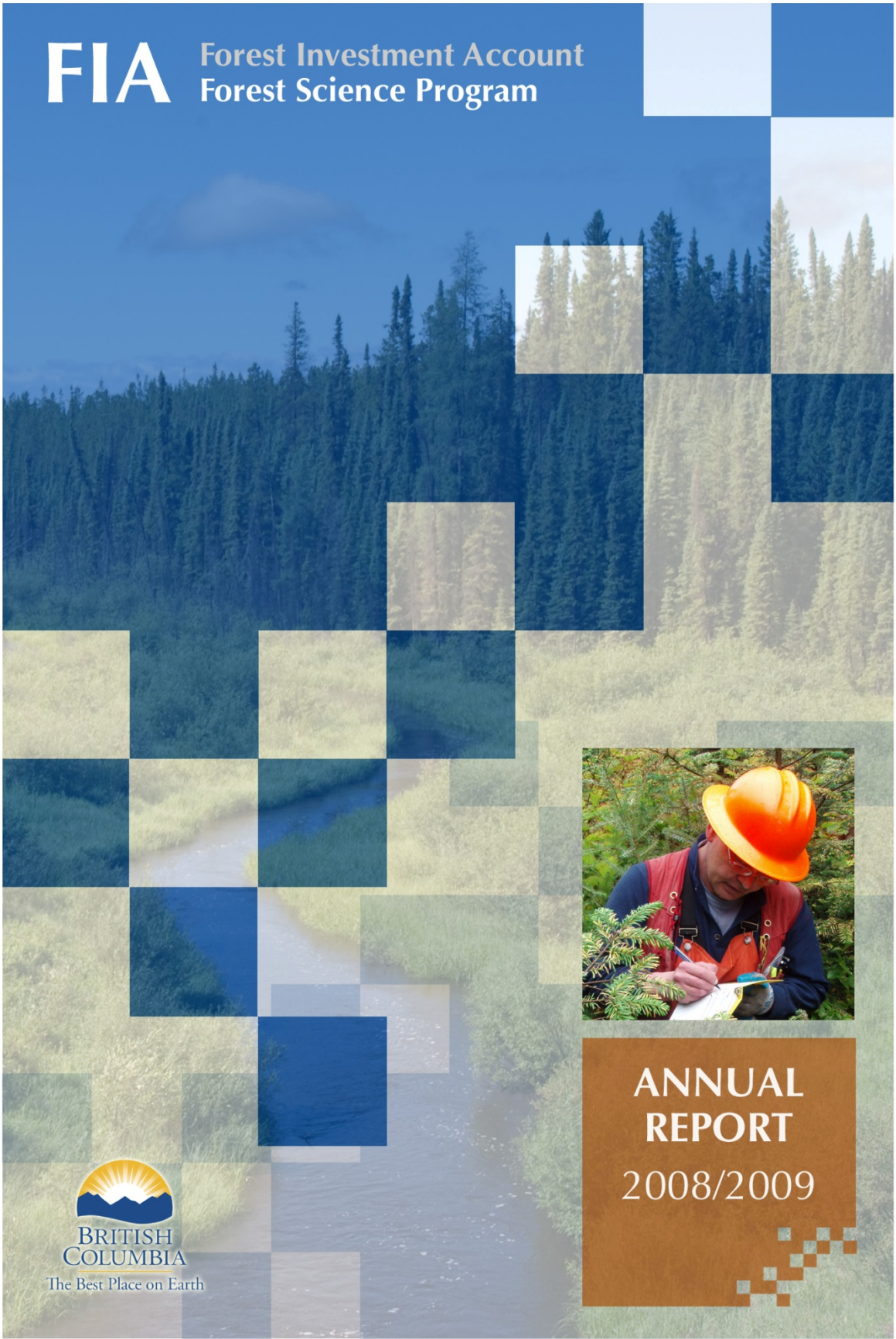


FIA Forest Investment Account Forest Science Program



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More information on the FIA Forest Science Program can be found at
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Message from the Co-Chairs of the Chief Forester's Forest Science Advisory Council

In 2008/09, we continued to receive important science-based findings from research projects initiated under the Forest Investment Account Forest Science Program (FIA–FSP), including the completion of 50 three-year projects, 33 two-year projects, and 22 single-year projects. In 2009/10, we will summarize these findings in the *Synopsis of FIA–FSP Research Projects 2004–2009*.

In addition to research and extension, the Forest Science Board¹, its advisors, and support staff invested significant effort in strategic planning, program development, and communications in 2008/09. In the area of strategic planning, the Board:

- produced the penultimate draft of the FIA–FSP Strategic Plan 2009–2014 and final versions of the research program strategies for the Sustainability and Forest Growth and Value Programs
- initiated the development of a proposed Aboriginal Science Funding Stream within FIA–FSP in co-operation with the First Nations Forestry Council and the Ministry of Forests and Range

Our major program development activities included:

- undergoing a review of FIA–FSP structures and costs and beginning to develop responses to recommendations arising from the review
- funding collaborative research under two new Collaborative Research Initiatives related to Growth and Yield Modeling and Future Forest Ecosystems
- continuing to harmonize First Nations interests and culture within the FIA–FSP by involving First Nations Board members and advisors in all aspects of the FIA–FSP, from identifying program priorities to establishing criteria for proposal reviews and membership on proposal review teams
- organizing two workshops to clarify the concept of indigenous science and identify the shape of a proposed Aboriginal Forest Science Stream within FIA–FSP

The Board also updated synopses of research projects in preparation for an updated version of the *Synopsis of FIA–FSP Research Projects* report, and distributed a periodic newsletter linking FIA–FSP to First Nations communities and other organizations.

We thank the Board, its advisors, and the staff from the Ministry of Forests and Range, PricewaterhouseCoopers, and Cortex Consultants Inc. for their contributions to another successful year.

¹ The Forest Science Board was disbanded at the end of 2008/09, and many of their functions were replaced by a new advisory group called the Chief Forester's Forest Science Advisory Council.



Bill Bourgeois
Co-Chair, CF-FSAC

Melanie Boyce
Co-Chair, CF-FSAC

1 FIA–Forest Science Program

1.1 Context

The Forest Investment Account (FIA) is a provincial government mechanism for promoting sustainable forest management in British Columbia. It has five programs: Crown Land Use Planning Enhancement, Forest Science, Land Base Investment, Market Development, and Tree Improvement.

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 practising sustainable forest management, improving forest growth and value, and using forest science results more effectively through extension.

This annual report describes progress on work outlined in the *FIA Forest Science Program Business Plan 2008/2009*. Section 1 presents an overview of the FIA–FSP. Section 2 discusses the participation by co-operating organizations and fund recipients. Section 3 reports progress, with budgets and actual expenditures. Section 4 highlights work in 2009/10.

Crown Land Use Planning Enhancement
Forest Science
Land Base Investment
Market Development
Tree Improvement

1.2 Forest Science Board

The Forest Science Board is a voluntary advisory body that comprises users and providers of scientific knowledge drawn from industry, governments, First Nations, and academic and private research organizations. The Board advises the Deputy Minister of Forests and Range on FIA–FSP strategies and program improvements, and champions the program by communicating its achievements.

Three types of committees support the Forest Science Board:

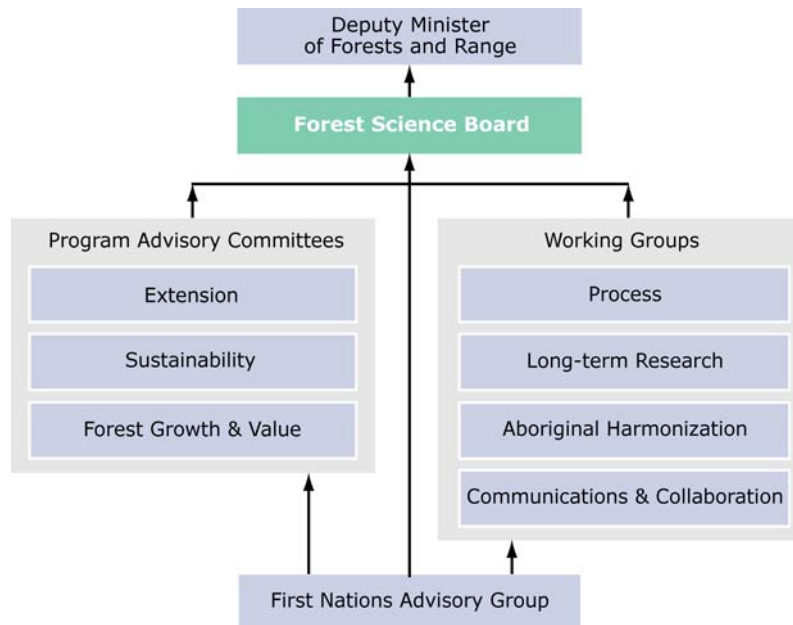
- *Program Advisory Committees*, consisting of industry, government, and agency representatives, offer strategic advice and recommend funding priorities for their respective programs.
- *Working Groups* are Board subcommittees established to advise on specific aspects of the FIA–FSP.
- *Advisory Groups* are established as needed to advise about specific issues.



The FIA–FSP funds research and extension activities to improve management of British Columbia’s public forest lands

Figure 1 illustrates the relationships between the Board and its committees, and the development of the FIA–FSP strategic and business plans.

Figure 1 Relationships between Forest Science Board and committees



A Secretariat (Cortex Consultants Inc.) supports the Board and Program Advisory Committees. A Program Administrator (PricewaterhouseCoopers LLP) oversees implementation of the FIA–FSP and audits FIA–FSP projects.

1.3 Planning Framework

The Forest Science Board and its committees focus research and extension on high-priority areas that address user needs.

The FIA–FSP planning framework involves users and providers of scientific knowledge in defining and ranking the research needed to answer key resource management questions, as well as the recommended methods for getting this information to practitioners.

Long-term Strategies

The *FIA Forest Science Program Strategic Plan 2004–2008* sets out the vision, strategic goals, structure, planning framework, themes, and co-operative principles of the FIA–FSP.

The FIA–FSP has five overarching strategic goals:

1. Improve science-based knowledge in support of sustainability
2. Improve science-based knowledge in support of improving forest growth and value
3. Guide development of a provincial forest extension program that includes FIA–FSP extension

❖
*The FIA–FSP
reflects the
information needs
and priorities of
those who plan and
manage BC's public
forest lands*

4. Develop an efficient and effective process for determining annual research and extension priorities
5. Encourage sufficient stable funding to meet the needs of the FIA–FSP.

Component strategies for the Sustainability, Forest Growth and Value, and Provincial Forest Extension programs outline the structure and methods to achieve each program’s strategic goals.

Annual Priorities

The Program Advisory Committees (PACs) participate in annual planning processes to define broad regional priorities for research and extension. Following Board review and approval, the approved priorities shape the Research Call for Proposals and the Provincial Forest Extension Program (PFEP) work plan.

Members of the two research PACs (Sustainability, and Forest Growth and Value) and the First Nations Advisory Group (FNAG) solicit input from their geographic and sector constituencies to identify priority research issues for the Call for Proposals. The FORREX Forest Research Extension Partnership works with regional steering committees and subject area working groups to identify and rank critical knowledge gaps for each of the six subject clusters in the PFEP.

Call for Proposals

The annual Research Call for Proposals follows a two-stage competitive process, based on research priorities set by the Forest Science Board. Proponents submit a letter of intent (LOI) that briefly describes the proposed project. The LOI review assesses the proposal ideas against FIA–FSP strategies and priorities. Proponents whose LOIs pass the first stage are invited to submit a detailed full proposal (second stage). The full proposal review evaluates the proponent team, proposed methodology, and scientific merit of the project.

Expert review committees evaluate all proposals, following criteria consistent with FIA–FSP objectives. Based on these recommendations and PAC priorities, the Board recommends the allocation of available funds to research and extension projects. When approved by the Deputy Minister of Forests and Range, these recommendations constitute the annual FIA–FSP Business Plan.

Most funds are allocated to single- and multi-year projects that address the annual priorities set by the Forest Science Board. A small portion of funds is available for other (proponent-driven) projects that fall within the Sustainability and Forest Growth and Value program areas, but not on research issues identified as annual priorities.

Funding Categories

In 2008/09, the Board approved funding for:

- short- and long-term research to address issues related to sustainable forest management and improving forest growth and value



The annual Call for Proposals is based on PAC- and FNAG-defined research priorities



Projects lasting one to three years are funded to deliver results in the near and medium terms

- Collaborative Research Initiatives (CRIs) addressing growth and yield modeling, and future forest ecosystems
- a provincial forest extension program to deliver existing and new knowledge to practitioners
- infrastructure maintenance and remeasurement activities on selected long-term research installations that support short- and long-term research projects
- graduate student research on applied topics in forest science and conservation.

Continuous Improvement

The Board strives to continuously improve the planning and solicitation of research. In 2008/09, it addressed 26 items identified by participants in 2007/08 (Figure 2).

Figure 2 Continuous improvement items in 2008/09, by topic

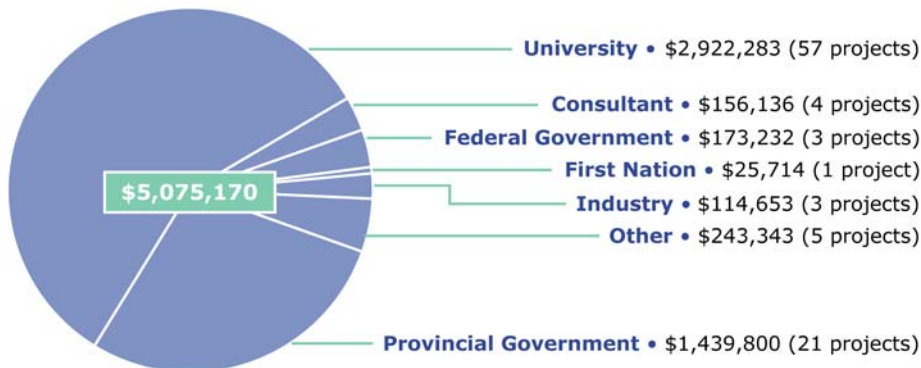


2 Program Participation

2.1 Co-operators and Recipients

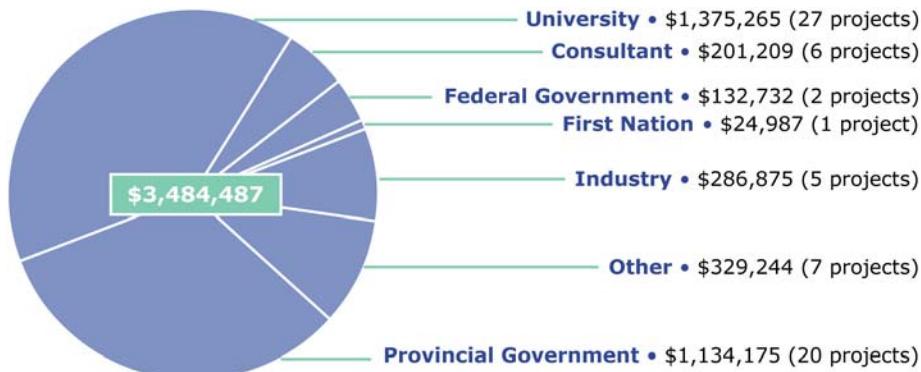
The FIA–FSP is positioned to develop and deliver knowledge to those who manage British Columbia’s forest lands. Consequently, industry, consultants, provincial and federal governments, First Nations, universities, research institutes, and other groups play a key role in defining research and extension needs, and delivering projects (Figures 3 to 5).

Figure 3 Sustainability Program 2008/09 — Value (and number) of research projects, by recipient categories



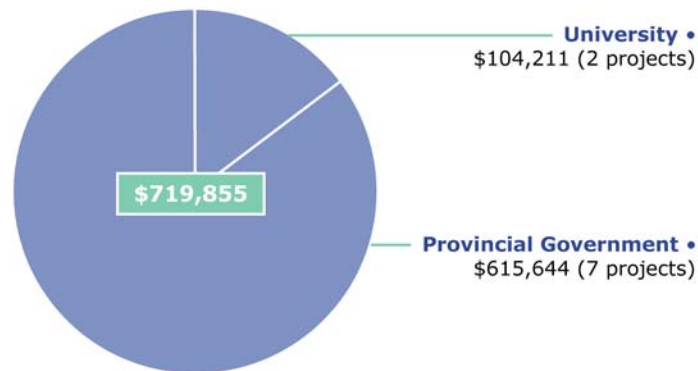
*Does not include FFE-CRI projects

Figure 4 Forest Growth and Value Program 2008/09 — Value (and number) of research projects, by recipient categories



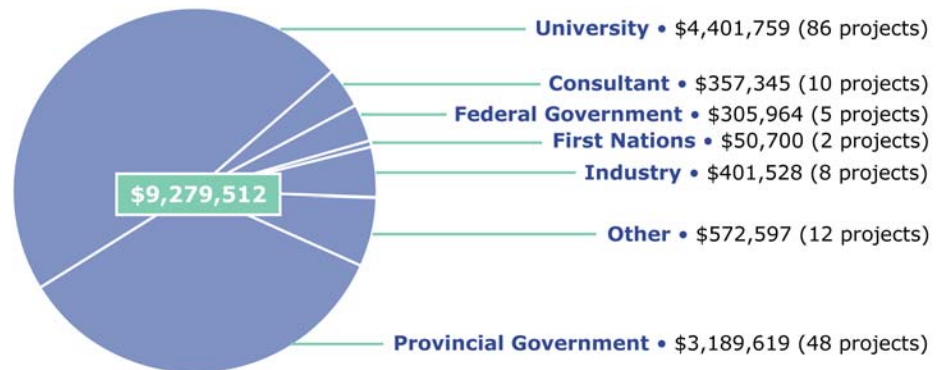
*Does not include GYM-CRI projects

Figure 5 Value (and number) of Collaborative Research Initiative projects in 2008/09, by recipient categories



Eighty-two percent of FIA–FSP research project funds were allocated to projects led by researchers at universities and the provincial government (Ministry of Forests and Range, and Ministry of Environment; Figure 6). Provincial government projects frequently involve collaboration with universities and consultants.

Figure 6 Research funds allocated in 2008/09, by recipient categories



In 2008/09, universities led the greatest number of projects (Figure 6) and represented the second highest level of in-kind support for projects (Figure 9). The provincial government led the second highest number of projects (Figure 6) and provided the highest level of in-kind support (Figure 9).

2.2 Leveraged Investments

The Forest Science Board promotes collaboration among research and extension institutions and programs to increase synergies and leverage funding for projects of common interest.

In 2004/05, FIA–FSP investments of \$9.75 million leveraged almost \$1.3 million in cash and \$5.9 million in in-kind contributions from other organizations and programs (Figure 7). In 2005/06, FIA–FSP investments of \$10.4 million leveraged over \$1.5 million in cash and \$7.1 million in in-kind contributions. In 2006/07, FIA–FSP investments of \$15.16 million leveraged \$3.6 million in cash and \$6.9 million in in-kind contributions. In 2007/08 FIA–FSP investments of \$15.46 million leveraged \$4.2 million in cash and \$7.4 million in in-kind contributions. In 2008/09 FIA–FSP investments of \$13.73 million leveraged \$3.1 million in cash and \$5.7 million in in-kind contributions.

Figure 8 shows the 2008/09 leveraged contributions for research and extension investments. Figure 9 shows the average value of cash and in-kind contributions per research project, by contributing agency, in 2008/09.

Figure 7 Cash and in-kind contributions leveraged by FIA–FSP investments from other organizations, by year, from 2004/05 to 2008/09

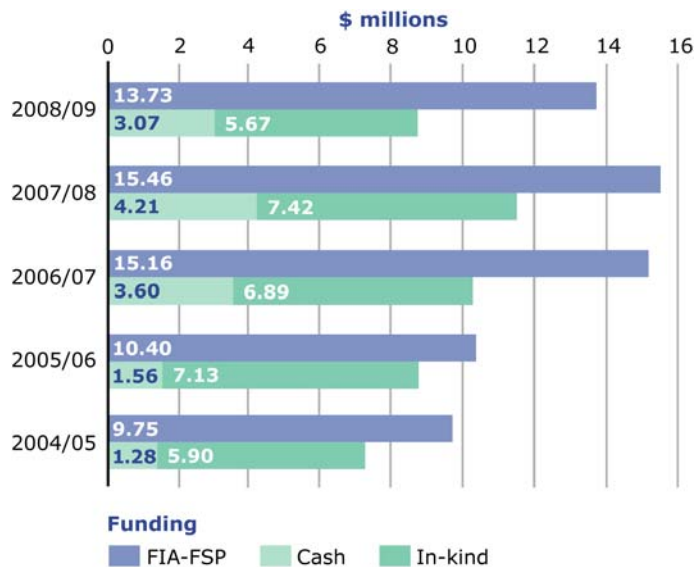


Figure 8 Leveraged contributions for research and extension investments funded by FIA–FSP in 2008/09

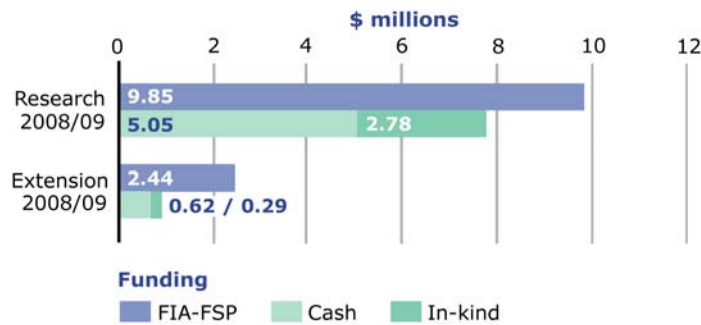
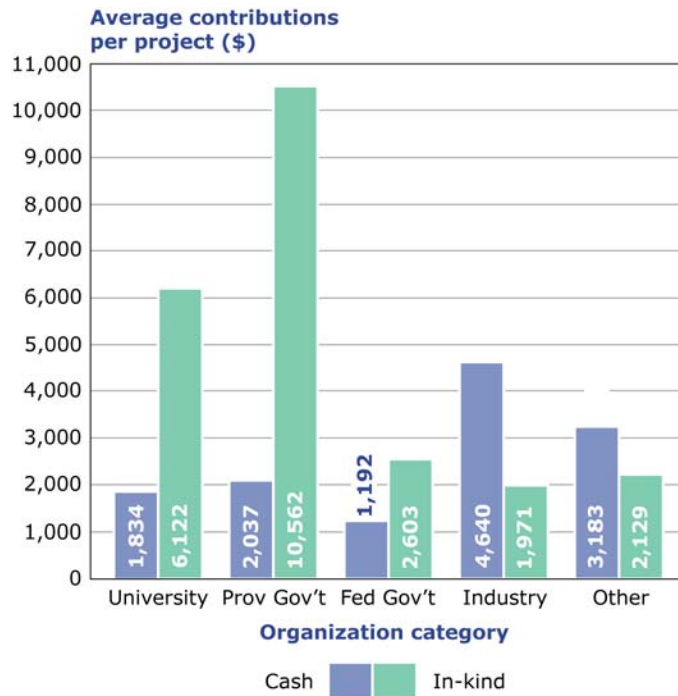


Figure 9 Value of cash and in-kind contributions to research projects funded by FIA–FSP in 2008/09, by contributing agency



Cash contributions to research projects in 2008/09 increased significantly from 2007/08 for provincial government, federal government, and “other” (including consultants and First Nations) project participants and decreased significantly for universities. In-kind contributions increased across all agencies.



3 Program Progress 2008/09

3.1 Budgets and Expenditures

Table 1 summarizes the FIA–FSP budget and expenditures for 2008/09. Under-spending in research was a consequence of individual projects coming in below budget. Under-spending in extension was associated with below-budget costs and program efficiencies. Overspending in Research Partnerships was associated with supporting the Sustainable Forest Management Network’s (SFMN’s) application for funding to support technology transfer and extension activities. Under-spending in governance and annual business planning was associated with support for Committee Chairs and member travel. Under-spending in program development was a consequence of below-budget costs. Under-spending in program administration and audits was associated with below-budget costs for Ministry administration and supporting the development of Collaborative Research Initiatives.

Table 1 FIA–FSP budget and actual expenditures in 2008/09

Category	Budget (\$)	Actual (\$)	Variance (\$)
Research Projects (Call for Proposals)	9,266,657	9,132,304	134,353
Collaborative Research Initiatives Projects	734,258	719,855	14,403
Program-level Extension	*2,487,666	2,442,420	45,246
Research Partnerships (SFMN)	0	50,000	-50,000
Governance, Annual Business Planning (Forest Science Board and Committees)	541,000	457,904	83,096
Program Development (Forest Science Board and Committees)	129,352	97,222	32,130
Communications	80,000	80,000	0
Program Administration and Audits (PricewaterhouseCoopers, Ministry of Forests and Range)	904,967	750,922	154,045
Total	14,143,900	13,730,627	413,273

Note: Expenditures do not include the in-kind, staff, and other substantial inputs by industry, academic, government, institute, and consultant co-operators who contribute to the success of FIA–FSP.

3.2 Research

The FIA Forest Science Program funds research to support sustainable forest management in British Columbia through:

- research programs on sustainability and forest growth and value
- infrastructure maintenance (site maintenance, core monitoring, and knowledge asset protection) on key provincial long-term research installations (LTRIs)
- partnerships and collaborative projects with other agencies and networks.

Table 2 summarizes research expenditures in 2008/09. Continuing projects received 73% of funds within the Sustainability Program and 64% of funds within the Forest Growth and Value Program. Approximately equal amounts of research expenditures went towards projects within the Forest Growth and Value Program (37%) and the Sustainability Program (36%), with the remainder spent on Collaborative Research Initiative (CRI) projects (26%).

Table 2 FIA–FSP research budget allocation and expenditures in 2008/09

Program area	Budget (\$)	Actual (#)	Actual (\$)	Actual (\$)
Sustainability		84		4,400,152
Continuing multi-year projects	3,335,889	60	3,227,584	
New multi-year projects	760,381	17	927,705	
Single-year projects	299,864	7	244,863	
Forest Growth and Value		64		3,363,951
Continuing multi-year projects	2,306,531	39	2,157,299	
New multi-year projects	915,816	17	920,430	
Single-year projects	215,795	8	286,222	
Proponent-driven projects*		14		795,555
Continuing multi-year projects	822,758	14	795,555	
New multi-year projects	0	0	0	
Single-year projects	0	0	0	
CRI projects*		9		719,855
New multi-year projects	450,818	5	440,054	
Single-year projects	283,440	4	279,801	
LTRI maintenance	609,623	36	572,647	572,647
Total		207		9,852,159

* Proponent-driven projects (and some CRI projects) relate to Sustainability and Forest Growth and Value themes and topics.

Table 3 shows the program expenditures by project duration. In keeping with the nature of research, and lag between setup and the achievement of results, the largest proportion of funds in each program was allocated to three-year projects.

Table 3 Number and value of research projects funded in 2008/09, by duration and program

Project duration	Sustainability		Forest GV		Proponent		CRI		Totals
	#	Value (\$)	#	Value (\$)	#	Value (\$)	#	Value (\$)	Value (\$)
3-year	58	3,251,492	37	2,141,254	11	695,519	4	411,974	6,500,239
2-year	19	903,796	19	936,475	3	100,036	1	28,080	1,968,387
1-year	7	244,863	8	286,222	0	0	4	279,801	810,886
Total	84	4,400,152	64	3,363,951	14	795,555	9	719,855	9,279,512

◆
In 2008/09, 209 projects totaling approximately \$9.85 million were implemented

Sustainability Program

The Sustainability Program focuses on research to improve:

- understanding and modeling of the relationships among ecosystem structure, biodiversity, habitat values, social and cultural values, and the effects of natural disturbance and human activities on ecosystems
- the identification and evaluation of sustainable forest management indicators, functional targets, and thresholds
- effectiveness of mandated policies and practices.

In 2008/09, almost \$5.1 million was invested in 94 projects under the FIA–FSP Sustainability Program. In total, 84 projects, valued at \$4.40 million, addressed priority themes and topics (Table 4). There were 10 unclassified, proponent-driven projects valued at \$675,018.

Table 4 Sustainability Program 2008/09 projects, by themes and topics

Research theme, topic	Annual priorities	
	#	Value (\$)
1.0 Ecosystem structure, composition, and processes related to the sustainable management of forests	40	2,135,890
1.1 Riparian ecology and management of small streams	5	390,239
1.3 Maintaining biodiversity at the landscape scale	3	133,573
1.4 Effectiveness of site-level structures in maintaining biodiversity and rangeland habitats typified by grass and shrub cover	27	1,366,756
1.9 Climate change	5	245,323
2.0 Decision support tools for sustainable forest and range management	3	150,231
2.1 Resource modeling	3	150,231
3.0 Indicators, thresholds, and monitoring systems	22	1,020,130
3.1 Development of indicators and monitoring systems	6	258,891
3.2 Indicator thresholds of ecological sustainability	10	501,863
3.3 Socio-economic sustainability	4	151,611
3.4 Methods for balancing social, economic, cultural, and environmental indicators of sustainability	2	107,764
4.0 Scientific information to inform the development or refinement of policy, regulations, and practices	19	1,093,901
4.1 Scientific information to inform the development or refinement of policy, regulations, and practices	19	1,093,901
Total	84	4,400,152

Forest Growth and Value Program

The Forest Growth and Value Program focuses on research to increase understanding of how the forest grows and how it yields products and services of value to British Columbia society. To do this, the program has six major themes (Table 5). Each theme is directly tied to issues that have been raised by forest managers and other users of forest science information around the province.

In 2008/09, almost \$3.5 million was invested in 68 projects. In total, 64 projects (\$3.36 million) addressed priority themes and topics (Table 5). There were four unclassified, proponent-driven projects valued at \$120,536.

Table 5 Forest Growth and Value Program 2008/09 projects, by themes and topics

Research theme, topic	Annual priorities	
	#	Value (\$)
1.0 Basic research on tree growth and stand development	14	635,525
1.1 Complex stands, including partial cutting, variable retention	11	525,703
1.3 Old trees and stands	3	109,822
2.0 Design and analysis of silvicultural systems	15	714,854
2.1 Complex stands including partial cutting, variable retention	13	590,843
2.2 Even-aged stands	2	124,011
3.0 Growth and yield modeling/predictions	9	778,376
3.1 Complex stands including partial cutting, variable retention (excluding site productivity)	8	618,701
3.2 Wood quality	1	159,675
4.0 Timber losses to environmental and biotic factors (wind, drought, insects <incl. MPB>, disease, animal damage, fire)	10	566,531
4.1 Stand and forest dynamics following MPB	4	270,195
4.2 Estimating and/or mitigating stand-level losses	1	47,088
4.3 Mitigating losses (other than mountain pine beetle)	3	170,747
4.4 Site productivity impacts	2	78,502
5.0 Analytical techniques and models for strategic analysis	3	71,612
5.1 Development of novel methods to integrate data and models across scales	2	44,267
5.2 Development of novel methods to link GY models to process, climate, hydrology, wildlife, and other models	1	27,346
6.0 Marketable resources other than timber	5	212,880
6.2 Non-timber forest products (NTFPs)	5	212,880
7.0 Climate change	8	384,171
7.1 Predicting effects of climate change on forest health and condition (e.g., insects, disease, fire)	1	54,432
7.2 Predicting effects of climate change on growth and productivity	3	166,366
7.3 Responding to ecosystem shifts	2	125,196
7.4 Physiological and adaptive responses of species and seedlots	2	38,178
Total	64	3,363,951

Long-term Research Installation Maintenance

Long-term research installations (LTRIs) are physical sites specifically designed and established to enable long-term experiments addressing resource management issues and treatment options. On these sites, potentially one or more decades are needed to properly assess biophysical responses.

LTRI funding is intended to protect the infrastructure of key installations and maintain them for use by the scientific community for further short- and long-term experiments. LTRI funding is focused on research installations where there has been considerable investment and where there is risk of losing the investment if infrastructure and core activities are not funded. LTRI funding is not meant to replace funding from other sources or direct costs associated with experiments at the sites.

In 2008/09, almost \$572,647 was allocated to infrastructure maintenance activities on 36 LTRIs relevant to research themes in the Sustainability and Forest Growth and Value Programs. This support included remeasurements on installations where such information is critical to their continued use.

Research Partnerships

Research partnerships are one means to focus scarce funds on common areas of interest. The FIA–FSP funds other research initiatives to link with researchers and leverage funding at the provincial and national levels.

A 2006/07 grant of \$510,000 to the Sustainable Forest Management Network (SFMN) was in effect until March 31, 2009. The SFMN is a non-profit Canadian network of research Centres of Excellence, based at the University of Alberta, in Edmonton, Alberta. Its mission is to deliver an internationally recognized, interdisciplinary program that undertakes relevant university-based research; develop networks of researchers and partners; offer innovative approaches to transferring knowledge; and train scientists and advanced practitioners to meet natural resource management challenges.

Also in effect for 2008/09 was the 2006/07 contribution to a three-year pilot project to encourage academic research by graduate students on applied topics in forest science and conservation at British Columbia universities offering graduate degrees. The graduate student pilot project provides \$125,000 in annual funding to the province's future forest scientists and matches MSc and PhD students (and their supervisors) to research mentors in government, private-sector, and non-profit organizations.



LTRIs provide opportunities for collaborative research and the collection of long-term data



Research partnerships promote collaboration and the leveraging of funds

3.3 Extension

The Provincial Forest Extension Program (PFEP) fosters collaboration to address the extension needs of the FIA Forest Science, Land Base Investment, and Small Tenures programs. As the provincial forest extension provider, the FORREX Forest Research Extension Partnership (FORREX) coordinates and undertakes activities to:



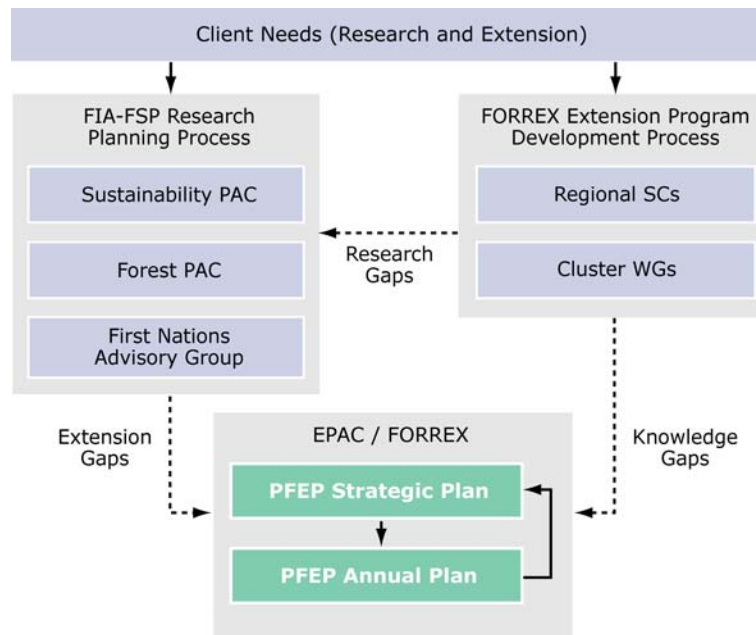
Forest extension delivers existing and new knowledge to practitioners

- synthesize existing knowledge relevant to key forest policy, management, and practice issues
- identify user needs for information
- provide users with the knowledge and tools they require to sustainably manage Crown forests.

In 2008/09, FORREX delivered extension events and products in accordance with the PFEP annual work plan (www.forrex.org) and five-year PFEP strategy (2005–2010), as approved by the Forest Science Board in 2006.

The PFEP capitalizes on the FIA–FSP research planning process and existing FORREX infrastructure for extension program development and evaluation, as well as other sources of input on client needs for research and extension (Figure 10). This broad input and guidance ensures that the PFEP responds to community needs and priorities and collaborates where possible with other initiatives.

Figure 10 Provincial Forest Extension Program planning framework





In the FIA–FSP research planning process, Program Advisory Committees for Sustainability (SPAC) and Forest Growth and Value (FPAC) identify knowledge gaps and set research priorities. The research funded through FIA–FSP generates new knowledge, which is extended to clients through extension activities within research projects, and through the PFEP and other venues.

The FORREX extension program uses Regional Steering Committees (SCs) and Cluster Working Groups (WGs) to identify and rank critical knowledge gaps from the needs identified by clients and FIA–FSP advisory processes.

The EPAC and FORREX integrate research information and knowledge gaps in developing the PFEP Strategic Plan and PFEP annual business plans. To strengthen the link between the two processes, and to ensure that knowledge gaps are addressed in both research planning and extension, FORREX extension specialists are members of the SPAC and FPAC research planning and priority setting. FORREX is also represented on the Extension Program Advisory Committee (EPAC).

Almost \$2.3 million was invested in the PFEP in 2008/09. These funds supported a wide range of extension activities and products, including surveys, articles, peer-reviewed papers (*LINK*, *Streamline*, *JEM*), listserv announcements, workshops, field tours, presentations, site visits, outreach, problem-solving sessions, synthesis and collaborative forums, and conferences. In addition, significant effort was expended to enhance the Aboriginal Forestry and Indigenous Science extension program through partnerships with First Nations organizations and conducting a needs assessment. These activities focused on priority management issues in ecosystem and biodiversity conservation, forest dynamics and integrated resource management, aboriginal forestry and indigenous people's needs, socio-economics, information and knowledge systems, and watershed management, with significant effort devoted to mountain pine beetle-related issues.

The PFEP addressed critical issues including mountain pine beetle (MPB) and community-based solutions, MPB salvage and watershed impacts, community forests and First Nations, habitat-based approaches to grasslands, dry forest ecosystems and species at risk, future forest visioning, the natural resource sector continuous learning gap analysis, and First Nations approaches to planning for sustainable watershed and carbon management in British Columbia's forests. For more detail on PFEP activities in 2008/09, see the FORREX annual report (<http://www.forrex.org>).

To ensure access to the latest research results, all FIA–FSP final research reports are posted to the Ministry of Forests and Range Library (<http://www.for.gov.bc.ca/hcp/fia/searchreports.htm>).



To strengthen the link between research and extension planning, extension specialists are members of the SPAC and FPAC

3.4 Management

The Forest Science Board achieved most of its 2008/09 objectives:

First Nations Harmonization	<p>Continued to harmonize First Nations interests and culture within the FIA–FSP by involving First Nations Board members and advisors in all aspects of the FIA–FSP, from identifying program priorities to establishing criteria for proposal reviews and working with proposal review teams.</p> <p>Initiated development of an Indigenous Science Funding Stream (ISFS) in co-operation with the First Nations Forestry Council and the government of British Columbia, and organized two workshops to clarify the concept of indigenous science and identify the shape of an ISFS within FIA–FSP.</p>
Program Development	<p>Completed the penultimate draft of the <i>FIA–FSP Strategic Plan 2009-2014</i>. Finalization of the plan is awaiting confirmation of changes to the program’s structure in 2009/10.</p> <p>Updated the <i>Sustainability Program Research Strategy 2009-2014</i> and the <i>Forest Growth and Value Research Program Strategy 2009-2014</i> to align with critical resource management issues.</p>
Program Execution	<p>Monitored and assessed performance measures for the FIA–FSP and strengthened the peer-review process.</p> <p>Identified research priorities for the Call for Proposals 2009/10 and improved the Call for Proposals process based on proponent and user feedback.</p>
Program Communications	<p>Published one issue of <i>FIA–FSP and First Nations of BC NEWS</i>.</p> <p>Prepared and published the <i>FIA–FSP Annual Report 2007/08</i>.</p> <p>Maintained the FIA–FSP website (www.fia-fsp.ca).</p> <p>Prepared articles, exhibited the FIA–FSP display, and made presentations on the FIA–FSP to a range of user audiences.</p>

3.5 Administration

PricewaterhouseCoopers LLP (PwC) was responsible for administering the FIA–FSP program and auditing projects. The Ministry of Forests and Range oversaw contracts for the Program Administrator and Secretariat, and other contracts undertaken for the FIA–FSP as recommended by the Forest Science Board.

Project Monitoring

PwC monitored project progress using the computer-based Research Investment Management System, into which recipients entered quarterly project performance and financial reports.

Recipients submitted amendments for any major changes to approved work plans to PwC for review and approval. PwC ensured that recipients submitted required reports to the Ministry of Forests and Range library and that extension commitments were met.

Auditing

Performance audits use objective measures to ensure that the projects achieved the agreed-upon milestones and outcomes. Financial audits, related to FIA–FSP funds, included a review of policies, procedures, and controls established by recipients, and a review of project cost statements to ensure consistency with and applicability to the individually approved project, the Recipient Agreement, and the Cost Guidelines.

Forty-six performance and financial audits were conducted by PwC on FIA–FSP recipients for 2007/08 projects. Planning for the 2008/09 audits commenced in the fourth quarter of the fiscal year; however, implementation was halted due to the impending transfer of the FIA–FSP administration from PwC to the Ministry of Forests and Range.

Performance Measures

The Forest Science Board uses performance measures to help assess its progress towards FIA–FSP goals. Table 6 identifies 12 such measures, associated targets where appropriate, and performance metrics.

Table 6 FIA–FSP performance measures

Objective, performance measure – Metric	2006/07	2007/08	2008/09
Encourage sufficient stable funding to meet the needs of the FIA–FSP – Partnerships and leveraged funding			
Coordination and integration of projects with other funding sources			
E01 % funding leveraged by FIA–FSP (total cash and in-kind, including through FORREX)	75% (\$10.44M)	81% (\$11.64M)	70% (\$8.74M)
E02 % of cash funding leveraged by FIA–FSP	26% (\$3.55M)	29% (\$4.22M)	25% (\$3.07M)
Improve science-based knowledge in support of sustainability and improving timber growth and value – Improved decisions/better practices			
Survey of user groups			
E03 # of users who feel FIA–FSP has contributed (moderate to large contribution) to availability of new knowledge	Next survey 2007/08	54%	Survey not conducted
E04 # of users who feel significantly or very significantly that the science-based knowledge obtained from FIA–FSP funded research during the last year is useful in the support of forest management, planning, and policy decisions	Next survey 2007/08	40%	Survey not conducted
Expert advice/Consultation			
E05 # of researchers involved in FIA–FSP projects available to give expert advice	378	367	372
E06 # of graduate students involved in FIA–FSP projects available to give expert advice	59 MSc; 30 PhD	75 MSc; 56 PhD	60 MSc; 41 PhD
Improve science-based knowledge in support of sustainability and improving timber growth and value – Quality of investment			
Audit findings			
E07 % of audit reports completed in fiscal year with no major non-conformance identified	89%	98%	100%
Delivery of a collaborative provincial forest extension program – Increased access to information			
Access to project final reports			
E08 % of previous year's approved projects listing required reports and contact information in FIA–FSP repository (excludes LTRIs and FORREX projects)	94%	99%	Not available
Access to peer-reviewed reports and journal articles			
E09 % of peer-reviewed journal and other publications series submissions (as indicated by the number of requests for deferring the posting of final reports), divided by the number of products delivered (excluding LTRIs) for year	47% (152/322)	89% (205/230)	119% (220/184)
Extension activities and products delivered			
E10 # of extension events and extension products delivered through approved projects	259	240	340
E11 # of extension events and extension products delivered through the Provincial Forest Extension Provider (FORREX)	1983	833	407
Extension activity and products effectiveness (user survey)			
E12 % of respondents who were aware of FORREX and PFEP	85%	Next survey 2009/10	Survey not completed
E13 % of respondents who felt information products were relevant	70%		
E14 % of respondents who used information in past year	43%		

4 The Year Ahead

At the end of 2007/08, budgetary pressures within the Ministry of Forests and Range led to restructuring within the FIA–FSP. The Forest Science Board was disbanded and administration of the program was transferred from PricewaterhouseCoopers LLP to the Ministry of Forests and Range. FIA–FSP activities for 2009/10 will focus on updating and clarifying the program structure, function, and mandate, in addition to providing credible, relevant, and accessible scientific knowledge to support sustainable forest and range management policies and practices.

Forest Science Board 2008/09

Board Members	Affiliation	Representing
Bill Bourgeois (Chair)	New Direction Resource Management Ltd.	Forest Sector (Interior)
Natasha Caverley	Turtle Island Consulting Services Inc.	First Nations (Coast)
Kristine Ciruna	Ministry of Environment	Provincial Government
Barbara Hawkins	University of BC	Forest Science Provider (Universities)
Gary Hogan	Canadian Forest Service	Federal Government
Gary Hunt	Thompson Rivers University	Forest Science Provider (Universities)
Shannon Janzen	Western Forest Products	Forest Sector (Coast)
Wayne Martin	Ministry of Forests and Range	Provincial Government
Walter Matosevic	Canadian Forest Products Ltd.	Forest Sector (Interior)
Albert Nussbaum	Ministry of Forests and Range	Provincial Government
Gerry Still	Ministry of Forests and Range	Provincial Government
Ernst Stjernberg	FPIInnovations - FERIC	Forest Science Provider (Organization)
Ivan Tallio	Nuxalk Nation	First Nations (Coast)
Wayne Wall	International Forest Products Ltd.	Forest Sector (Coast)

Ex-Officio Board Members

Ian Brown/Katherine Wolters	PricewaterhouseCoopers	Program Administrator
Chris Hollstedt	FORREX	Extension
Monty Locke/ Roger Painter	Ministry of Forests and Range	Ministry Designate for FIA-FSP

Secretariat

Melissa Hadley	Cortex Consultants Inc.
Jason Smith	Cortex Consultants Inc.

Sustainability PAC

Name	Affiliation
Scott McNay (Chair)	Wildlife Infometrics Inc.
Bill Beese	Cascadia Forest Products
Shannon Berch	Ministry of Forests and Range
Phil Burton	Canadian Forest Service / University of Northern BC
Patrick Daigle	Ministry of Environment
Gerry Fraser	International Forest Products Limited
Ajit Krishnaswamy	FORREX
Andrea Lyall	Kwakwaka'wakw Nation
Shawn Meisner	Tolko Industries Ltd.
Charles Menzies	University of BC
Janet Mitchell	FPIInnovations - FERIC
Dan Moore	University of BC (FRBC Chair)
Geoff Scudder	University of BC emeritus

Forest Growth and Value PAC

Name	Affiliation
Alan Vyse (Chair)	Independent
Wendy Cocksedge	Royal Roads University
Dave Conly	Tolko Industries Ltd.
Jim Goudie	Ministry of Forests and Range
Ray Krag	FPIInnovations - FERIC Division
Valerie LeMay	University of BC
Jim McGrath	Kamloops Indian Band
Guy Newsome	Ministry of Forests and Range
Albert Nussbaum	Ministry of Forests and Range
Todd Redding	FORREX
Nick Smith	Cascadia Forest Products
Steve Stearns-Smith	Stearns-Smith and Associates
Kathie Swift	FORREX
Terry Teegee	Takla Lake First Nation
Ralph Winter	Ministry of Forests and Range

Extension PAC

Name	Affiliation
Steve Stearns-Smith (Chair)	Stearns-Smith and Associates
Ian Brown	PricewaterhouseCoopers
Chris Hollstedt	FORREX
Monty Locke	Ministry of Forests and Range
Wayne Martin	Ministry of Forests and Range
Scott McNay	Wildlife Infometrics Inc.
Ernst Stjernberg	FPIInnovations - FERIC
Alan Vyse	Independent

