

Mersey Tobeatic Research Institute

***FSC Forest Certification for Small
Woodland Owners***

Feasibility Report

October 2010

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Acronyms

ASF	Association for Sustainable Forestry
CSA	Canadian Standards Association
CoC	Chain of Custody
EAC	Ecology Action Centre
EOMF	Eastern Ontario Model Forest
FNSWO	Federation of Nova Scotia Woodland Owners
FEC	Forest Ecosystem Classification
FM	Forest Management
FMU	Forest Management Unit
FSC	Forest Stewardship Council
HCVF	High Conservation Value Forests
MRSC	Maritime Regional Steering Committee
MoU	Memorandum of Understanding
MTRI	Mersey Tobeatic Research Institute
NFA	Nova Forest Alliance
NSDNR	Nova Scotia Department of Natural Resources
NSLFFPA	Nova Scotia Landowners and Forest Fibre Producers Association
NSWOOA	Nova Scotia Woodland Owners and Operators Association
RMU	Resource Management Unit
SLIMF	Small and Low-Intensity Managed Forest
SNBR	Southwest Nova Biosphere Reserve
SFM	Sustainable Forest Management
SFI	Sustainable Forestry Initiative

Definitions

The Forest Stewardship Council defines the following useful terms and definitions (FSC 2008):

Group entity: The group entity is the entity representing the forest properties that constitute a group for the purpose of FSC forest management certification. The group entity applies for group certification and finally holds the forest management certificate. The group entity is responsible to the certification body for ensuring that the requirements of the FSC Principles and Criteria for Forest Stewardship are met in all forest properties participating in the group. The group entity may be an individual, a cooperative body, an owner association, or other similar legal entity.

Group member: A forest owner or forest manager who participates in a group scheme for the purpose of FSC forest management certification. Group members are responsible for implementing any requirements of group membership. Group members do not hold

individual FSC certificates, but as long as they comply with all the requirements of group membership, their forest properties are covered by the forest management certificate issued to the group entity.

Forest Management Unit (FMU): A clearly defined forest area with mapped boundaries, managed by a single managerial body to a set of explicit objectives which are expressed in a self-contained multiyear management plan.

Low intensity forest Timber: The rate of harvest is less than 20% of the mean annual increment, and the annual harvest from the total production forest area is no more than 5,000 cubic metres (m³).

Non-timber: Natural forests not exceeding 50,000 hectares, managed exclusively for non-timber forest products, and with no NTFP plantations exceeding 100 hectares.

Resource Manager: A person or organization that has been given the responsibilities by forest owners for the utilization of their forest resources, including operational planning and harvesting operations. In a group scheme, resource manager and group entity may be the same person or organization.

Resource Management Unit (RMU): A set of Forest Management Units (FMU) managed by the same managerial body (e.g. the same resource manager).

Small Forest Total forest area is less than 1,000 hectares.

Smallholder Those who own, manage or use forests which are considered “small” in relation to others in their region, and those who apply low intensity harvesting practices to timber and/or non-timber forest products. Smallholders are known by different names – woodland owners, family forests, small non-industrial private forests, small forest enterprises, community forestry operations, and non-timber forest product (NTFP) harvesters.

Types of forest management groups:

Type I group: A group with shared responsibilities between the group entity and the group members. These may vary from administrative tasks to planning, silviculture, harvesting, and monitoring with shared responsibilities between the group entity and the group members.

Type II group: A ‘Resource Manager’ type of group in which the group entity has basically taken all operational responsibilities including administration, forest management and harvesting activities on behalf of the group members.

Background Information

The Mersey Tobeatic Research Institute (MTRI) based in Kempt, Nova Scotia is a non-profit co-operative with a mission to advance collaborative research, monitoring, and management that promotes sustainable use of natural resources and biodiversity conservation in the Southwest Nova Biosphere Reserve (SNBR). Following the UNESCO designation of the SNBR in 2001, MTRI was incorporated in 2004 through a partnership that included Parks Canada, Bowater Mersey Paper Company, local universities, provincial government agencies, municipalities, other non-profit groups, and community members. With seed funding from Parks Canada, MTRI hired staff to help its volunteer board of directors develop a strategic plan, launch collaborative education & research projects, and purchase the field station in 2006. MTRI works closely with landowners, industry, government agencies, and other research partners to provide a variety of services and direct a number of activities and projects related to biodiversity and ecosystem monitoring, and environmental research, education, and management.

In November 2009 the Mersey Tobeatic Research Institute (MTRI) received confirmation from the Nova Scotia Department of Natural Resources (NSDNR) of funding from the *Community Development Trust Fund* to promote Forest Stewardship Council (FSC) certification of small woodland owners (here after referred to as ‘smallholders’; see definitions above) in Nova Scotia. The goal of the project is to work closely and collaboratively with smallholders, woodlot owner groups, and other partners throughout Nova Scotia to provide services to improve forest management practices on small private woodlands through forest certification, which should help smallholders prepare to meet the increasing global demand for certified forest products and demonstrate a commitment to promoting sustainable forestry practices in the region.

Regional Context

Nova Scotia falls within the Acadian Forest Region, an area historically characterized by long-standing mature forests dominated by shade-tolerant, long-lived tree species such as red spruce, eastern hemlock, sugar maple, and American beech, as well as other long-lived although less shade-tolerant species such as yellow birch, eastern white pine, northern red oak, and white ash. It is a rich and diverse forest region due to its unique mixture of boreal species from the north and deciduous species from the south. The occurrence of red spruce within these mixed forests is characteristic of the region (Rowe 1972). Forests dominated by these tree species mixtures tend to regenerate naturally in forest canopy gaps left by small-scale disturbances created by fallen individual trees or small groups of trees, whereas large-scale, stand-replacing disturbances are relatively uncommon (Mosseler *et al.* 2003). However, several centuries of anthropogenic disturbances in the region, including agricultural land clearing, intensive woodland harvesting, widespread stand conversion, and the introduction of damaging insects, invasive species and diseases have highly degraded the original ecological integrity of the region’s forests. Today’s forests are dominated by relatively young, even-aged, early-

successional forests types, while the abundance and age of tolerant trees has declined dramatically (Simpson 2009).

Forests have long been an integral part of the economy and way of life in Nova Scotia. Today, the long term sustainability of our forests and the industries that rely on them is dependent upon the ability of private smallholders, industry and the government to work together towards the sustainable management of this valuable natural resource. One distinct feature of forests in the Maritimes is the high proportion of private ownership; most of Nova Scotia's forested land (70%) is privately owned, and in southwest Nova Scotia smallholders are stewards of approximately 50% of the forested land area. There is also a longer history of active management than in many other regions of Canada. The development of private landowner stewardship requires an understanding of landowner knowledge and values about managing forests and their active participation in management activities. Smallholders face several challenges in their responsibility as stewards of their land, most notably how to sustainably manage their woodlands and market their wood (EOMF 2007). By working together, smallholders, manufacturers, and retailers can create market and cost sharing opportunities. There is growing interest in certification as a means of promoting the sustainability of our forest resources in Nova Scotia, and to prepare to meet the increasing global demand for certified forest products.

Forest Certification

The concept of forest certification was developed in response to growing concern surrounding the sustainability of forest management practices. Since it was introduced in the 1990s, sustainable forest certification has become a topic of global interest and has become common practice for many forest product companies and forest management organizations around the world. It is a voluntary, market-based concept developed to certify forest management practices to a set of globally recognized standards. Through a process of independent third-party audits, forest operations are evaluated to determine whether they meet the required standards for certification, and provide assurance that forest owners, practitioners, and operators are operating legally and comply with established and accepted sustainable management standards (NRC 2009b). Certification provides assurance to consumers and local communities that management practices (EOMF 2006):

- Ensure environmental, social, and economic benefits from the forest
- Provide for the long-term social and economic well-being of local communities
- Maintain the ecological functions, overall health, and integrity of the forest
- Specify long-term goals and provide for ongoing monitoring & assessment
- Address the compositional, structural, and functional aspects of biodiversity within the forest ecosystem
- Are applied consistently across the forested landscape

Since it emerged in the 1990s, forest certification has been adopted quickly across Canada, which now has the largest area of third-party, independently certified forest of any country in the world. As of December 2008, Canada had nearly 146 million hectares of independently certified forest land, representing about one-third of the country's forests and 40%

of the world's certified forests (NRC 2009a). Approximately 10% of the world's forests are certified (NRC 2009a).

Certification includes two components: Forest Management (FM) certification, which is the certification of the sustainability of forest management activities; and product certification, which is the channel through which certified forest products are distributed from their origin in the forest to their end-use and is also termed "Chain of Custody" (CoC). Currently, three systems of third-party forest certification have support in Nova Scotia: (i) the Canadian Standards Association (CSA) Sustainable Forest Management (SFM) System, (ii) the Forest Stewardship Council (FSC) certification program, and (iii) the Sustainable Forest Initiative (SFI). However, only two of these systems, CSA and FSC, have been applied to smallholders in Nova Scotia.

The Forest Stewardship Council

The Forest Stewardship Council is an international, independent, non-profit organization that was founded in 1993 by a diverse group of representatives from 25 countries to support environmentally appropriate, socially beneficial and economically viable forest management through the certification of forest management practices. FSC has developed an international labelling scheme for forest products which provides a credible guarantee that the product comes from a well-managed forest independently certified to the FSC internationally recognized principles of forest stewardship, which are:

1. Compliance with Laws and FSC Principles
2. Tenure & Use Rights and Responsibilities
3. Indigenous Peoples' Rights
4. Community Relations and Worker's Rights
5. Benefits from the Forest
6. Environmental Impact
7. Management Plan
8. Monitoring & Assessment
9. Maintenance of High Conservation Value Forests (HCVF)
10. Plantations

FSC envisions a state whereby woodlands are managed to "meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations." FSC Canada coordinates the development of regional standards by local steering committees that are based on the FSC Principles & Criteria, but also take into account local ecology and social circumstances. FSC also facilitates group certification for Forest Management, whereby a group of forest owners can join together and share certification costs among the group members, dramatically reducing costs for landowners, and often making certification viable for small woodland owners. Other benefits gained by forming such a group can include coordinated market access, training and idea-sharing. Certification feasibility for smallholder groups is therefore based on the assumption that smallholders:

- Develop the capacity to function as a Group Entity; or
- Have access to an existing Group Entity under which they can apply.

Group Entity Management Types

FSC defines two group entity management types. A Type I group is a group with shared responsibilities between the group entity and the group members (Figure 1). These may vary from administrative tasks to planning, silviculture, harvesting, and monitoring. Most Group Entities fall within Type I due to the flexibility of roles that it offers. A Type II group is a ‘resource manager’ type of group in which the group entity has basically taken all operational responsibilities including administration, forest management and harvesting activities on behalf of the group members (Figure 2). Functionally defined (FSC 2009), a Resource Management Unit (RMU) is an operational cluster of group members’ certified forest management units (FMU). Groups may also be structured as a combination of both types of groups (Figure 3), as is the EOMF.

Smallholders wishing to become members in a group scheme should approach the resource manager responsible for an RMU that shares their management philosophy. For example, Nagaya is the Group Entity certificate holder and resource manager for the Acadian Forest Families, a geographically dispersed RMU comprising approximately 25 FSC certified group members with respective FMUs. As a small Type I Group Entity FM enterprise, Nagaya has a standard Memorandum of Understanding (MoU) with each Acadian Forest Family certified group member. A candidate group member seeking affiliation with the Acadian Forest Families would approach Nagaya for consideration.

In the absence of an available resource manager that is signing up new members or where there is a mismatch in management philosophies between the smallholder and available group entities and RMU, the smallholder would need to determine if there is a group of other like minded smallholders interested in developing a separate Group Entity and/or RMU, and whether the initiative is feasible.

Figure 1. Type 1 Group with shared responsibilities between the group entity and the group members, from administrative tasks to planning, silviculture, harvesting, and monitoring.

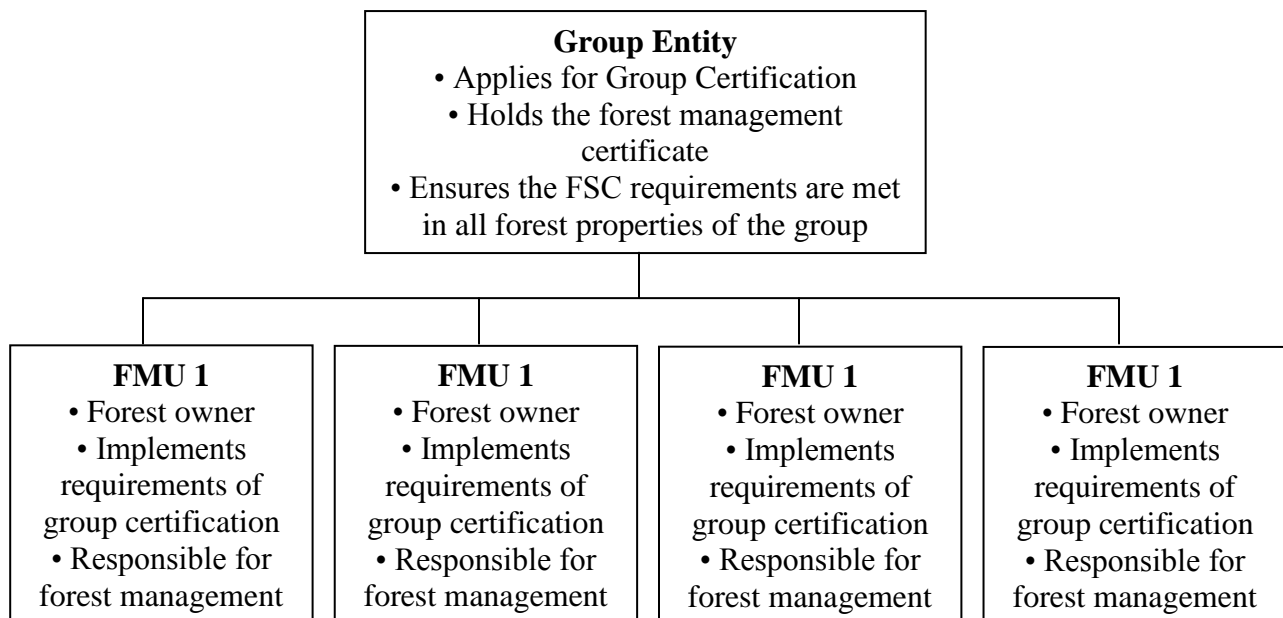


Figure 2. Type II ‘Resource Manager’ group in which the group entity has basically taken all operational responsibilities including administration, forest management and harvesting activities on behalf of the group members.

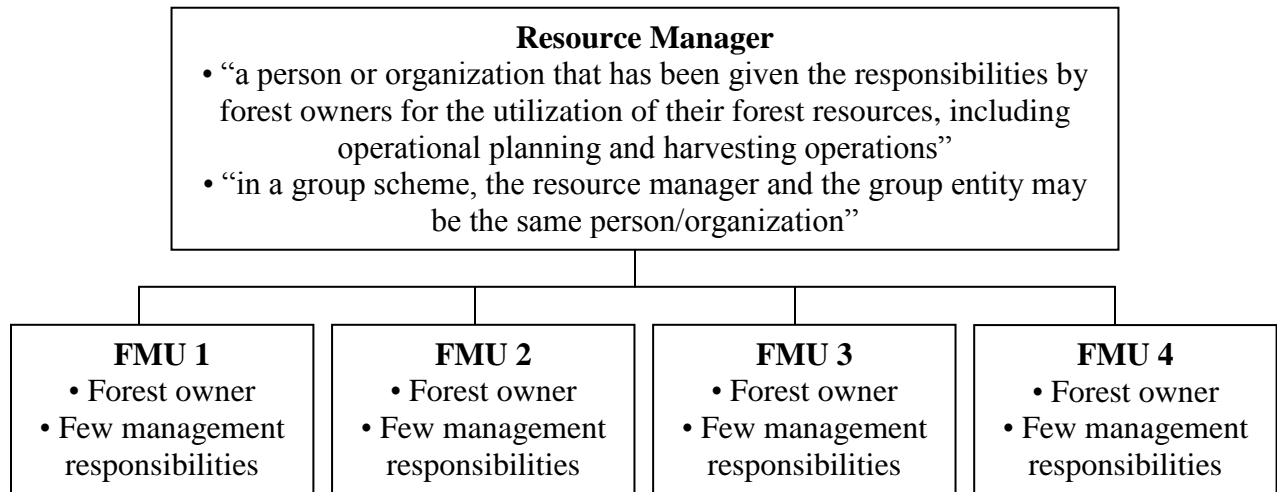
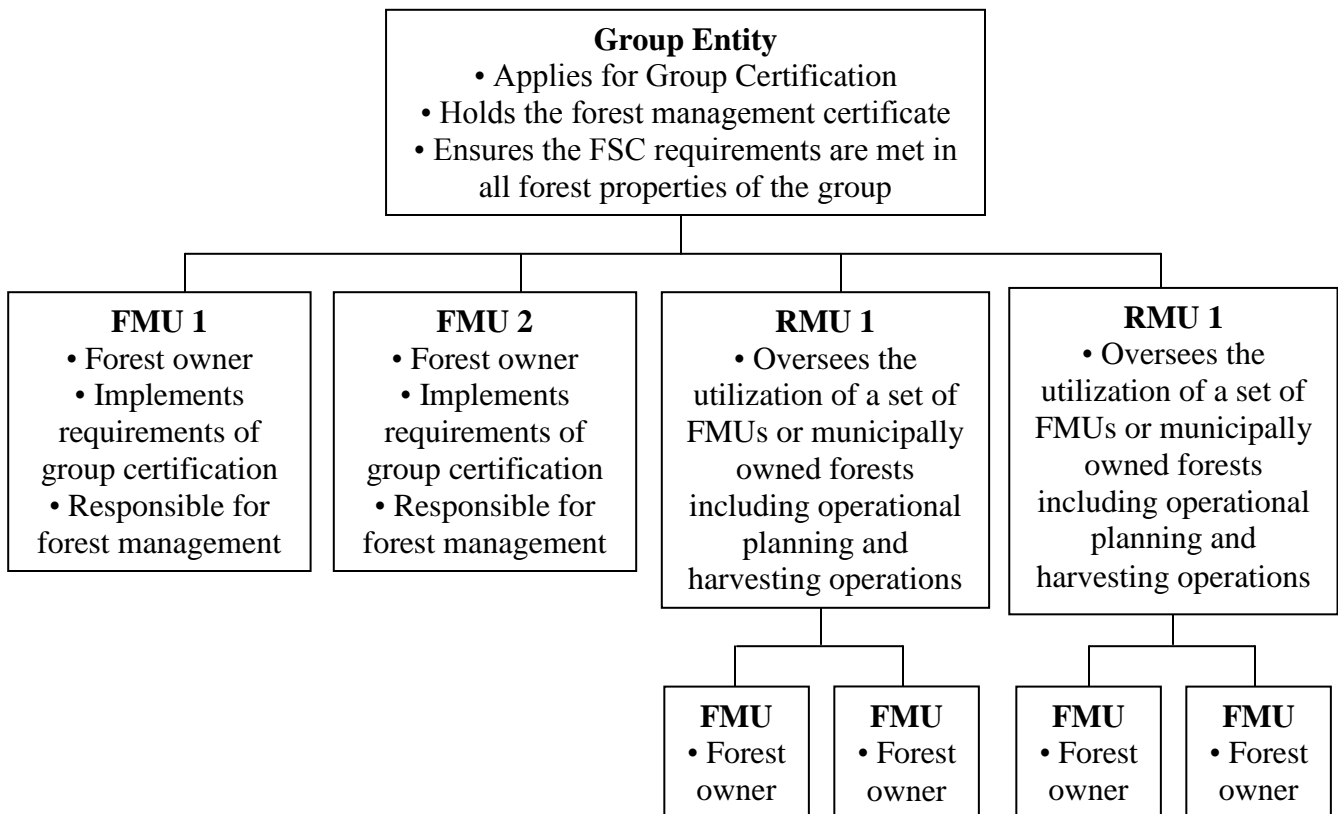


Figure 3. A group with a combination of Type I and Type II qualities with shared responsibilities between the group entity and individual group members or FMUs, as well as RMUs in which a set of FMUs has given all forest management responsibilities to the same managerial body or resource manager.



FSC Maritimes Standard

In Canada there are four regional forest management standards: the National Boreal Standard, British Columbia Standard, Great Lakes-St. Lawrence, Laurentian Standard and the Maritimes Standard. The FSC Maritimes Standard applies in the Acadian Forest Region of the Maritime Provinces including Nova Scotia, New Brunswick and Prince Edward Island. The Maritimes Regional Initiative began in 1996 with the first Maritimes Regional Standard receiving accreditation by FSC International in 1999, though not all members of the Maritime Regional Steering Committee (MRSC) were fully in support of the standard. A revised Maritimes Standard, addressing specific conditions attached to the 1999 accreditation, was accredited by FSC International in 2003. In June 2006 the MRSC agreed on a complete set of recommendations for a further revised Maritime Standard, recognizing that further work was needed in order to address Small or Low-Intensity Managed Forest (SLIMF) considerations. The Final Draft of the current revised Maritimes Standard (*FSC-STD-CAN-Maritimes-SLIMF-2008*) was accredited in January 2008 by FSC International.

Forest regions differ in terms of how the FSC vision is achieved. The FSC Maritime Standard (2008 p. 5) specifically requires that:

“... certified forest management operations work towards restoration of the natural features of the Acadian Forest. Two fundamental aspects of the restoration approach are ensuring a diverse and site-appropriate mixture of native species is maintained or restored, and that natural disturbance regimes are followed.”

Within regions, smallholders differ in their management objectives and the weight of their concerns on ecological, social, and economic scales. FSC accommodates different approaches provided that the fundamental principles and requirements as defined within the applicable regional standard are not compromised. As a general rule smallholders will pool into Resource Management Units (RMU) according to shared philosophies that maximize cooperation and minimize conflict. A critical success factor in the formation of any FSC Group Entity or RMU is the determination of those who lead the effort and their willingness to accept the costs that this effort involves in the long term. MTRI promotes FSC certification as part of its regular programming activities and has stated its objectives to assist other interested groups in doing the same.

MTRI chose the FSC Forest Management (FM) Certification as the most appropriate system for small-scale forest certification in southwestern Nova Scotia for several reasons. When MTRI began to pursue forest certification, the FSC was the only system that had developed regional standards specific to the Acadian Forest Region of Nova Scotia and the only system that had standards specific to smaller-scale forest operations (SLIMF Standard). Additionally, FSC FM certification is globally endorsed as the most environmentally responsible forest certification scheme available, and is the certification standard most closely aligned with MTRI's mandate to promote sustainable use of natural resources and biodiversity conservation through collaborative research, monitoring and management. FSC certification for smallholders complements the range of conservation activities currently undertaken by MTRI in the areas of:

- Landscape connectivity
- Species at risk
- Aquatic health
- Community outreach
- Applied research

The overall goal of MTRI's interest in forest certification is to promote sustainable forestry practices on small private woodlands. Forest certification is viewed by MTRI as one important tool towards this goal of achieving improved forest management on the ground. Although there is growing interest in forest certification in Nova Scotia as a means to promote the sustainability of our forest resources and to prepare to meet the increasing global demand for certified forest products, MTRI also recognizes that at present there is limited capacity within the province to support smallholders in forest certification. Therefore MTRI was interested in working with smallholders to get their forested land certified, but also to build capacity within the province to support certification by providing educational material and sharing information with groups interested in managing a pool of smallholders through certification. An effective group forest certification program *depends on the support of smallholders and must meet their needs*.

Forest Certification Working Group

In November 2009 MTRI organized a Forest Certification Working Group. The purpose of the working group is to provide advice and guidance in project planning, implementation, monitoring, and evaluation for MTRI's Small Woodland Owner Certification project. The group meets on a monthly basis (for the first six months of the project; less frequently after six months) and membership includes individual landowners, contractors and forest technicians, representatives from the NSDNR, Nova Forest Alliance (NFA), woodland owner groups (Federation of Nova Scotia Woodland Owners, Nova Scotia Woodland Owners and Operators Association), AbitiBowater Inc., NewPage Corporation, Harry Freeman & Son Ltd., the Ecology Action Centre and the Mersey Tobeatic Research Institute.

Project Goal

The overall goal of MTRI's forest certification project is to work closely and collaboratively with smallholders, woodlot owner groups, and other partners throughout Nova Scotia to provide services to improve forest management practices on small private woodlands through primarily FSC forest certification.

Project Objectives

There are four main objectives to the project:

1. Develop a feasibility analysis and business plan to assist groups interested in forest certification to increase capacity for forest certification in Nova Scotia.
2. Create a user-friendly manual that is based on research and makes use of the best available science, and is customized to Acadian Forest types, which helps

interpret best forestry practices under FSC Maritimes Standards certification and using the NS Forest Ecosystem Classification (FEC).

3. Work with smallholders through the certification process (the specifics about the pool to be determined under objective 1).
4. Raise woodland owners' awareness and understanding of the benefits of forest certification and the requirements to achieve forest certification on their woodlands.

Feasibility Analysis

The objectives of the feasibility analysis were to explore the process of pursuing forest certification for a group of small private landowners according to the *FSC Standard for Group Entities in Forest Management Groups (FSC-STD-30-005 (VI-0) EN)* and to determine a suitable course of action towards implementation of an FSC FM certification for smallholders in southwest Nova Scotia.

In 1998 FSC approved a Policy on Group Certification focusing on guidelines for certification bodies. A group entity is the entity representing the forest properties that constitute a group for the purpose of FSC FM certification. The group entity applies for group certification, holds the forest management certificate and is responsible to the certification body for ensuring that the requirements of the FSC Principles and Criteria for Forest Stewardship are met in all forest properties participating in the group. The basic requirements to be implemented by Group entities wishing to apply to an FSC accredited certification body for FM group certification can be found in the *FSC Standard for Group Entities in Forest Management Groups*.

The purpose of this document is to provide and share information necessary to achieve and manage an FSC Forest Management certificate for a pool of certified woodlands in Nova Scotia. The document outlines the steps involved, presents working models for certification, and discusses readiness factors that groups interested in forest certification in Nova Scotia need to consider before applying to an FSC accredited certification body for forest management group certification. As such, it is intended for groups or individuals that are interested in acting as a group entity or Resource Manager for a group of smallholders in the province. The document also includes an assessment of MTRI's own readiness to take on this role within the Southwest Nova Biosphere Reserve (SNBR).

Group Profiles & Case Studies

Given the range of viable approaches taken to meet FSC standards, MTRI examined existing pools to determine working business models and the relevant merits of group structures and functions for each. The following sections provide a summary of Group Entities located internationally, in other parts of Canada, and here in the Maritimes with groups varying greatly in size, structure, and philosophy. The FSC defines Type I and Type II groups (see *Group Entity Management Types*, p.11), however we found that internationally groups can be further categorized into six basic types according to size and operational structure, group philosophy and objectives, all of which may limit group membership. The six basic types are:

- Large Type I Group Entity
- Large Type II Resource Manager
- Small Type I Group Entity
- Small Type II Resource Manager
- Small Conservation-Oriented Non-Profit Organizations
- Specialist Groups

For each of the six basic types of FSC certified Group Entities described below, we have provided a description and case study examples. The profiles help answer a series of questions regarding the structure of groups, such as:

- What is the location, pool size, and how has it been established?
- Who is the Group Entity and what type of group are they (e.g. woodland group, group of smallholders, independent business, non-profit organization)?
- What is the rationale for the pool? Is it geographical, philosophical, or based on some other characteristic?
- If there are more interested smallholders than resources, how does the group decide who to include?
- What role does the Group Entity play (e.g. purely administrative to managing the land for smallholders; i.e. FSC Type I or Type II)?
- How do mills fit into the scenario? Are they part of the pool or separate? Is there a strong local market demand?
- How do Group Entities remain economically sustainable (e.g. premium wood prices, government support, smallholder fees)?
- If there are fees, how are they levied? Are fees scaled to land size/wood harvested, or are they at a flat rate?

Groups Located Internationally

1. Large Type I Group Entity

This type of group entity is an umbrella organization managing a group which covers a large geographic area or several communities, usually split into sub-groups for ease of management. The focus of these groups is often on capacity building for poorer communities, enabling them to trade fairly in a global market, or on conservation of natural resources and

ecologically based forest stewardship. Management is generally carried out by the landowners or farmers themselves, but the group entity assists with accessing markets, securing external funding (if required) and providing the necessary infrastructure to facilitate long-term sustainability of the group.

Case Study - COATLAHL, Honduras

www.coatlahl.com

COATLAHL acts as a group entity for 16 community based forestry operations in northeast Honduras. Families contributing to these communities average 29 per community group, and holdings are generally small in size, but support high value tropical hardwoods. Group certification allows COATLAHL to co-ordinate production, reducing certification costs so that small producers can meet the demands for FSC certified wood from international buyers. COATLAHL also manages a furniture workshop which exports products made from certified wood.

2. Large Type II Resource Manager

This model is common in areas that have historically logged on a large scale, most often involving for profit companies that have a long tradition of trading and well established market access. Obtaining certification allows these companies to diversify their products and meet market demands while demonstrating a more responsible attitude to sustainable harvesting. In many countries, landownership by small private woodland owners can account for a significant proportion of the total forested area. Group certification has allowed these larger organizations to access greater areas forest for timber extraction. Certification is usually based on an agreement that the resource manager is responsible for all forest management contracts. They will usually hold chain of custody certification and market products for the landowner, sometimes at a premium. Landowners pay to join the group, and this fee may be fixed, or be variable depending on forest size.

Case Study - Scottish Woodlands

www.scottishwoodlands.co.uk

Scottish Woodlands (SW) is a large UK based independent forest management company, describing itself as “environmentally aware, commercially focused, customer orientated”. It holds FSC group certification for two schemes:

- Full, where SW acts as a resource manager and is contracted for management; and
- Associate, where management is carried out by the landowner or a third party.

The group has over 190 members, holding 82,000 ha, and is operated regionally from sub-offices around the UK. Members pay to join, with better market access, rather than premiums, being the incentive. Scottish Woodlands also holds Chain of Custody (CoC) certification.

3. Small Type I Group Entity

Many groups fall into this small group model, usually coordinated by a non-profit group or a co-operative of woodland owners and other interested parties. The group size is smaller without sub-groups, and often geographically limited. In some cases members are recruited in accordance with the group's management objectives or philosophies. The structure of the group is typically dependent upon external funding such as government grants or loans, and although the aim is to become financially self-sustaining, most small group entities require external funds to offset the cost of certification. Some pools require more membership to be financially viable, some charge a membership fee, and others are free. The group entity is responsible for assessing operations and assisting with marketing, sometimes holding chain of custody certification. In most cases, forest management and timber extraction is carried out by members or a third party.

Case Study - Massachusetts Woodlands Co-op

www.masswoodlands.coop

The Massachusetts Woodlands Co-op (MWC) currently has 60 landowners holding over 12,000 acres of certified woodlands. The co-op was formed by landowners, foresters, and mill operators who had a common goal to ensure sustainable forest management and habitat conservation while supporting the local economy and making the most of an abundant resource. With the help of grant aid and a multitude of partnerships, the co-op has been operating as a business, returning profits to members, but is not yet financially self-sustaining because revenues do not cover all the cost of certification for members. MWC hopes that they will achieve financial self-sufficiency in the next 3-5 years. MWC has received CoC certification for their own brand of locally processed "HomeGrown Wood" targeting local markets and keeping "local dollars in the region".

4. Small Type II Resource Manager

Small Type II Resource Manager group entities are smaller forest management operators who have sought FSC certification to diversify their business and secure timber for a growing market. Generally only a proportion of the forests they manage are FSC certified, and consist of one pool which is managed by one team. Forest management and logging is generally carried out by the resource manager. Although these are generally for-profit organizations, sustainable management and ecological interests tends to be a strong part of their ethic.

Case Study - Two Trees Forestry, Maine

www.twotreesforestry.com

Two Trees Forestry is a small business offering forest management planning, timber harvesting, and woodland appraising. They advocate environmentally responsible forestry and act as resource managers for a pool of 60 woodland parcels with forests totaling 14,000 acres. No membership fee is charged, but owners need to have a management plan and timber inventory for their woodland, and Two Trees expect to be contracted for all harvesting. They offer free advice, and market access, with premiums for certified wood a possibility.

5. Small Conservation-Oriented Non-Profit Organizations

There are a few organizations that fit into one of the above categories but have very different objectives from those described above. The group entity may or may not act as a resource manager for the forest parcels but their objectives are primarily about safeguarding a resource that may otherwise disappear through neglect. These group entities often have to gain the confidence of the landowners and sell the concept of active management as well as certification. Initiation of the projects relies heavily on external funding.

Case Study - Coed Cymru, Wales

www.coedcymru.org.uk

Coed Cymru is a charity based group entity set up by a partnership of both government agencies and NGOs to promote the management of broadleaved woodlands and the use of locally grown timber. It was formed with the objective of halting the serious decline of native broadleaved woodland cover in Wales, and giving advice and assistance to farmers with woodland properties to ensure the survival of these woodlands. Most of the holdings are small (< 4 ha). Coed Cymru can advise and carry out forest planning and management if required, with members only really required to carry out necessary paperwork. There is no fee to join. They do not carry CoC certification, but supply many local woodworking businesses.

6. Specialist Groups

Like the previous category, this group could be considered in one of the first four categories, but is distinctive due to the fact that membership is constrained by the product of the pool. Woodlands are managed in a sustainable way but the primary produce is not raw timber.

Case Study - FECOFUN, Nepal

www.forestrynepal.org/wiki/139

FECOFUN (Federation of Community Forest Users, Nepal) is a national federation of forest users, advocating community forest user rights. Fourteen Community Forest User Groups are certified in the scheme, covering 14,000 ha. Members produce some 14 different kinds of Non Timber Forest Products (NTFP), which, with FECOFUN's assistance, are marketed world-wide. FECOFUN's main objective is to "promote self-confidence and self-dependence to forest user groups through equal participation of all in decision making".

Groups in Canada

Eastern Ontario Model Forest (Large Type I Group Entity)

www.certification.eomf.on.ca

The Eastern Ontario Model Forest (EOMF) is one of fourteen large-scale working model forests, representing the five major forest eco-regions of Canada, with the EOMF representing the Great Lakes St. Lawrence Forest Region. The EOMF has been working with forest certification since 1999 when they initiated a Certification Working Group to investigate the certification of private land in eastern Ontario (EOMF 2007). They also established a partnership with FSC Canada to undertake a project to assess the feasibility of FSC certification of groups of smallholders in Eastern Ontario. The EOMF is responsible for recruiting landowners, hiring an

accredited certifier and overseeing the organizational and reporting aspects of maintaining FSC forest management certification. It has established and supports several FSC certified smallholders, such as the Eastern Ontario Certified Forest Owners.

The EOMF also holds a Group CoC certificate on behalf of several small-scale wood processors in the region and has made partnerships with mills in the region that hold a vested interest in certified wood and pay an operating fee for any wood coming from the EOMF program. It defines the forest management requirements for Forest Managers needed to implement the FSC GLSL Standards, and audits their performance. All members pay an annual certification fee consisting of a base fee to cover the cost of audits plus an operating fee which is variable depending on the harvest volume and associated wood products. The EOMF recognizes that “while certification is not the end in itself, it acts as an important tool by providing a framework of achieving sustainable forestry on the ground”.

MTRI has been working collaboratively with the EOMF Sustainable Forestry Certification Initiative in the hopes of benefitting from lessons learned and experiences gained by this well-established and exemplary group. Scott Davis, the EOMF Certification Coordinator, visited Nova Scotia in February 2010 for a training and information sharing session with members of MTRI’s Forest Certification Working Group, which contributed greatly to the production of this feasibility analysis. Scott also requested observer status for a member of MTRI to be present for an annual FSC audit in Ontario in March 2010.

Ecotrust Canada (Small Type I Group Entity)

www.ecotrust.ca

Ecotrust Canada is a nonprofit whose purpose is to “build the conservation economy in coastal British Columbia”. It operates one FSC Forest Management certification group, and so would fit into the small nonprofit model, despite the size and varied remit of the organization. They offer advice and application packages, an FSC standards compliance toolkit and handbook, and encourage membership from landowners with less than 2000 hectares, or have an Allowable Annual Cut that is less than 5,000 cubic meters and less than 20 percent of the total mean annual increment of the productive forest area. They also hold a group chain of custody certificate for wood processors. Costs range from \$1500 -2500 depending on area certified.

Groups in the Maritimes

Summarized below are three Group Entities using the *FSC Certification Standards for Best Forestry Practices in the Maritimes Region for Small and Low Intensity Managed Forests (FSC-STD-CAN-Maritimes-SLIMF-2008)*. All the Maritimes FSC group certificate holders would be classed as small Type I Group entities, having one main pool of landowners within their management structure. The Federation of Nova Scotia Woodland Owners (FNSWO) is also working with small woodland certification, though their program was developed in accordance with the CSA Z804-08 Standard, *Sustainable Forest Management for Woodlands and other Small Area Forests*.

Pictou Landing First Nation (Small Type I Group Entity)

Pictou Landing First Nation has nearly 600 members and is located on the Northumberland shore in Nova Scotia, Canada. Their territory spans five reserves that have a combined area of 528 hectares. The region as a whole has been severely fragmented by land clearing that peaked in the late 1800's, and subsequent clear-cutting that has resulted in even-aged stands dominated by white spruce with very little forest cover more than 100 years old.

The main priority of Pictou Landing First Nation's forest management is restoration of the Acadian forest. Secondly, they prioritize high quality recreational opportunities, such as hunting and gathering, and viewing wildlife. Finally, they list other priorities such as clean water, high plant and animal diversity, the creation of a venue for understanding and learning about the forest environment, economic benefits for the Band (including employment opportunities, training opportunities, and income from stumpage), and a source of raw materials for native crafts. Until the end of the 1990s, the Band was adhering to the '94-'95 Manual of Procedures and Standards produced by the Province of Nova Scotia under the Cooperation Agreement for Forestry Development. More recently, their forest management objectives have shifted to forest restoration and silvicultural techniques that favour long-lived, valuable species. Pictou Landing First Nation was first certified under the FSC Maritimes standard by SmartWood in March 2000; they were the first woodland to earn FSC certification in the province of Nova Scotia.

Nagaya Forest Restoration Ltd. (Small Type I Group Entity)
www.acadianforest.com

Nagaya Forest Restoration Ltd. was formed in 1999 to certify members of the Acadian Forest Families, a group of forest landowners, forest workers and technicians, woodworkers, marketing companies, retailers and customers distributed throughout the three Maritimes Provinces (Nova Scotia, New Brunswick and Prince Edward Island) to the *FSC Certification Standards for Best Forestry Practices in the Maritimes Region*. The group is currently made up of 25 properties (3,197 ha.); there is an annual membership fee of around \$200-\$300 for all members of Nagaya (Jim Drescher, per. comm.). Bill McKay, president and sole owner of Nagaya Forest Restoration Ltd., has been learning and developing sustainable and restorative forestry practices in the Maritimes for over 35 years. Both Nagaya and the Acadian Forest Families have been major advocates of FSC certification in the Maritimes and are dedicated to the sustainable restoration of the Acadian Forest. Their vision is simple: healthy forests make healthy communities. Nagaya Forest Restoration and the Acadian Forest Families are organized to effectively exchange ideas and experiences in their goal to restore Acadian Forest. The overall Nagaya management system is designed to restore the species composition and structure characteristics of a natural Acadian Forest that are ecologically appropriate for each site. The approach is a precautionary one that uses selection to enhance diversity and to develop the inherent value of quality trees. Their system strives to establish high ecological function with minimal disruption of ecological integrity due to forest use by humans, allow life to flourish, and increase the contribution of forests to communities. The end result is expected to:

- Achieve low impact management of forest land
- Preserve and restore the Acadian Forest
- Properly recognize the contribution of forest workers
- Create high quality products

- Guarantee customers that their purchase puts value back into the forest
- Plan for a reliable and steady supply of coarse woody debris and organic matter
- Promote a mixed-wood forest
- Remove low volumes more frequently
- Harvest less than the growth increment

Nova Scotia Landowners and Forest Fibre Producers Association (Small Type I Group Entity)

The Nova Scotia Landowners and Forest Fibre Producers Association (NSLFFPA) was created in 1979 and is a private non-profit organization representing small private landowners and producers selling to the NewPage mill in Port Hawkesbury. Their mandate includes progressive agreements with NewPage that provide silvicultural reinvestment for private woodlands and FSC certification services for its members. The NSLFFPA seeks to raise the price of wood so woodland owners see the importance of protecting its value. The opportunity to join the association and FSC certified pool is available to landowners with at least 10 hectares of forest located within 250km of the NewPage mill in Port Hawkesbury. The NSLFFPA was registered as a group Forest Manager by the FSC in 2005. In 2007, they had approximately 30 FSC certified members with a total land area of 484 ha. Currently the NSLFFPA has completed approximately 90 management plans for landowners, including processing their application, conducting a first interview with the landowner, and a timber cruise of each property. Their objective is to have at least 100 management plans completed by March 31, 2010, another 100 management plans processed in the next fiscal year, with similar expansion of the certification pool in succeeding years (Kingsley Brown, pers. comm.). There is an annual membership fee of \$10 for all members of the NSLFFPA but no additional cost for management plans and audits for landowners interested in FSC certification. The sustainability of their certification program is assured through collective agreements with NewPage from the sale of their wood (Kingsley Brown, pers. comm.). NewPage contributes an additional \$2.00/ton for certified wood, a premium which goes into a trust fund with the intention of making the program sustainable into the future without dependence on long term public funds. The NSLFFPA will receive \$850,000 over four years from the *Community Development Trust Fund* to support woodland certification.

Federation of Nova Scotia Woodland Owners

www.fnswo.ca

The Federation of NS Woodland Owners (FNSWO) is comprised completely of small-private woodland owners throughout Nova Scotia. Their stated purpose is to help better the position of Nova Scotia small-private woodland owners by providing the tools they need to make well-informed woodland management decisions and to ensure that their rights and concerns are voiced, listened to and taken seriously (FNSWO 2009). The FNSWO is committed to promoting forest management practices that contribute to the long-term health and productivity of Nova Scotia's small, privately-owned woodland. They are governed by nine board members and have approximately 1200 members (FNSWO 2009). To become a voting member of the FNSWO and to be eligible for their certification program you must own at least 15 acres, and no more than 5000 acres of woodland in Nova Scotia; membership dues are a one-time fee of \$20.00. In 2008 the FNSWO initiated a Small-Private Woodland Certification Program developed in accordance

with the CSA Z804-08 Standard, *Sustainable Forest Management for Woodlands and other Small Area Forests*. Their program is designed to increase landowner awareness and participation in small-private woodland certification and the main goal is to help interested Nova Scotia woodland owners achieve group woodland certification using the CSA Z804 standard. The CSA Z804 standard is applicable to management of forests less than 4000-hectares. Under the program, the FNSWO is providing small, independent landowners with forest management plans and training that comply with the Canadian Standards Association's new Forest Management Standard for Woodlands. The FNSWO will receive \$575,000 over four years from the *Community Development Trust Fund* to support woodland certification.

Operating Environment in Nova Scotia

Presently there are limited opportunities for smallholders in southwestern Nova Scotia to pursue FSC certification. Nagaya is headquartered in New Brunswick and the Acadian Forest Families group is not readily taking on new members. The NSLFFPA is based in eastern Nova Scotia as a preferred supplier to NewPage and does not currently offer a viable alternative for most landowners in the southwest. The FNSWO is relatively well represented in the western region however they are not currently offering an FSC alternative to their CSA certification program. Their CSA program is customized to smallholders and could offer a reasonable alternative for those looking for a recognized best practices model but who are discouraged by the current lack of FSC representation in the area or who perceive FSC as too costly or demanding in comparison.

Smallholders in southwest Nova Scotia have a long history of managing their woodland independently on a modest scale. Most do not know about Forest Stewardship Council certification; in a recent phone survey (February 2010) using the Caledonia phone exchange, 88 of the 100 people surveyed had not heard of the Forest Stewardship Council. To gain further insight into woodland owner perceptions and attitudes towards their woodlands and certification, an information session was provided for smallholders interested in certification in the immediate area around MTRI. A questionnaire was distributed following the discussion, and ten were returned. Their responses indicate that most smallholders rank their *long-term interest in their woodland* and *family legacy* as priorities over *a source of income*, and *a place for relaxation and recreation*. Most respondents carry out woodland management activities themselves and are wary of using contractors. Of five respondents who had used contractors in the past, three were disappointed with work done. Half of the respondents already have a management plan for their property and when asked about what price they would be willing to pay for a management plan for FSC certification, prices ranged from \$0 - \$2000, with other suggestions that the cost of a management plan should be scaled according to projected harvest income or property acreage.

When asked about perceived benefits of certification, most respondents to MTRI's woodland owner survey ranked *personal assurance of sustainably managed woodlands for the future* as most important, with *market access* close behind. The biggest deterrents for becoming certified were *the costs involved* and *losing control of management of their woodlands*. When given options for financing a certification program, most respondents would prefer to pay lower fees initially and rely more heavily on subsidies, even if it risks the long term sustainability of the certification program. Informal discussions with landowners generally support these results and indicate that landowners would rather be coordinated locally than linked to a group elsewhere in the province. Despite landowners' heavy reliance on industrial mills for market access, there is a lack of trust towards industry, and *a strong feeling that they should not have to bear costs associated with certification without some guarantee of a premium or alternative contributions from industry*. A full summary of results of the survey is provided in Appendix A.

Potential Benefits of FSC Certification

For FSC group members, the benefits of certification include greater access to markets with more stable market share; when given the choice, consumers will choose eco-labeled

products over other equally priced products. For those who are uncertain about the work quality and honesty of contractors and buyers and are hesitant to manage their woodlands for timber value, certification may provide reassurance that harvests and sales will be independently monitored by a knowledgeable third party and supported by a trusted network of like-minded peers. The community economic benefit of this is that more woodland can be put into production in the long run, providing mills with a sustainable supply of certified raw product. Participation in a certification program provides evidence to qualify for Nova Scotia's Forest Resource Property tax classification and for Revenue Canada's Intergenerational Transfer Tax Credit. Groups of owners may also benefit from better access to silviculture assistance funding under the Forest Sustainability Regulations, as some of the remaining Nova Scotia Group Management Ventures have.

Though certification can help assure market access, as well as the tax benefits and funding potential mentioned above, other direct financial benefits for group members are difficult to realize. Premiums currently paid by the market for certified products are unlikely to cover the increased costs of production. There may also be an overall reduction in wood volumes harvested due to smaller total allowable cuts under the FSC standard. Higher costs with decreased annual volumes may initially discourage some landowners from participating.

Markets

In the market place, consumers are more likely to choose eco-labeled alternatives than in the past, thus increasing market share for providers of these products. Demand for FSC paper is driven in large part by an aggressive FSC marketing strategy coupled with green procurement policies in government and business (FSC Canada 2006). Since 2009, Bowater Mersey Paper Company's mill in Brooklyn, Nova Scotia has held an FSC Chain of Custody (CoC) certificate and shipped certified material from Quebec to produce book-grade paper sold at a premium to a European publisher. Another market for Bowater FSC certified newsprint opened up in Nova Scotia in 2010, though it is without a premium but helps assure market access for paper production in the region. In March 2010, Bowater Mersey Paper Company also received FSC Forest Management certification in its Medway District to help supply its markets. Other local mills that have obtained FSC CoC certificate include Freeman's Lumber in Greenfield, Turner's Lumber near Bridgewater, and Logs to Lumber near Mahone Bay. Strategic alignment opportunities for MTRI exist with local mills who are interested in developing an FSC supply chain from private woodlands in southwest Nova Scotia.

The demand for FSC certified lumber and wood panels is projected to more than triple between 2008 and 2013, dependent upon the American housing market recovering from the recent economic downturn that hit hard in America. This growth would be more than three times as fast as the overall market for wood panels (Freedonia Group 2009). A growing market for certified wood pellets is also responding in large part to European demand. Junginger (2009) states that "certification of wood pellets is not (yet) a hot topic, but may become so in future years as increasingly over Europe, sustainability requirements for biomass are being formulated". North American demand for pellets is also poised to take off as renewable energy policy aligns with supply opportunities.

There also exist opportunities to capitalize on the "buy local" trend and green consumerism by developing niche markets and specialty branding for local timber and non-timber forest products. Perry (2006) states that:

Marketing campaigns for local and organic foods demonstrate a distinct market of consumers who will seek out and pay for products that sustain rural livelihoods and reduce environmental impacts. In addition, a large sector of current wood demand is in high-end construction, representing consumers who are easy to lure with a good "story" and have high levels of disposable income.

Aguilar (2007) concludes that high-end consumers will pay premiums of 10% to 25% for tropical wood where the purchase is demonstrated to protect the environment. It is not unreasonable to assume that similar premiums would also apply to locally produced and branded FSC products. The Massachusetts Woodland Co-op has demonstrated this, creating their own brand for locally grown FSC certified timber products, generating small business opportunities locally.

Although the trends are positive it is too early to predict with certainty whether markets for ecological services such as the trade in carbon credits will become a viable economic reason for smallholders to seek FSC certification. The EOMF FSC Program is exploring carbon market opportunities with Blue Source Canada.

Risks Associated with Group Certification

Associated with the many benefits outlined in the previous section of this analysis, there are risks involved with becoming a Group Entity. These risks should be considered by any organization analyzing its options.

- The external funding necessary to maintain a Group Entity for the long term might not be sustainable. Although there would be residual benefits for smallholders by having developed management plans and standard operation procedures, momentum and credibility for the certification program would be lost or compromised¹. Landowners involved in MTRI's in-depth survey expressed concern about becoming involved in and spending money on a new initiative that didn't last in the long term so failure in this regard could also impact MTRI's reputation in the community.
- Smallholders may become disillusioned with and critical of the standard if they enter the program with high expectations regarding market access and price premiums. Realistic economic expectations must be set at the beginning.

¹ Several Group Ventures program organizations supported under the 1977 Canada - Nova Scotia Forestry Agreement failed due to funding cuts.

- Group members may not be able to maintain a schedule of FSC prescribed treatments because of cost constraints and or a supply of reliable contractors. Not all owners are in the position to do their own forest work. The few quality contractors who are available to practice silviculture to FSC standards have difficulty finding ways to make it economical.
- Harvest operations among potential group members may be too low to warrant FSC certification. It is important to screen group members initially according to their interest in providing certified product for market. Not all group members may be harvest ready at the outset but the direction needs to be set that a reasonable level of commercial timber and /or non-timber forest product harvest is expected from the program.
- An effective group forest certification program *depends on the support of smallholders and must meet their needs*. If groups are not organized by smallholders or their representatives, their support for the program them may be overestimated.

Business Case

Anticipated Costs

The following direct costs are broad estimates. Costs will vary depending on whether the Group Entity or RMU is already established with the necessary facilities, staff, technical infrastructure and equipment in place or whether the organization is a start-up. The cost breakdown represents the expected sequence of activities in which they occur. These estimates do not include indirect costs to the smallholder as a result of additional inputs into harvesting effort such as tree marking, collection of group fees, or training. Management plans are usually paid by the smallholder but are included below for information since some Group Entities fund management plans as a service and incentive for smallholders to join the pool.

Group Entity Manager and Administrative Support

A Group Entity manager is required to oversee the program and monitor associated group member operations on behalf of the Group Entity. Federal rates of pay for entry level professional forestry staff is between \$29,177 and \$49,546 per annum (Treasury Board, 2009). Rates vary upwards based on experience and training. As the Group Entity is established the manager position may not be needed full-time. Group Entity administrative support is also required, though it is possible to combine the Group Entity manager and administrative support positions. Established Group Entities may already have an office manager or assistant that can assume FSC administrative duties. In the case of Type II, Resource Manager Group Entities, the group entity manager may have the added responsibilities of writing management plans for group members and managing and/or coordinating forest management activities.

Group Entities and associated RMU's will need to agree on how resource management roles and responsibilities will be distributed. Staff represents the highest cost for certification. For this reason, becoming a Group Entity may not be feasible for organizations that do not already have trained staff in place.

Internal Quality System

A comprehensive manual containing policies, procedures and work instructions along with templates and internal audit check lists is the core component of a quality system. This is primarily a one-time cost and will depend on the ability to obtain and repurpose existing procedures from other FSC group entities that are willing to share. Developing a policies & procedures manual is the first project that should be undertaken by the manager. Electronic documents can be managed with as little as a laptop computer with resident file management system. Where there is a need for greater collaboration and security, enterprise class document and records management systems start at approximately \$1000.00 per year and up. GIS software license costs are roughly the same. Costs increase according to the system selected and the need for training and support.

Management Plans

A FSC compliant and harvest ready management plan for a 100+ acre woodland could cost upwards to \$2,000 to produce. Picea Forestry in the Bridgewater area works with Nagaya Forest Restoration Limited and quotes management plan rates for a 100 acre woodland at \$750 to \$2000 (Amero 2009). There is potential that plans or portions thereof can be written by the smallholder, but harvest prescriptions require sign-off from a Registered Professional Forester (RPF) or Certified Forest Technician (CFT). Newsom, Bahn and Cashore (2006) concluded that 94% of operations in a study on operation-level corrective action requests during SmartWood certification audits were required to make improvements to management plans. Investing in a thorough plan should save significant time and expense in responding to corrective action requests.

Assessment and Audits

Assessment and audit costs depend on the certifying body, the complexity of the pool, and the acreage to be audited. Scott Davis, EOMF FSC Project Coordinator, stated that for a small Group Entity with 30 to 50 group members costs could range upwards from \$18,000 for the initial certification audit and \$7,500 for each annual certification audit. Available accredited certification bodies should be short listed and issued a Request for Quote for services and rates before a selection is made. Table 1 compares the estimated costs of external audits relative to group size for two hypothetical scenarios based on data from Smith (2002) as well as anticipated costs for an MTRI group certification certificate.

Table 1. Auditing costs relative to group size (Smith 2002). Group certification costs for two hypothetical groups as well as MTRI with different numbers of members, hectares and annual harvest volumes.

	Group X (Smith 2002) 30 members 15,000 hectares 12,000 m ³	Group Y (Smith 2002) 70 members 35,000 hectares 28,000 m ³	MTRI Anticipated 30 members < 2,500 hectares
Initial Audit Cost	\$15,000	\$15,000	\$18,000
per group member	\$500	\$214	\$600
per hectare	\$1.00	\$0.42	\$7.2
per cubic metre	\$1.25	\$0.54	-
Annual audit cost	\$5,000	\$5,000	\$7,500
per group member	\$166.67	\$71.43	\$250
per hectare	\$0.33	\$0.14	\$3
per cubic metre	\$0.42	\$0.18	-
5 Year Total Audit Costs	\$35,000	\$35,000	\$48,000
per group member	\$1,166.67	\$500	\$1600
per hectare	\$2.33	\$1.00	\$19.2
per cubic metre	\$2.92	\$1.25	-
Average Annual Audit Cost	\$7,000	\$7,000	\$9,600
per group member	\$233.33	\$100	\$320
per hectare	\$0.47	\$0.20	\$3.84
per cubic metre	\$0.58	\$0.25	-

Possible Sources of Funding

Group entity funding is potentially provided through several sources:

- **Mill fees (ad hoc/variable)** can seal a supply agreement and provide a small portion of the funds needed to manage a Group Entity. Fees can range from \$1.00 to \$2.00 per ton for pulp and biomass, though mill fees for saw logs can be substantially greater than this. The EOMF returns a portion of the mill fee collected back to the landowner,

landowner group or community forest group providing the wood. The fees paid by mills are typically an agreed upon cost for obtaining certified wood and do not necessarily reflect actual market premiums. At current rates, revenues derived from mill fees help cover annual certification costs but fall short of the funds required to become a self-sustaining group².

- **Group Member fees (fixed annual)** serve to filter active and engaged group members from those who are merely participating because the group is free. Considering that the financial benefits of certification to many smallholders are minimal, mandatory fees should be kept as low as possible. Depending on group members' ability and willingness to pay, a membership fee could range from \$50.00 to \$350.00 per group member annually. The EOMF implemented a sliding scale based on RMU types but through lessons learned recommends a simple flat fee of \$1.00 per acre for all group members.
- In the case of **Type II, Resource Manager Group Entities**, in which the group entity has taken all operational responsibilities including forest management and harvesting activities on behalf of the group members, additional revenue may be generated by writing management plans for group members, and through contracts for forest management activities. Small Type II Group Entities often operate as for-profit businesses. This is a viable possibility for groups and individuals in Nova Scotia, though operating for-profit may make it more difficult to secure public funding and private donations (see below), though alignment with a not-for-profit group that can solicit public funds to be entrusted to benefit of the group's members or to fund the addition of new members is a possibility.
- **Volunteers** provide the equivalent of a funding source through cost avoidance. With changing demographics towards an aging workforce, experienced staff can be sourced for monitoring RMU field operations and office support.
- **Individual and corporate donations** should not be discounted as a potentially significant source of funding. Where the organization has charitable status, such as MTRI, funding can be collected from a larger base of donors whose donations are conditional on receiving tax deductions.
- **Public funding** may be necessary to make up the difference between expenses and revenues. Publicly funding a FSC Group Entity should be interpreted as a social payment for ecological services (PES). The ecological goods and services provided through well managed forests provide a calculated benefit to society by supplying clean water and air, sequestering carbon and preserving biodiversity. There are costs associated with SFM practices that society should have a role in contributing towards. In Nova Scotia, public funds allocated to forest management planning, forest certification administration and

² Assume 50 group members each having 100 acres of productive woodland. The sustainable harvest is estimated at one acre per year for each lot yielding approximately 80 tons annually. With a \$2.00 per ton fee this amounts to \$8,000 annually. Intensity of rotation depends on site specific conditions and will increase or decrease the total allowable cut and potential revenues there from.

monitoring programs and for specialized restoration treatments could be distributed to qualifying smallholders and Group Entities through the current silviculture program managed by the Association for Sustainable Forestry or some other group.

In accepting public funds, Group Entities must demonstrate good governance by making a concerted effort to achieve self-reliance through:

- Negotiating buyer fees that match current market premiums
- Diversifying markets to obtain higher premiums for certified products and ecological services
- Developing higher value products per unit of biomass extracted
- Soliciting private donations of time and money

Within the EOMF, a financing target for the group is set to source income as one third from woodland owners, one third from industry/consumers, and one third from public funds/private donation. This gives a fair distribution of the cost of certification, and would seem a reasonable goal for MTRI.

Modeling Anticipated Costs and Potential Sources of Funding

Based on the anticipated costs and potential sources of funding summarized above, as well as the anticipated goal of securing equal funding representation from woodland owners, industry, and society, a model of the annual anticipated costs and potential sources of funding associated with a group certification program administered by MTRI was created. This model, based on a number of assumptions outlined below, includes generous estimates of the annual costs of the program projected for group sizes ranging from ten to one hundred members.

Model Assumptions

- Included in the costs model is salary for one part-time coordinator to manage the certificate for the group members. MTRI is assuming that once the group is established that this part-time coordinator will be able to administer the program, with support from MTRI staff and programs. Once the group reaches 50 members this salary was increased to reflect a full-time coordinator's salary, or two part-time staff working on the project. These salaries do not include the costs of monitoring by a forest technician.
- Through consultations with other groups working with certification and through discussions with SmartWood staff we have estimated the cost of the initial and subsequent annual forest certification audits. In the model we have made the assumption that these costs are not likely to vary by much in relation to the number of landowners included under the group certificate.
- The costs of monitoring associated with the program have been included separately from the salaries for staff to organize and manage the certificate program. At present, MTRI likely does not have anyone on staff qualified to conduct monitoring and assessments of forest management activities and anticipates contracting someone externally for this work. The costs of travel to and from FMU have also been included in the model.

- A \$5000 to \$8000 budget, depending on the group size, has been incorporated into the model to reflect annual training needs once the group has been established. It is assumed that this will be sufficient to satisfy the training needs of group members and staff.
- Twenty percent administrative costs have also been allocated in the budget for such activities as bookkeeping, insurance, office space, staff supervision, and office and forestry equipment. MTRI's policy requires that all projects contribute 20% towards administration of the organization and its field station.

Model Summary

The total annual costs of the program increased incrementally from \$43,080 for ten members to \$108,720 for one hundred members. This translated into significant reductions in the cost of the program per member as the number of members increased (Figure 4). The cost of the program per member with only ten members is expected to be around \$4308 (see Figure 4a). Considering that the goal of the program is to have one third of the costs of the program paid by the members, one third of this amount is \$1436 (see Figure 4b). It is unreasonable to expect that many landowners in southwestern Nova Scotia will consider such a high annual fee. With one hundred members however one third of the cost of the program per member is equal to approximately \$360 a year (see Figure 4c). This seems like a reasonable goal to set for the program and is in the range of fees paid by members of the Acadian Forest Families, though they have only xx members paying such fees. Annual fees of \$250 and \$450 are also explored (Figure 5).

Given that an annual fee of \$360 per member will not cover the cost of one third of the program until the program reaches one hundred members in size (see Figure 5d), revenue must be generated elsewhere to account for this. With ten group members, the need for external funding is only \$14,360 (see Figure 5e), whereas with one hundred members it is \$36,240 (see Figure 5d). By setting a goal of raising \$35,000 annually while there are fewer than fifty members and increasing this to \$40,000 annually with greater than 50 members these funds can be used to offset the deficit in member fees until the program is established with one hundred members (see Figure 5f).

The model is based on the assumption that the program can successfully fund one third of the costs of the program through industry premiums for wood. This may be unlikely and therefore it may be necessary to raise additional funds either through securing additional public funds or individual and corporate donations.

Figure 4. Estimated annual costs per group member of the total cost of an MTRI FM certification program from ten to one hundred members, as well as one third of the costs of the program. The jump in cost at 50 members reflects an increase in salaries as the need for additional staff is expected to increase as the number of group members increases.

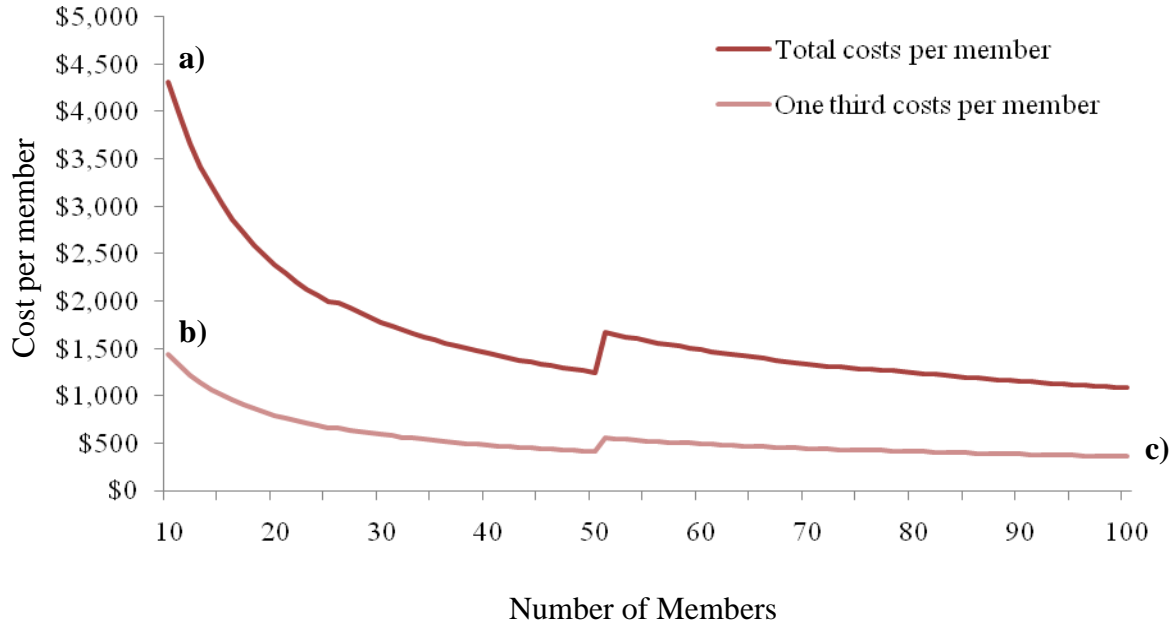
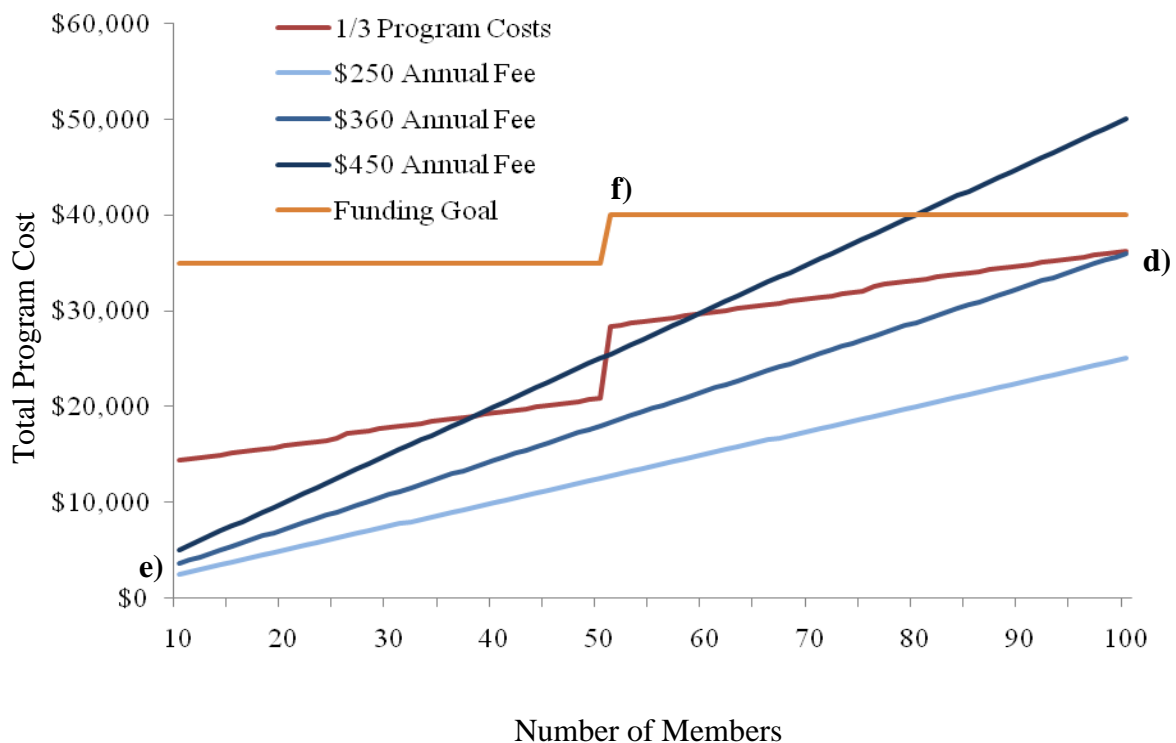


Figure 5. One third of estimated funding needs (red line) based on the goal of achieving one third funding from the landowners, one third funding from industry, and one third funding from society through government subsidies. Three annual fee amounts are presented (blue lines), as well as the external funding goal of the program (orange line).



Organizational Readiness

Where the intention is to form a Group Entity, gaps in the *FSC standard for group entities in resource management groups* should be thoroughly assessed before application is made to an accredited certifier to reduce the likelihood of an expensive pre-certification audit with a long list of non-compliance items. Groups who are interested in developing an FSC RMU that will be covered under an existing Group Entity will need to assess many of the same readiness factors and requirements as those seeking full Group Entity status since a Group Entity/RMU Type I or II relationship will need be determined and an MoU developed.

Although it is likely that MTRI currently falls short of meeting the *FSC standard for group entities in forest management groups* (FSC-STD-30-005), there are no indicators to suggest that MTRI could not comply if it decided to become a Group Entity (Appendix C). MTRI has the necessary organizational infrastructure and staff that if trained and deployed could meet the stated quality system and monitoring requirements. The EOMF Group Entity started out in a position similar to MTRI. It now has 10 years experience successfully managing a large and diverse network of semi-autonomous RMU's with one full-time staff member allocated to the FSC program at approximately 70%.

MTRI Gap Analysis (SWOT)

In addition to the gap analysis with regards to the specific requirements of the *FSC standard for group entities in forest management groups* (FSC-STD-30-005) provided in Appendix C, the following gap analysis relates to MTRI's current capacity to meet the general requirements of establishing an FSC certified Group Entity within the organization. The strengths (S), weaknesses (W), opportunities (O), and threats (T) outlined below were compiled for four categories to frame priority areas for business planning and systems implementation.

Human Resources

Present Operations
<p>Strengths</p> <ul style="list-style-type: none"> • Established staff experience in project management, budget control and administration for a variety of environmental programs (MTRI Annual Reports, 2005-9). • Existing expertise available on species at risk, landscape connectivity, aquatic and forest health, and old growth forests. • Collaborative relationships with groups who have an interest or involvement in certification in Nova Scotia (e.g. FNSWO, NSWOOA, EAC, NSLFFPA, NFA, NSDNR), as well as a group in Ontario (EOMF) with over ten years of experience working with certification of smallholders. • Funded part-time staff for the project for the duration of the initial 2 year project. • MTRI has identified forestry professionals within local communities offering management plan writing skills and consultancy services willing to participate in necessary training and assist with the project. <p>Weaknesses</p>

- Unlike other groups working with certification in Nova Scotia, MTRI does not have a permanent forest technician or a Registered Professional Forester on staff with the project.
- No prior experience of managing a forest certification group.

Future Operations

Opportunities

- Certification provides the opportunity to link many other research projects that MTRI is currently engaged in, such as aquatic health, old growth forest, landscape connectivity and species at risk. MTRI has the capacity to apply research that could lead to a greater understanding of the wider environmental and social benefits of forest certification for the Acadian forest.
- There are local forestry professionals committed to sustainable forest management and keen to be involved with the project.
- MTRI has a track record of stewardship promotion and environmental education at all levels. There is the capacity through staff and local community links to broaden peoples' awareness of sustainable forest management and forest certification by means of organized talks, seminars, workshops and training courses.

Threats

- Lacking of secured funding to manage the project after the initial two year period (it is unlikely that the project will be self-sustaining in the short term).
- Continuity is needed to develop trust with landowners over time – this could be difficult if staffing is inconsistent – retention of professional staff is a challenge in the rural area where MTRI is located.

Financial Resources

Present Operations

Strengths

- As a not-for-profit organization, MTRI has a successful portfolio of fund-raising and budget control for a wide variety of environmental projects.
- MTRI has received \$150,000 for a two year period to cover the four project components: feasibility analysis, production of FSC certification guide, community outreach, education and training relevant to the project and the implementation of FSC certification for a group of smallholders.
- An additional \$20,000 has recently been confirmed from the Nova Forest Alliance towards the project, with particular emphasis on securing longevity and building capacity within the community.

Weaknesses

- Long term funding for the project is not secured. Initial audits would rely on external funding as the initial group size is likely to be too small to be financially self-sustaining.
- There has been little indication from local mills that do not already pay a premium for certified wood that they would be willing to do so at this time.
- The uncertainty of present and future market trends in certified forest products may cause reluctance amongst smallholders to commit to becoming certified. Without the

commitment of these landowners, it may be hard to reach the critical mass of group members required to acquire enough funds to cover certification costs.

- At present, there is reluctance amongst some smallholders to cut wood as prices are too low to make it worthwhile. Generating volumes of certified wood is one way of generating income for funding the group and reducing membership fees, so this may be another deterrent to becoming certified.

Future Operations

Opportunities

- Some mills in Nova Scotia have a demand for FSC certified wood and there are no signs at present that this will decline. Global trends project an increase in demand as the public becomes more environmentally aware (FSC Canada n.d.).
- The availability of premiums from some mills within the province may create competition that will encourage all mills to pay a premium.
- Marketing opportunities can be explored focusing on value-added products which may offer a higher premium.
- As awareness in certification increases and more smallholders seek certification, there is an opportunity to co-ordinate audits for the same time of the year and share the cost of bringing auditors from other provinces. It may also mean that more auditors become qualified, making audit prices more competitive.
- There is also the possibility of aligning certification programs in the province under one FSC certified umbrella organization to promote cost sharing between organizations to reduce the costs of certification for each group.

Threats

- An increase in the supply of FSC certified product may meet and exceed demand, causing a drop in prices and make harvesting unprofitable.
- Markets in certified products will evolve over time; certification itself is a competitive market, demand for other systems may decrease the need for FSC certified products.

Information Resources

Present Operations

Strengths

- Since its formation, MTRI has benefited from research input from several universities, accumulating a wealth of data over a wide spectrum of projects, many of them involving the forest environment. As a part of its collaborative ethic, MTRI partners with several other organizations, drawing on expertise in many fields.
- One of the main project outputs will be an FSC certification standards management guide. MTRI has recently produced guides relevant to forest certification, including guides to *Species at Risk in Nova Scotia*, and *Healthy Lakes and Wetlands for Tomorrow*.
- From the onset of the forest certification project, MTRI has invited input from forest related organizations, industry, forestry professionals and woodland owners within the province. Representatives of these sectors have been consulted on a monthly basis through the FSC Certification Working Group, ensuring that a wide range of views are taken into consideration and consensus is reached wherever possible.

- As a part of the group profile analysis, consultation took place with several other group certificate holders as a means of gaining more knowledge of the process and avoiding pitfalls. Some of these organizations (most notably the Eastern Ontario Model Forest) have been keen to share experiences and literature, and have even granted staff observer status for an annual audit, all giving invaluable insight into the day to day reality of coordinating an FSC forest certification group.

Weaknesses

- Much of the information available about certification groups is specific to that group's geography/philosophy/local marketing opportunities, and will not necessarily fit with MTRI's situation.
- There is very little solid information available about future markets, making the formation of a business plan precarious and attracting landowners more challenging.

Future Operations

Opportunities

- There is still scope to learn from other organizations willing to share knowledge experiences within and beyond Nova Scotia.
- Training is still needed in the auditing process, FSC management plan writing and Forest Ecosystem Classification, but all are planned for spring/early summer.
- Landowners themselves have a wealth of knowledge and experience, but often prefer to work independently. Forming a group can create opportunities to have information sharing workshops and events.

Threats

- Staff changes can cause a loss of accumulated experience & knowledge.

Facility and Material Resources

Present Operations

Strengths

- MTRI has office premises at Kempt, North Queens, and is familiar to most local landowners.
- The field station offers computers, software, and secure document storage essential to the organization of a certification group. Its facilities are suitable for hosting meetings, talks and training sessions.

Weaknesses

- At times the field station operates at capacity, particularly in the summer when there are several summer researchers sharing the facility.

Future Operations

Opportunities

- MTRI is currently running a campaign to raise funds for an expansion of the field station.

Markets

Present Operations

Strengths

- Some local mills have a demand for FSC certified wood, and there are no indications at present that this will decline. Indeed, trends project an increase in demand as the public becomes more environmentally aware.
- At least one mill in Nova Scotia pays a premium for unprocessed wood (Newpage Port Hawksbury). Some mills (e.g. Windhorse Farm) pay a premium (up to 20%) for processed timber.

Weaknesses

- There are no guarantees of any market for certified wood in the area at present. Both industry and woodland owners are at the mercy of public demand.
- Lack of premiums as incentives and uncertain markets may make investing in certification hard for landowners

Future Operations**Opportunities**

- Working collectively as a cooperative may allow small woodland owners to respond more readily to short-term demands from mills.
- Local businesses could be developed to make use of certified timber (e.g. Massachussets Woodlands Co-op, local branding *Homegrown Wood*).
- If there is sufficient interest, a group CoC certificate could be considered to support small scale and artisan processing.

Threats

- Large mills will almost certainly use wood from their own FSC certified forests first, if demand falls.

Competition**Present Operations****Strengths**

- There are no other FSC group entities operating in southwest Nova Scotia at present.
- MTRI has a clearly defined mission. This could reduce overlap, should other certification groups develop within the biosphere (i.e. the philosophy may focus on research and conservation interest).
- Initial consultation with landowners has indicated that they would rather be affiliated with a local organization than one based in another part of the province.

Weaknesses

- Two other groups operate within Nova Scotia, generating volumes of FSC certified timber. One is very selective of its membership and the other does not charge for management plans or certification, which may attract potential members of a local pool who are less willing to meet the cost of certification in the short term.

Future Operations**Opportunities**

- There are no other FSC group entities operating in southwestern Nova Scotia at present.
- MTRI has a clearly defined mission. This could reduce overlap, should other groups

develop within the biosphere (i.e. the philosophy may be governed more by environmental conservation values than socio-economic values).

Threats

- There is a groundswell of interest in certification in Nova Scotia due to current market trends. If multiple groups get certified, potential recruits may go elsewhere for certification.

Socio Cultural Environment

Present Operations
<p>Strengths</p> <ul style="list-style-type: none"> • A long history of small woodlands owned privately by farmers and individuals. • There are already a number of environmentally conscious smallholders managing woodlands for harvest on a relatively small scale. • Many of the smallholders have many years experience in woodland management and negotiating with mills. • The existence of small family-run mills, some of whom already have FSC CoC certificates. • The presence of larger pulp mills, some with or seeking FSC CoC certificates. <p>Weaknesses</p> <ul style="list-style-type: none"> • Lack of financial incentives (due to low or no premiums and extra costs involved) to become certified. • Lack of certainty about the long term viability of the project. • Lack of trust amongst landowners towards large mills, and a strong feeling that they should not have to bear the cost of certification without some guarantee of a premium. • Some woodland owners may be interested in certification, but lack the necessary experience, equipment and confidence to manage woodlands themselves.
Future Operations
<p>Opportunities</p> <ul style="list-style-type: none"> • Sharing knowledge, experience and participating in training to ensure sustainable management practices. • The potential creation of more local forest related work. • An increased local certified wood volume could help to sustain local mills, and thus secure more local employment. <p>Threats</p> <ul style="list-style-type: none"> • Woodland owners fear of losing control in managing their land. • Western region woodland owners are independent and do not have a solid history of banding together for mutual support. • Woodland owners have concerns about what will happen when support funding dries up if the group is not self-sustaining.

Summary & Recommendations

Summary

Forest certification systems are voluntary and market driven. Although price premiums in commodity markets are difficult to achieve, certification is becoming a condition for market access and is increasingly being considered a cost of doing business. Demand for certified wood products has been largely met through extensive tracts of certified industrial and public forest lands and initially small, private lands were not well addressed by the certifying bodies. This has changed with FSC's standards for SLIMF's and the CSA's Z804-08.

Certification provides smallholders with an opportunity to gain recognition for their personal commitment to sustainable forestry. Appreciating that certified best management practices differentiate responsible owners from those who may be less conscientious is acknowledged as an important motivator among smallholders. MTRI recognizes the ecological benefits of forest restoration and silvicultural techniques that favour long-lived, shade tolerant and important Acadian Forest species. The development of a pool of FSC certified smallholders in the region is perceived by the organization as one means to move towards forest management that promotes the restoration of the species composition and structural characteristics of a natural Acadian forest. At the same time, MTRI recognizes the potential economic and social benefits of forest certification to local communities, including employment, training opportunities, and income.

Ensuring better access to markets is another key motivator for smallholders to become involved with certification. By establishing a reliable supply of FSC certified wood in southwest Nova Scotia, smallholders will not only have improved access to markets, but they may also be able to increase demand for certified wood and products in the region, benefitting smallholders and possibly allowing some individuals that been operating below their potential to increase their annual cut and thus their income from the sale of timber off their land. Improved market access may also provide sufficient incentive for additional smallholders in the region who have been reluctant to get involved in harvesting activities due to a lack of confidence in the market to begin harvesting, thus increasing the overall supply of certified wood and products from the region.

Another key motivator for smallholders is trust. Many smallholders who would otherwise engage in harvesting activities decline out of concern that their land will be irreparably damaged or that they will be cheated by unscrupulous contractors. Being part of a certification pool that can oversee contracts and operations provides reassurance to smallholders that their individual needs and objectives will be met, and that their forests will be sustainably managed. It is paramount that MTRI work collaboratively with landowners to build trust within a certification program and confidence within smallholders to cut wood and market their products. In order to proceed with the recommended strategies outlined below, MTRI must be prepared to make a long term commitment to the project.

Alternative Program Options

1. Limit involvement to FSC promotion.

MTRI is currently promoting forest certification for smallholders and is collaborating with agencies and associations to raise awareness and increase training. Considering that MTRI is not a forestry organization and is not mandated to represent smallholders, MTRI could continue to assist other forestry organizations in becoming Group Entities without taking on the entity role itself. MTRI would continue to provide ancillary services to CSA and FSC certified groups by providing services such as species at risk monitoring, educational material, high conservation value forest surveys, etc.

2. Pursue Group Entity status.

MTRI's organization and infrastructure provides the essential building blocks for achieving FSC Group Entity status. Considering that a key objective is to provide information and support to other organizations in becoming FSC Group Entities, the most effective and credible means to this end is to go through the process of becoming a Group Entity and documenting lessons learned along the way. With the possibility of multiple Group Entities operating in the province, effort will be required to maintain consistent delivery, economies of scale, and strong marketing positions on behalf of smallholders. Sharing knowledge, best practices, training and coordinating audits could continue through the Small Woodland Certification Working Group that is currently facilitated by MTRI.

3. Align certification programs.

Rather than create another independent FSC system, MTRI might consider partnering with other organizations to develop one FSC system. For example there is an opportunity for groups working with FSC forest management certification such as Nagaya and/or NSLFFPA to align. If this is done each organization could contribute a portion of its present certification funding to develop a common FSC certification system that would service Resource Management Units across the province opting to register under an umbrella program.

Recommendation

It is recommended that MTRI proceed with becoming an FSC Group Entity (Alternative 2) while preparing for the future possibility of aligning other FSC groups and supporting the formation of a Nova Scotia wide FSC group certification umbrella organization, similar to the Eastern Ontario Model Forest (Alternative 3). The MTRI FSC Group Entity should remain a separate cost centre within MTRI. Roles and responsibilities should be defined within MoUs whereby:

- The MTRI Group Entity certificate holder is responsible for maintaining communications with the accredited certifying body and conducting monitoring of group members enrolled under the certificate; and

- Individual landowners are responsible for implementing the requirements of the FSC Maritime Standards in their forestry operations
- Multiple Resource Management Units (RMUs), should they develop as the group grows, would become responsible for representing small groups of smallholders and managing forestry operations.

MTRI Best Fit Management Type

MTRI is a registered charitable cooperative with a mandate to advance collaborative research, monitoring, and management that promotes sustainable use of natural resources and biodiversity conservation in the Southwest Nova Biosphere Reserve (SNBR). The overall goal of MTRI's forest certification project is to provide services to improve forest management practices on small private woodlands through forest certification. MTRI's unique position within the SNBR and the goal of the forest certification project make it similar to the Eastern Ontario Model Forest and its FSC private woodland certification program in Eastern Ontario. Taking a landscape level perspective on forestry operations within the SNBR, MTRI is well positioned to accommodate group members and community FMUs under a regional certification program.

Management Type Options

Small Type I Group Entity

Presently in Nova Scotia, groups working with FSC certification are operating as Type I Group Entities, though even within this category, there is diversity in their approaches. Nagaya, for example, is a small group (approximately 25 members after seven years) has taken a very selective approach to group membership that is built on a strong sustainable management ethic and trust. Members are distributed throughout the three Maritime provinces, but require minimal monitoring to ensure compliance with the standards. Whereas the NSLFFPA is experiencing fast growth and is quickly expanding into a Large Type I Group Entity.

Small Type II Resource Manager

In a Small Type II Resource Manager Group Entity the group entity has essentially taken all operational responsibilities on behalf of the group members including forest management and harvesting activities. This is a viable possibility for groups and individuals in Nova Scotia, though these groups tend to operate as for-profit businesses. In southwest Nova Scotia however, and likely throughout much of Nova Scotia, most landowners do not want to lose control of the management of their land and many actually do the forest management activities on their own. In the landowner survey that MTRI conducted this spring, *losing control of their land* was identified as one of the strongest deterrents to becoming certified by the ten landowners that were surveyed. None the less, there may be an opportunity within the province for a group (s) that is willing to work over a large geographical area in order to pool together sufficient membership of the type of landowners required for this type of group..

Recommendation

It is recommended that MTRI would most appropriately fill the role of a Small Type 1 Group Entity, organizing and maintaining certification on behalf of the members. In this respect it would be similar to the other groups in the Maritimes and the Massachusetts Woodlands Co-operative described above. It is felt that a Type II Resource Manager Group Entity model is not likely to be well taken up in southwest Nova Scotia given that most landowners want to remain in control of the management of their land, with many doing work on their land themselves.

It is recommended that MTRI aim to start the program as a small group entity with less than 50 members to build strength and experience within the program before taking on a larger membership. MTRI might also consider having at least 20 members before initiating the pre-assessment audit in order to have sufficient numbers to warrant the cost of the initial audit. The roles and responsibilities between MTRI as a Group Entity and associated FMUs and RMUs should be defined through Memoranda of Understanding (MoU).

Initial discussions with a sample of local landowners indicate that there are a diversity of smallholders with varying forest management philosophies and interests in the region. The formation of a Group Entity that accommodates this diversity is recommended. An important quality of such a structure would be the opportunity for promoting information sharing opportunities between members and widespread community promotion. Differing philosophies or regional groupings could also be accommodated at the level of RMUs.

Since writing the final draft of this document, it looks likely that there is an opportunity for MTRI to align programs with the FNSWO who will be certifying woodland owners to FSC, as well as CSA, standards.

Conclusions

Based on a comparison of international and national FSC Group Entities, and taking into consideration MTRI's strong project management background, demonstrated ability to secure funding, and the organization's administrative, leadership and expertise capabilities, MTRI provides a strong organizational backdrop to the development of an FSC certified group entity, serving woodland owners within the Southwest Nova Biosphere Reserve. Considering that much of the infrastructure is already in place at MTRI, costs for setting up and operating a FSC program are limited to a part-time group manager, monitoring costs, and payment of audit fees to an FSC accredited certifying body. The FSC group manager would be required to lead the development of a quality system, solicit the participation of an initial pilot group of smallholders, and coordinate monitoring and assessment activities with the accredited certifying body, working with the FNSWO certification program manager. MTRI would act as a RMU under the certificate held by the FNSWO. The opportunity for MTRI to merge or leverage resources with other emerging FSC Group Entities to share auditing costs should be considered at all times.

Next Steps

In October 2010, MTRI's Board of Directors approved a proposal to collaborate with the FNSWO on its FSC certification program. The existing CSA Policies and Procedures manual, Standard Operating Procedures, management plan templates and MoU's need to be converted to

documents which will meet FSC standards, and fees for group membership still need to be finalized at the time of writing.

Prior to applying to an accredited FSC auditor for a pre-assessment MTRI should meet or be close to meeting all FSC-STD-30-005 requirements and have an implementation plan for meeting FSC Group Entity requirements. At the time of writing, MTRI are developing a Guide to FSC Group Certification for Small and Low Intensity Managed Forests in Nova Scotia, which should be available to landowners interested in FSC certification early in 2011.

A pilot Resource Management Unit of approximately 20 to 30 active smallholders who are interested in having their FMU's certified will need to be identified and established. The RMU will require a business plan to address group membership growth, market development and income generation. When soliciting group member participation it is important to present a contingency plan to maintain, wind down or transfer program operations if public funding is cut and the Group Entity cannot be sustained. This could be as simple as stating the funding and survivability risk to RMU group members under the terms and conditions of group membership prior to obtaining informed consent.

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Appendix A - FSC Landowner Questionnaire Summary

A number of local landowners who had previously expressed an interest in forest certification and had experience of harvesting wood were targeted for the survey. All were given some background information about the project and forest certification. Seventeen surveys were returned in time to be included in this summary.

Landowners and their woodlands

Participants were asked to rank which of the following values of their forests in order of greatest importance to them. Overall ranking was as follows:

- Family legacy 1
- Source of income 2
- Source of firewood 3
- Wildlife refuge 3
- Recreation/relaxation 5

Twelve of the seventeen ranked a family legacy of the greatest importance, with source of income ranked first or second most important by seven landowners. Ten landowners indicated that they were or had been members of other landowner groups, including the Nova Scotia Woodland Owner and Operators Association, the Federation of Nova Scotia Woodland Owners, and the Nova Scotia Landowners and Forest Fibre Producers Association.

Woodland management

Thirteen of the seventeen (76%) landowners said that they currently carry out all of the management in their woodlands. Ten had used contractors for some management in the past. Eleven of them had sought help with planning forest operations, but only five had sought help with accessing financial programs and harvesting operations, and just under half had previously sought help with marketing their wood.

Almost half of the landowners already had management plans for their woodlands, and over half of those said they used them as prescribed. Those who did not said it was due to alterations needed to the plan to react to unpredicted insect or weather damage, lack of time or changing market conditions. Of the ten people who said they had used contractors, five indicated that they were disappointed or very disappointed with the results, due to lack of understanding of requirements, poor work and in one case, oil spillage.

Forest Certification

When landowners were asked to rank the following **benefits** of certification, the following overall ranking resulted:

- Personal assurance that forests are being managed sustainably for all values for the future 1
- Framework for sustainable management 2
- Availability of advice and technical assistance 3
- Broader market accessibility and potential for increased income 4
- Benefits to wildlife 5

- Small woodland owners can become unified, giving them more marketing power 6
- Public recognition that management is to approved standards 7

Half of the landowners ranked personal assurance of sustainable management as being the most important benefit. When landowners were asked to rank the following **deterrents** to becoming certified, the following overall ranking resulted:

- Cost of management plans/certification 1
- Potential loss of control over management 2
- More paperwork 3
- Lack of knowledge about certification 4
- Lack of confidence in the market 5
- The need for a management plan 6

Ten out of the seventeen respondents ranked cost as the greatest deterrent for them.

The Cost of Certification

Landowners were given two options for covering the costs of certification:

- Whether they would rather pay a higher membership fee to start with so that the group is self-sustaining in the long run and costs come down as more members join?
- or-
- Whether they would rather pay lower fees and rely more heavily on grants and subsidies initially, but risk the group being less sustainable should the subsidies stop, and see membership fees rise or the program end?

Half of the landowners indicated that they would rather pay a higher membership fee to begin with, the majority opting to pay less to begin with and rely more heavily on grants and subsidies. When landowners were asked to rank what they perceived as the fairest way to charge fees for a certification group from the following options, the following overall rankings were given:

- Percentage of timber sold 1
- Charge per acre 2
- Combination of all options 3
- A flat annual fee (the same for everyone) 4

Landowners were asked what they would be willing to pay for a woodland management plan if the initial cost of certification was covered by subsidies. Answers varied widely with suggestions ranging from \$0-300, to \$500-2000. Two people suggested the price should be linked to the value of allowable harvest, while one suggested a price of \$5 per acre.

Appendix B – Annual Costs and Revenue for Forest Certification Model

Table B1. Estimated annual costs of an MTRI FM certification program from ten to one hundred members. See *Modeling Anticipated Costs and Potential Sources of Funding*, page 33 for model assumptions.

Number of Members	Salary Costs	Audit Costs	Monitoring Costs	Travel Costs	Training Costs	Sub-total	Administrative Costs	Total Costs	Total Cost per Member	1/3 Total Costs	1/3 Total Costs per Member
10	\$17,500	\$9,600	\$3,000	\$800	\$5,000	\$35,900	\$7,180	\$43,080	\$4,308.00	\$14,360	\$1,436.00
11	\$17,500	\$9,600	\$3,300	\$880	\$5,000	\$36,280	\$7,256	\$43,536	\$3,957.82	\$14,512	\$1,319.27
12	\$17,500	\$9,600	\$3,600	\$960	\$5,000	\$36,660	\$7,332	\$43,992	\$3,666.00	\$14,664	\$1,222.00
13	\$17,500	\$9,600	\$3,900	\$1,040	\$5,000	\$37,040	\$7,408	\$44,448	\$3,419.08	\$14,816	\$1,139.69
14	\$17,500	\$9,600	\$4,200	\$1,120	\$5,000	\$37,420	\$7,484	\$44,904	\$3,207.43	\$14,968	\$1,069.14
15	\$17,500	\$9,600	\$4,500	\$1,200	\$5,000	\$37,800	\$7,560	\$45,360	\$3,024.00	\$15,120	\$1,008.00
16	\$17,500	\$9,600	\$4,800	\$1,280	\$5,000	\$38,180	\$7,636	\$45,816	\$2,863.50	\$15,272	\$954.50
17	\$17,500	\$9,600	\$5,100	\$1,360	\$5,000	\$38,560	\$7,712	\$46,272	\$2,721.88	\$15,424	\$907.29
18	\$17,500	\$9,600	\$5,400	\$1,440	\$5,000	\$38,940	\$7,788	\$46,728	\$2,596.00	\$15,576	\$865.33
19	\$17,500	\$9,600	\$5,700	\$1,520	\$5,000	\$39,320	\$7,864	\$47,184	\$2,483.37	\$15,728	\$827.79
20	\$17,500	\$9,600	\$6,000	\$1,600	\$5,000	\$39,700	\$7,940	\$47,640	\$2,382.00	\$15,880	\$794.00
21	\$17,500	\$9,600	\$6,300	\$1,680	\$5,000	\$40,080	\$8,016	\$48,096	\$2,290.29	\$16,032	\$763.43
22	\$17,500	\$9,600	\$6,600	\$1,760	\$5,000	\$40,460	\$8,092	\$48,552	\$2,206.91	\$16,184	\$735.64
23	\$17,500	\$9,600	\$6,900	\$1,840	\$5,000	\$40,840	\$8,168	\$49,008	\$2,130.78	\$16,336	\$710.26
24	\$17,500	\$9,600	\$7,200	\$1,920	\$5,000	\$41,220	\$8,244	\$49,464	\$2,061.00	\$16,488	\$687.00
25	\$17,500	\$9,600	\$7,500	\$2,000	\$5,000	\$41,600	\$8,320	\$49,920	\$1,996.80	\$16,640	\$665.60
26	\$17,500	\$9,600	\$7,800	\$2,080	\$6,000	\$42,980	\$8,596	\$51,576	\$1,983.69	\$17,192	\$661.23
27	\$17,500	\$9,600	\$8,100	\$2,160	\$6,000	\$43,360	\$8,672	\$52,032	\$1,927.11	\$17,344	\$642.37
28	\$17,500	\$9,600	\$8,400	\$2,240	\$6,000	\$43,740	\$8,748	\$52,488	\$1,874.57	\$17,496	\$624.86
29	\$17,500	\$9,600	\$8,700	\$2,320	\$6,000	\$44,120	\$8,824	\$52,944	\$1,825.66	\$17,648	\$608.55
30	\$17,500	\$9,600	\$9,000	\$2,400	\$6,000	\$44,500	\$8,900	\$53,400	\$1,780.00	\$17,800	\$593.33
31	\$17,500	\$9,600	\$9,300	\$2,480	\$6,000	\$44,880	\$8,976	\$53,856	\$1,737.29	\$17,952	\$579.10
32	\$17,500	\$9,600	\$9,600	\$2,560	\$6,000	\$45,260	\$9,052	\$54,312	\$1,697.25	\$18,104	\$565.75
33	\$17,500	\$9,600	\$9,900	\$2,640	\$6,000	\$45,640	\$9,128	\$54,768	\$1,659.64	\$18,256	\$553.21

34	\$17,500	\$9,600	\$10,200	\$2,720	\$6,000	\$46,020	\$9,204	\$55,224	\$1,624.24	\$18,408	\$541.41
35	\$17,500	\$9,600	\$10,500	\$2,800	\$6,000	\$46,400	\$9,280	\$55,680	\$1,590.86	\$18,560	\$530.29
36	\$17,500	\$9,600	\$10,800	\$2,880	\$6,000	\$46,780	\$9,356	\$56,136	\$1,559.33	\$18,712	\$519.78
37	\$17,500	\$9,600	\$11,100	\$2,960	\$6,000	\$47,160	\$9,432	\$56,592	\$1,529.51	\$18,864	\$509.84
38	\$17,500	\$9,600	\$11,400	\$3,040	\$6,000	\$47,540	\$9,508	\$57,048	\$1,501.26	\$19,016	\$500.42
39	\$17,500	\$9,600	\$11,700	\$3,120	\$6,000	\$47,920	\$9,584	\$57,504	\$1,474.46	\$19,168	\$491.49
40	\$17,500	\$9,600	\$12,000	\$3,200	\$6,000	\$48,300	\$9,660	\$57,960	\$1,449.00	\$19,320	\$483.00
41	\$17,500	\$9,600	\$12,300	\$3,280	\$6,000	\$48,680	\$9,736	\$58,416	\$1,424.78	\$19,472	\$474.93
42	\$17,500	\$9,600	\$12,600	\$3,360	\$6,000	\$49,060	\$9,812	\$58,872	\$1,401.71	\$19,624	\$467.24
43	\$17,500	\$9,600	\$12,900	\$3,440	\$6,000	\$49,440	\$9,888	\$59,328	\$1,379.72	\$19,776	\$459.91
44	\$17,500	\$9,600	\$13,200	\$3,520	\$6,000	\$49,820	\$9,964	\$59,784	\$1,358.73	\$19,928	\$452.91
45	\$17,500	\$9,600	\$13,500	\$3,600	\$6,000	\$50,200	\$10,040	\$60,240	\$1,338.67	\$20,080	\$446.22
46	\$17,500	\$9,600	\$13,800	\$3,680	\$6,000	\$50,580	\$10,116	\$60,696	\$1,319.48	\$20,232	\$439.83
47	\$17,500	\$9,600	\$14,100	\$3,760	\$6,000	\$50,960	\$10,192	\$61,152	\$1,301.11	\$20,384	\$433.70
48	\$17,500	\$9,600	\$14,400	\$3,840	\$6,000	\$51,340	\$10,268	\$61,608	\$1,283.50	\$20,536	\$427.83
49	\$17,500	\$9,600	\$14,700	\$3,920	\$6,000	\$51,720	\$10,344	\$62,064	\$1,266.61	\$20,688	\$422.20
50	\$17,500	\$9,600	\$15,000	\$4,000	\$6,000	\$52,100	\$10,420	\$62,520	\$1,250.40	\$20,840	\$416.80
51	\$35,000	\$9,600	\$15,300	\$4,080	\$7,000	\$70,980	\$14,196	\$85,176	\$1,670.12	\$28,392	\$556.71
52	\$35,000	\$9,600	\$15,600	\$4,160	\$7,000	\$71,360	\$14,272	\$85,632	\$1,646.77	\$28,544	\$548.92
53	\$35,000	\$9,600	\$15,900	\$4,240	\$7,000	\$71,740	\$14,348	\$86,088	\$1,624.30	\$28,696	\$541.43
54	\$35,000	\$9,600	\$16,200	\$4,320	\$7,000	\$72,120	\$14,424	\$86,544	\$1,602.67	\$28,848	\$534.22
55	\$35,000	\$9,600	\$16,500	\$4,400	\$7,000	\$72,500	\$14,500	\$87,000	\$1,581.82	\$29,000	\$527.27
56	\$35,000	\$9,600	\$16,800	\$4,480	\$7,000	\$72,880	\$14,576	\$87,456	\$1,561.71	\$29,152	\$520.57
57	\$35,000	\$9,600	\$17,100	\$4,560	\$7,000	\$73,260	\$14,652	\$87,912	\$1,542.32	\$29,304	\$514.11
58	\$35,000	\$9,600	\$17,400	\$4,640	\$7,000	\$73,640	\$14,728	\$88,368	\$1,523.59	\$29,456	\$507.86
59	\$35,000	\$9,600	\$17,700	\$4,720	\$7,000	\$74,020	\$14,804	\$88,824	\$1,505.49	\$29,608	\$501.83
60	\$35,000	\$9,600	\$18,000	\$4,800	\$7,000	\$74,400	\$14,880	\$89,280	\$1,488.00	\$29,760	\$496.00
61	\$35,000	\$9,600	\$18,300	\$4,880	\$7,000	\$74,780	\$14,956	\$89,736	\$1,471.08	\$29,912	\$490.36
62	\$35,000	\$9,600	\$18,600	\$4,960	\$7,000	\$75,160	\$15,032	\$90,192	\$1,454.71	\$30,064	\$484.90
63	\$35,000	\$9,600	\$18,900	\$5,040	\$7,000	\$75,540	\$15,108	\$90,648	\$1,438.86	\$30,216	\$479.62
64	\$35,000	\$9,600	\$19,200	\$5,120	\$7,000	\$75,920	\$15,184	\$91,104	\$1,423.50	\$30,368	\$474.50
65	\$35,000	\$9,600	\$19,500	\$5,200	\$7,000	\$76,300	\$15,260	\$91,560	\$1,408.62	\$30,520	\$469.54
66	\$35,000	\$9,600	\$19,800	\$5,280	\$7,000	\$76,680	\$15,336	\$92,016	\$1,394.18	\$30,672	\$464.73

67	\$35,000	\$9,600	\$20,100	\$5,360	\$7,000	\$77,060	\$15,412	\$92,472	\$1,380.18	\$30,824	\$460.06
68	\$35,000	\$9,600	\$20,400	\$5,440	\$7,000	\$77,440	\$15,488	\$92,928	\$1,366.59	\$30,976	\$455.53
69	\$35,000	\$9,600	\$20,700	\$5,520	\$7,000	\$77,820	\$15,564	\$93,384	\$1,353.39	\$31,128	\$451.13
70	\$35,000	\$9,600	\$21,000	\$5,600	\$7,000	\$78,200	\$15,640	\$93,840	\$1,340.57	\$31,280	\$446.86
71	\$35,000	\$9,600	\$21,300	\$5,680	\$7,000	\$78,580	\$15,716	\$94,296	\$1,328.11	\$31,432	\$442.70
72	\$35,000	\$9,600	\$21,600	\$5,760	\$7,000	\$78,960	\$15,792	\$94,752	\$1,316.00	\$31,584	\$438.67
73	\$35,000	\$9,600	\$21,900	\$5,840	\$7,000	\$79,340	\$15,868	\$95,208	\$1,304.22	\$31,736	\$434.74
74	\$35,000	\$9,600	\$22,200	\$5,920	\$7,000	\$79,720	\$15,944	\$95,664	\$1,292.76	\$31,888	\$430.92
75	\$35,000	\$9,600	\$22,500	\$6,000	\$7,000	\$80,100	\$16,020	\$96,120	\$1,281.60	\$32,040	\$427.20
76	\$35,000	\$9,600	\$22,800	\$6,080	\$8,000	\$81,480	\$16,296	\$97,776	\$1,286.53	\$32,592	\$428.84
77	\$35,000	\$9,600	\$23,100	\$6,160	\$8,000	\$81,860	\$16,372	\$98,232	\$1,275.74	\$32,744	\$425.25
78	\$35,000	\$9,600	\$23,400	\$6,240	\$8,000	\$82,240	\$16,448	\$98,688	\$1,265.23	\$32,896	\$421.74
79	\$35,000	\$9,600	\$23,700	\$6,320	\$8,000	\$82,620	\$16,524	\$99,144	\$1,254.99	\$33,048	\$418.33
80	\$35,000	\$9,600	\$24,000	\$6,400	\$8,000	\$83,000	\$16,600	\$99,600	\$1,245.00	\$33,200	\$415.00
81	\$35,000	\$9,600	\$24,300	\$6,480	\$8,000	\$83,380	\$16,676	\$100,056	\$1,235.26	\$33,352	\$411.75
82	\$35,000	\$9,600	\$24,600	\$6,560	\$8,000	\$83,760	\$16,752	\$100,512	\$1,225.76	\$33,504	\$408.59
83	\$35,000	\$9,600	\$24,900	\$6,640	\$8,000	\$84,140	\$16,828	\$100,968	\$1,216.48	\$33,656	\$405.49
84	\$35,000	\$9,600	\$25,200	\$6,720	\$8,000	\$84,520	\$16,904	\$101,424	\$1,207.43	\$33,808	\$402.48
85	\$35,000	\$9,600	\$25,500	\$6,800	\$8,000	\$84,900	\$16,980	\$101,880	\$1,198.59	\$33,960	\$399.53
86	\$35,000	\$9,600	\$25,800	\$6,880	\$8,000	\$85,280	\$17,056	\$102,336	\$1,189.95	\$34,112	\$396.65
87	\$35,000	\$9,600	\$26,100	\$6,960	\$8,000	\$85,660	\$17,132	\$102,792	\$1,181.52	\$34,264	\$393.84
88	\$35,000	\$9,600	\$26,400	\$7,040	\$8,000	\$86,040	\$17,208	\$103,248	\$1,173.27	\$34,416	\$391.09
89	\$35,000	\$9,600	\$26,700	\$7,120	\$8,000	\$86,420	\$17,284	\$103,704	\$1,165.21	\$34,568	\$388.40
90	\$35,000	\$9,600	\$27,000	\$7,200	\$8,000	\$86,800	\$17,360	\$104,160	\$1,157.33	\$34,720	\$385.78
91	\$35,000	\$9,600	\$27,300	\$7,280	\$8,000	\$87,180	\$17,436	\$104,616	\$1,149.63	\$34,872	\$383.21
92	\$35,000	\$9,600	\$27,600	\$7,360	\$8,000	\$87,560	\$17,512	\$105,072	\$1,142.09	\$35,024	\$380.70
93	\$35,000	\$9,600	\$27,900	\$7,440	\$8,000	\$87,940	\$17,588	\$105,528	\$1,134.71	\$35,176	\$378.24
94	\$35,000	\$9,600	\$28,200	\$7,520	\$8,000	\$88,320	\$17,664	\$105,984	\$1,127.49	\$35,328	\$375.83
95	\$35,000	\$9,600	\$28,500	\$7,600	\$8,000	\$88,700	\$17,740	\$106,440	\$1,120.42	\$35,480	\$373.47
96	\$35,000	\$9,600	\$28,800	\$7,680	\$8,000	\$89,080	\$17,816	\$106,896	\$1,113.50	\$35,632	\$371.17
97	\$35,000	\$9,600	\$29,100	\$7,760	\$8,000	\$89,460	\$17,892	\$107,352	\$1,106.72	\$35,784	\$368.91
98	\$35,000	\$9,600	\$29,400	\$7,840	\$8,000	\$89,840	\$17,968	\$107,808	\$1,100.08	\$35,936	\$366.69
99	\$35,000	\$9,600	\$29,700	\$7,920	\$8,000	\$90,220	\$18,044	\$108,264	\$1,093.58	\$36,088	\$364.53

100 \$35,000 \$9,600 \$30,000 \$8,000 \$8,000 \$90,600 \$18,120 \$108,720 \$1,087.20 \$36,240 \$362.40

Table B2. Estimated annual funding possibilities of an MTRI FM certification program from ten to one hundred members. See *Modeling Anticipated Costs and Potential Sources of Funding*, page 33 for model assumptions.

Number of Members	Total Costs	1/3 Total Costs	Total Cost per Member	1/3 Total Costs per Member	Revenue \$250 Annual Fee	Revenue \$360 Annual Fee	Revenue \$450 Annual Fee	Funding Goal	\$360 Annual Fees + Funding	2/3 Program Costs	Difference
10	\$43,080	\$14,360	\$4,308	\$1,436	\$2,500	\$3,600	\$5,000	\$35,000	\$38,600	\$28,720	\$9,880
11	\$43,536	\$14,512	\$3,958	\$1,319	\$2,750	\$3,960	\$5,500	\$35,000	\$38,960	\$29,024	\$9,936
12	\$43,992	\$14,664	\$3,666	\$1,222	\$3,000	\$4,320	\$6,000	\$35,000	\$39,320	\$29,328	\$9,992
13	\$44,448	\$14,816	\$3,419	\$1,140	\$3,250	\$4,680	\$6,500	\$35,000	\$39,680	\$29,632	\$10,048
14	\$44,904	\$14,968	\$3,207	\$1,069	\$3,500	\$5,040	\$7,000	\$35,000	\$40,040	\$29,936	\$10,104
15	\$45,360	\$15,120	\$3,024	\$1,008	\$3,750	\$5,400	\$7,500	\$35,000	\$40,400	\$30,240	\$10,160
16	\$45,816	\$15,272	\$2,864	\$955	\$4,000	\$5,760	\$8,000	\$35,000	\$40,760	\$30,544	\$10,216
17	\$46,272	\$15,424	\$2,722	\$907	\$4,250	\$6,120	\$8,500	\$35,000	\$41,120	\$30,848	\$10,272
18	\$46,728	\$15,576	\$2,596	\$865	\$4,500	\$6,480	\$9,000	\$35,000	\$41,480	\$31,152	\$10,328
19	\$47,184	\$15,728	\$2,483	\$828	\$4,750	\$6,840	\$9,500	\$35,000	\$41,840	\$31,456	\$10,384
20	\$47,640	\$15,880	\$2,382	\$794	\$5,000	\$7,200	\$10,000	\$35,000	\$42,200	\$31,760	\$10,440
21	\$48,096	\$16,032	\$2,290	\$763	\$5,250	\$7,560	\$10,500	\$35,000	\$42,560	\$32,064	\$10,496
22	\$48,552	\$16,184	\$2,207	\$736	\$5,500	\$7,920	\$11,000	\$35,000	\$42,920	\$32,368	\$10,552
23	\$49,008	\$16,336	\$2,131	\$710	\$5,750	\$8,280	\$11,500	\$35,000	\$43,280	\$32,672	\$10,608
24	\$49,464	\$16,488	\$2,061	\$687	\$6,000	\$8,640	\$12,000	\$35,000	\$43,640	\$32,976	\$10,664
25	\$49,920	\$16,640	\$1,997	\$666	\$6,250	\$9,000	\$12,500	\$35,000	\$44,000	\$33,280	\$10,720
26	\$51,576	\$17,192	\$1,984	\$661	\$6,500	\$9,360	\$13,000	\$35,000	\$44,360	\$34,384	\$9,976
27	\$52,032	\$17,344	\$1,927	\$642	\$6,750	\$9,720	\$13,500	\$35,000	\$44,720	\$34,688	\$10,032
28	\$52,488	\$17,496	\$1,875	\$625	\$7,000	\$10,080	\$14,000	\$35,000	\$45,080	\$34,992	\$10,088
29	\$52,944	\$17,648	\$1,826	\$609	\$7,250	\$10,440	\$14,500	\$35,000	\$45,440	\$35,296	\$10,144
30	\$53,400	\$17,800	\$1,780	\$593	\$7,500	\$10,800	\$15,000	\$35,000	\$45,800	\$35,600	\$10,200

31	\$53,856	\$17,952	\$1,737	\$579	\$7,750	\$11,160	\$15,500	\$35,000	\$46,160	\$35,904	\$10,256
32	\$54,312	\$18,104	\$1,697	\$566	\$8,000	\$11,520	\$16,000	\$35,000	\$46,520	\$36,208	\$10,312
33	\$54,768	\$18,256	\$1,660	\$553	\$8,250	\$11,880	\$16,500	\$35,000	\$46,880	\$36,512	\$10,368
34	\$55,224	\$18,408	\$1,624	\$541	\$8,500	\$12,240	\$17,000	\$35,000	\$47,240	\$36,816	\$10,424
35	\$55,680	\$18,560	\$1,591	\$530	\$8,750	\$12,600	\$17,500	\$35,000	\$47,600	\$37,120	\$10,480
36	\$56,136	\$18,712	\$1,559	\$520	\$9,000	\$12,960	\$18,000	\$35,000	\$47,960	\$37,424	\$10,536
37	\$56,592	\$18,864	\$1,530	\$510	\$9,250	\$13,320	\$18,500	\$35,000	\$48,320	\$37,728	\$10,592
38	\$57,048	\$19,016	\$1,501	\$500	\$9,500	\$13,680	\$19,000	\$35,000	\$48,680	\$38,032	\$10,648
39	\$57,504	\$19,168	\$1,474	\$491	\$9,750	\$14,040	\$19,500	\$35,000	\$49,040	\$38,336	\$10,704
40	\$57,960	\$19,320	\$1,449	\$483	\$10,000	\$14,400	\$20,000	\$35,000	\$49,400	\$38,640	\$10,760
41	\$58,416	\$19,472	\$1,425	\$475	\$10,250	\$14,760	\$20,500	\$35,000	\$49,760	\$38,944	\$10,816
42	\$58,872	\$19,624	\$1,402	\$467	\$10,500	\$15,120	\$21,000	\$35,000	\$50,120	\$39,248	\$10,872
43	\$59,328	\$19,776	\$1,380	\$460	\$10,750	\$15,480	\$21,500	\$35,000	\$50,480	\$39,552	\$10,928
44	\$59,784	\$19,928	\$1,359	\$453	\$11,000	\$15,840	\$22,000	\$35,000	\$50,840	\$39,856	\$10,984
45	\$60,240	\$20,080	\$1,339	\$446	\$11,250	\$16,200	\$22,500	\$35,000	\$51,200	\$40,160	\$11,040
46	\$60,696	\$20,232	\$1,319	\$440	\$11,500	\$16,560	\$23,000	\$35,000	\$51,560	\$40,464	\$11,096
47	\$61,152	\$20,384	\$1,301	\$434	\$11,750	\$16,920	\$23,500	\$35,000	\$51,920	\$40,768	\$11,152
48	\$61,608	\$20,536	\$1,284	\$428	\$12,000	\$17,280	\$24,000	\$35,000	\$52,280	\$41,072	\$11,208
49	\$62,064	\$20,688	\$1,267	\$422	\$12,250	\$17,640	\$24,500	\$35,000	\$52,640	\$41,376	\$11,264
50	\$62,520	\$20,840	\$1,250	\$417	\$12,500	\$18,000	\$25,000	\$35,000	\$53,000	\$41,680	\$11,320
51	\$85,176	\$28,392	\$1,670	\$557	\$12,750	\$18,360	\$25,500	\$40,000	\$58,360	\$56,784	\$1,576
52	\$85,632	\$28,544	\$1,647	\$549	\$13,000	\$18,720	\$26,000	\$40,000	\$58,720	\$57,088	\$1,632
53	\$86,088	\$28,696	\$1,624	\$541	\$13,250	\$19,080	\$26,500	\$40,000	\$59,080	\$57,392	\$1,688
54	\$86,544	\$28,848	\$1,603	\$534	\$13,500	\$19,440	\$27,000	\$40,000	\$59,440	\$57,696	\$1,744
55	\$87,000	\$29,000	\$1,582	\$527	\$13,750	\$19,800	\$27,500	\$40,000	\$59,800	\$58,000	\$1,800
56	\$87,456	\$29,152	\$1,562	\$521	\$14,000	\$20,160	\$28,000	\$40,000	\$60,160	\$58,304	\$1,856
57	\$87,912	\$29,304	\$1,542	\$514	\$14,250	\$20,520	\$28,500	\$40,000	\$60,520	\$58,608	\$1,912
58	\$88,368	\$29,456	\$1,524	\$508	\$14,500	\$20,880	\$29,000	\$40,000	\$60,880	\$58,912	\$1,968
59	\$88,824	\$29,608	\$1,505	\$502	\$14,750	\$21,240	\$29,500	\$40,000	\$61,240	\$59,216	\$2,024
60	\$89,280	\$29,760	\$1,488	\$496	\$15,000	\$21,600	\$30,000	\$40,000	\$61,600	\$59,520	\$2,080
61	\$89,736	\$29,912	\$1,471	\$490	\$15,250	\$21,960	\$30,500	\$40,000	\$61,960	\$59,824	\$2,136
62	\$90,192	\$30,064	\$1,455	\$485	\$15,500	\$22,320	\$31,000	\$40,000	\$62,320	\$60,128	\$2,192
63	\$90,648	\$30,216	\$1,439	\$480	\$15,750	\$22,680	\$31,500	\$40,000	\$62,680	\$60,432	\$2,248

64	\$91,104	\$30,368	\$1,424	\$475	\$16,000	\$23,040	\$32,000	\$40,000	\$63,040	\$60,736	\$2,304
65	\$91,560	\$30,520	\$1,409	\$470	\$16,250	\$23,400	\$32,500	\$40,000	\$63,400	\$61,040	\$2,360
66	\$92,016	\$30,672	\$1,394	\$465	\$16,500	\$23,760	\$33,000	\$40,000	\$63,760	\$61,344	\$2,416
67	\$92,472	\$30,824	\$1,380	\$460	\$16,750	\$24,120	\$33,500	\$40,000	\$64,120	\$61,648	\$2,472
68	\$92,928	\$30,976	\$1,367	\$456	\$17,000	\$24,480	\$34,000	\$40,000	\$64,480	\$61,952	\$2,528
69	\$93,384	\$31,128	\$1,353	\$451	\$17,250	\$24,840	\$34,500	\$40,000	\$64,840	\$62,256	\$2,584
70	\$93,840	\$31,280	\$1,341	\$447	\$17,500	\$25,200	\$35,000	\$40,000	\$65,200	\$62,560	\$2,640
71	\$94,296	\$31,432	\$1,328	\$443	\$17,750	\$25,560	\$35,500	\$40,000	\$65,560	\$62,864	\$2,696
72	\$94,752	\$31,584	\$1,316	\$439	\$18,000	\$25,920	\$36,000	\$40,000	\$65,920	\$63,168	\$2,752
73	\$95,208	\$31,736	\$1,304	\$435	\$18,250	\$26,280	\$36,500	\$40,000	\$66,280	\$63,472	\$2,808
74	\$95,664	\$31,888	\$1,293	\$431	\$18,500	\$26,640	\$37,000	\$40,000	\$66,640	\$63,776	\$2,864
75	\$96,120	\$32,040	\$1,282	\$427	\$18,750	\$27,000	\$37,500	\$40,000	\$67,000	\$64,080	\$2,920
76	\$97,776	\$32,592	\$1,287	\$429	\$19,000	\$27,360	\$38,000	\$40,000	\$67,360	\$65,184	\$2,176
77	\$98,232	\$32,744	\$1,276	\$425	\$19,250	\$27,720	\$38,500	\$40,000	\$67,720	\$65,488	\$2,232
78	\$98,688	\$32,896	\$1,265	\$422	\$19,500	\$28,080	\$39,000	\$40,000	\$68,080	\$65,792	\$2,288
79	\$99,144	\$33,048	\$1,255	\$418	\$19,750	\$28,440	\$39,500	\$40,000	\$68,440	\$66,096	\$2,344
80	\$99,600	\$33,200	\$1,245	\$415	\$20,000	\$28,800	\$40,000	\$40,000	\$68,800	\$66,400	\$2,400
81	\$100,056	\$33,352	\$1,235	\$412	\$20,250	\$29,160	\$40,500	\$40,000	\$69,160	\$66,704	\$2,456
82	\$100,512	\$33,504	\$1,226	\$409	\$20,500	\$29,520	\$41,000	\$40,000	\$69,520	\$67,008	\$2,512
83	\$100,968	\$33,656	\$1,216	\$405	\$20,750	\$29,880	\$41,500	\$40,000	\$69,880	\$67,312	\$2,568
84	\$101,424	\$33,808	\$1,207	\$402	\$21,000	\$30,240	\$42,000	\$40,000	\$70,240	\$67,616	\$2,624
85	\$101,880	\$33,960	\$1,199	\$400	\$21,250	\$30,600	\$42,500	\$40,000	\$70,600	\$67,920	\$2,680
86	\$102,336	\$34,112	\$1,190	\$397	\$21,500	\$30,960	\$43,000	\$40,000	\$70,960	\$68,224	\$2,736
87	\$102,792	\$34,264	\$1,182	\$394	\$21,750	\$31,320	\$43,500	\$40,000	\$71,320	\$68,528	\$2,792
88	\$103,248	\$34,416	\$1,173	\$391	\$22,000	\$31,680	\$44,000	\$40,000	\$71,680	\$68,832	\$2,848
89	\$103,704	\$34,568	\$1,165	\$388	\$22,250	\$32,040	\$44,500	\$40,000	\$72,040	\$69,136	\$2,904
90	\$104,160	\$34,720	\$1,157	\$386	\$22,500	\$32,400	\$45,000	\$40,000	\$72,400	\$69,440	\$2,960
91	\$104,616	\$34,872	\$1,150	\$383	\$22,750	\$32,760	\$45,500	\$40,000	\$72,760	\$69,744	\$3,016
92	\$105,072	\$35,024	\$1,142	\$381	\$23,000	\$33,120	\$46,000	\$40,000	\$73,120	\$70,048	\$3,072
93	\$105,528	\$35,176	\$1,135	\$378	\$23,250	\$33,480	\$46,500	\$40,000	\$73,480	\$70,352	\$3,128
94	\$105,984	\$35,328	\$1,127	\$376	\$23,500	\$33,840	\$47,000	\$40,000	\$73,840	\$70,656	\$3,184
95	\$106,440	\$35,480	\$1,120	\$373	\$23,750	\$34,200	\$47,500	\$40,000	\$74,200	\$70,960	\$3,240
96	\$106,896	\$35,632	\$1,114	\$371	\$24,000	\$34,560	\$48,000	\$40,000	\$74,560	\$71,264	\$3,296

97	\$107,352	\$35,784	\$1,107	\$369	\$24,250	\$34,920	\$48,500	\$40,000	\$74,920	\$71,568	\$3,352
98	\$107,808	\$35,936	\$1,100	\$367	\$24,500	\$35,280	\$49,000	\$40,000	\$75,280	\$71,872	\$3,408
99	\$108,264	\$36,088	\$1,094	\$365	\$24,750	\$35,640	\$49,500	\$40,000	\$75,640	\$72,176	\$3,464
100	\$108,720	\$36,240	\$1,087	\$362	\$25,000	\$36,000	\$50,000	\$40,000	\$76,000	\$72,480	\$3,520

Appendix C. MTRI Standard for Group Entities Gap Analysis

Table C1. Gap analysis for the *Standard for Group Entities in Forest Management Groups (FSC-STD-30-005)* for the Mersey Tobeatic Research Institute (MTRI).

Number	Requirement	Compliant	Gap	Readiness	Comments
1.0	General requirements				
1.1	The group entity shall be an independent legal entity or an indivisual acting as a legal entity.	Yes	None	High	Registered as a charitable cooperative.
1.2	The Group entity shall comply with relevant legal obligations, as registration and payment of applicable fees and taxes.	Yes	None	High	MTRI complies with all legal obligations.
1.3	The Group Entity shall have a written public policy of commitment to the FSC Principles and Criteria.	In Progress	Narrow	Acceptable	MTRI publically supports and is actively promoting FSC Principals. Notice of FSC program goals published. Formal policy statement still needs to be written. Written public policy should be published on the web and as the first section of the policy manual.

1.4	The Group entity shall define training needs and implement training activities and /or communication strategies relevant to the implementation of the applicable FSC standards.	In Progress	Narrow	Acceptable	Training needs and delivery redundancies are being identified by the Certification Working Group. BMP and ecological site classification being held in spring sponsored by NSFWO. FSC Assessor training planned. Possibility to shadow EOMF audit. Stakeholders identified and communications plan drafted and reviewed.
2.0 Responsibilities					
2.1	The Group shall clearly define and document the division of responsibilities between the Group entity and the Group members in relation to forest management activities.	No	Wide	Low	Contingent on Board decision to proceed. Will need to determine Group Type. MOU to define relationship and division of responsibilities.
2.2	The Group Entity shall appoint a management representative as having overall responsibility and authority for the Group entity's compliance with all applicable requirements of this standard.	No	Narrow	Acceptable	Contingent on Board decision to proceed. MTRI has current staff that could fill this role.
2.3	Group entity staff and Group members shall demonstrate knowledge of the Group's procedures and the applicable Forest Stewardship Standard.	No	Medium	Fair	Criteria that demonstrates knowledge (minimum experience, training, education, etc.) needs to be defined. By developing procedures Group Entity staff will have demonstrated their knowledge of the procedures.
3.0 Group entity's procedures					
3.1	The Group entity shall establish, implement and maintain written procedures for Group membership covering all applicable requirements of this standard, according to scale and complexity of the group including:				
3.1 I.	Organizational structure;	No	Wide	Fair	Adopt and modify EOMF procedures
3.1 II.	Responsibilities of the Group entity and the Group members including main activities to fulfil such responsibilities (ie. Development of management plans, sales and marketing of FSC products, harvesting, planting, monitoring, etc.);	No	Wide	Low	Adopt and modify EOMF procedures. Division of responsibilities may vary according to an agreement with each Group member or collectively via an MOU between the Group Entity and RMU.
3.1 III.	Rules regarding eligibility for membership to the Group;	No	Wide	Fair	Adopt and modify EOMF procedures
3.1 IV.	Rules regarding withdrawal/suspension of members from the Group;	No	Wide	Fair	Adopt and modify EOMF procedures

3.1	V.	Clear description of the process to fulfill any corrective action requests issued internally and by the certification body including timelines and implications if any of the corrective actions are not complied with;	No	Wide	Fair	Adopt and modify EOMF procedures
3.1	VI.	Documented procedures for the inclusion of new Group members;	No	Wide	Fair	Adopt and modify EOMF procedures
3.2		The Group entity's procedures shall be sufficient to establish an efficient internal control system ensuring that all members are fulfilling applicable requirements.	No	Medium	Fair	Contingent on successful adoption of EOMF procedures.
3.3		The Group entity shall define the personnel responsible for each procedure together with the qualifications or training measures required for its implementation.	No	Medium	Fair	Present positions at MTRI can be take on most Group Entity roles.
3.4		The Group entity or the certification body shall evaluate every applicant for membership of the Group and ensure that there are no major non-conformities with applicable requirements of the Forest Stewardship Standard, and with any additional requirements for membership of the Group, prior to being granted membership of the Group. NOTE: for applicants complying with SLIMF eligibility criteria for size, the initial evaluation may be done through a desk audit.	No	Medium	Fair	A key performance measure. Criteria for review and selection of pilot RMU.
4.0 Informed consent of Group members						
4.1		The Group entity shall provide each Group member with documentation, or access to documentation, specifying the relevant terms and conditions of Group membership. The documentation shall include:	NOTE: In some groups, it may be sufficient to provide individual members with a summary of these items, provided that full documentation is readily available on request at the Group entity's offices. The information should be presented in a way adapted to the language and knowledge of the Group members.			
4.1	i	Access to a copy of the applicable Forest Stewardship Standard;	Yes	None	High	MTRI is planning to exceed this requirement by publishing a Smallholder's Guide to The FSC Maritime Standard.
4.1	ii	Explanation of the certification body's process;	No	Narrow	Fair	This could be covered by a small publication comparable to the EOMF's Guide to Forest Stewardship Council Certification for Private Woodlots in Ontario.
4.1	iii	Explanation of the certification body's, and FSC's rights to access the Group members' forests and documentation for the purposes of evaluation and monitoring;	No	Narrow	Fair	Adopt and modify EOMF procedures.

4.1	iv	Explanation of the certification body's, and FSC requirements with respect to public information.	No	Narrow	Fair	Adopt and modify EOMF procedures.
4.1	v	Explanation of any obligations with respect to Group membership, such as:				
4.1	v a	maintenance of information for monitoring purposes;	No	Narrow	Fair	Adopt and modify EOMF procedures. Includes management plan, stand treatment and harvest records.
4.1	v b	use of systems for tracking and tracing of forest products;	No	Narrow	Fair	Adopt and modify EOMF procedures. Includes bill of lading.
4.1	v c	requirements to conform with conditions or corrective action requests issued by the certification body and the group entity;	No	Narrow	Fair	Adopt and modify EOMF procedures.
4.1	v d	any special requirements for Group members related to marketing or sales of products within and outside of the certificate;	No	Medium	Low	May be possible to adopt relevant EOMF procedures.
4.1	v e	other obligations of Group membership; and	No	Medium	Low	Yet to be identified.
4.1	v f	explanation of any costs associated with Group membership.	No	Narrow	Good	EOMF cost matrix provides a good starting point for determining membership costs.
4.2		A consent declaration or equivalent shall be available between the Group Entity and each Group member or the member's representative who voluntarily wishes to participate in the Group. The consent declaration shall:	NOTE: A consent declaration does not have to be an individual document. It can be part of a contract or any other document (eg. meeting minutes) that specifies the agreed relationship between the Group member and the Group entity.			
4.2	i	include a commitment to comply with all applicable certification requirements;	No	Narrow	Good	Adopt and modify EOMF procedures
4.2	ii	acknowledge and agree to the obligations and responsibilities of the Group entity;	No	Narrow	Good	Adopt and modify EOMF procedures
	iii	acknowledge and agree to the obligations and responsibilities of Group membership;	No	Narrow	Good	Adopt and modify EOMF procedures
4.2	iv	agree to membership of the scheme, and	No	Narrow	Good	Adopt and modify EOMF procedures
4.2	v	authorize the Group entity to be the primary contact for certification and to apply for certification on the member's behalf	No	Narrow	Good	Adopt and modify EOMF procedures

5.0 Group Records

5.1	The Group entity shall maintain complete and up-to-date records covering all applicable requirements of this standard. These shall include:	NOTE: The amount of data that is maintained centrally by the Group entity may vary from case to case. In order to reduce costs of evaluation by the certification body, and subsequent monitoring by FSC, data should be stored centrally wherever possible.			
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5.1	i	List of names and contact details of Group members, together with dates of entering and leaving the Group scheme, reason for leaving and the type of forest ownership per member;	No	Narrow	Good	
5.1	ii	Any records of training provided to staff or Group members, relevant to the implementation of this standard or the applicable Forest Stewardship Standard;	No	Narrow	Good	
5.1	iii	A map or supporting documentation describing or showing the location of the member's forest properties;	Yes	Narrow	High	MTRI provides GIS / mapmaking services. Part of the FMU plan.
5.1	iv	Evidence of consent of all Group members;	No	Narrow	High	See 4.2 above
5.1	v	Documentation and records regarding recommended practices for forest management (i.e. silvicultural systems);	No	Wide	Low	Part of the FMU plan. Timber cruise and stand prescriptions have not been services that MTRI provides.
5.1	vi	Records demonstrating the implementation of any internal control or monitoring systems. Such records shall include records of internal inspections, non-compliance, actions taken to correct any such non-compliance;	No	Medium	Fair	Adopt and modify EOMF procedures
5.1	viii	Records of the estimated annual overall FSC production and annual sales of the Group.	No	Medium	Fair	Records supplied to Group Entity while monitoring harvest operations.
5.2		Group records shall be maintained for at least five (5) years.	No	Narrow	Acceptable	MTRI already manages internal records according to CRA retention periods.
5.3		Group entities shall not issue any kind of certificates or declarations to their group members that could be confused with FSC certificates. Group member certificates may however be requested from the certification body.	Yes	None	High	Low risk. MTRI does not issue forest management certificates.
6.0 Group Size						
6.1		There is no restriction on the maximum size that a group certificate can cover in terms of number of group members, their individual forest property size or total forest area. The Group entity shall have sufficient human and technical resources to manage and control the Group in line with the requirements of this standard. NOTE: The number of Group members, their individual size and the total area will however influence the evaluation intensity applied by the certification body in their annual audits.	Yes	None	Good	Low risk assuming pilot RMU starts small ie. 20 to 30 members and growth is managed.

6.2	The Group entity shall specify in their procedures the maximum number of members that can be supported by the management system and the human and technical capacities of the Group entity.	No	Medium	Fair	To be defined. EOMF provides a baseline.
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7.0 Multinational groups

7.1	Group schemes shall only be applied to national groups which are covered by the same Forest Stewardship Standard.	N/A	N/A	N/A	
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7.2	In cases where homogenous conditions between countries / regions may allow an effective and credible cross-border or multi-regional monitoring system, the Group entity shall request formal approval by FSC IC through their accredited Certification Body to allow certification of such a group scheme.	N/A	N/A	N/A	
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8.0 Monitoring requirements

8.1	The Group entity shall implement a documented monitoring and control system that includes at least the following:				
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8.1 i	Written description of the monitoring and control system.	No	Narrow	Fair	Adopt and modify EOMF procedures See 8.3 a & b
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8.1 ii	Regular (at least annual) monitoring visits to a sample of Group members to confirm continued compliance with all the requirements of the applicable Forest Stewardship Standard, and with any additional requirements for membership of the Group.	No			
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8.2	The Group entity shall define criteria to be monitored at each internal audit and according to the group characteristics, risk factors and local circumstances.	No	Wide	Low	Custom criteria to be defined after an RMU pilot is identified.
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8.3	The minimum sample to be visited annually for internal monitoring shall be determined as follows:				NOTE: for the purpose of sampling, FMUs < 1,000 ha and managed by the same managerial body may be combined into a 'resource management unit' RMU according to the proposal made in FSC-STD-20-007 Annex 1.
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8.3 a	Type I Groups with mixed responsibilities - Groups or sub-groups with mixed responsibilities shall apply a minimum sampling $X = \sqrt{y}$ for 'normal' FMUs and $X = 0.6 * \sqrt{y}$ for FMUs < 1,000 ha. Sampling shall be increased if HCVs are threatened or land tenure or use right disputes are pending within the group.	No	Wide	Low	
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8.3	b	Type II Resource Manager Groups - Group entities who also operate as resource managers may define the required internal sampling intensity at their own discretion for the forest properties they are managing, independent of their size and ownership (the minimum numbers as defined above do not apply here).	No	Wide	Low	
8.4		For monitoring purposes the Group entity should use the same stratification into sets of 'like' FMUs as defined by the certification body in their evaluation.	N/A			
8.5		The Group entity should visit different members in their annual monitoring than the ones ones selected for evaluation by the certification body, unless pending corrective actions, complaints or risk factors are requiring a revisit of the same units.	N/A			
8.6		In the selection process of members to be visited, the Group entity should include random selection techniques.	N/A			
8.7		The Group entity shall issue corrective action requests to address non-compliances identified during their visits and monitor their implementation.	No	Narrow	Fair	Adopt and modify EOMF procedures
8.8		Additional monitoring visits shall be scheduled when potential problems arise or the Group entity receives information from stakeholders about alleged violations of the FSC requirements by Group members.	No	Narrow	Fair	Adopt and modify EOMF procedures
9.0 Sales of forest products and use of the FSC trademark						
9.1		The Group entity shall document and implement a system for tracking and tracing of forest products produced by the Group members which are supposed to be sold as FSC certified.	No	Wide	Low	Bill of lading. Sale records to FSC CoC Certified buyers. Group Entity may apply for separate CoC certificate for small wood manufacturers and firewood sales.
9.2		For the purpose of ensuring that non certified material is not being mixed with FSC certified material, FSC products shall only be sold according to a sales protocol agreed by the Group members and the Group entity.	No	Wide	Low	Controlled Wood requirements
9.3		The Group entity shall ensure that all invoices for sales of FSC certified material are issued with the required information (see FSC-STD-40-0004 V2-0 Clause 6.1.1) and are filed by the Group members.	No	Wide	Low	

9.4 The Group entity shall ensure that all uses of the FSC Trademark are approved by the responsible certification body in advance. **No** Narrow Good