

Learning for Sustainability through Community Forest Management

By

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## **ABSTRACT**

Community forestry is considered a collaborative governance approach that notionally provides local communities with some decision-making authority about forest management, as well as being promoted as a promising approach for ensuring forest sustainability and encouraging social learning among participants. Based on these potential benefits, this research investigated how collaboration and learning can help in managing community forests sustainably. The research involved a qualitative case study, focused on the Wetzinkwa Community Forest Corporation (WCFC) located in Smithers, British Columbia.

Data were collected through semi-structured interviews with WCFC participants, forest tours, participant observation, and document review. The results indicate that individual and social learning did occur through collaborating on forest management issues such as sustainable forest management and benefit distribution. Further, the data shows the WCFC was making progress in sustainably managing the forest through efforts such as protecting forest under-story and embarking on a project to ensure forest health and resiliency.

## **DEDICATION**

This thesis is dedicated to Mr. Moses Nkuah and his wonderful family.

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## TABLE OF CONTENT

Abstract.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Table of Content.....	v
List of Tables.....	x
List of Figures.....	x
List of Plates.....	x
Glossary of Terms and Acronyms.....	xi
List of Appendices.....	xii
Definition of Terms.....	xii
<b>Chapter One: Introduction</b>	
1.1 Research Context.....	1
1.2 Research Purpose and Objectives.....	5
1.3 Research Contribution.....	5
1.4 Methods.....	6
1.5 Thesis Organization.....	7
<b>Chapter Two: Community Forestry, Social Learning, and Sustainable Forest Management</b>	
2.1 Community Forestry in Canada.....	8
2.2 Community Forestry in British Columbia.....	10
2.3 What is Community Forestry?.....	12
2.4 Collaborative Management/Governance.....	15
2.5 Challenges of Community Forestry Management/Governance.....	17
2.5.1 Power Relations in Collaborative Management/Governance.....	17
2.5.2 Conflicts within CF Management.....	18

2.5.3 Capacity of Communities in CF Management.....	19
2.6 Sustainable Forest Management and Community Forestry.....	20
2.6.1 Measuring Sustainable Forest Management.....	22
2.7 Social Learning in Natural Resources Management.....	23
2.8 Social Learning through a Management Lens.....	25
2.9 Considering Social Learning.....	28
2.10 Chapter Summary.....	32
<b>Chapter Three: Research Methodology</b>	
3.1 Social Constructivist Paradigm.....	37
3.2 Qualitative Case Study.....	38
3.3 Cases Considered.....	39
3.4 Case Description.....	49
3.5 Data Collection Methods and Sampling Procedure.....	51
3.5.1 Semi-structured Interviews.....	51
3.5.2 Participant Observation.....	53
3.5.3 Forest Field Tours.....	54
3.5.4 Document Review.....	55
3.6 Data Accuracy and Analysis.....	55
<b>Chapter Four: Opportunities/platforms for Sharing Ideas, Providing Input and Learning</b>	
4.1 Introduction.....	57
4.2 Governance of Wetzinkwa Community Forest Corporation.....	58
4.2.1 Board Structure and management.....	58
4.2.2 Decision Making.....	60
4.3 Discussion of formal and informal platforms/opportunities.....	61
4.3.1 Formal Avenues.....	62
4.3.1.1 Resource User Group Meetings (RUGMs).....	62
4.3.1.2 Open Houses.....	64
4.3.1.3 Seminars/Community talks.....	67
4.3.1.4 Reporting Back to Council.....	68
4.3.1.5 WCFC Board Meetings.....	69
4.3.1.6 Newspaper Advertorials.....	69

4.3.1.7 Social Media.....	72
4.3.1.8 WCFC’s website.....	72
4.3.2 Informal Avenues.....	74
4.3.2.1 Personal discussions with GM and (or) board members.....	74
4.3.2.2 Trade Shows.....	75
4.3.2.3 Walk in Your Woods.....	76
4.4 Summary.....	78

**Chapter Five: Participant Learning Outcomes**

5.1 Introduction.....	83
5.2 Individual Learning.....	84
5.2.1 Sustainable Forest Management (SFM).....	84
5.2.2 Forest Governance.....	87
5.2.3 Forest Management Practices and Operations on the Land Base.....	89
5.2.4 Commercial Aspects of Forestry.....	92
5.2.5 Relationship and Trust Building.....	93
5.3 Social Learning.....	94
5.3.1 Sustainable Forest Management (SFM).....	94
5.3.2 Benefit Sharing.....	97
5.3.3 Forestry as a Business/Investment.....	99
5.3.4 Working with Multiple Forest Users.....	101
5.3.5 Relationship Building.....	105
5.3.6 Policies.....	107
5.3.7 Skill-set of Board Members.....	109
5.3.8 Community Involvement/ Surveys.....	111
5.3.9 Forest Governance and Forestry Operations.....	112
5.4 Challenges to learning.....	113
5.5 Summary.....	114

**Chapter Six: Collaboration and Sustainable Forest Management Practices**

6.1 Introduction.....	119
6.2 Research Collaborations.....	119

6.3 Collaborating with the Office of the Wet’suwet’en First Nation.....	122
6.3.1 Protecting and Managing Wet’suwet’en Values113.....	122
6.3.2 Collaborating on Managing for Non-Timber Forest Management.....	125
6.4 Collaborating on Managing Watersheds/Drainage.....	128
6.5 Collaboration Challenges.....	129
6.5.1 Initial Challenges.....	129
6.5.2 Capacity challenges.....	130
6.5.2.1 Finance.....	130
6.5.2.2 Time constraints.....	131
6.5.3 Public Outreach and Communication.....	132
6.5.4 Conflict.....	133
6.5.4.1 Among Board Members.....	133
6.5.4.2 Among Key Stakeholders.....	134
6.5.4.3 Between the Board and Shareholders.....	135
6.5.4.4 Between the Board and Forest Users.....	136
6.5.4.5 Among Recreational Groups.....	137
6.6 Implementing SFM Practices.....	137
6.6.1 Biodiversity.....	138
6.6.2 Wildlife Management.....	139
6.6.3 Watershed/Riparian Area management.....	141
6.6.4 Forest Over-and- Understory Management.....	142
6.6.5 Timber Harvesting.....	144
6.6.6 Tree Planting.....	146
6.7 Challenges to Implementing SFM.....	147
6.7.1 Mountain Pine Beetle Epidemic.....	147
6.7.2 Provincial Regulation.....	148
6.7.3 Climate Change.....	149
6.7.4 Availability of markets.....	149
6.8 Summary.....	150

## **Chapter Seven: Conclusions and Recommendations**

7.1 Introduction.....	154
7.2 Opportunities/Platforms for Making Input and Learning.....	154
7.3 Participant Learning Outcome.....	156
7.4 Impact of Collaboration and Learning on Sustainable Forest Management Efforts.....	160
7.5 Challenges to Collaboration and Learning.....	163
7.6 Recommendations.....	164
7.6.1 Public Participation.....	164
7.6.2 Sustainable Forest Management.....	166
7.6.3 Learning.....	167
7.7 Concluding Comments.....	168
References cited.....	170

## **List of Tables**

Table 3.1: Community Forest Cases Considered.....	42
Table 4.1: Opportunities for Learning and Sharing Ideas .....	61
Table 5.1: Major Participant Learning themes and sub-themes.....	84

## **List of Figures**

Fig 2.1: Conceptual Framework.....	33
Fig 3.1: Map of Study Area.....	49
Fig 3.2: Map of Wetzinkwa Community Forest Tenure Area.....	50
Fig 4.1: Board Skills and Experience.....	110

## **List of Plates**

Plate 4.1: Attendees at WCFC's 2013 AGM.....	66
Plate 4.2: Wetzinkwa Community Forest Advertorial.....	71
Plate 4.3: WCFC's Booth at the 2013 Trade Show.....	76
Plate 4.4: A Walk in Your Woods Along the Sackungen Trail .....	77
Plate 5.1: Slash piles.....	92
Plate 5.2: Remnant of Burned Slash Piles.....	92
Plate 5.3: The Silvern Gathering Shelter With the Three Interpretive Posters.....	106
Plate 6.1: Climate Change Adaptation Species.....	121
Plate 6.2: Culturally Modified Trees Preserved on the Community Forest Tenure.....	124
Plate 6.3: Tree Patches.....	141
Plate 6.4: Cow Moose.....	141
Plate 6.5: Forest Understory.....	142
Plate 6.6: Location of the 1,000,000 <sup>th</sup> Tree Llanted on the Community Forest Tenure.....	147

## **Glossary of Terms and Acronyms**

BC	British Columbia
BLRMP	Bulkley Land and Resource Management Plan
BVRC	Bulkley Valley Research Centre
CF	Community forestry
CFA	Community Forest Agreement
CCSC	Cross Country Ski Club
FRPA	Forest and Range Practices Act
OW	Office of the Wet'suw't'en
RUGM	Resource User Group Meeting
SFM	Sustainable forest management
TOS	Town of Smithers
VOT	Village of Telkwa
WCFC	Wetzinkwa Community Forest Corporation

**List of Appendices**

Appendix I: Draft Interview Schedule.....185

Appendix II: Collaborative Posters Made by WCFC and the Wet’suwet’en Hereditary Chiefs.....187

Appendix III: 2013 Wetzin’kwa Community Forest Survey Response.....189

Appendix IV: Description of Participants.....193

Appendix V: Informed Consent for Participants.....194

## **Definition of Terms**

**Bulkley Land and Resource Management Plan:** This is a sub-regional land management plan that guides the management of land and resources in the Bulkley Valley.

**Collaborative governance:** This is an approach to governance that generally brings multiple and diverse stakeholders such as forest users and First Nations together to make consensus-based decisions.

**Community forest agreement:** This is a program of the government of British Columbia that provides area-based tenure to a community group, local government, or First Nation to manage public forest lands for their benefits.

**Double loop learning:** This is a categorization of social learning that is concerned with participants/stakeholders questioning the values and norms that form the basis of their collective decisions.

**Forest and Range Practices Act:** This is the provincial policy that guides forest and range management in British Columbia.

**Individual learning:** Learning by individual s, in this case as a result of their involvement in the activities of the Wetzinkwa Community Forest Corporation.

**Social learning:** Defined severally by many authors, as described in Chapter 2, is an ongoing iterative process that involves deliberation, interaction, reflection, shared understanding, and collective decision making among stakeholders, in this case the Board of the Wetzinkwa Community Forest Corporation.

**Single loop learning:** This is a categorization of social learning that focuses on participants/stakeholders finding solutions to problems/challenges they face and finding alternative means to improving outcomes, in this case in regard to managing forest resources.

**Sustainable forest management:** This is considered the normative goal of all forest management approaches, and it is a management approach that generally seeks ecological integrity, social equity, and economic stability. The components of sustainable forest management in Canada are categorized into social, cultural, environmental, and cultural sustainability, as discussed in Chapter 2.

**Triple loop learning:** This is a categorization of social learning that involves stakeholders learning how to learn while managing resources.

Wetzinkwa Community Forest Corporation: Is the corporation that holds the licence to manage the 32,000-ha community forest tenure, which is jointly held by the town of Smithers and the village of Telkwa, with support from the Wet'suwet'en First Nation.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Research Context

The management of natural resources has been shifting toward a more participatory paradigm for some years now (Pahl-Wostl & Hare, 2004; Pahl-Wostl et al., 2007; Cundill & Rodela, 2012). This shift is predicated in part on the sustainability outcomes that participatory approaches promise to bring (Reed & McIlveen, 2006). Although there are different types of participation, those that involve communities in decision making and deliberation, and provide some level of control to communities, are considered to have greater potential for success in natural resources management (Keen, Brown, & Dyball, 2005; see Arnstein, 1969; Pretty 1995). Given that there are complexities surrounding the management of natural resources, including people in decision making and related deliberations helps to ensure that their perceptions, knowledge, and experiences are harmonized into decisions, which is necessary in the context of sustainability (Keen et al., 2005).

However, arriving at participatory and collaborative decisions in resources management is complex and requires learning by stakeholders in order to adapt to the dynamic nature of such processes and the management of the resources themselves (Maarleveld & Dangbégnon, 1999; Keen et al., 2005). This is because stakeholders are individuals, groups, among others, that are affected by, and/or affect, forest management decisions, actions, and policies (Grimble & Chan, 1995). Some authors (e.g., Buck, Wollenberg, & Edmunds, 2001; Pahl-Wostl et al., 2008; Armitage, Marschke, & Plummer, 2008; Garmendia & Stagl, 2010) have identified that incorporating a social learning dimension in decision processes can be a means of encouraging such learning. This social learning can provide a way to achieve consensus regarding strategies for sustainably managing natural resources, since it could facilitate joint problem solving in an

atmosphere of mutual trust and knowledge sharing among collaborators, and empowers learners to alter their thinking and modes of operation when undertaken properly (Buck et al. 2001; Pahl-Wostl & Hare, 2004).

Sinclair, Diduck, and Fitzpatrick (2008) and authors such as Keen et al. (2005) for instance, argue that the implications of learning through participatory natural resources management and environmental governance can, for example, promote more sustainable outcomes. Muro and Jeffrey (2008) also discuss that several authors have encouraged the application of social learning to address the complexities in sustainable natural resources management. To this end, Pahl-Wostl and Hare (2004) view social learning as “an iterative and ongoing process that comprises several loops and enhances the flexibility of the socio-ecological system and its ability to respond to change” (p.195).

Public involvement in decision-making processes is largely considered critical to sustainable forest management (SFM), a concept that is recognised as the normative goal of most forest management. In Canada for instance, McGurk, Sinclair, and Diduck (2006) observed that the emergence of sustainable forest management has resulted in collaboration between forest product companies and a broad range of stakeholders such as the public, which in the past had been very limited. Moreover, involving forest-dependent communities in forest management decisions is recognised as having the potential to yield more prudent and sustainable outcomes because of the important role forests play in the socio-economic lives of local people (Gilmour & Fisher, 1991; Arnold, 2001; Charnley & Poe, 2007). As such, participatory approaches which can facilitate fair and effective decision making among collaborating stakeholders are considered a central principle of SFM (Hunt & Haider, 2001).

As is the case with other resource sectors such as water, social learning has been incorporated into participatory, collaborative approaches of forest management because it has “high potential to foster better collaboration among local institutions (horizontal integration) and vertical links among forest departments, NGOs and local community groups without losing sight of equity issues related to gender, culture, or poverty” (Buck et al., 2001, p. 15). Communication can be enhanced among stakeholders in a collaborative forest management process that incorporates social learning, allowing stakeholders to develop an interdependent relationship capable of ensuring sustainability. However, ensuring sustainability through participatory processes in forest management is a complicated and complex process fraught with challenges (Sinclair et al., 2008; Berkes, 2009).

Recognizing the complex nature of forest management, Padgee, Yeon-su, and Daugherty (2006) for instance, suggest that “the success of community forest management depends on the relationship between the community and its resources, which should facilitate feedback and the ability to respond to changing conditions over time” (p. 34). This idea underpins the community-based or ‘community forestry’ approach to forest management that is generally defined as the devolution of power to local communities to manage the forest for a variety of benefits (Teitelbaum, Beckley, & Nadeau, 2006; Bullock & Hanna, 2008). The community forest approach is perceived as a way to implement ecologically-based forestry (Teitelbaum et al., 2006). This approach has the potential to enable local people to influence that which affects their survival and help to ensure the sustainability of their livelihoods (Reed & McIlveen, 2006).

Community forest management is recognized as a promisingly viable approach to dealing with the conditions necessary for societal development of forest-dependent communities as people become more involved in the decision-making process (Duinker, Matakala, Chege, &

Bouthillier, 1994; Charnley & Poe, 2007; Alemagi, 2010). Baker and Kusel (2003) observe further that the objectives of community forest initiatives are to “conserve or restore forest ecosystems while improving the well-being of the communities that depend on them” (p.8).

While the above authors point to the potential of community forestry as a forest management approach, community forestry may also have significant limitations. For example, it might ‘institutionalise conflict’ if the model incorporates completely opposing interests in a single management body, because it will be difficult to maintain consensus among stakeholders (Beckley, 1998). Furthermore, Bradshaw (2003) asserts that there are capacity challenges, such as securing start-up capital, faced by new managers of a community forest (i.e., communities). Finally, Duinker, Matakala, & Zhang (1991) warn that community forestry cannot be perceived as a one-fits-all model for all communities, because not all communities have the capacity to make the approach successful.

In Canada, British Columbia (BC) is one of two provinces that have established legal tenures for community forestry (the other province being Quebec) (Teitelbaum, 2014). The BC provincial government has established a community forest agreement (CFA) program in which area-based tenures are awarded to communities for their management and benefits. This program is intended “to provide new opportunities for community management of Crown forest land” and to provide “greater flexibility” to communities to manage local forests in the province (BC Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO), 2011). The objectives stated for the community forest tenure agreements include: diversify the use of and benefits derived from the community forest agreement area; provide social and economic benefits to British Columbia; promote community involvement and participation; promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons;

among others (MFLNRO, 2011). One of these community forests, Wetzinkwa Community Forest Corporation, was awarded a community forest tenure in 2007 and is the focus of this study.

## **1.2 Research Purpose and Objectives**

The purpose of this study is to investigate how collaboration and social learning help in managing community forests sustainably. The study has the following objectives:

1. To examine opportunities/platforms that exist for providing input into decisions and learning (including activities such as training, seminars, etc.);
2. To describe what people (resource user groups, broader public, board members) have learned through their involvement in a community forest;
3. To describe how collaboration and learning are impacting sustainable forest management (SFM) efforts; and
4. To examine the challenges and barriers to collaboration and learning.

## **1.3 Research Contribution**

A lot has been written in the literature about the potential of community forestry as a forest governance approach, such as the potential to enhance benefits local communities derive from the forest, improve forest management decision making processes by making them more democratic, and encourage managing the forest for multiple values (e.g., Duinker et al., 1994; Beckley, 1998; Teitelbaum, 2014). However, after over 20 years of community forestry practice in Canada, there is still the need for empirical evidence to support the existence of these benefits to communities. This research therefore partly contributes to the body of literature that seeks to document benefits local communities derive from community forest management. Furthermore, it has been discussed in the social learning literature that decision processes that encourage

individual and social learning are capable of yielding more sustainable trajectories in natural resource and environmental management (e.g., Keen et al., 2005; Sinclair et al., 2008; Sims & Sinclair, 2008), and this study seeks to add to the knowledge that this assumption is based on through community forestry. The study therefore contributes in part, to the growing body of literature that discusses outcomes of individual and social learning in managing natural resources (in this case community forestry), and how this affects sustainability.

#### **1.4 Methods**

The research is qualitative in nature and was approached through a social constructivist paradigm. A social constructivist approach allowed research participants to share their own experiences regarding collaboration in forest management, their learning outcomes through the collaborative process initiated, and how this collaboration has impacted the sustainable management of the resource. A case study strategy of inquiry was used in this research. The case study selected was the Wetzinkwa Community Forest Corporation in BC. In terms of data collection methods, semi-structured interviews, participant observation, forest tours, and document review were employed. The study population included forest user groups, property owners, a contractor, present and past board members of WCFC, pioneers of the WCFC, staff of the WCFC, a municipal Councillor, and a community researcher. Semi-structured interviews were audio recorded and in some instances hand-written notes were taken. Notes were also kept for the forest tours and participant observation. Express Scribe Transcription software was used to transcribe interviews, and the information obtained was coded using NVivo™ (QSR 2010) software. The methods are detailed in Chapter Three of the thesis.

## **1.5 Thesis Organization**

The thesis is organized into seven chapters. This introductory chapter is followed by a review of literature relevant to the study. Chapter Three details further the methods and techniques used in conducting the study. Chapter Four describes opportunities for learning, sharing ideas, and making input. Chapter Five focuses on the learning experiences of participants. Chapter Six considers the impact learning and collaboration have on SFM efforts, and Chapter Seven provides conclusion and recommendations based on the findings of the research.

**CHAPTER TWO**  
**COMMUNITY FORESTRY, SOCIAL LEARNING, AND SUSTAINABLE**  
**FOREST MANAGEMENT**

**2.1 Community Forestry in Canada**

Decisions regarding who manages public or privately owned forests are important because of the impact those management decisions can have on forest health and the wellbeing of its users (Arnold, 2001; Hodgdon, 2010). Managing public forests has commonly been the purview of the state, which has traditionally managed the forest in a way that retains productive forests (Arnold, 2001). In Canada, nearly half of the landscape is covered in forests, and approximately 93% of the total forested areas are Crown land; out of which 77% is owned by provincial and territorial governments and 16% by the federal government (Natural Resources Canada (NRC), 2012). Therefore, governments in Canada have long been managing and maintaining Crown land on behalf of the citizenry (Chambers, 2004; Charnley & Poe, 2007). Management of these forests has largely been achieved through long term forest leases to forest product companies (Beckley, 1998; McGurk et al., 2006).

In the 1990s, public critique of the forest industry and how the provincial and federal governments managed forests led to experimentation with new forest management approaches, including ones that could provide more benefits to the public (Charnley & Poe, 2007). As Bullock and Hanna (2008) maintain, the public, particularly in forest-dependent communities, has been seeking increasing accountability from forest managers. Generally, the experimentation with other methods of forest management sought to increase public participation in forest management, while ensuring social, ecological, and economic sustainability of the forest (Charnley & Poe, 2007). The outcomes of the experimentation involved more local people in

forest management initiatives leading to the emergence of the Canadian Model Forest Program in 1992 (Bonnell, 2012), the formation of forestry industry stakeholder advisory committees (Parkins et al., 2006), Crown forest co-management between communities and private industry (Teitelbaum et al., 2006), and finally community forestry (Duinker et al., 1994; Teitelbaum, et al., 2006; Bullock & Hanna 2008). Though early forms of community forestry date back to the 1940s-50s (Duinker et al., 1994; Teitelbaum et al., 2006), it is the initiatives that began in the 1990s that firmly rooted community forestry in Canada.

As Chambers (2004) notes, the great majority of forests are owned by the public and, therefore, incorporating public values and objectives in their management is imperative. Duinker et al. (1994) hold the view that community forestry has been given an impetus in Canada due to focus being placed on “forest management on the one hand and community empowerment on the other” (p.711). Most community forests in Canada can be found in Ontario, Quebec, and British Columbia (Community Forests Canada, undated; Teitelbaum et al., 2006), with active community forests in the country totalling over 100 (Community Forests Canada, undated).

It is important to note that the increasing demand to involve local people in forest decision-making processes coincided with several other factors. The key factors were: a shift in development thinking in the 1970s that sought to increase public participation in decision making processes, supported by rights-based approaches (Chambers, 1994; Fisher, 1995); government decentralization policies targeted at devolving power to the citizenry (Lane & Corbett, 2005); a desire to increase benefits and access to local users whose livelihoods were dependent on the forests (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000); and the need to find ways to deal with changes and challenges in ecological, social, and economic conditions of the forest that resulted from state-owned management processes (Arnold, 2001; Charnley & Poe, 2007;

Hodgdon, 2010). In addition, the 1985 Conference on Common Property Resource Management organised by the US National Academy of Sciences (NAS), was a major step in shifting attention to more participatory approaches to forest management, as it demonstrated that collective management of the forest was a viable approach (Arnold, 2001; Wiersum, Singhal, & Benneker, 2004).

## **2.2 Community Forestry in British Columbia**

British Columbia provides a good case for the purposes of my study because it has the longest history with community-based forest approaches of any Canadian province. In British Columbia, the provincial government owns about 93% of both total land base and forested lands (Bullock & Hanna, 2008), with one quarter of all communities in the province dependent on forestry for their income (Wouters, 2000). Over the past two decades, there has been demand for alternative management approaches by forest-dependent communities seeking to “stabilize their local economies and provide long-term employment opportunities” (Gunter & Mulkey, 2012, p.1). This public demand rallied support for community forestry in the province. Community forestry is viewed as an approach capable of achieving economic stability, and thereby dealing with the current economic, social and ecological challenges being faced by a number of forest-dependent communities (Gunter & Mulkey, 2012). The BC government made available about 1.2 million cubic metres of timber for small-scale tenures such as community forests and woodlots under its Forestry Revitalization Plan (MFLNRO, 2014).

The province of British Columbia is noted for the establishment of the oldest community forest in Canada, Mission Municipal Forest, in 1958 (Allen & Frank, 1994). Origins of community forestry in BC can be traced to the 1945 recommendation made by Chief Justice Gordon Sloan in the *Royal Commission Report*, which suggested that local municipalities should

be allowed to manage their forests (Gunter & Mulkey, 2012). Following this recommendation, the Mission Municipal Forest, which had an original goal of reducing local unemployment in the municipality, was formed (Teitelbaum et al., 2006). Though a second recommendation in 1957 by a commission constituted by Chief Justice Sloan failed to extend such forest management to other municipalities, some community-based initiatives that took place in the province in the 1990s gave management rights to communities through the award of forest licenses (Gunter & Mulkey, 2012).

Community forestry finally gained a sound footing in the province following the passing of the *Forest Statutes Amendment Act* in 1998, which sought to pilot a new approach to forest tenure in the province (Bullock & Hanna, 2008; Teitelbaum et al., 2006; Gunter & Mulkey, 2012). The Community Forest Agreement (CFA), as the new forest tenure is called, vests in communities, the ‘central control’ in managing forest on Crown land (Gunter and Mulkey, 2012). Over 80 interested communities applied for the licence in 1998 (Teitelbaum et al., 2006). After reviewing the applications, seven pilot community forests, which were composed of both First Nations and non First Nations communities were established (BC MFLNRO, 2014). These were all five-year community forest pilot agreements.

There were ten pilot community forests in the year 2000 (Bradshaw, 2003), but through an amendment in the *Forest Act* in 2005, 33 other communities received approval to be involved in the program (Gunter & Mulkey, 2012). In 2004, a five-year probationary community forest agreement was introduced to replace the pilot agreements, subject to a long term licence agreement of between 25 and 99 years (Gunter & Mulkey, 2012; BC MLNRO, 2014). The Burns Lake Community Forest Corporation was the first community forest in the province to be

awarded a long term 25-year community forest agreement licence in 2005 (see: <http://blcomfor.com/index.php/about-us/background-and-history/>).

In order to increase incentives for broader community participation in the program, ensure long term planning, and establish business relationships by community forests, legislation was passed in 2009 to eliminate the five-year probationary licence on community forests, and rather give communities a 25-year renewable licence (Gunter & Mulky, 2012).

### **2.3 What is Community Forestry?**

Community forestry as a concept lacks a precise and strict definition (Duinker et al., 1994; MacLellan & Duinker, 2012). This has resulted in widespread use of the term and definitions from various scholars and forestry practitioners in ways that are specific to their own locale, or ones that are so broad as to cover any community-based forest management approach. For instance, the Food and agriculture Organisation (FAO) (1978) define community forestry as:

Any situation which intimately involves local people in forestry activity. It embraces a spectrum of situations ranging from woodlots in areas which are short of wood and other forest products for local needs, through the growing of trees at the farm level to provide cash crops and the processing of forest products at the household, artisan or small industry level to generate income, to the activities of forest dwelling communities.

Linking community forestry to sustainability issues, Charnley and Poe (2007) define it as “Forest management that has ecological sustainability and local community benefits as central goals, with some degree of responsibility and authority for forest management formally vested in the community” (p.301). In providing an overview of community forestry in Canada, Duinker et al. (1994) defined a community forest as “a tree-dominated ecosystem managed for multiple community values and benefits by the community” (p.711). Finally, in their analysis of

community forestry in Canada, Teitelbaum et al. (2006) defined community forestry on public lands in Canada as “A public forest area managed by the community as a working forest for the benefit of the community” (p.417).

Though definitions may vary, the two main attributes or characteristics of community forestry are community or local control in decision making about the management of the forest, and the benefits derived from it. These indicate a shift in forest management responsibilities - use, control, accountability - and rights from the State to local people (Fisher, 1995; Agrawal & Ostrom, 2001; Teitelbaum et al., 2006, Ostrom, 2009). However, the level of ownership of the forest by the community or State is a point of concern, as it determines the types of benefits that will accrue to local people and, in some cases, the success of the community forest (Teitelbaum et al., 2006).

The many ways community forestry has been defined is to an extent a result of the term's use in different political and geographic settings, for instance, Social forestry (Fisher, 1995), Joint Forest Management (Poffenberger & McGean, 1996); Community-based forest management (Lynch & Talbot, 1995); and Community-based forestry (Gauld, 2000). Thus, even though all the terms above denote a form of forest decentralization and devolution to communities, they have been used differently to reflect needs in specific geographic settings. Fisher (1995) argues that the unpleasant connotations that came to be associated with social forestry (which was initially the name given to community-based forestry approaches) in some countries partly explain the emergence of new names such as community forestry and joint forest management, to explain community participation and interests in forest management. MacLellan and Duinker (2012) assert that the flexibility in defining community forestry to reflect particular needs of a local people/community has contributed to the success of the approach.

In Reed and McIlveen's (2006) assessment of community forestry, they allude to the fact that defining 'community' in community forestry is critical, multi-layered, and complex, presenting a hurdle that needs to be overcome by scholars. Duinker et al. (1994) present five different definitions of 'community' based on their review of the term: community as a way of life; community as a geographic location; community as a social system; community as a type of relationship; and community as a source of energy. Common among these definitions of community is community as a geographical location, which implies connections between people (population) and place. Such a definition is limited in defining community forestry, because population size and density of a place do not necessarily mean all members in a particular area are involved with the community forest. To this end, MacLellan and Duinker (2012), observe that a community can be defined as 'community of interest' and 'community of place.' Thus, a community becomes "a setting in which the people have some sense of place, common interests and goals, and are willing to cooperate or work together to achieve those goals" (Duinker et al., 1994, p.712).

In this study, I conceptualize community forestry as involving a group of people with interests in forest resources (timber and non-timber forest products, as well as ecological benefits), who actively manage for their benefits and the health of the forest by ensuring ecological integrity, social equity and sustainable economic outcomes. Active management in this context refers to the ability of communities (forest user groups) to have input into decisions through regular meetings (not consultations) either directly or through their representatives. When participation in decision making is through representation, representatives should be in a position to meet members of their user groups to discuss the agenda and issues before and after

meetings of the Board or committees managing the forest. Like MacLellan and Duinker (2012), I define community as encompassing both interest and place.

## **2.4 Collaborative Management/Governance**

Managing forests for community benefits is inherently complex due to the multiple uses of forests by the people in a given locality or community and the ecological services forests provide. Consequently, public participation that will include the public in decision-making processes - especially forest-dependent communities that are affected by such decisions - has been encouraged in order to help deal with the complex multiple uses of the forest (Gilmour & Fisher, 1991; McCarthy, 2005). According to Fisher (1995), the participation of local people and their interests in forest management was encouraged partly because of the “pragmatic value of local involvement” (p.2). Some of the earliest forms of participation in community-based forest management approaches such as social forestry often restricted participation to paid labour and focused little attention to local needs in developing countries (Fisher, 1995).

While public participation is increasingly being used as an approach to involve people who are affected by forest management decisions, different levels of participation exist (see: Arnstein, 1969; Pretty, 1995; White, 1996). Building on the typologies of participation developed by Pretty and White, Agarwal (2001), for instance, describes six forms of participation: Nominal, Passive, Consultative, Activity-specific, Active, and Interactive (empowering) participation. Drawing from Agarwal and others such as Keen et al. (2005), it is evident that some forms of participation (e.g., Nominal, Passive, Consultative) are a way to solicit information through consultation processes, in which outcomes may not be consensus-based, while in others (e.g., Active and Interactive participation) all stakeholders have a fairly

equal chance of providing input in the decision process with outcomes that are borne out of a collective action.

The latter, broadly referred to as collaborative governance or management, has been applied in managing natural resources such as forests (e.g., Schusler, Decker, & Pfeffer, 2003). Collaborative management ensures collective recognition of complexities in managing natural resources, and provides stakeholders with the opportunity to respond to the changing and uncertain trends associated with management (Keen et al., 2005; Berkes, 2009). As a result, collaborative governance processes are expected to be able to effectively address problems such as natural resource depletion and conflict among resource users, and also to ensure more accountability from forest managers (Heikkila & Gerlak, 2005; Ansell & Gash, 2008). Thus, when public involvement is increased in forest management, “both the process and outcomes from the process should be perceived as fairer and, consequently, more effective” (Hunt & Haider, 2001, p.873).

Through collaborative governance, multiple stakeholders (governments, forest user groups, forest managers, among others) come together to discuss management issues regarding the forest in order to arrive at some collective decisions. This is in line with Keen and Mahanty’s (2005) postulation that the basis of collaborative management is participation by multiple stakeholders. Thus, multiple stakeholders have the opportunity to collaborate and influence management decisions, where otherwise they would have been left out of any consultation process. Community forestry aligns with the collaborative governance approach, as it conceptually seeks, among other things, a reconnection between ‘local communities with their forest environments, and a way to balance the many competing uses and values of the forest’ (Teitelbaum et al., 2006, p.416).

Keen and Manhanty (2005) observe that for collaborative governance to achieve its desired outcomes, co-learning (or collaborative learning), which is embedded within a collaborative management approach should be an important focus for stakeholders. Multiple interests in a collaborative management process often results in conflicts that need to be negotiated and agreed upon, and it is through a learning process that conflicts over activities, actions, and understandings can be resolved and shaped into preferred management strategies (or collective action) (Keen & Mahanty, 2005). This learning dimension is explained further in this section of the study.

## **2.5 Challenges of Community Forestry Management/Governance**

Managing community forests through multi-stakeholder collaboration has its own set of challenges, which can hinder the ability to reach the many positive potential benefits community forestry can promote. In this section, I explain power relations, conflicts, and capacity of communities as challenges that community forests need to surmount to ensure effective and efficient management of the forest for increased community benefits.

### *2.5.1 Power Relations in Collaborative Management/Governance*

One of the most discussed challenges of governance in community forestry is power relations among multiple stakeholders (Reed & McIlveen, 2006; Padgee et al. 2006; Matthews & Missingham, 2009). According to Buchy and Hoverman (2000), the role of power is central to participatory/collaborative forest management processes, as it is capable of ultimately changing relationships among stakeholders within the participatory process. Power to impact decisions about the forest is a major motivator for people to get involved in forest management, given the prospect of more shared decision-making with state forest agencies (Buchy & Hoverman, 2000).

Reed and McIlveen (2006) point to power in shaping management practices and outcomes, the influence of power in outcomes of decisions, and power balance among representatives in a collaborative setting as important issues that need to be assessed critically in the context of community forest management. This is because the complexity embedded in collaborative management can result in power being a decisive factor in the success or failure of the collaboration (Keen & Manhanty, 2005).

Further, the economic status or interest of community members can determine their representation as stakeholders in forest management (Reed, 2010). In the forest advisory committees she studied, Reed (2010) concluded that these committees were the preserve of elites and community members with an economic stake in the forest resource. As well, some studies have identified that committees established to manage the forest are often dominated by people, mostly males, with forest-related knowledge (Jabbour & Balsille, 2003). In a situation where a few representatives wield a lot of power because of their wealth or status in society, collaborative management can be hijacked to suit the needs and interests of these elites over the broader community, thus defeating the purpose of the collaboration.

#### *2.5.2 Conflicts within CF Management*

Power can be a source of major conflict among multi-stakeholders within a community forest management setting. Bullock and Hanna (2008) maintain that the emergence of community forestry can cause conflict between a section of the community that sees the approach as a potential for ensuring economic benefits and stability, and those that perceive it as an impediment to large scale logging. Such divergent views can therefore serve as a recipe of polarisation within the community.

Among those who are in support of the approach, the extent to which their interests are represented can also be a major source of conflict within communities, in the event that representation does not highlight and exhaust the various values, interests, and social structure of the community (Appelstrand, 2002; Wellstead, Stedman, & Parkins, 2003). However, the myriad of community interests in the forest makes it difficult to recognise and incorporate all of them, and therefore presents a major challenge in identifying stakeholders to fully represent all interests (Duinker et al., 1994; Clark, 2002). In such a situation, it can be argued that because some interests are being sacrificed, conflict becomes inevitable among interest groups of the community forest.

Beckley (1998), for his part, argues that integrating completely opposite interests in a single management approach could make the community forest difficult to govern/manage, and therefore attempts at integration could undermine the community's ability to achieve its goals. Bullock and Hanna (2008), therefore, call for a pluralistic and accountable representation in the CF management process, if community forestry is to realise its potential of resolving value and belief conflicts.

However, conflicts in CF management are not necessarily destructive. Some conflicts can challenge the status quo and processes of management to yield innovative and better ways of management in line with community interests, because conflict could "indicate process weakness, reveal aspects of a decision that need reconsideration, bring new information and perspectives to the fore, or reveal inequity" (Bullock & Hanna, 2008, p.80).

### *2.5.3 Capacity of Communities in CF Management*

The shift from top down, centralised forest management to greater community involvement in management looks appropriate based on the potential community forestry

possesses. However, devolution of power to communities to manage the forest for their benefit also means that communities must assess the extent of their capacities to realise such goals. The success of community forestry “will depend on capacity building for practical site-level management and for managing or negotiating larger processes of land use planning” (Bullock & Hanna, 2008, p.83).

It is, for instance, posited that forest-dependent communities that do not have well-diversified economies will find it difficult to increase their capacities to manage the forest to their advantage (e.g., Watkins, 1997). Bradshaw (2003) found this in his assessment of 10 community forest pilot projects in BC, where external pressures such as unsupportive provincial government policies and lack of start-up funds resulted in inactions by some communities two years after they had been awarded community forest pilot agreements. Thus, there was low capacity among some of the piloting communities to start their activities after they gained autonomy to manage the forest, leading them to rely heavily on volunteers, which resulted in burn out among such people. Bradshaw therefore suggests that there might be a need for state assistance with community capacity building and maintenance if community-based natural resource management projects such as community forests are to be successful.

Communities need to build capacity in order to be responsive to the ‘shocks’ they may be confronted with regarding forest management. This requires appropriate community expertise and experience that can be of immense support in assisting community forests to succeed (McIlveen & Bradshaw, 2009). Without strong community capacity, managing the forest for ecological, economic, and social benefits will be difficult. McIlveen and Bradshaw’s (2009) finding resonates with the notions of Duinker et al. (1991) that not all communities can be considered to have the required capacity or be in a position to embrace community forestry as a

forest management approach, and with Bullock and Hanna's (2008) contention that community forestry cannot be considered a panacea for correcting all the challenges of industrial forestry.

## **2.6 Sustainable Forest Management and Community Forestry**

Over the past two decades, issues of sustainability and sustainable development have dominated policy, research, and public debates, especially after the publication of the Brundtland report, *Our Common Future*, which emphasized the need for the current generation to meet its needs while ensuring that future generations' ability to meet their own needs are not compromised (World Commission on Environment and Development (WCED), 1987). Therefore, there has been strong emphasis in all sorts of literature on the importance of ensuring social, economic, and environmental balance, if there is any chance of achieving sustainability. The concept of sustainability has been applied to forest management and, in fact, the term appears to have originated from a 1713 German forestry plan that managed the forest for long term productive use (Du Piasini, 2006).

SFM, as a concept, has gained increased attention in forestry, and has seemingly become a normative goal for all forest management approaches. However, Sample, Johnson, Aplet, and Olson (1993) claim that "the concept of sustainable forests, despite its wide appeal, is not widely understood by the public, by forest policy and management professionals, or even by its advocates" (p.5). Despite these claims, some writers (e.g., Merlo & Croiteru 2005; Shindler, Finlay, & Beckley, 2003) observe that functions and products from the forest have increasingly been misused or undervalued by society, and therefore SFM has come in as a response to these unsustainable practices or actions by society.

Defining SFM is as complex and difficult as the term sustainability, because of the many integrated concepts and variables that arise regarding forest management (Adamowicz & Burton,

2003). However, the definition provided by the Ministerial Conference on the Protection of Forests in Europe (MCPFE) (2011) elaborates the key issues. The Conference defined SFM as:

the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems (MCPFE, p.152).

In Canada, SFM is generally viewed as management that “maintains and enhances the long-term health of forest ecosystems for the benefit of all living things while providing environmental, economic, social, and cultural opportunities for present and future generations” (Canadian Forest Service, 2001, p.38). Similarly, community forestry is conceptually perceived to implement ecological-based forest management, create employment opportunities for community members (Teitelbaum et al., 2006), “maximize benefits of forest values to a different and usually wider range of stakeholders while simultaneously serving as mechanisms to reduce conflict between stakeholders” (Beckley 1998, p.736), while achieving sustainability, fairness, and efficiency (Hunt & Haider, 2001).

Since community forestry, by its nature, devolves power to local people or gives them a larger role in forest management decisions, there are claims that management outcomes could “lead to higher levels of economic growth, environmental protection, and community stability” (McCarthy, 2006, p.86) according to its proponents. Elbakidze, Angelstam, Sandström, and Axelsson (2010) further emphasize the need for collaboration among multiple forest users at multiple levels to develop the needed capacity to adapt to risks and uncertainties of forest management, especially at this time when sustainability has become an objective for forest

management. In my mind these points suggest that SFM is implicit in community forestry management.

### *2.6.1 Measuring Sustainable Forest Management*

Worldwide, SFM is measured by a set of criteria and indicators (C&I) developed for forest values that are managed within a particular geographic setting (Gough, Innes, & Allen, 2008; BC Ministry of Forest, Mines, and Lands (MFML), 2010). Criteria provide information on the range of forest values being measured, for example, *biological diversity*, while indicators are measurable characteristics of these forest values (NRC, 2012). Indicators for biological diversity for instance include genetic diversity, ecosystem diversity, and species diversity (see: Canadian Council of Forest Ministers (CCFM), 2008; BC MFML, 2010).

In Canada, the CCFM has developed a set of six criteria and 46 indicators for tracking the country's progress towards achieving SFM (NRC, 2012; CCFM, 2005). Similarly, 91 indicators grouped into 24 topic areas have been developed by BC's Ministry of Forests to assess SFM in the province (BC MFML, 2010). These indicators are based on both international and national frameworks of indicators for assessing SFM (BC MFML, 2010).

The various components under a set of C&I are generally categorised into ecological, economic, social, and cultural sustainability components (Gough et al., 2008; CCFM, 2008; NRC, 2012).

## **2.7 Social Learning in Natural Resources Management**

The nexus between learning and natural resources management has been increasingly emphasized in the literature, with some authors (e.g., Armitage et al., 2008; Keen et al., 2005) claiming learning has become a normative goal of management and should be pursued, because it has the potential to improve understanding of the human-environment relationship. Learning

results in change and is an “act or process by which behavioural change, knowledge, skills, and attitudes are acquired” (Boyd & Apps, 1980, p.101).

There are different types of learning identified and extensively explained by scholars in the natural resources management context including, among others, transformative learning (Mezirow, 1994); experiential learning (Kolb, 1984); organizational learning (Argyris & Schön, 1978); and social learning (Bandura, 1977). The latter, which has been used most extensively in the natural resources and environmental management literature, is defined as ‘the collective action and reflection that occurs among different individuals and groups, as they work to improve the management of human and environmental interrelations’ (Keen et al., 2005, p.4).

Originally defined in the sphere of psychology by its proponent, Bandura (1977), the concept of social learning has increasingly been applied in various fields including natural resources management (e.g., Buck et al., 2001; Keen et al., 2005). Incorporating social learning approaches in natural resources management stems from the complexity and uncertainty in outcomes that characterizes natural resources management (Berkes, 2009), and also because of a paradigm shift towards a more bottom-up approach to managing natural resources (Cundill & Rodela, 2012; Pahl-Wostl et al., 2007). Along with this shift, there has been more involvement of scholars from the social sciences in the study of natural resource management and people from affected communities in managing natural resources (Chambers, 2004; Cundill & Rodela, 2012).

As a result of the varied perspectives that stakeholders bring to the resource management table, there is a need to find ways to effectively share their ideas and experiences to help make the resulting management decisions more dynamic and certain (Maarleveld & Dangbégnon, 1999; Armitage et al. 2008; Garmendia & Stagl, 2010). In the process of sharing ideas, members of the group (or stakeholders) can learn from each other through an iterative and reflective

process that can result in a better understanding of resources management and sustainability (Keen et al., 2005; Keen & Mahanty, 2006; Bull, Petts, & Evans, 2008).

However, current conceptualizations of social learning in natural resources management indicate that the ground continues to shift from earlier explanations given by Bandura, in which social learning was defined as involving an individual who was learning in a social context by observing and imitating role models (Bandura, 1977). Reed et al. (2010) for instance, note that some conceptualizations of social learning implicitly involve social change that benefits wider social ecological systems. As well, it is now recognized that how social learning evolves, its outcomes, and how it is perceived in the natural resources literature varies depending on the management approach/paradigm (i.e., adaptive management, adaptive co-management, and collaborative/participatory management) (Rodela, 2011; Cundill & Rodela, 2012).

Some authors (e.g., Keen et al., 2005; Keen & Mahanty, 2006) argue that learning should become an essential part of decision making processes in natural resources management because of the growing complexities that surround resource management and a realization by stakeholders of the need for collective decision making in the process. Management that includes learning approaches provides an opportunity to use a broader range of knowledge in managing natural resources compared to conventional narrow approaches to decision making (Jiggins & Röling, 2002). In this way, decisions arrived at can further deepen understanding of the human-environment relationships and ensure continual improvements in natural resources based on the decisions (Keen et al., 2005.).

## **2.8 Social Learning through a Management Lens**

Social learning in natural resources management has been discussed in relation to three broad approaches (i.e., adaptive management, adaptive co-management, and

collaborative/participatory management) by numerous scholars (e.g., Armitage et al., 2008; Keen & Mahanty, 2006; Cundill & Rodela, 2012). Therefore, understanding how social learning has been used in each of these approaches is important to understanding social learning in practice.

In adaptive management for instance, Holling (1978) describes learning as a process of active experimentation in natural resources management that helps managers deal with the uncertainties and complexities that surround the outcomes of management. Building on the ideas of Walters (1986), Cundill and Rodela (2012) explained learning in adaptive management as:

an iterative process based on the scientific model of carefully planned experiments that involved scientists and decision makers who learnt through a cyclical process of setting objectives, planning, taking action, monitoring and reflecting on the outcomes, learning, and taking action again. (Cundill & Rodela, 2012, p.9).

In this realm, learning exclusively involves dealing with outcomes that arise from management decisions that are made based on the knowledge of managers or scientists (experts), and it occurs at the individual level. In this 'learning by doing' atmosphere, managers are able to test their decisions, monitor, observe outcomes, assess effects and learn from them as a basis for making improved management decisions (Lee, 1993; Armitage et al., 2008). The focus of learning therefore can be said to operate at a top level between policy-makers and managers/scientists (Cundill & Rodela, 2012).

Within the collaborative management paradigm, the focus on who learns, how they learn, and what they learn is significantly different from adaptive management (e.g., Keen & Mahanty, 2006). This approach to governance is influenced by participatory democracy, which aims to involve the poor and others who lack power in decision-making processes that affect their lives and livelihoods (Chambers, 1994). Collaboratively, stakeholders (from communities to

governments) are involved in the process of management, and learn through deliberations and interactions (Buck et al., 2001; Rolling, 2002). During the learning process, problems regarding environmental concerns could be resolved, there is potential for mitigating conflicts, people learn to work together and how to take collective action (Keen & Mahanty, 2006; Cundill & Rodela, 2012).

Thus, in participatory or collaborative management approaches, social learning emerges as an outcome of the interaction among stakeholders. The concept of social learning in collaborative management involves stakeholders coming together in an environment that ideally allows them to interact, deliberate, resolve their conflicts, and come out with strong management decisions regarding natural resources (Keen et al., 2005; Cundill & Rodela, 2012, Rolling, 2002). However, some overlap exists between social learning in adaptive and collaborative management.

A paradigm that combines both adaptive and collaborative management is the adaptive co-management paradigm. Adaptive co-management emphasizes the learning-by-doing and experimentation aspects of adaptive management, and the collaborative and deliberative process that is central to participatory management (Armitage et al., 2008; Cundill & Rodela, 2012). As Armitage et al. (2008) explain “adaptive co-management, in particular, is an outcome of the adaptive management and collaborative management experiences in which the learning and linking functions (horizontally and vertically) of governance are emphasized” (p.87). In this way, adaptive co-management aims at self-organization of socio-ecological systems (Berkes, 2009), particularly because of the action-nature feedback relationship that exists between the environment and ecological experience (Rodella, 2011). As a result, learning in this management paradigm is geared towards managing resources to ensure socio-ecological resilience, as resource

managers and users are able to build capacity to deal with ecological responses in dynamic ways (Folke, Colding, & Berkes, 2003; Plummer & Armitage, 2007).

The time required for ecological feedbacks and the large scales at which ecological systems operate require flexible management of resources “tailored to specific places and situations and supported by, and working with, various organizations at different levels” (Olsson, 2004, p.75). The adaptive co-management paradigm therefore is a “long term management structure that permits stakeholders to share management responsibility within a specific system of natural resources and to learn from their actions” (Ruitenbeek & Cartier, 2001, p.8).

This study will focus on social learning outcomes in a collaborative forest management setting, where stakeholders with diverse experiences and backgrounds in forest management share knowledge and make decisions through representation on a community forest board and committees with the aim of sustainably managing the forest. Social learning in collaborative management is my focus, rather than other learning approaches, because the general question being asked is how learning in community forestry is helping to sustainably manage the forest. As described earlier in a section of this chapter, community forestry leans towards collaborative management/governance, because of its potential for community members to share their knowledge and influence forest management decisions.

## **2.9 Considering Social Learning**

Social learning can be viewed as a term that has engendered several overlapping definitions, partly because of the different application of the term in natural resources management, and the numerous disciplines from which learning theory has developed (Armitage et al., 2008; Cundill & Rodela, 2012). I have provided some definitions already and feel it is important to focus my use of the term, as some authors (e.g., Diduck, Bankes, Clark, &

Armitage, 2005; Armitage et al., 2008; Reed et al., 2010) argue that the failure on the part of scholars to agree on a single definition of the term impacts their work.

Reed et al. (2010) for instance, observe that some definitions make any social process social learning, which they contend is not and should not be the case. A lack of conceptual clarity therefore questions the existence of social learning and prevents consideration of outcomes that are associated with it in natural resources management (Armitage et al., 2008). Muro and Jeffery (2008) further indicate the lack of reflection by authors on the clarity of social learning, and emphasize that there is limited empirical research on social learning in participatory decision making processes.

However, the many definitions emphasize features such as reflection (Rodela, 2011), deliberative processes (Buck et al., 2001; Cundill & Rodela, 2012), shared understanding and interaction (Muro & Jeffrey, 2008; Buck et al., 2001), and collaborative decision making (Keen et al., 2005). These characteristics of social learning further categorize the term as both an outcome and a process in natural resources management decision making. As a process, social learning can be viewed as sharing information, ideas, and knowledge among people (stakeholders) in a network, and reflecting on them (Reed et al., 2010). In such situations, the various values and understandings held by stakeholders are presented to others within the network, with the aim that each stakeholder can learn from the others' experiences and knowledge regarding the management of natural resources.

As an outcome, social learning could result in participants building trust, attitudinal change, and empowering stakeholders in the network (Buck et al., 2001; Pahl-Wostl & Hare, 2004). Its ultimate outcome in natural resource management, however, is to achieve a more sustainable management of social-ecological systems (Muro & Jeffrey, 2008; Sinclair et al.,

2008). For the purposes of this study, I will adopt the definition by Reed et al. (2010), who define social learning as “a change in understanding that goes beyond the individual to become situated within wider social units or communities of practice through social interactions between actors within social networks.” They observe that for social learning to occur, there should be a change in understanding, which should be situated in a wider network or community of practice (the in-groups individuals represent) through person-to-person interaction within the network.

The premise that my choice is based on is that within a community forestry setting, there will be representatives of the community and user groups at board or committee meetings, and one way to observe that learning is occurring will be for representatives to share information regarding such meetings with the community and user groups especially where the main avenue for learning is through annual general meetings. At this interpersonal level, clarity can be given to questions posed by the representatives of the community or user groups to enable them to better understand any issues pertaining to managing the community forest. Thus, learning becomes situated within the user group (its members) or community members.

As I have defined it, social learning could have the effect of having people challenge previous knowledge, experiences, and actions to help with the adaptation to risks and uncertainties. Consequently, some authors (e.g., Maarleveld & Dangbégnon 1999; King & Jiggins, 2002) categorise outcomes of social learning into single-loop, double-loop, and triple loop learning, based on their examination of social learning.

Single loop learning involves searching for alternative courses of knowledge and actions to solve specific problems and improve outcomes, with the aim of correcting errors that characterise routine activities/actions, while double loop learning questions the underlying values and norms of one’s actions (Armitage et al., 2008). In both cases, however, social learning is

expected to empower stakeholders to gain a better understanding of their actions as they share, deliberate and build trust among themselves regarding managing natural resources such as a forest.

For their part, Maarleveld and Dangbégnon (1999) explain social learning within the context of action-reflection feedback loops based on learning loops described by Argyris and Schön (1996). They observe that single loop learning occurs “when outcomes of decision making and action are evaluated in terms of the way these contribute to realizing goals and expectations. A mismatch between expectations and performance is resolved by improving present practices so that future performance is within the range of existing norms and values” (Maarleveld & Dangbégnon, p. 269). As a result, they view single loop learning in the context of finding actions and/or taking decisions that will lead to achieving some set goals or desired outcomes. They further explain that double loop learning occurs when feedback from actions begin to show changes in the underlying assumptions of these actions or practice. That is, when norms, values or beliefs that informed actions begin to undergo radical changes (Pah-Wostl et al., 2008), after the feedback from those actions is assessed.

Triple-loop learning is regarded as multiple-loop learning (Armitage et al., 2008) “characterized by reflection and actions that address the conditions that structure interaction patterns in single and double loop learning” (Maarleveld & Dangbégnon, 1999, p.270). Thus, in triple-loop learning, actors or stakeholders learn how to learn (Maarleveld & Dangbégnon,1999) by critically reflecting on their “actions, assumptions, values, and learning processes” (Keen & Mahanty, 2006, p.502).

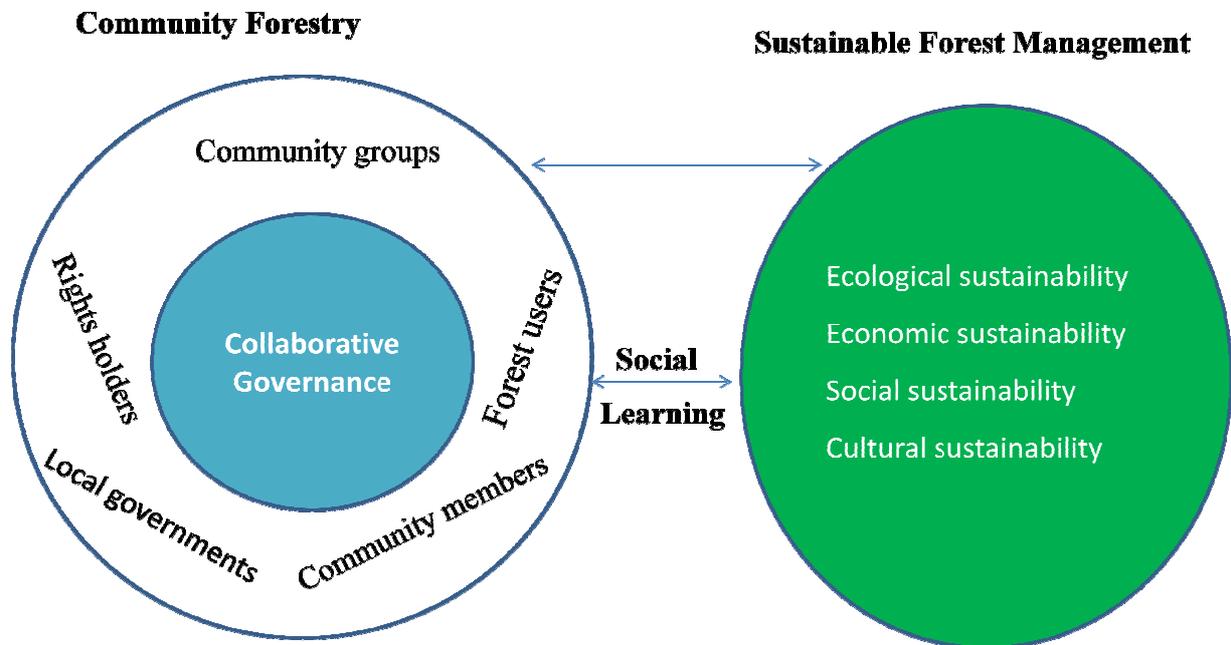
## 2.10 Chapter Summary

Community forestry, as it has been argued above, is an approach with much potential to radically change the top-down, centralised forest management approach that has been commonly used in Canada, and to offer some level of autonomy to communities to participate in forest management and gain more direct benefits. At its root, community forestry is about the devolution of power to local communities to manage the forest, and also to think differently about how to manage the resource. Like all community-based forest management approaches, community forestry, of course, faces challenges such as power relations, conflict and capacity building, which can completely undermine success if not addressed.

Given the participatory community-based nature of this approach, as described in the literature, community forestry has the potential to encourage broader based social learning than traditional approaches to forest management, since local people are directly involved in management. In fact, it has been argued that incorporating social learning in this collaborative multi-stakeholder process is important, since it is through social learning that communities can learn and share ideas, and take collective action to deal with risks and uncertainties that are a part of forest management. This becomes even more important if the community forest's implicit goal is achieving sustainable forest management, which has really become a normative goal for most forest management approaches.

My reading of the literature, as summarized above, lead to the development of the conceptual framework depicted in Fig 2.1. The figure is made up of two conceptual areas represented by circles; the circle on the left captures Community Forestry which, as discussed in the chapter, is a forest governance/management approach that notionally brings together forest stakeholders (e.g., community members directly affected by forestry decisions, forest users,

community groups, rights holders, local governments, etc.), who are vested with some authority to make management



**Fig 2.1: Conceptual Framework**

decisions about forest use and the distribution of any benefits resulting from use. These forest management decisions are expected to generally improve the wellbeing of stakeholders and communities at large and help improve forest values and conditions (Baker & Kusel, 2003; Charnley & Poe, 2007).

Within this circle I have located a smaller circle that represents Collaborative Governance, a governance process/approach that generally aims to bring multiple and diverse stakeholders together in taking consensus-based decisions (Ansell & Gash, 2008) when managing natural resources. As established above, community forestry typically aligns with this form of governance, which also reflect more advanced forms of public participation discussed in the literature. This is due mainly to the fact that a community forest board or committee is made up of multiple 'local' individuals and groups. In BC, for instance, public involvement in making

forest management decisions is one of the many objectives set in the province's community forest agreement. These points help to underscore how collaborative governance is core to community forestry, as shown in Figure 2.1.

The large circle on the right of Fig 2.1 represents Sustainable Forest Management, which is regarded as the overarching goal for community forests in BC. The components of sustainable forest management are generally grouped into economic sustainability, ecological sustainability, social sustainability, and cultural sustainability (See: Gough et al., 2008; CCFM, 2008; NRC, 2012). Similarly, the community forestry literature suggests that SFM holds a lot of promise for ensuring forest and ecosystem health, community benefits such as jobs, and cultural recognition of the forest (e.g., Teitelbaum et al., 2006; Charnley & Poe, 2007). This link between community forestry and its potential for sustainable outcomes is depicted in Fig. 2.1 by the arrow that runs from the top of the community forestry circle to the sustainable forest management circle to the right. Of course, the outcomes of these benefits would impact the way the forest is managed, and this is seen by the reciprocal arrow that runs from the top of the sustainable forest management circle to that of community forestry.

Between these two big circles is another arrow and reciprocal arrow identified as Social Learning (Fig. 2.1). The literature reviewed above indicates that social learning can improve governance systems and encourage sustainability outcomes. Owing to the uncertainty and complexity that characterise resource management decisions, there have also been numerous calls by authors, as outlined above, to incorporate social learning in the process of managing resources to help ensure more sustainable outcomes (e.g., Armitage et al., 2008; Sinclair et al., 2008). Figure 2.1 therefore suggests that for community forestry to meet the goals of sustainable forest management, social learning needs to occur among those governing the forest.

Thus, while it is possible to achieve the goals of community forestry described above, social learning is capable of deepening stakeholders' understanding of the resource being managed (Keen et al., 2005), and helps stakeholders use the broader range of knowledge shared during deliberations about managing the forest (Jiggins & Röling, 2002). The ultimate aim of this learning is to enable stakeholders take actions to deal with uncertainties, complexities, and risks associated with forest management, and to improve the likelihood of sustainability. This relationship is shown by the social learning arrow from the community forestry circle to that of sustainable forest management. The feedback learning loop/relationship is demonstrated in Fig 2.1 by the reciprocal arrow that runs from the sustainable forest management circle to that of community forestry. This feedback relationship, referred to as an "adaptive collaborative" approach by Fisher, Prabhu, and McDougall (2007), is considered very important in managing natural resources such as the forest.

Despite the breadth of the literature on each of the key topics captured in Figure 2.1, the literature review revealed that community forestry is still a relatively new form of forest governance approach in Canada. Despite receiving a lot of theoretical discussions and review in the literature, there is little written about community forest practice and outcomes in the literature (e.g., Ambus & Hoberg, 2011; Teitelbaum, 2014). Teitelbaum (2014) concludes in this regard that "Empirically based accounts of community forestry practice represent a limitation from a policy perspective, as decision-makers have few studies to draw on in gauging the potential of this approach" (p.265). So my study will provide another case that will aid in understanding the community forest approach to management.

In addition, despite establishing a legal tenure for community forestry in BC, the literature review also reveals that there have only been a few studies (e.g., Bradshaw, 2003;

McIlveen & Bradshaw, 2005/2006; Reed & McIlveen, 2006; Ambus & Hoberg, 2011) that have considered the governance implications of the CFA to forest management in the province. As well, even the majority of these studies do not examine or look at how community forests are trying to sustainably manage their community forests tenures or how they are meeting the goals of sustainable forest management, which is increasingly being recognised as the normative goal of forest management. I will consider governance and sustainability as Figure 2.1 suggests. Furthermore, very few studies, for example, Buck et al. (2001), have considered the role of social learning in the community forest context and the outcomes of such learning for effective forest governance and sustainability.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Social Constructivist Paradigm**

While there are numerous research paradigms/worldviews for conducting social research that a researcher may use, I wanted to provide an explanation for the one that aligns most closely with my thinking. In achieving this focus, I will reflect on the broader research question being asked and on my personal background.

Growing up in Ghana provided me with an interesting perspective on community and the importance of community to development. This lived experience included participating in many community events and helping to get things done locally. These personal values were incorporated in my undergraduate thesis, which allowed me to work with communities through personal interactions and underscored for me the value of the different perspectives participants bring to an issue based on their own personal experiences. This research work required a careful inquiry into the lived experiences of participants to unravel their learning experiences over the years that they have been involved in community forestry. Their involvement and learning is predicated on the intricacies that surround concepts of collaboration, community forestry and sustainability, which together form a complex whole. As a result of my personal experience and the nature of this research, this study was approached from a social constructivist paradigm.

Social constructivism (SC) holds that reality about the world is built through people's interactions, understanding, and experiences with events in the world; hence its underlying epistemology that facts are what resonates with people (Neuman, 2000; Creswell, 2007). With SC, participants (members of the public, forest user groups, and board members) who have been involved with Wetzinkwa Community Forest Corporation (WCFC) in its planning, operations and decision making over the years shared their experiences by constructing meanings from their

own lived experiences (Creswell, 2007). Thus, the various multiple realities that participants hold regarding the process were understood in the context of stories they shared with me, challenges encountered, and successes achieved as part of their involvement with WCFC (Creswell, 2009). As a result of the relativity of the multiple realities participants hold (Denzin & Lincoln, 2005), and their own unique understanding of the process based on their experiences, an SC paradigm best allowed participants to share their views with me.

### **3.2 Qualitative Case Study**

The choice of Social Constructivism as a research paradigm is inclined towards a qualitative research design, which also emerges in numerous other strategies of inquiry such as case study (Creswell, 2007, and 2009). Given the purpose and objectives of my work, I applied a qualitative approach that utilizes a case study strategy of inquiry. Case studies, as defined by Denzin and Lincoln (2005), are an ‘intrinsic study of a valued particular,’ which aims to understand the knowledge of people who have observed and experienced a particular phenomenon - in my case, community forestry. Following Yin (2003), I also thought that a case study approach was the best for my research, because I studied an issue within a specific real life context and asked ‘how’ and ‘why’ questions.

Choosing a case or cases among several others to study is no easy task, as not every phenomenon can be considered a case (Stake, 1995). To aid in this, I developed and applied a list of characteristics to help make a choice of a community forest out of the over 50 community forests in BC:

1. Evidence of an on-going process of multi-stakeholder collaboration in forest management.

2. A decision structure that allows representation of the larger community on a Board, committees and sub-committees.
3. Opportunities for face-to-face deliberation between members on the Board/committees and the larger community.
4. Regular meeting of the Board/committees, and between Board and larger community.
5. Some evidence of learning through innovative governance or forest management or evidence of alternative forest resource management other than timber.

I considered these characteristics to select a single case study (Stake, 1995; Yin, 2003). As discussed by Merriam (2002) and Yin (2003), a single case study design permits incorporation of multiple methods of inquiry, allowing for triangulation to ensure methodological rigor.

### **3.3 Cases Considered**

Table 3.1 below describes the community forests that I spent the most time considering. I applied the selection criteria with my main purpose and objectives in mind, as I looked for community forest cases that appeared to be something other than industrial community forests. The similarity with all these cases was that, in addition to an AGM or open house, there was at least one other opportunity for a person-to-person interaction between members of a board (set up to oversee operations of the CF) and the community at large. This, I thought, had the potential to allow for greater community involvement and exhibit social learning.

While it was possible to conduct the study in each of the case areas, I selected the Wetzin'kwa Community Forest Corporation (WCFC) for the following reasons:

1. Immediate past activities of the CF allowed for exploring areas such as the participants' learning experiences and governance. From May 23-25, 2013, the community forest hosted the BC Community Forest Association Conference and AGM in Smithers. The

general manager, Mr. Bill Golding, told me the AGM was attended by some local people interested in community forestry. Also, on Saturday, July 27, 2013, the CF held “A Walk in Your Woods’ tour of the forest. These activities have the potential for participants to learn about the community forest and forestry in general. I therefore wanted to capture these potential learning experiences and others, and ask how they may have contributed to understanding sustainability issues, forestry governance, etc., and compare that to their previous understanding. My plan was to be in the field in October, 2014, and I felt there would not be much memory loss on the part of participants who were involved in these activities.

2. WCFC, relative to the others, had more upcoming activities during the fall season (my fieldwork season), which was going to allow me better understand the operations of the CF first hand. The activities included: road building; ecosystem classification and writing of site plans and silviculture prescriptions; log sales negotiations; logging contract negotiation or tendering; organization of National Forestry week activities; writing of advertorials for newspaper (articles about various aspects of community forestry); and planning for the Wetzin’kwa Year-end financials and AGM. With these upcoming activities, I could examine the decision-making structure within the CF, establish whether they have implemented SFM practices and determine how that will affect current plans.
3. Prior to awarding the licence to WCFC, there was a committee under the BC Timber Sales programme that managed a portion of WCFC’s current tenure. In terms of collaboration and governance, my interest was to find out the challenges of WCFC having to collaborate with SCFS in managing the tenure, and what lessons they have learned from the committee.

4. The board of the community forest seemed relatively active compared to some other boards, as evidenced in monthly meetings held to discuss operations/activities of the CF. The board also administers the WCFC grants program, which provides support for projects and initiatives that will return the greatest long-term benefit to residents in the Bulkley Valley (<http://www.wetzinkwa.ca/>).
5. Finally, the CF was willing to accept me into the community based on my frequent communication with the general manager.

**TABLE 3.1: COMMUNITY FOREST CASES CONSIDERED**

<p style="text-align: center;">Criteria</p> <p style="text-align: center;">Cases</p>	<p><b>Evidence of an on-going process of multi-stakeholder collaboration in forest management.</b></p>	<p><b>A decision structure that allows representation of the larger community on a Board, committees, and sub-committees.</b></p>	<p><b>Opportunities for face-to-face deliberation between members on the Board/ committees and the larger community.</b></p>	<p><b>Regular meeting of the Board/committees, and between the Board and the larger community.</b></p>	<p><b>Some evidence of learning through innovative governance or forest management/ Evidence of alternative forest resource management other than timber.</b></p>
<p><b>Wetzin'kwa Community Forest Corporation (WCFC), British Columbia.</b>  <a href="http://www.wetzinkwa.ca/">http://www.wetzinkwa.ca/</a></p>	<p>The town of Smithers and the village of Telkwa jointly manage the 32,000-ha forest. A seven-member board oversees the activities of WCFC.</p>	<p>1. There are three community-at-large members (representing a cross-section of the community), that sit on the seven-member board for a three-year term.                  2. According to Mr. Bill Golding (General Manager) there is one vacancy on the board every year for someone to renew the Board.</p>	<p>According to Bill:                  1. About 10-12 resource user groups exist within the community forest and meet when necessary (especially when management will affect a particular group).                  2. There are at least two open house sessions a year, and an annual AGM, which allows the larger community to interact with the</p>	<p>Monthly Board meetings are held.</p>	<p>According to Bill Golding, the WCFC:</p> <ol style="list-style-type: none"> <li>1. Manages watershed and water resources.</li> <li>2. Enhances outdoor educational and recreational experiences</li> <li>3. Manages biodiversity</li> <li>4. Manages the forest understory.</li> <li>5. Manages for wildlife such as</li> </ol>

			board and forest manager. 3. The board usually engages the public through networking and other ad hoc opportunities.		grizzly bear, moose, deer and goat. 6. The community forest has completed the collection of vaccinium rhizomes. This is part of a project to propagate berry plants in a nursery for out-planting on selected sites in order to boost berry production for use or sale by First Nations.
<b>Creston Community Forest (CCF), British Columbia.</b> <a href="http://www.crestoncommunityforest.com/">http://www.crestoncommunityforest.com/</a>	Five shareholders are involved in managing the community forest licence: Town of Creston, Regional District of Central Kootenay, Wildsight, Erickson Community Association, and Kitchener Valley Recreation and Fire Protection Society. A ten-member board oversees the activities of the CF, which manages	1. Five members of the board are elected directors at large from the community, representing a cross-section of the community. They are persons with an interest in the environment, forests and water. 2. There exists a finance sub-committee.	1. According to Daniel Gratton (forest manager), some board members will at times discuss their role with other members of the public in order to explain their role as Board member and what the Community Forest does in the community.	1. Monthly Board meetings are held 2. A finance sub-committee also meets once monthly; a day before board meetings.	1. Creston has been employing an 'ecosystem-based philosophy' of forest management since its inception in 1997. 2. CCF manages for the retention of multiple age classes and species. 3. The CF is active in

	the 18,159-ha forest.		2. Board meetings are open to the general public.		watershed management 4. According to Daniel, the only NTFP is firewood (donated to the community), but there are plans to develop a program that would have the CF take a lead role in treating the Wildland-Urban Interface in the areas surrounding Creston.
<b>Wells Gray Community Forest Corporation (WGCFC), British Columbia.</b> <a href="http://www.wgfc.ca/">http://www.wgfc.ca/</a>	The forest license is owned and managed on behalf of the citizens of Wells Gray Country. A Board of Directors, comprised of seven local representatives from various aspects of the community, First Nations (Simpco First Nations), and business oversee the management of the 13,145-ha forest area.	A Community Forest Advisory Committee (CFAC) acts as a mechanism for community participation and involvement and to help the community forest be successful.	According to , George Brcko (Forest Manager): 1. He is responsible for organising open houses, seminars, etc., to incorporate community interests. 2. The Board and Forest manager sometimes meet the CFAC once a month. 3. Board members do not necessarily	There are monthly meetings for both Board members and the CFAC.	According to WGCFC's management plan for the period 2006-2011, the CF manages: 1. Biodiversity 2. Riparian areas 3. Watersheds for water quality 4. Cultural heritage 5. Wildlife 6. Recreation 7. Visual

			meet community members		Resources 8. Soil 9. Fire Protection
<b>McBride Community Forest Corporation (MCFC), British Columbia.</b> <a href="http://www.mcbridecommunityforest.com/">http://www.mcbridecommunityforest.com/</a>	Wholly owned by the village of McBride. A five-member board oversees management of the 60,000-ha forest.	<ol style="list-style-type: none"> <li>Two community-at-large members sit on the board.</li> <li>According to Marc von der Gomma (General Manager), there exist two subcommittees: Personnel and Grants committees.</li> </ol>	<ol style="list-style-type: none"> <li>Board meetings are open to the general public. According to Marc:</li> <li>There are usually one-on-one informal engagements between Board members and the general public because of the relatively small population of the village (About 660 people).</li> <li>The CF works with recreation groups such as the snowmobile club, backcountry horsemen or the mountain biking club.</li> </ol>	According to the general manager, there are two public information meetings, and four Board meetings per year.	<p>According to the general manager:</p> <ol style="list-style-type: none"> <li>The CF manages wood, wildlife, the watershed for water quality, and biodiversity</li> <li>There is also wild bee harvesting</li> <li>The CF also manages recreational sites, scenic/ viewsapes, and develops main trails (to help snow ploughing).</li> </ol>
<b>The Sunshine Coast Community Forest (SCCF), British Columbia.</b> <a href="http://www.sccf.ca/">http://www.sccf.ca/</a>	The Sunshine Coast Community Forest (SCCF) is solely owned by the District of Sechelt. Sechelt Community Projects Inc. (SCPI) operates the licence on	<p>According to Dave Lasser (Operations Manager):</p> <ol style="list-style-type: none"> <li>There exist the Governance, Executive, Audit, and Nominations</li> </ol>	<p>According to Dave Lasser:</p> <ol style="list-style-type: none"> <li>The CF has an "open door" policy and an office in the community to respond to queries</li> </ol>	Board meetings are organised as and when needed. As of September 10, 2013, there had been five Board meetings.	<ol style="list-style-type: none"> <li>The CF manages and provides firewood to the public.</li> <li>The forest stewardship plan (FSP) of the CF</li> </ol>

	<p>behalf of the District. A nine-member board, made up of a broad cross section of the community oversees operations of the 10,790-ha forest.</p>	<p>subcommittees of the Board.  2. Three other committees: CF Advisory Committee, Economic Advisory Committee, and Forestry Environment Technical Advisory Committee have been disbanded in favour of topic specific sub-committees to deal with specific issues as they come up.</p>	<p>from the general public.  2. There are at least two open public meetings in a large forum per year.  3. When a specific study is undertaken using outside professionals, a public meeting is held where the study results are presented.  4. He (Dave) is asked to make presentations to public groups or be a member of public committees dealing with natural resource issues.  5. Board members engage with the public on a daily basis in their personal lives and every board meeting has examples of feedback from the community on a one-on-one basis.  6. Board members routinely phone or</p>		<p>details strategies for the management of water quality, fish habitat, wildlife habitat and biodiversity within riparian areas.  3. Soil management  4. Wildlife management  5. Visual quality  6. Cultural heritage resources  7. Watershed management.</p>
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			<p>send Dave emails with feedback or questions they have received from the public.</p> <p>7. The CF works with other resource users (recreational, commercial, etc.) on a regular basis.</p>		
<p><b>Cheakamus Community Forest (CCF), British Columbia.</b>  <a href="http://www.cheakamuscommunityforest.com/">http://www.cheakamuscommunityforest.com/</a></p>	<p>The Cheakamus Community Forest is governed by a non-profit society comprised of representatives from the Resort Municipality of Whistler (RMOW), Lil'wat, and Squamish First Nations in an equal partnership. A six-member board, composed of two representatives each of the partners oversee the operations of the 33,000-ha forest.</p>	<p>1. There is a Council-appointed advisory body in Whistler, Forest &amp; Wildland Advisory Committee, which meets monthly.</p> <p>2. There also exist referral committees of the First Nations to advise their councils.</p>	<p>1. The CCF holds two open houses per year; one in the spring and one in the fall.</p> <p>2. According to Heather Beresford (of the RMOW), board members meet with various stakeholders such as commercial recreation operators, and public recreation groups depending on the issues of the day.</p>	<p>The community forest holds board meetings three times in a year.</p>	<p>1. According to the CF's SFP, management responsibilities will include soils, wildlife, biodiversity, and riparian areas.</p> <p>2. According to Heather Beresford, the CF co-operates with other agencies on recreation and watershed issues.</p>
<p><b>Kaslo &amp; District Community Forest Society, British Columbia.</b>  <a href="http://www.kaslocommunityforest.org/">http://www.kaslocommunityforest.org/</a></p>	<p>The KDCFS holds and manages the community forest licence on behalf of, and with direction from, the people of the Kaslo/North Kootenay Lake community.</p>	<p>According to Bill Kestell (Woodland Manager), there are sub-committees of the board, for example the Winterfest sub-committee.</p>	<p>1. There is an annual general meeting of the CF.</p> <p>2. Board meetings are open to the public</p> <p>3. Notices of</p>	<p>The board meets every second Wednesday of the month for meetings.</p>	<p>According to Bill Kestell, the CF manages watershed/water resources, biodiversity, forest tree under-</p>

	<p>The Society is composed of a nine-member board, including two appointees of local government (Kaslo Village and Regional District of Central Kootenay), and seven directors elected by the membership.</p>		<p>meetings are provided on the CF's website. 3. When developing a new cutting permit in a watershed, the CF meets with individuals in these areas for discussions.</p>		<p>story, wildlife, viewsapes, etc.</p>
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### 3.4 Case Description

The Wetzinkwa Community Forest Corporation is located in Smithers, northwestern central BC (Figure 3.1). Smithers is one of the towns that make up the Bulkley Valley. In 2005, the Town of Smithers and the Village of Telkwa, together with the Office of the Wet'suwet'en First Nation, were invited by the BC MFLNRO to apply for a probationary community forest licence.



Fig. 3.1: Map of Study Area. Retrieved from <http://www.forttelkwa.com/Directions.html>

They submitted an application and, in 2007, were awarded a five-year Probationary Community Forest Licence Agreement (K2P) (Figure 3.2) to manage an area-based community forest tenure of over 32,000 hectares. A permanent community forest licence was awarded in 2010 for a 25-year period.

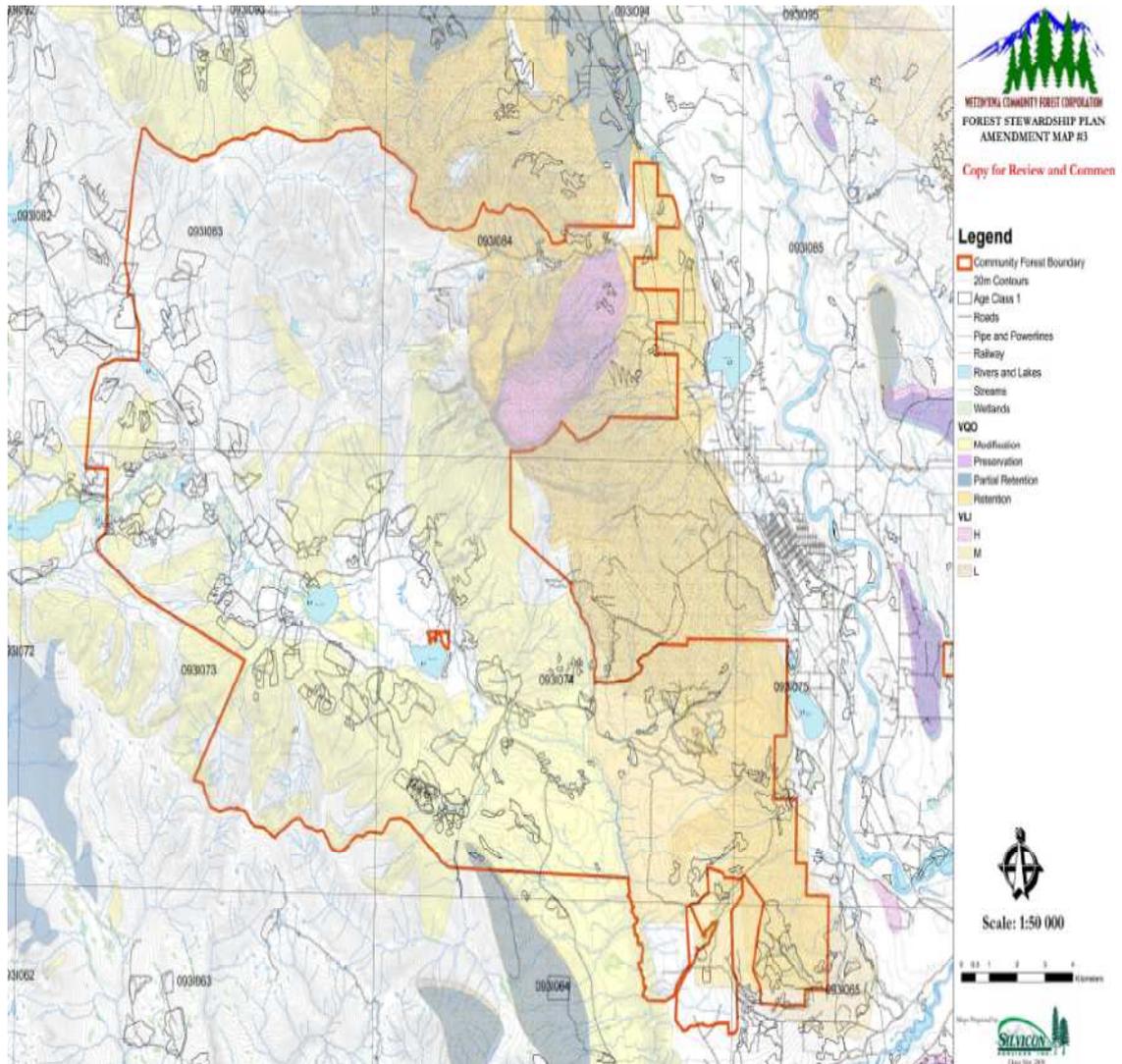


Fig. 3.2: Map of the Wetzinkwa Community Forest Tenure Area. Retrieved from [http://www.wetzinkwa.ca/images/stories/Documents/wetzinkwa\\_comfor\\_fspm3\\_may09\\_gvlow.pdf](http://www.wetzinkwa.ca/images/stories/Documents/wetzinkwa_comfor_fspm3_may09_gvlow.pdf).

The Wetzinkwa Community Forest Corporation is located in Smithers, in northwestern central BC (Figure 3.1). Smithers is one of the towns that make up the Bulkley Valley. In 2005, the town of Smithers and the village of Telkwa, together with the Office of the Wet'suwet'en First Nation, were invited by the BC MFLNRO to apply for a probationary community forest licence. They submitted an application and in 2007 were awarded a five-year Probationary Community Forest Licence Agreement (K2P) (Figure 3.2) to manage an area-based community forest tenure of over 32,000 hectares. A permanent community forest licence was awarded in 2010 for a 25-year period.

The community forest tenure area includes trails that belong to forest user groups such as the Bulkley Valley Cross Country Ski Club (or Nordic Centre); Smithers Mountain Bikers Association (SMBA); Smithers Community Forest Society; and the Bulkley Valley Backpackers. There are also trails for the BC Naturalists and traditional trails for the Wet'suwet'en First Nation. Therefore, WCFC manages the community forest tenure collaboratively with these forest user groups and the Wet'suwet'en First Nation. Detailed description of the organisation's governance is provided in Chapter Four of the thesis.

### **3.5 Data Collection Methods and Sampling Procedure**

The data collection methods utilized for this study included: semi-structured interviews, observation, forest tours, and document review. Each is discussed below.

#### *3.5.1 Semi-structured interviews*

By utilizing semi-structured interviews, I aimed to unearth the personal experiences of participants involved with WCFC, and to document their experiences, knowledge, and impact in managing the community forest tenure. The interview questions used (See Appendix I) touched on all four objectives of the study.

Thirty interviews were conducted, the majority (25) being face-to-face with participants, while the others were completed by telephone. In most (25) cases, interviews were recorded, while hand-written notes were taken for others. Participants interviewed included: present and past WCFC board members (11), the general manager of WCFC, the communications director of WCFC, executives of resource user groups (7), community researcher, land/property owners (2), a Councillor from the village of Telkwa (VOT), a contractor, an executive of the office of the Wet'suwet'en, two past district directors of the Ministry of Forest, and two pioneers of the WCFC. Appendix IV provides a description of the study's participants.

Board members were chosen as my focus for the interviews to delve into SFM governance and management activities as well as learning. Past board members were identified as having the potential to provide some insight into how WCFC has been operating. Recreational resource user groups were interviewed because they undertake their activities on the community forest tenure area and getting their views on how they collaborate with the organisation in managing the tenure, their input into decisions, and their learning experiences from the process was critical to document. To get an understanding of how the struggle for a community forest evolved, as well as the initial challenges of WCFC, I thought it was important to involve pioneers (founding members) of the WCFC. Realising that most of my participants lived and worked in Smithers and therefore had a sense of WCFC's activities, I recruited one Councillor from the VOT who had been following the activities of WCFC, as evidenced by his presence at WCFC's AGM. The community researcher was a member of at least one forest user group and, in addition, had been following the activities of WCFC with a great deal of interest. As a result, she was in a position to give her perspective from three different angles - as a researcher, member of a resource group, and active participant in WCFC's activities. The contractor was

chosen because his company has been working with WCFC for the past four years and was in a position to explain happenings between the CF and contractors who work on the community forest tenure. The average time spent conducting an interview was approximately 70 minutes, with a range of 50 minutes to two hours. After interviewing thirty participants, interviews were discontinued because of data saturation. Thus, no new information was being shared by participants, as they repeated those of earlier participants.

Semi-structured interviews were used because of fluidity that is embedded in the method and its ability to allow for a guided conversation with participants in a non-threatening manner (Yin, 2003). In addition, the flexibility of the method allowed me to reformulate questions based on the direction in which the interview responses led. Further, it allowed me probe specific responses participants raise in order to better understand their experiences and involvement with the community forest.

### *3.5.2 Participant Observation*

When I decided on using observation, my intent was to get involved in community forest meetings, training, and seminars if the opportunity presented itself. As I envisaged it, participant observation would allow me to get a feel for the community and the forest management activities being undertaken by WCFC, as a way of corroborating what participants tell me during interviews (Yin, 2003). Contrary to my expectation, however, I only had the chance to participate in and observe the organisation's AGM held in Moricetown (a Wet'suwet'en First Nations reserve). The event took place on the 14<sup>th</sup> of November, 2013, from 7:05 pm to 8:38 pm. In attendance were the general manager of WCFC, five directors of the board, and five other people, including myself. In addition to recording who attended the meeting, I kept notes on discussions around future plans of the community forest operations. For example, a proposal for

tenure expansion from 32,000 ha to 60,000 ha was discussed by the general manager and the rest of the board at the meeting. The general manager mentioned that he had met with a Minister to review the proposal, which was submitted 3–5 years ago. I also found that WCFC had planned to harvest 50,000 m<sup>3</sup> of wood for the 2013-14 logging season and had planted over 1.7 million trees since operations started on the tenure.

The Chair of the AGM invited me to introduce myself and to share with the group what my research was about and my reasons for choosing WCFC as my study site, which I obliged. Expressing interest in my research, the board requested that I submit my findings to them once the thesis is completed. I asked a question at the meeting regarding the over 300% increase in WCFC's AAC from 30,000m<sup>3</sup> to 95,000 m<sup>3</sup>. In response, the general manager explained that the increase was necessary to deal with the mountain pine beetle epidemic in the tenure before it spreads to unaffected trees, and also to prevent affected pine trees from further losing value.

### *3.5.3 Forest Field Tours*

Forest tours became a necessary method, particularly regarding objective 3. To better understand sustainability outcomes of the collaborative process, I intended to personally observe some of the activities that participants noted as being sustainable (e.g., understory protection). With an understanding of how sustainability is conceptualized by participants and the community forest organization, I could then corroborate their stories or assertions with what I observed directly from the field.

I participated in three forest tours, aiming to observe forest practices of WCFC that were identified by participants as being sustainable, and to familiarize myself with the forest management practices of WCFC. My first tour was with the forest manager, which took place on October 30<sup>th</sup>, 2014, when I was still reading and familiarising myself with WCFC's operations. I

was shown the site where whitebark pine had been planted and I helped install rabbit protectors around them. I also took a short tour of the Smithers Demonstration Forest, where multiple harvesting methods and forest management practices have been carried out in the past.

My second forest tour was with an employee of Silvicon Services Inc., who was in charge of supervising activities of contractors who have been hired by WCFC to operate within the tenure. This tour was on December 10<sup>th</sup>, 2014, when I had conducted enough interviews to be in a position to observe forest management practices participants had identified as sustainable. I had the chance to observe logging activities such as tree felling, skidding, and loading logs onto trucks. Finally, a researcher showed me around some portions of the community forest tenure area that I had not visited on 29<sup>th</sup> December, 2014. On all of the three forest tours, I took field notes and photographs, and asked questions of my tour guides for further explanation.

#### *3.5.4 Document Review*

In addition to the methods described for my fieldwork, I reviewed documents of the organisation, including annual reports; MOUs with the Bulkley Valley Cross Country Ski Club, Smithers Community Forest Society, and Smithers Mountain Bikers Association; the financial statement; the forest Stewardship Plan; the management plan that was submitted for the provincial CF licence; and policies. My intention for reviewing documents was to understand the extent to which plans, strategies and other policies stated in these documents were being implemented and how well they reflected what was happening in the forest.

### **3.6 Data Accuracy and Analysis**

Using the above methods, I was able to provide a ‘thick description’ inherent in case study research (Denzin & Lincoln, 2005). Triangulating my data by using different methods and member checking helped maximise data accuracy (Stake, 1995). For instance, I provided

transcribed interviews to some participants to authenticate information they shared during interviews.

Semi-structured interviews were transcribed, and notes on participant observation and forest tours were kept. Coding of the interviews was done using NVivo™ (QSR 2010) software. Themes were then generated from the information provided through the interviews and analyzed in line with objectives of the study and through constructs from the literature. To ensure anonymity of all participants, names were not associated with information provided; instead, numbers were assigned to participants, for instance, Participant 1. In my description of findings, I use words such as ‘a few’, ‘many’, etc., and all these have their numerical connotation: ‘a few’ represents 1-5 participants; ‘some’ 6- 13 participants; ‘many’ 14- 21; ‘most’ 22 – 29; and ‘all’ 30 participants.

## **CHAPTER FOUR**

### **OPPORTUNITIES FOR SHARING IDEAS, PROVIDING INPUT, AND LEARNING**

#### **4.1 Introduction**

As established in Chapter Two, the social learning literature emphasises sharing of ideas, information, and deliberation among stakeholders as being important to learning through natural resources and environmental governance (Reed et al., 2010). Such knowledge sharing can also help to improve human-environment relationships (Keen et al., 2005). Furthermore, if there is any chance of the broader public having an impact on, and learning from, the resource decisions taken, there need to be opportunities/avenues through which such contributions can be made (Sinclair & Diduck, 2005; McGurk et al., 2006).

Given these points, I sought to explore both the formal and informal opportunities available to research participants by considering: opportunities to offer input to decisions; opportunities to share information or ideas; and opportunities to deliberate on forestry operations (e.g., annual management plans, planning, etc.) of WCFC. The data are presented below in relation to two major themes: formal and informal opportunities. I have defined the former as arrangements that allow WCFC to officially engage the broader public in discussing operations and forest management plans, and to inform the public about the direction the community forest is heading. Informal opportunities were defined as any avenue that allows one-to-one discussions and interactions among members of the public and board members, and/or between the public and the general manager of WCFC. Table 4.1 shows sub-themes grounded in the data for each of the major themes discussed above. I begin the chapter with a detailed description of the organisation's governance, before discussing components of the table.

## **4.2 Governance of Wetzinkwa Community Forest Corporation**

### ***4.2.1 Board structure and management***

Wetzinkwa Community Forest Corporation is governed by a seven-member volunteer board that oversees the corporation's strategic planning. On the board are four permanent positions held by the town of Smithers (TOS); the village of Telkwa (VOT); the Office of the Wet'suwet'en (OW), representing the Wet'suwet'en First Nation; and Northern Engineers Wood Products (NEWPRO), an industry representative. Although the first three representatives are considered the three main stakeholders of WCFC, VOT and TOS are the two shareholders of the community forest tenure, each owning 50% of the shares. The remaining three positions on the board are held by members of the public (referred to as Director-at-large or Community-at-large members), who sit for a three-year term each on the board. Members of the public interested in becoming community-at-large members must apply to the board to be selected. After successfully passing an interview, such persons are then accepted to become board members of the organisation.

The structure of the board allows for the admission of a new Director-at-large or community-at-large member every year, replacing one whose term expires; allowing for staggered terms. There are also four officer positions: Chair, Co-chair, Secretary and Treasurer that members of the board can occupy. Wetzinkwa Community Forest Corporation (WCFC) was incorporated as a business in August 2006 under the Business Corporations Act of British Columbia. The board is currently negotiating with the MFLNRO to expand the tenure to 60,000 hectares.

Though the three main stakeholders are jurisdictions, their representatives on the board do not have any political affiliation, nor are they Municipal or Band Councillors. This makes the

board independent of the jurisdictions. Appointees of the jurisdictions on the board are professionals who work and reside in the community. However, in the past, the VOT was represented by one of their employees: “Our administrator was on the board of directors, and we found out it was illegal to do that, so we found someone in the community to do that – to represent Telkwa” (Participant 29). Past and present board members, and pioneers of the organisation, told me that the jurisdictions agreed from the onset to run the WCFC as a corporation or business and, therefore, decided not to appoint politicians or Municipal/Band Councillors onto the board to avoid any conflicts of interest. This governance structure, according to Participant 13, is different from other community forests he has been involved with: “The other unique part of the governance structure that I haven’t seen elsewhere is that the Councils of the VOT and TOS have non-political members on the board as their representatives.” Participant 3 added, “I would say we have been fortunate to maintain an arm's length from the government bodies, and it is only the board of WCFC that come out with policies and ways that we should run, and how profits are spent.”

While the board oversees strategic planning of WCFC, Silvicon Services Inc., a local forest company, has been contracted by the organisation to oversee the day-to-day management of the forest tenure. The company takes direction from the board and also provides feedback on operations to the board. There is a policy, *WCFC Draft Policy #2010*, which describes the relationship that should exist between board members (or directors) and the general manager (GM). As stated in the policy, the goal is not to restrict communications between board members and the general manager, but to “streamline direction provided from the board to the General Manager” (*WCFC Draft Policy #2010*, p.1). Participant 13 described contracting forest management on the community forest tenure to a company and not an individual forester: “The

unique structure is that we did not hire a forester as an individual for the job, but a company, so more resources and less hassle with payroll and personnel.”

The board has drafted several policies to guide its governance of the community forest tenure. One of them is a Standard Operating Procedure, which “describes general requirements to minimize impact on the environment and the health and safety of workers” (WCFC Standard Operating Procedure updated July 14, 2010). The policy generally applies to all employees of WCFC and activities that happen within the tenure. There are also other policies, such as Travel Expense Policy for Board Members, Officers, and Employees; Conflict of Interest Policy; and Guidelines; and Reserve Funds Policy.

#### ***4.2.2 Decision making***

According to board members, the board meets monthly to deliberate and discuss issues concerning the organisation that can range from forestry operations to any information brought up by a board member. Before board meetings, the General Manager contributes to the agenda by providing updates on operations to the secretary. The chair and co-chair of the board also make input to the agenda prior to meetings. Any person or group of persons tasked to act on behalf of WCFC can also contribute to the agenda. During meetings, board members have the opportunity to also add to what will be discussed, be it information they were privy to as a result of interaction with the public, or issues they consider to be of concern to the effective governance of the community forest tenure. Members of the public can ask to attend board meetings or make presentations to the board.

In terms of making decisions, board members emphasized that the board is a consensus board and that consensus has to be reached despite the varying opinions board members may have on an issue. Voting only takes place when the board deems it necessary to vote on an issue.

Board members confirmed that this rarely occurs. Below are the views of two board members on board decision making:

*I think since our decisions are consensus-based, once you don't get something there needs to be an explanation to ensure that you get what is being said. I think it is inquisitive minds (Participant 8).*

*..There is no one person that has ultimate authority or anything like that. Everything is majority approved, but everyone has their say. I can't remember when someone ever said, 'I wasn't heard.' Everybody gets to say their piece. You may have one opinion at the beginning but end up with another after the process (Participant 5).*

Reaching a consensus in making decisions is a key ingredient for the success of a CF as Beckley (1998) asserts, indicating that for community forestry to be successful, it is important for stakeholders to maintain consensual decision making, but be prepared to learn from one another and develop common understanding on issues.

### 4.3 Formal and informal opportunities for participation and learning

Table 4.1 presents the grounded data related to the formal and informal opportunities for participation in WCFC decision making and learning.

**Table 4.1: Opportunities for learning and sharing ideas**

<b>Formal opportunities/platforms</b>	<b>Informal opportunities/platforms</b>
Resource user group meetings (RUGMs)	Personal discussions with general manager/board members
Open houses	Annual trade show
Seminar/community talks	Walk in your woods
Reporting back to Council	
Board meetings	
Newspaper advertorials	
Social media	
WCFC's website	

### **4.3.1 Formal Avenues**

#### **4.3.1.1 Resource User Group Meetings (RUGMs)**

RUGMs are formal means by which WCFC as an organisation meets with forest users (e.g., skiers, mountain bikers, hikers, land owners, etc.) to discuss management plans and operations, and their resulting effects on the activities of these users. They are also means by which WCFC listens to the concerns and input forest users have in relation to management plans. Some RUGMs are organised during key decision-making points when WCFC “thinks the community will be impacted and people would want to know” (Participant 3). The RUGMs are arranged as needed, but occur at least once every year. There is an e-mail list for the forest user groups, which WCFC uses to invite groups to the RUGMs. Commenting on the usefulness of the RUGMs to WCFC and forest resource users, four participants offered the following:

*There is a good avenue for input and discussions... the Resource User Group, by identifying key stakeholders, which I somehow think is a general model. It is a formal means by which the board can get to major stakeholders and talk to them about management plans, impacts from harvesting, etc., and what their viewpoints are (Participant 3).*

*The Resource User Group meeting is the requirement, where people who are impacted are involved in that (management). Because it is a community's forest, we should be incorporating views as broadly as possible (Participant 4).*

*I think they [WCFC] gather information from all the groups and incorporate all that into what their legislative requirements say (e.g., AAC, etc), and they try to optimise the results to as many people as possible. I think that system of management is fascinating and complex, but it is being done well right now from what I have seen (Participant 21).*

*At the RUMGs, we have an agenda; these are the things that we are doing, and these are things you indicated in the past that are of concern to you, so we discuss it. In addition, we allow them [forest users] to add an agenda and maybe new items that are brought to the table. If their agenda is requesting for A against B, we try to put them into the plan, but the reality is that the comments can go against legislation or plans signed off by the Ministry of Forestry (Participant 1).*

A forest resource user expressed contentment with the RUGMs, and viewed the process as an opportunity to make an impact on the forest management plans of WCFC when someone holds a different opinion from what has been proposed by the organisation.

*The good thing is that they show you all the planning first, talk of what they did last year, the grants, and tell you what they are going to do in the future. If you do not like what they are going to do, you talk to them. Our neighbour, for instance, talked to them about his concern after logging – it looks ugly to have a big cut-block in front of the house, so maybe they could change the borders of their cut-block a bit (Participant 17).*

Though RUGMs provide opportunities for the WCFC to obtain input from forest users to fine-tune their management plans, some participants highlighted the inherent challenges of the meetings regarding the number of people who attend:

*It is one of those things that we have to do, but when you are going to have about 2,000 people providing input then you will go nowhere. You need to trust your directors to do a good job (Participant 4).*

*We have that, but you cannot guarantee that all resource groups will participate... 25 years of experience tells me that if people don't show up, it means they don't care enough; things are not screwed up enough. If things are screwed up, they are coming out and in thousands, so it is a kind of a feedback model. I can't say that is a good way of looking at it, but in practical terms it is (Participant 3).*

Some forest users noted that the RUGMs were a formal means to get their thoughts out to WCFC, but felt the agenda for the meeting is sometimes too specific.

*When they are having a RUGM, they will inform us; we go to the meetings just to see what they are up to and their challenges. Often, those meetings are specific to areas, say, where they want to harvest and their challenges, so they are not often completely related to what we are doing. But from a community interest point of view, I think that's the reason they invite us (Participant 20).*

This comment casts a critical eye on the number of forest groups who will attend the meetings if they think the agenda for discussion would not affect their operations on the community forest tenure, and the extent of deliberation and input the meeting can generate if very few groups are in attendance. Regarding the latter point, Participant 27 was curious about the extent to which

input provided at meetings such as RUGMs are actually incorporated into final management plans. She queried:

*So when it [input] goes through at an open house, where is that loop of accountability? That is the failure I see with many resource management organisations and even government. You can collect the information at open houses, but I don't really know how or if that information has been incorporated. What is the device for getting that information out?*

I suggested that WCFC could demonstrate through implementation of their plans that input from forest users have been incorporated into decisions without having to come back to forest users with a final plan for their review. However, Participant 27 questioned, “How can a non-technical public understand what they have done, and how it meets their needs? Or, does it meet their needs in the short run?”

#### *4.3.1.2 Open Houses*

Open houses are frequently mentioned in literature as an approach to obtaining public input, often with mixed reviews especially when it is the only involvement technique (Diduck & Sinclair 2002). It was therefore surprising that few participants mentioned it as a platform they use to raise concerns regarding WCFC's management plans and operations, or to seek clarity on plans and to provide input. Board members indicated that the public was apathetic about open houses, perhaps for some of the reasons suggested in the literature. Unimpressed by the public's attitude in this regard, Participant 4 stressed:

*We have had a few [open houses]. Again, they are so poorly attended, so we have not bothered to be doing that. The one that had a good turnout was that at the unveiling at the Silvern Gathering Place off the McDonald road. I think because it was better advertised and also had free food. We had a crowd of about 60 maybe... There has been an open house at the AGM or when there is a need for input, but other than folks that are really concerned, there has never been a rush of people.*

I was in attendance at WCFC's AGM held in Moricetown (a Wet'suwet'en First Nations reserve) on November 14, 2013, and it was evident that the public did not turn up. Attendees at the AGM

(as shown in Plate 4.1), comprised the GM, five board members, and five other people (which include me). Thus, four people out of the public attended the AGM and, out of this four, only one person did not already have connections with WCFC.

However, I also observed that the AGM was not advertised on WCFC's website or by other means, but was noted on the organisation's Facebook page on 28<sup>th</sup> October, 2013 - 16 days before the event. A reminder was posted on the same page on the day of the event, 14<sup>th</sup> November, 2013. I was told earlier on that the event had been advertised in the local newspaper, The Interior News, but I did not see the ad. The post on Facebook indicated that WCFC was having its AGM and that all were invited. After providing the time and location, the post stated that any person who wanted further information could contact the General Manager via a phone and/or fax number provided. Moricetown is about 30 km west of Smithers. This location was chosen because AGMs have been rotating between the three location of the stakeholders and it was Moricetown's turn.

The AGM was of course open to the public. It provided an opportunity for attendees to ask questions about management plans and operations of the organisation and seek clarity on issues presented in the annual report but was poorly advertised.

**Plate 4.1: Attendees of WCFC's 2013 AGM**



**Photo Source: Anderson Assuah**

In addition, one Participant also noted that lately WCFC has not been organising open houses to get input from the community in its governance and management of the forest tenure:

*As far as meeting with the community to ask them what they want to see we do, I haven't seen that in my two years on the board. I have been to two AGMs and the attendance has been the same and not until you are doing something really bad, you wouldn't get people coming to say anything... I think many of our community members don't even know us; they don't! Even those who apply for our grant, I wonder if they do know about what we do or who we are. I just hope they do (Participant 8).*

Participant 4, in fact, suggested that WCFC should perhaps not bother to organise open houses, because of the poor turnout by the community. During the presentation of grants in 2013, however, I was told WCFC organised an informal meet-and-greet type open house, which allowed successful grant applicants to interact with board members and the GM over coffee and snacks.

Interestingly, some participants actually agreed that there is a lot of apathy on the public's part to attend open houses and other meetings organised by WCFC:

*I think it is apathy. People who are vocal will get involved with things that they see they can make a difference or complain about. There was initial discussion about the CF when it first started and they didn't know what it was, but it is not so now. It is either*

*because people are not impacted, they understand what is going on, or they don't care. They have enough information about what is happening, so they don't need to be involved (Participant 14).*

*I wasn't approached to be part, but because I live there I decided to get involve... People do not care about the forest because they are not affected by their activities. I don't think it is WCFC's problem, it's about the people (Participant 17).*

*I don't think a lot of people know about the dynamics or the intent of the CF. But I think they move in when there are grants, and these can inspire them to learn... I think they try. Recently they had their AGM and there were only two people there. What else can you do? Maybe it is the whole communications piece that needs to be looked at, because it is key to success (Participant 23).*

In its 2009-2010 Year End Summary, it was stated that WCFC had an open house in the town of Smithers to ask for public opinion on how to deal with the mountain pine beetle epidemic. Together with other community outreach initiatives, a decision was arrived at regarding how to manage for the epidemic:

*"The results of the community involvement and communication initiative showed considerable support for the salvage, reforestation and fire hazard abatement components associated with a temporary increase in the AAC to deal with the beetle infestation. There was little opposition voiced" (WCFC End Year Summary, 2009-2010).*

#### 4.3.1.3 Seminars/Community talks

Prior to my fieldwork, I sought to investigate seminars and community talks as possible avenues through which WCFC could get the attention of the public and share information about their activities, to educate them on issues of forestry, sustainable forest management (SFM), and approaches being used by the organisation to achieve SFM. According to board members, community talks have been used on an occasional basis when the opportunity presented itself. The following summarises efforts by WCFC in reaching out to the public about their operations through community talks:

*I have made presentations to government agencies and the Bulkley Valley Research Centre. I go out to these organisations, because I know they have an interest in what we do, so I will do a report and give it out to those people as a way of communicating our*

*plans, activities, successes, and failures. That is a proactive approach in my point of view to allow people understand what we are doing, give us feedback, etc. though it is not a broader community education or something (Participant 3).*

However, organising seminars for the broader public does not seem to be on the agenda of WCFC, and as one Participant bluntly put it:

*We haven't done seminars, but have had joint field trips in groups with the local researchers. Our GM sharing with them what we have been doing to get their perspective is a form of cross learning, because sometimes there is a difference between academia research and what happens practically (Participant 2).*

From May 23-25, 2013, WCFC hosted the BC Community Forest Association Conference (BC CFA) AGM in Smithers. This annual event brings together government representatives, community forest managers, board members, forestry professionals, researchers, and academics. The GM of WCFC indicated that a couple of community members attended this one-time event, and that it was an opportunity for the attendees to learn about forests and forest management. Despite acknowledging that the BC CFA AGM was a good opportunity for the public to learn, Participant 2 felt it “was more for community forest managers to learn.”

#### *4.3.1.4 Reporting Back to Council*

Board members, who are appointed by the three stakeholders to the board, report back to their respective Councils and Chiefs. This was identified as a potential learning opportunity by participants for the people involved with the major stakeholders of WCFC. Both representatives of the Town of Smithers and the Village of Telkwa brief their Councillors at least twice in a year. The Office of the Wet'suwet'en representative briefs the hereditary chiefs on a quarterly basis. Though these presentations are not open to the general public (unless Council meetings are public), it is a good platform for the main stakeholders to learn about the organisation and make input into decisions through their representatives.

*We report to our Councils also, at least twice a year for Smithers, and [names of individuals withheld] does same for Telkwa. This makes the Councillors there also know*

*what we do. [name of individual withheld] kind of does same for the hereditary chiefs. At least for me, it is a couple of times a year around key milestone things like the year-end financial completed by the accountant, so we discuss it. And, also when operations start to ramp up (Participant 3).*

I was also informed by Participant 4 that there have been joint presentations made by the WCFC representatives of Smithers and Telkwa to both Councils.

#### *4.3.1.5 WCFC Board Meetings*

Monthly board meetings were identified, primarily by board members, as the main platform for them to interact with each other, ask questions of forest managers and other presenters for clarity on issues being discussed, make management decisions and ultimately learn. As Participant 2 observed, “Learning happens on the board when we have had board meetings and a number of strategic meetings.” There were no board meetings during my two months plus stay in the community, which was odd because the board is to meet monthly, so I was not able to observe board practices. As mentioned earlier on, the public can ask to sit in board meetings and listen to the discussions that unfold. Three non-board participants mentioned they have been present at board meetings to make presentations to the board, but did not mention it as an opportunity for them to learn.

#### *4.3.1.6 Newspaper Advertorials*

WCFC’s has recently hired the services of a Communications Director to help improve communications between the organisation and the public and one of her many responsibilities is to write monthly advertorials to be published in the local newspaper. She started writing the advertorials in April 2013 and, as of December 2013, a total of six advertorials had been published. Some of the topics covered include: “Where Skid Road Meets Ski Trails: Winter Recreation in Your Community Forest”; “Jobs from the Logs: Employment in Your Community

Forest”; and “If a Tree Falls in the Community Forest: The Many Steps of Harvest Planning.”

Plate 4.3 is an example of the advertorials published by WCFC in the local newspaper.

While advertorials help to inform the public about the activities of WCFC, none of the participants interviewed mentioned advertorials as a way they learn about forestry and the activities of WCFC, even though some mentioned they see such publications and recognize the possibility to learn. I was told that the audience for the advertorials varies, as it depends on the number of people who purchase and read the newspaper.

## Plate 4.2: Wetzinkwa Community Forest Advertorial

### Wetzin'kwa Forest Talk

## Where does the wood go? IF YOU GUESSED HOUSES, HEAT AND HYDRO POLES, YOU'RE GETTING WARMER

As winter nears, northern roads will become busier with the grind of logging trucks, hauling their goods to market.

As those logs thunder past, have you ever considered where they're going? Logs harvested in the community forest are processed locally, but will be used both close to home and abroad for building, infrastructure and even heating.

#### Saw logs

More than 90 percent of Wetzin'kwa logs—mostly pine, but some spruce and subalpine fir (locally known as balsam)—are saw logs that are processed into lumber at mills in Smithers.

At PIR, logs are put through a canter or profiler, which chips off rough edges. Removed bark is used to heat the mill, along with its dry kilns and planer. Chips go to Canfor pulp mill in Prince George. Sawdust and shavings are used to make particleboard at Newpro in Smithers.

Wetzin'kwa continually looks for ways to use logging waste. Dry logs that do not meet purchaser specifications are set aside for firewood cutters, or it is hauled to Moricetown for use as firewood. In the past, the community forest has completed trials where treetops were used in post and rail manufacturing. Wetzin'kwa has also had waste piles processed with a large grinder for use by Newpro in their fibre board production.

The processed lumber is used domestically and overseas: roughly half is shipped to the United States, 30

percent to China, 15 percent to Japan and the remainder stays in Canada.

#### Pole logs

Pole logs are sent to Decker Lake Forest Products near Burns Lake, where they are made into hydro poles. Pole logs are straight, wide, have fewer knots, and two inches of sapwood, which more readily accepts preservative treatment.

After the logs are put through the pole peeler and treated with preservatives, they are distributed across BC and Alberta. The bi-product, bark and shavings, goes to Pinnacle Renewable Energy, a pellet plant in Burns Lake.

Decker Lake produces 10,000 to 15,000 poles each year, but only a small amount comes from Wetzin'kwa Community Forest.

#### Building logs

An even smaller portion of Wetzin'kwa's logs go directly to builders, for use in log homes and other buildings.

Some stay in the community forest, for such things as cabins or the new Silvern Lakes Gathering Area shelter, which was hand-scaled and built by a local craftsman. Wetzin'kwa also donated logs for the new Bovill Square stage on Smithers' Main Street.

Wetzin'kwa Community Forest Corporation manages the local community forest to provide a balance of economic development, environmental sustainability, cultural values and recreational pursuits. For more info, visit [www.wetzinkwa.ca](http://www.wetzinkwa.ca) or find us on Facebook.



[www.wetzinkwa.ca](http://www.wetzinkwa.ca)

Photo Source: Amanda Follet, WCFC Communications Director

#### *4.3.1.7 Social Media*

A few participants mentioned that WCFC has a Facebook page on which updates of the organisation's activities are published. As of July 27, 2014, there were 105 'likes' or followers of the organisation on its Facebook page. The page is regularly updated with events of the organisation. For instance, the advertorials published in the newspaper had been posted; the search for a new community-at-large member was posted; the application for grants in 2014 was also posted; and an event such as that of the National Forestry Week in 2013 was posted on the page. Even though this seems as though it could be like a potential learning platform for the public, none of my participants mentioned it as such, even though its existence was recognised by a few. It is possible for anyone to make comments on events or activities that are posted on the Facebook page, or ask questions in the comment box. Though there are 105 followers on the page, the page has not received a lot of comments or 'likes' on posts. For instance in 2014, there has not been more than eight 'likes' on any news, information or event posted on the page; and only five people have commented on posts.

#### *4.3.1.8 WCFC's Website*

It can safely be assumed that the first point of contact with any organisation is its website, and WCFC has, not surprisingly, established one (visit <http://www.wetzinkwa.ca>). Among the publications on the website are the organisation's history, its governance structure, and its core values. Visitors to the website can also learn about the areas in the community that WCFC contributes to, including such things as the goals and vision of the organisation; general management objectives; the organisation's Forest Stewardship Plan; the memorandum of understanding WCFC has signed with some forest users; and the annual grants programme and its recipients.

The website is a potential learning platform for anyone interested in learning about WCFC's activities, its plans, and forestry. However, yearly management plans, minutes from board meetings, WCFC's policies, updates on new board members, and annual reports are not posted on the site. In addition, there is no regular update of upcoming events of the organisation - for instance, upcoming board meetings and RUGMs. When asked whether the webpage could be updated with current operations and plans of the organisation on a regular and timely basis Participant 1 noted that:

*Those [updates] may be posted there, but not when and as it occurs. It's just a matter of finances. Remember our profits go into the community in the form of grants or legacy fund that we are going to draw interest from. We can post everything, have a staff of ten doing all these stuff, but then we would have no grants program. It is one of those things that you ask where is the line that when you cross, you start to consume revenues that can be better used in the sort of charity side of the community forest.*

This view, along with the lack of available information, suggests that maintaining and managing a website is a significant financial commitment that WCFC is not currently willing to make.

Below is the response I received when I asked about how much goes into communications:

*Directly as in terms of communication contract is about \$25,000, when you include all the stuff: walk in the woods, advertorials, trade shows, etc., and when you include the BC AGM it's close to about \$50,000 (Participant 1).*

I was also curious in finding out whose responsibility it is to manage the organisation's website:

*No one manages it, but if we have to manage that it will be [name of individual withheld], myself, or someone else. It is something out there that is a regular job, and the reason is that a few thousand dollars to get that done. But when you start doing that with all the things people would want to do, that becomes a lot of money to invest in there... Even with the Facebook, the amount of energy required to respond to comments everyday could consume the entire budget. So basically we have set limits on these things; we have set some budget line items, so we go to our budget and say 'we have this much for communication,' and if that is how much the board has set for communication, my job is to ensure that we fulfill that. If I manage the website, I have to do less advertorials, if I do more advertorials, less management of the website, so all these I am suggesting are all trade-offs (Participant 1).*

## 4.3.2 Informal Avenues

### 4.3.2.1 Personal Discussions with GM and (or) Board Members

Population estimates of Smithers and Telkwa are 5,219 and 1,471 respectively (British Columbia Statistics, 2013), making them relatively small communities. As such, my assumption before going to the field was that personal exchanges and informal discussions between the public and members of the board would be a common way the public could learn about the organisation and its forestry operations, and to make suggestions to the board. Eleven participants cited informal public-board member discussions as potential communication and learning opportunities, although some others mentioned the public could talk to board members when necessary. Below are some reflections this group of participants offered:

*Since it's a small town, you can just bump into people like [names of individuals withheld], who I talk to. If there is a concern with, say, the road, I will just call [name of individual withheld] and ask him about it just to let them know (Participant 20).*

*I phone in when I have concerns; I talk to [name of individual withheld]. For instance, with the under pass I talked about, I talked to him to find out his level of support, and to see if that is something within their mandate to support. That will be very common (Participant 21).*

*I have met [name of individual withheld] on several occasions to ask him to explain issues to me. [name of individual withheld] has also done same– I phone him to get a better idea about what I need to do, so supportive (Participant 8).*

To some participants, interaction with board members has resulted in them gaining deeper understanding of WCFC's operations on the land base.

*I like talking to [name of individual withheld], where he will take up a map and say this is what it is. We had an issue with one of our contractors in the spring for felling some culturally modified trees (CMTs). I wanted to understand why those trees were not supposed to be cut. Apparently, they had FN values that needed to be protected, so he took out pictures of what he meant and started explaining to me (Participant 8).*

*A lot of things I learned about community forest were through [name of individual withheld] so maybe getting hold of a board member and having a chat...I speak with people and they tell me their understanding has been enhanced because they bumped into a board member and were told what WCFC was doing (Participant 9).*

#### 4.3.2.2 Trade Shows

There is a two-day annual Northwest Trade Expo hosted in Smithers every summer for traders to showcase and sell their products. Each year at this trade show, board members of WCFC show up at a booth (as shown in plate 4.3) to provide information to the public on issues such as the organization's activities and contributions to the community. Gifts in the form of tree seedlings are given to people who visit the booth, and there is a draw prize for a tree. Surveys are also conducted at the trade show for feedback about the organisation and its activities from members of the public who visit the booth. The purpose of the trade show is to create awareness among the public, and to provide responses to questions asked about the organisation:

*At the trade show for instance, we have posters displayed. One of them describes WCFC just geographically, the management, and the sort of vision. There is one on governance, because people do not know about the involvement of Telkwa, Smithers, Office of the Wet'suwet'en, and the three community members at large. And there is one talking about different uses of the forest (Participant 7).*

WCFC sees the trade show as a good way to "talk face-to-face with people" (Participants 4), and to open themselves up to questions that may be lingering in the minds of the public. Despite people visiting WCFC's booth at the trade show, some feel that the purpose of being at the trade shows has not achieved the desired impact the board would have liked to see as captured in the following.

*Once a year we go to the trade show and we are open to questions, and we have done questionnaires three times to get input and also to raise awareness about what we are doing. However, I can still say that you go to the town and talk to some people and they would say they know nothing about WCFC...In general when you go to the trade shows, I find at least half of the people I talk to not knowing about the CF (Participant 3).*

**Plate 4.3: WCFC's Booth at the 2013 Trade Show**

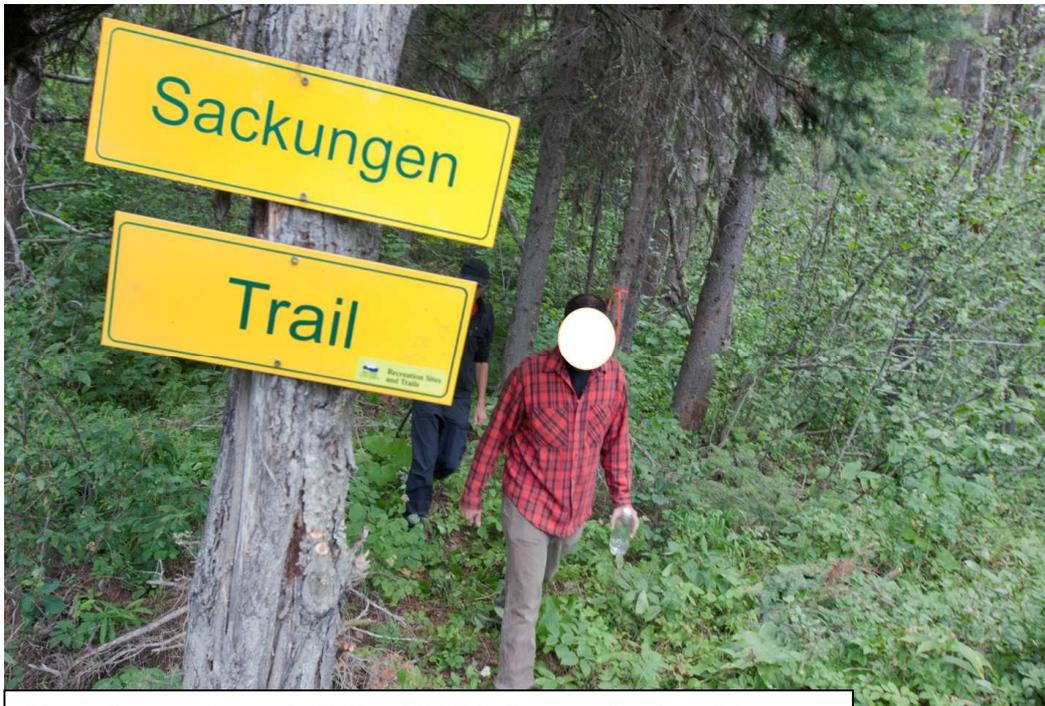


**Photo Source: Amanda Follet, WCFC Communications Director**

#### 4.3.2.3 Walk in Your Woods

As part of WCFC's activities, there are tours in the community forest dubbed 'Walk in Your Woods.' These are organised to show the public what is going on in their community forest, it provides an opportunity for learning about WCFC and forestry in general. The walks are organised occasionally, but occur "at least two to three times a year" (Participant 4). During National Forestry Week, such tours are organised for both children and the general public. Though the entire duration of a walk varies, it sometimes last for up to two hours. The walks are led by a tour guide, who is usually a forest professional. The topic for discussion for the walk scheduled during the 2014 National Forestry Week celebration was "retention levels and regeneration in harvested areas." Plate 4.4 shows a walk organised along the Sackungen Trail on July 2013, to discuss the sackungen rock formation.

**Plate 4.4: A Walk in Your Woods along the Sackungen Trail (2013)**



**Photo Source: Amanda Follet, WCFC Communications Director**

Unfortunately, the walk scheduled for the National Forestry week was cancelled due to a lack of interest shown by the public. The event was posted on WCFC's Facebook page on September 18<sup>th</sup>, 2013, and the public was asked to join, but only two people signed-up. The event was posted again on the Facebook page three days before the weeklong celebration (scheduled to commence on September 22<sup>nd</sup>, 2013). The event was also advertised on WCFC's website. Some participants associated the lack of public interest in the walk as resulting from poor advertising by the WCFC. This lack of interest notwithstanding, some participants who have participated in previous walks see them as the best way the public can learn about forestry:

*...there is a guide, an expert in area like entomology, local person, or biologist. [name of individual withheld] did something like a cultural tour, where we have a theme for the walk for folks to gather to have something like a stroll, not a hike. I find that as the best, because you are in the forest, see things at first-hand, get questions being answered (Participant 4).*

Another participant had this to say about the walks:

*I have volunteered to take people on hikes to show them around. Three different years, I took people around to the Demonstration Forest, the Sackungen trail, and nature trails. I went to the BCCFA and I was invited to go there and took people around on a field trip, and showed them around our Demonstration trails - trying to teach people about forestry (Participant 15).*

#### **4.4 Summary**

Good public participation is considered important to natural resource management for reasons such as considering multiple perspectives, encouraging learning among stakeholders, and giving a voice to stakeholders (Robson & Hunt, 2010). While there is no single governance structure for a community forest, the board structure of WCFC does allow for multiple representation in that it accommodates representatives from industry, First Nations, three jurisdictions (main stakeholders), and three members of the public (who represent community interests). This is in line with two objectives stated in the BC Community Forest Agreement (CFA): “Promote community involvement and participation” and “Promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons” (BC MFLNRO, 2011). Moreover, alternating one community-at-large board member every year provides opportunity for new ideas to come to the table and for the selected person to learn from the process of managing the community forest, while contributing their knowledge and experiences.

However, missing from the board are representatives of forest user groups, who operate on the community forest tenure, such as the Bulkley Valley Cross Country Ski Club, Smithers Mountain Bikers Association (SMBA), Smithers Community Forest Society, BC Naturalists, and Bulkley Valley Backpackers. Though resource user group meetings provide opportunities for forest user groups to provide input into decisions of the WCFC, it is interesting that such important stakeholders would not be represented on the board since decisions made by WCFC

will likely directly affect them. Their omission from the board can be traced to the design of WCFC's board structure, which automatically excludes them from sitting on the board. Perhaps their omission is a result of WCFC's inadequate capacity as a relatively small organisation. As pioneers of the organisation explained, the main stakeholders agreed to go by this board structure since WCFC's inception, even though in designing participatory decision-support processes, "broad representation of affected stakeholders is required to demonstrate equity and credibility" (Sheppard, 2005, p.1521).

The board is committed to achieving consensus when discussing issues, partly because community interests are held supreme by the board. As noted in the results above, when a board member disagrees on an issue, discussions have to still continue until everybody present agrees on a way of proceeding. By this approach, board members accommodate the views and interests of others, and they all have "an equal role in creating the end product" (Mascarenhas & Scarce, 2004, p.33).

Providing opportunities for public input in forest decision making is considered imperative and has been discussed by many authors as identified in Chapter Two (e.g., Sheppard, 2005; Robson & Hunt, 2010). The findings reveal there are eleven different avenues or platforms through which members of the public can contribute to the management of the community forest, and through which they have the opportunity to learn about the community forest and forestry in general. While these public involvement techniques seem broad, the data in fact reveal that only a couple of them actually lead to active participation by the public, thereby providing opportunities to learn. For instance, out of the eight formal avenues discussed, three were found in the analysis to be effective in getting input from the stakeholders and providing opportunities for dialogue and deliberation: RUGMs, reporting back to municipal Council and chiefs, and

board meetings. Of these three, RUGMs and reporting back to Council and Chiefs are the most effective in getting input from the public involved with the WCFC, and for learning. The RUGMs bring forest users together to discuss and deliberate on management and operational plans of the organisation, and also allows forest users to learn about the organisation's management on the community forest tenure. When board members report to their municipal Councils and Chiefs, the opportunity is provided for them to learn about the organisation and to suggest ideas to their representatives on the board.

There are, however, no arrangements for community-at-large board members (who represent community interests) to provide feedback to the public they are supposed to represent to allow the public to learn about the activities of the organisation, or provide input resulting in the sort of principle/agent breakdown that McGurk et al. (2006) discuss. As well, the RUGMs target specific forest users and exclude members of the general public from the process. This is because members of the public do not get the e-mails sent out to forest user groups for the meetings, nor are the meetings advertised on official communication channels, such as the organisation's website for the public to attend. Thus, it seems that the broader public is excluded from having input or learning from the activities of the organisation by design.

Out of the eleven avenues discussed in the data above, six were mentioned by participants as opportunities through which deliberation and learning occur, namely, RUGMs, Board Meetings, Reporting back to Council, AGMs (formal platforms/avenues), Walk in Your Woods, and personal discussions with General Manager/board members (Informal platforms/avenues).

Furthermore, even though an open house was used in gathering information about dealing with the mountain pine beetle epidemic, open houses are not specifically organised by WCFC to

get the public's input into decisions and plans of the community forest. AGMs appear to be the only open house available to the public to contribute some ideas to the organisation, and to learn from the process and during my visit this event was poorly advertised and poorly attended as outlined above.

As well, providing adequate information for public involvement is the critical on-ramp to dialogue and learning in resource and environmental governance (Sinclair & Diduck, 2005). However, the findings show that WCFC does not provide information on its yearly management plans to the public (except for forest user groups) on which their input might be based. Further, board minutes are not published on the organisation's website, where the public can learn about decisions taken by the board on a monthly basis, and to query whether such decisions are appropriate. As a result, most community members/public that are not involved directly with the organisation are isolated from the process of managing the community forest tenure, because there is no information on operations or decisions available to them. Opportunities to participate in decision making and management are very limited.

The above findings were underscored by the organisation's apparent lack of willingness to dedicate the resources necessary to update its website regularly with the sort of information that might actually generate interest in their work. It was noted that spending a lot of money updating and providing information on the website would take away from the money available in the form of grants provided to the community. Similarly, there seems to be poor advertising for some events that could involve the public, generate discussion, and provide opportunities for learning. Mention can be made of the 2014 AGM and the Walk in Your Woods tour organised during National Forestry Week, which some participants pointed out as being poorly advertised.

Perhaps, the discussion about opportunities for making input and learning, support McGurk et al's (2006) assertion that "specific ways of achieving meaningful public participation in forest management are still being tested" (p.810). However, with the emergence of public participation as a key component of forest management (Beckley, Parkins, and Sheppard, 2005) and learning increasingly becoming a central theme in natural resources management (Armitage et al., 2008), the WCFC need to provide enough opportunities for deliberative discussions and interactions among members of the public to allow them share their perspectives and knowledge (Schusler et al., 2003; Cundill & Rodela, 2012). This can broaden their understanding on issues being discussed or on human-environment relationships (Buck et al., 2001; Röling, 2002).

## CHAPTER FIVE

### PARTICIPANT LEARNING OUTCOMES

#### 5.1 Introduction

Collaborative governance and community forest literature suggest that there could be opportunities for learning among interested parties (often termed stakeholders), as they collaborate on managing natural resources. Keen and Mahanty (2006), for instance, observe that “Learning between stakeholders is important at all stages of a project or community initiative - collaboratively defining learning needs can enhance ownership, relevance, and commitment to learning processes” (p.508). Based on these contentions, and having explored opportunities available to participants to share ideas and learn, my intention here is to document and describe things learned by study participants through their involvement with WCFC. The main themes and subthemes of learning outcomes shared with me by participants are presented in Table 4.2, and are the focus of discussion. Individual learning (see Table 4.2) is defined here as the learning outcomes of individual participants as a result of their involvement in the activities of WCFC, while social learning refers to lessons board and forest user groups as units have learned through working together on issues of forest management.

**Table 5.1: Major Participant Learning themes and sub-themes**

<b>INDIVIDUAL LEARNING</b>	<b>SOCIAL LEARNING</b>
Sustainable forest management (SFM)	SFM
Forest governance	Benefit sharing
Forest management practices and operations on the land base	Forestry as a business/investment
Commercial aspects of forestry	Working with multiple forest users
Relationship and trust building	Relationship building
	Policies/regulations
	Skill-set of Board Members
	Community involvement
	Forest governance and forestry operations

## **5.2 Individual Learning**

### *5.2.1 Sustainable Forest Management (SFM)*

As noted in Chapter Two, SFM over the years has been promoted as the appropriate normative goal of forest management. Community forestry in particular, is perceived by some authors as a way to manage forests sustainably (e.g., Charnley & Poe, 2007). Not surprisingly, SFM has found its way into the operations of WCFC as reflected in their goal to manage the community forest tenure “for the long term economic, environmental and social benefit of the residents of the Bulkley Valley” (<http://www.wetzinkwa.ca/goals.html>). However, throughout my interviews, most participants indicated that WCFC’s harvesting rate is too high, would affect the forest’s sustainability in the future, and it is not sustainable or reflective of SFM practices.

The increase in harvesting rate is a result of an increase in WCFC's annual allowable cut (AAC) from 30,000 m<sup>3</sup> to 95,000 m<sup>3</sup> for five years (2010-2011 to 2014-2015 harvesting seasons) to allow the community forest to harvest most of the wood that has been affected by the mountain pine beetle epidemic in the tenure area. One participant made the following remarks:

*I have learned certain things about AAC, how much they are allowed to take each year, because of the pine beetle. When they started we were told certain amount was going to be taken out each year and, after years, they would re-apply and go for five times that amount. The first time I saw the amount, it was heartbreaking with the amount they had taken, but that was because of the pine beetle. They had been allowed to take a large amount, because it was dead wood already (Participant 16).*

This learning resulted from the participant attending WCFC's open house organised to gain community input into dealing with the mountain pine beetle epidemic, as discussed in Chapter Four.

Participant 19 held the opinion that the rate of harvest could still be reduced to lessen the impact of harvest even though there is pine-beetle infestation:

*The cut has been accelerated because of the pine beetle, but I am not sure it is all instances that the cutting should be done at the rate that is taking place, even though there is pine beetle infestation. They [WCFC] would agree it [the rate of harvest] is not sustainable (Participant 19).*

A number of participants also indicated that they now have a better understanding of how SFM works in practice. For instance, comparing operations of industrial forests to WCFC regarding sustainability, Participant 20 explained:

*WCFC has given me a little bit of reality. Just talking with them you get to realise that sure, there is all of the conceptual and theoretical knowledge out there based on sound ecology and it makes sense, but it may or may not be practical depending on the type of forest you are in. How close or far you are to a market - all these factors need consideration because, at the end of the day, there has to be an economy surrounding the forest, otherwise it becomes a park; you leave it alone. I don't think SFM is being held back by a lack of knowledge, it is being held back by lack of a realistic ability to implement that knowledge from a dollar and cents point of view.*

As a member of one of the resource groups, this participant has been attending resource user group meetings and has been constantly interacting with the general manager of WCFC and the chair of the organisation. It is through these avenues that, according to him, improved his knowledge and understanding of SFM.

In addition, Participant 4 indicated that he now understands SFM in a broader context after having been involved with WCFC. He explained that he favoured logging on small cut-blocks, and with small equipment, because those actions indicate SFM practice. However, he now holds the opinion that there is a place for logging with big machinery, while still ensuring sustainability on the land.

*It [SFM] has definitely become more open...Before, I would have supported the hand felling, small machine skidding type scenario, thinking that will be a lower impact, but I realise that is not a cost-effective thing. There can be scenarios where big machinery can do a better job than the traditional hand felling scenario...When it is a small patch clear-cut it makes sense in a pure dead pine stands, and there is a gentle feller buncher operator. It is like an art and these guys are skilled with the machine doing so many things. It is not as simple as I would have thought like the romantic hand-felling operations.*

A few participants also mentioned that they have learned about plans by WCFC to manage for climate change as part of managing the community forest tenure sustainably. Two participants shared their learning experiences regarding WCFC's plans. While Participant 7's learning is a result of her interaction with a board member, attending RUGMs was the source of Participant 17's learning:

*[name of individual withheld] knowledge of whitebark pine and her connections with the Bulkley Valley Research Centre (BVRC) taught me about a strategy that aims to increase the resilience of the forest in the face of climate change by diversifying the species composition (Participant 7).*

*Another thing I learned was with climate change, if you believe in it. They wanted to get different species to keep the normal process but faster. To get different species in different areas; Douglas fir and larch will be planted to give a diversity of species on the land (Participant 17).*

### 5.2.2 Forest Governance

As already described, WCFC's governance involves a board structure, forest manager, collaborating with forest resource user groups and accommodating their views into management plans. Some participants explained they learned that the governance of WCFC is better than some other community forests in the Bulkley Valley, and that the WCFC is more interested in listening to public views than these other community forests. This openness, according to some participants, has resulted in increasing benefits to the community. Some even argued that WCFC's governance structure could potentially be a model for other community forests:

*I have learned that they [WCFC] perform better than expected compared to other people I have heard speak about other community forests. These people are more interested in what the public has to say, and I'm not sure if it's because we are watching over them or keeping track of them. I think they want to be part of the community, and want the community to know that they are doing things well and in a sustainable way. I think their board of directors wants that (Participant 15).*

*I think the set-up of the organisation and its relationship with the First Nation, Telkwa and Smithers creates a good opportunity to become a model of sustainable forestry practices, and promoting the multi-uses of the forest and valuing other things rather than just the immediate economic value of the wood. As a person looking in from the outside, that is how I see it (Participant 19).*

*...It is a revenue-generating entity, but a not-for-profit, and money goes back into the community. For me this is a big one; you have a forest bordering the community that is managed for a long-term period rather than a volume-based tenure that is in and out. The big one I see there is the spin-off of the funding, and you see it in a lot of projects around (Participant 20).*

The above learning outcomes partly resulted from the consultation processes conducted by the WCFC in Moricetown, Smithers, and Telkwa prior to applying for the community forest licence. During these consultations, WCFC talked about the governance structure of the organisation, potential benefits of the organisation to the community, among others. Also, some participants, in this case Participant 15, has a background in forestry and through discussions and conversations with some community members indicated he came to this realisation.

Some participants recounted that the involvement of the Wet'suwet'en by the TOS and VOT in the initial planning stages for the community forest tenure was one of their critical learning outcomes regarding WCFC's governance. This is how two participants put it:

*What was interesting about this process was that Smithers and Telkwa approached the Office of the Wet'suwet'en before there was any application for CF licence and that made a huge difference for our leadership, because it was an opportunity to create something. When projects are presented to the OW with strict structures, there are no room for our principles and values to be incorporated, so the big difference was we created the CF with the municipalities. And, the Wet'suwet'en chiefs saw it as a way to incorporate innovative forest management practices that will protect and conserve some of our cultural heritage resources (Participant 2).*

*In fact, the involvement of the OW has been amazingly positive; it's been a really good experience for everybody" (Participant 1).*

During the initial stages of applying for a licence, the Wet'suwet'en had an opportunity to be a third shareholder, but rejected the opportunity. As Participant 3 explained:

*They [the OW] were worried and unsure if this was going to work for them; it was a big risk, because they have not collaborated with before and vice-versa, and they didn't know the business. Actually, there is a few of us at the table who felt this could be profitable (Participant 3).*

Participants felt that even though provincial regulations require that community groups, such as First Nations be consulted when applying for a community forest licence, the effort made by the shareholders to make the Wet'suwet'en a shareholder speaks to the extent of collaboration and partnership the TOS and VOT wanted to exist within this community forest.

Some participants also noted that it is not uncommon to find members of the public who hold different views regarding how the community forest tenure should be valued and managed. Surprisingly however, Participant 1 observed that people who hold such contrary opinions feel they have the support of all others, which is not the case. He noted that this was a revelation to him regarding challenges that community forests face in their governance:

*Everybody believes strongly in a particular position, and feels everyone else holds the same opinion. For me, this was an eye-opener and it describes the problem with a CF in*

*running things. The reality is that not everybody thinks in the same way; there are a lot of beliefs out there, so the fact that somebody does not like it does not mean it does not work well. You have two ends of the spectrum: you can't make the assumption that because one group feels this way; all the others feel the same.*

This realisation was possible through resource user group meetings, where forest user groups present and share their opinions on how the community forest tenure should be managed.

### 5.2.3 Forest Management Practices and Operations on the Land Base

In order to assess whether participants had a clear understanding of the actual activities of WCFC on the land base, I posed questions to them about what they have learned from WCFC's operations since getting involved with the organisation. Most participants responded that they had learned about management practices by going to the woodlands to see what is happening. Below, two observations are offered:

*Impact from the CF is far less than the large huge clear-cuts out there. At least the community forest tries to make it less visible and less impactful. It seems the broad forest industry hacks these mass areas, but the community forest lessens its impacts. That is a visible conclusion I have come to (Participant 16).*

*My thoughts are that normally cutting blocks are huge, but the CF does things differently. They make sure blocks are not huge; some of them are bigger and that is okay, but not huge. The contours of the blocks is nice, and I wouldn't oppose logging if it is done that way, because it leaves islands of spruce standing and you get pine around it. It is not an ugly square block that they get everything out of it. They leave islands of different species on the land (Participant 17).*

Participants also revealed that through learning about forest management practices, they were better able to articulate their concerns. Some participants noted, for example, their concern about the increasing amount of slash (waste) piles (see Plate 4.5), or non-merchantable wood left on the land after logging. Some participants felt it is an eyesore for such huge piles of wood to be left at various points on the land and, therefore, urged WCFC to find feasible ways to deal with them:

*What I have noticed in some of the blocks is a lot of burned piles [waste]. I have been dismayed by them, and it will be good to see some of these things used, for example, as pellets. That is one thing I would question about their operations (Participant 18).*

When I asked the board and general manager about the slash piles, they unanimously agreed that it is a major concern to them. Participant 1 noted: “The slash piles are a big thing across the board, because we do not have a pulp outlet; there isn’t any mill near here to sell to. We have tried numerous things, sometimes with a bit of success, but we are trying to see what happens with it.”

One way WCFC has dealt with the situation is to provide wood from these piles to community members to heat their homes. Community members have been allowed on the community forest tenure area to haul the wood to their homes. To help community members get better access to the wood, WCFC sometimes deposits them at easy access points on the community forest tenure. However, there are regulations regarding taking wood from the forest in British Columbia, so even though the availability of the wood is benefit to the community, WCFC has not been able to publicly communicate its availability to the community through its advertorials in the newspaper. As the Communications Director of WCFC explained:

*They [slash piles] are left there for the summer and people would often go and get their firewood. And, WCFC, if they can, place them at vantage points for the community to have access to it. [name of individual withheld] does not want to say much about it because there is bureaucracy around it, red tape around it, because people have to get permits to have access to them. People don't often have the permits, and do you want to promote that?*

In addition to the above, WCFC burns the slash piles usually in the late fall to prevent potential brush fires. Plate 4.6 is evidence that some of the slash piles are burned. One participant observed, however, that burning slash piles after harvesting had negative impact on his property: “Their [WCFC] procedure is burning the slash piles, and that is tough. That impacted me greatly this year, and I had to stay indoors, because the smoke filled my valley and it didn’t flow out” (Participant 16).

Furthermore, the board told me that there was a trial with NEWPRO, which manufactures particleboard, to produce fibre from the slash piles. NEWPRO bought a machine to process the waste into fibre for their use and to supply to other pulp mill industries. But following the shutdown of the pulp mill in Kitimat, NEWPRO's ability to continue operations with the machine was hampered, forcing the company to stop producing the fibre. Participant 3 explained:

*They [NEWPRO] ground a lot of piles in the bush - We were the first to try that in the bush. We gave the fibre to them; they did it so we can see if there was a business, or if they could just take away the fibre from us. It worked really well for them. The pulp mill closed down, and there was no need for that fibre and, all of a sudden, there was a lot of fibre on the market, and the company felt there wasn't any need to operate this machinery. So they got rid of it, and bought all the fibre they needed on the market. It was a clear case of a local economy collapsing for the material, which resulted in low demand. We cannot take that product and transport it to Prince George or elsewhere because it was not economically prudent and therefore we have to light it on fire.*

Also, WCFC started a fence post trial with the slash, in which the tops of trees were processed into specific dimensions and shipped to Houston to a company that is interested in buying them for fence posts. As some board members told me, this option has not been economically viable:

*In the past we have tried to develop a market with someone in Houston, who is interested in small diameter tops - going down to 2 inches [rat tail]. It is not going to be bought by a local mill because it is too small to make 2 by 4 lumber from it. But this person has a fencing and pole business and that was good. However, for a variety of reasons that was not economically viable, we could not continue (Participant 3).*

This was confirmed in WCFC's 2012-2013 End Year Summary, which stated that the trial was not operationally viable, and there were some recommendations suggested for the future.

In WCFC's 2011 Strategic Planning Retreat report, it is stated that the organisation engaged the services of a not-for-profit forest research institute to evaluate the possibility of converting waste wood into bio-energy (WCFC Strategic Planning Retreat, 2011). According to

the report, the economics did not favour this initiative in the short term, because there was no outlet for waste wood in Smithers.

Through his interactions with WCFC, Participant 20 explained to me that the leadership of the community forest demonstrated to him that where possible, alternatives to forest management would be considered on the land base:

*Historically, they have done lots on silviculture and harvesting techniques, so there are lots of forestry practices that provide opportunities to explore some of those. I have talked to [names of individuals withheld] about it; there is a lot of knowledge and interests in exploring different practices. This is because they operate not just as a non-for-profit organisation. Canfor, for instance, would not explore potential harvesting methods but minimise the bottom-line, whereas a community forest would look at the various options. They don't operate in a bubble not caring about how it is affecting other areas. One of the things is that because they are close to the community, they are under a lot of scrutiny and rightfully so, because it is a shared resource. For one of their harvest plans, they have to answer to not just the board, but the community at large.*

Plate 5.1: Slash piles

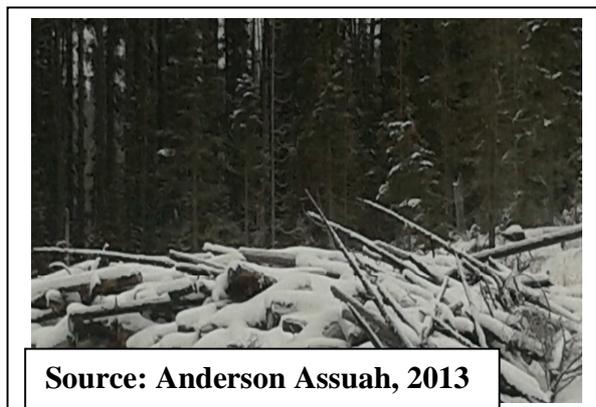


Plate 5.2: Remnant of burned slash piles



#### 5.2.4 Commercial Aspects of Forestry

Some participants mentioned that they gained knowledge about the business of forestry by observing how decisions are taken by WCFC in the price negotiation and sale of logs. Four of such views are presented below:

*Even though I have lived in the valley for 25 years, I never really knew much about the commercial aspect of the forest, but through attending meetings and talking to people, I have had a better hand on how things work, what is important to the community forest as*

*a business, etc. For instance, how you calculate the productivity of the forest; so many cubic metres of biomass increase per year type of a thing. Offshoot of that is which areas are selected for harvest, which criteria go into making those decisions (Participant 14).*

*I think it is more of the marketing and sale of logs... I didn't have a lot of knowledge in stratifying the value of the logs... We sold logs for hydro poles – it gets sent to certain mills, and some of our wood gets utilised for log home builders. They have certain specifications for their log requirements, but if we sort too much of our timber to accommodate log home buyers, they do pay more for the wood than the mills, who would want a lower price on the bulk of our volume. So learning about the things you need to consider before marketing the fibre to get a lot of return is something I didn't really have a lot of knowledge about before. And working with the community forest, I am learning more about the economics, and trying to keep the balance with the social and environmental benefits going back to the community. So those are some of the new areas that I have learned through the community forest (Participant 2).*

*I also learned more about the business side of forestry - this was something I had not been exposed to before in such an operational way. This gave me a deeper understanding and appreciation for the context of community forestry - and the tradeoffs that communities have to make when attempting to manage the forest for a wide range of values, while running a viable enterprise at the same time fulfilling all of the legislative and regulatory requirements (Participant 7).*

*In BC most of our economy is based on forestry, but lots of us don't know anything about it. I have learned about wood products; keeping some locally, but also exporting. Extracting the wood and the cost associated with that, and that is amazing with regards the costs. Building a road for instance is about half a million dollars (Participant 6)!*

These outcomes were the result of participants through attending resource user groups meetings and board meetings, during which the board makes strategic decisions regarding marketing and selling of logs from the community forest.

#### *5.2.5 Relationship and Trust Building*

Data on individual learning outcomes also indicate that the involvement of the Office of the Wet'suwet'en in governing the community forest tenure has resulted in relationship and trust building, which hitherto did not exist, among the two municipalities (Smithers and Telkwa) and the OW. In addition to this, there is mutual respect among these jurisdictions, as they collaborate

to manage the community forest tenure. Two participants explained the relationship among the three bodies in the following way:

*The collaboration has resulted in the Town, Village, and the Executive Director of the OW going down to the UBCM together; they meet ministers as three parties to talk about things that will help our region. That is a result of cooperation from the community forest...the minister is taken aback, because this is rare, so the lobbying power will benefit our region, because he will see that there is unanimity (Participant 3).*

*I think it is the openness and understanding, and the OW has some serious issues with forest health and that was accepted from the on-set... Like I said, the shareholders are not afraid to say they are doing things differently in the forest because of the OW interest. And that is right from the start and we have been able to foster that up to now (Participant 23).*

Furthermore, board members expressed the new positive relationship and trust that has come to exist among individuals of these organizations, and the mutual respect they have for one another, as they make decisions and implement plans for the community forest. Board members explained that the opinion of each board member is respected and taken into account during deliberations. Participant 2 observes that respect and collaboration that exists among the board is central to WCFC's success thus far:

*...It has created a collaborative respectful climate for community-at-large board members to come in and work together. So I think the CF was being solution-oriented, not hanging up on issues or being positional, but always finding innovative ways of moving forward. I think that is one of the ingredients to our successes – the respect and collaboration we have had.*

## **5.3 Social Learning**

### *5.3.1 Sustainable Forest Management (SFM)*

There has been learning on the board regarding managing the forest sustainably. This learning is evident in the organisation's Integrated Resource Management (IRM) initiative which, among others, is aimed at resiliency and species diversity on the community forest tenure. The initiative was spearheaded by a past board member of WCFC who, when on the board, felt things could be done differently from an operational perspective on the tenure to promote forest

health. Through communications with the GM of WCFC and other forest professionals, and with support from fellow board members, the board accepted the initiative. The initiative was discussed at the board's strategic meeting in 2011 to give some form of structure to it, and a budget was detailed for the initiative in 2012. "How can we invest now in a better planning process and be able to go back to the community and say 'we are not thinking about the cheapest way to get the log to the mill, but thinking about the long term stability of the forest?'" Participant 3 said of the initiative's importance to the community and the board.

Specific actions outlined in the initiative included such things as whitebark pine (*Pinus albicaulis* Engelmann) recovery; planting of western larch (*Larix occidentalis* Nuttall) and Douglas fir (*Pseudotsuga menziesii* (Mirbel) Franco) in anticipation of climate change; improving stocking standards; and funding grant proposal topics that pertain to the Wetzin'kwa tenure aimed at either promoting or benefitting the local forest industry, forest ecosystems, or the forest community. Excited by the initiative, some board participants expressed their contentment:

*We have a structure with the desire to embark on an IRM initiative... We want to develop stands that are more resilient and, having gone through a number of iterations with the research going on, we can do that. The whitebark pine recovery is part, the CNC research is part. It is a funding plan that we have set aside money to invest in some initiatives to take us down that path. Which initiative is selected every year is dependent on the board. Some of them are no cost; thus far, there is no cost with the CNC research, we may monitor certain things and help the college with what they are doing (Participant 1).*

*We want to try some specific projects: plant whitebark pine and support a researcher who was planting to regenerate the species, because it appears to be declining in the natural environment; a group to brainstorm resiliency and what sort of practice that we would incorporate in our everyday prescriptions, and then follow through with timber supply modelling - that piece hasn't happened yet - but it is an objective for that committee. It was to calculate our future AAC and provide it to the government and to say 'This is the kind of forest practice that would be good to support biodiversity and resiliency.' That group is supposed to act in the future... These are things we are spending money on that we wouldn't normally do. Proactively, we are doing this with the help of [name of individual withheld] and other scientists, as long as we stay within the legal framework (Participant 3).*

In the 2012-2013 season, the WCFC supported a local researcher from the Bulkley Valley Research Centre (BVRC), a local research organisation, with \$4000 for a project to recover whitebark pine . In addition, WCFC provided sites on the community forest tenure for planting the whitebark pine and, when I was in the field, rabbit protectors were installed around them by WCFC. Planting of western larch by the organisation was scheduled for the spring of 2014.

When I asked for reasons for helping in restoring whitebark pine, which would not be economically beneficial to WCFC, a board member gave the following response:

*Because it is an endangered tree; it is red-listed across Canada, and it occurs naturally here, so it is important to do what we can to restore it. And, I know from my previous colleagues that there is this woman, who gets the cones and grows them, and she has been putting in efforts with the restoration, so I thought we could help her a bit. She has been doing that on volunteer basis (Participant 10).*

The challenge to the IRM initiative, however, is that its progress has been somewhat affected because the three-year term of the board member who was spearheading the initiative has expired. I asked about the progress of the initiative from the board and, while board members maintained that the initiative remains a priority, they accepted it had lost some momentum:

*It is one of those things that when you have a director-at-large doing something and her time ends and there is no one to pick up the pieces, it can slide a bit. And also because there hasn't been something solid established...It is still on our priority list, on our long-term strategic plan and key priorities. Whether it has got the continued passion and steam to keep it going, we have to see...What was created was a working relationship with the BV Research Centre; bringing together researchers there. It has evolved into specific projects like the whitebark plants, species diversity, the pine hydrological special zone, long term research stuff. It is slowly happening, but it is not as focused as when [name of individual withheld] was championing it (Participant 4).*

As mentioned earlier, learning around managing the forest in anticipation of future climate changes has culminated in the board's decision to plant western larch and Douglas fir, which are two species not approved by the Province for the Bulkley Valley. With the direction of climate variability not clear to the organisation, the survival of one or both species would provide

information and insight into how tree species could be managed in the future. These species are being introduced because, according to some board members, the Forest Stewardship Plan (FSP) allows WCFC to experiment with up to 10% of non-targeted or non-approved species on the community forest tenure, and the organisation is looking to exploit the maximum 10%. Participant 1 explained the relevance of introducing the two species, and their importance to future management:

*Spruce, balsam, and pine are the three typical species we can plant or harvest. We know how they behave, but we are not aware of how larch and Douglas fir are going to do on the land. They might not grow well in the short term, so how we make sure that they survive in the long-term is the question. We need to know all the characteristics of those species before we make that happen, because we have to create a forest where we took one (Participant 1).*

Participant 15, while accepting the uncertainty of climate change predictions in the Bulkeley Valley, feels that WCFC could go beyond the 10% allowance provided by the government if they demonstrate to the government that there is strong need for them to experiment with more species to deal with climate change:

*They say the government is limiting the amount of species they can plant, but I am not sure that is true. There are rules, but when you give a good rationale to the government about what you want to do; government can give you a break. But around here it is difficult to know where we are going in terms of climate change; some say drier and hotter summer, others say wetter and colder winters, which will dictate the type of species you plant. You have to plant for the two. West Fraser tried larch and it came out very well in a lot of places, but it was not good in other areas, too (Participant 15).*

### 5.3.2 Benefit Sharing

As defined by several authors (e.g., Teitelbaum et al., 2006; Duinker et al., 1994) managing the forest for community benefits is considered a core component of community forestry. At the outset of creating WCFC, all participants indicated that they learned about benefit sharing and some of the benefits that the community would enjoy from the community forest, such as supporting local initiatives, diversifying the local economy, monetary benefits,

among others. These learning outcomes were initiated during the consultation process prior to applying for the community forest licence, when WCFC organised open houses in Telkwa, Smithers, and Moricetown to get community input into the process. “Originally, it was set up to provide extra money into the community through harvesting timber and taking care of the land” (Participant 29). One way the board has ensured that the community benefits from the community forest is by distributing profits made on logging to the community. To effectively do this, the board has set up an annual grants program, in which the public can apply for grants on a yearly basis. Through implementing the program, the board has learned to make its distribution effective and efficient, often through input from board members who have experiences with distributing grants. Participant 2 recollected:

*Some of the directors we have had previously had their hands on the pulse in terms of what was happening in the communities in terms of infrastructure that is already existing, and organisations that are existing and trying to encourage social health and wellbeing. And learning from other directors in bringing their knowledge and expertise into how our grants application and evaluation take place. For example, one of our previous directors was involved with the Mountain Equipment Co-op grant program, so we utilised a lot of those ideas and the format for our grant evaluation from the previous work that had been done by the director, and that has enhanced the ability of the community forest to do due diligence and share some benefits to the community.*

The grants program supports community projects and initiatives in the areas of: Arts and Culture; Recreation; Regional Economic Development; Social Services; Environment; and Conservation and Natural Resources Management (WCFC End Year Summary, 2009-2010). Information on WCFC’s website (see:<http://www.wetzinkwa.ca/grant-program.html>) lists grant recipients from 2009 onwards. Grant applications are opened in May and are advertised for community members to apply. The deadline for the 2014 grants application was May 30, 2014, and decisions on applications were made on June 20, 2014. Available information on WCFC’s Facebook page on July 16, 2014 indicated that \$178,778 was distributed among thirty successful grant applicants for the 2014 grants cycle. Earlier on, my communications with one board member

revealed that forty-four applications were received for the 2014 grant cycle. Among the 30 projects supported by the grants program were the following: Wet'suwet'en Language and Culture Camp by the OW; Telkwa Elevator Project by Telkwa Christian Reformed Church; Kids School Dig Food and Summer Camp Workshops by Ground Breakers Agriculture Association; Equipment Upgrade Project by Bulkley Valley Gymnastics Association; and Hudson Bay Mountain Road Underpass by the BV Cross Country Ski Club.

In addition to the grants, WCFC donates monies to the three main stakeholders: TOS, VOT, and the OW. There have also been donations to the Mountain Bikers Association, Smithers Community Forest Corporation, Bulkley Valley Cross Country Ski Club, among others, to assist in their operations. The above-mentioned organisations have their trails in the community forest tenure. Furthermore, the WCFC contracts activities on the community forest tenure to people within the Bulkley Valley, particularly within the jurisdictions of the three stakeholders. For example, First Nations contractors were awarded beetle management contracts to undertake beetle probing and burn activities in the 2008-2009 season (WCFC End Year Summary, 2008-2009).

### *5.3.3 Forestry as a Business/Investment*

An important learning outcome that board members identified was running the WCFC as a business. As a Corporation that pays taxes, there is need to manage the organization very well in order not to run into losses. Consequently, all board members underscored the importance of staying profitable, while managing for community interests. Board members, particularly those without any forestry business background, indicated that they had to learn from those with such experiences on the board. Participant 4 captured this idea:

*...What the log market is doing determines how much more profits we are going to make, and what other opportunities we have to do things differently. For example, if the log*

*market is low, we have to do things differently to make ends meet. As things go up then you have opportunities to do different harvesting, different applications over and above planting because, at the end of the day, we have to make sure that we are going to do business to stay here for a very long time.*

Through managing the community forest tenure, board participants indicated that the board has learned to invest profits being made from harvesting on behalf of the community. This learning is predicated on the board's realization that there has been an increase in AAC and therefore there is a need to create reserve funds, out of which they can draw money for future activities and operations. In addition, through projections, the board realizes that through reassessment of the AAC, it "will go from approximately 95,000 m<sup>3</sup> to about 25,000 m<sup>3</sup>" (Participant 3), which will be below the original AAC that was established when the community was awarded the tenure.

One of the reserve funds is what is referred to by the board as *a legacy fund*, which board participants said aims to "bank money to draw a lot of investment income from, so we are able to maintain a steady grants program to keep some stability" (Participant 4). Two board members further commented on the legacy fund as follows:

*The community forest board is creating a legacy fund to contribute to innovative initiatives and stewardship in the community; it will help finance our granting program years down the road. The fund has been around for about three years. This will prevent us from depending on logging, because there are years we wouldn't be able to harvest much (Participant 2).*

*We have basically taken on a financial planner or advisor with the Royal Bank of Canada to advise us on a portfolio with the intent that we are going to roll the money we have been making, because for two or three years now, WCFC has been making a lot of money because we have been harvesting beetle wood (Participant 7).*

The target amount for the legacy fund is \$3,000,000 and profits made from logging activities are already being saved towards meeting the set target. My communications with an immediately

past board member confirmed that WCFC has met this target after the 2013-2014 harvesting season (this period is after I had completed my field work).

In addition to the legacy fund, there is a Silviculture Fund or Silviculture Accrual/Liability, which provides funds for silvicultural operations on the WCFC tenure. The board has decided to set aside \$4.50/m<sup>3</sup> of harvested wood, with the vision that the accumulation of these monies would help the organisation deal with silviculture treatments on the community forest tenure into the future. Relishing the plans of the board for sustainable funding for silviculture, Participant 3 had this to say:

*... We say that every time you sell wood put down \$4.50/m<sup>3</sup> in the bank, so we have funds for our silviculture activities, which may last for up to 12 years - but we are fully funded. Every time we harvest, we have money to re-forest in the next 15 years plus more. We are a little conservative as a board, putting down more money than we require.*

Furthermore, Participant 3 described an Emergency fund set up by the board which, in the event of any catastrophe, would be utilised to defray administrative costs, as the organisation made its way back to active operations:

*... We have a fund specifically about [amount withheld], so let's say this mill burns down tomorrow, we still have to run our business before we figure out what to do. So we could collapse our administrative cost structure and get to an absolute skeletal business for a year or two, and be able to pay to management groups like Silvicon, because we might not harvest wood for a year or so. We have set aside money for such catastrophic events (Participant 3)!*

#### 5.3.4 Working with Multiple Forest Users

The community forest tenure has trails for recreational activities such as skiing, biking, hiking, and trapping, as outlined above. Though WCFC is not directly in charge of recreation on its tenure, the organisation supports recreational groups whose activities are within the tenure. “They do nothing about recreation; we [recreational groups] have to go to them and tell them what we want to do about recreation. We suggest ideas about what we want to do,” Participant

15 said of the role WCFC plays in recreation. By signing MOUs and incorporating the views of forest user groups into management plans, WCFC is learning ways to work with such groups in the community. Learning to work with multiple recreational groups on the community forest tenure is even more important in Smithers, because there was contention regarding the future of recreation on the community forest tenure that predates WCFC. Therefore, finding ways to accommodate recreational users is considered a big achievement by participants, even though the CFA legislation requires that management of community forests include meaningful input from such stakeholders:

*The recreational use is contentious in this area, because every group wants the other's activities excluded. For example, the skier does not want the snowmobiler anywhere close. The community forest tries to find a way that everyone can undertake their activities fairly, and it is not easy to find such solutions in the valley that everybody will buy into (Participant 14).*

Participant 1 used the following example to illustrate the contention that occurred among two forest user groups when WCFC initially invited stakeholders to the RUGMs:

*A good example: The trail people didn't want the mountain bike guys to operate on the community forest or be at the [Resource User Group] meetings. Those are difficult hurdles... That is because they know they are going to have somebody there that does not think the exact same way that they do, and that makes our [WCFC] position tougher. Their position is easier when everybody at the meeting agrees with them, and that is what every one of them wanted, right? It is easier to do things if everybody agrees with you, so the way to do this is to exclude people from the participation process.*

When I asked how these earlier contentions were resolved, he recounted:

*You invite everybody there, and if somebody does not want to come, they don't have to come. It's that simple.... They can also provide info in another way and if that is how they want it, fair enough, but I can't exclude members of the community.*

There are MOU's signed with groups such as the Smithers Community Forest Society (SCFC), Smithers Mountain Bike Association, and the Bulkley Valley Cross Country Ski Club (CCSC). With the MOUs, WCFC has pledged to incorporate in their plans ways to protect, for instance, trails of these groups and to manage the tenure in ways to enhance recreation. Three different

recreational group participants commented on the positive working relationship that has evolved between them and WCFC:

*The wood creek is where we have our trails, so they maintain the road for us, though we manage the trails. For us, this is huge because if the roads weren't there, our trails wouldn't be there. Maybe they would have been there, but it won't be the sort of trails we have... I look at the engagement between the CCSC and the CF, and I see their close relationship in there. I look at how they have managed their harvest very well and also done a bunch of hazard tree removal to the advantage of the CCSC. This shows that there is a good collaboration going on there (Participant 20).*

*We developed a master agreement with them along our ski trails, and we completely accept their mandate for the management in the area. They gave us a tenure right; our tenure right was loose prior to their coming, so they helped us to attain a much stronger tenure (Participant 21).*

*Well, they certainly are concerned when they want to put a logging block on the trails of a hiking trail, so we will talk to them about it. But generally, they say on each side of your hiking trail, we will leave an unlogged buffer of maybe 15 metres, so it protects your trails (Participant 15).*

In addition, most participants from recreational groups mentioned that they do actually impact management/management plans of WCFC as reflected in the following:

*Yes, our club has; the methods of cutting, the forms of cutting, etc. Anything that affects us, we have an influence. When they are cutting, we talk to them about the kind of finishing they should leave behind. We have talked to them about what areas they would cut, and their ability to remove dangerous trees (Participant 21).*

*We have had a couple of informal meetings, where [names of individuals withheld] were there and we showed a map of where we wanted to develop and how that is going to affect harvesting and any concerns WCFC had. In an instance, we provided them with data, which they incorporated into their plans, so they left a buffer. It seems to me that it went seamless because we sent it (names withheld), and our request was met - it made an impact just talking to them. So at the time it met our objective and theirs. Initially, we made a layout of our trail and asked if they had merchantable timber, etc. (Participant 20).*

*I have influenced some decisions about ski trails and hiking trails management. This is because we have recreation tenure and we are the ones who manage them, so I think we have had some influence there (Participant 15).*

However, Participant 15 noted that WCFC “presents their operating plans for a year about what they want to do and ask for feedback, but they don't talk about management.” One Participant

from the BV Backpackers had contrary views to what other groups had said regarding WCFC's role in promoting recreation on the community forest tenure. He was of the view that recreation does not rank highly on the agenda of WCFC, and that they (BV Backpackers) have not been invited as a group to make input into WCFC's plans. Though he concedes that "most of their (WCFC) logging area is away from the core area that our (BV Backpackers) trails are located," the group still has trails within the community forest tenure and, therefore, should be invited to also make input:

*The question of recreation and multi-use is not on top of their agenda and there is room for some friction, but the CF objectives do include promotion of recreational opportunities. I don't think the lines of communication are as established as they should be to allow for us to hear about decisions that affect recreation and the trails and make some input into it. There was logging to the entrance of one of the trails on our maps and no one told us anything about it... We were not formally approached to make inputs, but I know they have an open house every year, and that is an opportunity for us to make an input. However, no one has made the effort to approach us, and we have not made direct overtures to them other than applying for grants (Participant 19).*

I asked Participant 19 if he was aware of the RUGMs, where WCFC meets with all recreational groups to discuss their plans on the community forest tenure and he had this for an answer:

*If there is a RUGM, we have not been invited to it, and if there is something in there for recreation then they should have done more to reach to us... if there are any avenues to meet resource groups, we should be involved, because we have a large group of people.*

As well, the board of WCFC has learned that providing grants and donations to recreational groups to help assist with their activities within the community forest tenure is a good way to create goodwill among stakeholders.

*Our major point of engagement is that we have received funding from them [WCFC] on two occasions; we have been successful on each of the times we have applied for funding from them. We try to maintain our trails, which we purposely build and ensure access to (Participant 20).*

*They have managed our side of the forest in ways that benefit us. For example, financially, when they pull logs out of our area, they are inclined to give us a significant cut from that; and they are cooperative with us when designing their cutting plans, and*

*the timing of their cut, so it impacts us minimally. That is hugely valuable, since they have the right to get logs out of there (Participant 21).*

### 5.3.5 Relationship Building

By working with forest user groups, the Office of the Wet'suwet'en, and the Bulkley Valley Research Centre, board members are convinced that they are learning to build relationships with groups in the community. The relationship WCFC has built with the Cross Country Ski Club (CCSC) or the Nordic Centre was mentioned by most participants. The story goes that in one of its logging operations, WCFC logged with great care along the trails of the CCSC, and shared profits made on the sale of the logs with the club. In fact, CCSC members indicated when they wanted WCFC to log, and the sort of outcome they would like to see after harvesting was completed. WCFC and the CCSC worked together on the harvesting plans, and after the harvest CCSC members were satisfied with the work done by the organisation, and this has been the basis for a good working relationship between the two organisations. As some board members pointed out, the CCSC wants WCFC to do such harvesting again in the future. Two board members captured nicely the board's learning on relationship building with recreational groups:

*I will say some companies wouldn't go as far as we do. Like our MOU with the ski club, where we make them tell us when they want to harvest. Though it is our right to harvest and manage all these areas, we recognise the value of the visual impact to their recreation. And we give them profits in those areas also. We are walking the walk! We are committed to the fact that with a CF, it is not about harvesting trees to make the most money out of the process, but continuously profiting in the long run and benefiting other community initiatives and values as well (Participant 3).*

*Within that area [WCFC tenure], there is the Smithers Community Forest Society and, in the past, we created interpretive trails for hikers and demonstrating interpretive signs. We have been working with the mountain bikers to ensure that we are not impacting their trails on the tenure. Through our grants program, we also support these recreation groups to develop and maintain their infrastructure on the land base (Participant 2).*

Furthermore, WCFC, in collaboration with the Office of the Wet'suwet'en, has constructed a gathering structure along the McDermott Road within the forest, which can be used for picnics by community members. The shelter is located on one of the Wet'suwet'en's traditional gathering places, which is the hub of a number of trails (Participant 2). Plate 4.7 shows the shelter, which was opened in the summer of 2012.

In order to ensure that community members who visit the shelter learn about WCFC and its operations, and the collaboration between WCFC and the OW, WCFC and the Wet'suwet'en hereditary chiefs have created interpretive posters that are displayed at the shelter. These posters are also on display at the Nordic Centre [the CCSC]. Appendix II shows the three posters created. Participant 2 revealed that:

*There is a commitment to hold annual gatherings at the picnic shelter to include the Wet'suwet'en, the broader public, the directors of the WCFC, and contractors to have a gathering on the land base. So again that is one way we are trying to create interest.*

**Plate 5.3: The Silvern Gathering Shelter with the three interpretive posters.**



**Source: Anderson Assuah, 2013**

### 5.3.6 Policies

In a strategic meeting organised by WCFC in 2011, a policy subcommittee was formed to review the organisation's existing policies and to develop new ones where necessary, in order to guide strategic and/or operational decisions. The policy committee was formed because of the realisation by board members that the 'Corporation's policy framework was insufficient' (Wetzin'kwa Strategic Planning Retreat, 2011, p.10). The committee has gone on to work together to create some new policies and make revisions to others such as WCFC's Board of Directors Operating Policy. Below are two examples of responses from board members that I feel show learning by the board around policies, and the actual actions that followed the learning:

*The policy sub-committee of which I was a part identified some policy gaps and went through a process to prioritize these. We each identified one or two policies that we would take the lead to draft...we revised and/or updated a few existing policies and developed at least two new policies. One of these that I led was the development of a community involvement & communications policy - that very broadly set out some objectives and identified some ways in which we might achieve those objectives (Participant 7).*

*We reviewed the existing operations and investment policies and made changes to them. We provided procedure documents for whoever was in our Treasurer position in signing of cheques, and to be more conscientious when signing cheques. We have a good policy in place regarding how the board should interact with management (Participant 8).*

I was also informed by some board members that WCFC learned from the policies of other community forests as they helped to inform the board on the kind of policies that needed to be drafted: "We have had some policies from Sunshine Coast and Burns Lake Community Forests to compare and see what they had, so we see what they have in place" (Participant 8).

In addition to developing policies, there has been learning around WCFC's regulations to guide management of the community forest tenure. One such regulation requires contractors working on the community forest tenure to protect culturally modified trees (CMTs) when logging within the tenure. "At one meeting we were looking at the regulations for the contractors

and the atonement they would pay if they do not abide by these rules. So, we were working with the Office of the Wet'suw't'en to see what would be fair," said Participant 8. The board's discussions and learning on the impact of penalties for protecting CMTs has resulted in a decision to fine contractors who do not obey the regulation. Participant 30, a contractor, confirmed this explaining that:

*You can get a fine when you do not obey the rules. If you fall a CMT, you get a fine. It is usually negotiated after everything is done. They hire reputable contractors, so if you don't understand anything, you have to ask questions...When you log for them they keep 10% or \$10,000 as a hold back till you are done and everything is alright. Then you get it back. [During] summer time, they have a good look at what was done. So when they find something wrong, then you don't get your money back.*

Although there are provincial regulations in BC regarding protecting cultural features/heritage such as CMTs, Participant 2 noted that with WCFC, the Office of the Wet'suwet'en is certain that they will be protected unlike other licensees. He explains:

*When we have issues with them (industry) around cultural heritage destruction, it becomes a convoluted issue; the complaint has to be registered with the RCMP, and the Ministry of Forests does not have mechanisms to deal with the destruction of cultural heritage.*

In addition to WCFC-related policies, most board members also discussed learning about provincial policies and regulations and their application:

*People sometimes have some expectations that you shouldn't be logging at all, or we should be logging half as much. I was even thinking we could see things like that, but if we don't log there, someone is going to do so. The chief forester sets the volume to be taken, so it is not up to us in the community forest. And, if planting trees or doing really little things is going to make you non-compliant, you are going to get a fine. I thought it was easier for sure, but I have learned a lot from the law (Participant 10).*

*I got to understand the opportunities and constraints: what you can do as a board when making decisions, and the constraints that existed around provincial regulations when making decisions. The AAC needed to be changed every two years or so, and that was very challenging, because it influenced how much you could cut, especially when prices are low, and it is not sustainable...But that was what you had to do. I was saddened by that because things acted at the Provincial level (Participant 11).*

Learning on the board around provincial policies and policies of the organisation has been instrumental to managing the community forest tenure. Since forestry is ‘heavily’ regulated in British Columbia (Participant 7), the organisation has to stay within policies while managing the tenure. Two policies were noted in particular that influence forest management in the Bulkley Valley: The Bulkley Land and Resources Management Plan (BLRMP), and the Forest and Range Practices Act (FRPA). Respondents indicated that the contents of both policies must be adhered to in managing the forest. Developed in 1998 by the Bulkley Valley Community Resources Board, the B.V. LRMP is a unique sub-regional management plan considered the dominant document that drives natural resource management in the Bulkley Valley. The plan was signed off by three cabinet ministers of British Columbia. FRPA, on the other hand, is the provincial forest policy that guides forest management by all forest licensees.

### *5.3.7 Skill-set of Board Members*

One way the board of WCFC has learned “is through assessing ourselves as a board and looking at the gaps in terms of skills to give us an idea of who we have to recruit for that” (Participant 6). Board members indicated that the board always seeks to be diverse and to accommodate people of different professional backgrounds on the board. It is therefore not surprising that members that self-identify as an environmentalist, social worker, wood worker, forester, business person, an administrator, academic, and banker have been on the board since the inception of the organisation. To know the relative strengths of each board member, a matrix was developed and used by the board in cataloguing their characteristics. The three core and sub-areas that were assessed in the matrix are presented in Figure 4.1. As some board members told me, the matrix can be useful when recruiting new members of the public onto the board – it could be used as a reference point to recruit people with different skill-sets to complement those already on the board. “We try not to select the most qualified forestry person, but kind of looking

for the most community-minded that will bring something to the board to make us rounded. This is different from how many industrial forests will do” (Participant 4).

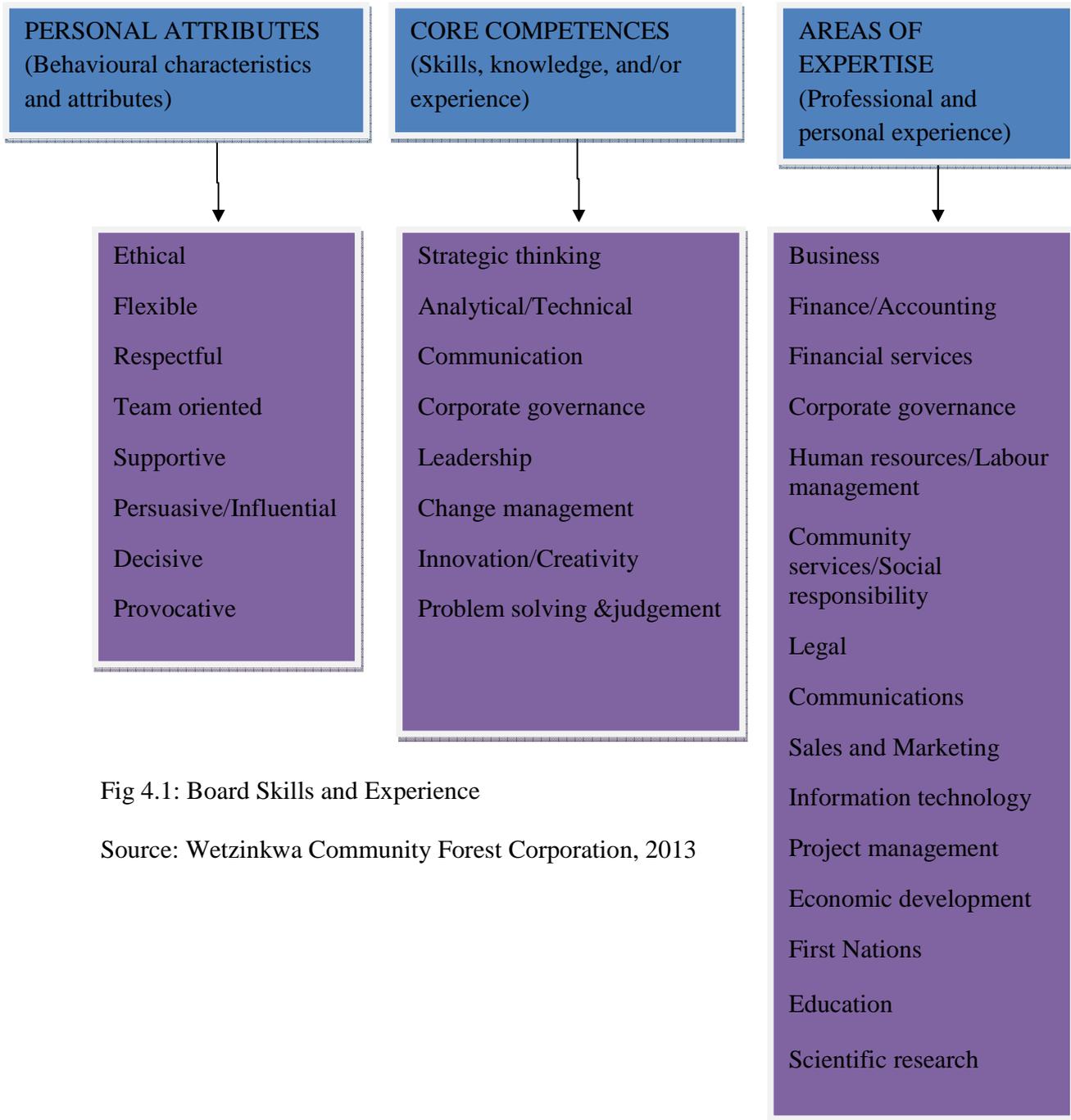


Fig 4.1: Board Skills and Experience

Source: Wetzinkwa Community Forest Corporation, 2013

### 5.3.8 Community Involvement/ Surveys

In addition to assessing their skills, board members established that they look to learn about the extent of the public's involvement, knowledge about WCFC's activities, and comments on operations through conducting surveys at events such as the Annual Trade Expo. Results from the survey were used by the board to assess its performance regarding communications with the public, the public's interest in the organisation, and also to get feedback on operations. Appendix III shows responses from the survey conducted at the 2013 Trade Expo.

The major thing that the board has taken away from the surveys, according to board members, is that there have not been a lot of negative comments on the organisation's operations on the tenure, and "to an extent there isn't huge complaining in the newspaper or controversies, so there seems to be satisfaction" (Participant 6). In the board's view, a lot more people could participate in WCFC's activities, but the board maintains that limited involvement could also mean the organisation is charting the right path and going about managing the community forest tenure well. This is how two board members explained it:

*There are people who are really interested in the CF, but not until something really goes wrong you don't hear from them, because we have not had a lot of that from this community. I know there are some problems with other community forests in BC, which has given the community members a lot to say, but I think we are doing good with WCFC because there hasn't been any opposition in what we are doing, and the community is engaged so when someone has an issue we hear about it and seek some resolution (Participant 2).*

*Through the Resource User Group, AGM, Council, etc., we have not had many negative feedback. Some may say we do a lot of clear-cutting or we harvest a lot and are philosophically against that, but I think people realise in the end that we are harvesting as sensitively as we can and targeting well, the damaged trees...The community is well-engaged. There are a lot of researchers and people who are concerned about the environment, so if we can harvest to the degree we have here in the last four years and have no negative comments, it is amazing, in my opinion. If it was some other operators who came in to do this, I think they would have no chance, because you do all that and all the profits going to the shareholders and they are seeing nothing (Participants 3).*

### 5.3.9 Forest Governance and Forestry Operations

All present and past board members agreed that the board has learned and is continuously learning about managing the community forest tenure. This learning stretches from community participation through the grants program to forest operations on the land. The following describes learning around forest governance by the board:

*We had little titbits of knowledge when we started, but now it is the broader awareness of the whole process; from planning to layout, legislation, stumpage rate, the numbers and what it takes to stay profitable. Logging, skidding, rates of mills etc, so we can stretch those dollars and once all of your basic cost is met we think about the profits (Participant 4).*

*We have incorporated many management plans to conserve and protect Wet'suwet'en values. We have also realised that there is a need for community component and awareness. I think the learning we have done at the board providing information at the trade shows and putting articles in the newspaper are efforts to bring awareness to the community at large in what we are doing (Participant 2).*

*Our discussion on the board has always been about how to manage for the community values, whether they are the OW values or trails, and it has been a learning curve for them on that. Some may have no experiences on that, but they have been able to participate and made decisions to do it, give the GM directions and he does it. So big buffer zones, trails, or whatever it is, all those have been learning for those who have no idea in forestry, and we have been able to make collective decisions. We make decisions to help enhance the management, etc. Even with people who have a forestry background, they still need to learn why we are considering certain things, and all these have helped in making decisions to make the forest well (Participant 3).*

*We learned about administration and how the job is done. I did four field trips personally when I was on the board, where we went to look at cut blocks, how they were logged, who we were dealing with and the various agreements (Participant 13).*

Not only has the board learned from its own operations and engagement with the public, but also from other community forests regarding how to set up, strategies used for efficient operations, and challenges faced by these community forests.

*I remember at a point [name of individual withheld] was tasked to find out from other community forests - how they had set out. So we were trying to learn from other models as to how things were working (Participant 11).*

*We had some of the results from Burns Lake and Prince George regarding how they had tried to deal with the pine beetle. So we had results on what worked and what did not work. We had the benefits of that, so we kind of knew that there was no need doing these little wee patches, because you go and log that wee patch and did not get all the beetles around it (Participant 5).*

*One of the things that WCFC has done in terms of being successful is looking at other CF structures and some of the positives and challenges that those CFs faced... We definitely wanted to share the resources with community groups. There have been examples of other community forests in BC that were building empires and owning certain corporations and trying to get community benefits from that... We wanted to keep things simple by encouraging there to be economic and social growth and having the grant program go to a diversity of people consistently - that was how we wanted to share profits with the community. That is also an insight looking at the size of our tenure and AAC, which is modest. We didn't want our activities to override the financial viability of the tenure over time (Participant 2).*

*I think Bill and his organisation organised materials to explain a lot of things, so people can learn if they attend the meetings. There were just 20 people at the meeting I went. If people don't care, they don't, and it's difficult to educate people if they don't want to be educated (Participant 17).*

#### **5.4 Challenges to learning**

All board members and most non-board participants noted that inadequate engagement and communication between WCFC and the public is a challenge WCFC faces in terms of the ability of the public to learn about the activities of the organisation. With limited engagement, there are not many opportunities for the public to get involved in the organisation's activities and to learn from the process. Participant 20 had this to say about the engagement between WCFC and the public:

*The greatest challenge is actually getting people to engage. The onus is on the community to ask questions and demonstrate that they are interested, and do a little more work to understand what WCFC does. But how are you going to do that? Again, the onus is on people to show up. I am involved because there is an overlap with that aspect of the community with that of the CF; I didn't actively go out there to do so. There is a sort of a gap as we move forward in the agreement between the CF and the Crown (Participant 20).*

In this regard, most participants mentioned that the WCFC has not been proactive or invested in the sorts of community education and outreach that would provide the platform for the public to learn about forestry and/or their activities, making the public more able to effectively engage in discussions about the community forest and forestry. Below are some views of participants regarding how WCFC can face this challenge:

*People keep saying the forest industry is dying, but we don't see it as such. I think they [WCFC] need to start communicating what forest health is about; what forest tenure is about; being able to demonstrate that if we do something in the right way, then there will be a future for the forest industry... They need to start educating the people about the importance of forest development (Participant 23).*

*Making a two or three-hour section for early high school and middle high school kids to go and say this is how we do it (managing the forest). And, it is not just the kids, but the parents will also be interested, and you get everybody thinking about it (Participant 14).*

*...But we can have one board meeting to gain understanding of forest management or forestry in general. We have talked about it, but we have never really made time to do it. That is a weak excuse though, but I am sure once you contact all the others they will say they have no more time (Participant 3).*

## **5.5 Summary**

The findings presented above show that all research participants (board and non-board) have learned from being involved in the decision making and management of the WCFC community forest tenure. Most participants were of the opinion that through their involvement with the organisation they have improved their knowledge on forest governance and issues related to forestry in general, such as running a forestry business and distributing benefits to members of the community. These and other learning outcomes support the popular assertion in the social learning literature that through participatory approaches to resource management, participants are likely to learn and acquire new knowledge that leads to better management outcomes (e.g., Buck et al., 2001; Pahl-Wostl & Hare, 2004).

In addition, trust and relationship building have been discussed as being important components of the social learning process (e.g., Cundill, 2010; Cundill & Rodela, 2012) and both of these were important outcomes of learning noted by participants of the study, particularly among board members. It was also found that relationship and trust building occurred among the board and WCFC employees and forest user groups and, perhaps most importantly, the ongoing relationship building among the three key stakeholders of WCFC. This was something that had not occurred in the past. The board members learned about internal policy weaknesses, which led to the creation of new policies and revision of others, in order to guide management of the CF through considering their own experience and what others had done. This is also consistent with the reflection and action components that are described in the social learning literature (e.g., Keen et al., 2005).

Some authors (e.g., Maarleveld & Dangbégnon, 1999; Keen et al., 2005; Cundill & Rodela, 2012), discuss collective action as a potential outcome of learning. This notion is also supported by the data, for example, by the attempts made to deal with the slash (waste) piles on the community forest tenure area, after the board learned about the waste piles being a major challenge to their operations and of concern to others. Thus, burning the piles, providing some of the piles to community members for heating purposes, producing fibre from the piles, and experimenting with a fence pole company in Houston were all actions taken collectively by the board to find a use for the waste.

Furthermore, the board's acceptance of the IRM initiative also reflects collective action and supports the idea that through social learning, ideas and experiences shared by individuals can be reflected on by other stakeholders and result in action (Keen et al., 2005). Board members reflected on the IRM concept put forward by a member, brought structure to it, particularly at

strategic planning meetings, and have pursued some components of the initiative, such as recovering whitebark pine. This initiative also highlights that such action requires maintenance or continued learning for success. In this case it seems that the board is having difficulty translating the outcomes of the initiative and moving forward, since the main driver behind it has left the board.

It can be said that the fence pole and NEWPRO fibre trials/experiments showed that WCFC is trying to learn through experimenting with new ways of adding value to logs instead of selling them in their raw form. However, such innovations or experiments are susceptible to unfavourable conditions that are beyond the control of the community forest (Bradshaw, 2003). For instance, the inability of NEWPRO to continue operating their machine to produce fibre resulted in the closure of the pulp mill in Kitimat and an excess supply of fibre on the market. These challenges led to negative outcomes for WCFC even though the causes were external to their influence.

The action of finding ways to reveal the strengths and weaknesses of each board member's skills and therefore the gaps in skills among the board could be important to the learning outcomes of the board – as the data above shows. Applying the board skills-matrix and appointing people to the board who think differently has the potential to encourage thoughtful discussions and deliberations on issues related to forest management. This could work in favour of effective management of the WCFC. Of course, such a decision matrix could also be used to direct outcomes in a particular way, which would likely limit learning outcomes and effective management.

The community forest literature establishes at length that managing the forest for local benefits is key to the emergence of CF as a forest management approach (e.g., Duinker et al.,

1994; Teitelbaum, 2014). Finding meaningful ways to share benefits among communities is something that the board must learn about, and WCFC is doing so through grants and donations to community organizations and forest user groups. Board members are doing their best to find ways to share the profits that are being made from logging and this effort will likely continue to mature, especially in terms of transparency and program development.

Learning to work with multiple forest users on the community forest tenure has helped WCFC lessen or mitigate conflict among forest users, as confirmed by some participants in the data presented, and between forest users and the organisation. For instance, WCFC has involved forest user groups in discussing its management and cutting plans, and made use of their input to prevent any negative impacts on such groups, as shown by the example of the CCSC described above. Having different recreational groups go about their activities on the community forest tenure without conflicts among them supports the argument by Bullock and Hanna (2008) that through community forest management, conflicts among forest user groups can likely be mitigated as they have to this point in the WCFC.

As participants from recreational groups revealed, they have been able to influence decisions taken by WCFC that would affect their operations within the community forest tenure. This is an expectation of community forestry and participatory resource management approaches in general. It is also found in the social learning literature, which suggests that when managing a resource, input from stakeholders should help guide operations and management.

Through deliberative processes, stakeholders can share their knowledge while learning amongst themselves and from the process in order to broaden their knowledge about forestry issues (Keen et al., 2005). However, this might be somewhat limited in the case of WCFC since as one participant noted, the RUGMs do not generate discussions around management, but are

organised to present “operating plans for a year about what they [WCFC] want to do and ask for feedback” (Participant 15).

One way of thinking about the social learning outcomes revealed in the data discussed above is through the single and double loop typology of learning presented in Chapter Two (e.g., Maarleveld & Dangbégnon, 1999; Pah-Wostl et al., 2008). Armitage et al. (2008) explained single loop learning as finding alternative courses of action/strategies and knowledge to solve a problem and improve outcomes. The data reveal that the WCFC board engaged in a fair amount of single loop learning through their deliberations, for example, the attempts by the board to find solutions to the slash piles and finding approaches to benefit sharing as described above. The board is still engaging in single loop learning in relation to running a successful forestry business, for example, how to reinvest profits.

The data also revealed evidence of double loop learning explained in the literature as being related to questioning underlying values, norms or beliefs of one’s actions (Pah-Wostl et al., 2008; Armitage et al., 2008). The board’s learning around the IRM is a good example: value-laden questions were asked, according to the initiative’s proponent, and people had to compare their own beliefs about what was right against what was being proposed. Why should we do things the same way? Why can we not change things a bit to improve forest health and resiliency on the land base? These questions sparked thinking around how things could be done differently on the land. Perhaps questioning the value of CMTs and other cultural features to the OW sparked learning around them, leading the board to enact regulations to deal with contractors who do not protect the trees. As the board representative of the OW explained, the Province is unable to properly resolve conflicts that occur when other licensees destroy cultural features of

the OW. In this sense, learning around the best way to protect these culturally valuable features also falls in line with double loop learning.

## CHAPTER SIX

### COLLABORATION AND SUSTAINABLE FOREST MANAGEMENT PRACTICES

#### 6.1 Introduction

As established in Chapter Two, community forestry follows a governance model that tends to be collaborative and participatory in nature. In BC, the community forest agreement acknowledges this model by recognizing the need to provide opportunities for participation by communities and First Nations in managing community forests. As a result of working with multiple forest users and organisations in managing the community forest tenure, WCFC has collaborated with others on several initiatives, which I outline in this chapter. Participants felt that many of these collaborations were attempts by, or are indicative of, the organisation's desire to manage the community forest tenure sustainably and to gain new insight into SFM practices. I further outline the challenges being faced by WCFC during the collaborative process and in achieving SFM, as described by participants.

#### 6.2 Research Collaborations

Part of the board's learning that resulted from the IRM initiative was to collaborate with researchers and fund researchers' work through grants. As such, WCFC is now looking at committing \$2,000 per year (\$500 per proposal, for a maximum of four proposals) in their budget to attract researchers to write research grant proposals. This, in the board's opinion, would provide employment for community members, in addition to being aimed at providing information on new forest management practices on the community forest tenure. The response of Participant 3 captures this collaborative plan on proposal writing:

*We talked about support for grant writing within this initiative (Integrated Resource Management Initiative); there are a lot of researchers who want to bring in grant money for research within the community, so we have up to \$2,000 per year or \$500/grant to give to research scientists to write grants, and say 'write a grant application to support*

*the community somehow'. Ultimately, we are trying to bring money into the community through these grants, and it is an economic model because we would put people to work for three months or whatever depending on the grant. It can also benefit our community forest by targeting the grant and research work to do something that will help us in our long-term management... In our opinion, we do not want to get money out there for research that will not be of any benefit to us - we are thinking about it as a business (Participant 3).*

As introduced in Chapter Two, WCFC is collaborating with College of New Caledonia and the North West Community College on climate change research in the community forest tenure. Participant 3 explained that the initiative started when the head of the North West Community College approached the chair and general manager that some researchers from the College of New Caledonia were looking for community forest to carry out a research. The proposed research was an experiment focused on planting western larch and Douglas fir for climate change adaptation. As climate change presents uncertainty in forest management, this initiative would seem to support the assertion that through collaborative management, stakeholders collectively recognise the inherent complexities to managing a resource and look for ways to deal with such uncertainties (Keen et al., 2005; Berkes, 2009).

WCFC selected sites for the experiment, and the College of New Caledonia installed the necessary equipment in preparation for planting of the two tree types in 2014 (WCFC End Year Summary, 2012-2013). On June 12, 2014, a post on WCFC's Facebook page showed that western larch, Douglas fir, and cedar (Plate 4.8) had been planted on the sites provided for the research. According to Participant 1, the climate will be monitored, and repetitive re-measurements taken of various characteristics on the site.

Another research collaboration noted was the recovery of whitebark pine, for which WCFC collaborated with a researcher from the Bulkley Valley. During my first forest tour, I was told that whitebark pine is a keystone species for wildlife (e.g., moose), because of its large seeds

(Notes from forest tour). The community forest is partly supporting the recovery of the whitebark pine in order to enhance the population of moose, a species of concern on the community forest tenure.

**Plate 6.1: Climate Change Adaptation Species**



Douglas fir

Cedar (*Thuja plicata* Don ex D. Don)

Western larch

Source: Wetzinkwa Community Forest Corporation, 2014

Excited by the collaboration and the positive image it creates for WCFC in the community, Participant 3 said:

*“If we can help an organisation in our community to meet its goals without any harm, then why not? This collaboration is a good fit; there aren't any big risks in doing that. It makes us look collaborative, and also that there is something positive in our community and we supported it”.*

Emphasising the benefits that should accrue to WCFC regarding collaboration on this research, Participant 1, for instance, mentioned that WCFC would learn from the outcome of the experiment and use the knowledge gained to improve forest management. He said:

*We collaborated with the local college and CNC to do research in the community forest, so they know their research is not going to be logged...One of the main components of that initiative is that it has to be an applied research; if you do this, this will be the outcome. We want something that would impact our management (Participant 1).*

The description of the expected benefits of the collaboration to WCFC underscores the board's willingness to learn about new forest management approaches for the future. Participant 15 also

suggested that there could be a stronger partnership between WCFC and the BVRC, and between WCFC and the Smithers Community Forest Society, on research to enhance learning among the public.

*I have talked also about doing forestry research in the CF; they have been somewhat open, but not as open as I would have hoped... There could be research involved. There is the BV Research Centre and board, and I think they should be more involved with the community forest. Or, at least communicate back and forth with them. Research is about learning, and if there is a research project going on people can come and learn (Participant 15).*

### **6.3 Collaborating with the Office of the Wet'suwet'en First Nation**

#### **6.3.1 Protecting Wet'suwet'en Cultural Values**

Collaborating with the Office of the Wet'suwet'en in managing the community forest tenure has resulted in an arrangement where the OW can make changes in operational plans before they are implemented. This is a check against the possible destruction of Wet'suwet'en cultural values, medicinal plants, traditional trail systems, etc.

*To a certain extent, the Wet'suwet'en is in a unique position in that the General Manager develops the cutting permits and we have a unique arrangement in terms of the community forest; we have a referral coordinator that gets to see the operational plans of the community forest before they are formalised, and gets to make changes... The referral coordinator, through the OW, provides a letter of support to the plans once everything is okay (Participant 2).*

When asked for any evidence that might show how input from the OW is actually incorporated in operational plans, participants offered responses such as the following:

*There have been situations where the board and general manager, without any challenges, have dropped some of these cutting permits in significant areas for the Wet'suwet'en. This is a huge difference working with a major licensee, where our concerns are heard and managed for. There are issues we present and these are managed for on the land base... We had one of the cutting permits withdrawn completely from the plans; there was some valuable timber stands that the GM dropped because of the Wet'suwet'en values (Participant 2).*

*...They (the Wet'suwet'en) are into picking berries and those kind of things, and in the CF there are certain areas that those things grow. They come forward and say those areas we are planning to log have a good concentration of mushroom, so is there something we can do not to damage it (Participant 5).*

*The Wet'suwet'en is participating in forest tenure management on their territory, and they have direct impact on what is happening... They wanted a big buffer for goat habitat and they have it, a bigger buffer around streams and they have that. They wanted to propagate vaccinium and we embarked on doing that, so there is a lot of an advantage here (Participant 1).*

Participant 2 gave a detailed description of how WCFC and the Wet'suwet'en have shared information and worked together to protect cultural values on the tenure:

*One other thing we have done is to GPS our trail system, and if there is forestry activities around the trail system, the CF ensures that when the plantation is planted, our trail is not going to be reforested, so when the next forest comes up, the trail network will still be functional, and that is a lot different from the normal licensee, who plant the whole structure and the whole trail system is lost. Salmon are important to the OW and there is a lot in the tenure area, and we manage it not only in relation to provincial requirements, but with additional free zones and buffers around them... Another example is that there are culturally modified trees that we take time to GPS, so they are protected on the land base after forest activities- that is another difference with other major licensees who would not take the same precaution like the community forest will do...*

Some participants expressed delight with WCFC's efforts at protecting and managing for Wet'suwet'en cultural values on the land. Two of them noted:

*We have been trying to promote the conservation and protection of our cultural heritage resources and valued ecosystem layers, but with the major licensees we don't get the same results as we have with the CF (Participant 2).*

*For the Wet'suwet'en, we did quite an extensive training from the beginning and that is also a big part of it, sharing that information. For us being able to share and trust one another with that information, and if the information we share is actually going to be used, because we are not there as a token stakeholder. And we have seen that; they have demonstrated that in the forest practices (Participant 23).*

In addition, some indicated that collaboration with the OW has led to a more careful and precautionary approach to harvesting in areas that are good habitats for wildlife. Two participants explained how the involvement of the Wet'suwet'en has contributed to sustainably managing for wildlife on the community forest tenure:

*...Not targeting forests that are adjacent to wetlands, because some riparian conditions are good for protecting wildlife habitat; and the Wet'suwet'en shared valued ecosystem information, and we (Wet'suwet'en) have created a layer that represents limiting moose habitat, which may involve some of the areas for where their forest cover is conducive ...*

*There aren't intensive forest activities in the areas such as along the Copper River (Participant 2).*

*Other than following the rules, we have funded some projects like moose enhancement within basically where they brush the bunch of the willow to enhance moose browsing. And, definitely working with the Office of the Wet'suwet'en on the trail network. It is the game trails; they were mapped and made aware of, and all steps and precautions were taken to make sure that they (the trails) are maintained (Participant 4).*

Some participants mentioned that the collaboration with the OW and efforts at preserving their values on the land by WCFC signal that SFM practices are being applied on the land.

*In terms of preserving some of Wet'suwet'en values and interests on the land base, that is making practices sustainable. For the commercial side of managing the forest, you have to look at it for a longer period, because we may not be able to harvest as many trees in the future (Participant 2).*

*The representative from the OW was involved to ensure that things that we were going to do were sustainable (Participant 12).*

#### **Plate 6.2: Culturally Modified Trees Preserved on the Community Forest Tenure**



Source: Anderson Assuah, 2013



Source: WCFC, 2013

During interviews some participants revealed that the board is dedicated to going the extra mile and taking extra precaution in managing the forest to ensure satisfaction among members of the community and, in this instance, ensuring satisfaction among the Wet'suwet'en. Participant 4 captures this vision of the board:

*Regulations exist on all these (wildlife, watershed, etc.), but it is the board's desire to go over and above them. The regulations were put there to protect the forest ultimately, but the best we can do leaves a lot - a lot more can be done on the (tenure) area than regulations demand, so that is what we are doing. The board is keen to do whatever we can; to go over and above, provided we are profitable and recognising that is the minimum (Participant 4).*

Speaking about the collaboration between the OW and the two municipalities in managing the community forest, Participant 23 explained how the Wet'suwet'en hereditary chiefs feel about the OW's involvement with the process:

*..they (hereditary chiefs) have seen the devastations around the territories, and they have felt that they needed to be part of the decision making so that these travesties do not happen anymore, and being able to determine what is acceptable in harvesting and creating forest health. So that has always been there for so many years, and the chiefs' accessibility to the territory from past and present forest practices and the amount of access people have to the territories at large. So bringing all these big issues into a small community forest has been a tremendous feat, I believe.*

I asked if it was safe to assume that the hereditary chiefs were happy with whatever was going on, and she responded, "I wouldn't say happy but comfortable, because being happy will mean no disturbance."

### *6.3.2 Collaboration in the Management of Non-Timber Forest Values*

Community forestry is perceived as having the potential to manage for multiple forest values to the benefit of communities (Teitelbaum, 2014). Therefore managing for non-timber forest products (NTFPs) such as mushrooms, berries, among others, is an important aspect of community forest management. As a result of the ongoing collaboration between WCFC and the OW, the former has supported the latter (who maintain the rights to harvest NTFPs) to propagate huckleberries and blueberries. Even though I was told by Participant 1 that "At this time, it is not part of our license to manage that [NTFPs]," WCFC supported the Wet'suwet'en with \$15,000 to assist in research regarding berry propagation (WCFC End Year Summary, 2009-2010). The research involved growing berries in a greenhouse and assessing their survival rates. If the

berries were successful, then they would be planted on the land base. However, the trial did not yield the desired results to allow planting to commence:

*It is tricky to propagate huckleberries; our intent was that we tried to develop some shoots and seedlings and put them back in the land base – now we are going through a trial and error process of doing it... Last year we had 50 percent survival rate, and this year I haven't gotten the results. However, the longer the huckleberries stay in the greenhouse, the lower its survival rate. One thing we are cognisant of is that for a huckleberry to survive it has to be in the plant community they came from; they can't just be in the greenhouse (Participant 2).*

As one past board member mentioned, supporting the OW in managing for NTFPs, including medicinal plants, started when logging began on the community forest tenure area. He explained:

*A unique thing was that the Wet'suwet'en were really interested in knowing what was happening on the ground, after we have logged an area off, because their medicines were found on the land. We created a fund that went in to support them in identifying their native products they take from the ground...The way the board works as a unit and involving the FN in the process, setting aside money for the FN to investigate and determine what the undergrowth is after logging, struck me as unique (Participant 13).*

According to Participant 2, WCFC has been helpful in surveying areas that are likely to enhance the growth of berries in the community forest tenure:

*The WCFC hired a Wet'suwt'en local contractor to do some surveys, where there are productive berry stands and regenerating forests. And there were different options put forward on the table on how you can do certain silvicultural practices that would enhance berry production. Since the community forest is pretty young, a lot of plantations are not at that point that need silviculture treatment, but we have put money aside and we are investing in looking at different options. When it is time to do some silviculture treatments, we can do some practices that are conducive to enhancing berry production.*

In addition, WCFC board members stated that there was a conscious effort to avoid harvesting in areas considered to be important habitats for NTFPs:

*Through the Wet'suwet'en, the community forest has been really open as far as preserving traditional berry or mushroom areas. So there have been areas where maybe the GM says we will log in here and the board member from the Wet'suwet'en says this is our traditional mushroom area, so we just leave it; we don't go in or do something around it (Participant 5).*

Even though there are efforts at managing for NTFPs, they have not been vigorously pursued by WCFC. This is partly because neither WCFC nor the Wet'suwet'en has pushed to commercialise the products, and managing NTFPs is not a high priority for WCFC at this stage. Two participants further explained:

*...The Wet'suwet'en have provided a number of valued ecosystem layers that show where there were NTFPs based on a predicted ecosystem mapping database where our medicinal plants would be, food plants would be. The CF has been pretty respectful of this. The Aboriginal people including the Wet'suwet'en do maintain the right to these resources, and we haven't actually made provisions of making these economically viable resources for the community at large. There is a certain natural respect for the cultural uses of these resources, so there hasn't been anything where marketing has been put towards developing these ecosystems [resources] (Participant 2).*

*At this time it [NTFPs] is not part of our licence, the authority to manage that... In terms of botanicals, that is not part of our licence... If we were to pursue those things we might come into conflict with the OW in their traditional gathering sites and interests there, and so we want to really approach that carefully... We will only try and expand our economic value generation with agreement from the OW because they have medicinal and cultural harvesting practices and we don't want to conflict with that. It [NTFPs] is something I would want us to pursue, but it hasn't been the highest priority because this business has lasted just six years; we need to deal with pine beetle and get ourselves organised... I think there are opportunities to diversify there. We did spend some money and gave the OW grant money to do some berry propagation/trial - we have financially supported that - but we have not aggressively pursued that. And somewhat we have strategically made the decision to hold off - it is not a super high priority until we can mesh up well with the Wet'suwet'en to look at something on a joint basis (Participant 3).*

Additional reasons that could account for the minimal efforts at managing NTFPs are that the CFA does not automatically transfer rights to communities to access forest resources such as NTFPs (McIlveen & Bradshaw (2005/2006), nor does it grant community forests exclusive rights to harvest NTFPs (Davis, 2011). In this case, permission would have to be sought from the province as part of the forest management licence agreement.

Participant 2 provided the following comment on what he thinks has contributed to the success of the collaboration between the WCFC and the OW:

*I think what is working for us is that the municipalities wanted to create a CF with the OW, so the involvement of the First Nation was not an after-thought, and we [the OW] weren't sold a predetermined project or methods of operation or management. It was collaboration and a lot of up-front discussion that was done. Within that also, it enhanced the relationship between the municipalities and the Wet'suwet'en, and it created a collaborative respectful climate for community-at-large board members to come in and work together. So I think the CF was being solution-oriented, not hanging up on issues or being positional, but always finding innovative ways of moving forward. I think that is one of the ingredients to our successes – the respect and collaboration we have had.*

#### **6.4 Collaborating to Manage Watersheds and Drainage**

There has been a collaborative effort by WCFC, the Ministry of Forests, and private woodlot owners on managing drainage that runs through the community forest. This collaborative effort was targeted at sustainably managing drainage by, for instance, reducing the level of harvest around key drainage areas. Participant 3 provided further details of this collaboration, and pointed out that participating in the process indicates WCFC's commitment to work on projects that will enhance managing resources on the tenure:

*There is a place called Pine Creek, where there is a hydrological concern because of its stability. It is a lacustrine type soil, fine textured; there is evidence of historic mass wasting and swamping in the area. The GM of WCFC worked with a Technical Working Group in the Ministry of Environment, West Fraser Mill, and my woodlot in that area and we said 'how much harvest should we set as a maximum threshold to protect the watershed from instability?' So we started establishing thresholds for harvesting different elevations, which the hydrologists told us were important. You have to put a cap on low, middle, and high elevations to manage the spring melt rate, so there is enough cover to preserve snow long enough into the season in order not to have a much damping of snow in that area, creating an erosion impact. We participate in some of these (Participant 3).*

The OW, I am told, made requests to WCFC to leave large buffer areas around watersheds and riparian areas, to which WCFC has adhered.

To Participant 15, a better way to manage for watersheds is through selective logging on the community forest tenure: "Well, they are limiting their clear-cut areas in their watershed areas...But you see, once you selectively log, no effect. If you did partial harvesting, you don't

need to worry about watershed areas.”

## **6.5 Collaboration Challenges**

In spite of the collaborative potential of community forestry as discussed in the literature, authors also document challenges that stakeholders/communities might face in a collaborative setting and through community forest management (e.g., Beckley, 1998; Bradshaw, 2003). With this knowledge in mind, I explored these possible challenges through my interviews.

### *6.5.1 Initial Challenges*

Pioneers of WCFC and past board members explained that the organization did not face major challenges when the idea was conceived to start a community forest. They attribute this to the organisation’s approach to getting input and support from the public right from the outset. For instance, there were discussions and presentations to the thirteen Wet’suwet’en hereditary chiefs regarding the initiative, to seek their involvement in the process. In addition, there were about 50 letters sent to potential stakeholders such as trappers, private land owners and woodlot owners, who were in and around the community forest tenure area (Participant 28). Three open houses were also held in Smithers, Telkwa, and Moricetown (the communities of all three main stakeholders) to explain to the public the essence of the community forest and to garner their input.

These efforts notwithstanding, there were challenges in agreeing to an approach to managing the tenure. One community-at-large board member resigned from the board over this because he disagreed with the approach to forest management that the newly formed organisation was going to embrace. As explained by a past board member:

*I don’t remember anything negative. Honestly, nothing is negative unless you decide to log. One community-at-large board member quit when he realised that the company was going to log, because he didn’t want to be involved with the logging - that is when we went to the strategic meeting (at the onset). The person realised that there was going to*

*be harvesting, so graciously resigned. Some of the thoughts at the strategic meeting were if we were going to harvest everything very fast or not to harvest at all. The decision was to definitely harvest – manage the resource, and consider all other values (Participant 12).*

When I approached this person who resigned, he explained that at the outset WCFC could have chosen to be a model for ecosystem-based management, looking into the long term and considering other values on the land base, but chose to go with the industrial forest model of logging and focusing on profits. He therefore tendered in a letter of resignation, because the committee that was championing this vision was side-stepped and decisions made were not in line with how the organisation had been initially conceived:

*I was a board director when it started in 2005/2006, but I resigned because of how decisions were made. This is because originally, we decided to set-up a company, of which the Town of Smithers, the Village of Telkwa, and the Office of the Wet'suwet'en would eventually be the shareholders, but there would be a shareholders' agreement regarding what values should be managed for, how they would be managed, etc. With this, we could modify operations from what industry does maximising profits. There was a committee that worked towards this, but there was a decision made outside of this committee that we wouldn't go in this direction any more (Participant 24).*

## 6.5.2 Capacity Challenges

### 6.5.2.1 Finance

Start-up capital was a major challenge to getting the WCFC partners working together according to Participant 3, who was also one of the pioneers of the organisation. He indicated that it was estimated that \$100,000 - \$150,000 was required to pay for initial administrative costs such as submitting the CFA application, cutting permits and environmental assessments. As a result, the steering committee that was set up to oversee the activities of the organisation approached the local mill, Pacific Inland Resources (a West Fraser Timber Company), for some money but was unsuccessful. The company did not see a community forest as part of their mandate and did not want to get involved with it. Also, the banks were not ready to risk money for an organisation without any financial record or business experience.

The committee set up to oversee the organisation then approached Northern Engineered Wood Products (NEWPRO) and was able to negotiate a loan arrangement with them for \$150,000 at a 2% interest rate. There was, however, a reciprocal arrangement that WCFC would negotiate on behalf of NEWPRO to get constant supply of fibre from the sale of the community forest logs to the local mill. Two participants offered the following in this regard:

*I think there was some kind of agreement with NEWPRO to give that company some dedicated volume of wood. But that would go to the mill [PIR], since NEWPRO does not deal directly with the logs. However, through the mill, they could get the sawdust as their raw material. So they were putting some kind of money into the whole thing. I asked questions about that, but no one actually produced an agreement; however, there was clearly an agreement, be it a handshake or something (Participant 24).*

*Before we could execute the loan, the owner [of NEWPRO] passed away, and in his estate gave \$150,000 to the town, which he said was to be used for forestry activities. And the town made it available to us at the same conditions we arranged with NEWPRO initially. So we (WCFC) took advantage of that, got the money, and paid it back in the fourth year, though it was a five-year term (Participant 3).*

#### 6.5.2.2 Time Constraints

With a volunteer board of directors managing the community forest licence, the amount of time they dedicate to discussion and deliberation about the plans of the organisation could be critical to its success. It is probably no surprise that board members mentioned time as a major challenge to their participation on the board.

*For me, it is about the amount of time everything takes. When I got involved I had visions of projects, possibilities and excitement around everything that I could do or bring on board, and I think family and work and reality sets in. It takes a lot of time and energy to make things happen...One of the biggest lessons was that 'Holy, it's a lot more than I thought it would be.' And some disappointments, too, in that the reason I got involved was because I was really passionate and I had all these ideas to go forward, and I realise that as a director you are kind of limited, because you are a volunteer; my time is limited, the potential is limited (Participant 4).*

*I think scheduling a time that we all can be together as a board. We do our best though and the meetings are consistent. Part of it is a volunteer position, so balancing that with people's jobs is important. But when a lot of issues come up, people would be happy to make time to deal with them – we haven't had a lot of issues though (Participant 2).*

*...This is a volunteer board that puts in a lot of time to give direction to the CF. So wanting them to put in extra hours to do all other kinds of stuff would be difficult. That is the big question: Is there adequate time for us to do something else? (Participant 1).*

This last quote in particular points to the difficulties time constraints can pose in doing more than the minimum in terms of the board being involved in the management of the forest and having time to collaborate with others on new issues. Time constraints are preventing the board from meeting to discuss issues as often as they would like to.

### *6.5.3 Public Outreach and Communication*

As established in Chapter Four, most participants noted that in their view, the public is apathetic about collaborating with the WCFC on managing the tenure. Like the board, all other participants attributed this apathy to a lack of public outreach, or communication gaps between the organisation and the public, and mentioned it as the fundamental challenge to the limited collaboration. The board particularly sees this as its major challenge and believes there needs to be innovative approaches to bridging this gap. Some board members shared their views on the issue:

*...But for the grassroots constant participation, there hasn't been a lot and we have tried ...we do what we can, but we have not been really creative in how to get more people who have issues to show up. There have been very few people who have been involved, and those who feel we are logging along their properties get involved. It has actually been challenging to get consistent and thoughtful input as to both operational levels and, in the long-term, what we will do with the benefits...I think people are busy and until there is something wrong, they are not willing to participate even in things that will impact them (Participant 4).*

*We could do better in terms of structuring open houses more frequently and in a targeted way to engage the community more. And that is part of our mandate - though it is not more of community education, but a way to get feedback and input into what we are doing. You are limited by budget and time, because the board may not want to go out there once a quarter to do such because it is a lot of time, but it is really no excuse. As a CF, I think we should fund more of those things. I will say it is a shortcoming of our board policies right now, because we can do better...I don't think we have done a great job communicating with the public, but I think there are people who see the opportunity for sharing in our profits. We have funded about 50 organisations, so that in itself raises awareness in the organisation (Participant 3).*

The OW representative ranked interest of the Wet'suwet'en in getting involved with WCFC from low to moderate, and attributed this ranking to more pressing issues in other sectors of the economy, such as mining and exploration, that have occupied their attention. He said:

*For instance, now there is a proposed project of having pipeline go through our territory. Since there has been an increase in activities on our territory, there are more concerns towards the effect of these proposed projects, so unfortunately forestry has taken a back seat in the area; other projects have taken the lead.*

One community participant commented on the community forest's lack of outreach and how that affected him:

*Well, they don't do a lot of outreach...One of the disappointments I had was nobody came to see me and in a way that they share that responsibility, because I live at the edge of their harvest area, but nobody came to me. My first interaction with them came from their flagging, and then I knew they were in my area. So, I had to contact them because the impact is coming. That was a slight disappointment, because they were not proactive in getting in touch with somebody like me who lives in the area they were cutting. Nobody came to ask me anything (Participant 16).*

#### 6.5.4 Conflict

As some authors (e.g., Ansell & Gash, 2008; Cheng & Sturtevant, 2012) have noted that the plurality of interests represented by stakeholders in a collaborative management setting could serve as a source of conflict, and can impact effective collaboration among stakeholders, I delved into the issue of conflict with participants.

##### 6.5.4.1 Among Board Members

All current board members stated that there has not been conflict among them as they deliberate and make decisions about the tenure and work to agreeable solutions, albeit they do not always agree. Board members feel fortunate in this regard, as revealed by the fact that community interest remains supreme in their deliberations:

*We have been fortunate to have good people on the board to work with and collaborate on ideas. There have been times that we do not agree, but there has been no animosity so far, or a lot of tensions on the board, so it has been fun to participate on the board (Participant 4).*

*I haven't seen anything like that, we have been really lucky! I don't know if it is the diversity or the interest of people being on the board, but we have not had any meetings sabotaged (Participant 2).*

*The dedication of the board, and in my time, there has been a few tensions here and there, but overall, I think it has been a highly functioning board and under (name withheld) leadership. I think it's partly set the tone under which the board operates the norms and values (Participant 7).*

Board members further pointed out that there could be conflict of interest among members of the board because of their possible association with other organisations in the community and, therefore, there are policy and guidelines on conflict of interest.

*There hasn't been any conflicts among directors, but being a small community, a board member may be part of a group and therefore would have to abstain themselves from voting from a certain topic because it might conflict with interests of the other group. So there are mechanisms to deal with such things. In our recruiting process, we check backgrounds to find out where people work and the groups that they belong to. So if anything in terms of grants distribution comes up, that board member would decline from voting. But there are some instances that the rest of the board wants to listen to their perspective to hear what they have to say (Participant 2).*

*The major conflicts happen on the ground with operations, but not on the board. People do not have to take things personally on the board. When there is a conflict of interest, it is discussed on the board and people stay behind (Participant 6).*

One board member told me she had to declare her conflict of interest status when discussions were on-going about specific organisations in which profits were to be invested. The Conflict of Interest and Policy and Guidelines, *Policy #2002*, requires WCFC's board members, staff, and employees to declare their status in honesty of the organisation. However, I was not informed of any conflict resolution or mitigation strategies that the board has in place to manage any future conflicts.

#### 6.5.4.2 Among Key Stakeholders

Some participants mentioned that there has not been any conflict between the three stakeholders. However, board members noted that there was an issue that could have been a

recipe for conflict between the town of Smithers and the village of Telkwa, when the former demanded an amount of money from WCFC to invest in building an arena for the town. The village of Telkwa objected to that request.

*We had something with Smithers, where they wanted to take a lot of money from the WCFC funds to build the arena. They said 'we are partners and we should be able to take the amount that we want to build this arena' and Telkwa spoke up and said not so fast. So, I don't know if there is an expectation that there is a lot of money, and if there will be pressure as [financial] resources [from harvesting] dwindle (Participant 9).*

One participant from the village of Telkwa commented on the issue as follows:

*Back up to about a year, the CF had more than 2 million sitting in the bank. And I had a meeting with Smithers, and I proposed we ask them for a larger dividend. Smithers almost screwed my head off, "You keep your hands off that money and mind your business"! That is where that ended, and in a few months later they were lobbying to get \$600,000 for the arena and they wanted us, Telkwa, to support it. We wouldn't support it. I wasn't against them getting \$600,000 provided the Wet'suwet'en and Telkwa were each getting \$600,000. Arbitrarily giving Smithers alone \$600,000 is not right, because they are only a third owner of the community forest... We gave [the Telkwa representative] instruction that we aren't going to consider it, and I don't think it went further than that (Participant 29).*

The board's stance on the issue was to explain to both parties that it was not possible to dole out that amount of money for the project, and this is how the situation was resolved.

#### 6.5.4.3 Between the Board and Shareholders

Board members indicated there have not been conflicts between them and the shareholders, but three board members raised concerns that Telkwa and Smithers are most interested in the profits made from logging activities, and their keenness could be a potential source of future conflict between the shareholders and the board. Two board members explained the situation:

*There have been differences in opinions regarding how our profits will be used. They have had some discussions with us and some Councillors have projects in their areas that they want us to use the money for. We have told them it is the board's decision to decide how money is going to be used; we have taken your advice, but no guarantees. [If you do not like it, then you can employ yourselves]. Those will be the major challenge in future: strong voices from Council as to how our monies should be used. So far, I can't say there*

*are any major challenges; we have been left to do what we want to do. They have been very respectful for this wide community support (Participant 3).*

*What we have done in the past is, we have deposited some of the profits in a legacy fund to make it continue forever and ever. The politicians have seen that there is some money there, so of course they want to have access to that. And we are like: No, you are not going to have access to that! Not that we have full authority that way, but we make sure that things are looked after the way they should be looked after (Participant 5).*

My interview with Participant 29 partly confirmed the interest both Telkwa and Smithers have in the profits being made by the organisation:

*I think they got 2.5 million sitting there, and I kept thinking it will be nice to get our hands on some of that money, because we are the owners. Telkwa and Smithers need a lot of things, but after I learned about what that [legacy fund] was all about, I am quite satisfied to let the funds build to the level they want, and we will start distributing funds that come in year to year.*

#### 6.5.4.4 Between the Board and Forest Users

Almost all participants were of the opinion that there has not been conflict between WCFC and forest users in the community forest tenure. Some referenced the MOU with forest user groups as managing expectations and as a way of dealing with any potential conflicts that might arise. Two participants explained:

*I would say it has been good; there haven't been any major conflicts. The general public makes input, and I haven't heard any backlash. That area was chosen because it was controversial, so the fact that they have been in there logging pine-infested wood and the CCSC have developed a lot of trails [biathlon - for both shooting and skiing], the naturalists haven't extended that much, so it seems to be that everybody has their interest looked after. They also put their plans out there because the FSP, for instance, has to be advertised for the public to review it. There weren't much community input when I reviewed their FSP, because the process was solid and therefore unless there is a big problem it moves on like that (Participant 23).*

*We haven't had any real conflicts, which is a result of communication. Initially we could have had a conflict with them regarding the illegal trail we put in there. The conflicts we have to resolve is the road and the residents that live in the area, but not with WCFC. They have been supportive in doing things like signage (Participant 20).*

However, Participant 14 noted that some community members residing close to the community forest tenure were at odds with logging in that part of the forest. He explained that:

*Some of the people that live on the town edge of the CF are strongly concerned about what kind of activities happens in the forest. In my opinion, their interests are not necessarily the best interest of the CF. I think it is a not in my back yard [NIMBY] thing. They don't want to hear the sound of the logging machines, or visual, or generally they do not want trees cut down. That is the only one I can think about as a conflict (Participant 14).*

#### 6.5.4.5 Among Recreational Groups

Participant 1 explained that there was an initial challenge getting all interested groups that operate on the community tenure to attend RUGMs to discuss the organisation's plans, because of disagreements and seeming conflicts between some recreational groups.

*In fact, in starting the RUGM, there were a lot of things such as 'we are not going to be there, because ATVers are there.' This is because such people didn't want to be at a meeting, where machine-powered resource groups were available. They didn't agree with them. It was difficult getting people to come to the meetings. Another good example was that the trail people didn't want the mountain bikers to operate in the CF. Those were difficult hurdles, and they didn't want to be there because they didn't want anyone challenging them, so that their positions are stronger and agreed to, by all others. Trying to exclude opposing opinions, right? You invite everybody there and if somebody does not want to come, they wouldn't be there. It is that simple! They can decide not to be there, but provide input in another means if they want.*

## 6.6 Implementing SFM Practices

As established in Chapter Two, there are many forest values that are measured under BC's and Canada's C&I framework for measuring SFM. Owing to this, I listed some specific markers identified in the literature relating to ecological sustainability to see if I could observe these indicators on the community forest tenure. I broadly considered activities related to wildlife, riparian/watersheds, soil, forest over-and-under story, reforestation, fire management, and management for biodiversity, which were common markers I identified while reviewing the literature (see: CCFM, 2005; BC MFML, 2010; NRC, 2012). While I recognise the existence of both economic and social/cultural sustainability components in the data presented thus far, I specifically focused on participants' perception and my observations regarding how the WCFC is

implementing these and other markers. In doing so, I also watched for evidence of collaboration and/or learning related to these SFM indicators.

### 6.6.1 Biodiversity

Managing for biodiversity is one of many practices undertaken by WCFC, although the organisation is currently pre-occupied with harvesting pine-infested wood. When I asked how WCFC manages for biodiversity, all participants mentioned that WCFC plants different tree species that are appropriate to the ecosystem of the Bulkley Valley, that is pine (*Pinus banksiana* Lamb), spruce (*Picea abies*), and balsam fir (or sub-alpine) (*Abies balsamea* (L.) Mill). Some participants shared specific information on biodiversity, which along with the data in the chapters above help to show how both collaboration and learning have impacted this marker:

*We try to plant the ranges of species ecologically suited to this site, and that is defined by government, but we will also leave commercial and non-commercial size trees, where the stand structure exists before we start harvesting. Even in this pine salvaging areas, we still leave as much structure as possible (Participant 3).*

*It [biodiversity] is a funny one, because we are in the middle of mountain pine beetle. We are harvesting for the pine-infested wood and that allows us to do a couple of things. It allows us to make sure that we get those trees off and new once growing up, and we are participating in a broader planting of some species that includes species that would adapt to climate change, but are not found in our area. That includes whitebark pine, which is suffering massively (Participant 1).*

In its collaboration with WCFC, the OW is contributing to managing for biodiversity on the community forest tenure by providing data on rare species that need to be protected:

*...With biodiversity, there has been information that the OW has brought forward and is contributing in managing that. The OW has done an analysis on their land base and determined ecosystems that are rare. The province has these, but that is throughout the whole province. We [the OW] have created one that is unique to this area and it is shared with the general manager to ensure that we are not focusing on harvesting activities in areas with such rare species or medicinal plants (Participant 2).*

Planting western larch, Douglas fir and cedar (all non-target tree species) as part of the IRM initiative further adds to biodiversity management activities of the WCFC and, as earlier explained, this is a collaborative experiment on the community forest tenure.

However, one community participant was of the view that WCFC did not have a commitment to manage biodiversity beyond what is required by law and, in this case, beyond what is stipulated in the Bulkley Valley Land and Resource Management Plan:

*The LRMP provides minimum protections and so (a) are the minimum protections sufficient? I don't know; (b) they could provide protections greater than what is said in the LRMP if they wanted to. I don't think there is any inclination to do anything more than the LRMP minimum objectives. At one of the meetings about pine beetle infestation and logging I attended, I was told 'we are not going to do more than what the LRMP requires' (Participant 19).*

#### 6.6.2 Wildlife Management

Participant responses regarding how WCFC is managing for wildlife included comments about adhering to both the LRMP and FRPA rules on wildlife management, which required learning about these regulations, as noted above; enhancing willow growth for wildlife (e.g., for moose browsing); and deactivating winter roads to reduce access to wildlife hunting, which is a result of learning from forestry operations.

*We [WCFC] have done some cutting of willows in the area to enhance willow growth. So the GM and lay-out crew are very careful in determining where there is road access. There are some provisions to preserve some deciduous and browse species within the area. One of the things is access, because once there is access in a lot of these areas, it encourages overhunting. Since we are harvesting in the winter, some of these winter roads have been deactivated for access in the summer and fall when the hunting pressure would be out there (Participant 2).*

*I have to tell you that there is an area that would be good for moose habitat, and they [WCFC] have deactivated the logging road to allow the moose to move through to the river, where they can feed on the willow. That is very good! I think they did that on purpose and that will take care of wildlife (Participant 17).*

*Yes, like I said they are utilising different logging practices and leaving patches behind for the animals. On the surface it is a good idea, but whether they are utilising some*

*wildlife surveys to know places where they should harvest or not, I am not aware of that (Participant 18).*

Participant 24 was not sure if value is placed on wildlife management by WCFC, as he explained: “I haven’t seen them emphasise that [wildlife management], even though they have made communications with the community. What I have seen them emphasise is how much goes back to the community.”

As I toured the forest I was shown areas where wildlife patches have been left behind after logging, and it was explained by my tour guides that this is another wildlife management approach. Plate 4.10 shows small patches of trees left behind after logging and Plate 4.11 shows a cow moose I spotted on the community forest tenure. Some participants and my tour guides mentioned that there are core ecosystems within the community forest tenure that had been delineated by the Bulkley Valley Land and Resource Management Plan and these areas are protected by the WCFC through its management.

During my second tour of the community forest, my guide explained to me that wildlife management is considered in the planning phase when they are drawing up logging plans, and one participant confirmed this, as he explained:

*I think it [wildlife management] is in the planning... Your goal for clear-cutting and distribution should fit well in the landscape, leaving mature cover in the landscape in order not to disrupt wildlife. This is where Silvicon is very good; they know how to look all these regulations (Participant 3).*

In WCFC’s 2013 Logging Plan Map, I observed that wildlife tree retention areas (WTRAs) had been left out of the areas to be harvested. When I inquired from one of the contractors, he explained that the WTRAs are purposely left for wildlife management. As well, my second forest tour guide pointed to a wildlife corridor on the community forest, which is left purposely for wildlife like moose and mountain goats. This is how I confirmed that wildlife management was considered in planning, because I couldn’t take a picture of the large wildlife corridor.

**Plate 6.3: Tree patches**



**Plate 6.4: Cow moose**



Source: Anderson Assuah, 2013

### *6.6.3 Watershed/Riparian Area Management*

Watersheds/riparian areas are important to residents in the Bulkley Valley, as they are major sources of water. Through the Bulkley Land and Resource Management Plan, there have been limits set on the amount of harvest that can be done within the reach of a watershed or riparian area. This requires careful management of watersheds within the community forest tenure area. According to Participant 15, the Bulkley Aquatic Resources Committee (BARC) has set limits to harvesting in drainages. He told me that in his communications with board members of WCFC, he was told there was not going to be any more harvesting in drainage areas because of these set limits.

In addition, collaborating with the OW has resulted in managing watersheds and riparian areas beyond the requirements of both the LRMP and FRPA. Participant 1 explained, “Our riparian management areas are wider and broader than what is provided for (in the LRMP). We have signed an MOU with the OW who want wider management.” Participant 11 also revealed that “For instance, leaving a buffer around an area may not have been stated, but the GM finds it necessary to do so and everyone agrees on that.”

According to Participant 2, the focus on salvaging pine infested wood is implicitly helping WCFC to manage for watersheds, because pine grows in drier areas and therefore there is no harvesting of it in the wetter areas:

*We have had an uplift in our AAC to deal with the pine beetle epidemic, and pine trees grow in drier areas, so we are not in the wetter areas or riparian or water table areas. As a result of that we are protecting the watersheds, the tributaries, and where the water table is high. The nature of our AAC will reduce impacts on the watershed itself to an extent, and, in the future, we have to figure out innovative ways to maintain the hydrological integrity of the forest when we are going to harvest the areas with spruce, etc.*

#### 6.6.4 Forest Over-and-Understory Management

During harvesting, WCFC retains forest understory on some cut-blocks. Not all areas are subjected to clear cutting, although that appears to be the dominant approach to getting beetle-infested wood out of the forest. During my second tour of the forest, which coincided with logging, I observed that not all trees on a cut-block were cleared. The trees I saw left behind were not merchantable but, as I moved around, I saw others which looked merchantable, but were also not logged. I asked for explanations, and I was told these are understory left behind during logging (see Plate 4.12).

#### **Plate 6.5: Forest Understory**



Source: Anderson Assuah, 2013

During my interviews, I asked questions regarding forest under-and-over story management, and below are examples of the responses I received from participants:

*They are the biggest we are managing for, because we are paying our loggers to retain it. On each cut-block, we are retaining sapling poles and trees that are not targeted: balsam and spruce (Participant 1).*

*We have been lucky that some of the loggers we have hired are retaining a lot of understory. In the past there wasn't much to do in protecting understory. The way that the blocks are laid out, the skid trails are lay out, and the skills of the operators, they are able to harvest to minimize impacts on the ground and retain a lot of the understory (Participant 2).*

*They are keeping some of those [understory trees], but I think it is because the CF is close to the ski club, so everyone is watching, and they don't want everywhere to be flat. That is my guess. My sense is they don't see any long term benefits of understory; maybe they do (Participant15).*

However, as two participants explained, there is not much understory left during logging activities, even though the understory is the future stock of the forest and needs to be well managed:

*They will tell you there is retention, but that is very little. When they do the prescription, what is left in most places is a very small amount of trees. To me, it is unsightly and, if there was a different way to do it and leave a greater amount of trees, that would be a better practice; especially in some areas that are close to town and are at the heart of recreation for people (Participant19).*

*Now they talk about harvesting pine-infested wood and a lot of the understory gets damaged. It is hard to maintain them because of the kind of equipment used to protect your understory, which is your future stock. Setting the clock back to zero, if you leave trees behind, you are not going back to zero. If you go back to zero it means your whole land is not stocked for 10-15 years, because the young trees need to use the space (Participant 15).*

Surprisingly, all except Participant 3 commented on forest over-story and he was of the opinion that it was difficult to leave over-story, because of the pine beetle infestation: “It is typically difficult to leave over-story at this point, so we harvest it” (Participant 3).

### 6.6.5 Timber Harvesting

Participants indicated that logging is done during the winter season, because there is less impact from harvesting on the land/ground. Harvesting during winter is also a way to manage for soil health, according to Participant 10, who explained that: “We do winter logging and, as opposed to summer logging, the difference is striking. The soil layer is undisturbed, because there are no skid trails. Soils are also a requirement in the FSP, and there is 5% or 10% disturbance depending on the kind of soil.”

Regarding the method of harvesting utilised by WCFC, participants agreed that it is mainly clear-cut. However, most explained that it is a clear-cut with some retention on the land base.

*It's a clear-cut silviculture system- we take nearly all mature merchantable trees...and we recover it. Except when there are things like cultural features or Wet'suwet'en trails or visual impacts, then we leave as much structure as possible...So it is mainly clear-cut, which is an acceptable practice, but people associate negatives with it (Participant 3).*

*Right now it is conventional logging practices, but there is a lot more care about the pre-logging and logging plans. I think the CF isn't focused on saving every penny and sometimes it costs us a little bit more in terms of having the contractors take more time to save trees for regeneration. It sometimes costs us more to do so, but the CF is always willing to assume those cost for the protection (Participant 2).*

*I do not know everything they are doing, but they are certainly not clear-cutting everywhere; they leave some partial retention in their harvesting. I do not know how diverse their range of planting is; I would think they are planting a fairly diverse species of trees... Compared with other forest companies, they seem to emphasise on smaller cut blocks, different species, and different logging practices which, on the surface, looks very good (Participant 18).*

When I approached one contractor regarding the method of harvesting used on the tenure, he had this to say:

*It depends on the block. They have places they want left and certain places they want saplings and poles left, so it varies – it is a mixture. It is a mixture between clear-cut and selective logging. By selective logging, you will still leave merchantable tree behind if you are not after that particular species. Some places are left because they are wetlands,*

*CMTs, cultural trails, or too sensitive. The whole area is labelled on the map given us (Participant 30).*

I asked questions regarding the possibility of utilising more partial logging than clear-cutting, and I was told by some board members that there were discussions around partial logging, but salvaging pine-infested wood meant that partial logging could not happen immediately:

*There have been discussions around selective logging, but it is because of where we are in our uplift harvesting beetle-infested pine trees. Once we move to other trees species in the future, I think there would be more opportunities for selective logging...It isn't conducive to do selective logging right now, because the beetle infestation is about 70 percent on our area, so our license directs us to those areas (Participant 2).*

Owing to WCFC's collaboration with the Bulkley Valley Cross Country Ski Club, however, harvesting along the trails of the latter was selective and more targeted, as explained in the data above. Some participants referred to this approach as partial/selective harvesting.

One participant was of the opinion that partial logging can be done on the community forest amid salvaging pine-infested wood. He suggested that this could be possible when fines are attached to logging contracts to prevent contractors from destroying understory with the big harvesting equipment:

*I would say there should be more partial logging, even in the pine-infested forest. What I find is that they have logged the pine, but they are not paying much attention to the trees that they have left behind. It is very difficult – loggers are being paid by the amount of cubic metres they harvest and you tell them to protect these trees? My way of thinking is that if there isn't any kind of fine for damaging the trees, then they tend to run these trees over with the big equipment... My thinking is that there should be a fine attached to the document, and I think they would be more careful and they would bid lower (Participant15).*

Furthermore, WCFC manages visual impacts of its logging operations on cut-blocks through visual quality assessment and modelling. For instance, in WCFC's End Year Summary (2012-2013), it is stated that visual impact assessments were developed on cutting blocks along the Tatlow slope area on the community forest tenure, and the assessments were shared with forest user groups at the resource user group meeting in 2013. The assessment was shared with forest

user groups for their input since WCFC collaborates with such groups in its management of the community forest tenure, as earlier discussed.

Based on the assessment, it was estimated that approximately 8,800 m<sup>3</sup> was to be harvested along the Tatlow slope for the 2013-2014 harvesting season. During my interviews, some participants expressed satisfaction with the visual impact management of logged cut-blocks by WCFC. Three participants explained:

*They do a lot of aesthetics stuff and I don't understand that. I think it is a computer modelling that keeps the visual impacts of logging as low key as possible, so that for the many places that people are walking, you don't notice that. A lot of visual impact stuff. You don't notice it, so you don't see it and that is the whole point (Participant14).*

*What they do for the view, they have certain parts in the valley that they take into consideration. They project the line of site into the mountains and try to hide the logging blocks behind it like a screen. I didn't know they cared about that because, when you drive across B.C, there are lots and lots of logged blocks that have ugly views sticking out. I didn't know they would be this concerned (Participant 17).*

*They were talking about a proposed area they want to harvest. With the data they had gathered and analysed, and just for the visual standards from my point of view, they had gone over and above what normal forestry companies would do (Participant 20).*

Participant 7 raised a concern over the future of visual impact assessment management when logging activities commence in very visible areas on the community forest tenure:

*There are visual quality objectives but, at this point, I am not very sure about what we are going to do when we have to harvest some of the trees which are very visible. I think there will be more community consultation when it comes to that part of it in mitigating the visual impacts.*

#### 6.6.6 Tree Planting

Reforestation is core to SFM, and to forestry regulations in BC Tree planting on the community forest tenure is usually from June to August of every year. Since the inception of the community forest in 2007 up to 2013, WCFC has planted over 1.7 million trees (Notes from AGM). A contract to plant approximately 299,420 trees in the 2014 tree planting season was

completed in the summer of 2013 (WCFC Year End Summary, 2012-2013). According to Participant 30:

*They [WCFC] plant trees as soon as we harvest, fulfilling their silviculture responsibilities. They talked about free to grow the other night [at the AGM]. They are responsible for trees unless they are free to grow, which is a minimum of 5 years. In that aspect, they are doing a good job for sustainable forestry.*

**Plate 6.6: Location of the 1,000,000<sup>th</sup> tree planted on the community forest tenure**



Source: Anderson Assuah, 2013

## **6.7 Challenges to Implementing SFM**

Below, I present the views of participants on the challenges they think WCFC faces in achieving sustainability and SFM.

### *6.7.1 Mountain Pine Beetle Epidemic*

The mountain pine beetle epidemic and its associated harvest was identified by most participants as a major challenge to achieving sustainable forest management by the organisation, because they were unsure how and when WCFC would return to more sustainable cut levels, after taking a lot of wood from the forest within a short period of time.

*...the pine beetle, because they are logging all those areas with pine, so the challenge is how they are going to get back to reducing their cut over the next five years to a sustainable level (Participant 15).*

*The pine beetle is also a challenge; how much would they leave standing behind for biodiversity purposes vs. leaving it and making nature take its course? The pine beetle can affect the way they want to harvest, because it will affect other adjacent species around it. And, another thing is how much do you emphasise pine? The whole challenge now is diversity; you do not know how trees would respond to climate change (Participant 18).*

### 6.7.2 Provincial Regulations

Most participants pointed to provincial regulations surrounding forest management as a major challenge to achieving sustainability. They noted that forestry is highly regulated in the province, and this does not give much space for ‘players’ in the industry, such as community forests, to be innovative in managing the forest.

*There is disconnect, actually between industries and the people that work for them. The assumption is that people are just interested in getting wood and making much money, but working with [names withheld] that is not the case, because they have lots of different interests with forestry, but are hampered by the regulations. They want to make less money and manage things differently, but regulations say no, you can’t; you must manage things this way. That is an interesting aspect of potential learning for the community (Participant 20).*

*The Forest Act is a challenge to sustainability, because it provides just minimums for industry, which does not resonate with First Nations values (Participant 23).*

*...Stocking standards, when you write your FSP, you need the knowledge to go with it, but the regulations are all about timber objectives. You take money out and you have to put money back. Now with the money, the trees are growing, and is it money that we want or the forest? So the government is about that and that is silly, because things happen like the beetle. The beetle is not supposed to affect such large areas, because we have always been managing pine since the 1800s. Anyway, policy is a challenge to SFM (Participant 10).*

*The biggest challenge for all forest managers is that policy and legislation is focused on maximizing short-term economic gain and assuming environmental processes and products will be maintained. The community forests are an opportunity to do something different and have a longer-term view (Participant 27).*

### 6.7.3 Climate change

A few participants mentioned climate change as a challenge to SFM on the community forest tenure, as captured by the following quote:

*Obviously, a change in climate will be one of them. We are in an area where, depending on which model you look at, will be hotter and drier or warmer and wetter. Two totally different trajectories in climate change, and we can't put our eggs in one basket there. If we aren't careful we would be caught with our pants down, and we won't be able to have a resilient stand. If we decide to plant all larch because it manages to do well in the next two years (legislation won't allow that anyway), we will be opening ourselves up to some pests (Participant 1).*

According to Participant 15, actualising the goals set in WCFC's Forest Stewardship Plan (FSP) is the major challenge to achieving sustainability. He explained:

*I don't think there is anything [challenge], except you have to do what you said you want to do. That is the biggest challenge. For instance, if you say you will replant you have to do so. And not just replanting what you can get away with.*

### 6.7.4 Availability of markets

Some participants observed that in the event of the closure of the only mill in Smithers, sustainability would be threatened, because there will be additional costs to haul logs to different mills in different locations, which would affect profits being made by the organisation and overall viability of the community forest tenure.

*What happens if the mill closes? It means we have to drag our logs at a cost of extra \$40 or \$50 dollars/m<sup>3</sup> to get farther to the next mill, and maybe the market does not support it, and you have to close down. Another is with only one mill in town, they can say this is our price and if you don't want it ...lack of competition is also a threat, I think (Participant 3).*

*I think the advantage they have is that they are close to a saw mill that they sell to, because hauling costs would impact them if the mill closed. If the stumpage rate goes up, and the saw mill shuts down, that would be a big challenge. If anything disrupts that formula it would be difficult for it to succeed (Participant 22).*

*I just think one thing is that Canada sucks in terms of value-added, but in particular BC It is like "let's try and get our wood out and support the community." The small businesses who want to do value added cannot handle all these fees involved. I think that is a challenge to sustainability, because there is no sustainable market, but mostly big mills influenced by globalisation, and that influences CFs. There are some*

*entrepreneurial or value added things that the CF can support, for instance, tables made from WCFC forests (Participant 11).*

*Diversifying [the number of] places they can sell timber is a challenge, because my understanding is that the mills determine how much timber of which type they want. Diversified markets might allow for more discretion for resource managers. I think managers are in a difficult position and limited in what they can do because they have so much risk and economic pressures to consider (Participant 27).*

## **6.8 Summary**

Collaboration with other groups and individuals indicates WCFC's intent and willingness to open themselves up to initiatives which could benefit the organisation, and through which the community forest can learn to improve or enhance its management of the community forest, both on the land base and in their relationships with other organisations. For instance, it could be argued that making use of information shared by the OW and protecting their values on the land base point to a collaborative governance approach in which stakeholders are not seen as token participants in managing the forest, but have their voices heard on things they want carefully managed on their behalf. This was confirmed by one participant from the Wet'suwet'en, who indicated that WCFC has demonstrated through its forest management that information shared by the OW is being utilised.

The ongoing cross-cultural collaboration between partners involved in WCFC that previously was non-existent according to participants is an important achievement to this point. There were no major collaborations between the First Nations and the two municipalities (TOS and VOT) on projects or with previous forest products companies. Through WCFC, collaboration has started to emerge, with the Wet'suwet'en having the opportunity to confirm management plans before they are actually approved and applied on the land base. The Wet'suwet'en mentioned to me that the hereditary chiefs are comfortable with the collaboration taking place, having witnessed the many devastations on the land in the past through forestry

activities. This collaboration also shows action on one of the objectives of the CFA in BC, which is to “promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons” (BC MFLNRO, 2011).

As well, the board’s stance on the potential conflict situation between the VOT and TOS related to the distribution of benefits could be attributed to its strength as an independent board. Had appointees of these jurisdictions on the board been Councillors, outcomes related to this conflict could have been different because of entrenched positions. And, with WCFC not having any conflict management or mitigation strategies in their procedures, it could have proven difficult to resolve the issue. Since the underlying cause of this potential conflict revolved around benefits derived from WCFC, it indicates that distributing benefits is a challenge in community forestry requiring appropriate mechanisms to develop plans and transparency.

Bradshaw’s (2003) assessment of ten community forest pilot programs in BC concluded that there are capacity challenges that community forests are likely to face in the province because of the design and implementation of the CFA. One of the noted challenges was securing start-up and operating capital, which I also found in WCFC. As in the cases Bradshaw considered, the WCFC lacked start-up capital/funds and were unable to secure loans based on their limited collateral and having no track record of business activities. Also, Bradshaw reported on the problem of depending on volunteer staff to manage the pilot community forests, which often resulted in high burn-out rates among volunteers. WCFC is solely dependent on a volunteer board, who meet monthly to take decisions about the community forest. Though there was no clear indication of burn out among board members, they were concerned about their time commitments. Some even indicated that lack of time prevented them from doing more to help the

cause of the organisation. The WCFC does, however, now have the capital to hire a forestry company and consultants to aid in their activities.

In spite of the challenges to collaboration, the work of the WCFC with others has had some impact on SFM. Based on WCFC's consideration and management action related to the ecological sustainability markers I listed prior to my field work, it can be argued that the board has made efforts to consider ecological sustainability in their forest management activities. As well, actions such as paying contractors to protect forest understory, leaving buffers in areas not required by law, and leaving larger buffers along riparian zones because of the OW interest, all speak to the fact that some actions are being taken to help to ensure a level of ecological sustainability. However, without a direct empirical evaluation, the effects of these efforts cannot be determined. Some of these management practices have been enhanced through, for instance, collaborating with the OW and the two colleges, as well as learning through operational experience.

However, in order to make any strong statements regarding WCFC's SFM execution, its performance needs to be measured against a locally developed set of criteria and indicators established around forest values being managed on the community forest tenure that are not currently in place. Board members mentioned that the WCFC follows the criteria and indicators developed by the province and, therefore, the WCFC has not developed a set that is unique to the community forest. Hence, there was no evidence of clear measures of performance against these provincial indicators, apart from meeting requirements in the LRMP and FRPA. The expectation of board members is that in the future, there would be initiatives that would help develop a set of criteria and indicators for the community forest.

In this regard, one also has to take into account the concerns raised by a few participants that management of the community forest is restricted to the minimum requirements of the LRMP. These participants liken the operations of WCFC on the land to that of traditional industrial forests, contrary to expectations by advocates of community forestry in BC that it is supposed to be “distinct from conventional, so-called ‘industrial-style’ forestry” (McIlveen & Bradshaw, 2005/2006, p.70). In the future, evidence of this should be found after examining WCFC performance on locally developed SFM indicators.

In terms of challenges faced that threaten sustainability of the forest, most participants identified clear-cutting as a major challenge that needs to be addressed by WCFC. While some participants suggested that partial logging could be explored, the board explains that clear-cutting is being used because of the mountain pine beetle epidemic with a level of retention in some cut-blocks. Even though one contractor confirmed that harvesting methods are a mix between partial logging and clear-cutting with some retention, most participants still think there is not much retention, and that WCFC is destroying the future stock of the forest by clear-cutting forest understory.

The other challenge to sustainability identified by most participants was related to economics and the need to find an alternative mill to sell WCFC’s logs in the event that the only mill in Smithers closes down. Again, this challenge is concerned with the CFs vulnerability to external shocks as described in Chapter Five. Similar to the conditions that prevented the pulp industry in Kitimat from supporting fibre production on the community forest, closure of the local mill could mean reduction in WCFC’s profits if the organisation does not get similar prices for their logs in other markets. Additionally, hauling logs to these distant locations would mean increased transportation costs, which will impact on profits.

## **CHAPTER SEVEN**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **7.1 Introduction**

The purpose of the research was to investigate how collaboration and learning among stakeholders help in managing community forests sustainably. The related objectives set in this regard included: to examine opportunities and platforms that exist for having input into decisions and learning (including activities such as training, seminars, community talks, etc); to describe what people (resource user groups, broader public, past and current board members) have learned through their involvement with the Wetzinkwa Community Forest Corporation; to describe how collaboration and learning is impacting sustainable forest management (SFM) efforts; and to examine the challenges and barriers to collaboration and learning.

To address the objectives, I selected the Wetzinkwa Community Forest Corporation (WCFC) located in Smithers, British Columbia, as outlined in Chapter Three. Data were collected for the study mainly through thirty semi-structured interviews together with three forest tours, observation of forestry operations, and document review. Themes were generated from the information provided through interviews and analyzed in line with objectives of the study and through constructs from the literature outlined in Chapter Two.

#### **7.2 Opportunities/Platforms for Making Input and Learning**

Through the data I identified eleven avenues or platforms for the public to make input into decisions, deliberate on issues, and to learn together through WCFC's management of the community forest tenure. Eight of the avenues were formal and included opportunities such as the AGM meetings, while three were informal, such as Walk in Your Woods (see table 4.1). RUGMs, Reporting back to Council and Chiefs, board meetings (all formal avenues), trade shows, and Personal Discussion with Board/GM (all informal opportunities) were identified as

the frequently used avenues and most effective for generating input into decisions according to participants. However, for learning about forestry and the management plans of WCFC, RUGMs, Reporting Back to Council, Board meetings (all formal platforms), Trade shows, Personal Discussion with Board/GM, and Walk in Your Woods (Informal platforms) were the most effective opportunities according to participants.

The data, however, indicates different opportunities and platforms for making input into management decisions and learning by those who are directly involved and affected by the operations of WCFC (e.g., forest user groups and board members) and the public. Thus, although opportunities exist to make input and to learn, the public is not very involved with the activities of WCFC compared with property owners and forest user groups. This can partly be attributed to the unintentional exclusion of the public from deliberation and discussion of WCFC's management plans, particularly from the formal avenues. For instance, out of the eight formal platforms, AGMs seem to be the only avenue through which the public can provide input into decisions which of course is open to those who are directly involved and impacted by WCFC's operations. By design, the formal avenues and platforms largely prevent the broader public from having input into decisions, deliberating on plans, and learning from the process. However, these activities do present good opportunities for learning among those directly involved, such as board members, as the data above show. In their examination of public participation in the development of land use plans in Manitoba and Ontario, Kidd and Sinclair (2007) also found that public involvement events focused on locally affected people although the projects had implications affecting all citizens.

Another factor that prevents the public from getting involved in WCFC's activities is the lack of structure or plan to directly involve the broader public in decision making and deliberation. Although most participants mentioned that the public is disinterested or apathetic

toward involvement with WCFC, I could hardly find any meaningful opportunities developed by the community forest to gain the input of the public into decisions. For instance, the organisation has not put the necessary resources into the website to ensure it includes information such as minutes of monthly board meetings, yearly management plans, and annual reports. Updates of these items and more current activities in venues aside from the Facebook page could provide opportunities for the public to learn about WCFC's activities, and to provide input into managing the community forest tenure. Providing adequate information to the public or allowing public access to information are considered critical aspects of participatory processes that can lead to effective participation and learning by the public in resource and environmental governance (Sinclair & Diduck, 2005).

In addition, the concern raised by one participant from the B.V. Backpackers regarding the non-involvement of his group in RUGMs led to additional questions regarding the extent of involvement or exclusion of forest users in managing the community forest tenure. This exclusion could become a source of conflict. The exclusion of the B.V. Backpackers could be that the name of their current contact person to the RUGMs is not existent on the e-mail list WCFC utilizes in inviting forest users to the RUGMs. I discovered this when I requested the list to recruit participants for my study, where I found that the contact information was for the group's past president. This was similar to other groups on the list. This is an indication that the e-mail list needs to be updated regularly.

### **7.3 Participant Learning Outcomes**

Study participants indicated that they have learned about a variety of things that are specific to WCFC and to forestry in general that have enhanced their knowledge of community forestry and the forest sector. Broadly, there were fourteen areas where participants identified learning outcomes. I categorised five of these areas as individual learning and nine as social

learning (see Table 5.1). The areas of learning (individual and social) described by participants included issues such as SFM, forestry as a business, forest governance, and relationship and trust building. In relation to this last point, Schusler et al. (2003) found that 83% of their study participants reported they had gained trust in others as a result of their participation in a multi-stakeholder wildlife management undertaking. However, they reported that there was limited evidence of relationship building among participants, as 66% of participants reported that their relationships with others had not changed.

An important individual learning outcome most participants mentioned was the involvement of the OW in the process of managing the community forest, which started right from the planning stages before WCFC applied for the community forest licence. Subsequently, the involvement of the OW has resulted in a new form of relationship with the two other stakeholders of the community forest tenure (the Village of Telkwa and the Town of Smithers), which previously did not exist. Thus, according to participants, there is now an on-going cross-cultural collaboration between the OW and the two municipalities that had not been experienced prior to the establishment of the community forest. The OW, for instance, shares information on their territory with WCFC regarding operational planning, and it is in a position to make changes to cutting permits before they are approved by the Ministry of Forests and applied on the land base.

With regard to social learning, there have been outcomes related to relationship and trust building that have allowed the board to work with forest users that operate on the community forest tenure. This has been revealed, for instance, through signing MOUs with these groups that ensure that their trails on the community forest tenure area are protected, which also help to recognize the values these groups hold in relation to the forest. Further, by working with these forest users, WCFC has helped to lessen conflict among such groups. This is important in

Smithers, given that forestry activities on the community forest tenure area were contentious among recreational groups prior to WCFC securing the license. Learning about distributing benefits from operations to the public was also a major lesson for board members, particularly because of the expectations people had of the community forest during its inception.

Furthermore, the decision by the board to learn from other community forests regarding how they set their policies in an effort to avoid mistakes committed by others is an indication of the board's willingness to learn and adapt while managing the community forest tenure, as discussed in the social learning literature (e.g., Maarleveld & Dangbégnon, 1999; Berkes, 2009). This finding also indicates that there is a place for cross learning among community forests, as a result of their overarching objective of managing the forest for community benefits and interests. As indicated by one board member, the community forests WCFC learned from were willing to share their information and policies when the then newly formed Wetzinkwa Community Forest Corporation requested such information. If such cross learning is encouraged among the many community forests (without considering their specific goals), there is potential for information sharing on plausible plans and strategies, and on assessments to guide their operations and activities. For instance, WCFC's approach to dealing with the mountain pine beetle epidemic was partly informed by information they gathered on the successes and failures of approaches developed by other community forests faced with similar challenges.

It was also clear that these learning outcomes show evidence of single loop and double loop learning. The former, which is concerned with finding solutions to problems and improving outcomes, was supported by the board's actions to deal with the waste piles that remain on the community forest tenure after logging. These actions began when the board learned about the waste piles being a challenge to their operations. The board's approval of the IRM initiative that is aimed at managing the forest for forest health and resiliency is also consistent with double

loop learning. Thus, these two types of social learning discussed in the literature by authors such as Armitage et al. (2008) and others (e.g., Maarleveld & Dangbégnon, 1999; Pahl-Wostl et al., 2008) are supported by this study. However, I did not find any learning outcomes related to triple loop learning, which is concerned with stakeholders learning how to learn when managing resources (Maarleveld & Dangbégnon, 1999).

My findings reveal many single loop learning outcomes in comparison with the double loop learning identified. This signifies that WCFC as an organisation is learning to implement the CFA in British Columbia in line with the various regulations and laws that guide community forestry in the province. A case in point is the organisation's learning from other community forests, which has helped in developing appropriate policies and regulations to guide management of the WCFC tenure. In addition, the single loop outcomes show that WCFC, where appropriate, is in a position to explore other strategies to manage the community forest tenure to increase benefits to the community, which is an over-reaching goal of community forestry described by several authors such as Teitelbaum (2014).

On the other hand, the low number of double loop learning outcomes raises questions regarding the extent to which 'traditional' or 'conventional' forest management practices - that may also differ from government policy - are being considered by WCFC. These practices could include finding ways of doing things differently on the land base to increase forest health and resiliency, which are the ecological outcomes many expect from community-based approaches to forest management (e.g., Charnley & Poe, 2007). Yet I found little evidence of this sort of innovation. It could be that the WCFC is still too early in its existence to question norms and ideals as they attempt to firmly establish operations, but it is concerning that some people who were involved in the development of the corporation and had alternative views on forest

management are no longer involved, as the model adopted has trended toward more traditional forest management.

Further, the non existence of triple loop learning outcomes could be associated with WCFC being a relatively young organisation, which means time is required to get to this level of learning, particularly when the board is pre-occupied with dealing with the pine-beetle epidemic. However, board members mentioned that they are in a learning process since a community forest approach is a whole new venture for them. This realisation provides some hope for the future in that the board can critically examine their current decisions at some point which could help shape how they learn in the future.

#### **7.4 Impact of Collaboration and Learning on Sustainable Forest Management Efforts**

The data show that the WCFC is making attempts to address economic, social/cultural, and ecological criteria related to SFM. I identified examples of SFM that included indicators such as distributing benefits, providing local employment, managing for biodiversity, and protecting watersheds. The evidence is insufficient to conclude whether these SFM outcomes are advanced or modest, but as outlined below, some of these have also been identified as positive SFM outcomes in the CF literature.

Foremost among the positive SFM outcomes in relation to socio-economic wellbeing is the establishment of a legacy fund (as described in Chapter Five) that seeks to draw on investment profits to finance the yearly grants programme in the long term. This indicates sustainable thinking on the part of the board, since WCFC would be in a position to continue to distribute monetary benefits to the public even when profits made on yearly harvests decline. As board members revealed, there would be times when the organisation would not harvest as much as it does now, particularly when the current AAC is reduced; and this might affect profits on log sales. As a result, there is need for careful planning to invest current profits for the future. Since

benefit distribution is listed as one of the criteria (under socio-economic benefit and impact) for SFM reporting in BC and Canada (CCFM, 2005) WCFC is making strides at achieving a significant CF goal and a goal of SFM.

The board has also encouraged collaboration and local benefit sharing through the provision of direct and indirect employment opportunities for community members, as WCFC's hiring policy is 100% local. As a result, loggers, tree planters, and other contractors that work on the community forest earn income from the process. That is to say, as long as the community forest harvests logs, plants trees, etc., these contractors will earn income working on the community forest tenure. According to the indicators for SFM reporting in BC, providing employment for the public is classified as an indicator for economic sustainability (BC Ministry of Forests, Mines, and Lands, 2010). These findings are also consistent with Teitelbaum (2014), who found that the greatest economic benefit to the four community forests she studied was local hiring. I was not, however, able to ascertain the exact number of spin-off jobs created by the WCFC to determine precisely the number of jobs created locally and the overall impact of this in a community context beyond the benefit to those people actually employed.

Furthermore, the board's learning around investments has led it to reserve money for silviculture treatments on the community forest tenure area, which is a sustainable investment back into the forest. Thus, with the establishment of a Silviculture Accrual Fund (reserving 4.50/m<sup>3</sup> of harvest) to take care of future silviculture treatments, WCFC does not need to, in the future, take from its profits to maintain the forest. This is also an effort at achieving economic sustainability.

Through collaboration and learning, WCFC has also made strides on the social aspects of SFM. This has become possible because the board is now working with multiple forest users and incorporates their input into management plans and decisions in their governance of the

community forest tenure. Most forest user groups, for instance, talked about their satisfaction with WCFC's activities, and the fact that they are able to influence decisions that directly affect them. For their part, the OW also expressed comfort with the process of managing the community forest tenure by WCFC, because input they make into decisions and plans are applied on the land base. As discussed by Beckley (1998), an important challenge to community forestry is maintaining involvement by stakeholders and the broad range of interests that these stakeholders represent. Being able to work with these groups and having their support speak to how socially sustainable the organisation has been.

The involvement of the Wet'suwet'en First Nation in decision making, planning, and their access to forest resources, and the forest user groups' involvement in managing the community forest also indicate social sustainability on the part of the community forest, since the CFA urges the public and First Nation communities to be involved in managing the forest, and public involvement is listed as a criterion in SFM reporting in BC.

WCFC's collaboration with CNC and NWCC on the climate change experiment is an effort towards ensuring ecological/environmental sustainability. By planting non-targeted species such as western larch, Douglas fir, and cedar on the community forest tenure area, WCFC is increasing species diversity on the landscape that represents a component of ecological sustainability (BC MFML, 2010; CCFM, 2005).

In addition, the organisation is looking to learn new forest management practices from the outcome of the experiment that can impact current forest management approaches to improve forest health and resiliency - the overarching goal of WCFC's IRM initiative. This is also consistent with the literature (e.g. BC MFML, 2010; NRC, 2012), which identifies forest health as an important component of ecological sustainability.

Moreover, WCFC manages for wildlife, watershed, biodiversity, soil, etc. - all

components of ecological sustainability. In some instances, participants mentioned that the organisation does manage these components beyond what is required in the LRMP and FRPA that guide resource management in the Bulkley Valley.

In spite of all these accomplishments, WCFC has not been very innovative in its management of the community forest, as the data reveal. Some participants identified the constraints posed by the CFA and provincial policies as the reason behind the lack of innovation, noting that the community forests are required to satisfy the same requirements enshrined in the FRPA as traditional industrial forest licensees. As one participant noted, opting to do things differently on the land might end up with the CF being fined by the Ministry of Forests, Land, and Natural Resources Operation. These explanations are supported by Ambus and Hoberg (2011), who concluded that authority devolved to communities under the CFA in BC involves operational decisions affecting harvesting, and that “with a few relatively minor exceptions, the CFA is a small version of the large industrial area-based tenure, the Tree Farm License” (p.945). Thus, the CFA, by its design does not necessarily provide the flexibility required by communities to be innovative in management, nor does it fully provide autonomy to communities to manage the forest for their benefits (Bradshaw, 2003; McIlveen & Bradshaw, 2005/2006; Ambus & Hoberg, 2011).

### **7.5 Challenges to Collaboration and Learning**

WCFC has faced challenges collaborating with the public and forest users in managing the community forest tenure. One of the first challenges that confronted the organisation was securing start-up and operating capital to apply for the community forest license. This happened because banks were not willing to loan monies to the newly formed WCFC that had no track record of doing business. The organisation surmounted this challenge when the Town of Smithers provided a loan of \$150,000 to WCFC. This money came from the estate of a former

owner of NEWPRO who, in his estate, gave out \$150,000 to the TOS and indicated that the money be used to support forestry activities. This challenge corroborates Bradshaw's (2003) finding that other community pilot projects in BC had also found it difficult to secure start-up funds for their operations.

With regard to conflict, the data revealed that there has been limited conflict among stakeholders of the community forest tenure, forest user groups, and the public. Where there has been conflict, it has been resolved by WCFC's board explaining and clarifying issues among feuding parties. Signing of MOU's between WCFC and forest user groups has also lessened potential conflicts that might have occurred between WCFC and forest users.

The two main challenges to learning identified by participants were the inadequate engagement between WCFC and the public, and the lack of community education on the part of WCFC. It can therefore be concluded that WCFC has not made sufficient deliberate attempts to educate the public on issues related to their forest governance, community forestry, and forestry in general. As social learning continues to assume a normative role in natural resources management, such education can broaden the public's knowledge on human-environmental relationships, while allowing them to contribute their own perspectives and knowledge to managing the community forest tenure (Buck et al., 2001; Keen et al., 2005).

## **7.6 Recommendations**

The following recommendations are based on the study's findings, conclusions, and suggestions made by some participants. The recommendations are grouped under three main themes: public participation, SFM, and learning.

### *7.6.1 Public Participation*

WCFC should test ways to improve local public participation in their decision making by developing a public participation plan. Specifically, this plan should involve:

1. Investing in an update of the WCFC website with information that would allow the public to inform themselves about happenings within the community forest. For instance, information on monthly board meetings, outcomes of RUGMs, and yearly management plans that are not currently posted on its website should be made available to the public. These updates should request input from the public on issues discussed.
2. Dedicating resources to community education and outreach. In this way the organisation can bridge the huge gap that currently exists between what the WCFC does and what the public knows about these activities. As suggested by a few participants, WCFC should make use of the community radio station in Smithers for education purposes and to ‘sell’ the organisation to a majority of the public.
3. Organising open houses every year, primarily to get public input on WCFC’s management, forest practices, and operational plans, in addition to the RUGMs. By doing so, the public would feel involved in the process of managing the community forest tenure and can learn about the organisation through their deliberations. One participant suggested that WCFC should be very clear about where and when (e.g., revision of the FSP or AAC determination) the broader community could have a meaningful input into its activities, so that the public can get involved in the process.
4. WCFC should engage members of the various user groups they work with by, for instance, making short presentations at the meetings (or AGMs) of these groups. This is another way WCFC can raise its profile among the public and solicit their input on issues. This is because WCFC works with the leadership of these groups and there is no guarantee that their members know as much about WCFC as would their leaders. A participant suggested that there could be presentations and discussions about WCFC’s

activities at the yearly open house organised to present cheques to community grant recipients.

In addition to the above, the e-mail list for forest user groups must be updated regularly to include the contact information of current groups. Also, WCFC should reassess the forest user groups they work with to ensure that they are engaging all such groups.

#### *7.6.2 Sustainable Forest Management*

Most participants showed an interest in the fact that operations have been unsustainable due to the increase in AAC to get pine-infested wood out of the community forest. Based on this, WCFC should prepare Annual Sustainability Reports on its operations and make them available to the public. One Participant indicated that an Annual Sustainability Report would give the public a deeper understanding of WCFC's operations.

In order to track its performance regarding SFM effectively and efficiently, WCFC should develop its own set of criteria and indicators (C&I) for the many forest values that are managed on the community forest tenure. This is imperative given that the LRMP that guides forest management in the Bulkley Valley has not been revised for some time, and one cannot be sure that the minimum requirements stated in the document would guarantee sustainability of the forest into the future. With a specific C&I for the community forest, changes that occur in SFM components overtime can be revised accordingly.

Furthermore, WCFC should be more innovative in its management, particularly as the increase in AAC comes to an end. Since the CFA is intended to provide 'greater flexibility' to communities in managing local forests (BC MFLNRO, 2011), the community forest should ask permission from the MFLNRO to extensively embark on, for instance, NTFP development on the forest. Some participants suggested that the community forest should be innovative in its

harvesting method by embarking on more selective logging rather than clearcuts, and also experiment with silviculture practices that would enhance biodiversity on the land base.

### *7.6.3 Learning*

The WCFC should encourage discussion and deliberation about the management of the forest, in addition to seeking input on management plans from forest user groups at the RUGMs. As one participant suggested, different alternatives to managing a particular forest value such as watersheds, should be presented by WCFC at the RUGMs to allow forest users to deliberate on them before the group makes a decision. WCFC can guide discussions by explaining to forest users the policy implications of the various alternatives, and their potential impacts on the community forest tenure. This approach would help stakeholders learn more about management and forestry in general. It is through such deliberations and discussions that forest user groups and the public can question the underlying values of forest management practices that they have known over the years and offer suggestions on alternative approaches.

The WCFC should design specific initiatives around its management that would directly provide learning opportunities for the public, such as frequent community talks. Some participants felt that through such direct learning initiatives and activities, the public will enhance their knowledge about forestry and WCFC's management of the community forest tenure. That is to say, the community forest will be creating a social learning platform for the public, which can also be a positive way to build relationships in the community.

These recommendations cover all aspects of the WCFC's management and operations. Implementation will take time to yield desired outcomes, for instance, developing a set of C&I to measure SFM, and would require a willingness on the part of the WCFC to invest the necessary resources, particularly volunteer and staff time and money. Since it would be very difficult to attempt all of these recommendations at once, it seems to me that it is most important to start

with are the ones related to participation and learning. One of the clear benefits of community forestry touted in the literature is that it brings some important management decisions to the local level and provides better opportunities for local involvement than traditional forest management. I was therefore surprised at the lack of local involvement in WCFC. The WCFC could easily start posting to its website board minutes, annual reports, and its yearly management plan. By providing such information to the public, WCFC would be opening up their management and operations on the tenure to the broader public, as well as providing an on-ramp for facilitating more meaningful engagement between them and the public. This would result in discussions and learning that would impact operations of the WCFC.

### **7.7 Concluding Comments**

Having carried out this research, it is imperative to note that community forestry is an important new governance approach in that it offers the prospect of decisions being made by those directly affected, and for benefits to be shared among the local people who have the closest relationship with the forest. These two points alone address important concerns about conventional forestry practices involving multi-national corporations. The data show, though, that important questions remain in regard to these, especially the role of the state (i.e., the province of BC) in directing what is possible at the community level, and the community forests themselves actually being representative of the community.

Furthermore, my data align with the literature in showing that social learning can result from collaborative, local management of resources such as the forest. In this case, the data show that through learning stakeholders deepened their understanding of forestry operations, and were introduced to other aspects of forestry for which they had no or little knowledge. In fact, learning on the board played an important role in WCFC's efforts at managing the forest to meet the goals of sustainable forest management.

Even though there is not overwhelming evidence in the literature to suggest that community forestry in BC or social learning yields more sustainable outcomes, providing and enhancing social learning opportunities through community forest management will have positive outcomes in terms of achieving the goals of SFM and thereby sustainability more broadly.

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## APPENDIX I

### Draft Interview Schedule

Study title: Learning Through Community Forest Management

#### Introduction

- What was your motivation for joining the Wetzinkwa Community Forest Corporation (WCFC)?
- How long have you been involved with the process?
- In which ways do you feel you have benefitted from the CF governance approach?

#### Platforms/Opportunities for Individual and Social learning

- What approach to governance does WCFC?
- Are there opportunities for discussion and deliberation among members?
- Are presentations given by experts at Board meetings?
- Are there other avenues to learn and share ideas? Describe any.
  - o Formal: Seminars, training, community talks, formal meetings, etc.
  - o Informal: small discussion groups outside formal meetings, personal discussions, field visits, etc.
- Are there any of these that you found particularly helpful for i. sharing ideas; ii. learning?
- Through which of these avenues do you learn more?

#### Outcomes of Learning

- What are some of the things you have learned through being part of the CF organization?
- Which were the most influential events or activities that impacted such learning?
- In which ways has what you learned impacted your everyday thinking and decisions about the forest (if not captured above)? Can you tell me some of these?
- Would you say what you have learned has caused you to question practices, norms, etc. that you held about SFM/CF before being part of the CF organization? If so, can you give examples of this?
- How easy or difficult was it for you to accept these new practices, ideas, etc.?
- How have you linked your learning experience as resulting from your collaboration with the CF?
- In which ways do you think learning can be enhanced within the Board/committee level, and between the Board/committee members and the community? (**For Board members**)
- In which ways do you think learning can be enhanced among the community and between the Board and the community? (**For community members**)

#### Learning and Sustainable Forest management (SFM)

- What were your thoughts on SFM/ sustainability of the forest before you joined the CF? Have these changed?
- How does the WCFC as an organization explain to others your approach to SFM or managing the forest sustainably?

- Which practices of the CF do you consider as sustainable or constituting SFM based on your understanding of the concept? (Examples)
- Why do you consider them sustainable? (Evidence)
- In your opinion, how well do WCFC's activities reflect the Criteria and Indicators they use to define Sustainable Forest Management?
- What have been the biggest barriers and challenges in working towards achieving Sustainable Forest Management?
- In which ways have your learning experiences affected managing the forest sustainably? Can you give some examples?

#### Challenges to Collaboration and Learning (**For Board and committee members' interviews**)

- What challenges do you face in trying to operate in a collaborative way?
- Has anything been done to try to meet these challenges?
- How has WCFC tried to involve the local community outside of active Board members in their deliberations?
- What has been the level of interest from the community?
- What are the major obstacles to getting people involved?
- What strategies have been used for dealing with such obstacles?
- What would improve the collaboration process in your opinion?
- Would you say there is fair representation of community interests on the Board/Committees?
- How are conflicts that arise within the Board/committees resolved? Are decisions at the Board/committee level borne out of collective action? Any saboteurs? How do you deal with that?
- How often do you meet with the people (user groups/committees) you represent?

#### Challenges to Collaboration and Learning (**For community members' interviews**)

- How interested and proactive is the Board in getting people involved in their management processes?
- Why did you get involved? How indicative do you think this is of others?
- Is there ample opportunity for discussion and deliberation of your ideas at consultation events?
- What are the major obstacles to getting others like you involved?
- In which ways have these obstacles been dealt with by the Board or committees?
- What key things have you learned through your involvement?
- What would improve the collaboration process in your opinion?
- How often do you meet with your representatives on the Board or committees?
- How do you communicate with them? Face-to-face meetings, e-mails, etc.
- Are your representative(s) able to communicate your interests at Board and committee meetings?
- How are conflicts that arise between you and the Board/committees resolved?





# Forest Management

## Mission Statement

The Wetzin Kwa Community Forest Corporation will manage a profitable community forest tenure while providing good forest management stewardship that will sustain forest resources for future generations.

## Patch retention

As part of our commitment to sustainable practices, logging is usually done during winter, with tree patches are retained in each harvest unit, and tree patches are planted in these sites during the following summer. In the community forest, all logging is done with retention. This means that patches of trees of various size and species will remain throughout the logged area. These provide some shade and retain soil moisture, which benefit the flora and fauna. These islands of trees will also act as refuge for some small wildlife.

## Protected areas:

We are also committed to protect certain areas for reasons of an purposes. There are different types of protected areas in the Wetzin Kwa Community Forest. The conservation of these areas has different purposes. In the sub-optimal habitat is protected. "Old ecosystems" representing ecologically important forest, are also protected. For example, in a high dry pine forest was logged, as much as possible, so harvest or permitted road building in that area is not allowed. Forests along streams are called riparian areas, and these are also protected so fish habitat and water quality stays intact.

## Nurse trees & tree planting:

Mature trees that produce seed will often be left behind as "nurse" trees to encourage local species to regenerate. Every stand that has been harvested is targeted for planting in the following season. A variety of evergreen species (spruce, fir, and pine) are planted in a grid pattern to minimize competition for light between the trees. The stands are monitored by field crews as they grow.

## Winter logging:

Winter logging is an effective way to reduce soil damage like compaction and erosion, and protect smaller plants and trees. These tree seedlings will often thrive when they get exposed to more sun the following spring. The impact of road building is also minimized during winter logging, and combined with reduced erosion affected by the snow pack, protection of the soil, there is a clear benefit for soil and water quality.

## Where does the wood go?:

As of 2012, 90% of the trees harvested are used to make lumber for the construction market. Residues from the stems will be used to make other products (such as pulp for paper or medium density fibre boards). Some tall and strong trees will also be used as distribution poles for electricity or telephone lines.

WETZIN KWA

## APPENDIX III

### 2013 Wetzin'kwa Community Forest Survey Responses



1. How aware are you of the Wetzin'kwa Community Forest? (click all that apply)
  - I just discovered you! (37)
  - I think I've heard your name before... (15)
  - I know your name — what do you do? (11)
  - I know all about you guys (11)
  - I visit every chance I get! (1)
  - If you're already aware of us, what have you heard about? (click all that apply)

- ❑ The community grant program (22)
- ❑ Economic initiatives (logging, forestry) (12)
- ❑ Events (i.e. A Walk in Your Woods) (16)
- ❑ A nice place to visit with trees and trails (12)
- ❑ A joint community initiative between Smithers, Telkwa and the Wet'suwet'en (18)
- ❑ Other: (4 checked, no comment)

- I saw your recent, eye-catching ad in Interior News [community grant program]
- Last year's trade fair
- First time I heard
- Responsible forestry?
- School – girls went there
- I just heard about it from Amanda
- Wildlife habitat values
- First time

3. Wetzin'kwa strives to balance the economic benefits of logging with the ecological, cultural and recreational values that exist within its tenure area. How can we do this better?

- 
- Let the public know about the features of the forest
  - More economically effective logging, more environmentally safe
  - Balance industry/forest
  - I just found out what the community forest is so I'm not too sure. Doing visits to cutting areas to show how you actively manage the forest could be neat.
  - I just learned about your operation model; it sounds fantastic. Keep up the terrific work you're doing. I will contact you if I think of any suggestions for you.
  - Keep up the good work
  - Keep on doing what you are doing and involved elders to share their knowledge more!
  - It's good to see an effort like this taking place
  - I'm not too sure what you do now, so it's hard to tell you that! Just that you're here doing this is great.
  - More advertising further north!
  - Including community on development or logging in the Smithers area
  - Planting more trees and offering trees to youth to plant – kids love to plant things and I think when they learn at young age how important our forests are it can balancing [?] in the future
  - Keep creating, supporting and promoting activities to do in nature. ☺

- Don't know
- Plant more trees and care for them until they can grow easily by themselves
- Make it easier for fire wood pile on landing/loading [?] for people
- (You do great! Nothing) – it is a shame about the logging in the area. I have been to two sites and they make me cry to see the waste and devastation.
- By listening to all involved parties
- Keep providing the grants for the community
- Just heard about this, will research more about it
- Get community involved
- Hmm, not sure. Would need to think about it.
- Arrange group hiking trips for various levels
- Keep thinking long term as well as wildlife value
- Full utilization
- New to area
- Keep it up!
- More events to go to
- Create more local employment
- Public awareness, government grants
- Keep on doing what you are doing
- Doing a great job!
- Expand the CF area (eg. into Gitksan territory)
- Increase what you do already. Keep up the good job.
- Be more media oriented to branch out.
- More advertising. I didn't even know it existed!
- Sounds good what you are doing – plant more spruce trees
- Continue with trails and let us know where we can go
- Perhaps a small on-site sawmill
- There's a lot of work to be done making a trail for tourist
- Find a better solution to the burning of slash piles. (eg. chipping waste wood for pellets/district heating/biofuels, etc.)

4. What initiatives, projects or events would you like to see happening in your community forest?

- The logging of pine beetle kill for sure as free firewood for community residents
- More awareness. People, unless in the logging industry don't know much
- Advertise walks; community trails
- Are there information boards along trails to teach people about what's growing/living in the forest? Guided nature walks?
- I need to learn more!
- Public environmental education events – for adults and kids (e.g. pollinating insect recognition and ID); continue to support biodiversity/resource research
- None that I can think of at the moment
- Medicine walks

- Teaching the youth
- I need to learn more about the forest before I can make suggestions
- More advertising to local youth, such as cub scouts, tour, etc.
- Working with school kids to encourage balanced education
- If trees reach power line they should be trimmed [?]
- Regrowth!
- More history/trails/info
- Develop more hiking trails in communities near Smithers
- Scavenger hunts for kids or nature walk for school students
- Continue to do what you are doing
- Hiking trails, parks
- Give work to those young guys that are walking up and down the street of Smithers
- Immediate replantation before erosion and wildlife is destroyed.
- Trails [sic], shelters and access to trails
- We definitely need to pay closer attention to how industry is polluting our environment
- Animal counts (with Ministry, ie Conrad Thiessen); birding activities
- Outdoor education sessions
- More trails to enjoy the forest
- Tours with plant identification
- Do not restrict access to taxpayers
- Anything that includes family and food (it attracts)
- More trails
- Educational events
- I have to think about it and look at the brochure
- School presentation and tours
- Love the trails – more walking trails always welcome. Great work with BV Nordic Centre
- Community walks, signage, education
- More work within the schools to promote the idea of foresters.
- Trails with garbage cans; possible tours with guides
- More environmental/cultural education signs
- Summer interpretive events
- More people working, training young people
- More logging/harvesting demonstrations

5. Please use the back of this sheet for any additional comments or suggestions.

- You are generous supporters of the community: Thanks!

## APPENDIX IV

### DESCRIPTION OF PARTICIPANTS

Type of Participant	Number	Gender	
		Female	Male
*Board Members	7	3	4
Past Board Members	4	2	2
WCFC General Manager	1	-	1
WCFC Communications Director	1	1	-
Pioneers of WCFC	2	-	2
Land/Property Owners	2	-	2
Village of Telkwa (VOT) Councillor	1	-	1
Contractor	1	-	1
Community Researcher	1	1	-
An Executive of the OW	1	1	-
District Directors of the Ministry of Forests	2	1	1
Resource User Groups	7	-	7
<b>Total</b>	<b>30</b>	<b>9</b>	<b>21</b>

\* It includes a representative from the office of the Wet'suwet'en

## APPENDIX V

### INFORMED CONSENT FOR PARTICIPANTS



UNIVERSITY  
OF MANITOBA

### NATURAL RESOURCES INSTITUTE

70 Dysart Road, Winnipeg, Manitoba  
Canada R3T 2N2.

General Office (204) 474-7170

Fax: (204) 261-0038

[http://www.umanitoba.ca/academic/institutes/natural\\_resources](http://www.umanitoba.ca/academic/institutes/natural_resources)

Research Project Title: Learning for Sustainability through Collaborative Community-Based Forest Management.

Principal Researcher: Anderson Assuah

Sponsor: Social Science and Humanities Research Council (SSHRC).

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This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

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**Project Summary:** This study is part of requirements to complete a Master's degree in Natural Resources Management, and it is titled, '*Learning for Sustainability through Collaborative Community-based Forest Management*'. There is a growing body of literature that suggests that communities that collaborate to manage the forest to their benefits have the capacity to learn among themselves, and what they learn helps them in managing the forest in a more sustainable way. As a result, I am investigating this community forest to ascertain the validity of these assertions on the ground. The purpose of the research therefore is to investigate the learning outcomes that can result from a collaborative community forest management approach that aims at sustainability outcomes. To achieve this purpose, I have these four objectives: to examine opportunities/platforms that exist for individual and social learning through community forest management; to describe what people (communities and other stakeholders) have learned through their participation in collaborative community forestry efforts; to establish how learning is impacting SFM efforts; and to examine challenges and barriers to collaboration and learning in a community forest management setting. Through this study, I seek to document the learning

experiences of present and past Board and committee members, as well as those of active community members who have been with the operations of the community forest.

**What you are consenting to:** You have been asked to consent for your participation in an interview. You may withdraw your consent at any time. The interview will be recorded with an audio recording device if you consent to the use of one. If you do not wish to have the interview recorded using an audio recording device the interview will be recorded manually. The interview will take approximately one hour to complete. The information you provide during the interview will be transcribed and analyzed with other interview information in order to draw conclusions about the research topic.

**Data Gathering and Storage:** All recordings, notes and transcripts will be stored in password protected computer files and any hard copies will be stored in a locked cabinet. The information resulting from this interview will be kept confidential. If you wish to retain anonymity, a participant number, rather than your name, will be used to identify you on transcripts and any other reproductions of the information you provide. No one other than me will have access to your real name if you choose to remain anonymous. Data collected for the study will be stored for a period of five years, after which they will be destroyed.

**Risk and Benefits:** No information will be used in a way that could put you at risk. You may also choose not to respond to some questions, if you deem them inappropriate, or you can carefully word your sentences. You may benefit from participating in this research project through further exposure to the collaborative management arrangement of the community forest, and possibly learning about what is really working and some challenges that need to be addressed.

**Expected Outcomes:** A Master's thesis, academic publications and presentations would be the result of this study. Once you provide consent for your real name and direct quotations to be used in any publication, no further written consent will be required of you during such publications. If you are interested in receiving a copy of the findings of my research, I will make that available to you.

#### **Feedback/Debriefing**

A summary of the interview and the interview transcript will be sent to a selection of respondents, four months after the interview process has been completed. This will be a request for you to verify and confirm information you shared during interviews. Participants are not required to review the interview schedule. You may withdraw your consent for the use of information at this time. You may do so by informing the researcher that you no longer wish to participate or to have your information used in this study. There will be no negative consequences for this decision - you can withdraw at any time.

**Research Timeline:** Data collection (document review, forest field tours, interviews, focus groups and participant observation) will be carried out during the fall (October to December) of 2013. Over the next several months, I may contact you with follow-up questions, or to ask for clarification or confirmation of the information you have provided.

**Questions:** If you have any questions either now or in the future, please feel free to contact me or my advisor (contacts are provided on the next page).

**Anderson Assuah**

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Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Ethics Review Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

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- Yes, I agree to have the interview recorded using an electronic audio recording device.
- No, I do not agree to have the interview recorded using an electronic audio recording device.
- Yes, I wish to remain anonymous, and my name will not be associated with any of my remarks in the interview.
- No, I do not wish to remain anonymous, and my name will be associated with any of my remarks in the interview.
- Yes, I would prefer to receive the transcript and results of this research.
- No, I would prefer to receive the transcript and results of this research.

I, \_\_\_\_\_ agree to participate in the interview.

Research Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher's Signature \_\_\_\_\_ Date \_\_\_\_\_

Thank you for your time.