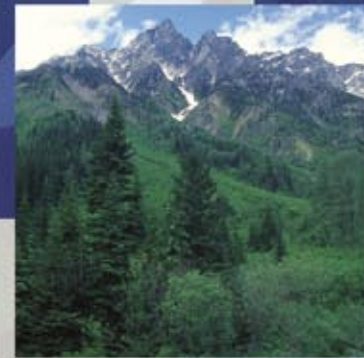


FIA Forest Investment Account
Forest Science Program



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More information on the FIA Forest Science Program can be found at
<http://www.fia-fsp.ca>

FIA Forest Science Program

Context

The Forest Investment Account (FIA) is a provincial government mechanism for promoting sustainable forest management in British Columbia. It is founded upon a Vote of the Legislature, authorizing the Minister of Forests to fund certain forest management activities. The FIA comprises seven programs: Land-Base Investment, Crown Land Use Planning, Tree Improvement, Small Tenures, International Marketing, Product Development, and Forest Science.

The FIA Forest Science Program (FIA-FSP) funds forest science initiatives that address the critical knowledge needed to enable science-based sustainable management of British Columbia's forest resources. The program focuses on applied research in the areas of sustainable forest management (SFM) and improving timber growth and value, and using forest science results more effectively through extension.

In November 2003, the Deputy Minister of Forests appointed a 12-member Forest Science Board to provide advice about strategies and priorities for the FIA-FSP.

Statement of Purpose

The Forest Science Board (FSB) is a voluntary advisory body that comprises users and providers of scientific knowledge drawn from industry, governments, and the forest science community. The Board will advise the Deputy Minister of Forests about strategies for the FIA-FSP, offer leadership to improve the program, and champion the program by communicating its achievements.

This Strategic Plan sets out the vision, strategic goals, Board structure, planning framework, forest science priorities, and cooperative principles of the FIA-FSP.

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Policy and Legislation

Responsibility and authority for stewardship of forest resources in British Columbia are delegated to the Ministry of Forests under the *Ministry of Forests Act*.

Under the *Forest Act*, when determining an allowable annual cut, the Chief Forester must consider the rate of timber production that may be sustained on an area, taking into account factors such as the expected rate of growth, which is based on scientific research.

The *Forest and Range Practices Act* and its associated regulations govern and set objectives for forest practices on Crown lands. The Lieutenant Governor in Council may make regulations prescribing objectives related to soils, visual quality, timber, forage and associated plant communities, water, fish, wildlife, biodiversity, recreation resources, resource features, and cultural heritage resources. The Chief Forester may establish standards for forest and range practices. Holders of tenure on Crown land must comply with these objectives and standards or approved alternatives.

Government policy is to deliver a sound scientific basis for forest practices and policy decisions in British Columbia. Government and industry resource managers rely on the FIA-FSP to deliver practical information and tools that will help inform forest and range practices, policies, and standards evolution, and the achievement of resource management objectives on the ground.



Vision

The FIA Forest Science Program will be a world leader in providing credible and relevant scientific knowledge to support sustainable forest management policies and practices.

It will:

- develop a forest science research program that research providers and users will view as a credible contribution to the scientific knowledge for land-based activities and will increase public acceptance of forest management decisions
- offer products that are useful and timely for solving provincial forest management problems in the short and long terms
- promote collaboration in design and delivery of an effective provincial forest extension program
- promote awareness of the value of forest science and the effective application of research.



Strategic Goals

1 Improve science-based knowledge in support of sustainability

- 1.1 Develop and implement a strategy for research related to issues of sustainable forest management within the scope of the FIA-FSP.

2 Improve science-based knowledge in support of improving timber growth and value

- 2.1 Develop and implement a strategy for research related to improving timber growth and value within the scope of the FIA-FSP.

3 Guide development of a provincial forest extension program that includes FIA-FSP extension

- 3.1 Select an agency to coordinate and deliver a collaborative provincial forest extension program.

4 Develop an efficient and effective process for determining annual research and extension priorities

- 4.1 Develop a structure for identifying annual research and extension priorities that meet defined business needs.
- 4.2 Establish principles and methods for allocating funds to the research and extension programs and projects, and the administrative structures required to support them.

5 Encourage sufficient stable funding to meet the needs of the FIA-FSP

- 5.1 Monitor forest research and extension activities and progress, and report annually to stakeholders. By November 1 each year, publish a summary of all research funded in the previous fiscal year.
- 5.2 By March 15 each year, deliver a business plan outlining the allocation of funds to FIA-FSP activities for the coming fiscal year.
- 5.3 Identify and report the return on investment of forest research and extension activities.
- 5.4 Champion an increase in annual funding for the FIA-FSP.



Board Structure and Membership

Forest Science Board

The Forest Science Board is governed by bylaws and policies that define how it carries out its responsibilities. These include operating principles, conflict of interest policy, communication policies, and procedures for managing meetings.

The 12 appointed members on the Board comprise both users and providers of scientific knowledge (Table 1). The Deputy Minister of Forests selects members to reflect the broad interests in forest science. The balance is weighted toward users to ensure that the FIA-FSP produces relevant and timely information.



Table 1 Forest Science Board membership structure

Affiliation	Members
Provincial Government	3
Forest Industry (2 Coast, 2 Interior)	4
Federal Government (Canadian Forest Service)	1
Forest Science Provider Agencies (universities, private organizations)	4
Total	12
Ex-officio (non-voting)	
PricewaterhouseCoopers	
Ministry of Forests	
Extension specialist	

Committees

Two types of committees support the Forest Science Board in shaping the FIA-FSP:

- *Program Advisory Committees (PACs)* are standing committees that provide strategic advice and recommend funding priorities for their respective programs. PAC Chairs are appointed by the Board for a three-year term. PAC members are nominated by a Board subcommittee in consultation with the PAC Chair, and appointed by the Board.
- *Working Groups (WGs)* are temporary committees established by the Board as needed to give advice about specific issues.



Planning Framework

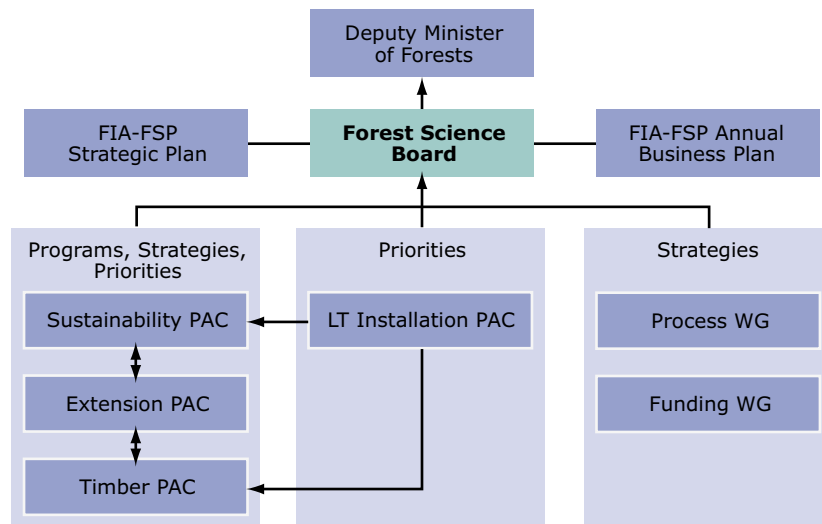
Investments made through the FIA-FSP are expected to contribute to the government’s goal of having a leading edge forest industry that is globally recognized for its productivity, environmental stewardship, and SFM practices.

Because the funding available to support this goal is limited, investments must focus on high priority research areas that address user needs, avoid duplication, and leverage funds by attracting money from other sources. The Forest Science Board and its committees work toward this end by developing strategies and defining annual priorities.

Figure 1 shows the relationships among the Board, Program Advisory Committees, and Working Groups, and the development of the FIA-FSP Strategic Plan and annual Business Plan.



Figure 1 Forest Science Board and committee relationships



Planning Advisory Committees

The **Sustainability PAC** and **Timber Growth and Value PAC** members are drawn from the range of cooperators in regional forest science communities, including government, industry, consultants, and other institutes and organizations inside and outside government. Each PAC also includes two representatives from the provincial forest extension agency, who provide advice on provincial extension activities and incorporate PAC extension suggestions into a provincial forest extension program.

The Sustainability PAC and Timber Growth and Value PAC identify critical issues, information needs, and knowledge gaps in each of their program areas, and recommend extension and research priorities to address these. Each PAC:

- provides annual advice to the Board on research and extension needs within its program area
- develops and periodically updates a five-year strategy for addressing short- and long-term research priorities in its program area
- recommends annual research priorities for the FIA-FSP Research Call for Proposals
- reviews and comments to the Board on the annual recommendations of the Long-term Research Installation PAC.

The **Extension PAC** includes the chairs of the Sustainability and Timber Growth and Value PACs, and representatives from the provincial forest extension agency and the Forest Science Board. The Extension PAC advises the Board on provincial forest extension needs and oversees development and implementation of the Forest Extension Program, of which research extension for the FIA-FSP is a part.

The **Long-term (LT) Research Installation PAC** includes reviewers from universities, industry, and governments who are familiar with the province's long-term research installations. The PAC annually assesses existing long-term installations in the context of the Sustainability and Timber Growth and Value Programs, and makes recommendations to the Board and PACs on the installations for which maintenance activities should be funded. The Board evaluates these recommendations and related comments from the Sustainability and Timber Growth and Value PACs, and determines which research installations to fund each year.



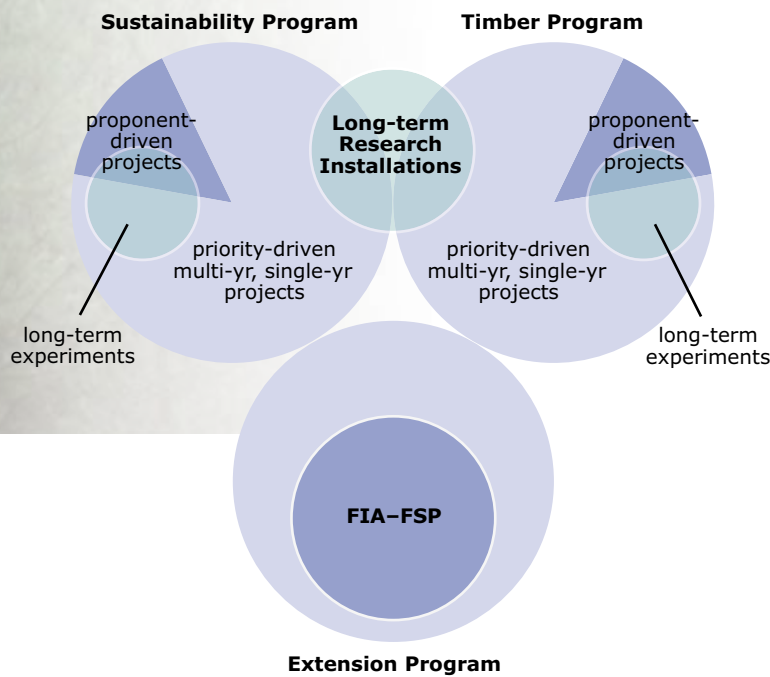
Funding Categories

The FIA-FSP funds four major categories of work:

- short- and long-term research to address issues related to sustainable forest management
- short- and long-term research to address issues related to improving timber growth and value
- a provincial forest extension program to deliver existing and new knowledge to practitioners
- infrastructure maintenance activities on selected long-term research installations that support short- and long-term research projects.

Figure 2 identifies the three FIA-FSP programs and types of projects funded under each. The Board decides how to apportion the annual available funds to each program and funding category.

Figure 2 FIA-FSP programs and funding categories



Allocation of Funds

Priority Themes

The PACs' long-term strategies and recommended priority research themes and topics shape the annual FIA-FSP Research Call for Proposals. The largest proportion of available funds within each program is allocated to these priorities, and available to single-year and multi-year projects, as well as long-term experiments. A smaller portion of funds is available for proposals that fall within the general research program, but on topics not identified as the annual priority.

Multi-year Projects

Research projects often require more than one year to complete. The Board will seek a balance in funding projects of one to three years, to ensure that new projects of varying terms can be approved each year. Once approved, a multi-year project will be funded for its full term (up to three years), based on the annual review of progress against deliverables and submission of an updated workplan and project timetable. Projects requiring longer than three years to complete must be competitively reviewed after every third year.

Annual Allocations for New Research

Annual available funds for new research will be allocated to maintain approximately equal funding of the Sustainability and Timber Growth and Value Programs. Due to funding constraints, the Board will allocate 90% of the annual available funds for each program to the priority research topics defined by the PAC, and 10% to proponent-driven proposals that fall within the program themes.

Long-term Research Installations

In recognition of the research benefits associated with long-term research installations, the Board will allocate a portion of its annual budget, as funding allows, to the maintenance of those installations that best support the priority research themes in the Sustainability and Timber Growth and Value Programs.

Extension

The Board allocates a portion of its annual budget to the provincial Forest Extension Program in consideration of an annual forest extension plan developed by the provincial forest extension agency. The program is based on priority management issues and user-identified needs. It includes the delivery of existing information that is not currently accessible to users, as well as new information resulting from research, including the FIA-FSP (Figure 2).



FIA-FSP Annual Business Plan

The FIA-FSP Business Plan for each fiscal year will include the allocation of funds that begin April 1 to:

- multi-year projects approved the previous spring for continued funding
- research projects selected from the competitive process begun the previous fall
- infrastructure maintenance of long-term research installations approved the previous fall
- PACs operations
- provincial forest extension activities
- Forest Science Board activities in support of the FIA-FSP.

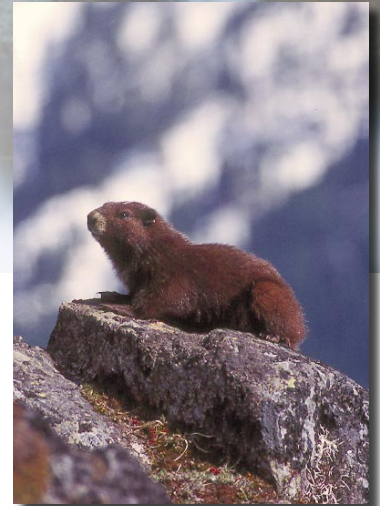


Forest Science Priorities

The Board's PACs develop long-term strategies and priority themes for research and extension. Table 2 lists the long-term themes identified for FIA-FSP programs on Sustainability, Timber Growth and Value, and Extension.

Table 2 FIA-FSP programs and priority themes

Program	Themes
Sustainability	<ul style="list-style-type: none"> Ecosystem structure, function, and processes, and biodiversity related to forest management Decision tools SFM indicators, targets, and monitoring systems Silvicultural systems Scientific information to inform policy, regulations, and <i>Forest and Range Practices Act</i> requirements Synthesis of best available information to improve policies and practices
Timber Growth and Value	<ul style="list-style-type: none"> Tree growth and stand development Design and analysis of silvicultural systems Growth and yield modeling/predictions Timber losses to environmental factors (wind, drought, insects, disease) Analytical techniques and models for strategic analysis Synthesis of best available information to improve policies and practices
Extension	<ul style="list-style-type: none"> Development and implementation of a multi-year provincial forest extension plan Participation in FIA-FSP Sustainability and Timber Growth and Value PACs Guidance to research proponents Synthesis of best available information to improve policies and practices Effective processes and mechanisms to obtain information on user needs and transfer knowledge to users



Interagency Collaboration

Several organizations in British Columbia are involved in pure and applied research and extension to increase understanding of how forests grow, and how human activities affect forest growth and development. The Forest Science Board, whose members include these interests, will seek opportunities for collaboration to increase synergies among research and extension programs and to leverage funding for research projects of common interest (Table 3). The Board will follow cooperative principles in its deliberations and program delivery.

Table 3 FIA-FSP cooperators

Organization	Focus	Research Areas
Forest Engineering Research Institute of Canada (FERIC)	Field-oriented research	Engineering design/specialized technologies, silvicultural operations, small-scale operations, transportation and roads, wood harvesting
Forest Research Extension Partnership (FORREX)	Research extension	Development, integration, and sharing of scientific, experiential, and indigenous knowledge to help people develop science and knowledge-based solutions to natural resource management challenges
Forintek	Technological support to wood products sector	Building systems, codes and standards, composites products manufacturing, lumber manufacturing, markets and economics, resource assessment, value-added products
Ministry of Forests, Forest Science Program	Applied research and strategic analysis to support policy decisions and operational activities	Climatology, forest genetics, forest productivity, forest/range ecology, growth and yield, landscape ecology, silvicultural systems, stream geomorphology, soil/terrain science, wildlife/fisheries habitat, watershed hydrology
Ministry of Water, Land and Air Protection, Biodiversity Branch	Maintaining and restoring the natural diversity of provincial species, habitats, and ecosystems	Aquatic and terrestrial habitats and species, forest recreation opportunities and impacts, monitoring effectiveness of policies, water and air quality
Natural Resources Canada, Canadian Forest Service	Research in support of sustainable forest management and competitiveness	Climate change, disturbance ecology, forest management, information management
Paprican	Pulp and paper research and technology	Analytical services, chemical pulping, engineering development, environment, fibre supply and quality, mechanical pulping, papermaking, product performance
Sustainable Forest Management (SFM) Network	Interdisciplinary, university-based research and innovation	Integrated resources management, landscape-level planning, natural disturbance management, policy and institutional analysis, value added/alternative products
Universities and Colleges	Pure and applied research	Biometrics, conservation, ecology, economics, engineering, genetics, growth and yield, hydrology, landscape ecology, management, modeling, operations, policy, silviculture, sociology, soils, systems analysis, visualization, wood products and processing



Credits

Photography

Cover	Jared Hobbs	Bunchberry (<i>Cornus canadensis</i>) wide ranging throughout BC
Cover	Jared Hobbs	Cayoosh Mountain west of Duffey Lake
Cover	Jared Hobbs	Northern Spotted Owl near Pemberton
Page 1	Jared Hobbs	White Lake Basin, Okanagan Valley
Page 1	Patrick Armstrong	Loader sorts logs in preparation for transport to mill near Williams Lake
Page 2	Jared Hobbs	Northern Pygmy Owl (<i>Glaucidium californicum</i>), Vancouver Island
Page 2	Jared Hobbs	Tiger Salamander (<i>Ambystoma tigrinum</i>), White Lake Basin, Okanagan Valley
Page 2	Jared Hobbs	Caribou (<i>Rangifer tarandus</i>), Muskwa-Kechika area
Page 3	Patrick Armstrong	Sandhill cranes, near Puntzi Lake, Chilcotin area
Page 3	Patrick Armstrong	Fir bark beetle salvage heli logging near Williams Lake
Page 4	Jared Hobbs	Sage dominated grasslands, southern central BC
Page 4	Jared Hobbs	Adult female Coopers Hawk is banded as part of a long-term population study, Victoria
Page 5	FERIC	Foresters meet in Peace River area log yard
Page 6	Patrick Armstrong	Foresters and logging supervisor reviewing harvest operations, Okanagan region
Page 7	Patrick Armstrong	Mountain pine beetle attack, Okanagan region
Page 7	Patrick Armstrong	Blue stain on lodgepole pine caused by mountain pine beetle, Okanagan region
Page 8	Patrick Armstrong	Lodgepole pine regeneration near Lumby
Page 9	FERIC	Rigging a head spar for a Wyssen skyline operation, Coquitlam Watershed
Page 10	FERIC	Logging contractor and woodlands staff discuss cable yarding techniques, Canal Flats
Page 10	Patrick Armstrong	Longline yarding retaining mule deer winter range near Lumby
Page 11	Jared Hobbs	Englishman River falls, Vancouver Island
Page 11	Jared Hobbs	Vancouver Island Marmot (<i>Marmota vancouverensis</i>), atop Green Mountain
Page 12	Jared Hobbs	Giant Douglas-fir trees near Elaho River
Page 12	Patrick Armstrong	Operations office staff confer with logging contract supervisor

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