

EBMWG Project Close-Out Report

Project #: AM 04b

Project Title: BCTS Adaptive Management Planning Pilot

Steering Committee Members: Audrey Roburn, Glenn Farenholtz, Amy Beetham, Alex Grzybowski, and Ian Smith from BCTS. Program Steering Committee members that contributed to this close-out report include Amy Beetham, Audrey Roburn, Alex Grzybowski, and Larianna Brown.

1.0 FUNDING

The estimated total cost of the project is \$20 000. Final billings are outstanding and the project will be completed within budget.

2.0 EXTENT TO WHICH PROJECT OBJECTIVES WERE ACHIEVED

Objective	Description	Evaluation (Text)	Summary*
1	Test the AMF prioritization procedure (including, using the Knowledge Summary) by using it to identify high priority research/monitoring questions related to a selected LUO.	Confirmed usefulness of proposed AMF <i>Prioritization Procedure</i> and <i>Knowledge Summary</i> by comparing the results of these documents with researcher and practitioner recommendations.	Fully Met
2	Develop a research/monitoring design to address one or more high priority questions.	Developed a research design for estimating windthrow damage in riparian areas in the North Coast. The AMP aims to address three high priority questions: 1. What proportion of the area of riparian reserves and management zones blow over? 2. How does windthrow vary among different types of riparian ecosystems. 3. What is the background (“natural”) rate of riparian windthrow	Fully Met
3	Prepare a plan to implement the research/monitoring design developed.	Prepared an AMP titled <i>Estimating Windthrow Damage in Riparian Areas in the North Coast</i> that identifies the methods to implement this research.	Fully Met
4	Assess the sufficiency of existing information and operational strategies to address intent of LUO.	Through interviews, a workshop, and considerable consultation with practitioners and research advisors, the consultants suggest that poor ecological inventories, a more complex planning process and, to a lesser extent, lack of established practices hampers EBM implementation and AM. Recommendations include building on existing communication processes to share information related to flexibility and AM, and ensuring collaboration amongst	Fully Met

		licenceses to offset AM costs. The consultants conclude that the current policy approach of linking adaptive management to specific flexibilities (noted in the LUOs) fails because it does not promote the study of important research questions or well-designed studies. Recommendations to address this issue are provided.	
5	Prepare recommendations on the content and implementation of AMPs contemplated in the LUO.	In the final report a recommended approach to preparing an AMP is provided in addition to an AMP template.	Fully Met
6	Describe support needed by forest managers undertaking AMPs (e.g., information, administrative and coordination support, expert involvement, projected research and implementation costs).	Held interviews and a workshop with practitioners to discuss a number of topics including support needed by forest managers to undertake AMPs. Provided key recommendations that addressed this issue.	Fully Met
7	Use a collaborative, open approach to help enhance the AMF and to build capacity within BCTS around AMPs.	The consultants collaborated with many people to undertake this project. Staff from BCTS led the project and served as forest advisors, MFR staff and consultants acted as ecology research advisors, and numerous members of the EBM WG provided feedback and guidance. A number of challenges were identified regarding BCTS's capacity to undertake AMPs (mainly related to policy and financial limitations) and recommendations to address these issues were provided.	Fully Met
8	Assess the ability and the potential of AMPs to address First Nations interests (including ecological integrity and human well-being topics) related to adaptive management.	The consultants provided a recommended approach to involving First Nations in the development of AMPs. Key issues and recommendations identified encourage practitioners and researchers to address First Nations interests in this process.	Fully Met

* Use: Fully met (100%), Substantially met (>75%), Partially met (50-75%), Marginally met (0-50%), Not met (0%)

3.0 MAJOR TASKS COMPLETED

Task	Description	Date
1	Meet with the Framework team to become familiar with the AMF and the Guidance to Practitioners document in current draft form. Meet with BCTS and the Project Steering Committee to develop a workplan;	October, 2008
2	Assemble relevant information (BCTS plans, LUO's, experimental watersheds workplan, relevant Knowledge Summary documents) and apply prioritization procedure to identify research question(s) in consultation with the AMF team.	October, 2008

Task	Description	Date
	Note: potential question(s) may have already been defined by the AMF team;	
3	Develop a research/monitoring design to address the question(s) outlined in 2;	November, 2008
4	Describe and design research/monitoring needs in support of resolving key uncertainties;	November, 2008
5	Held a workshop with BCTS and project advisors to develop an AMP project design.	December 2, 2008
6	Developed an adaptive management plan for estimating windthrow damage in riparian areas in the North Coast.	February 16, 2009

4.0 KEY PRODUCTS

Item #	Description	Completion date	Location
1	Adaptive Management Plan: Estimating Windthrow Damage in Riparian Areas in the North Coast	February 16, 2009	To be posted on EBM WG website
2	Issues and Recommendations Arising from the BCTS Adaptive Management Planning Pilot Study	February 16, 2009 (draft)	To be posted on EBM WG website
3	Summary of Workshop to Develop Adaptive Management Plan	December 2, 2008	To be posted on EBM WG website

5.0 PEER REVIEW

The Project Steering Committee and Program Steering Committee served as internal peer reviewers of the project methodology and final report. Additionally external reviews were sought from forestry practitioners, ecologists, and First Nations representatives.

Ian Smith, Dave Nicholson, Mike Viveiros and Les Pawlak, from BC Timber Sales, Terrace, BC served as forestry advisors and participated in a workshop to develop an adaptive management plan and discuss potential study topics. Allen Banner (MFR Research, Smithers, BC), Sari Saunders and Melissa Todd (MFR Research, Nanaimo, BC) and Laurie Kremsater (consultant, Aldergrove, BC) served as ecology and research advisors. Dan Cardinal, Wally Eamer and Grant Scott, from the EBM Working Group, provided valuable guidance related to First Nations participation in adaptive management planning.

6.0 MAJOR FINDINGS

The key objective of this project was to evaluate the current approach to undertaking flexibility and adaptive management in coastal BC and recommend steps to improve the effectiveness and

efficiency of adaptive management. Findings in the final report were based on a “pilot project” to develop an adaptive management plan with BC Timber Sales. Key findings identified in the final report are organized under sub-titles and listed below:

Test of Prioritization Procedures

- The proposed AM *Knowledge Summary* and *Prioritization Procedures* seem to be a useful tool to help guide discussions of research priorities. Together, the *Prioritization Procedures* and researchers (who participated in interviews and a workshop) identified 27 potential high priority research questions. These questions should be further evaluated to inform the initiation of AM projects.

Policy Related Barriers to AM

- For the most part research questions, identified by researchers participating in the project and the *Prioritization Procedures*, do not match LUOs that have provisions for adaptive management. To better understand this discrepancy, it would be useful for the research advisors that supported policy development to clarify their rationale for focusing AM on specific LUOs.
- The current way of including adaptive management within LUOs¹ is unlikely to lead to useful research and monitoring—it is unlikely to improve management—for the following reasons:
 - LUOs hinder adequate study design (spatially, temporally, and by limiting a range of treatments:
 - Adaptive management is limited to six LUOs with no clear rationale for selecting these particular LUOs:
 - LUOs only require adaptive management to the extent practicable however well-designed studies are unlikely to be practicable for any single company:
 - LUOs do not specify criteria for adaptive management studies:
 - LUOs disconnect research from management decision-making allowing licensees to determine information needs and but not provide a clear feedback mechanism to the province.

Capacity Related Barriers to AM

- In general, implementation of EBM is hampered by poor ecological inventories, a more complex planning process and, to a lesser extent, lack of established practices (see Table 9 in the final report).
- Overall, the largest barriers to flexibility and adaptive management are policy limitation and financial limitations. Revenue derived from flexibility (e.g., from increased timber harvesting), must exceed the costs of assessments and adaptive management. Without collaboration among licensees, the costs of adaptive management projects will be too large in most cases.
- Adaptive management typically recognizes that a team approach is needed. If licensees need help planning studies, support should be available from local researchers who are hoping to participate in the project or from a regional (or perhaps district) adaptive management body (currently under development).

¹ i.e., land use objectives specified in ministerial orders.

Involving First Nations

- The ability of licensees to undertake flexibility will in part depend on the good relationship they have developed with First Nations. A number of recommendations provide guidance on how to involve First Nations in AM and ensure licensees address First Nations interests related to benefit-sharing and stewardship.

Preparing an AMP

- An adaptive management plan describes a management related problem, identifies specific questions related to the problem, outlines an approach for answering one or more of these questions and describes a process for translating study results into management practice. Adaptive management studies differ from “standard” research studies in two key ways. They use formal conceptual models to help identify knowledge gaps and key study questions and then update conceptual models to reflect study results. They establish a formal process to adjust management to reflect study results and engage researchers/practitioners in the learning process.
- Legally, the responsibility for developing adaptive management plans rests with licensees, however, adaptive management requires a team approach.
- Researchers and forest practitioners (and First Nations where appropriate) should develop and undertake adaptive management plans collaboratively. This does not mean that everyone does everything, rather that good communication is established so that everyone has an opportunity to review each step, make comments and track progress.
- Provision of steps to follow in preparing an AMP and an AMP template.

6.1 Key Recommendations from the Pilot Study

For anyone planning adaptive management:

- R1) Use the Prioritization Procedure to help identify research questions
- R2) Complete the Knowledge Summary
- R3) Test the prioritization procedure with human well-being.

For the provincial government:

- R4) De-couple adaptive management from specific LUOs (so it can focus on relevant questions).
- R5) Instead, establish adaptive management teams (including researchers and practitioners) to identify topics and design studies.
- R6) Develop an alternative mechanism to fund adaptive management
- R7) Establish forest management advisory groups to make policy and practice recommendations

For licensees:

- R8) Collaborate with (or hire) researchers to plan and implement adaptive management projects.
- R9) Collaborate with other licensees on topics of mutual interest.
- R10) Only undertake studies that are likely to generate useful results.
- R11) Track the costs and benefits of flexibility.
- R12) Discuss adaptive management with First Nations as part of ongoing information-sharing related to development.

For the provincial government and/or licensees:

- R13) Prepare a riparian assessment procedure to support judgements about impacts on bank stability and stream morphology and about impacts on forested swamps.
- R14) Prepare a guidebook describing best practices in riparian areas (e.g., how to create functional riparian forest).
- R15) Establish adaptive management teams (practitioners and researchers) focussed on forestry.
- R16) Establish District-scale EBM implementation teams.
- R17) Initiate small adaptive management pilot projects with licensees to develop competence in adaptive management.
- R18) Provide adaptive management advice for licensees who wish to implement adaptive management within their own companies.
- R19) Study the relationship between forestry and human well-being under the Adaptive Management Framework.
- R20) Prepare a research protocol.

In logical sequence, the main recommendations necessary to enable adaptive management follow:

- 1) De-couple adaptive management from specific LUOs (R4).
- 2) Develop an alternative mechanism to fund adaptive management (R6).
- 3) Follow the recommended approach for involving First Nations (Section 5).
- 4) Establish adaptive management teams (practitioners and researchers) to plan studies related to forestry (R5, R15)
- 5) Follow the recommended approach to develop adaptive management plans. (Section 6)
- 6) Establish District-scale EBM implementation teams (R16).
- 7) Establish forest management advisory groups to make policy and practice recommendations (R7).
- 8) Initiate small adaptive management pilot projects with licensees to develop competence in adaptive management and to test adaptive management policy (R17).

6.1 Key Recommendations from the Program Steering Committee

The PSC recommends that the LRF accept the project conclusions and recommendations as initial information only since these are based on several key assumptions made by the authors and workshop participants about the intent of the Land Use Objectives.

The PSC also recommends that the LRF should undertake to amend the current ILMB guidance document to include better guidance on AM.

7.0 RELEVANCE/SIGNIFICANCE FOR EBM IMPLEMENTATION

The project provided the opportunity to test the utility of some of the developing adaptive management products being produced by the EBMWG including. The results of this research suggest that the proposed *AM Prioritization Procedures* and *Knowledge Summary* are useful in identifying research and monitoring priorities.

A number of policy and capacity limitations were identified that present significant barriers to develop AMPs and implement AM. Recommendations to address these issues, in addition to suggested approaches to involving First Nations in AM planning and preparing AMPs, can inform Provincial and First Nation discussions and decisions regarding the implementation of AM. In the future the methodology applied in this project can be used and improved upon by other AM planners and managers under EBM.