Canada's forests

Sub-components for this research area

Work has been divided into three sub-components, each delivering on one facet of the research area:

3.1 Stand establishment practices for resilient forests

- This sub-component helps establish or transform forest stands so they can withstand the risks posed by changing climate while at the same time producing fibre for value-added products in the future.

3.2 Silvicultural solutions to mitigate risks of decreased short-term timber supply

- This sub-component address potential timber supply shortages expected within the next 25 years in many jurisdictions of Canada.

3.3 **Sustainable supply of wood fibre for bioeconomy opportunities**

- This sub-component helps develop operationally and economically feasible sustainable residue supply chains for industry.

Examples of current research initiatives include:

- Using waste in the production of fast growing woody crops
- Increasing forest stand production with high-quality silvicultural data
- Matching woody residues with application

Annex III. Questions and Answers

a. 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.

b. 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.

c. Are there Indigenous consultations?

NRCan will undertake Indigenous consultations for projects under the FIP as needed on a case-by-case basis. In determining the need to undertake Indigenous 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 Indigenous consultations required for a particular project will be completed prior to funding being released to a proponent.

d. What if I have other questions?

Please contact us at nrcan.cwfc-ccfb.rncan@canada.ca if you have additional questions. This section of the guide will be updated each year to include new frequently asked questions.