

The FRPA Resource Evaluation Program

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Abstract

The FRPA Resource Evaluation Program (FREP) is a long-term commitment by the British Columbia government to assess whether forest and range practices are achieving management objectives for resource values identified under the Forest and Range Practices Act (FRPA). The two primary components of FREP are provincial/regional-level evaluations and district/regional-level resource stewardship monitoring. Evaluations and resource stewardship monitoring both use indicators and standardized protocols to assess the effects of forest management on a specific resource value. The types of evaluations conducted under FREP include implementation, effectiveness and validation. Evaluation intensities range from routine to extensive to intensive. FREP is linked to the work of several other monitoring and evaluation initiatives in British Columbia.

Indicators and monitoring protocols have been completed for a number of resource values, including riparian, soils, stand-level biodiversity, recreation, visual quality and range. Evaluations for invasive plants, cutblock size, wildlife trees, forage quality, range hydraulic function, and recreation sites are currently underway. Resource stewardship monitoring protocols for soils, riparian and stand-level biodiversity are being pilot tested. Continuous improvement occurs at the district/regional level and the regional/provincial level to improve local forest practices and Forest Stewardship Plan objectives and strategies, and to affect changes to legislation, policies and guidelines, where required. A quality assurance plan and meta-evaluation process will measure the success of the program. Future program direction includes increasing capacity, funding and partnerships, and developing digital data collection devices for monitoring and evaluation projects.

Keywords

Evaluations, monitoring, effectiveness, FRPA, stewardship, routine, extensive, intensive, indicators, protocols.

Background

The FRPA introduces the transition to a results-based forest practices framework in British Columbia. Under this new approach to forest management, the forest industry is responsible for developing results and strategies for the sustainable management of 11 resource values identified under FRPA. The role of government is to ensure compliance with established results and strategies, and evaluate the effectiveness of forest and range practices in achieving management objectives set by government for the 11 resource values. The resource values addressed under FRPA include: soils, visual quality, timber, forage and associated plant communities, water, fish, wildlife, biodiversity, recreation resources, resource features, and cultural heritage resources.

To help ensure that FRPA achieves environmentally sound, innovative, and cost-effective forest and range practices in British Columbia, the provincial government initiated the FREP. FREP is a long-term commitment designed to:

- Assess the effectiveness of FRPA in achieving stewardship of the 11 resource values identified under the act

- Identify issues regarding the implementation of forest policies, practices and legislation as they affect those resource values, and
- Implement continuous improvement of forest management in British Columbia.

The primary objective of FREP is to determine if forest and range policies and practices are achieving government's objectives for FRPA resource values, with a priority on environmental parameters, and consideration for social and economic parameters, where appropriate. In order to accomplish this objective, FREP will:

- Evaluate the status or trends of resource values and determine causal factors
- Determine whether resource values are being managed in a sustainable manner through proven or alternative forest practices
- Communicate the results of evaluations, and
- Recommend changes to forest and range policies and legislation, where required.

Structure of FREP

The structure of FREP is presented in Figure 1.

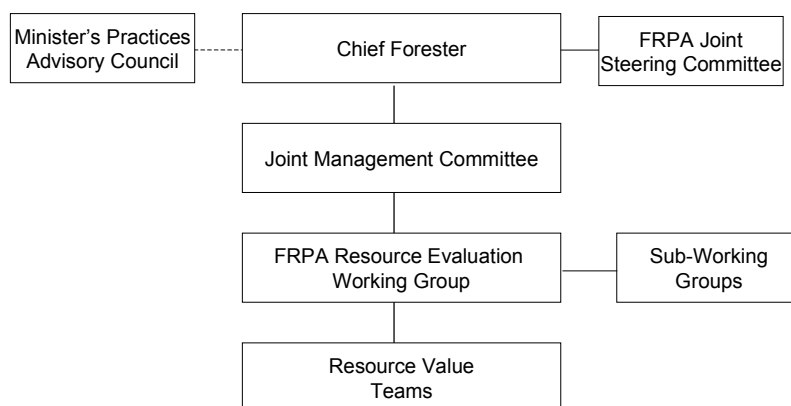


Figure 1. Structure of FREP.

Ongoing direction and guidance for FREP is provided by the Program Sponsor (Chief Forester), who also receives input from the Minister's Practices Advisory Council and the FRPA Joint Steering Committee.

The Joint Management Committee makes program decisions in consultation with the Program Sponsor, and reviews and forwards recommendations from the FRPA Resource Evaluation Working Group to the Program Sponsor.

The FRPA Resource Evaluation Working Group (FREWG), consisting of a committee of internal stakeholders, leads the development and implementation of FREP. External stakeholders are invited to provide input on evaluation issues and participate on sub-working groups, as required.

Resource Value Teams are responsible for developing evaluation questions for their assigned resource value(s), in consultation with internal and external stakeholders.

Once an evaluation project has been approved for funding, Resource Value Teams work together with Evaluation Project Teams to develop or refine resource value indicators, data collection protocols, and reporting procedures.

Program Participants

Internal stakeholders consist of the Chief Forester, the FRPA Joint Steering Committee, the Joint Management Committee, and staff from the Ministry of Forests and the Ministry of Water, Land and Air Protection. The co-ordination, development and implementation of FREP is being led by the Ministry of

Forests, Forest Practices Branch, in collaboration with Research Branch; Resource Tenures and Engineering Branch; the three forest regions and various districts; and the Ministry of Water, Land and Air Protection, Biodiversity Branch.

External stakeholders include provincial and federal resource agencies, the Forest Practices Board, academics, consultants, non-government organizations, the forest industry, First Nations groups, municipalities and regional districts, other groups and organizations, and members of the public.

Input is sought from external stakeholders throughout all phases of the evaluation process to ensure that stakeholder needs, priorities and concerns are identified and addressed. Stakeholders are kept apprised on ongoing projects, and mechanisms are in place to enable stakeholders to provide technical input into the design, implementation and analysis of FREP, as well as individual projects. Opportunities for stakeholder review and comment on program initiatives are also provided.

Program Approach

There are two primary components to FREP—evaluations and resource stewardship monitoring. Evaluations are carried out at the provincial or regional level to assess the status or trends of resource values, and can be extensive or intensive in nature. Resource stewardship monitoring is carried out at the district or regional level, and consists of routine and extensive overview monitoring of on-the-ground forest practices to assess whether resource value objectives or strategies are being achieved. Resource stewardship monitoring provides valuable information on the status, trends and implementation issues related to specific local resource values. This information identifies “red flags” that may require further investigation, and helps to focus the efforts of more detailed evaluations.

Figure 2 illustrates the relationship of district and regional resource stewardship monitoring within the overall provincial FREP process.

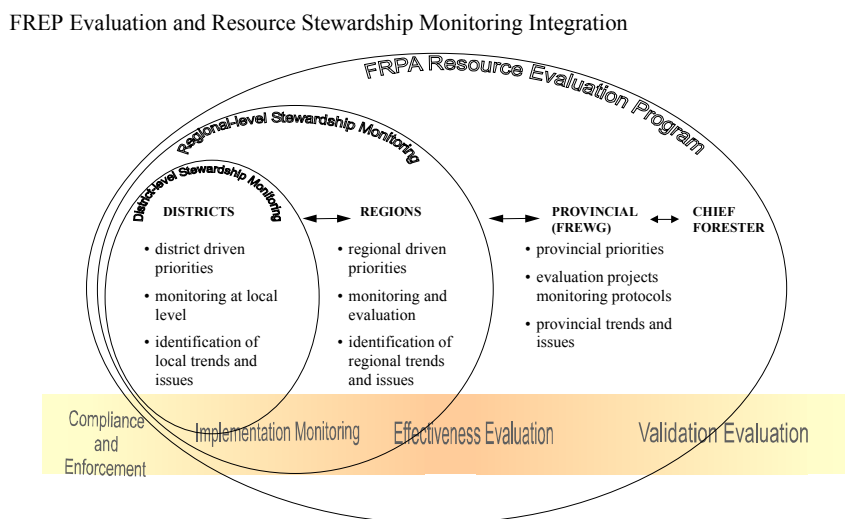


Figure 2. Integration of Resource Stewardship Monitoring and Evaluations

Indicators

Evaluations and resource stewardship monitoring both use indicators to assess the effects of forest and range management on a specific resource value. Indicators are measurable attributes or components (often environmental or social) of a resource value that provide reliable information on the status or state of that resource. The standardized methodology for collecting and analysing data for a particular indicator is referred to as a protocol.

There are several types of commonly used environmental indicators:

- Function-based indicators—measures physical processes and their rates (e.g., water flow or nutrient cycling).
- Structure-based indicators—measures ecosystem attributes that reflect broad-scale patterns (e.g., wildlife tree patch type, distribution and abundance).
- Species-based indicators—measures some aspect of an individual species' life history, behaviour or demography (e.g., presence of Lewis's woodpecker).

Types of Evaluations

There are four different types of evaluations that can be used to assess the outcomes of forest management practices. Each has a different purpose and answers different types of questions.

Compliance – Assesses compliance with legal requirements. Answers the question, “Have they done what they were legally required to do?” Compliance evaluations do not evaluate effectiveness and only provide limited guidance for improvement. As a result, compliance evaluations are not conducted under FREP; however, there are linkages between the two programs (See “Linkages with Other Monitoring/Evaluation Programs”).

Implementation – Assesses progress towards a specific goal (including the adoption of new practices, policies or guidelines) and whether practices were implemented as planned. Answers the questions, “Have they done what they said they would do?” “Have they achieved the intent of policy?” Implementation evaluations are frequently used for “internal” investigations.

Effectiveness – Assesses whether policies or practices are meeting management objectives. Answers the questions: “Did their actions achieve desired objectives?” “Are current practices, plans and standards effective?” Effectiveness evaluations assess the impacts of operational activities on specific resource values, often using comparisons with baseline data.

Validation – Assesses or verifies the basic assumptions under which a specific management direction was developed. Answers the question, “Are the assumptions upon which we base our policies and practices correct?” Validation evaluations are primarily research tools for examining the cause and effect relationships between an ecological system and management actions.

Evaluation Intensity

There are three levels of intensity for evaluations conducted under FREP. All three levels can be used to assess the current status of resource features or to identify trends by conducting a series of evaluations over time.

Routine – A relatively low intensity evaluation calling for typically inexpensive and rapid data collection. Routine evaluations are low-cost overview evaluations that often involve visual estimates and “yes/no” checklists. These types of evaluations are useful for identifying management trends or issues that may require more detailed evaluations.

Extensive – A more detailed evaluation involving the collection of categorical data using visual estimates or relatively simple measurements. Extensive evaluations are more rigorous and quantitative than routine evaluations, and are used to collect more detailed information on a given area.

Intensive – An in-depth evaluation involving detailed quantitative data collection and analysis. Intensive evaluations are more time consuming and expensive to conduct than routine or extensive evaluations. Comprehensive quantitative data is collected and compared with control or benchmark data.

The different types and intensities of evaluations under FREP are illustrated in Figure 3.

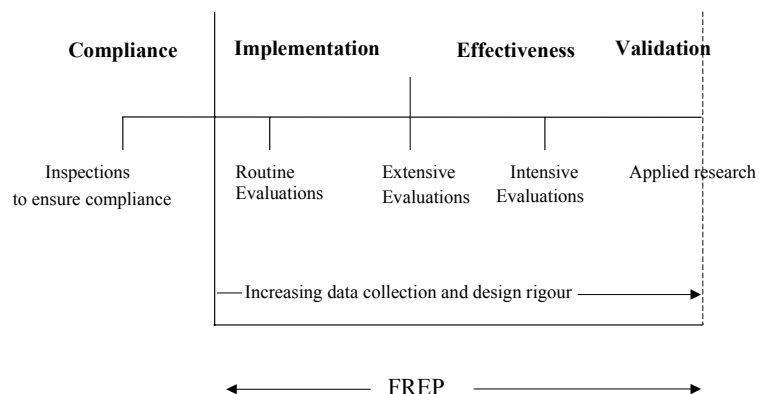


Figure 3. Types and Intensities of Evaluations under FREP.

Linkages with Other Monitoring/Evaluation Programs

FREP is linked to the work of several other agencies, and shares data and information with a number of complementary monitoring and evaluation initiatives in British Columbia, including:

- FRPA Administrative Effectiveness Evaluation Program (Ministry of Forests, Resource Tenures and Engineering Branch)
- Ministry of Water, Land and Air Protection, biodiversity and environmental monitoring programs
- Ministry of Forests and Ministry of Water, Land and Air Protection, compliance and enforcement programs
- Forest Practices Board audits and special investigations;
- Certification audits
- National Criteria and Indicators Reporting, and
- Provincial State of the Forest Reporting.

A clear understanding of the linkages with these other agencies is important to ensure that FREP's budget and staff resources are allocated efficiently and effectively. Representatives from the above agencies are engaged at various levels in the evaluation program.

One important linkage is compliance and enforcement (C&E). Activities carried out under FREP will not duplicate the efforts of C&E programs. The mandate of C&E is to ensure compliance with, and enforcement of, legislation. Therefore, FREP will not undertake compliance evaluations and C&E staff will not participate in FREP. Nevertheless, information from C&E databases (e.g., Compliance Information Management System) and other non-confidential data relevant to FREP priorities and projects may be requested and used during resource stewardship monitoring or evaluations.

Work Completed to Date

Over the last 18 months, the FRPA Resource Evaluation Working Group (FREWG) has focused on developing the management framework and structure of FREP, building capacity and interest in the program, determining priority evaluation questions, developing indicators and monitoring protocols for specific resource values, and learning important lessons related to developing and implementing a new, comprehensive provincial evaluation program. FREWG has also developed an extensive website for FREP initiatives, a communications plan and reporting framework, and a series of extension notes to communicate important program updates to stakeholders.

Indicators and monitoring protocols have been completed for a number of resource values, including riparian, soils, stand-level biodiversity, recreation, visual quality and range. Indicators and protocols for several other resource values are at various stages of development (e.g., karst (a resource feature), water quality, landscape-level biodiversity, timber, wildlife).

Evaluations are currently underway for invasive plants, cutblock size, wildlife trees, forage quality, range hydraulic function, and recreation sites. In addition, resource stewardship monitoring protocols for soils, riparian and stand-level biodiversity are being pilot tested in the fall of 2004. The pilot testing will help further define the role of district- and regional-level resource stewardship monitoring within the provincial FREP. It will also serve to refine the three monitoring protocols being tested to ensure they meet district and regional stewardship monitoring needs, and are effective in identifying resource value status, trends and implementation issues. Another key component of the pilot testing is to provide training to district implementation staff.

Continuous Improvement

One of the main objectives of FREP is to promote the continuous improvement of forest management practices in British Columbia. Continuous improvement occurs at two levels—the district/regional level and the regional/provincial level.

Continuous improvement at the district/regional level relates to improving local forest practices and Forest Stewardship Plan objectives and strategies. The results of resource stewardship monitoring are communicated directly to forest licensees and district managers. These results may indicate training or extension needs, or may be used to refine local practices to ensure that resource value objectives are being achieved. Resource stewardship monitoring may also identify “red flags” that require more detailed investigation at the regional/provincial level.

Continuous improvement at the regional/provincial level relates to affecting changes to legislation, policies and guidelines as a result of evaluations and resource stewardship monitoring. Monitoring and evaluation results, along with recommendations, are communicated to the Joint Management Committee and the Program Sponsor (Chief Forester). Social, economic and environmental factors are all considered prior to determining appropriate actions (e.g., training, extension, and/or policy and legislation changes).

The continuous improvement process within FREP is designed to ensure that we are asking the right questions, collecting the right information, ensuring that objectives for resource values are being met, and that the process is open and accountable to the public. See Figure 4 for an illustration of the continuous improvement process.

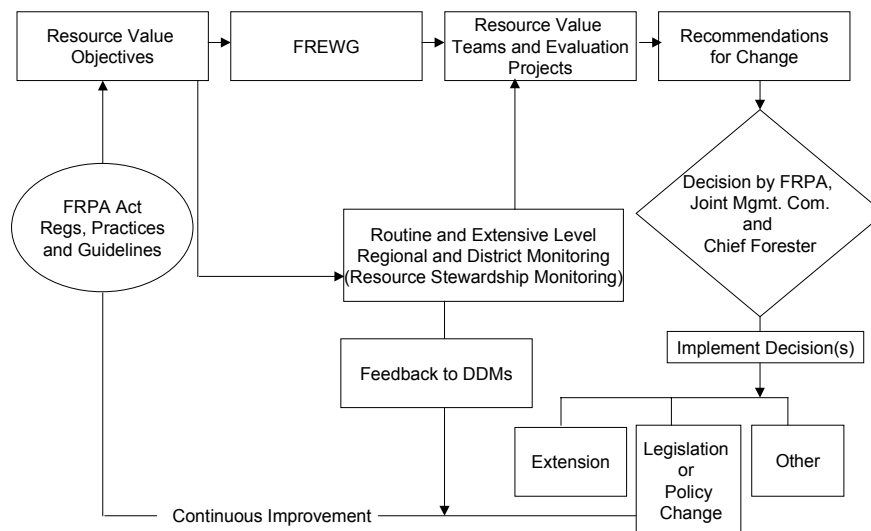


Figure 4. The Continuous Improvement Process

Measuring the Success of the Program

To measure the success of FREP, a quality assurance plan and meta-evaluation process will be developed. The meta-evaluation and quality assurance plan will apply at both the program level and project level. Key questions at the program level include: “Are the program objectives being met?” “Is the Province receiving value for money?” “Are monitoring and evaluation results valuable and being used?” Quality assurance at the project level covers all aspects of monitoring and evaluations, including indicator and protocol development; data collection, management and analysis; and reporting, reviewing and approval processes. Performance indicators for evaluating the success of FREP are currently under development.

Focus for the Future

- Future initiatives for FREP include:
- Further refinements to the program framework;
- Increase capacity and strengthen participation in the program;
- Secure additional sources of funding;
- Develop more external partnerships;
- Conduct resource stewardship monitoring pilots for other resource values;
- Develop and implement the quality assurance/meta-evaluation plans;
- Develop digital data collection devices for monitoring and evaluation projects;
- Increase routine and extensive monitoring; and
- Increase intensive evaluation projects.

More Information

Additional information on FREP can be found at: (<http://www.for.gov.bc.ca/hfp/frep>).

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