

GROWING SOCIOECONOMIC SUSTAINABILITY THROUGH COMMUNITY-BASED FOREST MANAGEMENT IN BRITISH COLUMBIA



BY ANNE ROOBAN



UNIVERSITY
OF MANITOBA

NATURAL RESOURCES INSTITUTE, UNIVERSITY OF MANITOBA

BACKGROUND

In the fall of 2015 and spring of 2016 I visited two Community Forests (CFs) in BC: the Lower North Thompson Community Forest Society (LNTCFS) in Barriere, and the Wells Gray Community Forest Corporation (WGCFC) in Clearwater. I was interested in learning more about CFs while residing in Prince Edward Island and working for a local watershed group. This experience helped me to realize the value of community-based management, and how this approach could potentially lead to better long-term outcomes for the environment and communities. Through a literature review on CFs in Canada, I decided to focus on the socioeconomic benefits that can be realized when communities are given more authority over governance and management of forests.

View near the Wells Gray Community Forest



The purpose of this research was to determine how CFs create socioeconomic benefits through their operations and revenues, and how these benefits help community members create long-term opportunities that support local economies and ways of life.

OBJECTIVES

The objectives were:

- To explore how financial benefits from CF operations and revenues are shared and distributed locally;
- To examine whether Social Enterprise may inform the extent of benefits created for long-term support of local economies and way of life;
- To explore how CFs measure their progress (to ensure future success);
- To identify policy recommendations for CFs and the Province of BC.

The purpose of this document is to summarize some of the findings of this research to share with those who participated and others that might be interested. The full thesis from which this is drawn can be accessed through:

<http://hdl.handle.net/1993/32205>

CONTEXT

Large-scale industrial forestry and global markets have created socioeconomic challenges for rural communities^[1]. Community Forestry (CF) is an opportunity within the Forest Tenure system in BC for communities to run and manage forest operations on Crown land for community benefit, allowing for revenues to be generated and distributed locally^[2]. Many benefits have been realized through CF, such as participation in decision-making, innovation in forest products and practices, economic stability and employment, local socioeconomic benefits and improved ecological outcomes^[1,2,3]. However, there are also challenges which can limit these benefits, such as high start-up costs, working with a small land base, identifying clear goals, and measuring progress, among others^[1,2,3].

Many studies have pointed out a lack of research focused on specific ways that CFs share benefits with the communities they reside in and the effectiveness of these approaches^[4,5,6,7]. Therefore, this research aimed to look closely at two CFs: the Lower North Thompson Community Forest Society (LNTCFS), and the Wells Gray Community Forest Corporation (WGCFC), which includes the Wells Gray Community Forest (2010) Society (WGCFS) and the Community Forest Advisory Committee (CFAC) to consider what kinds of benefits are created, and how they are distributed throughout the communities.

A Social Enterprise (SE) framework was used, in part, to consider these benefits. SE relates to socially-minded businesses that focus on outcomes beyond profitability, such as social well-being or environmental benefits^[8,9]. These benefits may be measured in different ways, such as level of local participation in governance, number of local jobs created, and social return on funds re-invested for community benefit.

Using SE as a lens was helpful because it widens the understanding of benefits created through CF, and ways that challenges can be addressed.

METHODS

THE PROCESS

A case study approach was used in this research, with the LNTCFS and the WGCFC as the two cases. These were chosen through data collected on economic benefits from CFs in BC^[10], and a list of criteria which included operation of a Community Forest Agreement (CFA) tenure for at least 4 years, Annual Allowable Cut (AAC) over 10,000 cubic metres, active pursuit of local community benefits such as local job creation, educational opportunities and recreation, reporting on operational expenditures and revenues through newsletters and annual reports, and a clear process for distribution of revenues for community benefit.

A total of 39 interviews were conducted with forest managers, board members, forest users, local government, contractors, and grant recipients to understand the benefits created from each case CF. Quotes from interviews, alongside information from documents and observations at meetings were analyzed using a computer program (Nvivo), with which I organized the results and recommendations from this research.

Entrance to the LNTCFS



RESULTS

WHAT WAS LEARNED

Three major linkages between Community Forestry and Social Enterprise emerged from the data, which contribute to a broader understanding of the benefits provided through CF:

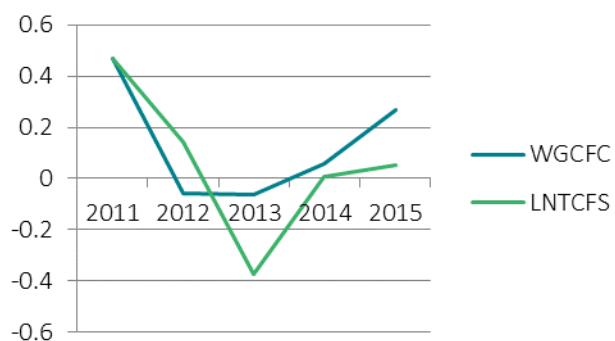
1. **Financial self-sufficiency and creation of local socioeconomic benefits.**
2. **Wider participation in governance and socioeconomic benefits**
3. **Innovative organizational structures and practices leading to new strategies and outcomes**

1.0 FINANCIAL SELF-SUFFICIENCY AND CREATION OF LOCAL SOCIOECONOMIC BENEFITS

1.1 PROFITABILITY

Profitability is a measure of a business's operational success, taking into account expenses and revenues. Profit margin ratio, which is a measure of profitability that demonstrates the percentage of return or profit on each dollar of revenue after expenses, was calculated for each CF from financial statements between 2011-2015, as shown in Figure 1:

Figure 1 : Profit margin ratio measuring profitability for the LNTCFS and the WGCFC from 2011-2015



It was found that low log prices in 2012-2013 significantly affected the operations and profitability of both CFs, demonstrating vulnerability to global markets. Silviculture expenses were also found to take up a significant portion of operating expenses, at 22% for the LNTCFS and 29% for the WGCFC on average for 2011-2015. However, both CFs do earn all their income through operational revenues and are profitable, dependent on the provincial stumpage tax rate which is set at 15% of what industrial tenure holders pay for timber access.

1.2 GRANTS TO COMMUNITY GROUPS

Five general categories emerged from data collected on grant distribution from both CFs:

Community Halls play a very important role in the life and well-being of small communities, and host a wide variety of events and activities. Grants towards community halls were used for key upgrades to the facilities, were important to ensure ongoing functionality and provided opportunities for social interaction and community cohesion.

Little Fort Community Hall



Local First Responders and Fire Departments are volunteer run, so funds from the CF grants provide training and equipment critical for fire protection and safety.

Schools and Educational Programs are supported by CF grants that provide school supplies and equipment for classes and extracurricular activities, bursaries for post-secondary education, and opportunities for summer students to gain work experience. Many participants felt that these sorts of grants increase the quality of education that students receive in rural areas, giving them access to opportunities equivalent to those found in major centers.

Social and Community Service Groups, such as food banks, healthcare and hospice groups, and non-profit senior's homes have received grants from CFs that allow them to fulfill their mandates. It was evident that grants that support community groups build community capacity, foster opportunities and support vulnerable people in both communities.

Gazebo at Evergreen Acres, Clearwater



Recreation is supported through grants towards recreation groups and societies, supporting active living and increased quality of life for local residents. Some examples included hiking and skiing trails, sports uniforms and equipment for schools, support for minor hockey, and curling programs for youth. Many participants mentioned that grants for recreation groups increase accessibility to recreation for community members by keeping costs lower.

Hospital Rim Community Trail, Clearwater



Figure 2 and Figure 3 show the percentage of funds given to these community sectors for each CF between 2011-2015, reflecting community needs and values.

Figure 2 The LNTCFS percentage of grants towards each community sector (2011-2015)

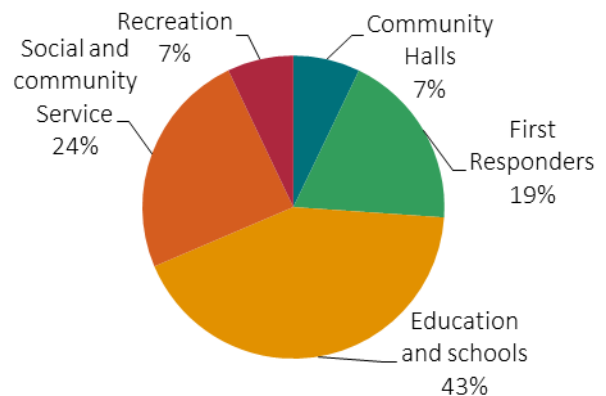
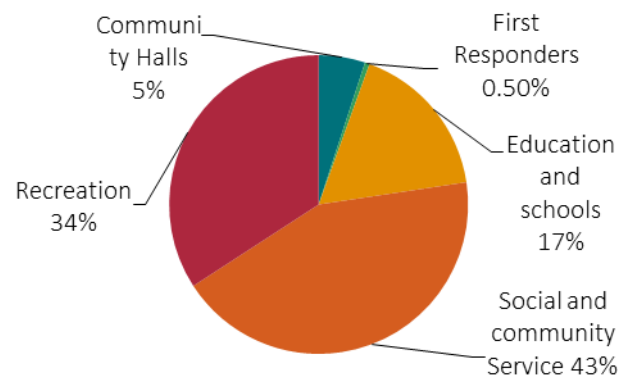


Figure 3 The WGCFC percentage of grants towards each community sector (2011-2015)



2.0 WIDER PARTICIPATION IN GOVERNANCE AND SOCIOECONOMIC BENEFITS

2.1 GOVERNANCE

The volunteer board(s) of directors play an important role in the forestry operations and business for each CF, as well as the distribution of benefits to the community through grants. AGMs, community meetings, local contracting and grant applications are the primary ways in which additional community members become involved with the CFs. Through these avenues, community-specific values are incorporated in management and decision-making.

2014 Community meeting in Barriere



By LNTCFS, Used with permission

2.2 HIRING LOCAL CONTRACTORS

Both CFs aim to provide at least 85% of all contracted work to local contractors through direct and indirect bids, according to written policies.

Local Contractor for the LNTCFS



However one challenge highlighted by participants was that sometimes contractors from outside the locally-defined area had to be brought in for certain jobs where local capacity to adequately complete projects was insufficient, or local expertise was not available, such as silviculture. Additionally, the number of local contractors has been decreasing, reflecting a general trend happening in industry of smaller contractors either closing down or scaling up to become larger companies and corporations over time to meet demand. Finally, the small land base of both CFs is not large enough to sustain local contractors year-round, but has been effective in maintaining business for local contractors during times of low log prices.

2.3 GRANT PROCESS

Grant opportunities from both CFs are advertised in local newspapers and on the CF websites ahead of time with clear deadlines. The application form for both CFs is available for anyone to download from each website, and includes clear guidelines and criteria for eligibility and what information is required. The simplicity of the grant application process was described by a number of grant recipients from both CFs, especially in comparison to applications for funds from other sources. However, some tensions and trade-offs in selecting successful applicants were identified by participants, including how to identify maximum community benefit.

Curling Rink operated by the Barriere Recreation Society



3.0 INNOVATIVE ORGANIZATIONAL STRUCTURES AND PRACTICES LEADING TO NEW OUTCOMES

A common theme in responses from participants was that innovative processes were developed firstly in response to the challenges faced by the loss of forestry jobs in the local area created by changing government policies, and secondly to the challenges presented by meeting the CFA tenure agreement and its many requirements on a small land base. These processes included innovation in securing capital and tenures in the start-up phases of both CFs, as well as strategic planning meetings and documents to guide decision-making. Seven innovative outcomes were identified in this research, and are described below.

The Three Board Governance Structure

comprised of the Wells Gray Community Forest Corporation (WGCFC), the Wells Gray Community Forest (2010) Society (WGCFS) and the Community Forest Advisory Committee (CFAC) was an innovative outcome from the initial committees that were formed to gain the invitation to begin a CF. The WGCFC is responsible for overseeing CF operations, the WGCFS is responsible for grant distribution, and the CFAC is responsible for public involvement and input. Together, all three boards fulfill the mission of the WGCFC and form a framework for the operation and implementation of their mission.

Restricted and Unrestricted Fund Accounting is used by the LNTCFS for operations and distribution of revenue. However, the LNTCFS has reversed the typical designation of restricted funds for donations and unrestricted funds for operations, because their operations must be clearly defined and run according to provincial CFA tenure regulations, and grants and donations may be distributed more generally, for community benefit.

The Expansion and Job Creation Fund created by the LNTCFS is taken from operational revenue which is set aside for an unspecified project to grow the local economy, and also plan for future opportunities. This may include partnership with a new business or industry, or expansion of the LNTCFS land base.

The LNTCFS engages in **Advocacy** for the outlying communities in the partnership. Since these communities are very small and not incorporated, they face unique challenges when trying to raise issues which concern them. Examples of situations that resulted in advocacy include logging by other companies affecting horseback trails, watershed improvements, and lobbying for an official train crossing.

The remaining three innovative outcomes, found to be most significant, are described in depth below in sections 3.1-3.3.

3.1 LAND MANAGEMENT PRACTICES AND SILVICULTURE

Both CFs use a number of operational practices which go beyond CFA tenure requirements and demonstrate long-term investment in the land base. Since the CFA tenure is an area based license, maintaining a healthy land base and enhancing its productivity are key in supporting socioeconomic benefits and sustainability.

One consideration the LNTCFS makes in land management is **Stand Selection**, meaning how forest stands within the tenure are prioritized for harvest. The LNTCFS is able to target stands based on forest health impacts without giving up access to higher quality stands, which is a concern within industry operated volume-based tenures. The security the CFA tenure provides CFs results in improved stewardship of the land base.

The LNTCFS also invests in **Site Preparation** and **Teabag Fertilization** at time of planting. Site preparation involves overturning tree stumps to limit spread of root disease, which can impact stand productivity.

The LNTCFS has also conducted a number of voluntary inventories and measures beyond CFA tenure requirements. Participants shared that having better data about the land base leads to better management decisions. Some of these initiatives are described below.

Terrestrial Ecosystem Mapping (TEM) was used to map ecosystems in sufficient detail and accuracy to be used for ecologically-based site productivity estimates during timber supply analysis. TEM uses direct photo interpretation of ecosystem attributes by mappers, and was completed for the entire CFA tenure in 2012 by Ecora.

An **Archaeological Overview Assessment (AOA)** is designed to identify and assess archaeological resource potential or sensitivity within a proposed study area. An AOA was completed for the entire CFA tenure in 2009, and was funded through the Forest Investment Account (FIA) from the province. This assessment provides recommendations concerning the appropriate methodology and scope of work for subsequent inventory and/or impact assessment studies.

A **Vegetation Resource Inventory (VRI)** is an inventory of forest cover on the land base used to make decisions regarding AAC during timber supply analysis. An updated VRI was completed by the LNTCFS in 2008 using FIA funding.

LiDAR Mapping is a remote sensing technique which provides high quality elevation models and inventory attributes such as streams, stand heights and volumes. The LNTCFS had LiDAR mapping conducted on their CFA tenure in 2014.

Forest stand for FSF investment by the LNTCFS



The **Forest Stewardship Fund (FSF)** is an internally funded initiative that puts operational revenues back into improving the LNTCFS land base as a means of supporting long term improvements to this area. Eligible activities may include one or more of the following activities:

- Rehabilitation of low volume, marginal forest types; ranging from partially subsidizing reforestation costs on marginally economic stands to fully subsidizing stand rehabilitation.
- Incremental silviculture on non-obligated harvested openings.
- Non-obligatory deactivation, maintenance, and/or rehabilitation of non-status roads, or upgrade of previously constructed winter roads.
- Development and maintenance of recreation sites and trails.
- Inventory improvements/assessments (riparian, forest, visual, terrain, wildlife, cultural, etc).
- Fish passage assessments, remediation design, and construction/upgrade works.
- Invasive plant management.

To date, most funds have been spent on rehabilitation of low volume/value stands. A fishing wharf was also installed on Dixon Lake to promote outdoor recreation in the area.

The WGCFC does extensive land planning and mapping within their CF tenure through their **Silviculture and Tactical Plan**, which is a detailed plan being developed that will identify optimal areas to invest in practices such as fertilization and pruning. The plan has already identified some problem forest types within the tenure, which will be addressed through accessing provincial funding, and will create local jobs.

This attention to the land base is also revealed as the WGCFC looks into its AAC and cut control and conducts an **Independent Timber Supply Analysis**. After the pine beetle uplift, the provincial government raised the AAC of the tenure to 33,000 cubic meters from 20,000 cubic meters. The WGCFC plans to confirm that this new AAC is realistic.

Along with TEM and VRI, WGCFC has conducted a **Change of Monitoring Inventory** through establishment of permanent sample plots. This allows the WGCFC to create their own growth curves (how fast timber is growing) generating their own data instead of relying solely on provincial data for management decisions. Participants shared that conducting these inventories gives them a new lens on the land base and confirms ecosystem productivity.

Forest near WGCFC



The WGCFC also funded a **Watershed Assessment** by an independent consultant, to ensure harvesting does not put the community watershed at risk, especially since it is the source of drinking water for the District of Clearwater (DOC). The WGCFC has been putting the recommendations of the assessment into practice, including monitoring peak flow every spring, gravelling sections of the watershed to prevent erosion, and investing in larger cross drain pipes on roads, additional seeding, and re-sloping beyond road permit requirements. Participants emphasized that these practices are not quick fixes, and will ensure long-term watershed health. The investment in a watershed assessment has also allowed the WGCFC to provide the DOC with accurate information regarding watershed health.

Watershed in Clearwater



The WGCFC also invests in **Fire Interface Activities** to protect the community of Clearwater from forest fires. Some of these activities are recommended by a Fire Protection Plan which was paid for by the DOC. Participants believe that CFs will play a huge role in managing and securing funding for forest fire control around towns in BC, tying these forest practices directly into socioeconomic benefit.

3.2 STRATEGIC PARTNERSHIPS TO CREATE WIDER BENEFIT

Strategic partnerships between CFs and other organizations leverage additional resources and funds to create larger projects than otherwise possible. Many kinds of strategic partnerships involving the CFs were developed in each community, shown in Table 1. One example from each is described below.

Table 1 Strategic partnerships between the CFs and community organizations for large projects

Strategic partnerships	LNTCFS	WGCFC
<i>District (Clearwater/Barriere)</i>	✓	✓
<i>Fall Fair and Rodeo</i>	✓	
<i>UBC Students</i>	✓	✓
<i>Job Creation Partnership</i>	✓	
<i>Clearwater Secondary</i>		✓

The Job Creation Partnership (JCP) is funded through the Employment Program of BC by the provincial and federal governments. The goal of the program is to help people gain skills and experience required to enter the workforce, build community capacity, and grow the economy. The JCP has been sponsored by the LNTCFS seven times to date, with an eighth year underway. Participants apply for a year-long term for a given project, and receive maximum funding through Employment Insurance. Safety and skills training is provided to participants by the LNTCFS, and they gain experience through completion of various projects, which have included trail clearing in the area, setting up a geocache system, forestry work within the CF, and building a fishing dock in partnership with a milling and carpentry JCP.

The WGCFS has a strong partnership with the District of Clearwater (DOC) through grants, largely because the DOC provides a means to distribute benefits widely among the community and promote economic development for the area. The DOC has received over ten grants from the WGCFS for various projects. Some of these grants make programming more affordable and accessible for community members by providing equipment or offering facility rentals at a reduced rate. Community trails create more recreation opportunities within Clearwater and increase tourism. A bio-energy system which burns woodchips to heat the Dutch Lake Community Center has provided significant savings to tax payers, freeing up funds for other initiatives. The WGCFS also partners with the DOC on wildfire protection and watershed planning.

Dutch Lake Community Center, Clearwater



Overall, it was found that the benefits with the greatest community impact came through the grants distributed to community groups, strategic partnerships and extra investment in silviculture. Benefits from hiring local contractors were present, but found to be less prominent.

No formal provincial reporting for assessing benefits was revealed for either CF in this research beyond reporting on AAC and silviculture, which was expected going into the research based on discussions with people engaged in CFs. It was in part for this reason that an SE lens was used to consider benefits. It was found SE provided a very relevant framework for enhancing understanding of CF benefit sharing practices and outcomes.

Understanding that the benefits from CFs extend beyond operational profitability and distribution of these profits to the community is key in advocating for continued policy support, and for maximizing socioeconomic benefits through pursuit of various strategies which grow participation and innovation.

Squam Bay Community Center



DISCUSSION

WHAT IT MEANS

LAND PRACTICES

Both CFs invest in forest mapping, land practices and silviculture beyond CFA tenure requirements, ensuring that this land base is healthy and able to provide revenues which generate socioeconomic benefits. However, it was found that these practices took up a significant percentage of overall operational costs, affecting profitability and causing greater vulnerability to market price fluctuations. These costs, in part, may reflect the fact that the CFA tenure is an area-based tenure, giving a high incentive to invest into a local land base to increase productivity and forest health and also ensure the future of the CF. However, operating on a small scale basis under CFA tenure regulations, which requires the same outcomes as industrial forestry operations for meeting AAC and silviculture obligations, makes it very difficult to compete in markets for log sales without specializing. Additionally, CFs must also manage for community specific objectives and values while operating in ecologically sensitive areas, all while promoting community participation and generating social and economic benefits. Other research has confirmed that these challenges are shared among other CFs in the province, and that charging a lower stumpage rate does not fully mitigate the cost of additional silviculture investment and meeting CFA objectives while also sustaining profitability^[7]. Our data confirm the challenges of remaining profitable through small-scale production within a provincial tenure system that includes large forestry operations.

SOCIOECONOMIC BENEFITS

This research found that the CF tenure leaves revenue distribution through grants largely up to CF boards, giving them a greater ability to fulfill needs in ways that are relevant to local realities.

Search and Rescue building, Barriere



Socioeconomic benefits related to hiring local contractors were present, but were limited in the cases by the overall decline of local small contractors, as well as small land base size and AAC, which is not capable of supporting full time forest contract work. However, the LNTCFS through their support of the Job Creation Partnership does help with employment in the area, and WGCFC may benefit from support of a similar initiative to foster capacity and local economic development.

Local participation in governance is supported by the CFA tenure, as demonstrated by board members who show clear commitment to managing the CF land base sustainably and for community benefit. However, participants from both CFs said they struggled to have full representation from outlying communities and First Nations, sustaining participation from the wider public, and creating opportunities for education about forestry. Some of the issues regarding participation stem from the small population to draw from for governance and from existing capacity being directed towards day-to-day activities, such as managing operations and grants. Therefore, both CFs should consider new strategies for recruitment, such as communicating the varied benefits of the CF and potential for innovation.

The support of projects and programs through grants and strategic partnerships builds community cohesion, instilling a sense of greater local control for the future of the areas. However, benefits from grants go towards things that do not directly create new economic opportunities or build capacity of existing community groups. Some grants do support tourism through funding of festivals and recreation, building on existing economies, but not much has developed beyond this. A large reason for this is that the CFA tenure does not provide any support for capacity building for communities as they develop plans and strategies for distributing and generating socioeconomic benefit. Therefore, communities focus on grant distribution without establishing meaningful ways to measure the extent of socioeconomic benefits from any given initiative or to determine which kinds of initiatives are most beneficial long-term. With that being said, the LNTCFS is demonstrating some initial steps towards long-term economic development through their designated fund.

Clearwater Secondary School



SUMMARY

Based on the results above, it seems that operating within the provincial tenure system on a small land base have caused both CFs to shift focus towards achieving socioeconomic benefits through revenue generation and land base management rather than through hiring local people to do forestry work or diversification. Supporting evidence for this view is the lack of diversification beyond timber harvesting, which is a concern already identified among CFs within the provincial tenure system [1, 2, 7, 11].

Participants from both CFs recognized this shortcoming and the need for diversification to ensure long-term sustainability. Achieving this may involve lobbying government for more policy support regarding Non-Timber Forest Products, or finding investors for small business development for processing facilities or log sorting yards. Wider economic development should also continue to be fostered and pursued by both CFs, as it has large potential to increase the sustainability for the area.

To better assess CF progress, capacity building support from the province is required so that communities can develop more effective metrics that fully account for wide scope of benefits generated from CF (such as participation and innovation). For example, the LNTCFS initiatives such as the Job Creation Partnership and the Forest Stewardship Fund provide wider benefits beyond revenues. Finding ways to account for and measure some of these investments and their outcomes will help in efforts to get continued policy support from the province, and maintain support from community members.

This research also highlights the importance of the reduced stumpage rate set by the province for CFs to help ensure their profitability. CFs enhance forest productivity and maintain forest health through engaging in forest practices which go above and beyond CFA tenure requirements. CFs also provide socioeconomic benefits well beyond economic profitability. The value of these benefits should compensate for, or even exceed, income forgone from stumpage. The province should continue to support and maintain lower stumpage rates within the CFA tenure.

Forest stand in the LNTCFS



Finally, despite logistical challenges, both CFs have been successful in growing their operations and distributing revenues as grants to local community organizations within the last five years. They have matured from groups primarily concerned about creating local employment to decision-makers and stewards of the local land base and future of their communities.

FUNDED BY:

Social Sciences and Humanities Research Council of Canada, the University of Manitoba and the Province of Manitoba

REFERENCES:

- [1] Teitelbaum, S. (2014). Criteria and indicators for the assessment of community forestry outcomes: A comparative analysis from Canada. *Journal of Environmental Management*, 132, 257-267.
<http://dx.doi.org/10.1016/j.jenvman.2013.11.013>
- [2] Bullock, R., & Hanna, K. 2012. *Community forestry: Local values, conflict and forest governance*. Cambridge, UK: Cambridge University Press.
- [3] British Columbia Community Forest Association. (2015). *Community forest indicators 2014: Measuring the benefits of community forestry*. Retrieved from <http://bccfa.ca/index.php/about-us/community-forest-indicators-report-2104>
- [4] Beckley, T. M. (1998). Moving toward consensus-based forest management: A comparison of industrial, co-managed, community and small private forests in Canada. *Forestry Chronicle*, 74(5), 736-744. Retrieved from <http://pubs.cif-ifc.org/10.1016/j.jenvman.2013.11.013>
- [5] Benner, J., Lertzman, K., & Pinkerton, E.W. (2014). Social contracts and community forestry: How can we design forest policies and tenure arrangements to generate local benefits? *Canadian Journal of Forest Research*, 44(8), 903-913. <http://dx.doi.org/10.1139/cjfr-2013-0405>
- [6] Bowler, D.E., Buyung-Ali, L.M., Healey, J.R., Jones, J.P.G., Knight, T.M., & Pullin, A.S. (2012). Does community forest management provide global environmental benefits and improve local welfare? *Frontiers in Ecology and the Environment*, 10, 29–36. doi:10.1890/110040
- [7] Furness, E., Harshaw, H., & Nelson, H. (2015). Community forestry in British Columbia: Policy progression and public participation. *Forest Policy and Economics*, 58, 85-91.
<http://dx.doi.org/10.1016/j.forpol.2014.12.005>
- [8] Ridley-Duff, R. (2008). Social enterprise as a socially rational business. *International Journal of Entrepreneurial Behaviour and Research*, 14(5), 291–312.
<http://dx.doi.org/10.1108/13552550810897669>
- [9] Madill, J., Brouard, F., & Hebb, T. (2010). Canadian social enterprises: An empirical exploration of social transformation, financial self-sufficiency, and innovation. *Journal of Nonprofit and Public Sector Marketing*, 12(2), 135-151. <http://dx.doi.org/10.1080/10495141003674044>
- [10] Assuah, A., Sinclair, J.A., & Reed, M.G. (2016). Action on sustainable forest management through community forestry: The case of the Wetzinkwa Community Forest Corporation. *The Forestry Chronicle*, 92(2), 232-244. Retrieved from <http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2016-042>
- [11] Ambus, L., & Hoberg, G. (2011). The evolution of devolution: A critical analysis of the community forest agreement in British Columbia. *Society & Natural Resources*, 24(9), 933-950.
<http://dx.doi.org/10.1080/08941920.2010.520078>