

HOW FREP IS INFLUENCING THE CONTINUOUS IMPROVEMENT OF RESOURCE MANAGEMENT IN BRITISH COLUMBIA

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INTRODUCTION

An important component of any adaptive resource management framework is an effective monitoring and evaluation process. This process should supply resource managers with the necessary information to align their practices to the condition of the land and resources they manage. In the case of British Columbia's public forests, an effectiveness evaluation program should also provide government and citizens with key information on the status, trends, and condition of natural resource values. Collecting and providing this data is an essential part of public accountability.

British Columbia's Forest and Range Evaluation Program (FREP) supports and influences provincial natural resource management in many ways. This extension note highlights some of FREP's existing initiatives and illustrates some exciting potential uses currently under consideration, topics which should be of interest to natural resource managers and decision makers.

THE ROLE OF FREP IN BRITISH COLUMBIA'S FOREST MANAGEMENT FRAMEWORK

As a foundation of the results-based *Forest and Range Practices Act (FRPA)*, FREP measures on-the-ground outcomes and identifies opportunities for continued improvement of practices, policies, and legislation. The program's monitoring indicators and procedures are focussed on the 11 *FRPA* resource values: biodiversity (stand and landscape), cultural heritage, fish/riparian, forage and associated plant communities, recreation, resource features, soils, timber, visual quality, water, and wildlife. This program is vital in

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achieving several of *FRPA*'s original goals and objectives, including:

- the balancing of social, environmental, and economic interests; and
- the reliance on resource management professionals to maintain public trust and provide "freedom to manage" in the delivery of defined results.

The timely, relevant, and critical information that FREP generates enables resource professionals to maintain their currency of scientific knowledge and to incorporate this knowledge into their practice.

FREP'S INFLUENCE ON CONTINUOUS IMPROVEMENT OF FOREST MANAGEMENT IN BRITISH COLUMBIA

An important part of FREP's long-term mission is to identify opportunities for the continued improvement of the province's forest and range practices, policies, and legislation. In pursuing this commitment, FREP has developed tools, data, and results that are used to advance and support: professional reliance; legislation and policy development, including Timber Supply Rationales; result-based forestry; forest certification; relationship-building through on-the-ground discussions of monitoring results; and liaison with other agencies. Ultimately, FREP provides land managers with an increased understanding of the status and trends of resource values and the condition of the overall resource land base. Figure 1 shows some examples of FREP's ongoing influence on the continuous improvement of resource management in British Columbia.

PROFESSIONAL RELIANCE

The Association of BC Forest Professionals *Code of Ethics* requires that resource professionals remain current in their

The FREP Mission:

To be a world leader in resource stewardship monitoring and effectiveness evaluations; communicating science-based information to enhance the knowledge of resource professionals and inform balanced decision-making and continuous improvement of British Columbia's forest and range practices, policies and legislation. <http://www.for.gov.bc.ca/hfp/frep/index.htm>



How effective is FREP in influencing change?

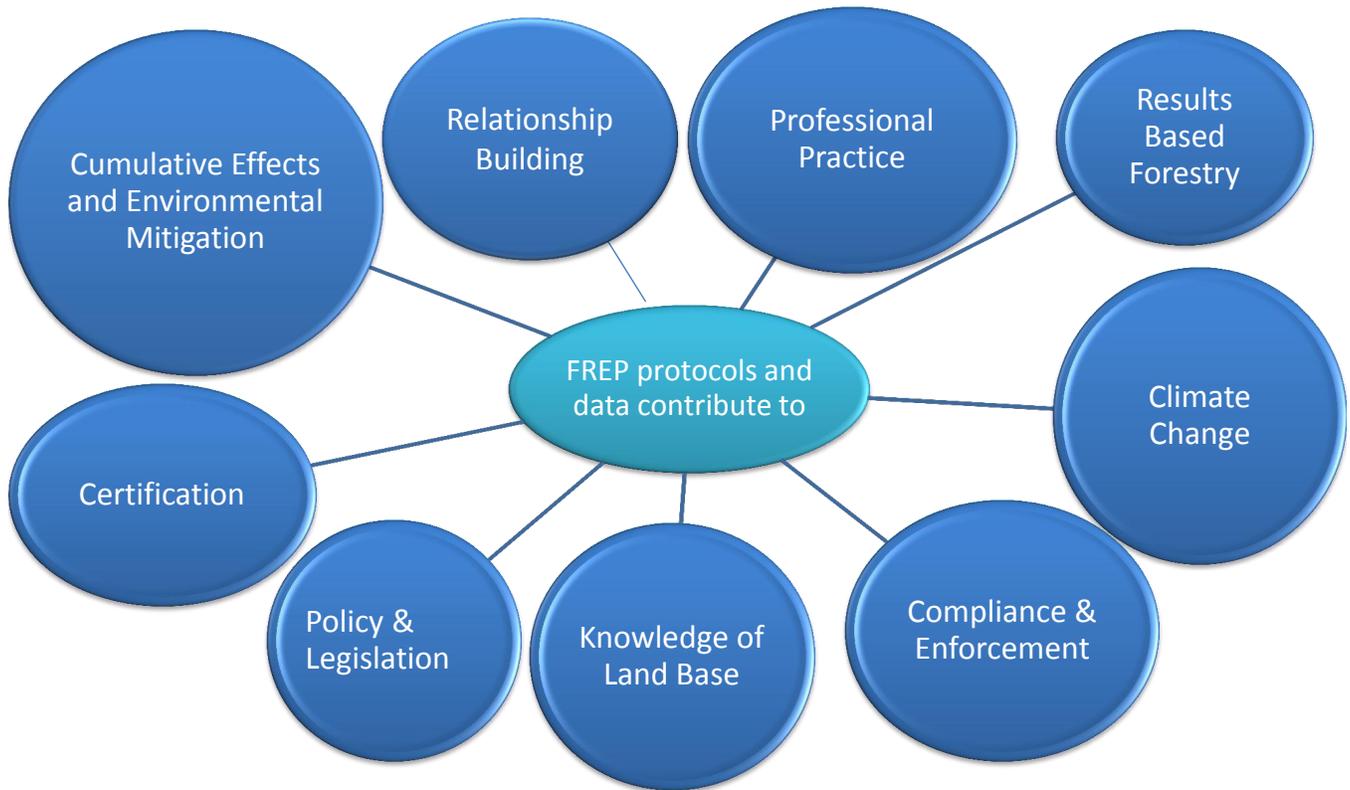


Figure 1

field of practice, ensuring that decisions are balanced between environmental, social, and economic values. Resource professionals must advocate and practice good stewardship of forest lands on the basis of sound ecological principles.

In a recent communications survey of FREP's clients, 74% of government field staff and 52% of industry respondents indicated they used FREP results and reports to enhance their knowledge in support of their professional practice. Just under 50% of industry respondents also indicated they used FREP-generated results to support decision making. These clients responded similarly when asked whether FREP extension products provided important information needed for balanced decision making relevant to the stewardship of natural resource values. With ongoing efforts to enhance FREP's extension activities, including making specific data available for individual licensees, the number of users of its extension products is expected to increase.

To date, FREP has produced 32 reports, 36 extension notes, 4 "FREP TV" YouTube videos, and 2 posters, all of which are publicly available through its website. In addition, many presentations have been given, much data shared,

and extension publications and presentations prepared and delivered by district staff. The majority of these extension efforts support and enable the success of advancing professional reliance. A key FREP publication aimed at supporting professional reliance is the annual Chief Forester's Report on FREP, which summarizes FREP findings and communicates the Chief Forester's perspectives on current management strengths and opportunities for continued improvement. In 2012, this report will be published as the *Assistant Deputy Minister Resource Stewardship Report: Results and Recommendations of the Forest and Range Evaluation Program*.

LEGISLATION AND POLICY DEVELOPMENT

Until FREP's 2011 field season, most of its monitoring was concentrated on cutblocks harvested under the authority of the *Forest Practices Code of British Columbia Act*. As a result, FREP's primary focus has been to support the advancement of professional reliance by identifying current management strengths and opportunities to improve "on-the-ground" practices. These *Code*-related monitoring results provide some early indications of situations that may require policy

change if conditions or practices do not improve under *FRPA*. Examples include roadside disturbance, natural range barriers, allocation of riparian retention on small streams (i.e., not more retention overall but a change in distribution), and management of large coarse woody debris. The current Chief Forester's policy on coarse woody debris was based on FREP results.

Another example of policy development involves FREP's Stand Development Monitoring Protocol, which provides useful information on forest health impacts and changes in stands 15–40 years old (i.e., changes in height, diameter, stocking, and species). The Timber Supply Rationales for the Prince George, Mackenzie, and Quesnel timber supply areas incorporated this data to refine forest health impacts on timber supply in these regions. FREP indicators, data, and the expertise of resource value team leads was also used in the development of the *Water Sustainability Act* (e.g., stream health indicators and provincial water objectives), the *Natural Resource Roads Act*, and the Ministry of Environment's Environmental Mitigation Policy and Procedures.

FREP PROTOCOLS AND RESULTS-BASED FORESTRY

FREP protocols are valuable resource tools, clearly describing indicators and data collection methodologies. A primary use of FREP data is to assess the outcomes of results or strategies within forest stewardship plans (FSPs). For example the Peace and Haida Gwaii Districts have used FREP data for this purpose. Approximately 11% of areas assessed by FREP are associated with an FSP; the remaining 89% are associated with forest development plans under the authority of the *Forest Practices Code of British Columbia Act*. It is expected that all future sampling will involve cutblocks associated with *FRPA*.

Although FREP protocols were originally developed to monitor outcomes related to *FRPA*, many of these protocols are easily transferable to other legislative frameworks. For example, the fish/riparian monitoring procedure has been modified to assess the effectiveness of the Riparian Areas Regulation under British Columbia's *Fish Protection Act*. FREP protocols are frequently requested as a basis for other monitoring programs, as the following examples illustrate.

- Licensees have used FREP protocols to help meet their certification monitoring requirements.
- The Westcoast Forest Society used FREP's stand-level biodiversity, soils, and riparian protocols in its own monitoring program within the Clayoquot Sound area.
- The Haida Nation based its monitoring of landscape unit objectives on FREP protocols.
- BC Timber Sales staff in the Thompson/Okanagan Region used FREP's stand-level biodiversity protocol and analysis methodology to develop an area-specific monitoring program for coarse woody debris.

- Community watersheds at Waugh Lake and Lang Creek, as well as the University of British Columbia's Malcolm Knapp Research Forest, have used FREP procedures to assist in watershed assessments.
- The Forest Practices Board has used modified versions of FREP's water quality, visual quality, and riparian protocols in its audits.
- The Department of Fisheries and Oceans has used FREP riparian procedures to help assess its wild salmon policy.

FOREST CERTIFICATION

Monitoring of forest management outcomes is an important part of third-party sustainable forest management certification programs, such as those of the Canadian Standards Association, Sustainable Forestry Initiative, and Forest Stewardship Council. For example, FREP's water quality protocol was used by several licensees to help meet certification monitoring requirements.

A coastal Forest Stewardship Council audit showed that FREP results and protocols fulfilled its Criterion 9.4 for monitoring the effectiveness of high conservation value forests within the Coast Forest Conservation Initiative.

BUILDING RELATIONSHIPS

Cultural heritage resource monitoring brings together First Nations, government, and licensee staff in monitoring the impact of forest management on resource features such as cultural trails, culturally modified trees, and traditional use areas. In the Thompson/Okanagan Region, this monitoring has increased understanding among all those involved on how to best protect these resource features during forest operations. Licensees and First Nations are working together with trust and a common goal to ensure the protection of these cultural heritage resource values.

TRANSFERABLE KNOWLEDGE OF THE LAND BASE

FREP data and results are frequently used to assist in answering questions posed to or by government ministries, as the following examples illustrate.

- FREP data and results were provided to the Ministry of Justice as background information on the state of forest management within a series of watersheds in a First Nations interest area.
- The February 2012 Auditor General report on the Ministry of Forests, Lands and Natural Resource Operations' (FLNRO) management of timber identified FREP as a key component of the Ministry's oversight framework and cited results of FREP timber value monitoring.
- FREP data regarding the amount of retention within harvested cutblocks has been used by FLNRO's Forest and Analysis Inventory Branch in timber supply reviews.
- An assessment of forest recreation sites in 2006 evaluated the effectiveness of recreation site

management policies and practices. This monitoring provided the necessary information to improve standards for structures and facilities at recreation sites.

- FREP monitoring results were requested by, and presented to, the Cohen Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River.
- The FLNRO stewardship action plan for climate change identifies FREP's contribution of key information for adaptive decision making related to climate change impacts.

CUMULATIVE EFFECTS

The FREP team is working closely with FLNRO's Cumulative Effects team. For example, FREP indicators have been incorporated into the development of the Cumulative Effects Values Framework, a screening tool to assess current conditions in an area. In addition, FREP data summaries contribute to cumulative effects pilot areas, and FREP protocols (multiple resource value assessment) and indicators (landscape-level biodiversity) are being co-piloted to monitor both forestry and non-forest sector impacts.

COMPLIANCE AND ENFORCEMENT

Compliance and Enforcement staff have attended FREP training and in some cases use protocols based on FREP methodologies (e.g., Visual Quality). Although field staff who undertake FREP monitoring work are not specifically looking for compliance issues, they are required to report any infractions they see to the Compliance and Enforcement Branch or the district manager. Information obtained from FREP Report No. 28 (*Northern Interior Analysis of Stand-level Biodiversity*) was cited in an investigation report on potential FRPA contraventions in the Nadina Forest District. Another investigation in the Kootenays used FREP Report No. 7 and extension notes nos. 17 and 19 as background on the placement of wildlife tree retention areas.

SUMMARY AND LOOKING FORWARD

The Forest and Range Evaluation Program plays several key roles in the success of British Columbia's forest management framework. The most important of these is to monitor the outcomes of forest and range practices on the 11 FRPA resource values. By communicating these results, knowledge is continuously improved, helping to facilitate the professional reliance model and enhance the level of public acceptance of sustainable forest and range management in British Columbia. Licensees are encouraged to use FREP data to help them understand the outcomes related to their practices or to meet some of their certification monitoring needs.

Several exciting future uses of FREP's proven monitoring and evaluation procedures are currently under consideration, including:

- the assessment of non-forest sector industrial impacts such as those related to mining, power generation, and transmission corridors; and
- greater integration of FREP data collection, analysis, and reporting with FLNRO's Cumulative Effects Values Framework.

In addition, Aboriginal Relations and Reconciliation staff on Vancouver Island are considering the use of FREP procedures and data to determine whether First Nations treaty rights are being maintained. British Columbia's Environmental Assessment Office is also determining whether FREP protocols can be used to help meet its major project monitoring requirements.

FOR MORE INFORMATION:

- Detailed information about FREP can be found on the program website at: <http://www.for.gov.bc.ca/hfp/frep/index.htm>.
- A FREP overview video, along with many other resource value specific videos, can be found on YouTube at: <http://www.youtube.com/user/frep101>.
- Extension notes, detailed reports, report summaries, data sets, and other documents targeted at government and industry forest professionals are available at: <http://www.for.gov.bc.ca/hfp/frep/publications/reports.htm>.

You can also connect with your local forest district stewardship officer, or contact Peter Bradford at Peter.Bradford@gov.bc.ca or 250-356-2134.

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