Living up to expectations?
Evaluating harvesting agreements as a governance arrangement for Common Pool Resource management in New Brunswick

Marieke Kessels

Email: m.m.kessels@gmail.com
Address: Willem van Noortplein 4 bis
3514 GK Utrecht

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Supervisor: dr. Frank van Laerhoven, Utrecht University
Second Reader: dr. Pieter Glasbergen, Utrecht University
Canadian supervisor: dr. Stephen Wyatt, Université de Moncton, Canada
Abstract

In the past, scholars have advocated privatization and government control as solutions for sustainable Common Pool Resource (CPR) management in general, and forest management in particular. However, in recent years, new governance arrangements have emerged. Harvesting agreements between the government of New Brunswick and First Nations communities are an example of these structures. The agreements are created in order to promote employment, however, little consideration is given to the degree to which these agreements promote sustainability as defined by social, economic, and ecological indicators. This study seeks to evaluate the success of the harvesting agreements in terms of economic, social, and ecological sustainability and in terms of legitimacy. Representatives of 13 communities were interviewed in order to elicit their opinions on the agreements. While further interviews with representatives of government and industry would help to develop a more comprehensive understanding of the agreements, from this data, it was determined that the agreements should not be considered a successful strategy for CPR management from the perspective of First Nations communities in New Brunswick.
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1. Introduction

1.1. Problem definition & Knowledge gap

Forests are an important natural resource, both economically and ecologically. People depend on forests for their livelihoods and for ecosystem services. Because of this, forest governance has been widely studied, particularly by Common Pool Resource (CPR) scholars. While CPRs are often subject to the Tragedy of the Commons, rules regarding use and ownership can prevent this. Fiscal deficits, aid from international donors that is tied to local actor involvement, and the desire of indigenous groups to gain greater control over their lands have resulted in governments extending rights to govern forests to a large number of actors (Agrawal, 2007). While in the past, scholars have advocated privatization and government control, more recently, forest governance has evolved to include market actors and civil society as well as government. Canada is home to 10 percent of the world’s forests (Natural Resources Canada, 2012), and the Province of New Brunswick is considered to be the most important player in the forest industry in Atlantic Canada (Wilson & Graham, 2005). Among the governance arrangements that have come about as a result of the inclusion of market actors and civil society actors in New Brunswick are harvesting agreements negotiated between the provincial government and indigenous communities. Despite the emergence of these agreements as a means of CPR management, relatively little attention has been paid to how well they are performing this function. The success of these agreements has not be examined in terms of social, economic, and ecological outcomes, nor have they been evaluated in terms of legitimacy. This represents a significant gap regarding knowledge in CPR management.

1.2. Research objectives

Given the knowledge gap described above, the central aim of this research is to do the following:

To contribute to the literature on Common Pool Resource management by means of an in-depth investigation of the harvesting agreements between the provincial government of New Brunswick and its Aboriginal communities.

In addition, the research also aims to:

Provide the Assembly of First Nations Chiefs of New Brunswick (AFNCNB) with information concerning the effectiveness of the harvesting agreements in New Brunswick in meeting the expectations of First Nation communities.

1.3. Research questions

In order to meet the above stated research objectives, the following central research question has to be answered:
How successful are the harvesting agreements as a governance solution for Common Pool Resource management in New Brunswick?

This central question consists of multiple subquestions:

- What do the harvesting agreements in New Brunswick entail?
- How sustainable is CPR management in the case of New Brunswick?
- To what extent do the harvesting agreements result in sustainable CPR management in New Brunswick?

1.4. Scientific relevance

By examining the success of New Brunswick’s harvesting agreements, this study will contribute to research evaluating governance arrangements for CPR management. In particular, there have been no studies of agreements as a means of regulating forest use. In a review of the central concerns and findings of scholarly writing on forests, Agrawal (2007) found that further research comparing different systems of governance—and thereby attempting to identify their specific strengths under specific circumstances—would be welcomed by scholars of forest commons. In keeping with this finding, analysis of these specific agreements will contribute to knowledge regarding what arrangement works best for what circumstances.

1.5. Societal relevance

Forests are essential for both economic development and environmental services including wood products, carbon sequestration, and biodiversity. Increasing populations put pressure on forests as people demand more land for agriculture and wood products for development. Given the potential conflict between use of forest resources for economic development and the need to preserve the environment, it is important to study arrangements that can help to balance these conflicting forces.

In the more local context, the government of New Brunswick uses agreements as a means of managing important forest resources. It is therefore in the interest of both governments and other stakeholders to understand the strengths and weaknesses of such agreements. While the New Brunswick Department of Natural Resources (DNR) collects some information relating to the volume and the value of timber harvested by the First Nations, there has been no attempt to assess the broader benefits and outcomes of these agreements since they first came into place in 1997. The current (2007-2012) agreements are scheduled for renegotiation later in 2012. Therefore, this study has the potential to provide information to policy-makers regarding the degree to which these agreements are contributing to environmental, social, and economic prosperity. Such information may help frame the upcoming negotiations in a more meaningful way.
1.6. Research outline

The following chapter consists of a review of the literature that establishes the theoretical background to this thesis. In the third chapter, the materials and methods used for answering the research questions presented above will be elaborated on. The fourth chapter discusses the contextual background of the research project, including forest management practices in New Brunswick and the policy outlining Aboriginal involvement therein. The empirical results of this research will be presented in chapter 5, and finally chapter 6 presents the conclusion as well as a discussion of the results in terms of their limitations and generalizability, and the implications they have for further research.
2. Literature review

2.1. Forest resources & the ‘Tragedy of the Commons’

Forests are frequently studied as Common Pool Resources (CPRs) when they share two important characteristics: a high level of subtractability and a high level of excludability. Subtractability refers to the fact that one person’s harvesting of forest products reduces the availability of these products for others. Excludability can be understood as the difficulty of excluding potential beneficiaries from access and use of the forest.

These characteristic mean that forests (and other CPRs) are subject to what Garret Hardin (1968) refers to as the ‘Tragedy of the Commons’. Hardin’s basic premise was that if individuals use a scarce resource in common, this would ultimately lead to the destruction of the resource because individual users gain the full benefits of using the resource but only bear a portion of the costs resulting from overuse (Ostrom, 1990). The destruction or degradation of forest resources is most likely to occur in open-access forests, where no arrangement to govern the forest has been established (Ostrom, 1999).

According to Hardin, the tragedy of the commons could only be avoided by either converting the resource into public or private property. This reasoning has influenced both scholars and policy makers concerned with natural resource management over the past four decades. However in the early 1990s, after studying a broad range of cases, Elinor Ostrom found that “communities of individuals have relied on institutions resembling neither the state nor the market to govern natural resources with reasonable degrees of success over long periods of time” (Ostrom, 1990: 1). In the next paragraphs, each of these solutions will be examined more closely.

2.2. Different approaches to sustainable forest use

2.2.1. Government regulation

Starting from the notion that in the absence of an external enforcer, the depletion of a resource is inevitable because the natural tendency of each rational individual is to free-ride, government regulation is considered to be an appropriate approach to prevent this from happening. In this scenario, the government develops systems of rules and decision-making procedures to govern the use of a resource in such a way that protects it from the destructive consequences of unregulated human actions (Young, 2011). Taxation provides the government with the financial means necessary to enforce these rules. While approximately 77 percent of the world’s forests is owned and administered by governments (White & Martin, 2002), critics of this approach have pointed out that it has potential limitations of its own.

According to Young (2011), three concerns stand out. The first concern is related to the potential for gridlock that exists in the policy-making process where multiple players and accordingly multiple interests make it difficult to create winning coalitions. “Perhaps the
most common outcome in such situations is a strong preference for the status quo, whether or not this is conducive to the pursuit of sustainability” (Young, 2011: 74). Corruption, the second concern mentioned by Young, is related to the fact that in the policy-making process the interests of certain user groups may receive favoritism over others. This practice is particularly worrisome in the case of natural resources where the resource itself is often not represented at all or is represented by a group with less leverage than the industries that rely on these resources as a source of income. The final concern, which Young dubs institutional arthritis results in a perpetuation of the status quo over outcomes that favor sustainability, as is the case with gridlock. However, in the case of institutional arthritis, it is caused by the entrenchment of defenders of the status quo in bureaucracies responsible for legislation and implementation of policies.

2.2.2. Privatization

Privatization of a CPR entails that ownership of a natural resource is transferred to a market party. The rationale underlying this approach being that because the owner directly experiences the costs and benefits of his decisions, he will protect and manage the resource wisely (Gibson et al., 2002). In addition, since property rights under this approach are well-defined, there would be no need for the user to exploit the resource in a short period of time for fear of others using up the resource.

According to economic theory however, the owner of the resource will try to maximize the return on his resource. In the case of a forest, this would imply that if the forest is more valuable to the owner as timber than as standing forest, trees will inevitably be cut down (Gibson et al., 2002). Young (2011) refers to this potential limitation of privatization for sustainable resource use as an act of “killing the goose that lays the golden egg”. The resource is used up in its entirety because this is the most profitable option for the owner. This strategy is especially appealing to the owner when the resource concerned grows or develops slowly (Young, 2011), as is the case with forests. A second concern regarding privatization discerned by Young is related to the failure to consider non-market values. In the case of forests, this entails that the owner favors certain uses (e.g. the production of timber or pulp) over others (e.g. ecosystem services) (Young, 2011). Young’s final concern with bringing natural resources under private property are the unintended side-effects that accompany this alternative in the form of negative externalities. These can occur on both a micro- and a macro- level. An example of a negative externality on the micro-level would be the loss of forests products used for traditional medicine by certain cultural groups as a result of clear-cutting. On a macro-level a prominent example concerns increased carbon-emissions resulting from the destruction of forests.

2.2.3. Community-based governance

Opposing classical economic perspectives which posit that solutions to the tragedy of the commons can only be found through the state or private enterprises, Elinor Ostrom and other commons scholars have set out to identify the conditions under which groups of individuals can organize themselves to ensure optimal and sustainable exploitation of natural resources without degrading them over longer periods of time.
Commons scholars frame the regulation issue as a joint action problem for a community and for this reason focus on identifying variables that lower the transaction costs of organizing and executing collective action in CPR governance. Following the Institutional Analysis and Development (IAD) framework (Ostrom, 2005), a distinction can be made between four clusters of variables; characteristics of the community, attributes of the CPR, the specifics of the relation between the CPR and the community, and the external environment. With a focus on forests as the CPR, an overview of findings for each cluster is presented below.

With regards to the first cluster, characteristics of the community, the size of the group that is expected to act collectively has been identified as an important variable. Generally, empirical findings for this variable show that the smaller the group, the higher the chances that collective action will come about. Homogeneity of the group has also been identified as an important variable that can lower transaction costs as it makes it easier to anticipate other group members’ behavior. The final community characteristic to be mentioned here, social capital, can be understood as frequent face-to-face communication between participants and dense social networks (Dietz et al., 2003). Findings show that social capital increases the trust between the participants which in turn is found to lower the transaction costs of organizing collective action.

Regarding the attributes of the forest, forest size and the actual condition of a forest are two important variables that have been found to influence the ability to organize collective action. A forest that is in a poor resource condition will be more difficult to manage than one that is in a good condition.

The third cluster involves the relationship between the forest and the community. A prominent finding in this regard is the positive correlation between the degree to which community members depend on forests for their livelihoods and the chance that groups will overcome collective action dilemma’s. So the higher the dependency of community members on forests for their livelihoods, the more likely it is that successful collective action will come about.

With regards to the fourth cluster, the external environment, it has been argued that autonomy to govern the forest matters as it is less costly to organize collective action when its purpose is legitimate (van Laerhoven, 2010).

While research from commons scholars has proven that under the right conditions communities are capable of avoiding the tragedy of the commons, this approach faces some theoretical and practical concerns of its own. First of all, there exists considerable debate amongst commons scholars about how certain variables affect the prospects for collective action (Poteete and Ostrom, 2004). Regarding group heterogeneity for example, “some hold that heterogeneity leads to uncertain policy outcomes, while others predict that heterogeneity is beneficial to collective action, since it leads to certain group members having a relatively stronger interest in providing the collective good, hence increasing the likelihood that they will contribute disproportionally to its provision” (van Laerhoven, 2010: 541). A second concern of a theoretical nature is the fact that little consensus exists on the
nature and significance of interactions between the different variables expected to influence collective action (Poteete and Ostrom, 2004). For example, when the size of the forest under governance is disproportionate to the size of the group, the likelihood of collective action actually decreases. These two theoretical concerns limit the comparability of empirical research in the field and thereby the inferences that can be drawn from it (Poteete and Ostrom, 2004). The final and most important concern for the purpose of this paper is that pure forms of community based governance, where ownership of a resource rests entirely with a group of individuals, are rare in modern day society. Since community as a solution for CPR management has only recently regained recognition after largely having been replaced by either the state or the market (Agrawal & Gibson, 1999), arrangements where community and either one or both of these parties play a role in the governance of a resource are now much more common. As was mentioned above, the presence of government or market parties can undermine community autonomy thereby affecting the legitimacy of a governance arrangement. However, it should be mentioned that considerable debate exists about the way in which this variable effects the prospect for collective action. Some authors argue that their presence can actually be conducive to community forest governance, for example when a government provides institutions for conflict resolution (Agrawal, 2001; Baland and Platteau, 1996 in van Laerhoven, 2010).

2.3. **Hybrid governance arrangements & property rights**

Associated with the process of globalization is the shift from “government to governance”. While government is understood to refer to “the formal and institutional processes which operate at the level of the nation state to maintain public order and facilitate collective action”, governance refers to “the development of governing styles in which boundaries between and within public and private sectors have become blurred (Stoker, 1998, p. 17).” A search for new institutions, partnerships, and governance mechanisms emerged as state-centered (inter)national regimes are no longer deemed adequate in addressing many of the global problems the world is faced with nowadays (Lemos and Agrawal, 2006). This transformation from a state-centric to a multi-centric structure can also be observed in forest governance (Visseren-Hamakers & Glasbergen, 2007). Pressures from a number of sources, such as fiscal deficits, aid from international donors that is tied to local actor involvement and pressures from communities and indigenous groups to gain greater control over their lands have resulted in governments extending rights to govern forests to a large number of actors (Agrawal, 2007).

However, the degree to which rights are extended to actors outside of the realm of government under these hybrid governance arrangement varies greatly. The taxonomy of property rights that was introduced by Ostrom and Schalger (1992) can serve as a useful framework in determining the degree to which rights are extended under a particular arrangement. Ostrom and Schlager distinguish between four positions that parties to a governance arrangement can hold: owner, proprietor, claimant, and authorized user. The position an actor holds within a governance arrangement is determined by the rights they can exercise. A collection of rights is referred to as a *bundle of rights*. The bundles of rights identified by the framework are as follows. The right to access and withdrawal, implies that
an actor is allowed to both access and withdraw certain resources from a CPR. Management rights entail the ability to determine how resources are used and the right to make improvements to the resource. Exclusion refers to the right to dictate what other actors can enter the resource. Finally, alienation is the right to transfer management and exclusion rights to other parties through sales or lease arrangements. Table 2.1 describes the four actor positions in terms of the rights they hold.

<table>
<thead>
<tr>
<th></th>
<th>Owner</th>
<th>Proprietor</th>
<th>Claimant</th>
<th>Authorized user</th>
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<tbody>
<tr>
<td>Access and Withdrawal</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Management</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Exclusion</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
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<tr>
<td>Alienation</td>
<td>x</td>
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</table>

Table 2.1 Bundles of rights associated with positions

Source: adapted from (Schlager & Ostrom, 1992)

### 2.4. Agreements

For the purpose of this research, an agreement is defined as a formal arrangement between a community and the government. Such agreements stipulate the rules concerning resource use with the purpose of ensuring sustainable management of the resource. Besides in New Brunswick, an example of such agreements can also be found British Columbia, Canada, where a Community Forest Agreement (CFA) stipulating the rules concerning the use of forest resources was introduced in order to increase participation of communities in management of local forests (Ambus & Hoberg, 2011).

### 2.5. Sustainability

The three fundamental components of sustainability as expressed in the Brundtland Report, *Our common future* (1987), are the environment, the economy, and society (Du Pisani, 2006). This so called triple bottom line has found its reflection in natural resource management where practices are considered to be sustainable when they are economically viable, and both ecologically and socially responsible. However, the success of a governance arrangement for natural resource management ultimately depends on whether the approach is accepted by the target population of the arrangement. (Thoms and Betters, 1997). Therefore, in evaluating agreements as a governance arrangements for Common Pool Resource management, attention will have to be paid to the extent to which resource users consider the arrangement legitimate in addition to their performance in terms of the triple bottom line.
3. Materials and Methods

3.1. Case selection

The research strategy employed in order to critically examine the harvesting agreements in New Brunswick as a governance arrangement for CPR management is a case study. A case study can be understood as “an intensive study of a single phenomenon for the purpose of understanding a larger class of (similar) phenomena (Gerring, 2004).” Considering that the harvesting agreements have not yet been comprehensively analyzed as a governance arrangement for CPR management in New Brunswick, this research has a clear explorative character. This implies that depth rather than breadth is sought after and for this purpose, case studies enjoy a natural advantage (Verschuren & Doorewaard, 2005). With regards to the strategy for selecting cases, the exploratory nature of this research requires that as much insight as possible is gained regarding the workings of the harvesting agreements in New Brunswick in order to ensure that the results from this research are representative. The aim was therefore to include all the First Nations communities that have signed the harvesting agreement with the provincial government in this study.

3.2. Research design

Two types of evaluation methods were used to establish the extent to which the harvesting agreements in New Brunswick result in sustainable CRP management. An evaluation based on a comparison in time was used to establish the extent to which the harvesting agreements in New Brunswick result in sustainable CPR management with regards to the following sustainability indicators; economic viability, environmental viability, and social responsibility. As a first step, the degree to which each of these indicators are present under the current harvesting agreement was determined. As a second step in the process, the degree to which these indicators were present under the previous agreement(s) was established. As a final step in the process, it was determined whether a difference in the degree to which these indicators were present at the different points in time could be attributed to the harvesting agreements. With regards to the fourth indicator, legitimacy, an evaluation based on a comparison to an ideal typical situation was employed in order to establish the extent to which the harvesting agreements in New Brunswick result in CPR management. First, the expectations that First Nations communities have in relation to forest management were established. As a second step in the process, the degree to which these expectations are met under the current harvesting agreements was determined. As a final step in the process, it was determined whether the outcome of the first two steps could be attributed to the harvesting agreements. The ways in which data was collected for these two evaluations will be elaborated on in paragraph below.
3.3. Data collection

Approval for this research by the Assembly of First Nations of Chiefs of New Brunswick was sought beforehand in order to increase the likelihood of cooperation by all 15 communities. As a result, in the summer of 2011, visits were made to 13 communities in order to obtain the necessary data for this research. During these visits, interviews consisting of three sections and lasting approximately 60 minutes were held with the forestry coordinators of the respective communities. The choice for interviewing the forestry coordinator was based on the fact that this is the person responsible for the decision-making regarding forestry in each community. To facilitate the analysis of the data later on, the interviewees were asked permission to record these interviews. In addition, the researcher holding the interviews signed a document ensuring anonymity for each interviewee in order to maximize the liberty perceived by the interviewee to answer the questions without constraints. Throughout this report, an identification code in the form of F1, F2, F3, etc., each representing a forestry coordinator, has been used to show the reader that the citations in this report are traceable to its author whilst at the same time ensuring the anonymity of the interviewees.

The first part of the interviews consisted of 4 close-ended questions in order to identify the tangible benefits—if any—the First Nation has obtained under the current harvesting agreement. Close-ended questions were the appropriate choice since factual knowledge was sought after in this part of the research.

For the second part of the interviews, 4 open-ended questions were asked in order to identify the perceived strengths and weaknesses of the harvesting agreements according to the interviewee. In this case, the use of open-ended questions allowed the interviewee the scope to give the information that seems appropriate to him.

The third part of the interview was concerned with establishing Aboriginal expectations relating to forest management and their relative importance as well as the extent to which these are currently being met. First the interviewees were asked to group 16 cards with Aboriginal expectations relating to forest management into four categories of importance: most important, moderately important, low importance, and not important. The expectations were drawn from a previous study that was conducted in Ontario, Canada (Kant & Brubacher, 2008) and have been adjusted to the specific context of New Brunswick for the purpose of this research. Empty cards were provided as well, in case the interviewee found that an expectation was missing in the list of sixteen provided to them, but this situation did not occur. Once all expectations were grouped into the four categories, the interviewees were asked to once again sort each pile according to their importance, which lead to a ranking of the 16 cards from highest to lowest in terms of their relative importance. Second, the interviewees were asked to indicate the extent to which each expectation is met by sorting the cards into 6 categories: fully met, mostly met, some met, only a little bit met, not met at all, and don’t know.
3.4. Operationalization of variables

3.4.1. Economic viability

The degree to which CPR management under the harvesting agreements can be considered economically viable will be measured by three indicators; revenue in terms of royalty payments, employment numbers, and organizational structures for the harvesting operations. With regards to the first indicator—revenue in terms of royalty payments—these are considered to be an important source of income for the First Nations communities. When harvesting trees on Crown land, individuals and firms are required to pay a fee to the Provincial government based on the volume of timber that has been cut. In the case of the First Nations, it is the primary license holder that pays the royalties over the community’s allocation to the provincial government. The DNR in turn pays an equivalent amount over to the First Nation. However, if a community fails to harvest their allocation, no royalty money will flow back to them. The reason for including employment numbers as an indicator for economic viability is because employment creation was identified as the primary objective of the harvesting agreement. The third indicator, organizational structures for the harvesting operations, refers to the way in which the communities manage their harvesting operations under the agreement. If the work is partly or entirely outsourced to other parties, this is expected to influence the employment opportunities for community members under the agreement.

3.4.2. Ecological responsibility

Considering the fact that the ultimate goal of CPR management is to ensure the long-term sustainability of natural resources, the degree to which forests are managed in a sustainable way under the harvesting agreement will therefore serve as the indicator for measuring the degree of ecological responsibility of CPR management under the agreements.

3.4.3. Social responsibility

In order for a governance arrangement to fulfill the requirement of social responsibility, it has to address two central issues. On the one hand, it has to allow for participation of groups that hold a stake in the arrangement and on the other hand, it has to ensure that the arrangement does not negatively affect these groups (Bryson, 2004). For this reason, the degree to which CPR management under the harvesting agreement can be considered socially responsible will be measured by means two indicators. The first indicator, Aboriginal involvement in forest management, will be used to measure the degree to which the First Nations are actually allowed to participate in CPR management under the harvesting agreements. In order to establish whether CPR management under the harvesting agreements respect the rights of communities, the second indicator concerns the degree to which Aboriginal and Treaty rights are recognized under the agreement.

3.4.4. Legitimacy

As has become clear from the literature review, the success of a governance arrangement for natural resource management ultimately depends on whether the approach is
considered as legitimate by the resource users. For the purpose of this research, the degree to which CPR management under the harvesting agreements is considered as legitimate by the communities will be measured by the level of congruence between the harvesting agreements and the expectations that the First Nations have in relation to forest management in New Brunswick. By establishing the Aboriginal expectations regarding forest management, simultaneously, insight will be gained with regards to the relative importance First Nations attach to the three other indicators for sustainable CPR management.
4. Contextual background

The following chapter provides the contextual background necessary in order to answer the first subquestion presented in the introduction; *What do the harvesting agreements in New Brunswick entail?* The first section will provide a background to the study location. The second section will deal with the way in which forests are being managed in New Brunswick. The following section will provide information regarding the Aboriginal Peoples that are living in New Brunswick. The final section will give the reader a detailed description of the harvesting agreements themselves.

4.1. Background to the study location

![Map of New Brunswick](image)

**Figure 4.1 Map of New Brunswick**

Source: Greenwich Mean Time, 2012

The province of New Brunswick covers a total amount of 73,440 square kilometers (Government of New Brunswick, 2012a) and is located in Eastern Canada, bordering two other Canadian provinces, Quebec and Nova Scotia, and the U.S. state of Maine. Currently, it has a population of 751,171 (Statistics Canada, 2012) and it is the only Canadian province that recognizes both French and English as its official language.

Before the French colonization in the early 1600s, the land was inhabited by the aboriginal nations of New Brunswick, which include the Mi’kmaq and Maliseet people. After multiple conflicts between the French and the British empires during this century, the region was ceded to Great Britain in 1710 (Government of New Brunswick, 2012c). New Brunswick
remained a British colony until the Canadian confederation in 1867 when, together with Ontario, Quebec and Nova Scotia, it formed the federal Dominion of Canada, which would later come to include all of Canada's current provinces and territories.

Although service-based economies dominate New Brunswick's modern urban areas, primary industries such as forestry, fishery and mining still play an important role in the rural parts of the province. With an Annual Allowable Cut (AAC) that accounts for nearly 5 percent (11 million cubic meters) of Canada's total AAC, New Brunswick is considered to be the most important player in the forest industry in Atlantic Canada (Wilson & Graham, 2005).

4.2. Forest management in New Brunswick

With regards to the ownership of its forestland, New Brunswick differs from most other provinces due to the relatively large percentage, about 50 percent, that is privately owned. In addition, through so-called Crown Timber Licenses, the provincial government has delegated the responsibility for managing the remaining half of the forests to the private sector. In return for payments such as royalties, stumpages and land rent to the provincial government, the private sector receives harvesting rights and management responsibilities. As a result of these tenure arrangements, more than two-thirds of New Brunswick's Crown land is currently under the control of six multinational corporations (Blakney, 2003). These Crown timber license holders—or primary licensees—in turn are obliged to contract out a certain volume of their allocation to sub-licensees.

Currently, the forest products industry in New Brunswick suffers from a general downturn in the market. As a result of a downturn in the North American housing market, a strong Canadian dollar and increased competition from South-America and Asia, the market value of Canada's forest products has decreased by 47 percent in the period 2004-2009 (Canadian Chamber of Commerce, 2012).
4.3. Aboriginal Peoples in New Brunswick

There are 15 Mi’kmaq and Maliseet First nations situated across New Brunswick with a combined population of 17,655\(^1\), representing 2 percent of the national total of Aboriginal peoples (Wyatt et al., 2010). Disputes relating to community members’ rights to natural resources off-reserve such as wood have led to a number of court cases over the past two decades. In the 1997 court case, Regina v. Paul, Justice Turnbull ruled that the Mi’kmaq and Maliseet of New Brunswick were entitled to harvest Crown resources. Even though the New Brunswick Court of Appeal later overturned this ruling, it did lead to the establishment of the interim harvesting agreements.

\(^1\) The number reported here is from the 2006 Census. Data regarding New Brunswick's Aboriginal population from the 2011 Census have yet to be released. As such, this number cannot be used to calculate the percentage of New Brunswick's population that is of Aboriginal descent in 2011.
4.4. The harvesting agreements

These agreements, between the province and the Aboriginal communities allocated 4.4 percent of the annual allowable cut from public forests to Aboriginal communities on a per capita basis (Wyatt et al, 2010). In reality, this entailed a reallocation from land previously under control of the private sector through Crown forest tenures to the First Nations. The first such agreements applied for only one year but they have been renewed for five-year periods since. A generic copy of the current (2007-2012) agreement has been included as an appendix.

As stipulated in the document, the primary objective of the harvesting agreement is to provide employment opportunities for First Nations’ people. However, the harvesting agreements also generate revenue for the communities in terms of royalty payments. When harvesting trees on Crown land, individuals and firms are required to pay the provincial government a fee based on the volume of timber that has been cut. In the case of the First Nations, the primary licensee pays the royalties over the community’s allocation to the provincial government. The DNR in turn pays an equivalent amount over to the First Nation. If a community fails to harvest their allocation themselves or to have it done by others, no royalties will flow back to them.

In addition, it is stipulated in the agreement that failure to adhere to the sustainable forest management practices defined in the licensee’s management plan will result in financial penalties.
5. Results

In the following chapter, the outcomes regarding the level of sustainability of CPR management in the case of New Brunswick will be presented per criterion that resulted from the literature review; economic viability, environmental responsibility, social responsibility and legitimacy. In the preliminary conclusion following the results for each criterion, the extent to which the harvesting agreements are responsible for this result will be discussed. This chapter will thus provide the answers to both the second and the third subquestion presented in the introduction.

5.1. Economic viability

Revenue in terms of royalty payments, employment numbers, and organizational structures for the harvesting operations were analyzed in order to assess how sustainable CPR management is in terms of economic viability under the current harvesting agreements in New Brunswick.

5.1.1. Revenue in terms of royalty payments

In order to gain an insight into the yearly royalty income of the First Nations under the current harvesting agreement, the amount of royalties that each community receives was determined. While some interviewees were willing and able to provide exact amounts, others did not feel comfortable reporting financial details. This response was anticipated, therefore, interviewees were only asked to report an estimate of the yearly royalty income their community receives.

Figure 5.1 presents an overview of the approximate amount of royalty payments that the communities receive per year under the current harvesting agreement. The DNR collected data about royalty payments over the previous harvesting agreement (2002-2007). Total revenue for all communities as reported by informants under the current harvesting agreement was $1.766,000 while DNR reported an annual average of $2.357,000 for the previous agreement. Although this number is significantly lower than the figure reported by the forestry coordinators, it should be seen in the context of a depressed timber industry in New Brunswick. The large disparity in royalty income between the different communities results from the per capita nature of the harvesting agreement. The more members a community has, the larger the share of the total allocation available under the harvesting agreements it receives.

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2 An employee from the DNR provided the researcher with this data.
Besides the data collected on the amount of royalties that they receive, some interviewees also elaborated on the different ways in which their community benefits from the harvesting agreement. From this, three categories can be derived.

The first category is related to the ways in which the community benefits from the royalty payments themselves. One interviewee (F3) indicated that the royalties that his First Nation receives goes to social programs, sports and pow-wow, thereby ensuring that the entire community can reap the benefits from the royalty income. A forestry coordinator (F9) from another community indicates that, although the harvesting agreement does not provide employment for any of the FN members, the royalties that the Band receives under the agreement are used to create employment for community members in other areas. A third community (F12) reported that the largest part of the royalties goes to assisting elders in the community who, as a result of changes in both provincial and federal government, no longer qualify for certain assistance programs. With the royalty income from their softwood allocation, one community (F5) has recently purchased a processor that they use to cut and split up their hardwood allocation to distribute as firewood to the community members living on reserve, the underlying idea being that the entire community should benefit.

Related to this is the way in which some communities indicate they benefit from the actual allocation that they receive under the harvesting agreement, particularly the hardwood. By keeping their hardwood allocation themselves, the community that owns the processor is able to provide its community members with firewood. Another community (F6) has reported that they have their hardwood allocation trucked to the reserve and chopped up for it to be distributed as firewood for the people on reserve.

The final category that was mentioned is economic benefits related to employment and development. Two communities (F8 & F13) have indicated that members of the FN are
benefitting because the harvesting agreement provides employment for some of them while one interviewee (F2) specifically reports economic development as a benefit resulting from the harvesting agreement.

“As far as the community goes, yes we have benefitted because we had 4 crews out last year and this year we are getting 3 or 4 crews out again. So as long as the First Nation gets the royalties of the wood that is cut, the community members will benefit from the agreement.” (F13)

5.1.2. Employment

In order to gain insight into the extent to which the current harvesting agreement provides employment for First Nations’ people, which was its primary objective, the forestry coordinators were asked how many members of the community have been employed as a result of the current harvesting agreement. In addition, respondents were asked whether these jobs were full-time or part-time. Only community members who were employed for 8 months or more per year were counted as full-time employed\(^3\). Figure 5.2 provides an overview of the current employment under the harvesting agreement for each community as reported by the interviewees.

![Figure 5.2 Current employment as a result of the harvesting agreement](image)

According to the forestry coordinators, the current harvesting agreement has resulted in 32 full-time and 34 part-time jobs for members of the communities. Data regarding

\(^3\) In New Brunswick, harvesting operations are not conducted in spring conditions when snow is melting and roads are thawing in order to prevent damage to the roads or the environment.
employment provided by DNR\textsuperscript{4} does not distinguish between part-time and full-time jobs but a total of 353 jobs was reported for the 2002-2007 period. When asked about current employment levels, 11 out of the 13 communities reported a significant drop of employment numbers over the duration of the current 5-year harvesting agreement. For example, one interviewee (F3) reported a drop from 39 community members being full-time employed in the first year of the current harvesting agreement (2007-2008) to a total of 6 full-time employed members currently (2011-2012). All interviewees indicate that the state of crisis in the forest products industry and a decreased demand for paper and pulp are major causes of this drop in employment.

Some interviewees also indicate that the decision by the DNR to stop appointing DNR coordinators in each region has negatively influenced employment numbers. These interviewees considered that this has forced them to deal with the licensee directly rather than having the DNR coordinator to help them. As far as the interviewees could tell, budget cutbacks at DNR were the reason coordinators could no longer be appointed.

“\textit{What has happened is that rather than dealing with the Province, we are dealing with the licensee now and the licensee does not want us in the woods. They want use gone.}” (F4)

In particular the assignment of blocks by the licensee seems to have an impact. The licensee has to assign the blocks where the First Nation can harvest before the community members can start cutting. One interviewee (F4) indicated that sometimes blocks are assigned as late as September or October, reducing employment opportunities before that time. In addition, the farther away the assigned blocks are, the higher the costs (e.g. fuel for transportation) for community members that might otherwise want to engage in harvesting operations.

With regards to the forestry coordinators themselves, several of them indicate that they only consider themselves to be part-time employed under the harvesting agreement. One interviewee (F9) does not even consider himself as employed under the agreement at all.

\textbf{5.1.3. Organizational structures for harvesting operations}

Related to the primary objective of providing employment opportunities is the way in which the communities handle the harvesting operations. Therefore, the interviewees were asked how the FN manages the harvesting operations under the current harvesting agreement. A categorical overview of the answers given is presented in table 5.1 below.

\footnote{\textsuperscript{4}Again, the researcher was provided with this data by an employee from DNR.}
What stands out from these results is that in almost half of the cases (6 out of 13) the big companies or the licensee is concerned with harvesting either the entire allocation (4 out of 13) or part of it (2 out of 13). In addition, in 3 out of the 13 cases a local non-Aboriginal contractor is involved in the harvesting operations. In only 4 out of the 13 cases a First Nation controls the entire harvesting operation. Interviews provide some indications as to why so few communities manage their own harvesting operations for timber provided under the agreement.

Firstly, the most prominent explanation that the interviewees offer is that their allocation is too small, making it unprofitable to cut it themselves with the conventional harvesting methods that all the communities employ (i.e. harvesting by means of chainsaws and skidders). In addition, the industry dictates that all the wood should be ‘clean’, meaning without stumps and branches, while the communities do not have the financial means to invest in the mechanical harvesting equipment such as harvesters and feller-bunchers needed to attain this result.

Secondly, it appears that some communities lack the capacity or skills to undertake the operations. Faced with this situation, communities must choose between involving external actors to harvest part of or their entire allocation and receiving royalty benefits or not harvesting the allocation and receiving no royalties.

Several interviewees indicated that they would prefer to contract with a local non-Aboriginal contractor than with a licensee. In the cases where a community did contract out their

<table>
<thead>
<tr>
<th>Organizational structure for managing harvesting</th>
<th>Amount of communities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Nation controlled operations</strong></td>
<td></td>
</tr>
<tr>
<td>Community members working for the Band council harvest the entire allocation</td>
<td>2</td>
</tr>
<tr>
<td>Aboriginal contractors harvest the entire allocation</td>
<td>2</td>
</tr>
<tr>
<td><strong>Joint First Nation-industry controlled operations</strong></td>
<td></td>
</tr>
<tr>
<td>Aboriginal contractors and the licensee both harvest part of the allocation</td>
<td>2</td>
</tr>
<tr>
<td>Community members working for the Band council and non-Aboriginal local contractors both harvest part of the allocation</td>
<td>1</td>
</tr>
<tr>
<td>Aboriginal contractors and local non-Aboriginal contractors both harvest part of the allocation</td>
<td>1</td>
</tr>
<tr>
<td><strong>Industry controlled operations</strong></td>
<td></td>
</tr>
<tr>
<td>Licensee harvests the entire allocation</td>
<td>4</td>
</tr>
<tr>
<td>A non-Aboriginal local contractor harvests the entire allocation</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5.1 Overview of the ways in which the harvesting operation is managed by the communities
allocation to the licensee, interviewees indicate that there was simply no other option than to go with the licensee because the operations would require a contractor to make use of the licensees’ roads, thereby incurring extra costs.

“The licensee (Irving) has tied our hands. We tried to go with a different contractor but then you have to use Irving roads, Irving this, Irving that. Then Irving charges us for using their roads making it unprofitable to hire another contractor so we had no choice but to go with Irving.” (F5)

5.1.4. Preliminary conclusion

In terms of the economic benefits, the harvesting agreements provide the First Nations with an important source of income in terms of royalty payments that flow back to the communities. The decrease in royalty income from $2.4 million per year under the previous agreement to $1.7 million under the current agreement is a result of the current crisis in the forest industry and can therefore not be attributed to the agreements. The agreements also create employment for a number of community members, although this is not the case for all 13 communities. In addition, employment numbers seem to have decreased considerably under the current harvesting agreement. While the general downturn in the forest product industry is considered to be the main cause for this decrease, several interviewees also indicate that the DNR no longer appointing a coordinator as of 2009 has had a negative impact on employment numbers. So with regards to the decrease in employment numbers under the current harvesting agreement, it appears that this can at least partly be attributed to the harvesting agreements, more specifically by the fact that the position of DNR coordinator that was agreed upon in the agreement has been cancelled. Data collected on the organizational structures for harvesting used by the communities show that out of the 13 cases, only 4 communities are able to complete their entire allocation themselves. In all the other cases, either non-Aboriginal contractors or the primary licensee harvest part of or the entire allocation. This dependence on third parties suggests that the economic benefits in terms of employment opportunities are not as high as they could be. While interviewees point out that their allocation is too small to cover the costs that are involved with engaging in the harvesting practices, they also indicate that they don’t have the financial means to invest in the mechanical equipment necessary to comply with the industry’s standards. Thus, although an increase in the allocation size could create more employment opportunities for the First Nations, a lack of financial capital on their end could actually prevent the actual coming about of more jobs. Therefore, the suboptimal employment opportunities can only be partly attributed to the harvesting agreements. Overall, it can be concluded that the harvesting agreements have a positive effect on the economic viability of sustainable CPR management with the royalty payments being the strongest indicator hereof.

5.2. Ecological responsibility

In order to establish how sustainable CPR management is in light of ecological responsibility under the harvesting agreements in New Brunswick from the perspective of
the First Nations communities, interviewees were asked whether they believe that under the current agreement, sufficient attention is being paid to issues relating to sustainable forest management.

5.2.1. Sustainable forest management
The answers provided by the forestry coordinators can be divided into three main categories.

The first category deals with affirmative answers concerning the primary licensees’ forests management practices. The only two comments that were made concerning this are that the licensee respects the management plan and that the licensee respects buffer zones for the most part.

The second category addresses affirmative answers concerning the First Nation’s forest management practices. Many interviewees make the distinction between whether they themselves are adhering to sustainable practices and whether the licensee that they are working under does. They indicate that, in contrast to the licensee, community members that go into the forest have great respect for the forest and follow the forest management plan. With regards to harvesting methods, one interviewee (F13) believes that the communities’ harvesting practices (i.e. using chainsaws and skidders) are much more sustainable than the mechanical harvesting methods used by the licensees because the feller-bunchers and porters cause a lot of damage to the ground. Another comment related to the methods used by the licensees is that unlike the licensee, First Nations do not want to cut trees that are too young and do not want to go over and beyond their allocation (F10).

“It is no good if we take and not put back. If we don’t put back, we are going to have nothing. We are supposed to be stewards of the lands, Natives. We are supposed to look after the land.” (F9)

By far the most answers given by the interviewees fall into the third category, negative answers concerning the licensees’ forest management practices. The most often presented indicator for this is that he licensees engage in clear cutting (i.e. every piece of merchantable wood has to be cut). Interviewees consider that this practice is bad for biodiversity because dominating species will take over an area that has been clear-cut. They offer selective cutting as a sustainable alternative which entails harvesting big wood, leaving the small wood and in addition leaving some big trees for the seed. Interviewees also indicate that some licensees go over their allocation and do not respect buffer zones and protected areas. One interviewee (F7) mentioned that these unsustainable practices have increased since the DNR reduced its staff levels in the forest. This same interviewee also wondered why so much wood is being cut when mills are actually closing down as a result of the downturn in the market. Increasingly, wood is being chipped and used for low value product; uses that interviewees felt were degrading or wasteful.
That First Nations feel that sustainability goes beyond just forest management practices becomes clear when looking at a comment that an interviewee made regarding replanting and thinning. The interviewee (F2) believes that the lack of involvement of Aboriginals in these practices is an indicator that the licensees are not adhering to sustainable forest management practices. In addition, this interviewee mentions that failure of the licensee to zone off areas of importance to Aboriginal people, such as traditional medicine areas, shows that the licensee does not engage in sustainable forest management practices.

“The big industries, they don’t care as long as they get their wood. That is the bottom line for them. And they will go back in and plant something but it doesn’t change the fact that they tore up acres and acres of land hauling out all that wood. I mean, I could take you to sites right now that Irving has cut and it is just disgraceful.” (F13)

5.2.2. Preliminary conclusion

According to the interviewees, the forest management practices under the current harvesting agreement are unsustainable. However, interviewees do distinguish between their own behavior under the current agreement and that of the primary licensee. They consider their harvesting methods to be more sustainable than those employed by the licensee. It thus appears that a party external to the agreement is actually responsible for the poor outcome regarding ecological responsibility. In addition, the interviewees argue for selective cutting as a sustainable alternative for the clear cutting practices that they currently have to engage in under the primary licensees’ management plan. Therefore, it appears that the harvesting agreements would also stand to gain in terms of ecological responsibility by increased involvement of First Nations communities in forest management. With only one interviewee indicating that unsustainable practices have increased under the current agreement, there is not much validity to this claim.

5.3. Social responsibility

Both the level of Aboriginal involvement in forest management and the extent to which Aboriginal and Treaty rights are recognized under the current harvesting agreements were examined in order to establish how sustainable CPR management is in terms of social responsibility under the harvesting agreements according to the First Nation communities.

5.3.1. Aboriginal involvement in forest management

The process of establishing the level of Aboriginal involvement in forest management under the current harvesting agreement consisted of two steps. As a first step in determining the degree to which the communities are involved in forest management, the degree to which the harvesting agreement de facto allows for Aboriginal involvement was measured by analyzing the agreement according to the taxonomy of property rights introduced by Ostrom and Schlager (1992). As a second step in the process, interviewees were asked about their level of involvement in forest management and whether this has changed under the current agreement.
From an analysis of the agreement in terms of the degree to which the First Nations hold rights on the operational and collective-choice level, it can be concluded that First Nations’ rights do not go beyond those of access and withdrawal as defined by Schlager and Ostrom (1992). Under the agreement, the communities are assigned a certain volume of wood per year for a 5 year period by the provincial government. In addition, rather than being able to decide for themselves on the locations where harvesting will take place, the First Nations have to consult with the primary licensee for this purpose. While the primary licensee is responsible for forest management on Crown lands and the government holds the rights to exclusion and alienation, First Nations are nothing more than authorized users whose rights are defined by the primary licensee and the provincial government. In addition, failure to adhere to the rules accompanying their operational-level rights results in financial penalties to be collected by the provincial government.

When asked whether the current agreement sufficiently allows for Aboriginal involvement in forest management practices, none of the interviewees provided an affirmative answer to this question. The answer that was reported most, 6 times in total, was that First Nation involvement in forest management practices is limited to the harvesting of the wood. Some communities reported that although they possess the necessary know-how, they are not involved in practices such as thinning and replanting.

Another reason—reported by 3 interviewees—that interviewees believed the current agreement does not sufficiently allow for Aboriginal involvement in forest management concerns their limited possibilities in choosing their harvesting blocks. The licensees try to give them poor quality areas such as swamps.

"Why should they tell us our lot? We should be able to go in and say this is our lot here, we are going to take this lot, we are going to cut this lot. It is always the Natives getting the scrap." (F9)

Since the DNR has not collected any data on the level of community involvement in forest management, interviewees were asked whether Aboriginal involvement in forest management has increased under the current harvesting agreement. None of the interviewees believed that the current harvesting agreements have lead to increased First Nation involvement in forest management and 4 even indicated that involvement in forest management has decreased under the current agreement. All of them mention the 2009 decision to stop appointing DNR coordinators as the main cause for this decrease. One interviewee (F3) indicates that the FN was better informed and more involved in management when the DNR forestry coordinator was still in place. The licensee that they are dealing with now has no time for the FN because it has too many operations of its own going on. Another interviewee takes an even stronger position.

"The single most detrimental thing that has ever happened to the First Nations is the Province taking out the worker from the DNR that used to be the go-between between the community and the licensee." (F4)
While the question asked referred specifically to the current harvesting agreement, 3 interviewees drew attention to the bigger picture, indicating that no progress has been made since the harvesting agreements first came into place in 1997.

“It hasn’t gone anywhere. I mean other than what we manage ourselves, that is it, we don’t manage anything else. It has been like that from day one, since we started. So nothing has changed as far as management goes.” (F13)

**5.3.2. Aboriginal and Treaty Rights**

As a second indicator of social responsibility under the current harvesting agreement, interviewees were asked if they believe that the agreement sufficiently recognizes Aboriginal and Treaty Rights.

In answering this question, non of the interviewees gave an affirmative answer and four of them replied that in essence the harvesting agreements were never meant to recognize Aboriginal and Treaty rights and that they are nothing more than a commercial agreement.

“It is commercial, it is about making money. I don’t think it deals with Treaty rights at all to tell you the God honest truth. There is nothing pertaining to native rights or native treaty rights. People who are entitled to all of it are getting whittled down to 5.3 percent, that is all it is.” (F6)

The issue of ownership is mentioned by two other interviewees as well. One (F9) mentions that the government referring to the land as Crown land rather than Traditional or Indian land is in itself an indication that Aboriginal and Treaty rights are not being recognized. The other interviewee (F10) argues that the size of their allocation is an indicator hereof because according to their Aboriginal and Treaty rights, they are entitled to a bigger allotment. This is related to the fact that because the First Nations communities of New Brunswick have never agreed to their land being ceded to the government, they view themselves as the rightful owners of all lands in New Brunswick (Blakney, 2003).

Two interviewees (F4 & F13) mention that the initial harvesting agreements were nothing more than a form of crisis management from the Province to get all the contractors out of the woods and to get away from answering the bigger question of Aboriginal and Treaty rights.

“It was just something the province did to get all the contractors that were in the woods out of the woods. That is all it was. It had nothing to do with Aboriginal and Treaty rights. Basically, I feel that it was not to hinder our rights but more or less slow our rights down, to try to keep us down, under their thumb basically.” (F13)

In addition to this, two interviewees (F7 & F11) mention that at the time the agreement was first signed, it was supposed to serve as a starting point for a long-term, bigger picture, which has not come about until this day.
“The agreement was supposed to serve as a starting point when it was first signed. Well, 12 years later and the government still hasn’t met any of our needs.” (F11)

Besides indicating that the current harvesting agreement does not sufficiently recognize Aboriginal and Treaty rights, some of the interviewees also point out that the licensees do not recognize these either. Indicators that they mention are that First Nations have no say in how to harvest the wood or about the quality of the wood that they are getting.

“Whatever the licensee tells us we are getting or doing, that is what we do. We are getting what we need from our biggest competitor and he is giving us the stuff that he doesn’t want.” (F2)

5.3.3. Preliminary conclusion

According to the interviewees, CPR management under the current harvesting agreements falls short on both indicators used for measuring the degree of social responsibility. With regards to Aboriginal involvement in forest management, the answers provided by the interviewees confirm the finding from the analysis of the agreement in terms of property rights that Aboriginal involvement is limited to First Nations harvesting the wood. In addition, 4 interviewees indicate that Aboriginal involvement has decreased under the current harvesting agreement and all of them indicate the 2009 decision to stop appointing DNR coordinators as the main cause for this decrease. So with regards to the decrease in Aboriginal involvement under the current harvesting agreements, it appears that this can be ascribed to the harvesting agreements, more specifically by the fact that the position of DNR coordinator that was agreed upon in the agreement has been cancelled. With regards to the recognition of Aboriginal and Treaty rights, interviewees indicate that the believe that these are not being recognized at all under the agreement. With only one interviewee indicating that the agreements actually hinder the advancement of Aboriginal and Treaty rights, there is not much validity to this claim. However, considering the fact that the agreements came about at the backdrop of a dispute concerning Aboriginal Rights and Title, the fact that the agreements do not deal with Aboriginal and Treaty rights at all can be seen as a shortcoming of the agreements. It can thus be concluded that the agreements have contributed to the poor outcome of CPR management regarding social responsibility.

5.4. Legitimacy

The process of establishing whether CPR management under the current harvesting agreements can be considered as legitimate by the target population consisted of several steps. The first step was to have the representatives organize sixteen expectations relating to forest management (Table 5.2) according to their order of importance.
<table>
<thead>
<tr>
<th>Card number</th>
<th>Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Recognition of Aboriginal and Treaty rights</td>
</tr>
<tr>
<td>2</td>
<td>Identification of areas of importance to Aboriginal People</td>
</tr>
<tr>
<td>3</td>
<td>Access to areas of importance to Aboriginal People</td>
</tr>
<tr>
<td>4</td>
<td>Protection of areas of importance to Aboriginal People</td>
</tr>
<tr>
<td>5</td>
<td>Involvement of First Nation in forest management</td>
</tr>
<tr>
<td>6</td>
<td>Regular reports by DNR and industry to First Nation about forest management</td>
</tr>
<tr>
<td>7</td>
<td>Incorporation of Aboriginal knowledge into forest management plans</td>
</tr>
<tr>
<td>8</td>
<td>Tree-planting and regeneration practices to ensure opportunities for future timber harvests for Aboriginal People</td>
</tr>
<tr>
<td>9</td>
<td>Manage forests to ensure that forest products are and remain available for Aboriginal People</td>
</tr>
<tr>
<td>10</td>
<td>Protection of wildlife and their habitat</td>
</tr>
<tr>
<td>11</td>
<td>Protect water, wetlands and watersheds</td>
</tr>
<tr>
<td>12</td>
<td>Partnerships between industry and government that generate Aboriginal economic development</td>
</tr>
<tr>
<td>13</td>
<td>Increased involvement by Aboriginal loggers in harvesting timber</td>
</tr>
<tr>
<td>14</td>
<td>Government support to the industry to provide local jobs and economic opportunities</td>
</tr>
<tr>
<td>15</td>
<td>Education, training and capacity-building programs for Aboriginal people</td>
</tr>
<tr>
<td>16</td>
<td>Sharing of revenues from Crown forests to support Aboriginal self-government</td>
</tr>
</tbody>
</table>

Table 5.2 Overview of expectations

These expectations were drawn from a previous study that was conducted in Ontario (Kant & Brubacher, 2008) but were adjusted to the specific context of New Brunswick. They fall in four broad groups that resemble the criteria for sustainable CPR management that were discussed in the previous sections:

- Aboriginal and Treaty Rights: Expectations 1 to 4
- Participatory decision-making: Expectations 5 to 7
- Environmental values and Sustainable Management: Expectations 8 to 11
- Economic opportunities and development: Expectations 12 to 16
5.4.1. Importance of expectations

Figure 5.3 presents the expectations in order of importance according to the interviewees from most to least important, with their respective scores.

The four expectations that were deemed most important by the 13 representatives were expectations 1 (Recognition of Aboriginal and Treaty rights), 11 (Protect water, wetlands and watersheds), 10 (Protection of wildlife and their habitat) and 4 (Protection of areas of importance to Aboriginal People). The four expectations that the interviewees reported to be of least importance were 14 (Government support to the industry), 6 (Regular reports by DNR and industry to First Nation), 12 (Partnerships between industry, government and First Nations) and 16 (Sharing of revenues from Crown forests).

In addition, the level of importance of each of the four broad categories according to the interviewees was established. The scores of the expectations in each category, as presented in table 5.3. Again, this table is ordered by importance from highest to lowest.
Table 5.3 Relative importance of groups of expectations

<table>
<thead>
<tr>
<th>Expectation grouping</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I: Aboriginal and Treaty rights</td>
<td>11.96</td>
</tr>
<tr>
<td>Group III: Environmental values and Sustainable Management</td>
<td>9</td>
</tr>
<tr>
<td>Group II: Participatory decision-making</td>
<td>6.86</td>
</tr>
<tr>
<td>Group IV: Economic opportunities and development</td>
<td>6.6</td>
</tr>
</tbody>
</table>

As can be derived from table 5.3 the expectations in the categories Aboriginal and Treaty Rights and Environmental values are deemed much more important by the interviewees than the expectations that fall into the other two categories, with economic opportunities and development being the least important.

5.4.2. Extent to which expectations are currently being met

Following the ranking exercise above, the interviewees were asked to indicate their perception about how well each expectation is being met (1 = not met at all; 2 = only a little bit met; 3 = some met; 4 = mostly met; 5 = fully met). Responses of “don’t know” have been excluded from the analysis. Results are presented in figure 5.4. Expectation 14 (Government support to the industry to provide local jobs and economic opportunities) created some uncertainty, with 7 interviewees answering “don’t know”, and was excluded from the analysis.

Figure 5.4 Extent to which expectations are currently being met
The four expectations that were met to the greatest extent according to the 13 representatives were expectations 11 (Protect water, wetlands and watersheds), 10 (Protection of wildlife and their habitat), 3 (Access to areas of importance to Aboriginal people) and 15 (Education, training and capacity-building programs for Aboriginal people). The four expectations that the interviewees considered to be met the least were 16 (Sharing of revenues from Crown forests), 12 (Partnerships between industry, government and First Nations), 7 (Incorporation of Aboriginal knowledge into forest management plans) and 2 (Identification of areas of importance to Aboriginal people).

Table 5.4 presents an overview of the relative extent to which each group of expectations was met, ordered from greatest to least extent. As can be derived from table 5.4 the expectations concerning Environmental values and Sustainable management were met to a much greater extent than the expectations that fall into the other three categories, with expectations regarding to participatory decision-making being met to the least extent.

<table>
<thead>
<tr>
<th>Expectation grouping</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group III: Environmental values and Sustainable Management</td>
<td>2.38</td>
</tr>
<tr>
<td>Group I: Aboriginal and Treaty rights</td>
<td>1.65</td>
</tr>
<tr>
<td>Group IV: Economic opportunities and development</td>
<td>1.63</td>
</tr>
<tr>
<td>Group II: Participatory decision-making</td>
<td>1.33</td>
</tr>
</tbody>
</table>

Table 5.4 Relative extent to which groups of expectations are met

5.4.3. Preliminary conclusion

When comparing the results per expectation (for each expectation individually) from the first step of the process to the ones from the second step of the process, the two expectations that were deemed most important, the protection of water, wetlands and watersheds (expectation 11) and the protection of wildlife and their habitat (expectation 10) are actually also two of the four expectations that are met to the greatest extent. In addition, two of the expectations that were identified as least important, partnerships between the industry, government and First Nations (expectation 12) and sharing of revenues from Crown forests (expectation 16) are amongst the ones that have been met the least. Similarly, when comparing the four groups of expectations (tables 5.3 and 5.4), the two groups that were considered as most important were also associated with the two highest scores regarding the extent to which they were met, although the order was reversed. Although the scores for the extent to which the expectations are being met rarely indicate a level of satisfaction beyond “only a little bit met”, the issues that are considered to be most important by the First Nations are also amongst those that are met to the greatest extent, particularly on the level of expectation groupings. Therefore, CPR management under the harvesting agreements can be seen as legitimate to a certain degree. However, this outcome cannot
be attributed to the harvesting agreements. The reason being that the card sorting exercise has shown that the primary objective of the harvesting agreement, the provision of employment opportunities for First Nation’s people, falls under the expectation grouping that is considered to be least important by the interviewees.
6. Conclusion and discussion

6.1. Conclusion

The central aim of this research was to establish how successful the harvesting agreements in New Brunswick are as a governance solution for CPR management. From the results presented in the previous chapter, it has become clear that overall, the harvesting agreements cannot be regarded as a successful solution for CPR management for several reasons.

An important reason why the harvesting agreements cannot be regarded as a successful solution for CPR management is because they do not allow for Aboriginal involvement in forest management. As the results indicated, Aboriginal involvement under the agreement is limited to First Nations harvesting the wood. Besides having implications for the social aspects of CPR management, limited Aboriginal involvement also appears to have implications for the ecological sustainability of the agreements. While the First Nations oppose clear cutting and argue for selective cutting as a sustainable alternative, they are forced to engage in such unsustainable practices under the primary licensees’ management plan.

The influence that the primary licensee is able to exert on forest management practices is a second reason why the harvesting agreements cannot be regarded as successful. The fact that there is another, rather powerful, stakeholder present besides the government and the First Nations communities calls into question the appropriateness of agreements as a governance arrangement for CPR management in New Brunswick. A governance arrangement in which all stakeholders in forest governance are represented may very well be more appropriate.

The 2009 decision to stop appointing DNR coordinators appears to only have worsened the situation. With the coordinator serving as a mediator between the community and the primary licensee, the communities actually felt more involved in forest management practices. The fact that this position was cancelled also appears to have influenced employment numbers resulting from the agreement. With the DNR coordinator gone, the licensee is able to either assign harvesting blocks later in the season or to assign blocks that are too far away from the communities’ reserves to make it profitable for them to engage in harvesting.

Only with regards to the royalty payments that flow back to the communities under the agreement can the harvesting agreement be regarded as successful. Although the results show a significant decrease of revenue in terms of royalty income under the current agreement, this outcome can be attributed to the general downturn in the forest product industry. Nonetheless, it appears that the royalties provide the First Nations with an important source of income from which either the entire or certain vulnerable groups within the community benefit.
Finally, in terms of legitimacy, there appears to be a large discrepancy between what the two main parties involved consider to be the problem that the harvesting agreement is supposed to address. While the court case that was at the backdrop of the establishment of the harvesting agreements was concerned with Aboriginal right and title, the primary objective of the harvesting agreement initiated by the provincial government was that of employment creation for First Nation communities. The results from this study confirm the presence of this discrepancy today as the card sorting exercise revealed that the primary objective of the harvesting agreement, that of employment creation, falls under the expectation grouping that is considered to be least important by the interviewees.

6.2. Discussion

One important limitation of this research is that the results are based solely on responses from forestry coordinators within First Nations communities. While indigenous communities are the target population of these agreements, government and industry are also important stakeholders in forest management in New Brunswick. Interviews with representatives of each of these sectors may have provided a different perspectives on the strengths and weaknesses of these agreements as forest governance arrangements. Had more time been available, such data could have been collected, providing a more comprehensive picture of these harvesting agreements. Despite this limitation, the study was still able to incorporate responses from representatives of 13 out of the 15 communities. The findings can therefore be considered an accurate portrayal of New Brunswick harvesting agreements from the perspective of First Nations communities.

In terms of generalizability, the outcomes of these agreements are highly dependent upon the actors involved, economic conditions, and other context-specific variables. Consequently, the findings cannot necessarily be generalized to other instances where agreements are employed as a governance arrangements for CPR management. For example, while the relationship between the presence of government mediators and several sustainability outcomes may also hold in other circumstances, additional research would need to be conducted in order to support or contradict these findings.

Respondents indicated that they valued sustainable practices and felt that such values were being overlooked under current arrangements. An important implication of these findings is that greater aboriginal involvement in forest management has the potential to improve sustainability outcomes. Such a finding could have important implications for forest management practices, therefore additional research should be conducted to validate this claim.
7. Works cited


Appendix: 2007-2012 Harvesting Agreement
2007-2012 HARVESTING AGREEMENT

THIS AGREEMENT made in duplicate effective the day of execution as noted on page 4.

BETWEEN:

HER MAJESTY THE QUEEN in right of the Province of New Brunswick as represented by the Minister of Natural Resources and Energy (hereinafter called the "Minister")

OF THE FIRST PART

AND:

THE XXXXXX FIRST NATION COMMUNITY, (herein-after called "XXXXXX")

OF THE SECOND PART

IN CONSIDERATION of the mutual benefit derived from this Agreement, the parties hereby agree as follows:

1. The Parties agree that this Agreement shall not serve to define or to limit Aboriginal or Treaty rights and is not intended to be, and shall not be interpreted to be, an agreement or a Treaty within the meaning of section 35 of the Constitution Act, 1982.

2. The Parties recognize that this Agreement is the result of negotiations conducted within the context of current legislation and jurisprudence and, as such, does not constitute, and shall not be interpreted as, evidence of the nature or extent of Aboriginal or Treaty rights and is made without prejudice to the positions taken by either Party with respect to Aboriginal or Treaty rights or title.

3. This Agreement is not intended to create, define or affect rights nor be construed as an interpretive aid in the determination of Aboriginal or Treaty rights.

4. Nothing in this Agreement is intended to nor shall be interpreted to affect any Aboriginal or Treaty rights of any other Aboriginal group.

5. This Agreement shall not preclude and shall be without prejudice to any other discussions among any of XXXXXX, the Province of New Brunswick and Canada on matters of trilateral concern.

5.1 This Agreement shall not preclude and shall be without prejudice to and shall not restrict the Province of New Brunswick and Canada from entering into trilateral initiatives, projects, programs or agreements with XXXXXX.

6. This Agreement shall not preclude and shall be without prejudice to any other discussions between XXXXXX and the Province of New Brunswick or XXXXXX and Canada on matters of bilateral concern.
7. In the event that Constitutional amendments concerning a self-government agreement are adopted on the same subject matter as this Agreement, the Parties shall re-open negotiations on this Agreement to take into account the Constitutional amendments.

8. Since this Agreement was concluded between the Parties on a "Without Prejudice" basis, it shall not be construed or employed to the detriment of either party in determining their respective underlying rights.

9. XXXXXX will be given status equivalent to a Permittee under the Crown Lands and Forests Act.

10. XXXXXX will be assigned a total of x,xxx m per year over five years (x,xxx m of softwood and x,xxx m of hardwood) on Crown Timber License X. This assignment of wood represents XXXXXX’s share of the allowable annual cut designated by the Minister for New Brunswick First Nation Communities.

11. If the Minister enters into an agreement with another First Nation, on terms more favorable than the terms of this Agreement, the Minister shall, if requested by XXXXXX, enter into a new agreement with the XXXXXX containing the more favorable terms.

12. Harvest blocks will be identified by the Parties in consultation with the Crown Timber Licensee who is responsible for forest management on Crown lands. Harvest blocks will be part of the Crown Timber Licensee's Management Plan as approved by the Minister. Volumes of wood harvested will be part of the total allowable annual cut.

13. XXXXXX will appoint a coordinator to work with the Minister on matters relating to implementing of this agreement.

14. The Minister shall designate an employee of the Department of Natural Resources and Energy as a coordinator to work in cooperation with the XXXXXX coordinator to facilitate the Minister's obligations under this agreement.

15. Disputes as to block designation shall be resolved in good faith as follows:

15.1 The XXXXXX First Nation shall request a neighbouring First Nation’s coordinator to work with the Executive Director of Regional Operations, or his/her designate. Those two individuals shall then use best efforts to resolve the dispute in a timely manner.

16. Roles and responsibilities of the coordinators are outlined in Scheduled A (attached). Cross-Cultural awareness is recognized as important aspect of a harmonious relationship and as such, opportunities for training and sharing of cultural difference will be explored by the Parties through the Joint Technicians Committee established by the Assembly of First Nations’ Chiefs in New Brunswick and the Minister

17. XXXXXX will be responsible for all costs associated with harvesting wood plus construction of secondary cut logging roads.
18. **XXXXXX** agrees to follow the same practices and standards for construction of roads and stream crossings as Crown Timber Licensees.

19. To ensure the sustainable management of renewable resources, harvest operations will be conducted in accordance with the approved Operating Plan and Forest Management Manual. Failures to adhere to standards will result in penalties, applied to **XXXXXX**, that are the same as those applied to other users of Crown land. Penalty types and amounts are identified in Schedule B. If penalties are not paid then penalty amounts will be deducted from the **XXXXXX** special purpose account (section 27 below).

20. Through the Joint Technicians Committee appointed by the Assembly of First Nations’ Chiefs in New Brunswick and the Minister, the Parties to this Agreement shall review the applicable penalties should the Minister implement an auditing system to monitor the performance of Licencees and sub-Licencees or otherwise significantly increase penalties.

21. Individuals harvesting wood on behalf of **XXXXXX** will finish assigned blocks in accordance with the approved Operating Plan and Forest Management Manual standards before proceeding to newly assigned blocks.

22. **XXXXXX** operations will not be conducted in spring conditions when roads are closed and soft ground leads to a high risk of road and/or environmental damage. Spring/summer operations will resume at the same time as sub-licensee harvest operations resume in the same License area.

23. The Minister will provide advice, upon request, with respect to development of business plans and financial management activities undertaken as a result of this Agreement.

24. Through the Joint Technicians Committee appointed by the Assembly of First Nations’ Chiefs in New Brunswick and the Minister, the Parties to this Agreement shall engage in a process to examine a decision making model on forest management issues that recognizes and provides for First Nation involvement.

25. Both parties agree that it is a primary objective of this Agreement to provide employment opportunities for First Nations’ people.

26. All timber harvested under this Agreement will be subject to a system of load slips and scaling procedures. **XXXXXX** agrees that no timber will be moved from the point of harvest until load slip and scaling arrangements have been agreed between the Minister and the **XXXXXX** coordinator.

27. Unless otherwise approved by the Minister, all timber harvested by **XXXXXX** under this Agreement must be sold to designated New Brunswick mills (i.e., Licensees and Sub-licensee mills) on a “free market” less royalty and a portion of overhead in the amount of $3.45 per m$^3$ of timber sold. Royalty rates will be consistent and current with those established in Regulation 86-160 of the *Crown Lands and Forests Act*, however should
wish, in consultation with the Minister, it may divert any portion of the timber harvested under this agreement to its sawmill and no Royalty will be paid or collected.

28. Other than for wood diverted under section 26, all New Brunswick mills will remit royalty to the Minister, to be retained in a Special Purpose Account for future use by XXXXXX, as determined by resolution of the Chief and Council of XXXXXX.

29. The parties agree that the timber volume harvested under this Agreement cannot exceed sustainable levels. The timber volume harvested by XXXXXX under this Agreement must be within 10 percent of the allocated volume within each year of the Agreement. At the end of the five-year term of this Agreement the total volume harvested cannot exceed 101% of the total allocated volume. As all Licensees, sub-Licencees and Permittees must adhere to the same standards there shall be no carry-over of any unharvested volumes beyond the 101% at the end of the five-year term.

30. XXXXXX agrees to provide an annual report of activities under this Agreement in accordance with the format provided in Schedule C.

31. This agreement may be terminated by either party:
   a) at any time, upon sixty(60) days’ written notice to the other party, or
   b) immediately, by written notice of termination in the case of default on the part of the other party which is not remedied (or which continues unabated) for more than five days after written notice thereof has been give to the party in default;
   c) and all respective obligations of the parties which accrue prior to the effective date of termination, shall survive such termination, until discharged in full.

32. This Agreement is effective from the date of the Parties’ signatures until March 31, 2012 or until both parties mutually agree to revisit the Agreement’s terms and conditions. The Parties may jointly amend this Agreement at any time in writing.

33. In this Agreement, references to the Minister include reference to authorized designates or representatives of the Minister.

34. In this Agreement, references to XXXXXX include reference to authorized designates or representatives of XXXXXX.

SIGNED in duplicate this …….day of ……………………., 2007.

Her Majesty the Queen in Right of the Province of New Brunswick

THE XXXXXX FIRST NATION

MINISTER OF NATURAL RESOURCES AND ENERGY

CHIEF

COUNCILLOR
COUNCILLOR

COUNCILLOR
SCHEDULE A

Roles and Responsibilities of Coordinators

DNRE Coordinator:
1. To work with XXXXXX’s Coordinator to identify suitable harvest blocks;
2. To work with XXXXXX’s Coordinator to flag block boundaries and buffers;
3. Advise the XXXXXX Coordinator of Crown land operating standards;
4. Provide technical advice on road location, layout and construction, harvest systems, harvest crew organization and strip layout, safe work practices and marketing;
5. Monitor XXXXXX harvest operations with respect to adherence to standards;
6. Address operating concerns with XXXXXX coordinator;
7. Implement a load slip system in conjunction with the XXXXXX coordinator;
8. Complete final harvest inspection report with XXXXXX.

XXXXXX Coordinator:
1. Assist in identifying suitable harvest blocks on behalf of XXXXXX;
2. Work with the DNR Coordinator to flag block boundaries and buffers;
3. Ensure XXXXXX harvest crews are knowledgeable of Crown operating standards;
4. Arrange for marketing of harvested forest products;
5. Assign harvest blocks and supervise XXXXXX harvest crews;
6. Review monitoring concerns with the Minister;
7. Work with the DNR Coordinator to ensure that concerns with XXXXXX crews are addressed and rectified;
8. Request technical assistance from the Minister when required;
9. Implement a load slip system in conjunction with the Minister;
10. Coordinate trucking, confirm and advise the Minister of wood destinations;
11. Advise Minister when an operation commences and when it is completed;
12. Complete final harvest inspection reports with the Minister.
### PENALTY SCHEDULE FOR INFRACTIONS NOTED ON HARVEST MONITORING REPORT FORM AND OTHER PENALTIES

Listed below, by penalty number, are various infractions with their associated penalty. Some infractions have a specific dollar value associated with them and others have a range which regional staff may interpret depending on the severity of the offense, the number of warnings issued, habitual offender, etc. Also included in the list are those infractions, which are part of the Licensee Performance Evaluation Criteria. They are identified with an asterisk *. These are the penalties that Licensees will be officially evaluated on for this period (2002-07). This penalty schedule will apply to Licensees, Sub-licensees, and Permittees.

<table>
<thead>
<tr>
<th>Penalty Number</th>
<th>Description of Infraction</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Notice of Commencement not provided.</td>
<td>$50 per day of operation for each day without a proper Notice of Commencement.</td>
</tr>
<tr>
<td>2</td>
<td>Harvesting block not flagged according to Operating Plan.</td>
<td>$200-$500 plus compliance date.</td>
</tr>
<tr>
<td>3</td>
<td>Unauthorized harvest.</td>
<td>$200-$500 or $200-$500 plus 3 times royalty.</td>
</tr>
<tr>
<td></td>
<td>a) cutting outside approved harvest block boundary</td>
<td>Performance penalty # 20 or 21 should be applied where the unauthorized harvest has</td>
</tr>
<tr>
<td></td>
<td>b) cutting unapproved harvest block.</td>
<td>compromised habitat or buffer stand structure requirements.</td>
</tr>
<tr>
<td></td>
<td>c) cutting in site specific wildlife habitat (i.e.; DWA, OSFH areas, buffer zone, etc.)</td>
<td>Performance penalty # 20 or 21 should be applied where the unauthorized harvest has</td>
</tr>
<tr>
<td></td>
<td>where the harvest has not compromised habitat or buffer stand structure requirements.</td>
<td>compromised habitat or buffer stand structure requirements.</td>
</tr>
<tr>
<td>4</td>
<td>Cut prescription not being followed.</td>
<td>$200-$500 or $200-$500 plus 3 times royalty.</td>
</tr>
<tr>
<td></td>
<td>a) general forest.</td>
<td>Performance penalty # 20 or 21 should be applied where the unauthorized harvest has</td>
</tr>
<tr>
<td></td>
<td>b) site-specific wildlife habitat (i.e.; DWA, OSFH, buffer zone, etc.) where the harvest</td>
<td>compromised habitat or buffer stand structure requirements.</td>
</tr>
<tr>
<td></td>
<td>where the harvest has not compromised habitat or buffer stand structure requirements.</td>
<td>Performance penalty # 20 or 21 should be applied where the unauthorized harvest has</td>
</tr>
<tr>
<td></td>
<td></td>
<td>compromised habitat or buffer stand structure requirements.</td>
</tr>
<tr>
<td>5</td>
<td>Cutting or damaging unapproved product within an approved harvest block.</td>
<td>$2/piece for each tree cut plus 4 times royalty for that class of timber.</td>
</tr>
<tr>
<td>6</td>
<td>Unacceptable utilization.</td>
<td>$200-$500 or $200-500 plus 3 times royalty.</td>
</tr>
<tr>
<td></td>
<td>a) logs to pulpwod or chips.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) veneer to log to sawlogs, pulpwod, or chips.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Wood remaining on harvest blocks after September 30th of the following operating season.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Other</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Wasteful harvesting practices.</td>
<td></td>
</tr>
<tr>
<td>Penalty Number</td>
<td>Description of Infraction</td>
<td>Penalty</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>a) waste in skids</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>b) trees left standing</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>c) trees cut and left</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>d) waste in tops</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>e) butting</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>f) high stumps</td>
<td></td>
<td>$2.00 each</td>
</tr>
<tr>
<td>g) bulldozing merchantable bolts or trees</td>
<td></td>
<td>$2.00/piece</td>
</tr>
<tr>
<td>8</td>
<td>Scaling arrangements not being followed.</td>
<td>$50-$500 or $50-$500 plus 3 times royalty.</td>
</tr>
<tr>
<td>9</td>
<td>Scale not being submitted.</td>
<td>$50-$500 or $50-$500 plus 3 times royalty.</td>
</tr>
<tr>
<td>10</td>
<td>Exporting primary forest products (log, studwood, pulp, etc.), without proper permission, “Export Permit”.</td>
<td>$500 or $500 plus three times royalty.</td>
</tr>
<tr>
<td>11</td>
<td>Hauling wood:</td>
<td>$50-$500 or $50-$500 plus 3 times the royalty.</td>
</tr>
<tr>
<td>a) not properly identified.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) to an unapproved destination.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Truck delivery slip:</td>
<td>$50-$500 or $50-$500 plus 3 times royalty.</td>
</tr>
<tr>
<td>a) improperly completed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) not accounted for.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Wood improperly marked or piled for check scaling purposes.</td>
<td>$50 -$200 plus compliance date.¹</td>
</tr>
<tr>
<td>14</td>
<td>Forest Fire Act, Regulation or Work Permit Condition not being followed.</td>
<td>$50-$200 plus compliance date.¹</td>
</tr>
</tbody>
</table>

**Watercourse**

<p>| 15 | Tops or debris in watercourse as a result of harvesting or road construction.             | $500 plus compliance date.¹                                           |
| 16 | Wood piled down within 15m of a watercourse.                                             | $50--$200 plus compliance date.¹                                       |
| 17* | Unauthorized traveling of equipment within the “No Travel Zone” adjacent to a watercourse. | $500 plus site restoration.                                          |
|     | (See FMM for standard No Travel Zone Widths)                                             |                                                                        |
| 18* | Operation of equipment in a watercourse other than during watercourse crossing construction. | $500 plus site restoration.                                          |
| 19 | Avoidable siltation of a watercourse related to forestry activities:                     | $50--$500 plus site restoration and compliance date.¹                 |
| a) Road or watercourse crossing construction, maintenance or condition.                |                                                                        |
| b) Rutting or exposure of soils through                                              |                                                                        |</p>
<table>
<thead>
<tr>
<th>Penalty Number</th>
<th>Description of Infraction</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>harvesting or silviculture activities.</td>
<td></td>
</tr>
<tr>
<td><strong>Watercourse Buffer Zone Related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20*</td>
<td>Failure to maintain a buffer zone appropriate for the objective(s) approved in the Operating Plan.</td>
<td>$500 plus three times royalty.</td>
</tr>
<tr>
<td>(old # 37)</td>
<td>a) Buffer zone width less than required by standards.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Post harvest stand structure less than required by standards.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Stand stability harvesting standards not followed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Exposed mineral soil within 30m of the bank of the watercourse.</td>
<td></td>
</tr>
<tr>
<td>NOTE: Penalties 3 or 4 should be applied when the infraction is not severe enough to warrant a performance penalty.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Site-Specific Habitat Related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21*</td>
<td>Failure to implement the pre/post treatment habitat status approved in the Operating Plan. (Applicable to harvest blocks in DWA and OSFH).</td>
<td>$500 plus three times royalty on all timber cut.</td>
</tr>
<tr>
<td></td>
<td>a) Post harvest stand structure less than required by standards for SWDH, MWDH or OSFH.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Stand stability harvesting standards not followed.</td>
<td></td>
</tr>
<tr>
<td>NOTE: Penalties 3 or 4 should be applied when the infraction is not severe enough to warrant a performance penalty.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Watercourse Crossing Related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23*</td>
<td>Unauthorized travel through a watercourse with vehicle/equipment in relation to crossing construction.</td>
<td>$500 plus site restoration.</td>
</tr>
<tr>
<td>24*</td>
<td>Excessive bulldozing, excavation, fording or machine operation in a watercourse during crossing construction, road construction, or yarding.</td>
<td>$500 plus site restoration.</td>
</tr>
<tr>
<td>25**</td>
<td>Grubbing of ground vegetation on a road right of way within 30m of watercourse ≥ .5m.</td>
<td>$500 plus site restoration.</td>
</tr>
<tr>
<td>26*</td>
<td>Installed watercourse crossing (culvert, bridge) smaller in size than that specified in Operating Plan.</td>
<td>$500 plus compliance date.</td>
</tr>
<tr>
<td>27*</td>
<td>Unauthorized installation of watercourse or wetland crossing.</td>
<td>$500 plus site restoration.</td>
</tr>
<tr>
<td>Penalty Number</td>
<td>Description of Infraction</td>
<td>Penalty</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>28</td>
<td>Cross drain culvert or diversion ditch not installed as required by the Operating Plan.</td>
<td>Compliance date.¹</td>
</tr>
<tr>
<td>29</td>
<td>Trenching outside of road right-of-ways.</td>
<td>$50-$200 plus site restoration.</td>
</tr>
<tr>
<td>30*</td>
<td>Culvert: a) not properly stabilized b) length inadequate to prevent steep banks c) at improper slope d) not set a minimum of 15cm into streambed.</td>
<td>$50-$200 plus compliance date.⁴</td>
</tr>
<tr>
<td>31**</td>
<td>Grubbing of ground vegetation on road right-of-way within 10m of a watercourse &lt; .5m wide.</td>
<td>$200-$500 plus site restoration.</td>
</tr>
<tr>
<td>32</td>
<td>Harvesting of non-merchantable wood within 10m of watercourse on road right-of-way regardless of width of watercourse.</td>
<td>$200-$500.</td>
</tr>
</tbody>
</table>

**General Penalties**

<table>
<thead>
<tr>
<th>Penalty Number</th>
<th>Description of Infraction</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Garbage on the operation (i.e. oil spills).</td>
<td>$50-$200 plus compliance date¹</td>
</tr>
<tr>
<td>34</td>
<td>No final harvest inspection report received within two weeks after completion of harvest block.</td>
<td>$50-$200.</td>
</tr>
<tr>
<td>35</td>
<td>Failure to notify DNR of an unauthorized harvest that has occurred on the License.</td>
<td>One times royalty for all products harvested.</td>
</tr>
</tbody>
</table>
| 36***          | The penalty to be imposed where a Licensee or Sub-licensee is, in the opinion of the Minister, in breach of any provision of an approved operating plan. | a) three times the royalty for all timber harvested on each day during which such breach occurs or continues,  
 or  
 b) fifty to five hundred dollars per day, depending on the severity of the offence, for which such breach occurs or continues,  
 or  
 c) both penalties referred to in paragraphs a) and b),  
 and the Minister may order the licensee or sub-licensee to stop any timber harvesting operations until he is satisfied that the approved operating plan is being or will be complied with. |

**NOTE:** Compliance date will depend on the severity of the infraction but in any event should not exceed 10 days from the date of initial inspection.  
¹ Plus $100 per day after compliance date.  
* Component of Licensee Performance Evaluation Criteria.  
** Only those associated with new crossings will be counted towards performance.  
*** Must consult with Harvest Monitoring Coordinator prior to notifying the Licensee, Sublicensee, or Permittee of the penalty.
Schedule C

A format for annual reports to be drafted by Forest Management Branch
"OTHER USE" GUIDELINES

These Guidelines are entirely optional. XXXXXX may inform DNR in writing, through the Forestry Coordinators, of XXXXXX’s intentions to follow these Guidelines.

Fuelwood

An identified volume can be diverted from the existing First Nation allocation for developing a fuelwood contract business. All hardwood utilized for such purpose will have to be low quality. Overhead charges would be collected; utilisation standards, scaling arrangements and loadslip requirements would apply. The department will collect no royalties however on behalf of the band.

Crafts

Any species harvested through the agreements can be identified for supplying a crafts person in the community for the purposes of the production and sale of crafts. This would be expected to be low volume. Again, overhead collection, scaling arrangements and loadslips would be required. The department would collect no royalties. A system must be in place to demonstrate the wood is used for the intended craft production.