Assessing Indigenous Control & Benefits through Manitoba's Timber Allocation Program

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ABSTRACT

Growing international awareness of the need to recognize Indigenous rights and interests is reflected in Canada's changing forestry culture. Across Canada, government and industry historically dominated the forest sector, resulting in the exclusion of Indigenous peoples from decision-making and benefits. Today, public forest licensing agreements can be a strategic tool for increasing Indigenous access to decision-making control and forest-based economic benefits. In Manitoba, Community Timber Allocations (CTA) are granted to First Nation, Metis, and northern communities. This research examines the implementation and outcomes of the CTA program and its possible significance in elevating Indigenous involvement in forestry for the period 2005-2015.

A qualitative case study and program evaluation approach were used to explore the types and degree of control and benefits afforded to communities through the CTA. Perspectives of Indigenous community members, industry representatives, and the provincial government were analyzed through semi-structured interviews and site visits, conducted between August 2015 and January 2016. Participating communities include Opaskwayak Cree Nation, the Manitoba Metis Federation, and Shoal Lake 40 First Nation. Analysis used a framework drawn from previous studies of control and benefits associated with small volume-based tenures, success factors and challenges, and program objectives outlined in CTA documents.

Findings demonstrate that CTAs are an avenue of Indigenous access to timber in Manitoba, a mechanism for community control and benefits at the operational level, and contribute to community capacity building. However, the CTAs do not enable Indigenous communities to influence forest management decision-making or forestry practices at the strategic and tactical levels of control, and resulting types and degree of benefits are dependent

on a community's existing capacity for implementation.

Outcomes of the CTA do offer meaningful involvement at the operational level where partnerships are formed, relationships are developed, and capacity is built. Interviews indicate that community economic goals align with core policy objectives for the CTA. Further program planning and support are needed to increase the breadth of goals and outcomes of the CTA. Establishing additional forestry opportunities with Indigenous populations beyond timber harvesting would also elevate control and support longer-term involvement. Overall, the CTA plays an important role for building foundational capacity.

In addition to providing new knowledge regarding small-scale forestry and forest policy implementation in Manitoba, this study offers two new tools for future evaluation and monitoring of the CTA program: a typology of CTA implementation strategies, and a framework of available control and benefits through the CTA.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1. INTRODUCTION

1.0 Problem Definition & Study Rationale

In recent decades there has been a growing awareness of the need to recognize

Indigenous rights and interests internationally and in Canada. Rooted partly in the emergence of

sustainable development[1], as well as human rights dialogues[2], settler Canada's relationship with

Indigenous peoples been under growing scrutiny primarily due to court cases and settlements

with national significance (see *R v. Sparrow 1990, Delgamuukw v. British Columbia 1997,* and *R

v. Marshall 1999*), protest movements (e.g. Idle No More), and Canada's Truth and

Reconciliation Commission. Much of this development and awareness has also been reflected in

Canada's changing forestry culture (Stevenson and Natcher, 2009; Wilkes and Ibrahim, 2013).

Government and industry interests have historically dominated Canada's forest sector,

resulting in the exclusion of Indigenous peoples from natural resource decision-making and

benefits (Ross and Smith, 2002; Wyatt, 2008). Despite these restrictions, Indigenous peoples

have maintained traditional social, economic, and spiritual forest activities and participated in the

forestry workforce (Markey et al., 2005; Thorpe and Sandberg, 2007; Tindall et al., 2013).

Improving Indigenous access to and involvement in forestry resources is essential to the

recognition and protection of treaty rights, and the incorporation of Indigenous values into

Canada's forest management system and policies (Ross and Smith, 2002).

Forest tenure is a form of licensing arrangement that delegates the responsibility of

managing public forests to the private sector, in exchange for payments of royalties, stumpages,

and land rents (Haley and Nelson, 2007). Forest tenure is a useful indicator not only of

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[1] See Rio Declaration on Environment & Development 1992: Agenda 21 Principle 22; and Convention on Biological Diversity
Article 8 (In-situ Conservation) (j)
[2] See United Nations International Declaration on the Rights of Indigenous Peoples, 2007

Indigenous access to Crown forests, but of market access and potential within the global forest sector (Brubacher, 2007; NAFA, 2015). As such, forest tenure can be a strategic tool for increasing Indigenous involvement through greater control in forestry decision-making and forest economic benefits – the two central objectives of Indigenous forestry (Wyatt 2008; Wyatt and Nelson, 2013). Therefore, these objectives are the focus of this evaluation study.

In Manitoba, short-term small volume Community Timber Allocations (CTAs) are one avenue for Indigenous communities to access timber on Crown land (Manitoba Conservation, 2011). At this time, no scholarly or evaluative attention has been paid to the implementation or outcomes of this program and its possible significance in elevating Indigenous engagement in forestry. As over half of Manitoba's land base is forested and home to over 50 Indigenous communities, such an assessment is particularly relevant to this region of Canada (Manitoba Conservation, 2011). Therefore, the CTA program provides an opportunity to explore a community-focused timber allocation in a novel setting and context, augment scholarly literature on small-scale forestry and Indigenous forestry and policy, as well as develop understanding to inform practice and policy.

The research questions, objectives, design, and theoretical foundations of this study were developed thorough a literature review linking three main topics: Indigenous forestry, community-based forestry, and program evaluation. Based on this review, the CTA program was identified as an opportunity to explore the role of small volume-based timber programs in increasing Indigenous community involvement in forest management in Canada (a need identified by Fortier et al., 2013; NAFA, 2015; Wyatt and Nelson, 2013). Specifically, the purpose of this study was to explore the types and degree of control and benefits afforded to communities through the CTA, and determine if the program design meets community and

provincial objectives. This study contributes insights from a Canadian province with a high Indigenous population that is undergoing many changes and is closely connected to forest landscapes. In addition, little research on community-based forestry has been conducted in Manitoba when compared to other regions, indicating a research gap and opportunity (Bullock and Lawler, 2015; Lawler and Bullock, 2017). This evaluation also holds potential to inform practice regarding Indigenous tenures and forestry involvement in similar settings across Canada (e.g. Saskatchewan and Alberta).

1.1 Research Questions and Objectives

This study is designed to determine the types and degree of decision-making control and resource-derived benefits available through the CTA (i.e., to test core principles underlying the CTA's overarching goals, objectives, and program implementation). To do so, this study was guided by six core research questions:

a) Does the CTA meet the goals and objectives of participating communities?

b) Does the CTA meet the goals and objectives of the province?

c) What factors contribute to community success with the CTA?

d) What challenges are associated with implementing a CTA?

e) What degree and variety of decision-making control do communities experience through the CTA?

f) What degree and variety of resource-derived benefits do communities experience through the CTA?

The main objectives of this research are to:

1. Contribute to literature on Indigenous forestry, specifically in expanding understanding of small-volume licenses and economic roles;

2. Develop an evaluative tool that can be applied to future research and monitoring; and,

3. Make recommendations relevant to community and government decision-makers.

1.2 Research Approach

Program evaluation is a research approach focused on exploring the need for, design, implementation, and impact of a program (Patton, 2002; Patton, 2007; Rossi et al., 2004). Evaluation research determines if programs work effectively and achieve intended goals and objectives, as well as inform action for improvement. Disseminating knowledge in an appropriate and useful manner for participating parties is also a focus of the program evaluation approach (Rossi et al., 2004).

To be useful, evaluations must be designed to answer the specific questions being asked of the program or policy. Often, this is determined using a 'goals-based' approach where a program is evaluated based on its ability to meet specific objectives (Patton, 2002). There are multiple ways to measure program objectives, and evaluation criteria are frequently determined through balancing the most appropriate measures with realistic constraints of budget and time. Although long-term comparative impact measures produce valid and reliable results for policy development, these approaches are often beyond the scope of most studies (Rossi and Freeman, 1993). One indicator of measurement validity outlined by Rossi and Freeman (1993) is consistency with usage in past work. Given the CTA's relevance to Indigenous forestry in Canada, community-based forestry initiatives, and community economic development, past evaluations on these topics established the foundation from which the evaluative criteria for the current study were derived.

This research combines the following program evaluation measures:

a) the achievement of core policy objectives of the CTA, following the forest policy evaluation approach outlined in Maryudi et al. (2012) and Furness et al. (2015);

b) predicted types of control and benefits associated with forest tenures and community-based forestry endeavours in related scholarly literature (e.g., Ambus and Hoberg, 2011; Gunter, 2000; Teitelbaum, 2014); and

c) predicted facilitating and challenging factors with the CTA for communities, based on those commonly associated with community-based forestry (e.g., Bullock and Hanna, 2007; Gunter, 2000; Luckert, 1999; McIlveen and Bradshaw, 2009).

Together, these criteria establish the analytical framework for this study (see section 2.4 for an outline of the analytical framework).

Finally, qualitative methods enhance the quality of an evaluation by capturing participant experiences that are not apparent and cannot be obtained via quantitative measures alone (Patton, 2002). Particularly where program implementation is investigated, qualitative methods provide the detailed and descriptive information needed to illustrate what is happening 'on the ground' (Patton, 2002). Case studies are useful for capturing the deep and detailed information required of this form of evaluation, and move beyond simply determining the outcomes of objectives. As Patton (2002: 152) describes, "to simply know that a targeted indicator has been met (or not met) provides little information for program improvement." Case studies also capture the unique and diverse aspects of differing program sites. Consequently, a case study approach is applied to conduct a qualitative evaluation of Manitoba's CTA program. This evaluation focuses on relationships among CTA goals, facilitators, challenges, and outcomes (i.e., degree and type of control and benefits), and assesses its potential influence on Indigenous involvement in forestry in Manitoba (Figure 1.1).
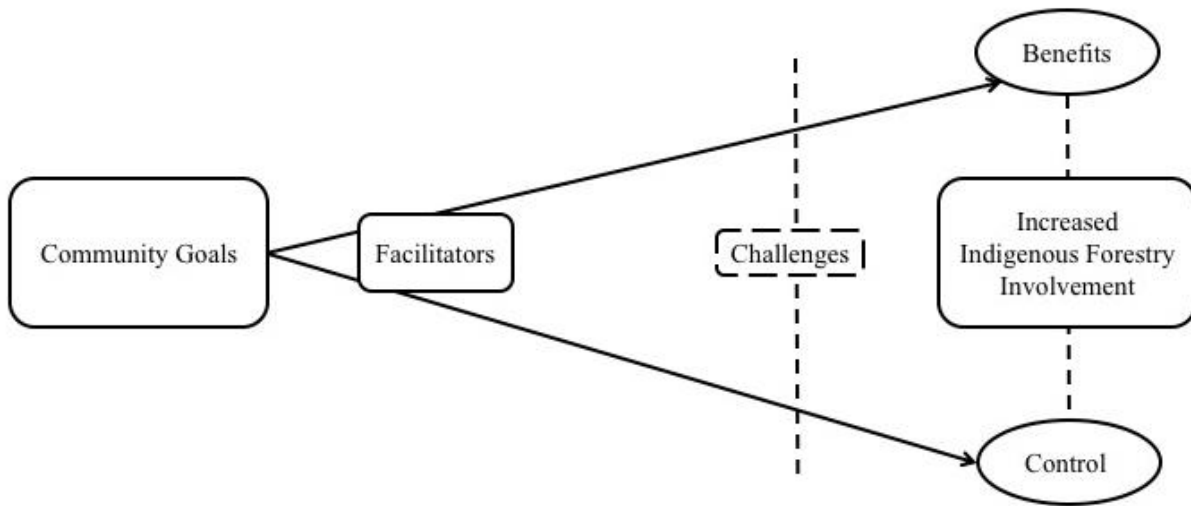
Figure 1.1 Community Timber Allocation conceptual model

1.3 Forestry in Manitoba: Background

As with much of Canada, Manitoba's history is rooted in natural resource development, including forestry, mining, fishing, trapping, agriculture, and hydroelectric power. Natural resources have been the backbone of many rural communities, both Indigenous and non-Indigenous. In 2014, approximately 8,000 forest sector jobs (NRCan, 2016) and over $474 million in manufactured goods were generated through forestry in Manitoba (NRCan, 2016). Importantly, many of these jobs are in geographic areas that may have limited economic development opportunities and stability, including northern communities. Apart from mining, Manitoba's natural resources are managed under the department of Conservation and Water Stewardship[3], which is divided into parks and regional services, biodiversity and land use, environmental stewardship, and water stewardship (Manitoba Conservation, n.d.a).

While frequently thought of as a prairie province, almost half of Manitoba's land base is forested (26.3 million hectares), with 570,000km^2 of boreal forest (Manitoba Conservation,

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[3] In April 2016 'Manitoba Conservation and Water Stewardship' was renamed 'Sustainable Development and Water Stewardship'. For the purposes of this study, the department is referred to as its previous name, Manitoba Conservation, to be consistent with the documents and data collected prior to the name change.

n.d.b). Much of this area, however, is not considered timber-productive as a large portion of Manitoba's boreal forest consists of muskeg and bog, which produces smaller trees and complicates infrastructure development, specifically roads (Bohning et al., 2003). Across the province, approximately 15 million hectares of forested land are considered timber productive, and 91% of these areas are provincial Crown land, highlighting the natural capital available through forest tenures (NAFA, 2003; Wellstead and Rayner, 2009). Most of Manitoba's industrial forest activity, as well as mining, and hydroelectric development, take place in this boreal region (Manitoba Conservation, n.d.b; Wells et al., 2010).

Several forms of forest tenure are available in the form of timber licenses in Manitoba, to provide public access to timber resources in the boreal region. At the same time, across Canada many Indigenous communities seek ways to establish further control over and benefits from forest resources (Booth and Muir, 2013; Wyatt, 2008). This is especially relevant in Manitoba where most Indigenous communities live in the boreal forest and there is a need for development opportunities.

1.4 Indigenous Involvement in Manitoba's Forests: Overview

The boreal forest is home to most of Manitoba's 63 Indigenous communities. Apart from Saskatchewan, Manitoba has the highest percentage of Indigenous people among the Canadian provinces – comprising 15% of the province's total population (Statistics Canada, 2006). With such a large Indigenous population comes a responsibility and pressure to prioritize Indigenous issues (Griffith et al., 2015; Wilson and Graham, 2005). Indigenous people are also Manitoba's youngest and fastest growing demographic segment (Statistics Canada, 2011a; Wellstead and Rayner, 2009). In addition, the median income for Indigenous people in Manitoba is much lower than that of non-Indigenous people (Griffith et al., 2015; Manitoba Aboriginal and Northern

Affairs, 2012). Thus, there is a definite need for development opportunities suited to Indigenous peoples in Manitoba and developing forestry opportunities could represent a suitable option.

Manitoba has a long history of community economic development policy, specifically with social and economic development with Indigenous and urban communities (Fernandez, 2005). Although there has been little community-based forestry activity and research in this region relative to other parts of Canada (Bullock and Lawler, 2015), there is a demonstrated appetite for new approaches and a change in the dominant policy regime, including approaches to increased Indigenous involvement in forestry. Some experiments with locally-based forest initiatives include: the local buy-out of the Pine Falls Paper Company in 1994 (Krogman and Beckley, 2002), the Indigenous engagement in forest planning initiatives on the east side of Lake Winnipeg (Wellstead and Rayner, 2009), as well as locally-sourced housing project proposals (Kemp, 2012). These initiatives demonstrate that interest in increased Indigenous involvement is not simply focused on timber harvesting, but collaboration, relationship building, and balancing local values, economic development, and conservation.

While relationships between the province and Indigenous communities in Manitoba have been unstable in the past, policy initiatives in recent decades have contributed to making positive changes (Wilson and Graham, 2005). An Aboriginal[4] Relations Branch of Manitoba Conservation was established in 2001 to ensure and increase the involvement of Indigenous communities in policy and programming (L. Ironquil, personal communication, February 13, 2017; Manitoba Conservation, n.d.c). Shortly after, in 2002 the Manitoba government released '*Next Steps*' – a strategic document outlining key priorities for sustainably managing Manitoba's forests, including: a) increasing co-management, employment and economic development

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[4] The term 'Aboriginal' is often used to refer to Indigenous groups in Canada, including First Nations, Metis, and Inuit. Recently, 'Indigenous' has been used more commonly in both international and Canadian contexts. 'Indigenous' is the term used throughout this text, except when referring to documents, studies, or organizations that employ the term 'Aboriginal'.

opportunities for Aboriginal communities, and b) increasing scientific and traditional knowledge of Manitoba's forests (Manitoba Conservation, 2002). These priorities were reiterated in 2011 as the foundation of a five-year plan. Manitoba Conservation reports on the progress of these priorities and indicators in an Annual Activity Report (Manitoba Conservation, 2011).

The CTA is a recognized measure for Indigenous involvement in forestry. Since 2008/2009 Manitoba Conservation has been tracking "the number and type of forestry co-management agreements in place, projects or developments undertaken by Aboriginal communities or number of contracts with communities or companies" as an indicator of the level of economic opportunities in the forest sector available to Indigenous communities in the department's performance reports (Manitoba Conservation 2014-2015: 180). Along with tree planting contracts and community consultation processes, the number and type of CTAs allocated is a primary indicator for this category, and the only form of harvesting involvement cited in reports between 2008 and 2015, demonstrating that the CTA is one of several measures of Indigenous involvement in forestry in Manitoba. Unpacking CTA implementation will therefore provide further breadth and depth of understanding regarding a key policy area for Manitoba.

Despite these initiatives, in their review of Indigenous collaboration in the forestry sector, Fortier et al. (2013) noted Indigenous communities involved in economic partnerships occurred at a much lower rate in Manitoba (12% of communities) than in other provinces (e.g., 59% in Alberta and 66% in Saskatchewan). Similarly, Griffith et al. (2015) found that while new ideas, objectives, and actors had emerged in Manitoba's forestry regime, there has been little Indigenous influence on the dominant industry-government relationship within Manitoba's forestry sector. As well, few legally-enforceable changes to *The Manitoba Forest Act, 2015* have

been made in response to the changing culture of forestry (Griffith et al., 2015). Therefore, although progress has been made, there is more work to be done in Manitoba relative to other provinces.

Communities use several forms of licencing to access timber resources in Manitoba (primarily Timber Sale Agreements and Timber Permits). The following section outlines the avenues for accessing Crown timber in Manitoba.

1.5 Forest Management & Tenure in Manitoba

Manitoba's annual allowable cut (AAC) is comparable to that of its neighbour province Saskatchewan, at under 10 million m^3 (~ 8,585,000 m^3) (Manitoba Conservation, 2011). The Forestry Branch of Manitoba Conservation divides the province into five regional sections: northeastern, northwestern, western, central, and eastern. Regional personnel at these offices work to ensure sustainable forest management practices and access to timber. Crown forests in Manitoba are managed and timber is allocated under three main types of tenure: Forest Management License Agreements (FMLs), Timber Permits, and Timber Sale Agreements (TSAs) (Manitoba Conservation, n.d.d). Timber Permits and TSAs each have several sub-categories, described below. Under the current system, the responsibility of forest management within FMLs falls to industrial license holders, while under TSAs and Timber Permits management responsibility rests with Manitoba Conservation (Manitoba Conservation, n.d.d). Manitoba's forested Crown land is divided into designated Forest Management Units (FMUs). Each FMU has an established AAC that is determined by the province. Outside FMLs, harvest volumes for each FMU are distributed through Timber Permits and TSAs.

Forest Management Licenses

FMLs are the largest tenure agreement in Manitoba, and the majority of the AAC is allocated through these long-term area-based tenures (Luckert et al., 2011; McGimpsey, 2013). FMLs are granted for periods of up to 20 years, with the possibility of renewal (NAFA, 2015). Companies holding FMLs are required to develop long-term management plans for the FML area. At this time, there are two active FMLs in the northwestern and western regions of the province (Manitoba Conservation, n.d.e). A third FML license area is located in the eastern region, but has been unallocated since 2009. With the exception of the two active FML licenses, the remaining Crown forest in Manitoba is allocated through Timber Permits and TSAs.

Timber Permits

Timber Permits offer commercial and non-commercial access for one year of small volumes of Crown timber to individuals, usually less than 300 m^3 (McGimpsey, 2013). Permits are frequently used for firewood, fence posts, small mill operations, or other small-scale projects (Manitoba Conservation, n.d.e). For larger volumes, a Timber Sale Agreement (TSA) is used.

Timber Sale Agreements

TSAs are smaller volume-based timber allocations, generally ranging from 100 to 10,000 m^3. As outlined below, TSAs can take one of several forms: quota, auction, special allocation, salvage, and community timber allocations (McGimpsey, 2013).

1. The Timber **Quota** System in Manitoba was introduced in 1965 to increase tenure security, investment, employment, and production (Manitoba Conservation, 2015). Volumes allocated under the quota system vary widely, and as of 2013 there were 151 quota allocations across

Manitoba (McGimpsey, 2013). Quota allocations have a 5-year duration period for a specific volume within an FMU harvesting area.

2. **Auction** Timber Sales are used when Crown timber of a specific volume and type becomes available in a location that may of interest to multiple parties. Manitoba Conservation can open a bid to the public and hold an auction based on the highest offered stumpage payment. Auctions are intended to allow opportunity for public access to Crown timber resources as they become available (Manitoba Conservation, 2009).

3. **Special Allocations** allow timber access for up to a 20-year period and can be granted to individuals or businesses. Often, special allocations are used to establish a new business or support an existing one. A business plan is required as well as a 10-year forest management plan (Manitoba Conservation, n.d.d).

4. **Salvage** timber sales are used in cases where cutting rights cannot be granted by competition due to the location, quantity, or quality of the timber (McGimpsey, 2013). Salvage can be awarded to individuals or businesses.

5. **Community Timber Allocations** (CTAs) are direct short-term, volume-based timber awards available for usually less than 5,000 m^3 (Manitoba Conservation, 2011; McGimpsey, 2013). CTAs are unique in that timber resources are made available to the public at the community level, rather than to individuals or businesses, as is the case with timber permits and other forms of TSAs (Manitoba Conservation, 2011; Manitoba Conservation, n.d.d). The allocations are intended to provide employment opportunities and increase social and economic well-being in First Nation, Metis, and northern communities. The CTA is the focus of this study.

1.5.1 The Community Timber Allocation Program

In Manitoba, *The Forest Act* grants CTA cutting rights under the following provision: (ii) to persons or organizations which require the right to cut timber for the purpose of providing employment in a low employment area or community where the establishment of a timber harvesting and utilization program will enhance the social and economic well-being of the area or community (Forest Act Part II 11(1) (b) (ii)).

CTAs can be further divided into two types: 1) commercial awards, which allow timber to be sold and require payment of timber dues or charges, and 2) non-commercial awards, in which timber is intended for community use, and timber charges do not apply (McGimpsey, 2013). The provincial objectives for this allocation, combined with the community-level focus and the fact that the CTA is used primarily by Indigenous communities make the CTA a useful case to assess Indigenous involvement in Canada, particularly linked with community-based forest management.

1.6 Thesis Organization

This study is organized into seven chapters. This first chapter set up the focus of the research, study rationale, guiding research questions and objectives, research approach, and background information for the context of the study. Chapter Two provides a literature review of related fields that establish the foundation of this study: Indigenous forestry, community-based forestry, and program evaluation. The third chapter outlines the methodological approaches of the study. Chapter Four shares the stories of three CTA community case studies, demonstrating the diversity of CTA uses and implementation approaches. Chapter Five then presents a program-level evaluation of Manitoba's CTA through systematically addressing the core research questions, drawing from both community case studies and program-wide documents

and interviews. Chapter Six discusses research findings alongside previous studies to confirm and enhance understanding, and it considers program recommendations to further support the CTA program and build existing strengths. Finally, Chapter Seven summarizes the study findings, discusses research implications, and suggests opportunities and policy recommendations.

CHAPTER 2. LITERATURE REVIEW

2.0 Introduction

This chapter outlines three foundational fields of research that this study is situated within: Indigenous forestry, community-based forestry, and program evaluation. For each of these fields, this chapter highlights concepts and approaches, key discussions within the literature, and relevant studies. This is followed by an outline of a newly developed analytical framework used to identify and evaluate key elements of the CTA.

One caveat should be noted with regard to the scope of the literature review. Due to this study's attention to Canada's forest management regime and Canada's relationship with Indigenous peoples, this review focuses on the development of Indigenous forestry and community-based forestry in a Canadian context. It therefore does not incorporate much of the international work that has been done in these fields, and is intentionally selective.

2.1 Indigenous Peoples and Forestry in Canada

As European colonization expanded across Canada, Indigenous peoples were excluded from resource development and benefits, and Indigenous control over traditional lands decreased (Frideres, 2013; McGregor, 2012; Nikolakis and Nelson, 2015). For many Indigenous communities, this resulted in a loss of traditional social and economic practices as well as knowledge systems (Nikolakis and Nelson, 2015; Tindall et al., 2013; Wyatt, 2008). Wyatt and Nelson (2013: 1) describe the impacts of the loss of control over traditional lands as limiting "… the cultural and material benefits available to Indigenous peoples, while also excluding them from economic benefits associated with the commercial exploitation of forests." Still, Indigenous communities have cultural and economic connections as well as traditional land rights to the forests where they live (Wyatt, 2008). As approximately 70% of Indigenous communities reside

in forestlands, there is significant potential for increased economic development through forestry endeavours (Booth and Skelton, 2011; Hickey and Nelson, 2005; NRCan, 2014). Involving Indigenous communities in forest management within the current system is a challenge, as elements of exclusive policies and tools are still in place and continue to form the dominant system of forest management in Canada (McGregor, 2012).

The fundamental differences in Western and Indigenous worldviews play an important role in the implementation of exclusive policies. The division between these opposing forestry paradigms is also central to the concept of Indigenous forestry (McGregor, 2012; Parsons and Prest, 2003). Throughout most of the 20th century forest management decisions were rooted in a Western anthropocentric worldview, focused on the economic values of colonial governments and a science-based knowledge system (McGregor, 2012; Parsons and Prest, 2003; Wyatt, 2008). In contrast, the ecocentric traditional Indigenous worldview equally values both biotic and abiotic aspects of the environment, and centers on the human-forest relationship rather than simply managing the forest (Parsons and Prest, 2003). Indigenous forestry represents a middle ground between these two worldviews, incorporating aspects of traditional Indigenous forest values with those of sustainable forest management (Booth and Skelton, 2011; Nikolakis and Nelson, 2015; Parsons and Prest, 2003). Parsons and Prest (2003: 780) define Indigenous forestry in Canada as, "sustainable forest land use practices learned over time that incorporates the respectful interaction between the forest and Aboriginal people of today for the benefits of generations unborn." The symbolism of the Two-Row Wampum ('treaty belt') is a representation used to explain the balance of these different perspectives. The wampum belt displays two rows of different coloured beads running parallel but never crossing, representing

the peaceful coexistence of the differing value systems (McGregor, 2012; Stevenson, 2013; Wyatt, 2008).

Recent decades have seen major developments in Indigenous forestry, spurred by court cases defining Aboriginal and treaty rights, increased access to resources, political acknowledgement of the need to involve Indigenous communities in resource management to achieve Sustainable Forest Management, forest certification, and consultation practices (Booth and Skelton, 2011; Parsons and Prest, 2003; Wyatt 2008). In research, important contributions have been made in the form of both reports and grey literature, often supported by the National Aboriginal Forestry Association (NAFA) and the Sustainable Forest Management Network (see: Brubacher, 2007; Fortier et al., 2012; Hickey and Nelson, 2005; NAFA, 2003; NAFA, 2015; Ross and Smith, 2002), in addition to peer-reviewed publications. The Indigenous forestry literature addresses both policy and practice.

Policy work has discussed complications of the 'policy gap' of Indigenous issues in Canada, where responsibilities can fall between federal and provincial jurisdictions (Fortier et al., 2013; Howlett and Rayner, 2001; McGregor, 2012; Tindall et al., 2013; Wilson and Graham, 2005). There has also been much discussion of the implications of policy changes on environmental governance more broadly (Bowie, 2013; Forsyth et al., 2013; Low and Shaw, 2011; McCarthy et al., 2012; McGregor, 2012; Rynard, 2000), and forest tenure reform (Curran and M'Gonigle, 1999; Hickey and Nelson, 2005; McGregor, 2012; Natcher et al., 2009; Nikolakis and Nelson, 2015; Passelac-Ross and Smith, 2013; Ross and Smith, 2002).

In forestry practice, Indigenous forestry scholars have focused on the incorporation of traditional values (Berkes and Davidson-Hunt, 2006; Karjala et al., 2004; Lewis and Sheppard, 2006; Parrotta and Agnoletti, 2007; Sherry et al., 2005; Stevenson, 2013), non-timber forest

products (NTFPs) (Boxall et al., 2003; Davidson-Hunt et al., 2001), and collaboration governance and outcomes (Beaudoin et al., 2015; Bullock, 2011; Fortier et al., 2013; Wyatt et al., 2010; Wyatt et al., 2013). Each of these topics addresses variations of questions on decision-making control and community benefits. The following section situates the current study within the ongoing discussion of Indigenous collaborative arrangements, and particularly forest tenure and timber Licenses.

2.1.1 Collaborative Arrangements

The challenges Indigenous communities face in gaining involvement in forest management, combined with a need for economic development opportunities, have resulted in different forms of involvement in the forestry industry (Wyatt, 2008). Generally, Indigenous forestry research has used case study approaches to explore collaboration within various communities, programs, or contexts. The literature offers an array of assessments and definitions, particularly for joint-ventures and co-management agreements (see Beckley, 1998; Boyd and Trosper, 2010; Brubacher, 1998; Chambers, 2004; Mabee et al., 2013; Smith, 2013). Smith (2013: 93), for example, describes the complexities of co-management arrangements,

> "It is the contention of many Aboriginal groups that enter into co-management arrangements that they are not agreements for co-jurisdiction or coexistence based on recognition of Aboriginal rights and title, but simply a form of cooperation as an interim measure to more equal sharing of power…[Aboriginal communities] bring to the resource management arena what is often seen by representatives of the dominant society – be they politicians, bureaucrats, managers, planners, or scientists – as inferior knowledge and a lack of power and capacity. There is little recognition of the value of

Aboriginal knowledge and that the lack of capacity and power is a result of colonial

efforts to control Aboriginal lands and resources."

Many collaborative arrangements have been implemented across Canada, often designed to

reduce conflict and promote cooperation between industry and Indigenous communities (Tindall

et al., 2013).

In his review, Wyatt (2008) describes a series of possible directions for Indigenous

forestry in Canada, ranging from "Forestry by First Nations" – which is essentially Indigenous

participation in the current forest management system, to "Aboriginal Forestry" – in which

Indigenous interests are dominant within the forest management system. From this spectrum,

Wyatt et al. (2013) developed a typology of Indigenous collaborations in forestry for establishing

control and determining benefits. This typology offered five main forms of collaboration

between Indigenous peoples and the forestry sector in Canada: 1) treaties, agreements, and

memorandums of understanding; 2) Indigenous land use planning; 3) consultation or

participation in management decision-making; 4) Indigenous-held tenures; and 5) economic

partnerships, such as joint ventures and contract agreements (Wyatt et al., 2013) (Table 2.1).

Different forms of collaboration offer varying levels of control and benefits, and such a typology

allows for comparisons. As Wyatt et al. (2013: 29) describe, "distinguishing between different

types of collaborative arrangements can provide a clearer understanding of the outcomes that can

be realistically expected from each arrangement…Understanding the potential benefits of

different arrangements can contribute to developing more specific indicators of progress in

collaboration."

Table 2.1 Typology of collaborative arrangements involving Indigenous peoples in the Canadian forest sector (MOU = Memoranda of understanding) (Adapted from Wyatt et al., 2013: 23 and Wyatt and Nelson, 2013: 4)

Treaties, agreements, MOUs	Management and Planning	Influence on decision-making	Aboriginal-held Forest tenures	Economic roles
Settlement	Aboriginal	Delegated authority	Aboriginal lands	Transformation
Agreement	Comprehensive	Co-management	Aboriginal tenure	Forest planning
Sector MOU	Planning	Advisory tables	Trusts	Harvesting
Case MOU	Activities	Exchange of information	Long-term area	Silviculture
	Land use studies		Significant volume	Employment
			Short-term	Revenue
			Minor and special	Non-timber
		Emerging		
Political	Strategic/ tactical	Strategic/tactical → operational	Operational
Capacity building opportunities to be determined				

The shaded sections in Table 2.1 outline where the CTA program as a timber harvesting license is likely positioned among other collaborative arrangements, based on initial descriptions of the CTA in *The Forest Act*, C.C.S.M. 1988 c. F150 (2017) and other policy documents. The degree of capacity building opportunities will be discussed in Chapters Five and Six of this study. Political, strategic/tactical, and operational levels of decision-making from Wyatt and Nelson (2013) have also been incorporated to clarify the types of decision-making control likely to occur.

Building on the work of Wyatt et al. (2013), an additional inventory of collaborative arrangements across Canada shared insights into how collaboration changed based on policy and context (Fortier et al., 2013). Most relevant to this study, Fortier et al. (2013) note a particularly low proportion of collaboration in the form of economic roles and partnerships in Manitoba (12%) compared to other provinces. This highlights an opportunity for this study to contribute insights into one form of economic roles and partnerships being used in Manitoba, the CTA program.

In addition, although economic roles and partnerships are the most common form of collaboration in other regions of Canada (100% in New Brunswick, 74% in British Columbia, 66% in Saskatchewan), little research overall has focused on these forms of involvement (Fortier

et al., 2012). Similarly, Wyatt et al. (2010) highlighted a need for increased research on the

benefits of economic arrangements, factors that contribute to success, and impacts of

collaboration for economic development. Therefore, this study aims to contribute to further

understanding of the function of short-term forest tenures, the associated economic roles,

benefits derived, and aspects of decision-making control available through this form of

collaboration (Wyatt et al., 2013). To serve these purposes, a program evaluation approach is

applied to assess the facilitating factors, implementation strategies, and outcomes of the CTA

program, as a timber license used by Indigenous communities in Manitoba.

2.1.2 Forest Tenure and Economic Participation

The complications and restrictions of conventional forest tenure design is a topic of much

discussion within the Indigenous forestry literature (Curran and M'Gonigle, 1999; FNFC, 2010;

Hickey and Nelson, 2005; McGregor, 2012; Natcher et al., 2009; Passelac-Ross and Smith,

2013) and the broader forest policy literature (Haley and Nelson, 2007; Luckert et al., 2011). As

Ross and Smith (2002: 1) explain,

> The provincial systems of tenure are a structural and systemic impediment to the
>
> recognition and protection of Aboriginal and treaty rights in forest management in
>
> Canada, the ability to continue traditional land use practices and to translate their
>
> underlying forest values into a contemporary expression being essential to the exercise of
>
> those rights.

In Canada, forested Crown land is often allocated to private industry in the form of long-

term renewable tenures (Booth and Skelton, 2011; McGregor, 2012; Wilson and Graham, 2005).

In recent years, some regions have made tenure reform efforts to better address Aboriginal and

Treaty rights in forest management. For example, in 2003 British Columbia reallocated 20% of

the AAC away from industrial forestry through a Forest Revitalization Plan, with half directed toward Indigenous communities (Pinkerton et al., 2008). In addition, programs such as Community Forest Agreements in British Columbia offer opportunities to incorporate Indigenous values (Booth and Muir, 2013). For these reasons, it is common for insights from this region to be shared in the literature (Booth and Skelton, 2011; Nikolakis and Nelson, 2015; Rynard, 2000). Ontario has also been analyzed where tenure changes have been made, including Sustainable Forest Licenses (Kant and Brubacher, 2008; Zurba et al., 2016), the Whitefeather Forest Initiative (Bowie, 2013; Davidson-Hunt et al., 2013); and the Wendaban Stewardship Authority (Bullock and Hanna, 2012; Mabee et al., 2013). Passelac-Ross and Smith (2013) also describe positive changes in the James Bay Cree's bilateral agreement with the Province of Quebec, Paix des Braves (2002).

Despite these initiatives, the development of a tenure system designed to encompass Indigenous values, rights, and which addresses the historic exclusion of Indigenous peoples is still a work in progress. Currently, forest tenures and licenses focused on harvesting rights can provide economic benefits and skill development opportunities, yet they offer little direct influence over forest management and the inclusion of Indigenous forest values (Nikolakis and Nelson, 2015; Wyatt, 2008). The questions of "how" Indigenous communities participate in forestry and incorporate community values, the various trade-offs involved, and the levels of control and benefits available through these approaches are currently playing out across Canada through diverse initiatives (Booth and Muir, 2013: 155).

2.2 Community-based Forestry

In recent decades, social, economic, and environmental concerns sparked a "legitimacy crisis" for the forestry industry from public and private sectors (Beckley, 1998: 736). Public

pressure for increased government accountability, participation opportunities, and environmental sustainability has led to the implementation of various forms of increased local control and alternative approaches to resource management (Bullock and Hanna, 2012; McIlveen and Bradshaw, 2005; Teitelbaum, 2014). Consequently, under a sustainable forest management regime, forestry practices have shifted to working toward a balance between economic, social, and environmental sustainability (Luckert et al., 2011).

The general term "community-based forestry" is used in this study, referring to, "the management of forested landscapes by community residents for environmental, community, and social benefits; it seeks to vest, to some degree, authority and responsibility for forest management in the community" (Cheng et al., 2011: 89). While this term can refer to different forestry approaches (e.g., municipal forests, co-management arrangements, community forestry, forestry cooperatives, etc.), it is usually associated with four key principles: local control, local benefits, multiple use, and environmental sustainability (Bullock and Hanna, 2012; Charnley and Poe, 2007; Krogman and Beckley, 2002; Teitelbaum and Bullock, 2012; Teitelbaum, 2014).

Although there has been increasing interest in community-based forestry in recent years, this concept is not new to Canada (Bullock and Lawler, 2015). Locally-based forestry arrangements in British Columbia, Quebec, and Ontario that focused on economic development and environmental restoration date as far back as the early 1900s (Teitelbaum et al., 2006; Teitelbaum and Bullock, 2012). Beyond early endeavours in certain regions, the contemporary practice and implementation of community-based forestry remains in its infancy, and experiences are still being reviewed and documented (Charnley and Poe, 2007; McIlveen and Bradshaw, 2009; Teitelbaum, 2014). Potential disconnects between theory and practice is one topic explored in the literature (Charnley and Poe, 2007; Teitelbaum et al., 2006), particularly

regarding levels of community control (Bullock et al., 2017; Krogman and Beckley, 2002). Much of the literature also addresses definitions of 'community forestry' vs. 'community-based forestry', noting distinctions between harvest-centred arrangements and those with additional objectives (Duinker et al., 1994; Krogman and Beckley, 2002). In addition, how 'success' is determined has also presented an ongoing discussion. For example, Teitelaum (2014: 258) refers to decision-making control as "both a defining feature of community forestry and a desired outcome." To this end, several studies explore the basis of community-based forestry 'success' as either inclusive representation or effective forestry practices (see Bradshaw, 2007; Padgee et al., 2006; Reed and McIlveen, 2006; and Reed and McIlveen, 2007). Finally, terminology and typologies for community-based forestry are still evolving, parsing out rights, values, and structures associated with this form of forest management (Bullock and Lawler, 2015; Bullock et al., 2017; Krogman and Beckley, 2002; Teitelbaum et al., 2006).

Despite positive principles and some encouraging outcomes associated with community-based forestry, it is not without its criticisms. Bradshaw (2003: 151) explains, "the concern is that, under extreme forms of devolution, resource allocation decisions may simply reflect the fickle will of the community, without systematic consideration of the strengths and weaknesses of a proposal and its alternatives", emphasizing community credibility, responsibility, and capacity are necessary to avoid problematic outcomes. Others have argued that while communities are directly affected by forestry decisions, this approach may exclude other populations with valid forest interests and concerns – such as urban populations, those with economic dependence on the forest rather than proximity, and minority groups within communities (Agrawal and Gibson, 1999; Beckley, 1998; Duinker et al.,1994; Luckert, 1999).

Reed and McIlveen (2006: 603) emphasize the importance of a 'nuanced perspective on community', paying close attention to representation and inclusivity.

Nonetheless, in theory, community-based forestry presents an alternative approach to conventional industrial forestry in that forest communities are involved in decision-making and benefits from local forests, at least more so than more conventional forestry arrangements (Beckley, 1998; Bullock and Hanna, 2012; Teitelbaum et al., 2006). The core principles of community-based forestry have been linked to those sought through Indigenous forestry, mainly 1) control, 2) benefits, and 3) the incorporation of local values (Booth, 1998; Bullock and Hanna, 2012; Curran and M'Gonigle, 1999; Lawler and Bullock, 2017; Treseder and Krogman, 1999; Zurba et al., 2016). These three principles are described in the following sections.

2.2.1 Local decision-making control

Decision-making control, while essential to discussions of community-based forestry, has been defined using various terms and concepts, including: control, rights, power, empowerment, involvement, decentralization, and devolution (Ambus and Hoberg, 2011; Charnley and Poe, 2007; McCarthy, 2006; Ribot 2002; Wyatt et al., 2010). This study uses the general term "decision-making control" as it encompasses many of these concepts and aligns with other studies on Indigenous and community-based forestry endeavours (such as Wyatt, 2008). In a national survey of community forestry in Canada, Teitelbaum et al. (2006: 417) describe 'the notion of community control' as follows: "that the people living in the community should be directly involved in deciding how the forest should be managed." Much of the literature identifies community control as an assumption of community-based forestry, and distinguishes it from other participatory processes in that community members are actively making decisions, rather than being consulted on them (Bullock et al., 2017; Teitelbaum et al., 2006). Studies have

demonstrated, however, that practice differs from theory when governments are unwilling to pass

on sufficient decision-making control to communities (Ambus and Hoberg, 2011; Charnley and

Poe, 2007; Ribot, 2002). Decision-making control is also discussed in terms of legal reforms and

tenure options (Charnley and Poe, 2007; Duinker et al., 1994; Fletcher and M'Gonigle, 1991).

This is particularly relevant when considering community-based forestry alongside Indigenous

forestry (Booth, 1998; Wyatt, 2008; Wyatt et al., 2010).

Multiple frameworks have been developed to measure and assess levels of control,

including: Arnstein's (1969) ladder of participation, Schlager and Ostrom's (1992) conceptual

framework of property rights, Berkes' (1994) co-management framework, and Buchy and

Hoverman's (2000) analytical framework of public participation. More directly related to

community-based forestry, Krogman and Beckley (2002) developed a spectrum with total

community control and benefits on one end and no control or benefits at the other, while Bullock

et al. (2017) offer a typology distinguishing the various approaches to community forestry

according to rights, governance, objectives and organizational models. Building from previous

research, the current study uses an evaluative framework originally developed by Forsyth (2006)

and also used by Ambus and Hoberg (2011), that gauges the degree of decision-making control

made available using aspects of forest management, and incorporating political, strategic/tactical,

and operational levels of decision-making control (see framework explanation and application in

section 5.5). The evaluative framework (section 5.5) was adapted from Ambus and Hoberg

(2011) for the current study as it focuses specifically on decision-making control in forest

management and was developed, in part, based on key directions for Aboriginal tenure systems

proposed by Ross and Smith (2002). The existing frameworks used in Forsyth (2006) and

Ambus and Hoberg (2011), however, do not categorize the type and degree of benefits offered

through community-based forestry approaches. The current study further develops the evaluative framework to incorporate benefit aspects based on the availability and outcomes of benefits through the CTA.

2.2.2 Local Benefits

In community-based forestry, local benefits stem from economic diversification, increased stability, and access to resources (Beckley, 1998; Bullock and Hanna, 2012). Benefits derived from community-based forestry initiatives are linked to the concept of community economic development (CED), which describes local efforts to economically diversify (Markey et al., 2005; McIlveen and Bradshaw, 2009; Teitelbaum and Bullock, 2012). These endeavours require the presence of some degree of community capacity. This form of development focused on building community capacity comes in "direct contrast with the needs based approach of past regional development policy" (Markey et al., 2005: 132). Such initiatives take stock of existing strengths, skills, and areas for improvement, and structure the design of development initiatives based on existing community capacity and opportunities for building certain areas and developing new capacities.

Community-based forestry practices focus on directing the benefits of the forest toward the local community rather than contributing to the "leakage of benefits" toward large private companies (Teitelbaum and Bullock, 2012: 701). Local benefits can be derived from the development of forest-based economic opportunities such as employment in forestry operations, harvesting of timber and NTFPs, and tourism or recreation activities (Bullock and Hanna, 2012; Teitelbaum and Bullock, 2012). In this way, community-based forestry encourages the participation of community members in planning and decision-making, and works toward achieving sustainable development through local control (Beckley, 1998; Markey et al., 2005;

McIlveen and Bradshaw, 2009). Yet here is another assumption explored within community-based forestry literature: that with local control comes local benefits – which may not always be the case depending on the arrangement in place (Charnley and Poe, 2007; Krogman and Beckley, 2002).

Beyond economic benefits, sustainable forestry practices and related environmental benefits are also associated with the local control of forests. The main idea is that locals are more likely to protect ecosystems they live in close proximity to and depend on, and they are more aware of degradation caused by short-term planning (Bradshaw, 2003; Bullock and Hanna, 2012; Charnley and Poe, 2007; Furness et al., 2015). In addition, smaller forestry operations associated with local management tend to have less of an ecological footprint and be more adaptive to the changing needs of ecosystem-based management practices (Markey et al., 2005). Ecological health and diversity have also been described as, "critical indicators of community capacity and stability" (Markey et al., 2005: 164), highlighting the importance of stewardship and environmental values to local benefits and self-sufficiency.

2.2.3 Local Values

The incorporation of local values in community-based forestry supports and influences multiple-forms of forest use. It presents opportunities for communities to go beyond timber production and establish further opportunities for economic diversification (Tindall et al., 2013; Wyatt, 2008). Teitelbaum and Bullock (2012) described a range of activities that take place in Municipal and Conservation Authority forests such as educational programming, recreation activities, and programs with Indigenous communities for the protection of cultural values. Successful incorporation of local values can support partnerships (Beaudoin et al., 2016), offer innovative approaches to sustainable forest management, such as the 'results-based' and NTFP

inclusive Nisga'a Forest Act in British Columbia (Passelac-Ross and Smith, 2013), and promote

and build equitable relationships (Wyatt, 2008). Local values, however, can sometimes conflict

with economic goals (Nikolakis and Nelson, 2015). Therefore, there is a need to understand how

Indigenous forestry operations incorporate local needs and values (Booth and Muir, 2013).

Sharing approaches and practices is particularly useful as incorporating local values can also

present its own challenges when communities must grapple with balancing traditional values

with business demands and development strategies (Booth and Skelton, 2011).

2.2.4 Facilitators and Challenges of Community-based Forestry

The success of community-based forestry initiatives can be influenced by internal and

external facilitating and challenging factors. Internal factors include the human, social, and

financial capacity of the community itself, such as education levels, skills, communication

abilities, and leadership qualities (Charnley and Poe, 2007; Gunter, 2000; Markey et al., 2005).

As such, community-based forestry projects are more likely to be successful if the design 'fits'

the needs, abilities, and goals of the community (Markey et al., 2005; McIlveen and Bradshaw,

2009). In addition, community support or 'buy in' can be central to success, enhanced by

community participation in the planning process (Charnley and Poe, 2007; McIlveen and

Bradshaw, 2009: 195). Once a plan is in place, however, getting access to financial resources to

cover start-up costs is a common challenge (McIlveen and Bradshaw, 2005; Treseder and

Krogman, 1999). In addition, despite high expectations placed on community-based forestry

initiatives to resolve conflict and produce positive outcomes, the implementation process can be

challenging. Communities can experience internal conflict with communication, personal

dynamics, and achieving open and inclusive processes (Bullock and Hanna, 2007; Reed and

McIlveen, 2006).

External factors also have significant influence over community-based forestry projects, but occur outside the direct control of communities, such as: historical influences and structures, supportive policies, government support through human and financial resources, the presence of adequate 'natural capital', and global economic influences (Bullock and Hanna, 2012; Duinker et al., 1994; McIlveen and Bradshaw, 2005; McIlveen and Bradshaw, 2009; Pagdee et al., 2006; Treseder and Krogman, 1999). While policies that both enable and support community-based forestry greatly contribute to an initiative's success and enable initiatives to take off (Gunter, 2000), generating economic outcomes can present difficulties for small-scale operations. As Pinkerton et al. (2008: 349) explain,

> The main vulnerability of community forests is to market forces which advantage the dominant positions of the majors, create high traction costs for communities, challenge their ability to secure market value for raw logs, and at the same time force them to innovate to survive.

Similarly, Luckert (1999) described economies of scale as likely challenges for community-based forestry initiatives, due to the small volumes involved, particularly when working to balance the cost of small-scale operations with revenue generation.

2.3 Evaluation

This study assesses a provincial timber allocation program based on principles identified in the Indigenous forestry and community-based forestry literature. It also uses approaches, concepts, and terminology from policy and program evaluation literature. Fitzpatrick et al. (2004: 5) define program evaluation as, "the identification, clarification, and application of defensible criteria to determine an evaluation object's value (worth or merit) in relation to those criteria." Histories of evaluation highlight its role in democratic societies, including encouraging

government accountability, data collection, transparency, and improvement, noting the perceived neutrality or objectivity of evaluators (Chelimsky, 2006; Fitzpatrick et al., 2004). Others have put forward the case of "evaluation as advocacy" (Abma, 2006; Greene, 1997; Whitmore et al., 2006). Greene (1997: 25) argues that the questions and criteria of evaluations inherently 'choose a side'. What seems to be agreed on, however, is the focus of evaluation on program improvement (Patton, 2002; Patton, 2007; Rossi et al., 2004).

The application of program evaluation is divided into two main categories: summative evaluation and formative evaluation. Summative evaluations assess general program effectiveness, often using large samples, experimental designs, and before-and-after program quantitative measures (Patton, 2002). Summative evaluations aim for generalizability among other programs, places, and policies. Formative evaluations, on the other hand, focus on program improvement, are case-specific, and often use the details and descriptions of qualitative methods (Patton, 2002). Due to the context-specific nature of the CTA, an emphasis on gathering community perspectives, assessing program implementation and challenges, and ensuring the usefulness of findings to program users, this study applied a formative evaluation approach. At this time, adequate before-and-after data for uses and outcomes of the CTAs are not available, however, a summative evaluation could eventually build on the current study and future monitoring, and be helpful in determining decisions surrounding program expansion, alterations, or funding (Patton, 2002).

As demonstrated in previous sections, evaluation has played a role in community-based forestry practices and policy in Canada (Ambus and Hoberg, 2011; Furness et al., 2015; Maryudi et al., 2012). Specifically, criteria and indicators are tools often used when assessing sustainable forestry practices (see CCFM, 2008; Sheppard, 2005), community-based forestry (see CIFOR,

1999; Teitelbaum, 2014), and the integration of Indigenous values into forest management (Adam and Kneeshaw, 2008; Adam and Kneeshaw, 2011; Sherry et al., 2005). Criteria and indicators involve selecting criteria for key principles and identifying measurable indicators for assessment (CIFOR, 1999). Indicators should be reflective of the local context and address the appropriate level of evaluation (i.e. community, province, or country, etc.) (Galbraith et al., 2007). Achieving the necessary levels of local input and community participation, however, requires in-depth involvement that exceeds the scope of this study. The criteria and indicators approach has also been criticized as top-down, unnecessarily complex, and reductionist (Bell and Morse, 2001; Slee, 2007). While the measurement of indicators for social and ecological outcomes is important, for the above reasons, the usefulness, practicality, and applicability of this approach is reduced for the current study (Maryudi et al., 2012; Vodden, 2009).

Implementation evaluation is also central to the current study, as no previous assessment of the CTA has been conducted. Patton (2002: 161) explains the significance of implementation evaluations as, "when outcomes are evaluated without knowledge of implementation, the results seldom provide a direction for action because the decision-maker lacks information about what produced the observed outcomes (or lack of outcomes)." Accordingly, the current study gathers the initial information on CTA implementation upon which to build future monitoring, and perhaps outcomes-based evaluations. In a time of reconciliation, government, community decision-makers, and researchers have an obligation to critically assess current policies as they relate to Indigenous interests and concerns, and to work to reform and improve current approaches.

2.4 Building the Analytical Framework

Based on the studies identified in the above fields, the following analytical framework aimed to a) position the current study among previous studies, b) guide the development of interview questions and lines of inquiry, c) build the benefit outcomes component of the CTA evaluative framework (see section 3.3.2 and 5.5), and d) compare findings to previous research. This analytical framework outlineed characteristics that incorporate: 1) objectives outlined in Manitoba Conservation's key forest management priorities (Manitoba Conservation, 2002) and *The Forest Act* for the CTA program, 2) types of control and benefits associated with small volume-based tenures and community-based forestry endeavours, and 3) success factors for communities based on those commonly associated with community-based forestry.

Table 2.2 The Community Timber Allocation analytical framework

Characteristic	Description	Source
Program Objectives	Increase co-management, employment and economic development opportunities for Aboriginal communities	Manitoba Conservation's key forest management priorities (Manitoba Conservation, 2002)
	Provide employment opportunities, and enhance the social and economic well-being of the community[5]	*The Forest Act* (Forest Act Part II 11(1) (b) (ii))

Decision-making control	Strategic Control:
	    Land use planning
	    Resource inventories
	    Harvest levels
	    Allocating resource rights
	    Economic rent
	    Standards of practice
	    Compliance and enforcement
	Tactical Control:
	    Dispute resolution
	    Management planning
	    Monitoring and evaluation
	Operational Control:
	    Site planning
	    Operational activities
	    Manufacturing and marketing
		Ambus and Hoberg, 2011
		Forsyth, 2006
		Gunter, 2000
		Charnley and Poe, 2007

Resource-derived benefits	Capacity building Engagement in forestry sector Environmental benefits	Bullock and Hanna, 2012 Markey et al., 2005 Teitelbaum, 2014
Facilitators	Capital:	Charnley and Poe, 2007

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[5] Language taken directly from the CTA description found in *The Forest Act*, C.C.S.M. 1988 c. F150 (2017).

	Human	Gunter, 2000
	Financial	Markey et al., 2005
	Natural	McIlveen and Bradshaw, 2009
	Community support	
	Leadership	
Challenges	Conflict resolution	Bullock and Hanna, 2007
	Communication	Luckert, 1999
	Implementation	Pinkerton et al., 2008
	Economies of scale	Teitelbaum, 2016
	Market forces	

While all sections of the analytical framework are interconnected, each component may play out differently for each community involved in the CTA depending on unique community context and characteristics. The components outlined in this framework guided the development of interview questions, qualitative analysis, and the construction of the evaluative framework (section 3.3.2 and 5.5). The results were used to verify aspects of this framework, expand its categories and otherwise add to it. As Patton (2002: 162) explains, "because it is impossible to anticipate in advance how programs will adapt to local conditions, needs, and interests, it is impossible to anticipate what standardized quantities could be used to capture the essence of each program's implementation." Therefore, this analytical framework was used to inform and develop a more detailed evaluation tool based on study findings.

2.5 Summary

This chapter presented three fields of research that form the foundation of this study: Indigenous forestry, community-based forestry, and program evaluation. Based on previous studies, this research aimed to contribute to understanding of forest tenures allocated to Indigenous peoples, the impacts of economic roles, and the potential capacity building opportunities. As the first assessment of the CTA program, there was also an opportunity to establish an initial benchmark on which to base future evaluations. The literatures described in this chapter not only set up the research space for this study, but offered an evidence-based

platform through which to analyze the CTA. The following chapter will explain the methodology

used for data collection and analysis.

CHAPTER 3. A CASE STUDY OF THE COMMUNITY TIMBER

ALLOCATION

3.0 Introduction

This chapter presents the research design, data collection, and analytical methods used in this study. It begins with an overview of case study research design and case selection. This is followed by an outline of the sources of evidence and the analytical approach used. This chapter concludes with ethical considerations and limitations of the study.

3.1 Case Study Design

Case study research involves context-sensitive explorations of complex real-life phenomena (Yin, 2003). A case study approach incorporates theory to guide data collection and analysis, while integrating multiple forms of data to validate findings, such as observation, interviews, and document review (Yin, 2003). Case studies have been used in many disciplines including public policy (Feld, 1995), medicine (Xu et al., 2014), education (Spohn, 2010), and law (Hucklesby, 2009). This research approach is particularly appropriate and valuable in program evaluation where case studies offer the opportunity to compare both within and between program cases in order to explain, illustrate, or explore program implementation or outcomes in an in-depth and holistic manner (Patton, 2002; Yin, 2003). As Martinson and O'Brien (2010: 163) explain,

In the field of program evaluation, case studies are frequently used to examine program implementation. Because programs must adapt to organizational context and local conditions, case studies are often the method used to examine variations across program

sites. This includes understanding the unexpected consequences of implementation and why implementation looks the way it does.

Three primary forms of case studies are used in program evaluation: exploratory, descriptive, and explanatory (Martinson and O'Brien, 2010; Yin, 2003). Exploratory case studies are used to inform larger studies, and/ or when clear outcomes are not apparent. For example, Hammond et al. (2009) use an exploratory case study to determine perspectives on student-teacher technology use. Descriptive case studies focus on complete descriptions within 'real-life context' (Yin, 2003). Li and Ng (2008) demonstrate this approach in a study of nurses' experiences in caring for patients with learning disabilities. The current study takes an explanatory approach, which focuses on cause-effect relationships or causal links among CTA goals, facilitators, challenges, implementation, and outcomes (Martinson and O'Brien, 2010).

Case studies can also be designed using single or multiple cases, where single cases usually represent a 'critical' or 'representative case' (Yin, 2003: 41), and multiple cases are appropriate for making comparisons across cases and developing insights (Martinson and O'Brien, 2010). A multiple-case design is generally preferred to a single case in that findings can be more supported, nuanced, and robust due to the inclusion of multiple contexts (Martinson and O'Brien, 2010; Yin, 2003). The current study is designed as a multiple-case study of the CTA program using three community cases.

Yin (2003) describes five primary factors in a case study research design as: a) research questions, b) propositions, c) units of analysis, d) logic linking the data to the propositions, and e) criteria for interpreting the findings. Design factors for this study were developed from the initial literature review, and revisited and adapted throughout the research process. The research questions are outlined in Table 3.1. Each of these questions is in turn linked to participant

interview questions (discussed in section 3.4.2). Propositions are intended to direct attention to relevant aspects within the scope of the study. The propositions for this study are also outlined in Table 3.1 below and are developed from the analytical framework presented in the previous chapter (Chapter 2, Table 2.2). The propositions act as a roadmap orienting the analysis toward the original objectives and questions. In addition, the propositions assist in clearly identifying rival explanations for the findings. Units of analysis determine the analytical focus of a study and the level at which findings and conclusions can be made. For example, the unit of analysis can be an individual, a neighbourhood, or a community-based forestry organization as in the case of Clayoquot Sound and Gwaii Haanas (Mabee et al., 2013). For the purposes of demonstrating diversity within the CTA program and its implementation across multiple sites, the primary unit of analysis selected for this study is participating communities. Case selection criteria for the community case studies are described in section 3.2.1. Findings from the case studies, combined with program-level document review and interviews, informed a secondary unit of analysis, the CTA program itself.

Logic linking the data to the propositions is addressed through the analytical processes of content analysis and 'pattern matching'. As Patton (2002: 453) explains, analytical processes refer to "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings." These processes for this study are described in section 3.2.1 below. Finally, without measures of statistical significance used in quantitative methods, developing criteria for interpreting findings can be challenging (Yin, 2003). Here, 'practical significance' can be assessed to determine differences between findings and their implications (Miles and Huberman, 1994: 254), in addition to the

consideration of rival conclusions which can enhance the integrity of the study (Patton, 2002;

Yin, 2003). Potential rival conclusions are also outlined in the table below.

Table 3.1 Research questions, propositions, & data sources

Research Question	Initial Propositions	Rival Explanation
a) Does the CTA program meet the goals and objectives of participating communities?	a) Communities participating in the CTA program implement the allocation in a way that supports specific community goals and objectives. b) The CTA is used to develop capacity for longer term goals and objectives.	i) The CTA program does not meet the goals and objectives of participating communities. ii) The CTA program does not provide the capacity development needed for longer term goals and objectives.
b) Does the CTA program meet provincial objective of increasing employment and social and economic wellbeing?	c) The CTA program increases employment, and economic and social wellbeing in participating communities, in keeping with objectives outlined in the Forest Act and the province's Forest Priorities.	i) The CTA program does not increase access to employment or economic development opportunities and so does not meet the objectives outlined in the Forest Act and the province's Forest Priorities.
c) What factors contribute to community success with the CTA?	d) Communities describe similar factors that facilitate success with the CTA. e) Facilitating factors match those identified in analytical framework (Table 2.2).	i) Communities participating in the CTA program do not identify similar factors that facilitate success. ii) Success factors are unrelated to those previously identified in the literature.
d) What challenges are associated with implementing a CTA?	f) CTA communities experience challenges. g) Communities participating in the CTA experience similar challenges. h) These challenges relate to those identified in the analytical framework (Table 2.2).	i) Communities participating in the CTA did not experience challenges. ii) Communities participating in the CTA program did not identify similar challenges. iii) No challenges associated with the CTA relate to previously identified challenges (Table 2.2)
e) In what ways and to what degree do communities experience decision-making control through the CTA?	i) CTA communities experience operational decision-making control. j) Communities participating in the CTA experience similar degrees of operational control. k) Types of decision-making control relate to those identified in the analytical framework (Table 2.2).	i) Communities participating in the CTA program did not identify an operational level of control (e.g., operational, tactical, strategic). ii) Communities participating in the CTA program did not identify similar degrees of operational control. iii) Types of decision-making control associated with the CTA did not relate to those previously identified (Table 2.2).
f) In what ways and to what degree do communities experience resource-derived benefits through the CTA?	l) CTA communities experience benefits. m) Communities participating in the CTA program experience similar benefits. n) Benefits relate to those to those identified in the analytical framework (Table 2.2).	i) Communities participating in the CTA did not experience benefits. ii) Communities participating in the CTA program did not identify similar benefits. iii) Types of benefits associated with the CTA did not relate to those previously identified (Table 2.2).

3.1.1 Case Selection

At the operational level of forest management, forest licenses can be instruments for increasing Indigenous involvement in forestry. Such licenses may act as stepping stones to building experience, knowledge, and capacity through on-the-ground operations (Wyatt and Nelson, 2013). The CTA program in Manitoba could be considered an instrument for increasing Indigenous involvement in forestry, yet little attention has been paid to its potential effectiveness. Therefore, the CTA program provides a useful case for this study.

This study focuses on the CTA program as, unlike other timber Licenses in Manitoba, this program is explicitly intended to create employment and economic development in Indigenous communities (Manitoba Conservation, 2011; *The Manitoba Forest Act*, 2015). While many First Nation and Metis[6] individuals and businesses in Manitoba access timber through various timber sale agreements (i.e., auctions, special allocations, and quota), the intentions and design of the CTA are particularly relevant to assessing Indigenous involvement and community-based forest management in Canada. As described above (section 1.5.1) the CTA is intended to provide access to Crown timber to communities rather than individuals or businesses (Manitoba Conservation, 2011). In addition, while non-Indigenous communities also qualify for the CTA, all participating communities or organizations involved between 2005 and 2015 have been identified as First Nation or Metis. The timeframe 2005 - 2015 is selected for this study for three reasons: a) 2005 to 2015 captures the period of time before, during, and after the economic downtown in 2007/2008 which greatly affected the forest industry and communities; b) as the individuals associated with the implementation of a CTA are constantly changing, 2005 is a

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[6] In Manitoba, the Manitoba Metis Federation (MMF) uses the term 'Metis' without the accent (Métis). In other regions of Canada, the accent may be used. Throughout this study, however, when referring to the Manitoba Metis, the accent is not used to align with the MMF's usage.

manageable time frame within which to track individuals or events; c) 2005 is the earliest year

government documents and records associated with the CTA are available without having to gain

access to archived records. Of the 17 participating First Nation and Metis communities and

organizations between 2005 and 2015, three community cases that represent the array of

experiences with the program are explored in this study.

3.1.1.1 Community Case Study Descriptions

Beyond the stated objectives of the CTA in *The Manitoba Forest Act*, there are few

parameters guiding the access, implementation, and outcomes of the program. Generally,

applications must be approved by the community (via a letter or other form of communication)

and volumes of timber allocated tend to average approximately 5,000 m^3, however, this can vary

depending on a community's goals, needs, and timber availability. Because the CTAs are

implemented differently in each community, it is appropriate to explore the program at the

community level through individual case studies to account for the diversity and flexibility of the

program, as well as enable cross-case comparisons (Yin, 2003). In addition, this multi-level

approach is more effective for informing action for improvement for both decision-makers and

program participants (Patton, 2002).

Three unique communities were investigated as case studies to explore the various

implementation styles and outcomes in participating communities. Communities were selected

based on purposeful sampling for maximum variation available within the program (Patton,

2002). Purposeful sampling involves selecting cases because they illustrate a feature of particular

interest and illuminate the research questions (Patton, 2002; Silverman, 2005). Purposeful

sampling for maximum variation involves identifying diverse criteria for selecting the cases. For

example, Martinson and O'Brian (2010) describe a federal grant program in which nine case studies were chosen out of 160 job training projects using inclusion decision criteria.

Patton (2002: 235) explains the value in this approach as, "any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared dimensions of a setting or phenomenon." While no 'magic number' for site selection exists, three sites are generally thought to provide "adequate variation and representation", whereas qualitative case studies that include more than 15 sites can lead to challenges with the pure volume of data in need of collection, processing, and analysis (Martinson and O'Brien, 2010: 171). This additional volume of data can overwhelm and dilute findings without contributing additional value through insights, patterns, and trends. As Martinson and O'Brian (2010: 172) state, "case studies are less about the number of cases selected and more about making the right match between the purposes of the study and the selection process, taking into account the diversity of the programs."

Community case selection was based on four decision criteria that influence program implementation and outcomes, yet relate to the overarching exploration of Indigenous involvement in forestry:

i)   the explicit selection of First Nation or Metis communities involved in the program;

ii)   whether they hold a commercial or non-commercial timber allocation license;

iii)   geographic location and proximity to market;

iv)   and duration of time and experience in the program.

The community cases include:

1. **The Manitoba Metis Federation (MMF):** This case represents a non-commercial CTA as well as one of the only organizations involved in the CTA (rather than a discrete community). The MMF was active with the CTA between 2012 and 2013. Timber from this license was used for a specific community program, making it a unique case among CTA communities. The offices of the MMF are located in Winnipeg, but their members are dispersed throughout Manitoba.

2. **Opaskwayak Cree Nation (OCN):** Of the three cases, this community has held a CTA license for the longest term (2007-2009, 2011- 2015), and is in close proximity to an industrial mill where the timber is processed and sold. This community also holds the largest volume of timber through the CTA, making it a unique case among program communities. OCN is located in the northwestern region of Manitoba.

3. **Shoal Lake 40 First Nation (SL40):** This community is located across the Ontario border, although much of their traditional territory is in eastern Manitoba. Shoal Lake 40 First Nation has been involved in the CTA program for several years (2009; 2011; 2012-2013). This case represents a smaller-scale application of the license for mixed-purposes (i.e., community projects as well as training) making it a unique case among program communities. This community is located in the southeastern region of the province.

Characteristics to guide case study selection were derived from government reports, websites, and internal government documents (Table 3.3). Each case study is presented in greater detail in Chapter 4.

3.2 Research Methods and Sources of Evidence

Yin (2003) describes the use of multiple sources of evidence as a key principle in establishing validity in case study research. Multiple sources of evidence facilitate data triangulation or "converging lines of inquiry", which enhance the accuracy and validity of findings (Yin, 2003: 98). Data triangulation enables the investigator to test for consistency across sources, as well as reflect and reinforce findings through multiple sources (Creswell, 2007; Patton, 2002). The following sections describe the sources of data used in this study and how each source was collected and organized. This study combined three sources of evidence: a) internal government documents, b) site visits, and c) semi-structured interviews.

3.2.1 Document Review

Between July 2015 and January 2016, 1,067 internal government documents directly related to the administration and implementation of the CTA program were reviewed[7]. These included permits, sales records, timber records, maps, contracts, and correspondence for 17 communities that held a CTA between 2005 and 2015 (Table 3.2). Each document was logged and categorized (see Table 3.2). Quantitative information from documents (i.e., permits, sales records, timber records) was compiled and summarized to track timber volumes, mill sites, tree species, timber products, and regional trends. Correspondence was analyzed qualitatively using thematic coding. Documents are an important component of evaluation as they provide information on aspects of the cases that cannot be observed, and record events or correspondence that occurred before the evaluation started (Patton, 2002). Patton (2002: 294) explains that, "documents prove valuable not only because of what can be learned directly from them but also as stimulus for paths of inquiry that can be pursued only through direct observation and

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[7] Access to these internal records was negotiated through the signing of a confidentiality contract with the Manitoba government.

interviewing." The documents reviewed provided information on important dates, events, motivations, as well as administrative processes and harvest volumes. This information was used to construct case records as well as triangulate across multiple sources and forms of data to increase the validity of findings (Patton, 2002; Yin, 2003).

Table 3.2 Description of document types and information

Document type	Description
Correspondence	**Formal letters:** Official correspondence between the community and Manitoba Conservation, often outlining the request for timber, or confirming the authorization of a CTA. **Emails:** Informal correspondence addressing questions, clarifications, or concerns.
Maps	Outline specific harvest sites within a Forest Management Unit.
Permits	**Operating permits**: Authorize harvest, outline provincial conditions and site specific conditions. **Work permit**: Authorizes work on Crown land. **Load slips**: Identifies the seller, receiver, tree species, product, and quantity of timber for a delivery.
Sales records	**General sales document:** Official record of payments for timber sale accounts and permits. **Timber sale record:** Monthly outline of timber sale transactions. Includes license number, date of sale, load slip number, volume, species, product, and destination.
Timber records	**Timber returns**: Monthly records completed once timber is delivered to its destination. **Load slips**: Authorize movement of Crown timber, communicate shipping and receiving information such as the names of the shipper and receiver, the timber sale/permit/license the wood was harvested under, species, product information (length of tree or chips), and estimated quantity. **Scaling plans:** Documents outlining licensed scaler to measure Crown wood and the destination of the Crown wood. Includes: name and license number of scaler, scaling location and method, destination, and estimated volume.
Timber Sale Agreement contracts	Official contract document outlining the terms of the CTA timber sale between Manitoba Conservation and the community. Includes involved parties, date of expiry, the FMUs and sections of the land to be harvested (Timber Sale Area), amount and types of timber the signee is authorized to cut, cutting provisions, and signatures of both the community signee and Manitoba Conservation.

3.2.2 Site Visits and Observations

Between July 2015 and October 2015 visits to five communities took place. These communities had ties to the CTA program through past or current involvement. Prior to conducting interviews, several communities were visited to assess the potential utility of research findings, interest, and willingness of community participation in the study. While not all

communities visited were willing or suitable to participate in the data-collection aspects of the study, these meetings and visits refined research questions, guided research design, and contributed to relationship building and knowledge distribution strategies. Time spent at communities included visits to a combination of Provincial Regional Forestry Offices, Natural Resource and Band Offices, logging sites, and timber processing sites. Visits focused on meeting community members and leaders associated with the CTA, but also were intended to take note of the surrounding environment, for example, condition of transportation infrastructure or the presence and condition of harvesting equipment. Projects (e.g., road construction), processes (e.g., harvesting), or sites (e.g., saw mills) related to the CTA were documented through photographs with the explicit permission of study participants.

3.2.3 Interviews

Interviews with specialized informants took a semi-structured, conversational form. Most of the individuals interviewed were currently or previously directly involved in the CTA, and therefore had specialized knowledge of the decision-making and outcomes related to the planning, application, and implementation of the CTA.

Reflecting the analytical structure of the study (see Table 2.2), the interview questionnaire was designed to address participant perspectives and experiences with the CTA as they relate to control and benefits, as well as evaluate the facilitating factors and challenges of the program. The questionnaire included four categories: background, program design, decision-making control, and resource-based benefits (see Appendix A for Interview Questions). Singular questions were intentionally used to acquire specific and focused responses. As Patton (2002: 358) describes, "An analysis of the strengths and weaknesses of a program is not the same as reporting what one likes and dislikes about a program. Likewise, recommendations for change

may be unrelated to strengths, weaknesses, likes and dislikes." For these reasons, participants were directly and singularly asked to specify their thoughts on control, benefits, challenges, facilitators, and opportunities for improvement.

In total, 21 interviews were conducted between August 13th, 2015 and January 25th, 2016. Participants included: government employees, contractors, business partners, industry representatives, community members, and community leadership (Table 3.3). Specialized informants were purposefully selected based on their direct involvement with the CTA program or their decision-making influence regarding CTA implementation or outcomes (Patton, 2002). Following this, a chain sampling method was used to conduct interviews with additional informed participants (Patton, 2002). Interviews ranged from 20 minutes to two hours in length; 11 interviews took place in person, and 10 were conducted over the phone. All but two interviews were audio-recorded and transcribed for review and analysis. Detailed notes were taken for the two interviews that were not recorded at the request of the participants.

Each participant was provided with an information letter, ethics consent form, and information pamphlet about the study prior to their interview. All participants were read a standard introduction and statement of ethics to obtain informed consent. Each participant was then asked all the interview questions, although certain questions and areas proved more relevant or interesting for some participants, depending on their role or involvement with the program. In keeping with ethical protocols, participants could decline to answer any question they were not comfortable answering or end the interview at any time.

Interview participants were contacted in one of three ways: a) publicly available contact information on websites or public documents, b) referral through participant recommendations, or c) contacts provided through the provincial government. This last approach involved regional

foresters informing their community contacts of the research project and either obtaining prior permission to pass on contact information to the researcher, or the participant contacting the researcher directly.

Interview participant numbers varied for each community case. The size of the operation, number of people, capacity of individuals to participate due to time and resource constraints, and participant interest, all varied greatly due to the diversity of communities that access and implement the CTA. It is important to note that nearly all specialized informants within the three case studies were interviewed.

Table 3.3 Interview participant affiliations

	Manitoba Conservation	Manitoba Metis Federation	Opaskwayak Cree Nation	Shoal Lake 40
Community Member	-	-	1	-
Community Leadership	-	2	1	1
Contractor/ Business Partner	-	-	2	3
Industry Representative	-	1	2	
Provincial Regional Forester	5	-	-	-
Provincial Management/ Administration	3	-	-	-
Total: 21	**8**	**3**	**6**	**4**

3.3 Data Organization and Analysis

The following organizational techniques were used throughout the course of data collection to systematically gather and track different forms of data. Document notes were organized by community case, and within community groupings by the CTA reference number and document type. Each document was given a unique identification code (e.g., community_doc_dd/mm/yy), and involved communities were assigned a community ID code (Community #1-17). Upon return from site visits, field notes were typed and organized by community and participant identifiers. Each interviewee was assigned a participant ID code

(Participant #s 1 - 21), and interview transcripts were also organized by community and participant sub-groups (for example: community member, contractor, etc.).

Following this process, data from documents, interviews, and site visits were organized into 'case records' for each community. These case records outlined timelines, summaries, case notes, and the sources of critical information for each community, and prepared information to be accessed chronologically or thematically. This process contributed to source organization for further analysis by aligning data into context, demonstrating significance, and the compiling of raw data for increased case reliability (Miles and Huberman, 1994; Yin, 2003).

Quantitative data derived from the document review were compiled and summarized to build case descriptions and program trends. A detailed description of the overall CTA program was developed first, including outlining trends for 1) harvest volumes, 2) frequency of community requests, 3) and harvest locations for all 17 participating communities between 2005 and 2015 (i.e., the period of available data). This information enhanced and validated findings from participant interviews by providing context, supporting claims, and confirming facts. It also enabled analysis of program wide trends, cross-case comparisons, and situated the community cases within the broader CTA program. Correspondence documents and field notes from site visits were analyzed qualitatively using a similar approach as applied to the participant interviews. From these compiled case records, the final case study narratives were developed (Patton, 2002).

3.3.1 Qualitative Analysis

Qualitative data from interviews, correspondence documents, and field notes were initially organized and analyzed based on responses to the interview questions (Patton, 2002; Saldana, 2008). Once organized, content analysis was conducted, which involves analyzing text

to look for consistencies, meanings, patterns, and themes (Patton, 2002). For this study, content analysis was performed in an iterative fashion using the following stepwise process:

a) interview transcription, review, preliminary analysis and memo-writing;

b) high-level simultaneous and descriptive coding using basic topic and sub-topic labels (Miles and Hubermann, 1994; Saldana, 2008); and,

c) structural coding and pattern mapping using QSR NVivo (Miles and Hubermann, 1994; Saldana, 2008).

The goal of the analysis was to distill, organize, and structure the data for the community-cases prior to conducting program-level analysis. Conducting a thorough descriptive analysis at the community-case level and the program level established a strong foundation for further forms of interpretation and exploration.

This study used multiple methods and perspectives to triangulate findings. Consistencies in findings were tested among the different sources of data (documents, site visits, and interviews) (Patton 2002; Yin, 2003). Findings were also interpreted through both a conceptual lens (i.e., assessing control and benefits) as well as an evaluative lens (i.e., program facilitators and challenges).

3.3.2 Evaluative Analysis

This study used a formative evaluative approach to assess the CTA program. As outlined in section 1.1, objective 2 of this study aimed to develop an evaluative tool for the CTA program. This tool was intended to be applicable and useful to both community and government decision-makers to monitor program progress and development, as well as inform future decision-making regarding program design and needs. This evaluative tool was designed based on decision-making control and resource-derived benefits outlined in the analytical framework. As no

previous evaluation of this program has been conducted, the evaluative tool is designed to be

flexible. Flexibility is needed to capture a range of potential control and benefits available

through the CTA, and to accommodate the range of experiences within the program. In addition,

the evaluative tool was intended to support comparisons to previous studies and new forms of

control and benefits experienced by communities through their diverse use and implementation

of the CTA program. In keeping with Forsyth (2006), Ambus and Hoberg (2011), and Wyatt and

Nelson (2013), a scale of decision-making control ranging from operational, to tactical, to

strategic levels is used. This scale also incorporated the key directions for Aboriginal tenure

systems proposed by Ross and Smith (2002), and used by Forsyth (2006) and Ambus and

Hoberg (2011) (see section 5.5 for the detailed framework explanation and application).

      While this evaluative framework outlined types and descriptions of potential control and

benefits available through the CTA program, the types and degrees to which control and benefits

are experienced by participating communities needed to be confirmed/clarified by the data. The

next step involved determining levels for each of the categories. Data from this study (including

government documents, key informant interviews, and site visits) were used to expand the

existing framework, develop a similar framework for CTA benefits, and populate the

frameworks using a scale from lowest to highest. Ranking categories and thresholds were

established based on participant interviews, document records, and rich case study descriptions.

Similar studies (Ambus and Hoberg, 2011; Sherry et al., 2005; Teitelbaum and Bullock, 2012)

have also applied a comparative method to undertaking context-specific program assessments.

The resulting evaluative tool to assess control and benefits of the CTA was structured in such a

way that future evaluations, by communities or Manitoba Conservation, could apply it and find it

relevant as well as flexible as more is learned about the program and how communities implement it.

3.4 Ethical Considerations

Due to the small population of Manitoba and the relatively small size of the forest industry, ethical concerns for the participants of this study were first and foremost. It should be noted that while complete confidentiality and anonymity for participants was a goal of this study, due to the small number of participants and the content of the interviews (such as decision-making related to professional role), it is possible that those involved in the forest industry in Manitoba may be able to identify some participants based on responses. This concern was mitigated by omitting direct quotations by some participants at their request, and removing all personal identifying information. Unique numerical identifiers were assigned to each participant and used throughout the study. Some data have also been presented in an aggregated fashion, and some responses have been heavily paraphrased. This study acknowledges the importance of representing and recognizing the voices of Indigenous participants, particularly when analyzed alongside industry and government representatives. However, at this time, participants are not identified by role or affiliation in an effort to protect identities due to the small number of participants (21). The study was approved by The University of Winnipeg's Human Research Ethics Board (see Appendix D for ethics certificate). Prior to conducting the research, the researcher also completed the Tri-Council TCPS 2: CORE training.

3.5 Research Limitations

The primary limitations of this research are threefold: generalizability, self-reported data, and access. A common critique of case study methods is the inability to generalize findings beyond the specific cases explored within the study (Patton, 2002; Yin, 2003). This is

particularly true of studies that employ purposeful sampling of cases, as this strategy looks at a small number of specific cases rather than generalizing from randomly selected cases. The goal of the case study approach, however, is not to generalize findings to populations or regions, but to clarify processes and outcomes through depth and detail (Patton, 2002; Yin, 2003). Similarly, the aim of this research is not to produce findings that are widely generalizable to other timber licenses held by Indigenous people across Canada, or even to other timber licenses in Manitoba, but to assess the specifics of the CTA program and share insights from those directly involved. A primary aim of the research is to provide an assessment and develop an evaluative tool that will be useful and relevant to those involved in the program. Both the findings and evaluative tool are widely applicable to communities and individuals who are directly affected by or involved in the CTA. In addition, while findings may not be directly generalizable, case study research contributes more broadly to the 'expansion and generalizability of theories' (Yin, 2003: 10). This study can help inform theories regarding the role small volume timber allocations play in increasing Indigenous involvement in the forestry sector, as well as success factors to community economic development endeavours.

In addition, this study employed qualitative data collection and analysis methods. A common challenge with qualitative data, particularly interviews, is that information is self-reported and subject to all the difficulties of human communication: selective memory, exaggeration, and bias. Interview participants were selected based on their knowledge, involvement, and experience with the CTA program, and therefore may be positively biased toward the CTA's impacts and outcomes. These potential difficulties are the primary purpose for interviewing participants from multiple perspectives (i.e., not just community members or Manitoba Conservation representatives), combining multiple forms of data to validate and cross-

check findings (i.e. interview, documents, and site visits), as well as analytical methods such as rival explanations (Yin, 2003). As Patton (2002: 307) described, "By using a variety of sources and resources, the evaluator observer can build on the strengths of each type while minimizing the weaknesses of any single approach."

Finally, access to communities, individuals, and information was essential due to this study's focus on community use, implementation, and outcomes of the CTA. Access to these sources was often limited by the availability of specific individuals, loss of contact with a potential specialized informant over time, incomplete record keeping, or inaccurate tracking.

3.6 Summary

This study used a qualitative case study approach to assess the CTA. The study was designed using a formative program evaluation and purposeful case study sampling of communities directly involved in the CTA between 2005 and 2015. The purpose of this approach was to provide detailed and descriptive insights into the use, implementation, and outcomes of the CTA program. Multiple forms of data were used to verify findings: documents, site visits, and interviews. An analytical framework was used to develop interview questions and inform qualitative analysis. Finally, an evaluative tool is developed based on both the analytical framework and data collection. The following chapters illustrate how the framework was applied to provide an in-depth exploration of control, benefits, challenges and facilitating factors with the CTA through both community-cases and program-level assessment.

CHAPTER 4. COMMUNITY CASE STUDY DESCRIPTIONS

4.0 Introduction

This chapter covers two communities and one organization involved with the CTA in Manitoba: Opaskwayak Cree Nation, the Manitoba Metis Federation, and Shoal Lake 40. These case studies were purposefully selected to illustrate the diversity of communities and diversity of CTA uses. Community contexts and forestry activities in three different regions across Manitoba are described. Specifically, I apply the analytical framework presented in Chapter 2 (Table 2.2) to outline each community's CTA objectives, uses, facilitating factors, challenges, and outcomes. The analysis illustrates that there are three core applications of the CTA by communities: a business-development focus (OCN), community program use (MMF), and a project-based application (SL40). The community cases demonstrate the flexibility of the CTA program and the breadth of potential implementation styles and opportunities.

4.1 Opaskwayak Cree Nation

Opaskwayak Cree Nation (OCN) is located approximately 630 km northwest of Winnipeg and 40 km west of the Saskatchewan border, where the Pasquia River and the Saskatchewan River meet. Historically, this location was a strategic meeting place for trading and other economic activities, resulting in the community's significance as the "Gateway to the North". The OCN residential community is located on the north bank of the Saskatchewan River, adjacent to the town of The Pas. The OCN reserve land is comprised of 21 parcels ranging from 4 to 5,542 hectares, and totaling 15,630 hectares that extends across the Saskatchewan-Manitoba border (INAC, 2016a). The current population is 5,940 with 3,251 living on reserve

(INAC, 2016b). OCN is a signatory to Treaty 5, and community members speak a Cree dialect linked to the Algonquian language group (Opaskwayak Business Development Corporation, n.d.). Since the 1960s the OCN community has been involved in various economic development projects, including a school, a community centre, and a senior's home, as well as business ventures such as the Kikiwak Inn and the Otineka Shopping Mall (OCN, n.d.). The community has a long history of involvement in natural resource development (OCN, n.d.).

Over time, OCN has taken steps to increase autonomy over their traditional lands and natural resources. This has included entering into the First Nations Land Management Act (1996), implementing the OCN Land Code in 2002, and in 2015 signing a 20-year joint management agreement with the Manitoba government (2015), "to ensure land-use and natural resource management in OCN's traditional territory will continue to be a co-operative effort." Through government departments and business endeavours, OCN works to provide services and opportunities to community members and address social challenges. For example, the 2011 National Household Survey identified an unemployment rate of 17.5 per cent (INAC, 2016c). This is compared to 7.6 per cent of the adjacent community of The Pas, and 6.2 per cent in Manitoba (Statistics Canada, 2011b). The OCN area remains a centre of economic activity for communities in northwestern Manitoba, with activities in agriculture, transportation, tourism, education, and forestry. In addition to the work of the community's Lands Department, OCN focuses on education and capacity building for its community members with the natural resource sector.

4.1.1 Opaskwayak Cree Nation & Forestry

The Opaskwayak Cree Nation community is located in the Boreal Plains ecozone, a commercially viable forestry area (Smith et al., 1998). Industrial forestry has been a significant

factor in the area for decades due to the high ground, adequate forests of mixed species, and transportation access, initially by water through the Saskatchewan River, and later by road and rail (Manitoba Historic Resources Branch, 2000). The OCN community is located within Forest Management License (FML) 2, which was held by Tolko Industries Ltd until November 2016, when it was bought by Canadian Kraft Paper Industries Limited (CBC, 2016). FML 2 covers an area of approximately 8.7 million hectares, with 3.7 million hectares of productive forest land base (Tolko Industries Ltd., 2011). Tolko's operating plan considered planning certain harvest blocks to meet the anticipated volume requirements for quota holders and other Timber Sale Agreements within FML 2, such as CTAs (Tolko Industries Ltd., 2013). The AAC for FML 2 in 2013 to 2015 was 685,000 m^3 of softwood, primarily white spruce, jack pine, and some balsam fir (Tolko Industries Ltd., 2013). It is important to note that in 2002 the harvesting rights for areas classified as "hardwood" or "mixedwood" were withdrawn from Tolko's FML and returned to the Crown. Therefore, the hardwood within FML 2 is managed by Manitoba Conservation (Tolko Industries Ltd., 2007). Timber Sales and other forms of timber access include the rights to harvest these hardwood volumes (Tolko Industries Ltd., 2013).

Roughly 10 km north of the OCN community, the kraft pulp and paper mill is one of the largest employers in the area, employing approximately 300 people (CBC, 2016). Beyond company employment, the OCN community has participated at length in consultation processes for industrial forest operations in the area, a Timber Volume Sampling project (2010), and developed a natural resources training program with the University College of the North. They have also developed local knowledge and expertise through community quota holders, loggers, and small sawmill owners (Manitoba Conservation Annual Report, 2011-2012). All of these factors support OCN's involvement in timber harvesting.

4.1.2 Opaskwayak Cree Nation & The Community Timber Allocation Program

Opaskwayak Cree Nation held six commercial CTAs between spring 2006 and spring

2015 (Table 4.1). Review of timber records, load slips, scaling plans, formal letters, and CTA

agreements reveals that over time, allocations increased from 5,000 m^3 of softwood in 2006 to

25,000 m^3 of hardwood in 2014. This shift from softwood to hardwood is likely related to

increased hardwood opportunities after hardwood was withdrawn from the FML 2 license.

Requested harvest sites were located in FMUs adjacent to the community, as indicated by CTA

agreements, harvest records, and maps.

Table 4.1 Opaskwayak Cree Nation Summary of CTA program involvement

Date	CTA #	Hardwood m^3	Softwood m^3	FMU
2006	3620	--	5,000	57
2008	3625	--	5,000	57
2009	3631	5,000	9,700	52
2011	4623	10,000	6,000	56
2013	4631	19,500	500	50
2014	4636	25,500	500	50

4.1.2.1 Opaskwayak Cree Nation CTA Goals and Objectives

Interviews and documents illustrated OCN's use of the CTA serves several objectives:

community access to Crown timber; an opportunity to create employment and skill development,

and; as volumes have increased, an opportunity to generate revenue for the community, and a

multi-year business endeavour with plans for an eventual community-owned business

(Participants 4, 5, 8).

4.1.2.2 Opaskwayak Cree Nation CTA Implementation

Opaskwayak Cree Nation's use of commercial CTAs supports their goals of employment

and revenue generation. Existing capacity in a community member who is a logger allowed for

initial access to harvesting equipment and experience. As the CTA focus grew to a potential

community business endeavour, higher volumes were requested to increase revenue (Participant 4). An outside contractor was eventually hired to carry out the harvesting on the condition that community members would be represented in the workforce, and with the intention that OCN would eventually buy the business (Participants 4, 6, 8). This business-development arrangement supports plans for the CTA to create employment, generate revenue, and establish a path toward business ownership (Participant 4). Throughout the use of these CTAs, timber has been sold to both local sawmills as well as the Tolko mill, and used for a variety of products, including sawlogs, chipperwood, and hog fuel. Of the 17 communities involved in the CTA, the OCN community and harvesting sites are in closest proximity to a major timber purchaser. Species harvested include spruce, Jack pine, trembling aspen, and white birch.

4.1.2.3 Opaskwayak Cree Nation CTA Facilitating Factors

Interviewees identified OCN's use of the CTA as a success (Participants 4, 5, 16). Correspondence documents referred to OCN as one of the province's 'most prolific' users of CTA. OCN's proximity to Tolko and other local timber buyers assisted in the commercial viability of OCN's business-development use of the CTA, offering market destinations for timber as well as manageable transportation distances (Participants 4, 5, 16). The pre-existing experience of local logging contractors (some community-based) was an asset that enabled timber harvesting (Participants 4, 5, 6, 16). In addition, OCN's Band Council offered administrative and organizational support through the Lands and Resources office (Participant 5). According to a band representative, "OCN has developed capacity to govern and has held that capacity since it took over its administration in 1969… we've demonstrated our ability to be actively involved in economic development" (Participant 4). Finally, OCN's location is

positioned on a critical transportation hub. The network of provincial roads affords OCN efficient timber transportation (Participant 16).

4.1.2.4 Opaskwayak Cree Nation CTA Challenges

Opaskwayak Cree Nation interviewees noted three main CTA challenges: human and financial resources, potential conflict among interested community contractors, and business awareness (Participants 4, 6, 8). While the organizational capacity of the OCN Band Council is an important asset, establishing a business venture involves additional responsibilities for the already small numbers of staff: "It's always about access to financial resources and of course human resources. There's only two [staff] in the natural resource department…" (Participant 4). Interviewees also described difficulties that arose from more than one logger associated with the community seeking timber access through the CTA (Participants 4, 6). This challenge was eventually resolved through internal community negotiations. Additionally, one interviewee noted the need to be 'money-smart' and pointed to challenges with finding and applying 'business-awareness' in CTA situations where the margins can be tight (Participant 6).

4.1.2.5 Opaskwayak Cree Nation CTA Outcomes

In 2015 four community members were employed through OCN's CTA (Participants 4, 6). The logging contractor was hired to provide training opportunities (Participants 4, 6, 8). Employees are trained on driving logging trucks, operating harvesting equipment, and general operational processes (Participant 6). Employees also have an opportunity to eventually buy the logging company (Participants 4, 6). The revenue generated through the CTA was estimated at approximately $11,000 that goes directly back to the community and is used for other natural resource projects (Participant 4). This is above and beyond the employment earnings of community members. The CTA has also established partnerships between OCN leadership,

Tolko, local logging companies, local sawmills, and community members (Participants 4, 6, 8, 16). One interviewee noted that the CTA provided opportunities for community members to conduct harvesting in a way that is conscious of community trap lines and wildlife habitat (Participant 8), illustrating the added-value of using community members who are familiar with local conditions, land uses, and people. Another interviewee commented that harvesting in local areas through the CTA helped to limit fire threats by clearing fuel and debris (Participant 4). All participants directly associated with OCN's implementation of the CTA mentioned the program provided much needed local access to timber to produce forest-derived benefits (Participants 4, 6, 8, 16).

4.2 Manitoba Metis Federation

The Manitoba Metis Federation (MMF) is unique among the community cases as it is an organization rather than a discrete location-specific community, and it is also the only case to implement a non-commercial CTA. The MMF represents the Metis community throughout the Historic Metis Homeland, which lacks distinct boundaries, but ranges from Ontario to British Columbia, and the northern United States to southern parts of the Northwest Territories (MMF, n.d.). The MMF was founded in 1967 and provides political representation for the Metis Community in Manitoba (Bartlett et al., 2012; MMF, 2016a). As a democratic and self-governing body, the MMF conducts financial and administrative matters as well as promotes the political, social, cultural, and economic interests and rights of the Manitoba Metis community. The MMF delivers a variety of programs and services, ranging from child and family services, justice, housing, youth, education, and human resources, to economic development and natural resource management (MMF, 2016b). In addition to an elected President and a Board of Directors, the MMF is divided into seven regional associations that are responsible for

programming and services in their respective regions (MMF, 2016c). Each region is also

comprised of several 'locals' in which members are directly involved (MMF, 2016c). Although

it is not necessary to be a resident of Manitoba to be a member of the MMF, there is an

application process in which individuals demonstrate their ancestral connection to the Historic

Metis Community (MMF, 2016d).

4.2.1 Manitoba Metis Federation & Forestry

The MMF is involved with forestry across the province through its regional sections and

locals. The Natural Resources Department of the MMF is focused on protecting Metis harvesting

rights, and working with government agencies to ensure continued access to these rights as well

as consultation regarding resource development (MMF, 2016e). The MMF recognizes

employment opportunities in timber and non-timber harvesting for its members, as well as

increased involvement in forest management and in the development of decision-making

processes. Departments such as Metis Employment and Training and the Metis Community

Liaison Department have pursued several of these objectives through initiatives like the Metis

Elders Firewood Project (EFP) (MMF, 2016f). This program was established to provide

employment and training opportunities through timber harvesting in areas of high unemployment

(Participants 3, 12). Fuelwood harvested and delivered through the program also serves the

purpose of subsidizing fuel costs for Metis Elders, which is a form of community social service.

4.2.2 Manitoba Metis Federation & The Community Timber Allocation Program

In order to provide the EFP access to timber resources, the MMF applied for salvage

timber permits in 2011, and for a Community Timber Allocation in 2012 (Table 4.2). Although

MMF services and programming are offered across the province, the EFP is operated out of the

northwest district. For Metis communities in the area, seasonal activities such as fishing and

trapping are important contributors to the local economy (Manitoba Conservation, 2011), and the northwest district was chosen as the area to harvest for the EFP to offer additional employment opportunities for community members, particularly in the off-season (Participant 12). In keeping with the objectives of the CTA, regional economic need played a role in this decision.

All timber allocated through salvage permits and the CTA was designated within FML 3, currently managed by Louisiana Pacific Canada and containing some of the most productive forest in Manitoba (Smith et al., 1998). Most of the softwood harvested in FML 3 is used by Spruce Products Ltd., located in Swan River, while the majority of hardwoods are harvested by Louisiana Pacific Ltd (LP) (LP, 2009). Members of the Mountain Quota Holders Association also operate in this region (LP, 2009). The MMF requested harvesting sites in FMU 11, within LP's FML area, and the company agreed to make these blocks available. Harvesting for the EFP took place between spring 2012 and spring 2014. Under the CTA, 1,250 m^3 of hardwood and 1,250 m^3 of softwood were allocated within FMU 11.

Table 4.2 Manitoba Metis Federation summary of CTA program involvement

Date	CTA #	Hardwood m^3	Softwood m^3	FMU
2012	4439	1,250 m^3	1,250 m^3	11
2013	4439	--	--	11

4.2.2.1 Manitoba Metis Federation CTA Goals and Objectives

In the MMF case, the CTA supports the objectives of the EFP program. The EFP has two main objectives, outlined on the MMF website, in correspondence documents, and interviews: to create employment and training opportunities, and to deliver fuelwood to Elders. The CTA provided access to timber to run the EFP program (Participants 3, 12).

4.2.2.2 Manitoba Metis Federation CTA Implementation

The EFP is facilitated through the Metis Community Liaison Department and the Employment and Training Department. These departments share duties in managing the employment/hiring process and the fuelwood orders and deliveries. The volumes of timber required for the EFP have been below the upper limit of Timber Sale Agreement licenses. EFP timber volumes are based on the number of requests for fuelwood from Elders (Participant 3). A coordinator works on-site with the EFP employees and oversees harvesting. Employees harvest and deliver fuelwood based on demand, and this creates seasonal full-time employment for MMF members. While the MMF has been running the EFP for several years (six or seven, estimated Participant 3), a CTA was only used for the program in 2012/2013. In 2013, there was a request to continue the allocation for another year in order to provide more time for harvesting to be completed in 2014. The extension request was due to unexpected delays. In addition, a different harvest block within the same FMU was requested and granted, to assist with the harvest and delivery of the fuelwood.

4.2.2.3 Manitoba Metis Federation CTA Facilitating Factors

Use of the CTA for the EFP is supported by the capacities of the MMF as a large and well-established organization. As one participant (12) responded, "Capacity - you've got [to have] the organizational structure to support [a] small-scale operation like this…the resources and the know-how." Interviewees described organizational capacity as providing access to funds and equipment, as well as administrative support for tasks such as processing payroll (Participants 3, 12). Both leadership and employee commitment play a role in the implementation of the EFP program. One interviewee cited the passion and support of the MMF's president for the EFP program, as well as the dedication of the workers to delivering the

timber to community Elders (Participant 3). Thus, both capacity and the organizational goals and culture helped to facilitate successful use of the CTA.

4.2.2.4 Manitoba Metis Federation CTA Challenges

The main challenges associated with the MMF's CTA were related to the logistics and operational concerns of running the EFP program, such as delivery timing, bad weather (Participant 3), and equipment maintenance (Participants 3, 12). For example,

"The challenges are basically keeping the infrastructure in place. The thing is, assets are always depreciating. For example, the skidder, we initially got one gifted to us and the equipment really needed to be refurbished - different components wear and over time you're spending more on repairs than it would actually cost you to rent or buy" (Participant 12).

In addition, although it was not discussed in interviews, letters and emails revealed that the MMF experienced challenges with CTA administration, specifically in the filing of monthly timber reports, which are required. Delays in reporting can lead to fines from late filing penalties. Reporting and filing challenges may be linked to issues of human capital, likely in the form of additional administrative work for limited staff.

4.2.2.5 Manitoba Metis Federation CTA Outcomes

Interviews indicated that the EFP is successful at providing seasonal full-time employment for six to 10 individuals, depending on the year (Participants 3, 12) (MMF, 2014). These individuals also receive training on equipment use and safety. The CTA was beneficial because it provided, "space to run the employment and training program" (Participant 12) and thus provided a support mechanism for MMF programming. The harvested fuelwood also provided benefits to Elders in the community. An estimated 250 to 300 individuals receive

fuelwood through this program (Participant 3). Over time, the MMF has used other opportunities to access timber, including salvage permits and timber removed by Manitoba Hydro for the development of Bipole 3 (Participant 3). Overall, the MMF's use of the CTA supports its own forestry programming.

4.3 Shoal Lake 40 First Nation

Shoal Lake is located at the Manitoba-Ontario boundary just north of the Canada-United States border. The Shoal Lake area contains seven parcels of First Nation land of approximately 5,000 hectares, and contains two residential communities, Shoal Lake 40 First Nation (SL40) and Iskatewizaagegan #39 Independent First Nation, in the Indian Bay and Snowshoe Bay areas. The Shoal Lake 40 community is part of the Objibwa language group and is a member of the Grand Council Treaty 3 (GCT3, n.d.; Shoal Lake Watershed Management Working Group, 2002; Sinclair and Hutchison, 1998). The current population of Shoal Lake 40 is 633, with 289 members living on reserve (INAC, 2016d). The majority of Shoal Lake falls within the Ontario border (over 95%), while much of two adjacent bays, Snowshoe Bay and Indian Bay, are located in Manitoba (Hoppe, 1998; Shoal Lake Watershed Management Working Group, 2002).

4.3.1 Shoal Lake 40 First Nation & Forestry

In Manitoba, the Shoal Lake area falls within the Pineland Forest Management Section, much of which is designated as provincial park, and includes FMUs 24 and 30 (Manitoba Conservation, 2013). The primary industrial forest license on the Manitoba side of the border is FML 1, which was previously held by Tembec, but this mill was closed in 2009 (Tembec, 2011). Despite this, there has been increased use of the forest resources of FMU 24 in recent years due to policy changes such as recognition of Treaty Land Entitlement, the prohibition of logging in provincial parks, and the increase of protected areas of forests and wetlands (Manitoba

67

Conservation, 2013). The provincial government manages the forest resource interests of over 60 quota holders in this area (Manitoba Conservation, 2013). In terms of commercial forestry activities, the Shoal Lake 40 community has participated in silviculture and tree planting initiatives with the Province of Manitoba.

4.3.2 Shoal Lake 40 First Nation & The Community Timber Allocation Program

Documents indicate that between 2009 and 2013, Shoal Lake 40 held three Community Timber Allocations (Table 4.3). In 2009-2010 the community requested 5,000 m^3 of hardwood, and an additional 1,000 m^3 that was added to the allocation in late 2010. In 2011, a second allocation was requested, this time for 1,000 m^3 of hardwood as well as 1,000 m^3 of softwood. In 2012, Shoal Lake 40 received a third allocation of 1,000 m^3 of hardwood. This allocation was extended in 2013 to a total of 2,000m^3, with the addition of 1,000 m^3 of softwood.

Table 4.3 Shoal Lake 40 First Nation summary of CTA program involvement

Date	CTA #	Hardwood m^3	Softwood m^3	FMU
2009	3087	5,000	--	20
2011	4035	1,000	1,000	24
2012	4036	1,000	--	24
2013	4036	1,000	1,000	24

4.3.2.1 Shoal Lake 40 First Nation CTA Goals and Objectives

Interviews indicated that Shoal Lake 40's primary objective for the CTA was to access Crown timber and contribute to road construction (Participant 14). In addition, correspondence documents also outlined training opportunities for community members. Their main goal was to undertake land clearing for a specific project, rather than being part of a larger, overarching employment or business strategy, for example.

4.3.2.2 Shoal Lake 40 First Nation CTA Implementation

With each CTA, a logging contractor was hired to conduct the harvesting. One interviewee described this type of arrangement as a "benefit agreement", in which profits from the timber are put toward road maintenance work in the community by the contractor (Participant 9). In 2009/2010 the timber was sold and processed for oriented strand board (OSB) at a nearby mill. In following years, 2012/2013 timber was used for fuelwood as well as biomass products and OSB production at another local mill. Both mills are located less than 100 km from the Shoal Lake 40 community. Documents show that Shoal Lake 40 requested specific harvest areas due to the CTA's harvesting role in the road development project.

4.3.2.3 Shoal Lake 40 First Nation CTA Facilitating Factors

Shoal Lake 40 First Nation used the CTA for access to timber several times, each involving a third-party logging contractor. Interviewees highlight that positive relationships between the community and both the logging contractor and Manitoba Conservation contributed to CTA implementation (Participants 9, 14). This community-company-government rapport helped facilitate successful use of the program. In addition, Participant 9 cited the proximity of the Shoal Lake 40 community to Kenora, Ontario and surrounding mills, as this saved the buyer money on timber haul distances and facilitated viable harvesting operations around the community, hence supporting the opportunity.

4.3.2.4 Shoal Lake 40 First Nation CTA Challenges

While some timber harvesting equipment is present in the community and had been used for harvesting in the past, costly maintenance and repairs are needed, as well as additional operational skills to run this equipment again (Participant 14; site observation). In addition, interviewees described challenges in the selection of both buyers and logging contractors based

in the area since the 2008 economic downturn (Participants 14, 15, 18). In recent years, it has been common for logging contractors to leave the eastern region of Manitoba to look for work in areas with more forestry activity (Participant 14).

4.3.2.5 Shoal Lake 40 First Nation CTA Outcomes

The Shoal Lake 40 CTA efforts are directed toward a specific road construction project, and correspondence documents outlined multiple benefits from the CTA involvement in addition to road infrastructure development. These included: road construction, GPS and archaeological training for six community members in 2009/2010, and two community members gaining harvesting and road construction experience in 2012. Positive working relationships were also developed between the community, logging contractors, and Manitoba Conservation representatives (Participants 9, 14). These experiences and relationships are important assets for future allocation endeavors (Participants 15, 18).

4.4 Summary

These case studies were purposefully selected to examine potential diversity in goals and objectives, implementation, facilitating factors and challenges, and outcomes among communities involved with the CTA. While the CTA provided access to Crown timber for all three communities, other objectives ranged from employment and training (OCN), providing a service for community Elders (MMF), to infrastructure development (SL40). This review of community cases also reveals three distinct forms of CTA use:

1) a business-development focus (OCN),

2) community program use (MMF),

3) and a project-based application (SL40).

In addition, factors that facilitate community success include both external factors (i.e., proximity to market and transportation access) and internal factors (i.e., organizational support and leadership), and are closely related to a community's implementation strategy. Finally, all three case studies highlighted training opportunities as an important outcome of their CTA experience. These descriptions, however, do not assess the achievement of policy objectives of the CTA, or the degree of decision-making control communities experience, which is a goal of this research. These questions, along with observations from all participating communities between 2005 and 2015, are addressed in the following chapter.

CHAPTER 5. COMMUNITY TIMBER ALLOCATION PROGRAM EVALUATION

5.0 Introduction

Having demonstrated in the previous chapter the unique experiences of three communities with the CTA, and three different types of CTA implementation and use, this chapter assesses the CTA at the program level. This chapter systematically addresses the study's core research questions, as well as fulfils research objectives 1 and 2 (i.e., contribute to literature on Indigenous forestry involvement in expanding current understanding of small-volume licenses and economic roles; and, develop an evaluative tool that can be applied to future research and monitoring).

Descriptive statistics and summaries present provincial scale program use (section 5.1). Alone, however, these trends provide little insight into on-the-ground implementation, decision-making processes, and outcomes. Therefore, sections 5.2 to 5.5 incorporate qualitative data to explore how communities use the CTA, identify factors that contribute to success in meeting provincial-level and community-level objectives, identify CTA challenges, and determine the types of decision-making control and resource-derived benefits experienced through the CTA.

Results in this chapter are derived from program-related documents of all participating communities between 2005 and 2015, as well as interviews focused on the CTA program in general with a) contractors who have experience working on CTAs with multiple communities, b) industry representatives who buy timber harvested through CTAs, c) provincial representatives who work with communities across the province, and d) community members

directly linked to CTA implementation in their communities. The chapter offers two tools for future evaluation and monitoring: 1) a typology of CTA implementation strategies, and 2) a framework of available control and benefits through the CTA. Results are discussed in the following chapter (Chapter 6).

5.1 Community Timber Allocation Use 2005 – 2015

Between 2005 and 2015 a total of 38 CTAs were granted to 17 Indigenous communities and community organizations, totalling approximately 309,650 m^3 of timber allocated. Six communities applied for non-commercial CTAs for community timber use, while the remaining 11 communities used commercial allocations. Of the 17 communities involved, nine accessed the allocation once with no extensions or repeated use, and eight communities used the allocation more than once, or extended it over several years. One community requested a CTA seven times (Community #3). During the 2005 and 2015 period, 2007 was the peak harvest year based on timber volumes, with approximately 75,750 m^3 allocated (Figure 5.1).
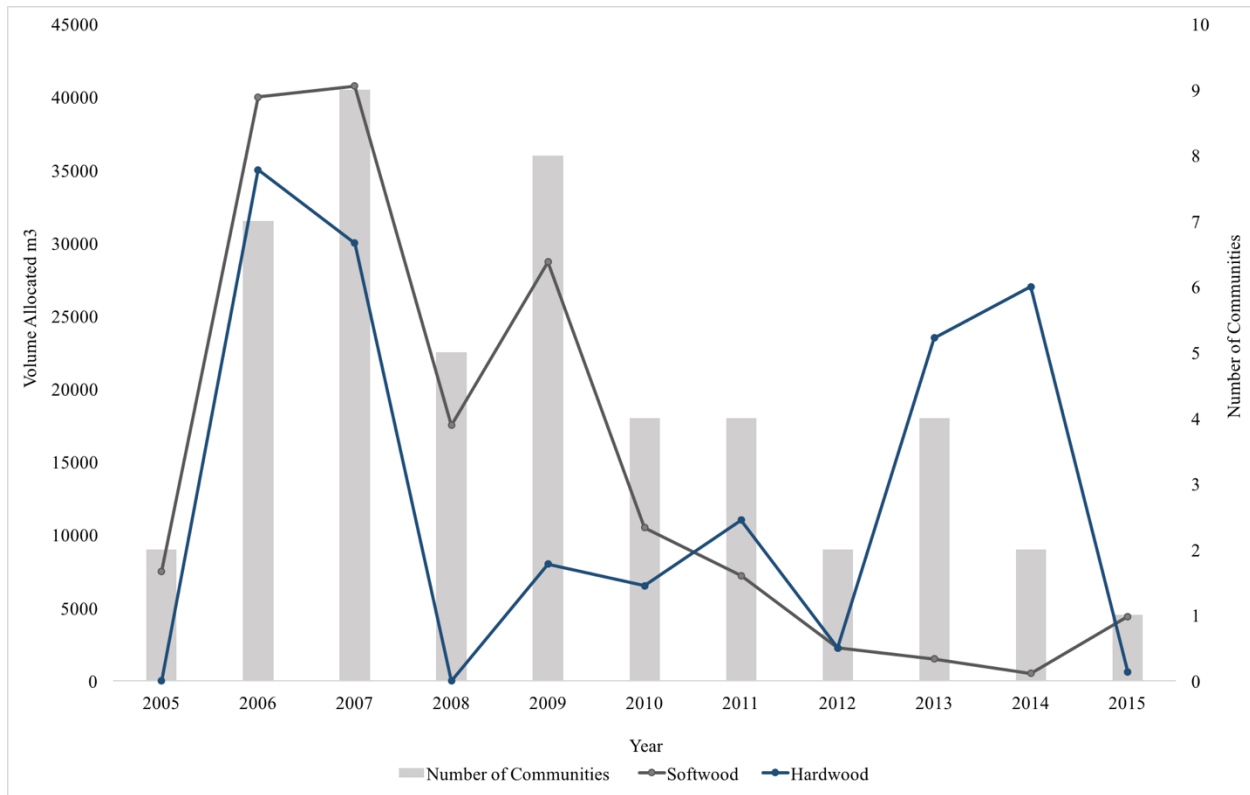
Figure 5.1 Timber volumes allocated through the CTA program, and the number of communities involved each year between 2005 – 2015. Derived from Manitoba Conservation records and documents.

The years 2007 and 2009 demonstrated peak community involvement with nine and eight communities each year, respectively. The years 2005, 2012, and 2014 saw low involvement with two communities involved each year. Lower community involvement in recent years (2010 – 2015) was cited by several interview participants (Participants 1, 2, 5, 6, 7, 9, 14, 16, 19) as well as the Manitoba Conservation Annual Reports for 2010-2011 and 2011-2012, as linked to the downturn in the forest economy. Since the economic downturn, forestry markets have been tight and even large companies require less timber supply. As a result, there are fewer opportunities for small harvest operations and communities to sell their timber to larger mills. Participant 1 described,

I think that the entire forest industry has been depressed for almost 10 years and that has

had the same effect on those with community awards as any other timber harvesters. It's

very challenging times, the prices are low, the costs are high.

Between 2011 and 2014, there was an increase in hardwood harvesting– approximately

80% of CTA timber harvested during this period was hardwood, mostly aspen. This hardwood

trend is related to the geographic distribution of the CTAs, clustered primarily in the northwest

region of the province where there is a viable market for hardwood to be sold at the FML 2 mill.

Overall, use of the CTA has been focused in the northwestern region of the province,

with intermittent use in the central and eastern regions (Figure 5.2). One community participated

in CTA harvesting in the western region, and there was an absence of CTA activity in the

northeastern region of Manitoba. Interviews (Participants 4, 5, 7, 13, 16, 18) and documents

(e.g., timber reports) confirmed that the cluster of CTAs in the northwest region relates to the

FML 2 mill providing a timber market to surrounding communities. The lack of CTA use in the

western region is noteworthy as the western region hosts FML 3 (see Figure 5.2), offering a

viable potential market. Some interviewees (Participants 2, 21) commented on the use of other

forms of timber licenses in this region (specifically, special allocation timber sales and personal

use timber permits).
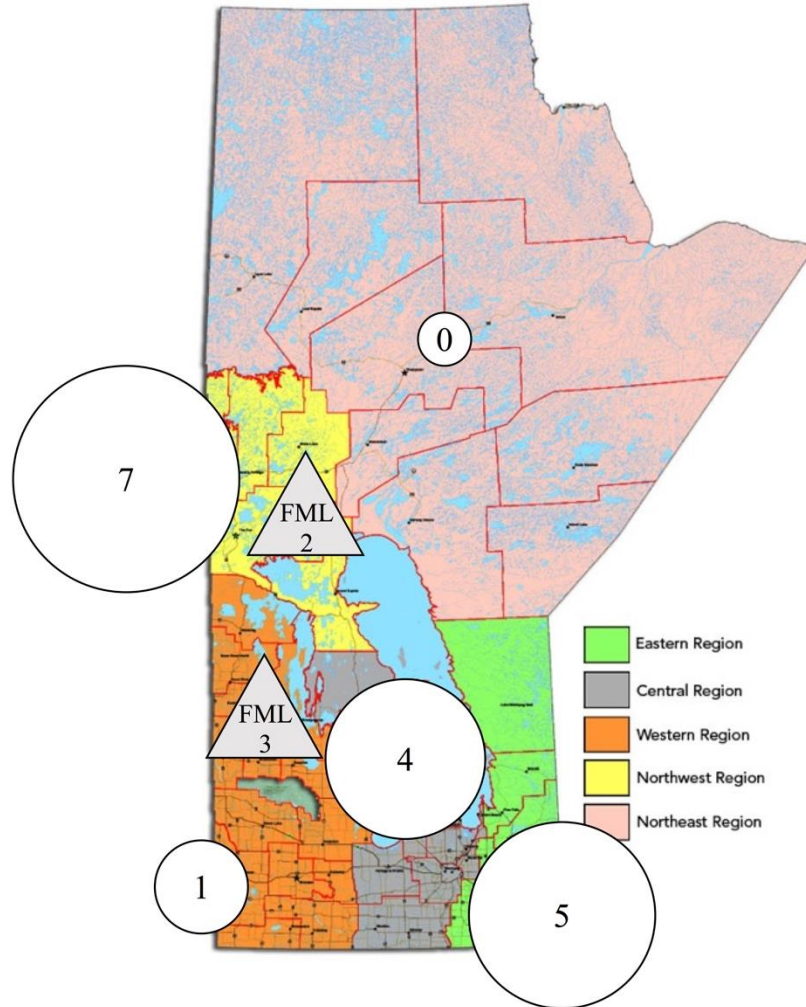
Figure 5.2 Regional distribution of communities holding a Community Timber Allocation, 2005 - 2015. The number and circle size indicates the total number of communities involved in the CTA in each region. Colours distinguish Manitoba Conservation's five management regions. Triangles indicate active FML locations. Map adapted from Manitoba Conservation Districts and Regions Map (n.d.) (Available from https://www.gov.mb.ca/conservation/wildlife/about/who.html)

5.1.1 Community Timber Allocation Implementation Strategies

While not frequently carried out in practice, official processes state that to receive a CTA

a community must submit a plan prior to approval. Plans must describe the volume of timber

requested to harvest and preferred harvesting sites, and present an outline of how the allocation

will benefit the community (Manitoba Conservation, n.d.d). Review of official correspondence

shows that more commonly, communities simply submit a letter of request, without formalizing

their intentions. Case studies in the previous chapter revealed three distinct forms of CTA

76

implementation, identified here as: a) project use (Shoal Lake 40), b) program use (Manitoba Metis Federation), and c) business development (Opaskwayak Cree Nation). Document review allowed further exploration of CTA use among the 17 participating communities, and confirmed similar implementation patterns beyond the three case studies.[8]

Identifying implementation strategies illustrates CTA use 'on the ground', and demonstrates how the CTA can 'fit' with various community goals and strengths (Table 5.1). Differences in CTA implementation generally align with the 'non-commercial' and 'commercial' CTA options. Five characteristics are used to depict community implementation strategies:

1) community goals and objectives,

2) community capacity necessary for implementation,

3) required timber volumes and CTA type requested,

4) number of actors and degree of community involvement, and

5) duration of involvement with CTA program.

Generally, these implementation strategies can be positioned along a continuum, offering lower levels of control and benefits associated with shorter-term project-based uses, and higher control and benefits for longer-term business-development approaches. Information used to develop and classify each strategy is derived from interviews with logging contractors, industry representatives, and Manitoba Conservation employees, as well program documents and records of the 17 participating communities between 2005 and 2015. Community ID numbers are used to maintain community confidentiality. Descriptions of each strategy is presented with supporting evidence below in 5.1.1.1.

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[8] The implementation strategies of two communities could not be identified as there was not enough information available in the documents to characterize CTA intensions and use.

Table 5.1 Classification of CTA implementation strategies

	Short Term		Long Term
Implementation Characteristic	**Project-based Allocation Use**	**Program-based Allocation Use**	**Business Development Allocation Use**
1. Goals and objectives	1. Specific goals and narrow objectives associated with a local project	1. Goals and objectives determined by program design	1. Multiple goals and objectives, often focused on economic development (e.g., revenue, employment) and tied to other regional economic activity (e.g., mill)
2. Community capacity	2. Pre-existing capacity not necessary	2. Adequate degree of human capacity necessary to establish and support program implementation	2. Adequate degree of existing human, technical, and financial capacity necessary, and capacity further developed over time
3. Timber volumes and CTA type	3. Generally smaller volumes (commercial or non-commercial)	3. Varying timber volumes, program-dependent (commercial or non-commercial)	3. Larger timber volumes needed to increase viability and support harvesting business model (commercial CTA required)
4. Number of actors and degree of involvement	4. Generally fewer actors, less direct involvement. May include: logging contractors and/or community members, and Manitoba Conservation	4. Number of actors dependent on program structure. Likely includes program administration, program participants, Manitoba Conservation, and possibly contractors. Actors have a high degree of involvement	4. Generally higher number of actors (administration, logging contractor, employees, timber buyer, Manitoba Conservation) and increased degree of involvement required to maintain the timber harvesting business model and business relations
5. Duration of involvement with CTA program	5. One to two CTAs (project-dependent)	5. Duration intermittent, depending on program goals, needs and timber availability from alternative sources (in the case of the MMF). If a program is well-established, could involve regular-use for the duration of the program	5. Repeated CTA use, longer-term involvement supports and maintains community business/ business development, regional development
	Lower Control & Benefits	**Higher Control & Benefits**	

5.1.1.1 Project-based Allocation Use

The CTA is a useful tool for when a community undertakes a specific project involving timber use or removal. This approach is demonstrated by the Shoal Lake 40 community case in their use of CTAs for a road development project. Documents indicate that at least six other communities used the CTA in a similar manner between 2005 and 2015 (Table 5.2). Other

examples of project-based implementation include building projects (e.g., housing) (Participants 2, 11, 16), or community saw mills (Participant 8, 16). Participant 2 described, "[Communities] have [an] interest in having access to timber … primarily for housing. There's been a little bit of interest for fuelwood, but it's mostly been for housing." Timber volumes requested for these projects ranged from 750 m^3 to 5,000 m^3. Four communities held a CTA once, one community held two CTAs, and Shoal Lake 40 has been involved in the CTA three times. At least four of these CTAs were non-commercial in keeping with the community project applications.

Table 5.2 Project-based implementation strategy traits

Community ID	CTA Type	Project	Volume (m^3)	# of CTAs	Harvest Approach
7	Undetermined	Housing/ sawmill	500 - 4,500	1	Community
12	Non-commercial	Housing project	1,500 - 2,500	2	Contractors*
13	Non-commercial	Housing project	500 - 1,000	1	Not harvested
14	Non-commercial	Fuelwood	500 - 1,000	1	Not harvested
15	Non-commercial	Fuelwood	250 - 750	1	Community
SL40	Commercial	Road development	1,000 - 5,000	3	Contractor

*possibly community business. Uncertainty important to note as it is linked to community goals.

The projects associated with this type of implementation strategy tend to be short-term (<1 year), with specific goals and smaller volumes. As the timber is often intended for internal community use, this strategy usually does not involve a buyer. Documents indicate that in two cases community members conducted the CTA harvesting, two communities did not successfully harvest (for reasons that could not be determined through document review), and two community CTAs were harvested by contractors, although one contractor may have been community-based.

5.1.1.2 Program-based Allocation Use

The program-based implementation strategy emphasizes the role of the CTA in providing access to timber on Crown land. Although currently unique to the Manitoba Metis Federation (MMF), the program-based implementation strategy is worth noting as a distinct approach, different in: a) the program-focused goals and objectives, b) the longer-term and ongoing nature

of the program design, c) the increased involvement of community members as both participants and recipients of the program, and importantly, d) the capacity and organizational structure needed to establish and maintain this type of training program.

Rather than addressing project-specific goals and objectives, program-based implementation serves the aims of community programs existing outside the CTA. In this case, the Elder Fuelwood program existed both before and after the MMF's involvement with this CTA, and so the allocation served pre-existing objectives and supported program delivery. With a program-based strategy timber volumes vary depending on the program in question, although in the case of the MMF, volumes were 1,250 m^3 of hardwood and 1,250 m^3 softwood.

The program-based strategy involves more actors at higher degrees of involvement than the project-based approach. For example, MMF community members were involved not only in timber harvesting (e.g., employment), but also as recipients of services delivered through the community program (e.g., fuelwood), and thus they were recipients of resulting benefit streams created by accessing the program. In the case of the MMF with the EFP, the program design contributes to capacity development.

5.1.1.3 Business-development Allocation Use

The business-development implementation strategy is used by communities with high levels of pre-existing capacity (e.g., relationships with industry/contractors, skills or knowledge from previous business or harvesting experience, access to equipment, financial resources), as exemplified by the OCN case. Seven communities, in addition to OCN, are identified as using a business-development CTA approach (Table 5.3). Generally, these communities used commercial CTAs to sell timber to local mills. In some cases, a community logger or business accessed the timber, in other cases these CTAs supported community-contractor partnerships,

several with multi-year business plans (Participants 9, 16). Although four communities requested

volumes within the 5,000 m^3 threshold, four communities also established agreements to increase

the timber allocated beyond this limit to support ongoing business strategies and partnerships.

Approval of increased volume requests is dependent on community needs and timber availability

in a given area, but these are usually granted. Requesting higher volumes is one way

communities address seasonal employment challenges and maintain operations year-round. As

Participant 4 emphasized,

> By moving [the volumes] up it helps to make [the CTA logging business] viable,
>
> otherwise, why would I invest in it? Why, when I know that a feller-buncher is easily
>
> upwards of a million dollars, why would I do that? On 5000 m^3 a year? It makes
>
> absolutely no sense. I'm setting up people for failure.

Use of the program in this manner also illustrates how it is part of a greater business and

economic development strategy. The communities implementing a business-development

approach are typically involved with the CTA program multiple times (two to seven). Two

communities had initial longer-term plans (indicated through document review) which did not

come to fruition, resulting in involvement of one or two years.

Table 5.3 Business-development implementation strategy traits

Community ID	CTA Type	Project	Volume (m^3)	# of CTAs	Harvest Approach
1	Commercial	Community mill/ local mills	750 – 5,000	2	Contractor**
3	Commercial	Sold to local mills	1,000 – 5,000	7	Contractor
4	Commercial	Sold to local mills	15,000*	1	Partnership
5	Commercial	Sold to local mills	5,000	3	Community
8	Commercial	Sold to local mills	15,000 – 30,000*	1	Partnership
9	Commercial	Sold to local mills	2,500 – 5,000	4	Community
10	Commercial	Sold to local mills	5,000	2	Community
OCN	Commercial	Sold to local mills	500 – 25,000	6	Contractor**

Multiple goals and objectives are linked to this implementation strategy including generating employment, training and skill development (i.e., harvesting as well as business administration), gaining timber harvesting experience and building knowledge, revenue generation, partnership building, and the opportunity to develop a business (Participants 4, 5, 9, 13, 16). These diverse goals can result in higher levels of community decision-making control and benefits. Therefore, while some level of existing capacity is needed for a business-development strategy, this approach can also be used to develop capacity incrementally over time. In this sense, capacity is an ongoing factor which both supports, and is a product of, forest development processes. Using a business-development approach to the CTA, various actors with greater degrees of involvement are required, primarily the addition of buyers and business partners.

5.2 Community Timber Allocation Goals and Objectives

Community goals and objectives with the CTA are diverse. While community participants could speak directly to the CTA goals and objectives of the case study communities (see Chapter 4), a broader perspective was offered through the descriptions of those who have worked directly on CTAs with multiple communities (e.g., Manitoba Conservation employees, logging contractors, and industry representatives) as well as goals outlined in CTA documents. Community goals cited by interviewees ranged from short-term plans for timber access (Participants 5, 11) and experience in timber harvesting (Participants 2, 10), to longer-term goals of forest health (Participants 4, 19) and business development (Participant 4). However, numerous participants identified the following community goals for the CTA: employment and training (Participants 1, 2, 3, 5, 10, 11, 12, 16, 18, 19), capacity building (Participants 1, 2, 5,

19), and economic development (i.e., revenue generation and business development) (Participants 1, 11, 19).

> Generally, yes most of [the communities] are looking for employment or they've got their own wood that they are marketing and they are looking for a place to send wood to, but I would say most communities are doing it because they're trying to generate employment in the area (Participant 18).

In line with community goals discussed above, provincial goals and objectives are identified through objectives outlined in Manitoba Conservation's key forest management priorities (i.e., to increase co-management, employment and economic development opportunities for Aboriginal communities [Manitoba Conservation, 2002]), and objectives outlined in *The Manitoba Forest Act* for the CTA program (i.e., to provide employment opportunities, and enhance the social and economic well-being of the community [Forest Act Part II 11(1) (b) (ii)]). Interviews with provincial representatives supported these objectives, with participants primarily citing that creating access to timber (Participants 1, 2, 9, 19) and economic development opportunities (Participants 1, 5, 9, 11, 13) are the province's primary CTA goals. For example:

> The goal of [the CTA], under the piece of legislation that we cite, is to provide employment in low employment areas ... Unemployment is high, so we're fulfilling that goal, at least that there's some additional employment, and also utilizing the natural resources that are here. (Participant 5)

While both communities and the province aim for timber access, economic development opportunities, and employment through the CTA, community goals address both a wider range

and more complexity in the goals they cite, such as capacity building, forest health, and business development.

5.3 Community Timber Allocation Facilitating Factors

This study considers facilitating factors influencers that contribute to a community's success with the CTA. 'Success', in the context of this study, is defined as i) the allocated timber is harvested, ii) intended outcomes occur, and iii) community goals and objective are met. Documents indicate that 15/17 communities harvested the allocated timber. The two communities that did not harvest timber (communities 13, 14) were not selected as cases in this study, and therefore the challenges they faced could not be fully identified and explored. In addition, two other communities established business partnerships with local loggers or other First Nations (communities 1, 8). These endeavors also faced challenges, and did not meet the expected outcomes. Therefore, not all CTA initiatives are carried out one hundred per cent 'successfully'.

The success factors that emerged from interviews and document review fall into two broad categories: human capital (internal), and geographic location (external) (Table 5.4). Human capital includes administrative and business skills, past timber harvesting experience, and leadership. As well, a community's location primarily affects access and proximately to transportation networks and infrastructure, and timber markets. These factors and their roles as facilitators associated with the CTA are explored in the following sections.

Table 5.4 Factors that contribute to success with the Community Timber Allocation program

Facilitating Factors	
Community capacity: Internal	**Geographic location: External**
Human capital: existing skills, education, and experience within the community[1], specifically regarding:	**Transportation infrastructure**: access roads to harvest sites and established provincial roads to transport the timber to market.
Administrative and business skills	**Access to market**: timber markets for lumber, pulpwood, or fuelwood should be within viable proximately of the community.
Operational experience	
CTA leadership	

[1] Definition derived from Bennet et al., 2012

5.3.1 Human Capital

The facilitating factors most frequently described by interviewees are those related to human capital (Participants 1, 2, 3, 4, 5, 9, 10, 11, 16, 19). In the CTA context, human capital includes the availability and ability of workers to carry out: i) administrative and strategic business tasks, ii) operational aspects of the allocation such as building relationships with local contractors or partners, and iii) leadership abilities for CTA initiation and/or management.

5.3.1.1 Administrative and strategic business skills

Administrative and business skills are needed for the day to day responsibilities of a CTA, as well as business planning and design (for a commercial allocations). These required skills range from correspondence, payroll, and reporting, to strategizing, financing, and marketing. Business design and marketing skills are especially important if revenue generation is a goal. Interview participants cited administrative skills as particularly necessary for managing the ongoing reporting required for a CTA (Participants 2, 4, 11, 16, 19). For some communities, this administrative capacity is present within the community's organisational structure (Participant 4, 12, 19), such as resource management or economic development departments within band councils or the MMF with established administrative employees. Participant 19 described this strength as, "Some communities have infrastructure to help with the budgeting and

the administration, as part of their own day-to-day business they have that in place." These additional responsibilities can be challenging for communities lacking administrative capacity (Participant 2). While administrative skills may be present, the CTA can involve taking on additional tasks and responsibilities, resulting in struggles to keep up with required reporting, dues payments, or correspondence (Participant 11, 16, and identified in the MMF case in Chapter 4). Participant 11 explained,

> The paper work… is not difficult, but unless you've got someone [whose responsibility it is] to know, 'Okay, I've got to get this timber return in for the wood cut this month, I've got to get it in by the end of the next month'. We do find we have problems with reporting.

This observation was confirmed through document review. Correspondence (formal letters and emails) and timber reports demonstrate inconsistent or late filing of timber reporting and tracking through timber reports, load slips, and paying of timber dues. Participants also described 'running the CTA as a business' as contributing to success (Participants 2, 4, 16). 'Business awareness' and being 'money smart' (Participant 6), particularly regarding long-term planning (Participant 16) were cited as assisting in CTA implementation.

5.3.1.2 Operational Experience

Operational skills and past forestry experience are also aspects of capacity that facilitate success. Participants cited community members' past experiences working in the forestry industry as an important asset (Participants 1, 2, 7, 10, 11, 13, 19). Participant 2 stated,

> If they have people in the community who have worked for contractors before operating equipment, that's where their strengths are. When they bring people on board who've worked in the forest industry, who've been trained on equipment, who've seen how

operations work, or people who've been involved in a trade for construction or housing, then there's more of a capacity there to operate.

Community members with experience in the forestry sector not only provide applicable skills and knowledge, but share networks of skilled individuals, and can contribute to equipment ownership or access (Participants 5, 8, 16). Participant 5 explained, "[The communities] come in with all the equipment or they come in subcontracting with three or four different individuals to bring in a whole set of equipment. Sometimes the five pieces of equipment belong to five different guys."

The higher frequency of CTA use in regions with active industrial licenses supports the facilitating influence of higher levels of forestry experience in these regions (Figure 5.2 above; see Table 5.5 below). Having people with previous experience thus provides operational "readiness" where there is equipment and networks ready to go, but also people who understand the culture and business of forestry required to mobilize these other forms of capital.

5.3.1.3 Leadership

While fewer participants overall listed leadership as a facilitating factor, those who did emphasized its importance (Participants 3, 11, 16). Interviewees noted the role of a leader as someone who 'brings the spark' or ignites interest in forestry operations in the community (Participant 16), and one who is willing to take on a leadership role in the planning, application, and implementation of the CTA (Participant 3). Participant 11 also described administrative benefits in having one individual take the lead on the CTA paperwork and reporting. This factor is linked to operational experience discussed above as leaders were commonly those with prior forestry and business involvement.

5.3.2 Transportation Infrastructure

Participants described access and proximity to transportation infrastructure, including provincial road networks and access roads to harvest sites, as an important facilitating factor (Participants 3, 4, 13, 16, 21). Provincial road networks allow easy delivery of timber to market or community users, and reduce fuel costs associated with transporting timber due to proximity to roads, road condition, as well as frequent truck traffic and the use of 'backhauls' (i.e., timber transported on a return journey) (Participant 16). Access and distances can be important factors facilitating success with CTAs as this reduces fuel costs associated with equipment and timber transportation (Participants 4, 5, 6, 10, 16). Therefore, short haul distances and good access to timber resources are key to successful small-scale harvesting endeavours.

Access to transportation infrastructure is an important consideration in planning the most appropriate implementation 'fit' for a community. While transportation infrastructure is particularly relevant for communities pursuing a commercial CTA for market access and cost efficiencies, detailed planning can explore opportunities for collaboration and support between communities, contractors, and industry. As Participant 21 described,

> We understand that it's a lot easier for [the communities] to incorporate an area that's already going to be harvested because if [the community is allocated] a block with no roads, they can't afford to build roads to get there to harvest a small quantity of timber. It's a lot more in their interest to go to an area that has a road or incorporate it with a logging contract that's going to build a road and give them access to wood, so that they don't have that infrastructure overhead as an impediment to them getting their wood.

This demonstrates support and collaboration between communities, industry, and contractors as one important outcome of the CTA.

The role of transportation as a facilitating factor is also reflected in the distribution of communities involved in the CTA, with the majority taking place in regions with developed road networks (Figure 5.2, Table 5.5). Overall, communities located in areas where active industrial harvesting takes place, such as the northwestern and western regions, can take advantage of the existence of roads that provide increased access to timber as well as markets.

5.3.3 Access to Markets

A community's access to or distance from market is described as a facilitating factor by multiple participants (Participants 1, 4, 5, 9, 11, 13, 16). Interviewees indicated that identifying a viable timber market is an important part of the CTA planning process. Distance to market is also a primary deciding factor for contractors and buyers (Participants 1, 4, 5, 7, 9, 13, 16), as distance travelled influences timber pricing. Participant 18 stated,

> [The community] will contact me or another buyer and see if there is a market available for the wood. So yes, depending on where they are we say, 'yes, we're interested in buying the wood'…For the most part, as long as they're within a reasonable distance of the mill, we can come up with a price that would get the wood to flow here.

The influence of market access is reflected in the trends of CTA use between 2005 and 2015 (Table 5.5). Most communities participating in the CTA program during this time are in the northwest region, in close proximately to or within industrial FML 2, while not a single community was involved in the CTA program in the northeastern region (see Figure 5.2 above). In contrast, those communities in close proximately to timber markets are involved in the CTA program for longer and request larger volumes of timber.

Table 5.5 CTA market access, location, and involvement

Region	Number of Communities	Communities w/ repeated use	Volume Range per year (m³)	Distance range from community to market*
Northwestern	7	4	500 – 30,000**	1.5 km – 259 km
Eastern	5	3	500 – 5,000	76 km – 236 km
Central	4	1	250 – 2,500	104 km – 200 km
Western	1	0	2,500	Community use
Northeastern	0	0	0	n/a

*Markets were identified from scaling plans and timber sale records. Distance ranges were determined based on distances from community to mill, based on the assumption that FMU selected for harvesting the CTA volumes are in close proximately to the community.
**Multi-year partnership agreement(s)

5.4 Community Timber Allocation Implementation Challenges

'Challenges' are considered a difficult process or problem encountered with CTA program implementation. Chapter 4 describes community case-specific challenges with implementation, while this section offers program-wide findings, incorporating observations from all participants and documents. Challenges frequently cited by participants include: equipment access and maintenance (Participants 1, 2, 5, 9, 12, 13, 19), location-related challenges (e.g., a lack of market access or transportation infrastructure) (Participants 13, 16, 9), and a lack of various forms of human capacity (e.g., administrative support, business knowledge, experience, and driver's licenses) (Participants 1, 4, 6, 9, 11). Participant 9 described,

> To take on a community allocation, you've got to have some type of equipment, and to start from scratch, it can be a pretty onerous undertaking unless you've got something... you know, the volume of timber isn't really enough to justify getting really good, high-quality equipment.

Community challenges associated with the CTA are often the absence of factors that in other cases facilitate success.

Administratively, some participants also cited challenges with regular reporting and timber tracking (Participant 11, 16). Although interview participants did not specifically cite

paying timber dues as a challenge, documents indicate that regular and on-time payments for commercial allocations, as well as timber reporting, are challenges for communities. These are likely also linked to a need for human capital support.

On a final note, a program-related challenge unrelated to a lack of facilitating factors, but rather attitude or perspective-based, was revealed. There was some concern expressed by non-community participants that frequently extending CTA allocations for multiple years, or by repeatedly allocating communities the same harvest areas, CTA expectations may change. These participants expressed concerns that communities may interpret CTAs as 'guaranteed long-term volumes' (correspondence document), feel 'entitled' to certain areas (Participant 7), or see the CTA as a quota allocation (Participant 16). No participants indicated that these expectations were current or ongoing issues, but there was 'potential' for these challenges to occur.

5.5 Community Timber Allocation Control and Benefit Outcomes

Chapter 4 outlined specific CTA outcomes in the three case study communities. This section incorporates these outcomes alongside reports and records of all communities' involvement to evaluate the type and degree of control and benefits available through the CTA program. To do this, I apply an evaluative framework adapted from elements of Forsyth (2006) and Ambus and Hoberg (2011). Findings provide a profile of the CTA program, incorporate community uses, complement the detailed community case studies presented in Chapter 4, and reveal themes not captured in the community-case studies or the analytical framework through the incorporation of additional perspectives.

5.5.1 Decision-making Control

The evaluative framework for decision-making control lists aspects of forest management within strategic, tactical, and operational levels (descriptions for each aspect of management are

presented in Table 5.6). Data from the current study were incorporated and expanded the

operational categories provided in previous studies (e.g., Ambus, 2008; Ambus and Hoberg,

2011; Forsyth, 2006) to include subcategories derived from participant interviews that described

aspects of the CTA communities have control over.

Table 5.6 Levels of forest management decision-making control and descriptions[9]

	Type	Description
Strategic	**Land Use Planning**	Devising regional land use plans to delineate areas for protection, resource use, and development.
	Resource Inventories	Designing assumptions and parameters for resource inventories to determine the level of production (e.g., Timber Supply Analyses).
	Harvest Levels	Determining harvest levels (AAC) at the regional level, and for individual licenses.
	Allocating Resource Rights	Decision to award tenures as well as extensions, replacements, and transfers.
	Economic Rent	Developing rules for royalties (stumpage), rent, and other fees.
	Standards of Practice	Establishing legal standards for resource management practices.
	Compliance & Enforcement	Establishing rules and procedures to ensure compliance with standards, and penalties for contravention.
Tactical	**Dispute Resolution**	Mediating disputes concerning the activities of tenure holders or Manitoba Conservation decisions.
	Management Planning	Creating management plans that describe objectives and strategies to achieve those objectives for a specific area and duration.
	Monitoring & Evaluation	Evaluating licensee performance using pre-determined criteria and measures.
Operational	**Planning***	
	Site Selection	Determining specific and desired timber harvesting sites.
	Contractor Selection	Selecting logging contractor to hire for timber harvest.
	Timber Type	Decision to harvest hardwood or softwood.
	Operational Activities*	
	Harvest Volume	Determining the volume of timber allocated through the CTA.
	Harvest Method	Controlling the harvest method carried out in FMU.
	Number of Jobs	Determining the number of jobs available to carry out harvesting for CTA.
	Manufacturing & Marketing*	
	Timber Use	Determining timber processing and use.
	Market Buyer	Selecting a buyer for timber products.
	Partnership	Establishing an ongoing business relationship with an individual, logging company, or community beyond that of a hired contractor.

* Sub-categories of the operational component are derived from findings in the current study

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[9] Evaluative framework derived from Forsyth 2006: 82 and Ambus and Hoberg 2011: 941

The framework implements a similar scoring approach as Ambus and Hoberg (2011), which ranks each aspect of decision-making control as: none, low, medium, or high (Table 5.7). Analysis involved scoring each category based on the current forestry legislation, interviews, site visits, and document review. Rankings are rooted in each form of evidence and determined based on findings and experiences from all communities involved in the CTA between 2005 and 2015 (similar to ranking approaches in previous peer-reviewed forest policy research i.e., Ambus and Hoberg, 2011; Sherry et al., 2005; Teitelbaum and Bullock, 2012).

Table 5.7 Degree of CTA decision-making control

	Type	None	Low	Med.	High
Strategic	Land Use Planning	X			
	Resource Inventories	X			
	Harvest Levels (AAC)	X			
	Allocating Resource Rights	X			
	Economic Rent	X			
	Standards of Practice	X			
	Compliance and Enforcement	X			
Tactical	Dispute Resolution	X			
	Management Planning	X			
	Monitoring and Evaluation	X			
Operational	**CTA Planning**				
	Site Selection			X	
	Contractor Selection				X
	Timber Type			X	
	Operational Activities				
	Harvest Volume			X→	
	Harvest Method				X
	Number of Jobs		X		
	Manufacturing & Marketing				
	Timber Use				X
	Market Buyer				X
	Partnership				X

5.5.1.1 Strategic and Tactical Decision-making

Participant interviews, document review, and forest legislation confirm that strategic and tactical types of control are not available through the CTA (Participants 1, 2, 11). Volumes are assigned to specific FMUs by Manitoba Conservation and determined by the available AAC.

Although communities have input and influence over harvest sites, harvest blocks are bounded by Manitoba Conservation prior to harvest. FMUs fall under the management jurisdiction of Manitoba Conservation, while several are included under industrial management within FMLs. Timber Sale Agreements do not require management plans. Operating permits are needed for all harvesting under the CTA. CTA participants must comply with provincial standards and regulations, and must pass harvest site inspections. Therefore, control through the CTA rests firmly at the operational level.

5.5.1.2 Operational Decision-making

The following section presents evidence and rationale for the ranking of each category of operational control.

Planning:

Site Selection: **Medium**

Decision criteria: the frequency of communities directly influencing the FMU selection of where CTA harvesting is to take place [None = never, Low = rarely, **Medium** = sometimes, High = always].

Community control over site selection was assigned a rank of 'medium'. Communities were consistently allocated their preferred FMU for harvesting, however mediating factors, such as the timber rights of FML or quota holders, often take precedence over small licenses like the CTA. Data demonstrated that five communities included maps in their CTA applications that indicated requested harvest locations that were awarded (communities 8, 10, 15, 16, 17). In addition, participants (1, 2, 4, 5) described Manitoba Conservation supporting communities in selecting accessible and appropriate harvest sites for community timber goals (based on desired timber type and volume). Some

94

communities successfully requested specific harvest sites multiple times (Participants 5, 7, 16). However, for those communities located within FML areas, permission from the FML company is needed, as was the case with the MMF harvesting in FMU 11. In addition, in both the western and eastern regions the presence of provincial parks and protected areas as well as numerous quota-holders must be taken into account.

Contractor Selection: **High**

Decision criteria: the ability of communities to independently select harvesting contractors for CTA harvesting [None = none, Low = rarely, Medium = sometimes, **High** = always].

Community control over harvesting contractor selection was assigned a rank of 'high'. From CTA implementation plan conception to operations, communities always have control over whether a harvesting contractor is needed, and if so, which contractor to select. The decision to work with a contractor is determined by a community's implementation strategy (Participants 1, 2, 5, 7, 9, 16, 18, 19). At least four communities opted to hire an outside logging contractor to carry out harvesting (communities 3, 9, 11, 17). Contractors looking to increase harvest volumes may approach communities and offer to assist with a CTA (Participants 6, 8 16). Communities are also able to negotiate contractor partnerships, as demonstrated by the business partnership in the OCN case, and the benefit agreements described in the SL40 case. From the province's position, the structure, design, and implementation of the CTA does not influence contractor selection.

Timber Type: **Medium**

Decision criteria: the frequency of communities successfully awarded the timber type requested through the CTA [None = never, Low = rarely, **Medium** = sometimes, High = always].

Community control in determining the types of timber allocated (i.e., hardwood or softwood) was assigned a rank of 'medium'. CTA agreements and correspondence documents indicate that communities are likely to receive the type of timber they request (hardwood or softwood). However, mediating factors including harvest location, timber availability, and other parties' interests in the wood, affect both the timber type and volume awarded. This is clearly demonstrated in the case of OCN's use of the CTA. The industrial FML 2 holder has the rights to the softwood timber, and in response, the OCN community transitioned from softwood to hardwood as volumes increased. In other regions, CTAs are also balanced with quota holder interests (Participants 2, 16).

Operational Activities:

Harvest Volumes: **Medium → High**

Decision criteria: the frequency of communities successfully awarded the timber volume requested through the CTA [None = never, Low = rarely, **Medium** = sometimes, **High** = always].

Community control over the volume of timber allocated under the CTA was assigned a rank of 'medium → high'. Although the CTA license is designed to allocate a maximum of 5,000 m^3, discretion and flexibility are incorporated into the license, allowing for higher volumes to be allocated based on community needs and timber availability. Therefore, structurally, the CTA limits community control over volume allocation to within a certain range, and accounts for other timber uses. In practice, however, it is common for communities to be approved for volume increases upon request. Document review did not reveal any instances of declined CTA volume requests. Between 2005 and 2015 communities requested volumes ranging from 250 m^3 to 255,000 m^3. Five

communities requested CTA volumes higher than 5,000 m^3, (7,500 m^3 to 25,500 m^3)

(communities 4, 5, 8, 9, 11). Two of these communities were unique multi-year

partnerships, resulting in the exceptionally high volumes allocated.

Harvest Method: **High**

Decision criteria: the ability of communities to influence the harvest method implemented under

the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

> Community control over the harvest method used under the CTA was assigned a rank of
>
> 'high'. Harvest methods depend upon each community's selected implementation
>
> strategy and access to equipment (Participants 1, 2, 11, 19). This is fully decided by
>
> communities according to their own circumstances and preferences. There is potential for
>
> lower levels of control if a contractor is solely responsible for operational decisions
>
> (Participant 2, 9): however communities do have full control over how much
>
> responsibility to assign harvesting contractors during negotiations.

Number of Jobs: **Low**

Decision criteria: the ability of communities to influence the number of jobs created under the

CTA license [None = none, **Low** = restricted, Medium = moderate, High = full].

> Community control over the number of jobs created under the CTA was assigned a rank
>
> of 'low'. While employment is a primary CTA goal for communities, there are several
>
> significant mediating factors that restrict a community's ability to fully determine the
>
> number of jobs linked to the CTA. For job creation, facilitating factors (primarily
>
> proximity to market and human capital), are needed to implement a commercial CTA.
>
> The MMF case is an exception in that this community has the organizational and
>
> financial capacity to support job creation through a non-commercial endeavour.

Otherwise, communities must negotiate the number of jobs available with harvesting contractors and partners, as was the case with OCN as well as with community 8, in which jobs were negotiated as part of the harvesting partnership. While a primary objective of CTA is job creation, the structure of the CTA license does not outline employment strategies, recommendations, or thresholds. In this instance, such unstructured flexibility results in the influence of outside factors on community control over this aspect of the CTA (see sections 6.2 and 7.2 for further discussion).

Manufacturing and Marketing:

Timber Use: **High**

Decision criteria: the ability of communities to determining timber processing and use under the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

Community control over the use of timber harvested under the CTA was assigned a rank of 'high'. Timber harvested under CTAs is used for various purposes, from non-commercial projects such as fuelwood and housing projects (communities 7, 12, 13, 14, 15) to commercial ventures with local mills (communities 3, 4, 5, 8, 9, 10). The MMF and Shoal Lake 40 represent unique timber uses to support a community program and develop transportation infrastructure. Timber use is closely linked to a community's CTA implementation plan. Among the 17 communities reviewed for the current study, all communities retained full discretion over how wood is used (i.e., the option remains with them to pursue commercial or community uses), and thus have a high level of control.

Market Buyer: **High**

Decision criteria: the ability of communities to select market buyers for timber harvested under the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

Community control over the selection of a market buyer for timber harvested under the CTA was assigned a rank of 'high'. The CTA license does not stipulate where timber should be sold. Communities have full control over identifying potential buyers, and negotiating timber prices. Community 3 in the eastern region sold to four separate mills throughout several CTAs, illustrating a high level of discretion on who timber is sold to. At the same time, communities in the northwest region sold almost exclusively to the FML 2 holder (communities 4, 5, 8, 9, 10, 11). In some cases, partnerships established between communities and local mills initiated CTA applications (communities 1, 8, 9).

Partnership: **High**

Decision criteria: the ability of communities to establish relationships with individuals, businesses, or organizations under the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

Community control over the establishment of partnerships related to the timber harvested under the CTA was assigned a rank of 'high'. Business partnership establishment is closely related to a community's implementation strategy (e.g., project, program, or business development). Between 2005 and 2015, three communities undertook unique partnership endeavours using the CTA timber license (communities 1, 4, 8). The establishment of ongoing business relationships through the CTA, with an individual, logging company, or community was also described by several participants (Participants 2, 4, 16). There are no restrictions/conditions on business partnerships associated with the CTA license. Communities are free to partner with whomever they choose, thus having a high level on control.

5.5.2 Resource-derived Benefits

Benefits differ slightly from control in that, while decision-making is the responsibility of key individuals (e.g., natural resource managers, council members, community leaders, contractors, and harvesters), the impact of benefits reach beyond those directly involved in the CTA and can have positive effects at both the community and regional levels. This component of the evaluative framework identifies three main areas of benefits (e.g., Bullock and Hanna, 2012; Markey et al., 2005; Teitelbaum, 2014) to assess: a) capacity building, b) community engagement, and c) environmental benefits (Table 5.8). This framework is based on the analytical framework (presented in section 2.4), and was refined through document review and interviews.

Table 5.8 Resource-derived benefit types and descriptions

Type	Description
Capacity Building	
Community Benefits	Benefits that affect the community beyond those directly involved in the CTA, such as services or infrastructure improvements.
Skill Development	Training opportunities, work experience, education and knowledge building.
Economic Development	Access to timber resources, employment, and revenue generation.
Engagement in the Forestry Sector	
Relationship Building	Development of trust and a sense of inclusion with provincial employees, industry representatives, and local contractors.
Business Opportunities	Opportunity to enter formal partnerships with logging contractors, community organizations, or industry agreements.
Environmental Benefits	
Fire Management	Timber removal and management in areas surrounding community.
Wildlife Management	Harvesting methods accommodate wildlife habitat, works with local trappers and hunters.

A similar scoring approach as used above for "control" (Ambus and Hoberg, 2011) is applied to CTA benefits, using a none to high scale (Table 5.9). At this time, no tracking or record keeping practices related to outcomes of the CTA are used (discussed further in Chapter 6 and 7). Therefore, the evaluation of benefits is based on the reported ability of communities to

experience these benefit outcomes directly through the CTA as related to the CTA license structure and implementation practices.

Table 5.9 Degree of CTA benefits

Type	None	Low	Med.	High
Capacity Building				
Community benefits				X
Skill development				X
Economic development				X
Engagement in Forestry Sector				
Relationship Building				X
Business opportunities				X
Environmental Benefits				
Fire Management		X		
Wildlife Management		X		

5.5.2.1 CTA Benefit Outcomes

The following section explains and presents evidence for the ranking of each category of CTA benefits.

Capacity building:

Community Benefits: **High**

Decision criteria: the ability of communities to experience benefit outcomes for the broader community, beyond those directly involved in the CTA, such as services or infrastructure improvements through the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

Benefit outcomes achieved for the general community through the CTA were assigned a rank of 'high'. Project-based CTAs provided fuelwood (communities 14, 15), timber for housing projects (community 7, 12, 13), or infrastructure for the community, as in the case of Shoal Lake 40. The MMF case also demonstrates social benefits for the community through the support of the EFP. The full value of the wood available is directed widely across the community for use and therefore available benefits from the harvested wood flow throughout the communities.

101

Skill Development: **High**

Decision criteria: the ability of communities to develop and provide training opportunities, work experience, education and knowledge building for those involved in CTA implementation [None = none, Low = restricted, Medium = moderate, **High** = full].

Community benefits from skill development through the CTA was assigned a rank of 'high'. Skill development was a primary goal of the three community case studies, and each demonstrated the ability to achieve this benefit outcome as it related to their implementation approach. In the case of OCN, community members hired to harvest timber under the CTA license were trained on driving logging trucks, harvesting equipment, and general operational processes (Participant 6). Similarly, in the MMF case, skill development was a key objective of the EFP, and employees were trained on harvesting equipment and safety protocols (Participants 3, 12). The project-based approach of SL40 also resulted in skill development benefits. Under the SL40 implementation strategy, community members participated in road construction, GPS and archaeological training harvesting experience (correspondence documents). Document review also revealed commitments to skill development and training through community-contractor partnerships (community 8). Both the variety of skill training and the level of skill training available are high as exposure to opportunities and advanced skill training are available. Use and training on advanced machinery and technologies provide transferrable skills that suggest useful skill development is occurring.

Economic Development: **High**

Decision criteria: the ability of communities to achieve employment and revenue generation benefit outcomes through CTA timber access [None = none, Low = restricted, Medium = moderate, **High** = full].

Community economic development benefits through the CTA were assigned a rank of 'high'. While not all communities elected for a commercial implementation strategy, the potential for economic development benefits form the CTA was demonstrated not only through the three community case studies, but also among other participating communities in document review evidence. For example, timber access is a benefit cited by many interviewees (Participants 1, 2, 4, 5, 6, 7, 8, 12, 14, 16, 18, 19). The CTA provided access to Crown timber to 17 communities between 2005 and 2015. Timber access was directly linked to employment generation. Employment through the CTA was the most frequently cited benefit among interviewees (Participants 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16, 18). The OCN and MMF case studies also demonstrated seasonal employment was made available for two to 10 individuals (OCN four, MMF six to 10). While these numbers are modest relative to the provincial forestry firms or those in other jurisdictions, the jobs created through the CTA are very important in the regions they serve. Documents indicate that other communities were seeking employment for five to 15 individuals (community 8). In addition, revenue generation for community entities was a benefit commonly cited by interviewees (Participant 1, 2, 4, 5, 9, 11, 16, 18). While revenue generation is not an objective of all participating communities, it is not tracked or reported for any community and therefore estimated revenue amounts are not possible. This is an important limitation on assessing benefits through the program but also

program monitoring and success (discussed further in Chapters 6 and 7). Overall, the

program is accessed mainly by communities in underdeveloped regions and produces

jobs and revenues that would otherwise not exist. Therefore, the benefits produced are

disproportionately important in the served communities.

Engagement in Forestry Sector

Relationship Building: **High**

Decision criteria: the ability of communities to develop trust and a sense of inclusion with

provincial employees, industry representatives, and local contractors through the implementation

of the CTA license [None = none, Low = restricted, Medium = moderate, **High** = full].

Relationship building benefits experienced by communities through the CTA were

assigned a rank of 'high'. Opportunities to build positive relationships with contractors,

Manitoba Conservation representatives, and industry were cited as a benefit by both

community and non-community participants (Participant 1, 2, 4, 5, 7, 9, 19). The OCN

and SL40 community case studies, in particular, demonstrate several ongoing positive

relationships built through the CTA. Over the several years of involvement with the

CTA, OCN established a positive relationship and open lines of communication with the

FML 2 holder, several logging contractors, and Manitoba Conservation. Similarly,

although a different implementation approach was taken, a SL40 community

representative reported positive working relationships with Manitoba Conservation and

logging contractors involved in the CTA (Participant 14). Although the extent of

relationship building benefits could not be confirmed through document review,

documents did indicate partnership building among communities, businesses, and

organizations based on CTA licenses in several instances (communities 1, 4, 8, 9).

Business Opportunities: **High**

Decision criteria: the ability of communities to enter formal partnerships with logging contractors, community organizations, or industry agreements [None = none, Low = restricted, Medium = moderate, **High** = full].

Community opportunities to establish business partnerships through the CTA were assigned a rank of 'high'. The structure and design of the CTA license does not stipulate or restrict how the CTA may be implemented, and communities are free to pursue implementation strategies that align with their goals or objectives, and are likely to maximize benefit outcomes. The OCN case is a primary example of a beneficial business opportunity established through the CTA, in which an ongoing partnership has been established. As previously mentioned, four other communities also developed business partnerships through the CTA, each unique to the community context (communities 1, 4, 8, 9). Overall, for communities that accessed the CTA, new and in some cases long-term business opportunities occurred that may not otherwise have occurred without the CTA.

Environmental Benefits

Fire Management: **Low**

Decision criteria: the ability of communities to carry out timber removal and management in areas surrounding the community for the purposes of fire mitigation through the CTA [None = none, **Low** = restricted, Medium = moderate, High = full].

The ability of communities to manage fire risk through the CTA license was assigned a rank of 'low'. Although timber harvesting in local areas can certainly contribute to fire mitigation, the benefit was linked to CTA outcomes by only one participant (Participant 4), and documents and other interviews suggest this is more of a byproduct of local

timber harvesting then a direct benefit. Throughout the province of Manitoba, all forest

management aspects, including fire mitigation efforts, are managed by either Manitoba

Conservation or the FML holder. This is not to say that fire management is not important,

on the contrary given recent experiences in Canada's boreal communities (e.g., Fort

McMurray, Slave Lake); however, the CTA is not widely accessed for fire management

purposes. Rather, other initiatives, such as the Manitoba Firesmart Program, focus on fuel

management for communities and home owners that might also fill these needs

(Manitoba Conservation, n.d.f).

Wildlife Management: **Low**

Decision criteria: the ability of communities to accommodate wildlife habitat and work with

local trappers and hunters through CTA harvesting [None = none, **Low** = restricted, Medium =

moderate, High = full].

> The ability of communities to accommodate wildlife habitat and work with local trappers
>
> and hunters through CTA harvesting was assigned a rank of 'low'. Similar to fire
>
> management benefit outcomes, while communities do have a high level of control over
>
> the harvesting methods used for the CTA, wildlife management outcomes are a
>
> byproduct of local community harvesting rather than a CTA objective. Again, only one
>
> person (Participant 8) cited wildlife habitat and protection benefits achieved by
>
> community members harvesting rather than outsiders. In addition, in many cases, the
>
> volumes and harvesting areas allocated under the CTA are too small to meaningfully
>
> impact wildlife population management. However, communities are likely involved in
>
> the wildlife management component of fire management through other forms of
>
> involvement, such as consultation processes.

5.6 Summary

This chapter presents the results of a program-level evaluation of the CTA license. The CTA is used more frequently in some regions of Manitoba (northwestern and eastern) than others (northeastern and western). Through community CTA use, three community implementation strategies were identified based on: 1) community goals and objectives, 2) community capacity necessary for implementation, 3) required timber volumes and CTA type requested, 4) number of actors and degree of community involvement, and 5) duration of involvement with CTA program. This characterization revealed project-based, program-based, and business development approaches. These implementation strategies align with community goals and objectives which focus on economic development, capacity building, and employment and training. These findings are discussed in relation to previous research in the following chapter.

Several forms of facilitating factors were identified, including: high levels human capacity in administrative skills and past forestry experience, along with close proximately to road networks and timber markets. At the same time, community challenges associated with the CTA are often the absence of factors that in other cases facilitate success, such as a lack of market access or transportation infrastructure, or administrative support and business knowledge. In addition, an attitudinal challenge was identified in which industry and provincial representatives expressed concern regarding the potential for enhanced community expectations of the CTA.

Overall, decision-making control with the CTA rests firmly at the operational level, with contractor selection, harvest method, timber use, market buyer, and partnership establishment ranking highest. Finally, communities experience high levels of benefit outcomes in both

capacity-building benefits and engagement in the forestry sector. In contrast, environmental benefits were given a rank of low for the CTA.

The above results are discussed in the following chapter (Chapter 6) within the context of community-based forestry and Indigenous forestry literature to examine the role this harvesting license plays in increasing Indigenous involvement in forestry in Manitoba.

CHAPTER 6. THE COMMUNITY TIMBER ALLOCATION: A MECHANISM FOR INVOLVEMENT?

6.0 Introduction

The results presented in the previous chapter offer insights into goals, objectives, and control and benefits available through the CTA, as well as facilitating factors and potential challenges. This chapter synthesizes findings from the program evaluation and links to findings in previous research to confirm and refute findings. This discussion also considers program recommendations to further support the CTA program and enhance existing strengths. The chapter concludes with a discussion on the role the CTA plays in increasing Indigenous involvement in forestry, and revisits the conceptual framework from Chapter 1 to refine relationships among the program components examined in this study.

6.1 Levels of Involvement in the Community Timber Allocation Program

Manitoba is home to 63 Indigenous communities, with the majority residing in forested areas. This study found that 17 Indigenous communities and community organizations participated in the CTA. Many communities, including those who have held CTA licenses, are involved through other forms of timber licenses in Manitoba. The total number and type of timber licenses held by Indigenous people in Manitoba could not be confirmed as records are not kept according to racial identification, and only estimates could be made. While the hesitation to track timber based on racial or cultural identification is understandable, this is a common challenge when assessing Indigenous-held forest tenures in Canada, as described in the National Aboriginal Forestry Association's First Nation-held Forest Tenure reports (Brubacher, 2007;

NAFA, 2003; NAFA, 2015). The NAFA report (2015) data collection efforts found the only provincial government that publically posts forest tenures held by First Nations is British Columbia; and as a result, data used in the NAFA report were limited to public sources. Similarly, only limited information on Timber Sale Agreement harvesting in Manitoba is publically available and therefore restricts comparing Indigenous CTA involvement with other forms of timber access. For example, a confidentiality agreement was needed for this study to access CTA information from the provincial government such as communities involved, and timber type and volumes allocated. In light of this, monitoring and reporting of TSA allocations across the province would be helpful and could be used to elevate awareness of available timber licenses, increase transparency, and inform efforts to support timber license updates and improvements.

Interview participants also identified a lack of program promotion as potentially related to the number of communities involved in the CTA program (Participants 1, 16, 18). Some participants linked the absence of promotion with community confusion and a general lack of awareness regarding available harvesting licenses for communities, as was the case with communities that were unfamiliar with the forestry sector in general. As one contractor, who has worked on the CTA license with multiple communities, stated,

I think there's a lot of good to come out of [the CTA] and I feel a lot of misinformation right now that doesn't need to be there. I think this would be a good program for the government to promote and I'm kind of surprised they haven't done more to promote it (Participant 18).

Other interviewees cautioned against heavy promotion of the program due to challenges associated with the timber harvesting business, and the fact that the program offers little support to communities outside the direct allocation of timber, potentially making it a risky endeavour

for communities lacking previous forestry experience (Participants 9 and 16). From a program design perspective, this is a noteworthy finding as the short-term, small-volume structure of the CTA is likely most useful as a capacity-building introductory step into the forestry sector. The lack of additional support could deter potential participants. Thus, a lack of supportive resources (e.g., human, technological, and financial) and capacity are likely constraints to program use. Future program evaluation research could explore barriers to CTA involvement through discussions with communities who have not used the CTA. The regional distribution of community involvement also illustrates opportunities for increased promotion or support, particularly in the western, northeastern and central regions.

In addition, document review reveals that not all communities involved in the CTA successfully harvested the timber allocated (communities 13, 14). This is not unique to the CTA, or in fact, timber licenses in Manitoba. Beaudoin (2012) points out that although the British Columbia government allocated 10% of the provincial AAC to Indigenous peoples, only 30% of this available AAC was being harvested. Booth and Muir (2013) attribute such outcomes as indicative of the inadequacy of timber allocations to increase participation. In the case of the CTA, it is likely these communities faced challenges with the harvesting process, such as access to expertise, equipment, or weather and environmental setbacks. The CTA program offers a strong foundation to further develop this form of access to better support community involvement and success. This limitation highlights how provincial policies intended to increase involvement in forestry and development also require custom supports to aid implementation to ensure the desired effects are realized by target populations.

This study also identified three CTA implementation strategies (i.e., project, program, and business development), made possible by the CTA program's intentionally flexible design.

The implementation approaches the current study has characterized can inform decision-making, assist in aligning community expectations and outcomes, and enable evaluation within the context of a community's goals and objectives, rather than imposing external expectations on CTA use and outcomes. A community's implementation of the CTA can change as capacity is built over time, and goals and objectives evolve (discussed further in section 6.6). These findings also contribute to existing classifications of Indigenous forestry collaboration in Canada, furthering understanding of implementation and outcomes of tenure arrangements and economic roles (see Fortier et al., 2012; Wyatt et al., 2010; Wyatt et al., 2013 - example outlined in Table 2.1). Specifically, findings from the current study outline facilitating factors and challenges, as well as elaborate on the types of control and benefits associated with the harvesting endeavours described in the framework presented by Wyatt et al. (2013).

Similarly, community-based forestry literature describes endeavours as more effective when reflective of community culture, values, and the surrounding environment (Bullock and Hanna, 2012; Duinker et al., 1994; Teitelbaum et al., 2006). In a Canadian context, community-based forestry organizations demonstrate diverse objectives and varying degrees of environmental sustainability (Teitelbaum et al., 2006), economic development (Reed and McIlveen, 2006), and conflict resolution (Bullock and Hanna, 2009). Recognition of differing CTA implementation approaches can assist communities, industry partners, and provincial governments in allocation planning that meets community needs and supports existing strengths (Fortier et al., 2012).

6.2 Goals and Objectives

Bullock et al. (2017) outline four types of objectives associated with community-based forestry endeavours: economic, environmental, socio-cultural, and educational. Findings indicate

that community CTA goals are primarily economic, and focused on economic development, capacity building, and employment and training, with the important exception of 'forest health' which is an environmental objective for some communities, though to a lesser extent.

In general, community and the provincial CTA goals and objectives are similar, with a focus on economic objectives. However, communities demonstrate aims beyond the employment and timber access described in the legislation and by provincial interviewees, with longer term objectives of capacity-building, business development, and forest health. These findings align with previous literature that show that rights-based access to timber is not enough for meaningful involvement to occur (Bullock et al., 2016; Nikolakis and Nelson, 2015; Ross and Smith, 2002). As Nikolakis and Nelson (2015: 644) describe, short-term harvest tenures are a "blunt instrument" for addressing the multiple Indigenous goals surrounding forestry. It is also important to note that in a broader context, the CTA of course does not cover all Indigenous forestry objectives, many of which are pursued within political spheres with federal and provincial governments, as well as industry (e.g., land claims, treaty rights, etc.). There is an important distinction to be made between community objectives for use of the CTA and overarching objectives for Indigenous self-governance. Nonetheless, that community goals are more diverse than provincial goals for the CTA underscores the need for additional support, and more effective reporting and tracking of outcomes.

At the provincial level, the broad goals and objectives outlined for the CTA are difficult to evaluate and that may be why they have not been evaluated at all, until now. From a program evaluation perspective, a definition of CTA success could address the program goals of a) providing employment, and b) improving community social and economic well-being. For the CTA, however, a threshold does not exist to define how much employment or economic and

113

social well-being is expected of the CTA users, in order to determine whether a community's use of the program is 'successful'. For remote communities with high unemployment rates, the addition of even one or two employment opportunities is significant, and it would be helpful to know what works to support such opportunities. The social and economic benefits that flow from this employment certainly contribute to community well-being, economically and socially. However, records of community employment or revenue generation through the CTA are not provincially tracked. This information remains the internal business of the communities. While the privacy and autonomy of participating communities is important, from an evaluation perspective, this makes tracking and measuring outcomes challenging, if not impossible. As Participant 11 described, "There is not a lot of follow-up in terms of [employment] other than: are they actually delivering wood? How much are they reporting of what they were allocated? That's our only indication of their success". Similarly, Participant 1 stated,

> Well, there are a few communities I know of that have been harvesting for a while so I'd have to assume - can only assume that they're successful…And I know of communities that apply for these permits year after year, so that's my only gauge of success.

While this predicament is common with objective-oriented evaluation (Fitzpatrick et al., 2004), the current practice of CTA implementation restricts the province's ability to determine if the CTA is moving provincial goals forward (as outlined in *The Manitoba Forest Act* and the province's Forest Priorities). On one hand, having no provincial requirements at all provides the flexibility that has allowed for much community control over implementation. At the same time, perhaps there is an opportunity for participating communities to set their own explicit goals. Such an approach would be suitable to ensure some monitoring takes place that is relevant to local context, but can also inform policy evaluation and design. Thus, there is an opportunity for

Manitoba Conservation to more clearly define program objectives and criteria for ongoing monitoring and future evaluations to better inform how the CTA can be designed with communities in mind and address broader goals.

6.3 Facilitating Factors & Challenges

This study found key CTA facilitating factors are human capital (administrative and business skills, operational experience, CTA leadership) and geographic location (transportation infrastructure and access to market). These factors relate to the original analytical framework based on previous studies (e.g., Charnley and Poe, 2007; Gunter, 2000; Markey et al., 2005; McIlveen and Bradshaw, 2009), although natural capital and community support played lesser roles than initially expected. At the same time, community challenges are directly linked to the absence of facilitating factors. Challenges in equipment access and maintenance are also common.

It is important to note that an additional challenge identified by non-community participants (contractors, industry, or government) involved concerns over CTA expectations. Specifically, these participants suggested the possibility of communities coming to view the CTA as a longer-term arrangement, or developing a sense of community 'entitlement' toward certain harvest areas. Although subtle, and reported in only a few interviews and documents, these concerns reflect the persisting dominance of industry-government relationships in Manitoba's forestry sector. Other forestry research in Manitoba has touched on similar attitudes of exclusion (Griffith et al., 2015). These concerns hint at underlying attitudes that should be openly addressed and remedied if increasing meaningful involvement is to be achieved. In addition, a full review of challenges experienced by communities who did not successfully harvest CTA volumes is suggested for future program monitoring and assessments.

The following sections provide specifics regarding facilitating factors and challenges for CTA timber license operations, additional supports needed for implementation, and strategies for future CTA use.

6.3.1 Human Capital

The presence of human capital is one of the most common facilitating factors cited by interviewees, while its absence was a noted challenge. This is consistent with previous research not only in Indigenous forestry and community-based resource management, but also rural development (Booth and Muir, 2013; Bullock et al., 2016; Hickey and Nelson, 2005; Nikolakis and Nelson, 2015; Ryser and Halseth, 2010), although full descriptions are not always provided in the literature. Aspects of human capital identified as facilitating success and challenges for communities implementing CTAs include: administrative/business skills, operational experience, and leadership.

Administrative and business skills (i.e. correspondence, payroll, reporting, strategizing, financing, and marketing) are particularly useful if revenue generation is a CTA goal. Administrative and business skills are often not considered alongside operational experience in forestry endeavours; however, additional support and resources could assist communities in establishing the administrative foundation needed for forestry operations on Crown land. These findings highlight an opportunity to formalize the partnerships and network-building already taking place among communities, contractors, and industry through potential skill-building, sharing of networks and contacts, and training resources. It may be that administrative support needed to handle reporting duties, for example, could be attained by better supporting partnership-building with Indigenous communities. The significance of developing administrative and business skills is described in recent studies (see Adam and Kneeshaw, 2009;

Ambus et al., 2007; Gunter and Mulkey, 2017), yet it is overlooked as a facilitator or challenge in community-based forestry literature. Perhaps not surprisingly, the National Aboriginal Forestry Association commissioned a report on building capacity for Aboriginal participation in forestry in which it emphasized administrative, legal and governance capacity as key needs and future action areas (Bombay, 2010).

Community members with experience in the forestry sector not only offer applicable skills and knowledge to CTA implementation, but also share networks of skilled individuals, contribute to equipment ownership or access, and provide training opportunities. While communities can successfully undertake forestry endeavours without previous forestry experience, as is the case of the Harrop-Proctor Community Forest, such skills are certainly an important asset (McIlveen and Bradshaw, 2009). The existence of administrative and operational skills that facilitated CTA success also point to the potential of the CTA as an opportunity for further development where these forms of human capital exist. Thus, human capital assessments across communities could help identify potential target communities.

The current study also found leadership contributed to both initial and continued involvement with the CTA for communities. This confirms findings in past studies that note the significance and complexity of leadership as a success factor (Charnley and Poe, 2007; Gunter, 2000; McIlveen and Bradshaw, 2009; Padgee et al., 2006). Although leadership is mentioned by fewer participants overall, its importance is stated by community members, contractors, and Manitoba Conservation representatives alike. For these reasons, leadership, as a contributing factor in success, could and perhaps should be highlighted in CTA design and implementation. Therefore, the development of forestry leadership programs could help build vital capacity for involvement in Manitoba's forest industry.

6.3.2 Transportation Infrastructure

Transportation infrastructure as a facilitating factor or challenge relates to a community's location and includes access to provincial road networks and roads to harvest sites. Participants noted fuel cost reductions associated with road proximity, road condition, and the use of 'backhauls'. These findings align with community development considerations in remote or northern locations (Fieldhouse and Thompson, 2012; Halstead and Deller, 1997; Mayfield et al., 2007). Past research has established that access to transportation infrastructure, including access roads to harvest sites and provincial road networks, facilitates the transportation of timber to market and the commercial viability of community economic development endeavours (Gunter, 2000; Halstead and Deller, 1997; Mayfield et al., 2007; Overend, 1982). Beyond logging roads, infrastructure development and improvement can support a variety of goals including access to increased capacity building, skill development, and training (Owen et al., 2012). From a provincial policy implantation perspective, increasing business planning support and the establishment of resource-sharing partnerships and networks could enhance the positive effects of transportation infrastructure while addressing challenges in areas with reduced CTA involvement.

6.3.3 Access to Markets

Identifying a timber market is an important part of the planning process for communities implementing a commercial CTA. This study found that distance to market is a deciding factor not only for communities, but also for contractors and timber buyers. Communities close to timber markets are involved with the CTA more frequently and for longer. This is consistent with previous research on small-scale forestry in general (Soucy and Kershaw, 2010). Within the forestry sector transportation distances between harvest sites or to market, have a significant

impact on profit margins and economic viability (Angus-Hankin et al., 1995; Overend, 1982; Paul et al., 2013; Soucy and Kershaw, 2010). The implications of high transportation costs are exacerbated in small-scale forestry settings where budgets are often smaller and margins tighter (Moss and Hedderick, 2012; Zhang et al., 2005). Close proximity markets greatly reduce fuel costs, making timber harvested much more economically viable compared to timber that has travelled great distances from remote areas (Angus-Hankin et al., 1995; Moss and Hedderick, 2012). Moss and Hedderick (2012: 102) describe this challenge in a small-scale forestry context as,

> These costs are manageable so long as they can be spread over a significant harvest volume. As tract size decreases, however, these costs must be spread over a smaller harvest volume, driving unit costs up. Per-unit harvesting costs generally begin increasing significantly as parcel size falls below 20 ha. Below 10 ha, timber harvesting is often uneconomical unless the timber is of very high quality and the harvest volume per hectare is also high.

While clear threshold volumes and distances for economic viability would be useful for CTA planning and decision-making, due to the variety of factors at play in addition to distance (e.g., truck/load size, road quality, timber size and quality, hours in the field, and road quality [Angus-Hankin et al., 1995; Moss and Hedderick, 2012]), viability thresholds are difficult to identify. Access to markets was further reduced for some regions across Canada after the economic downturn resulted in consolidation within the forestry industry across Canada (Furness et al., 2015; Gunter and Mulkey, 2017), thereby decreasing the number of smaller yet potential buyers for communities in certain areas. Even communities with road access in northern Manitoba are physically remote relative to major populations centres.

Findings also indicate that users of commercial CTAs are primarily 'market loggers', meaning any revenue generated is through the sale of timber to mills, not from timber processing (Burda, 1998; Cathro, 2004; Teitelbaum, 2014). While interviewees did describe some specialized products community-harvested timber was used for in the past (furniture making [Participant 19] and Christmas trees [Participant 13]), this timber was accessed through various other permits, not the CTA. Use of new or specialized markets for value-added timber products was not described by participants related to recent CTA use. However, the development of new markets for specialized or value-added timber products has been used in other regions by community-based forestry initiatives (Ambus et al., 2007; Vernon, 2007; Wilson and Graham, 2004). While the current volumes allocated through the CTA may be too small to consider dedicating resources to these efforts on an individual community basis, there is opportunity for collaboration and partnership networks among communities to share resources needed for economic diversification and to develop new markets as is done in other regions (Ambus et al., 2007; Burda, 1998). Although distance to market determines commercial viability of a CTA, this facilitating factor is largely outside a community's control.

Taken together, these facilitating factors and challenges associated with geographic location (i.e., transportation, access to market) are key factors in: a) whether a community becomes involved in the CTA program at all or seeks timber access through other permits; b) a community's selection of a commercial or non-commercial CTA; and c) the CTA implementation strategy a community selects. As Participant 1 described,

> Some sort of an access to industry or an industry mill, or close to a mill… Those are
> strengths that some First Nation communities have, others do not…and that's what
> guides [communities] on the different types of allocations. Ones that are close to

industrial facilities usually try to get a commercial award so they can sell wood to the

mill, those that are more remote and aren't near a facility usually want to use it for their

own [local] purposes.

Recognition of factors that facilitate CTA success as well as challenges associated with CTA

implementation can contribute to building support networks with other government departments

or forestry initiatives for future program development and/or expansion.

6.4 Outcomes

Forest tenures and economic roles are two of the most common categories of approaches

to Indigenous collaboration in the Canadian forest sector, according to Fortier et al. (2012),

Wyatt et al. (2010), and Wyatt et al. (2013). There is a need, however, for further exploration of

these arrangements compared to other forms of collaboration that are more widely researched

and perhaps utilized, such as land use studies, treaties, negotiated agreements, and

memorandums of understanding (Fortier et al., 2012). Due to this focus on certain types of

collaboration, little attention has been paid to the areas of economic and operational control. As

noted in Chapter 2, developing understanding of operational control is important as this is often

where capacity development occurs (Fortier et al., 2013; Hickey and Nelson, 2005).

6.4.1 Decision-making Control

This study explored strategic, tactical, and operational levels of control within the CTA using

an evaluative framework derived from Ambus and Hoberg (2011) and Forsyth (2006). The

current study contributes to this framework through expanding aspects of control at the

operational level with subcategories derived from the initial literature review, interviews, and

document review. This characterization of forestry operations is also supported by operational

research studies, such as Martell et al. (1998), which outlines aspects of forest operations planning (e.g., site selection/ location of machinery, harvest units, log destinations, etc.).

The ranking scores for each category determined that the CTA does not provide control at the strategic or tactical levels. This is perhaps an expected finding considering the CTA is a short-term, small volume timber harvesting license. It is likely that communities are involved in strategic and tactical decisions through a variety of other opportunities in Manitoba (e.g., advisory boards, consultations, memoranda of understanding/agreements) (see Griffith et al., 2015; McGurk et al., 2006; Wellstead and Rayner, 2009). The forest management system in Manitoba is designed in such a way that timber accessed through Timber Sale Agreements falls under the management jurisdiction of Manitoba Conservation, leaving community decision-making through these licenses firmly at the operational level. While operational control is restricted by higher levels of decision-making, Wyatt and Nelson (2013: 6) also argue,

> Operational arrangements are equally important as this is where the implementation of policies and strategies are negotiated transforming aspirations and statements of intent into practical measures that deliver socio-economic benefits or that enable Aboriginal people to control or influence the ways that other parties use their lands.

What has yet to be studied in the context of Manitoba is whether and how other sorts of agreements furnish different levels of control (i.e., strategic and tactical) and how these may bolster operational aspects. For example, operational aspects of control may change with diversified involvement enabled by higher levels of control and long term area-based licenses.

The current study found that while working with a contractor to implement the CTA can provide access to equipment, employment, and contribute to capacity building over time, there

are control trade-offs associated with these arrangements, particularly regarding harvest methods, number and allocation of jobs, and timber use. Participant 1 described,

> There [are] communities that take out an allocation every year and [what they] do is take that piece of paper and call up a non-First Nation operator, have them cut it, and then take a percentage off the top, and never see the bush, just get the revenue. And that provides some benefits, but it doesn't maximize on those benefits. Whereas others have [their] own equipment, [they] have their own company, own contracts, own people working, own trucks, and [they] fully utilize the benefit. So, it's all up to the community, their goals and their capacity, of course.

This confirms observations within the literature. For example, Hickey and Nelson (2005) described trade-offs with contractual partnerships, and found that although contracting contributed to conflict avoidance, profits, and employment, it supported a limited range of benefits compared to other partnership agreements (like joint-ventures).

In the context of Indigenous forestry, it is important to note that, "tenures are typically allocated within the authority of provincial forest acts, and so accepting tenure arrangements contributes to reinforcing non-Aboriginal dominance and control over traditional Aboriginal lands" (Wyatt and Nelson, 2013: 8). At the same time, as these findings demonstrate, operational-level control plays a key-role in capacity development and relationship building within the forestry sector, which is needed to assume higher levels of control (Bombay, 2010).

6.4.2 Resource-derived Benefits

The analytical framework used to evaluate CTA benefits is built on previous findings and interviews, focusing the evaluation on aspects relevant to the CTA experience, namely capacity building, forestry engagement, and environmental benefits. Unlike similar studies (Booth and

Skelton, 2011; Bullock and Hanna, 2007; Nikolakis and Nelson, 2015), interviews did not reveal community conflict or tension if outcomes did not align with expectations. Rather, benefit outcomes generally align with findings of community goals (e.g., timber access, economic development opportunities, and employment). In part, this may be due to participant bias, as interviewee selection focused on those directly involved with the CTA and therefore may have more positive outlooks on the outcomes of the CTA. Future evaluations could incorporate perspectives of 'uninvolved' community members to address this potential imbalance (Vodden, 2009). It is also possible this lack of conflict is linked to the CTA's relatively small scale timber harvesting and therefore less conflict associated with environmental impacts. Or it could be that the low awareness of the program also mitigates conflict.

Capacity building benefits accrue with forestry engagement at the operational level (Fortier et al., 2013; Hickey and Nelson, 2005; Wyatt and Nelson, 2013). Within the capacity building benefit category, 'high' economic development outcomes (e.g., timber access, employment, and revenue) support Manitoba's objective of improving economic well-being through the allocation, and demonstrates some level of achievement with the program. However, the lack of official tracking records on employment and revenue associated with the CTA make quantifying these benefits challenging, particularly as employment type, duration, and permanency varies. Program-wide numbers on employment quality and duration would also contribute to understanding of the actual outcomes of the CTA and would undoubtedly greatly assist policy makers. Bullock et al. (2016) describe similar challenges in tracking and reporting employment numbers associated with Indigenous forestry research. Either way, having data on the program is essential to understanding and improving policy implementation and outcomes.

Benefits in the 'engagement' category, relationship building (ranked 'high') and business opportunities (ranked 'high'), are particularly important for communities who were not involved in the forestry sector prior to the CTA, but may be less apparent for communities that use non-commercial allocations, as industry and contractors are less likely to be involved. The positive working relationships and business partnerships that arise through the CTA can lead to business opportunities that may not otherwise occur, and these in turn can produce spinoffs. These CTA benefits are key to community capacity-building and establishing the foundation for longer-term and/or higher volume timber harvesting endeavours.

These findings confirm observations within the Indigenous forestry literature (Fortier et al., 2012; Fortier et al., 2013; Hickey and Nelson, 2005; Wyatt and Nelson, 2013; Wyatt et al., 2010). Coates and Crowley (2013: 20) assert that,

> While there is no single model of resource and economic development that has or will work in Aboriginal communities across the country, it is increasingly clear that most Indigenous peoples are open to partnership approaches. Collaboration makes sense for Aboriginal people, communities, companies, governments, and Canada at large.

The business-development CTA implementation strategy outlined in the current study reflects this claim (particularly communities 4 and 8), and lays the groundwork for the establishment of more formal partnerships with other groups. These findings also contribute to a need for more research on Indigenous collaboration on economic development within the forestry sector (Wyatt et al., 2010).

The presence of environmental benefits is an unexpected outcome, despite both environmental benefits (fire and wildlife management) ranking 'low'. Involvement at the operational level is not often associated with environmental benefits (Ambus and Hoberg, 2011;

Wyatt and Nelson, 2013), and their presence, as described by interviewees, reflects the broader forest goals of some communities, rather than their plans for CTA use in particular. Still, the province and communities could consider whether using the CTA for fire smart programming could be useful. Although environmental benefits are a focus within the community forestry literature (such as the incorporation of community values, balancing ecological management with economic demands, and stewardship) (Furness and Nelson, 2012; Maryudi et al., 2012; Teitelbaum, 2014) the low score in this category is indicative of the potential of the CTA and the positive effects communities may experience as involvement increases, rather than a negative performance review.

Overall, the CTA outcomes align with Manitoba Conservation's broad goals and objectives, to increase opportunities and socio-economic development, and in some ways, the program exceeds these expectations (as with engagement and environmental benefits).

6.5 Increased Involvement through the CTA?

Together, the CTA implementation, goals, facilitators, challenges, and outcomes address the question – does the CTA increase Indigenous involvement in forestry in a meaningful way? Certainly, the types and degree of control and benefits available through the CTA are likely not considered sufficient compared to other arrangements discussed in community and Indigenous forestry literature (Booth and Skelton, 2011; Bullock et al., 2017; Krogman and Beckley, 2002; Nikolakis and Nelson, 2015; Ross and Smith, 2002), such as Enhanced Sustainable Forest Licenses in Ontario or Community Forest Agreements in British Columbia. Yet, the CTA acts as a main avenue of Indigenous access to timber in Manitoba (Brubacher 2007; Manitoba Conservation 2011). Findings demonstrate that CTA timber harvesting rights are a mechanism

for community control and benefits at the operational level, which contributes to important community capacity building.

For example, project-based implementation is associated with lower degrees of control and benefits, yet it is useful in meeting specific community objectives, and builds capacity. Program implementation (non-commercial CTA) may be particularly helpful for communities facing transportation and market access challenges due to its focus on community timber use. This approach is similar to the growing number of social enterprise initiatives taking place in Manitoba, particularly in Indigenous communities (e.g., Peguis First Nation and Fisher River Cree Nation geothermal energy project, BUILD INC, and Meechum Inc.), offering yet another network for support and knowledge sharing (Aki Energy, 2016). These findings, combined with the control and benefits framework used in this study offer communities and government decision-makers insights into the type and degree of potential outcomes from the CTA program.

The following revised conceptual model demonstrates the interconnections and relationships of the main themes discussed in this chapter (i.e., goals, implementation, facilitators/challenges, and outcomes) (Figure 6.1). Facilitating factors influence a community's implementation strategy and challenges that often occur once implementation has begun. This model demonstrates that outcomes can occur along a sliding scale where decision-making control and benefits are relative to the implementation approach used. In turn, the resulting capacity building supports future pursuits. This model assists in telling the "story" of the CTA program, linking findings to context and assumptions (McLaughlin and Jordan, 2010), and illustrates the cyclical nature of potential capacity-building through the CTA program.
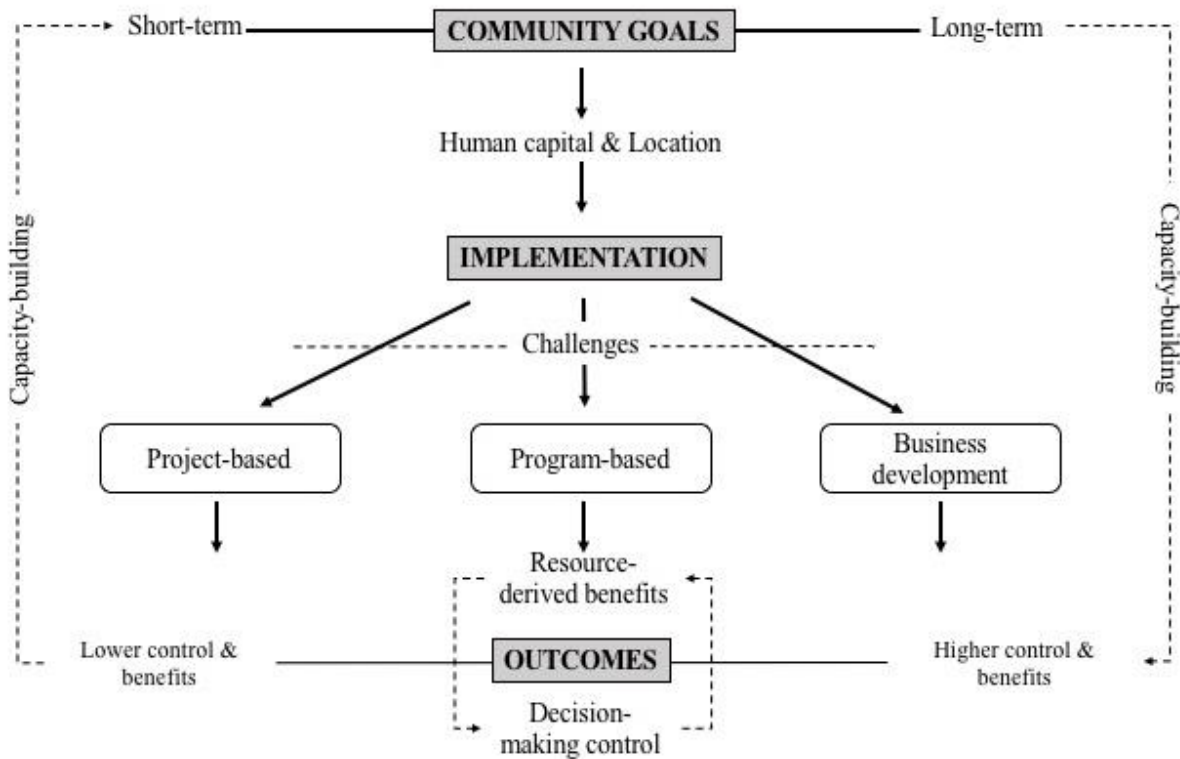
Figure 6.1 Revised Community Timber Allocation conceptual model

Currently there is little formal communication or information regarding CTA goals, implementation, and outcomes. Sharing these findings, however, can offer insights into community experiences and enhance community expectations. Community-based resource management in other regions has thrived from knowledge sharing and support networks. The British Columbia Community Forest Association is an excellent example of such a network, with over 50 members, and various conferences, events, publications, and resources (BCCFA, 2016). In addition, the Northern Ontario Sustainable Communities Partnership in Ontario offers communities and other organizations a space for communication and resource sharing at a time when resource management in the region is being re-evaluated (NOSCP, 2013). Recently, there have been efforts to advance understandings across Canada, as with the Community Forests Canada Network (Bullock and Lawler, 2014). The establishment of such a network in Manitoba

could clarify how communities use the CTA, share success stories and strategies, and could be built through existing organizations. For example, existing organizations that could contribute to these efforts include the Manitoba Model Forest, Manitoba Woodlot Association, Manitoba Forestry Association, Community Futures Manitoba, The Canadian CED Network, and The Assembly of Manitoba Chiefs, to name a few.

Finally, CTA goals and outcomes appropriately align with the core policy objectives outlined by Manitoba Conservation. If Manitoba's long term goal is to increase meaningful Indigenous participation, then formal forestry opportunities with Indigenous populations, beyond timber harvesting, are needed to reflect and support those goals.

6.6 Summary

This chapter discussed findings from the community case studies and program evaluation in the context of previous research to provide a synthesis and highlight new insights to augment and elaborate current understanding. Recognition of the goals, implementation, facilitators/challenges, and outcomes of the CTA can assist communities, industry partners, and the provincial government in allocation planning that meets community needs and supports existing strengths. There are opportunities to more clearly define program objectives, increase implementation support, and track outcomes to address challenges and enhance future monitoring and evaluations. Findings show that the CTA increases Indigenous community involvement in forestry at the operational level and contributes to capacity building, but it does not elevate strategic and tactical level control in a meaningful way. In addition, there are opportunities for strengthening communications and partnerships among communities, contractors, and industry.

CHAPTER 7. CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

This study assessed the role of the Community Timber Allocation in increasing Indigenous involvement in forestry in Manitoba. The study design, research questions, propositions, and theoretical foundations were rooted in the initial literature review linking Indigenous forestry, community-based forestry, and program evaluation. This chapter summarizes the study's findings, discusses research implications, and suggests opportunities and policy recommendations.

7.1 Research Summary

A case study approach was used to conduct this qualitative program evaluation, allowing comparisons both within and between program cases to explore implementation and outcomes. This research had three objectives: 1) contribute to literature on Indigenous forestry involvement by expanding understanding of small-volumes and economic roles, 2) develop an evaluative tool that can be applied to future policy research and monitoring, and 3) to make recommendations relevant to community and government forestry policy decision-makers. This study posed five research questions concerning CTA use and outcomes: goals and objectives, facilitating factors, challenges, type and degree of decision-making control and resource-derived benefits (Table 3.2). For each research question, a set of propositions and rival explanations were developed based on the analytical framework presented in Chapter 2 (Table 2.2). The following sections revisit the current study's findings in the context of these questions, propositions, and rival explanations.

CTA Implementation and Use:

While not an initial research question, a greater understanding of CTA use was necessary to provide context for the research questions. Only limited information of the CTA program is publically available, and interviews revealed that the CTAs flexible design resulted in diverse implementation approaches. In addition, although the CTA program is not actively promoted, communities who found a CTA implementation style that worked for them often used the allocation multiple times (8/17 communities). There is a clear pattern of CTA use in certain areas of Manitoba, specifically the northwestern and eastern regions, indicating a need for increased promotion or support in other areas, if increasing CTA use among communities is an aim of Manitoba Conservation.

The three community case studies presented unique approaches to CTA implementation, offering characterizations that could then be applied to other communities through document review according to: 1) community goals and objectives, 2) community capacity necessary for implementation, 3) required timber volumes and CTA type requested, 4) number of actors and degree of community involvement, and 5) duration of involvement with CTA program. The three implementation strategies (i.e., project, program, business-development) can inform community decision-making and assist in aligning community expectations and CTA outcomes. Understanding CTA use between 2005 and 2015 provides context for the findings of the following research questions, from which the main conclusions are drawn.

Goals and Objectives:

This study found that community CTA goals were primarily economic, and largely focused on economic development, capacity building, and employment and training. In this way, community goals aligned with the objectives laid out by Manitoba Conservation

to improve social and economic well-being. One exception is the longer-term goal described in the OCN community case of forest health. Therefore, the initial propositions (a, b, and c) suggesting the CTA supports specific community objectives, is used to build capacity, and increases employment are confirmed (see Table 3.2). However, rival explanation ii stated, "the CTA program does not provide the capacity development needed for longer term goals and objectives." With regards to this, whether the capacity development available through the CTA is enough or adequate to support longer term goals is dependent on both a community's implementation strategy, and focus of the community's goals.

Facilitators:

In response to the question: What factors contribute to community success with the CTA, there were two main factors that facilitated CTA success for communities: human capital (e.g., administrative and business skills, operational experience, and leadership), and geographic location (e.g., access to transportation infrastructure and markets). Therefore, these findings support propositions d and e, in that communities identified similar factors that facilitate success, and these factors aligned with those identified in the analytical framework (Table 2.2). Communities close to timber markets were involved in the CTA more frequently and for longer. Taken together, these facilitating factors are key considerations in whether a community: a) becomes involved in the CTA program or seeks timber access through other permits, b) selects a commercial or non-commercial CTA, and c) the type of CTA implementation strategy a community uses.

Challenges:

Communities did experience challenges in implementing the CTA (proposition f).

Challenges related to equipment access and maintenance, as well as a lack of human

capital were shared among participating communities (proposition g). The current study

specifically identified administrative/business skills as a challenge for CTA

implementation, particularly regarding business planning and timber tracking. These

challenges are relevant to the implementation and economies of scale challenges outlined

in the analytical framework (Table 2.2) (proposition h); however, challenges relating to

conflict resolution and communication did not emerge from this study's findings (rival

explanation iii). As discussed in Chapter 6, this lack of conflict may be due to participant

bias, and therefore future evaluations could also incorporate the perspectives of

'uninvolved' community members to address this potential imbalance.

Control and Benefit Outcomes:

This study explored the type and degree of control and benefits available through the

CTA (research questions e and f). Findings demonstrated that control rests at the

operational level (confirming proposition i), and that despite differing implementation

approaches, communities participating in the CTA experienced similar degrees of control

(proposition j). An existing forest management framework, used by Ambus and Hoberg

(2011), was expanded through the addition of aspects of operational control experienced

through the CTA. Although the framework was expanded, the operational forms of

control aligned with those identified in the analytical framework (Table 2.2) (proposition

k).

In addition, communities did benefit from the CTA (proposition l), and although benefits varied greatly depending on a community's implementation strategy, communities shared similar benefits in employment, skill-development, and relationship building (proposition m). All benefits identified were supported by the analytical framework (Table 2.2) (proposition n). An evaluative framework for benefits was developed, identifying three main types of operational benefits: capacity building, engagement in forestry, and environmental benefits. Overall, benefits experienced through the CTA generally align with community goals and expectations (e.g., timber access, economic development opportunities, and employment). Environmental benefits were an unexpected outcome and is reflective of the potential for CTA goals moving forward. Findings demonstrated that the CTA is a main avenue of Indigenous access to timber in Manitoba, a mechanism for community control and benefits at the operational level, and contributes to capacity building.

In examining the role of the CTA in increasing Indigenous involvement in forestry, it is important to note that short-term tenures and economic roles do not enable Indigenous communities to influence forest management decision-making or forestry practices – the strategic and tactical levels of control (Curran and M'Gonigle, 1999; Wyatt et al., 2013). However, it does offer meaningful involvement at the operational level where partnerships are formed, relationships are developed, and capacity is built. Further planning and support could increase the breadth of goals and outcomes through the CTA. Forming additional forestry opportunities with Indigenous populations beyond timber harvesting could address higher levels of control and support longer-term

involvement (see recommendations below); however, this emphasizes the role of the CTA as an opportunity for building foundational capacity.

7.2 Research Contributions

The current study contributes to Canadian Indigenous forestry and community-based forestry literatures by offering insights from a region with a high Indigenous population undergoing changes in the forestry sector, and where little research on forest policy has been conducted compared to other regions (Bullock and Lawler, 2015; Lawler and Bullock, 2017). This study contributes to the understanding of small volume tenures, and their associated roles and partnerships, as tools for Indigenous involvement in Manitoba. Smaller volume allocations and economic roles are common forms of Indigenous forestry involvement, and yet these have not been a focus of research (Beaudoin, 2012; Wyatt et al., 2010).

These findings also contribute to existing classification frameworks of Indigenous forestry collaborations (see Fortier et al., 2012; Wyatt et al., 2010; Wyatt et al., 2013). The types and degree of control and benefits, as well as the identified implementation strategies, offer further clarification of the implementation and outcomes of tenure arrangements and economic roles. In particular, this study expands an existing forest management control framework, and offers a benefits framework that outlines the potential benefits available through small volumes. These frameworks allow the findings of the CTA and specific community case studies to be generalized beyond the program, and provide on-the-ground information about how Indigenous involvement at the operational level is playing out for future studies and assessments. The typology of CTA implementation strategies offers a tool for describing relationships among community goals, implementation, and outcomes of forestry involvement.

Finally, this study could be of interest to community and government decision-makers, as well as forestry contractors and industry partners, in terms of new insights regarding program design, implementation, and opportunities. The implementation strategies described can inform potential program changes, development of supports, and provide insights for future community use. The control and benefits frameworks offer insights into the type and degree of potential or expected outcomes of the CTA program and highlight opportunities for capacity building planning and CTA strategizing.

7.3 CTA Design and Evaluation Recommendations

From the findings, four primary CTA recommendations have been developed.

Increased support:

The identified community challenges and patterns of regional involvement highlight that support, beyond the allocation of timber, would increase community involvement and CTA success. Support could take the form of administrative services, access to equipment either through resource sharing or financing opportunities, transportation infrastructure development (for interested communities), or linking the CTA with business development and/or training programs. Beyond economic goals, support could be offered to further develop the CTA program and incorporate community environmental goals. The development of formalized partnerships and networks through the CTA would also be a useful form of support.

Partnerships and networks:

Formalizing partnerships and network-building already taking place among communities, contractors, and industry in the form of skill-building, sharing contacts, and training resources could provide some of the additional support needed to enhance CTA use. This

would be particularly helpful in addressing administrative, business-planning, and start-up challenges (e.g., equipment access). Knowledge and support networks in other regions of Canada have been great supports for community resource management endeavours. The establishment of a similar network in Manitoba could be a source of CTA implementation information, business planning advice and contacts, and a platform to share success stories and strategies. CTA users are encouraged to look to models of social enterprise taking place in Manitoba, and to take advantage of this growing network of support and knowledge sharing. Finally, collaboration among communities could facilitate the sharing of resources needed for economic diversification and development of new markets.

Tracking:

Increased record keeping and tracking of CTA implementation and outcomes would improve understanding of the influence and impacts of the program and its achievements. Specifically, tracking employment and revenue would not only be useful from a monitoring and evaluative perspective, but would be informative to communities considering involvement and allow for evidence-based decision-making. It would also improve Manitoba Conservation's accountability and transparency regarding their objectives of social and economic well-being. To protect community privacy, these outcomes could be shared in anonymous or aggregated form. Even if not shared, such information would assist Manitoba Conservation in CTA evaluation for internal purposes as well as inform the design of new policies. Community and government decision makers would also benefit from promoting program availability. This would avoid confusion and misunderstandings, and possibly increase participation in the CTA. These changes, along with tracking Indigenous involvement in other forms timber licenses, would provide measureable ways to determine

achievement of the forestry priorities outlined by Manitoba Conservation (as described in

Manitoba Conservation 2002; 2011).

Future monitoring, evaluation, and program design:

This study has developed an evaluative tool for the CTA program that can provide a basic

structure for ongoing program monitoring and can be adapted to future evaluations. There is

an opportunity for Manitoba Conservation to more clearly define program objectives and

criteria to better inform how the CTA could be designed with communities in mind and

address broader goals. For example, by how much does the CTA aim to enhance social and

economic well-being? What is included in the definitions of social and economic well-being?

For the program to be adequately evaluated as meeting its objectives, specifics must be

provided as to what program success looks like. If success means meeting community

objectives, communities could be asked to explicitly state objectives when applying for

allocations. In addition, are there opportunities to incorporate forest health and environmental

goals into the CTA design? A review of challenges experienced by communities who did not

successfully harvest CTA volumes, as well as a survey of potential barriers for communities

who have an interest in forestry but have not been involved are suggested for future program

monitoring and assessments.

These recommendations echo those in previous similar studies (e.g., Booth and Muir, 2013;

Bullock and Hanna, 2008; NAFA 2015; Nikolakis and Nelson, 2015; Robitaille et al., 2017).

7.4 Future Research

As a result of this study, future research might be conducted through several avenues:

a) further program evaluation, b) Indigenous methodologies, and 3) regional tenure comparisons.

This study took a formative evaluation approach (i.e. focused on case-specific insights and program improvement); however, a summative evaluation could be built on the current study, and incorporate quantitative analysis (through improved outcomes tracking), focusing on program effectiveness, which could inform program expansion, or redesign. Program evaluation and research could also focus on barriers to community involvement in small volume tenures. As these allocations are useful for capacity building and provide a stepping stone into other forms of forestry involvement, developing understanding and clearly identifying barriers is key to increasing this form of involvement. Future evaluations could also explore the perspectives of 'uninvolved' community members to incorporate varied perspectives on timber harvesting, forestry goals, and values.

The evaluative frameworks presented in this research are building blocks for the ongoing revisions and reassessments taking place in Canada's changing forestry culture. While the necessary and appropriate time to build relationships and trust, and demonstrate the accountability of the researcher with participating communities was beyond the limited time scope of this study, future research is encouraged to fully involve communities from project initiation through to question development, design, analysis, and dissemination. Such a methodological approach could develop community-based evaluation criteria and possibly local-level criteria and indicators as previous studies have done (Adam and Kneeshaw, 2008; Sherry et al., 2005), thereby offering an even richer, and more culturally appropriate evaluative framework.

The Prairie provinces demonstrate similarities between forest industries, ecosystems, and relationships with Indigenous communities in terms of treaty rights and land claim agreements (Brubacher, 2007; Tindall et al., 2013). A broad comparison of similar tenure types across the

Prairie provinces would provide regional context and insight into potential strengths and weaknesses of differing tenure design and implementation strategies. Existing frameworks (Brubacher, 2007; Luckert et al., 2011) could support comparative analysis of Canada's Prairie forest tenures.

Finally, the CTA program provides an opportunity to contribute understanding of the role small volume timber programs play in increasing Indigenous community involvement in forestry. Importantly, this program takes place in a region with a large Indigenous population, much forested land area, and a changing forestry culture (Lawler and Bullock, 2017). The community case studies and program evaluation in this study offer insights into community uses, decision-making control, and benefits of these small volume allocations, while acknowledging community diversity and program flexibility.

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APPENDIX A: Interview Questions

Interview Questions & Protocol:

Researcher introduction followed by discussion of project overview and objectives, as described in the information letter. Informed consent obtained verbally or through signed consent form. Participant has opportunity to ask any preliminary questions about the research.

Italicized text indicates researcher prompts.

A. Role, Community, & Forestry Profile

1. Please tell me a little bit about your background
   <Prompt> How long a residnt in community?
   <Prompt> training related to current position?

2. Please tell me about your role with the Community Timber Allocation TSA?
   <Prompt> related responsibilities
   <Prompt> duration position held

3. What are some of the ways, beyond the Community Timber Allocation, that your community is involved in forestry activity?
   <Prompt> employment
   <Prompt> business
   <Prompt> consultations
   <Ask for specific examples/ estimated numbers>

4. Please tell me about the community's goals and objectives with respect to forests and forestry?
   <Clarify> general goals and measureable objectives
   <Prompt> intended outcomes
   <Clarify> what level of accomplishment would be considered 'success'?

5. What are some of the strengths within your community that help with achieving forestry goals?

6. What are some challenges within the community that may interfere with forestry goals?

7. How might the Community Timber Allocation assist your community in achieving its broader goals and objectives with respect to forests and forestry?
   <Potential topics: access, experience, and training – leave open for themes to emerge>

Thank you. We have been focusing on aspects of forestry in your community. At this point, I'd like to focus on the Community Timber Allocation program itself.

B. Community Timber Allocation Program

1. I'd be interested in knowing how you became involved in the Community Timber Allocation program. How did you find out about it?
<Prompts> what appealed to your community? What previous experiences have you had with forestry licenses? What are the eligibility requirements for acquiring a Community Timber Allocation? What steps were taken to apply?

2. Please tell me about the timber harvesting method your community uses to harvest the volume allocated under the license
<Clarify> silvicultural systems: clearcut, seed tree, group selection, shelterwood
<Prompt> equipment needed

3. Could you describe who carries out the timber harvesting?
<Ask for specific examples> contractors, mill or partner, community members, etc.

4. What is done with the wood that is harvested?
<Specify> where does it go & how far

5. Has your experience with the Community Timber Allocation program been what you expected?
<Prompt> initial idea or plan
<Prompt> what did you hope to gain?

6. Since becoming involved with the Community Timber Allocation program, how, if at all, has your community's involvement with forestry changed?

7. Based on your experience, what are the strengths of the Community Timber Allocation program?

8. What about any opportunities for improvement?
<Clarify> program design, running of program, fit with community goals and objectives

9. Based on your experience with the program, what are some recommendations you might make to address the issues you describe?

10. Is there any advice you might offer other communities thinking of applying for a Community Timber Allocation?

11. Suppose the province asked you whether the design of the Community Timber Allocation program should be changed. What would you say?
<Specify> arguments to support opinion

This section has focused on the Community Timber Allocation program itself. Now I'd like to talk to you about benefits your community has experienced through this program.

C. Community Timber Allocation Benefits

1. What sorts of benefits have resulted from the Community Timber Allocation in your community?
<Potential topics: revenues, employment, experience and training, youth engagement, cultural values – leave open for themes to emerge>

    a. Can you give some specific examples?
<Prompt> what kinds of jobs for who?
<Follow up as appropriate. If a benefit is described that is not covered in the questions below, the interviewer will follow up accordingly. Example: How much? How so? Etc>

2. How much direct revenue is generated from the Community Timber Allocation for your community?

3. What is the revenue generated from the Community Timber Allocation - if any - used for?
<Prompt> revenue distribution
<Potential topics: community projects, business development, general Band account - leave open for themes to emerge>

4. Currently, how many people are directly and/or indirectly employed through this tenure?
<Prompt> number of positions held
<Prompt> skill level of position held i.e. manager, logger, truck driver, etc
<Prompt> full time, part time, seasonal

5. What kind of business opportunities - if any - has the Community Timber Allocation lead to?
<Prompt> supply agreements with mills; joint ventures; small businesses, etc

6. What kind of training opportunities – if any - has the Community Timber Allocation created?
<Prompt> fire smart; chainsaw safety; outdoor education; heavy equipment operation, etc

7. What kind of cultural benefits – if any – are supported by the Community Timber Allocation?

8. Are there some benefits that could develop from this license over time that may not yet be apparent?

This section has focused on benefits from the Community Timber Allocation program in your community. Now I'd like to talk to discuss decision-making control associated with the program.

D. Community Timber Allocation Control

1. Who makes the decisions with respect to the general plan for the Community Timber Allocation?

2. Similarly, who makes decisions regarding the day-to-day operations of the timber harvesting under the Community Timber Allocation?

3. What aspects of forest management under the Community Timber Allocation does the community have direct control over?
<Potential areas: hiring, employment and training, agreements between communities and companies or agencies to employ community members or provide training, harvesting technique, revenue decision making – leave open for themes to emerge>

4. Is the general community (beyond band council and managers) involved in decision-making surrounding the CTA?
   <Potential areas: hiring, employment and training, agreements between communities and companies or community input on plans, use of revenue, use of timber, long term forest goals – leave open for themes to emerge>

5. What are some challenges your community has experienced with implementing the Community Timber Allocation as planned – if any?
   <Potential areas: complex administrative procedures, consultation processes, funding availability, business partners, access to necessary skills – leave open for themes to emerge>

6. Based on your experience, is your community able to change the way this license is implemented based on changing community aspirations?
<Clarify> changing goals, plans, or needs

7. Have there been any ways that the Community Timber Allocation has had an impact in your community that haven't been discussed?
<Clarify> can you elaborate?

8. That covers the questions I wanted to ask. Is there anything you'd like to add?

9. ***Is there anyone with specialized knowledge on this topic you would recommend I speak to?***

Thank you for taking the time to speak with me today. Are you willing to be contacted in the near future for follow-up questions or clarifications? Do you have any questions about the interview that took place today or the research project in general?

Please don't hesitate to contact me or my faculty supervisor using the information included in your letter should any questions or concerns arise.

APPENDIX B: Ethics Certificate

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University Human Research Ethics Board
(UHREB)

Statement of Ethics Vetting

The following ethics proposal has been approved by the UHREB. The approval is **valid for one year** from the date stated below.

For research lasting longer than one year it is the responsibility of the researcher to obtain Protocol Renewal. Renewal may be granted for **one year only**, after such time a new protocol must be submitted. Any changes made to the protocol should be reported to the Program Officer for UHREB review prior to implementation. See *UHREB Policies and Procedures* for more details.

Name of Investigator(s): Julia Lawler	**Department/Faculty:** Environmental Studies and Sciences and CFIR
Faculty Supervisor Ryan Bullock	
Co-investigator(s):	
Title of Project: Assessing Control and Benefits through Manitoba's Community Timber Allocations	
Research Office File #: HE04818	**Date of Approval:** June 17, 2015
Authorizing Signature: _Heather Mowat_ Program Officer, Research Implementation, Ethics and Contracts Office of the Associate Vice-President, Research and Innovation Telephone: (204) 786-9058 E-mail: h.mowat@uwinnipeg.ca	

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