Forest co-management in Northern Alberta: does it challenge the industrial model?

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Abstract: The paper addresses the ability of forest co-management, within the Western Canadian provincial context, to co-exist with the industrial model of forestry. This paper draws on a two-year qualitative study of a new First Nation co-management process in Northern Alberta and a review of other First Nation forest co-management arrangements in Western Canada. Qualitative methods used included 23 semi-structured interviews with key co-management participants, non-participant observation of board and related meetings, and content analyses of previous board minutes. Our findings indicate that co-management has led to the incorporation of diverse values in forest management planning, cooperative relationships among parties to the Board, and shared decision making in forest management. We argue that co-management does not directly challenge the industrial model, but modifies it through a process of incremental change toward a more well-planned industrial presence in First Nation traditional territory. By giving a high priority to cultural sustainability criteria, First Nation participants in the co-management process in Northern Alberta challenge the forest industry to re-think the pace of development, the rates of return required to be profitable and measures to improve First Nation employment within the industry. Ultimately, tests of co-management success should incorporate First Nation priorities to maintain traditional and cultural practices in the context of industrial forestry. Such tests should evaluate the practice of provincial consultation requirements with First Nations, and cooperative efforts to develop Northern boreal forest resources. The success of co-management also depends upon industry practices to reduce the impacts of their activities on First Nation uses of the forest, and overall, on ecological evidence of sustainable forest management, including maintenance of biodiversity.

Keywords: Forest co-management; institutional change; alternative forest management; resource management; First Nation forestry; social forestry.

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1 Introduction

Eighty per cent of Canada's First Nation and Métis communities are located in boreal or temperate forest environments. While Aboriginal people in Canada have treaty and other rights in extensive areas of Canada's forests, most forested areas are allocated to and managed by the private sector [1]. The extent of forestlands on Indian Reserves is in most cases too small to support large scale, long-term commercial forestry. It is in this context that Aboriginal communities are increasingly looking to the forest industry for opportunities to build technical capacity and develop partnerships, while also maintaining hunting, trapping, and other forest-based activities that are central to the social and cultural well-being of their people [2,3].

Across Canada, Aboriginal people are expressing discontent with private sector and government priorities for timber production and harvesting, which seem to disregard both traditional uses of the forest and the values that First Nation peoples associate with the forest. First Nations are also suggesting new models of practising industrial forestry, where natural resource development respects Aboriginal and treaty rights and the resource-use priorities, employment needs, and larger economic development goals held by First Nations [4]. This 'indigenisation' of resource management is not confined to Canada. Across the world, indigenous people are arguing for, or demanding, greater involvement in, and benefits from, the use and management of natural resources in the places in which they live [5–7].

First Nations in Canada are asking for a role in collaborative planning beyond general 'public involvement' practices, such as development-by-development notification, open houses, public meetings on key management decisions, and information-sharing workshops [8]. Rather, First Nations are asking for more long-term, fundamental involvement in forest co-management with forest industries and provincial governments [9,10]. First Nations are well aware that industries are not mandated to maintain wildlife populations, biodiversity, water quality, community well-being or other non-timber forest values [11]. Alternative institutional arrangements that enable Aboriginal influence over forest management allow for immediate attention to be given to the above values. Alternative institutional arrangements can be considered as interim measures for Aboriginal involvement in land use decisions, while larger Aboriginal and treaty rights issues are addressed by governments and the courts. A key challenge for Aboriginal

people lies in combining these alternative institutional arrangements with the industrial forest model.

The industrial model of forestry is generally characterised by international, national and provincial loci of decision making control. Decisions about capital investment, timber allocation, and regulatory policy are generally made at an organisational level far removed from local resource users. In the industrial model, the nature of decision making is hierarchical, with the highest decision making authority located in metropolitan areas. The scope of decision making within the industrial model encompasses a narrow range of values and scenarios, with primacy given to fibre production, market forces, and profit maximisation [11]. The industrial model of forestry characterises the majority of forest operations in Canada.

This paper addresses the ability for forest co-management (defined below), to co-exist with the industrial model of forestry, through examination of a cooperative management process in Northern Alberta. Alternative models for forest management are important to consider, given the co-existing trends of globalisation of forest resources and ‘indigenisation’ of natural resource management. Lessons learned from this case may be applied to other forest co-management arrangements, and to other indigenous people who are building or joining institutions for forest management in an attempt to satisfy both indigenous and corporate interests, and provide a way to negotiate fairly over interests in which a compromise is required.

2 Context for forest co-management in Northern Alberta

Industrial forestry began expanding into Northern Alberta in the late 1980s, as part of provincial government strategies to diversify the provincial economy and reduce dependence on oil and gas and agriculture. The provincial government negotiated Forest Management Agreements (FMAs) with industrial interests, covering large tracts of forested land in northern parts of the province. FMAs are long-term (20 years), area-based arrangements covering the establishment, growth and harvesting of timber. A company receiving an FMA is required to harvest a specified volume of timber, undertake forest management responsibilities and construct major facilities to process the timber harvested.

Aboriginal issues in forest management, including roles in resource management, are receiving more attention as industrial forestry expands into more northerly areas of the Canadian provinces, areas considered by some First Nations as their traditional territories. The concept of traditional territory includes historical aspects of Aboriginal land use: hunting, trapping, fishing, and gathering areas; travel routes; spiritual and cultural sites; and personal connections with specific areas of land. In various parts of Canada, the expansion of industrial forestry has led to conflicts with local Aboriginal land users, in some cases leading to social protest (e.g., Meadow Lake, Saskatchewan [12]). Protection of Aboriginal land use in the face of industrial logging operations is a major concern of some First Nations in Canada. Other First Nations view forest industry employment as a path to community economic development [13,14].

Increasing attention is also being given to Aboriginal and treaty rights issues in forest management. Aboriginal and treaty rights are recognised in the Canadian Constitution, in various treaties with First Nations across Canada, and in forest management policy documents such as Canada’s National Forest Strategy (specifically Strategic Direction 7;

see [15]). Treaties established the rule of the Crown over an area, reserved lands to the Indians for their use, and contained assurances of hunting, trapping and fishing rights and the ability of the Indians to continue their usual vocations. A number of recent rulings of the Supreme Court of Canada have supported Aboriginal interests in resource management, including the requirement for provinces to consult with Aboriginal people when allocating resources to third-party interests [16].

2.1 Co-management of forest resources in Northern Alberta

'Co-management' is an umbrella term that refers to a variety of arrangements for shared management of natural resources [17]. Co-management is a worldwide development in natural resource management linked to sustainable development efforts to manage fisheries and protected areas, and recently, to manage forests. In Canada, co-management has been applied in the management of wildlife in the far North for over two decades [18]. The definition of co-management used here is taken from Natcher [19, p.365]: "an institutional process where local resource users, government representatives and industry share (at varying levels of authority) the management responsibility of lands and/or resources".

A variation of co-management has recently been applied to a 30,000 km^2 area of boreal forest in Northern Alberta. The 'Special Management Area' (SMA) includes four communities of the Little Red River Cree Nation (LRRCN) and the Tallcree First Nation (TCFN), who consider the area as their traditional territory. The communities of John D'Or Prairie, Fox Lake (LRRCN), North Tallcree and South Tallcree (TCFN) are located within the SMA. The LRRCN community of Garden River is located outside the SMA within Wood Buffalo National Park. Within the SMA, the Government of Alberta has allocated the wood supply to established and new forest industries and to the First Nations. The First Nations currently hold quotas for approximately 40% of the total wood supply.

The two First Nations together have a total population of about 3,000 and there is considerable socio-economic disparity between these communities and non-native communities in the region. For example, the natural rate of increase for the First Nation population is 45 per 1,000, almost five times the provincial average [20]. More than 65% of the First Nation population depends on social assistance and household incomes are less than half the regional average [21]. Unemployment rates are estimated to be at least 54% and about 60% of the population has less than a grade 9 education [21]. Addressing these socio-economic disparities is a priority for the First Nations as well as for the other parties involved in the forest co-management process in Northern Alberta.

A new co-management institution, the 'Cooperative Management Planning Board' ('the Board') has been established for the SMA, with fourteen voting members: seven from the Little Red River and Tallcree First Nations, four from provincial and municipal governments, two from the forest industry and one from the oil and gas industry. The Board's mandate includes providing advice to Alberta's Minister of Environment on management of 'renewable natural resources' within the area. 'Renewable natural resources' include air, land, water, forest, fish and wildlife, parks and natural areas, as defined in the Memorandum of Understanding (MOU) establishing the co-management process [22,23].

The co-management process for the SMA is outlined in a formal agreement (an MOU) between the First Nations and the government of Alberta. The two parties to the formal agreement have different objectives for the co-management process. The First Nations are seeking influence over resource management in their traditional territories [24], while the Government of Alberta seeks to establish a process of consultation on renewable resource matters [25]. Both parties have a common interest in avoiding conflict, and in generating economic development opportunities for the First Nation communities. The forest industries with timber rights in the SMA have been invited to sit on the co-management Board, and have agreed to participate in the process in order to protect their interests and coordinate their planning and management with the First Nations. The forest co-management process in Northern Alberta is an example of ‘strategic’ co-management, described by Notzke [26] as a way for Aboriginal people to gain influence over the management of resources and a demonstration of the provincial government’s rethinking of Aboriginal rights and relationships.

3 Methods

This discussion of whether forest co-management in Northern Alberta challenges the industrial model of forestry draws on qualitative data from a two year study of the new co-management process in northern Alberta. Our main source of data are 23 semi-structured interviews, which included 13 board members and support staff (‘board members’) from all parties to the Board (First Nations, Government, Industry), and ten community members (‘community members’) from the Little Red River and Tallcree First Nations between July and October 1999. Our data sources also include field notes from non-participant observation at board meetings, government-First Nation meetings, Little Red River and Tallcree First Nation events and other public social events in the SMA. We also carried out a content analysis of previous board meeting minutes and other reports, policy and planning documents prepared by parties of the Board.

Our literature review provided guidance for designing the interview so as to ask questions concerning the factors influencing the success of co-management. A First Nation liaison helped the interviewer make contacts in the community and set up interviews. The first author carried out all of the interviews and obtained consent to record and transcribe the interviews. Twelve participants agreed while the rest requested that the interviewer take notes only. Interview transcripts totalled 176 pages of interview data, and with the use of QSR NUD*IST (Non-numerical Unstructured Data Indexing Searching and Theorizing) data were iteratively coded into major themes and sub themes. The University of Alberta granted human ethics approval for the project before the data collection began, and proper protocol for First Nation’s research was followed throughout the study.

4 Challenges for co-management in the context of industrial forestry

Co-management has been variously described as a genuine attempt to improve local participation in resource management decision making [27], an institutional adjustment [28], a ‘tinkering’ with the industrial forestry paradigm [29] and an attempt to coopt Aboriginal people into consenting to the allocation of resources to third party interests

[30]. In order to determine whether the forest co-management process in Northern Alberta does challenge the industrial forestry model, and if so, how, we will examine three aspects of the co-management process:

1 values in forest management, including the consideration of other (non-timber) forest values and involvement of other parties

2 relationships among the parties in co-management, including trust-building and perceived faith in the fairness of decision making procedures

3 power, including equity among the partners and power relationships within the co-management process.

4.1 Values in forest management

By increasing the number of parties involved in forest management, co-management challenges the industrial model to incorporate more diverse views of forest management as well as a wider range of forest values [4]. While the same statement could be made about other participatory or community-based forest management processes, the involvement of First Nations poses additional challenges to the industrial forestry model. The involvement of First Nations as equal participants challenges the industrial model not only to consider Aboriginal forest values, but also to incorporate Aboriginal perspectives and criteria in all aspects of forest management. The following quotes illustrate board members' hopes for the ability of the process to address a wider range of forest values:

> "… we have all the people at the table, we can make decisions that will ensure not only are we sustaining communities and the economy of the region, we're sustaining forests and other values." (interview No. 21, lines 206-209)
>
> "We need to find a way to meld cultural values with the business environment." (interview No. 24, lines 167-168)
>
> "…this is about managing the forest to protect ecosystem and First Nation values." (interview No. 16, lines 967-968)

Community members also share hopes for the process addressing a wider range of values:

> "By getting together, we can have a better understanding of each other's values. What is significant to one group may not be to another, but if they can sit down and work out their differences, hopefully it will be good for all people and all walks of life." (interview No. 114, lines 42-47)

An example of how the process challenges the industrial model in principle can be seen in the definition of the concept of 'sustainable forest management' (SFM). The forest co-management process in Northern Alberta must include not only mainstream criteria for SFM but give equal weight to Aboriginal criteria as well. Aboriginal criteria for SFM are described by Ray [9] and summarised as follows:

1 Tenure: Aboriginal people need guaranteed rights to the forest and its resources to participate meaningfully in its management or profit from its richness. Without access to resources, Aboriginal people can only participate from the margins.

2 Equity: Aboriginal people have few funds for economic development, few assets to use as collateral, and thus have less access to forest tenure and opportunities to start their own businesses.

3 Training: Aboriginal people need adequate training to have opportunities to be owners and managers and skilled labour in a modern industrial complex.

4 Community development: Aboriginal people wish to develop well-paid jobs close to home. Too often Aboriginal people must leave to succeed. Local employment generally offers only seasonal and low paid work, which is then reflected in community characteristics.

5 Tradition: Aboriginal people have traditional land, traditional knowledge of the resources we use, and traditional uses of resources. If Aboriginal people lose these traditions, they fail to continue to exist as a people.

These criteria were found to be important to First Nation participants in our study. Definitions of sustainability varied among the parties involved in the co-management process. Industry and government participants were concerned with timber supply and ecosystem protection aspects of sustainability. The following excerpts illustrate some non-First Nation board members' approaches to sustainability:

> "…sustainable forest management … means you are sustaining ecological aspects of the forest as well as making sure that there's enough timber to keep the mills running." (interview No. 21, lines 217-220).

> "If there is a sustainable timber supply, everything else will be taken care of." (interview No. 32, lines 27-28).

First Nation board members and community members were not as concerned with timber supply and were more likely to speak about the need for ecosystem protection and the need to ensure that the forest could continue to support their land uses:

> "I feel no compulsion to supply [the forest company] with a sustainable supply of timber." (interview No. 13, lines 120-121)

> "…it's our land anyway, …the government thinks … it's theirs, but it's not. It's not ours too, it's not…the native peoples' …It's nobody's … we're all here to visit. People have to understand that, to respect." (interview No. 113, lines 216-224)

Sustainability of First Nation land uses was seen by some participants as central to the ability of the First Nations to maintain their cultural identity:

> "… in order for us to continue practising some of the traditional lifestyles and vocations of the native people, …[we] need the forest. If we don't have the forest, if all of the forest is going to be cut down, the majority of the time this [traditional lifestyles] will be gone." (interview No. 12, lines 520-524)

Incorporating First Nations' cultural sustainability criteria into the definition of SFM challenges the industrial model to understand First Nation forest values, incorporate traditional knowledge in forest management planning, and, ultimately, conduct industrial forestry in a way that enables the forest to continue to sustain Aboriginal land uses and cultural values. This is a major challenge both for the conduct of industrial forestry and for the participants in forest co-management in Northern Alberta.

4.2 Relationships among the parties in co-management

One of the most important benefits of co-management identified by our study participants was the potential for the process to contribute to the building of relationships between the parties involved in forest management. Both board members and community members recognised opportunities for the different parties to share ideas and learn about each other:

> "It would be exciting if there [were] no lines in between the groups. If that can happen …." (interview No. 12, lines 325-326).

> "The first [benefit] is cultural exchange, the opportunity to mix with First Nations and environmental groups and others and express viewpoints and cultures. Not just Native culture, but business culture and government culture and other cultures." (interview No. 31, lines 4-8).

Study participants recognised numerous opportunities for the co-management process to provide avenues for cultural exchange among the parties on the Board. The concept of 'cultural exchange' refers to opportunities for individuals from the different parties on the Board (e.g., First Nations, government, and industry) to interact, share ideas, and learn about each other's perspectives, viewpoints and concerns. Cultural exchange activities were included in recommendations provided to the Board as part of this study. These activities could include visits to local forest product mills, participation in intergovernmental resource management workshops, and visits with First Nation people engaged in traditional pursuits.

Trust between the parties has been identified as an 'absolute prerequisite' for the success of co-management [12,18,31]. Study participants from all parties to the Board confirmed the need for trust-building in the Northern Alberta context:

> "We didn't trust First Nations and First Nations didn't trust those government guys." (interview No. 22, lines 301-303).

> "There will need to be trust-building first. It is easy to build trust, by working together, but even easier to destroy it. One mistake can erase years of trust-building and good relationships." (interview No. 32, lines 44-47).

The need for trust-building confirms the importance of individual commitment to co-management processes (see [32] due to the need for key individuals i.e., board members) to learn more about each other and work together to achieve common objectives.

Management of conflict is one of the goals of this co-management process and some board members spoke about the importance of attempting to resolve conflicts before they became disputes:

> "It's an opportunity to draw First Nations together with the government in a little more open communication. To get us talking. Working together to look at opportunities on a partnership basis." (interview No. 22, lines 16-19).

Most board members identified consensus decision making as a key aspect of the process and as critical to their ability to accept the Board's decisions. Adoption of consensus decision making represents a challenge to the industrial forestry model, which tends to rely on hierarchical decision making processes. In this particular case, co-management challenges the industrial model not only to adopt consensus decision making procedures but also to include Aboriginal values with respect to decision making. These values

(summarised in [33]) include harmony, equality, and relativity of time. The Aboriginal emphasis on non-confrontational ways of decision making and allowing longer times for consideration of issues is a challenge for non-Aboriginal participants in this co-management process, who must learn how to make decisions in a different way. In fact, one of the provisions of the MOU was to allow First Nations representatives on the Board a 'double vote.' This requires that any action taken by the Board must be approved by both a majority of board members and a majority of First Nation members. This provision is intended to counterbalance a second review by government, when the Board's recommendations are reviewed by the Alberta Minister of Environment [34]. This voting process was seen as a compromise toward consensus voting as opposed to a strict majority rule.

Interview data suggest that there may be a need to educate non-native board members about First Nation approaches to consensus:

> "… the white guys lack an understanding of consensus decision making … You talk 'til you decide, you don't sit down and vote."
> (interview No. 13, lines 30-34).

> "… consensus … uses dialogue as the basis for exploring issues. …as opposed to argument, I mean, you never say something which directly contradicts something which is said by someone else. To confront someone … is considered poor etiquette." (interview No. 16, lines 825-831).

One of the conclusions of our study is that the entire co-management decision making process can be seen as a form of cross-cultural conflict management, providing a forum for conflict to be manifested in a way that is potentially productive for all parties involved.

4.3 Power relationships in the co-management process

One of the questions raised about First Nations cooperating with industrial interests concerns the issue of cooptation: is First Nation involvement in co-management with industry merely a way to obtain Aboriginal consent to the allocation of resources in traditional territories? It is important to consider power relationships in discussions of 'empowerment,' a word often used in the co-management literature to suggest a shift in power relations toward the community/resource user level. A true shift in power relations with regard to forest management would mean a more serious challenge to the industrial model.

This discussion is based on definitions of power first developed by Lukes [35] and used by Beckley [23] in his study of power in a Maine paper mill town. Lukes describes and compares three different views, or 'dimensions' of the concept of power:

1. The one-dimensional view of power focuses on behaviour and decision making on issues over which there is an observable conflict of interest. Beckley terms this the pluralistic model of power, which assumes equal access to resources that confer power, and no significant barriers to political participation.
2. The two-dimensional view of power also focuses on observable conflict but includes both decision making and non-decision making. It therefore considers the exclusion of interests from the political system. Beckley terms this the elitist model, under which power can be accumulated and the powerful have wealth and status. The

powerful manipulate the political agenda so that many issues never reach the political arena.

3 The three-dimensional view of power adds the question of control over the political agenda, and focuses on hidden as well as observable conflict, and the effects of collective forces and social arrangements on subverting conflict.

Beckley terms this the hegemonic model of power. This is a subtle and pervasive form of elitist power that is not recognised as such. The powerless accept the legitimating ideology of the powerful, who use their power to prevent latent conflict from being expressed. Examples of the exercise of hegemonic power include slavery and women's suffrage, where it took some time for subordinate group members to come to believe in the legitimacy of their rights.

Forest co-management in Northern Alberta is practiced within the context of power relationships that include all three models of power described by Lukes and Beckley. The co-management process operates within a system that remains essentially elitist, because the government of Alberta retains all management authority and the other participants in co-management have no legal authority with regard to forest management. In addition, government and industry have access to most of the resources that confer power. The establishment of co-management could be seen as an exercise of hegemonic power, because one of Alberta's goals in establishing the process is to avoid conflict with First Nations over natural resource management. Deliberate avoidance of conflict is a component of Lukes' three-dimensional view of power:

> "… the most effective and insidious use of power is to prevent … [manifest] conflict from arising in the first place." [35, p.23]

Thus, following Lukes' argument, the powerful may avoid manifest conflict by manipulating the views of the powerless and perhaps convincing the powerless that conflict is not warranted. In this case, convincing the powerless (the First Nations) to participate in what is essentially a mainstream institution (the Board) could be interpreted as an exercise of hegemonic power on the part of government. Although this type of argument is advanced by proponents of the 'co-management as cooptation' viewpoint, we found little evidence to support this viewpoint in our study.

We did find that the establishment of co-management in Northern Alberta cannot be considered truly pluralistic, because all parties do not have equal access to resources that confer power. However, we concluded that the co-management process represents a shift toward the pluralistic model of power. This conclusion is based on a number of factors, including the allocation of wood supply to the First Nations, the composition of the Board (50% First Nations), the content of the MOU establishing the process (including the double vote), and the desire of all parties to cooperate. In addition, interview data indicate that board members from all parties felt that the First Nations were the most powerful party on the Board:

> "… [the First Nations], not only did they have representation on there, they were the controllers. They controlled the dollars, they controlled the staffing, so they had a potential to have a very big influence." (interview No. 116, lines 213-216).

> "…to a large extent, … [the First Nations] drove the Board business. A lot of the agenda they brought forward and we would participate in making decisions." (interview No. 21, lines 600-602).

Other board members interviewed felt that the Board had not yet dealt with difficult issues and it was thus too early to gauge the actual ability of the First Nations to influence the process. Based on the available evidence, we concluded that the First Nations appear to have a real opportunity to influence the operation of the co-management Board and thus affect the management of natural resources within areas they consider to be their traditional territories (also see [19]).

5 Conclusions: co-management and challenges to industrial forestry

The answer to the question of whether forest co-management challenges the industrial model is both 'no' and 'yes'. Co-management can be seen as not directly challenging the industrial model, but as modifying it through processes of incremental change. Co-management challenges industrial forestry to consider a wider range of viewpoints and values in forest management and incorporate alternative methods for conflict management. By giving a high priority to cultural sustainability criteria, First Nation participants in the co-management process in Northern Alberta challenge the forest industry and government to re-think the pace of development, the rates of return required to be profitable, and measures to improve First Nation employment within the industry. In the context of larger societal demands for more sustainable forestry and more influence by local users over resource management decisions, co-management may indeed challenge the industrial model and affect the practice of industrial forestry in the Northern boreal forest.

Given government and industry emphasis on Canada's role as a major international exporter of timber, alternative models of forest management are most likely to be adopted within the industrial model. Indeed, it would be naïve to suggest that co-management is a panacea for solving conflicts among provincial governments, the forest industry, and Aboriginal communities over forest management. There are few working models of forest co-management in Canada to help Aboriginal and other communities negotiate shared management agreements and further develop this type of institutional arrangement. Very few First Nations actually hold timber rights to the forested areas (Crown lands) that surround them, as do the First Nations in our study. Certainly, control over timber supply enhances the position of the First Nations within the co-management process, providing greater incentive to other industrial tenure holders, who count on the fibre from the First Nation tenure areas, to enter into co-management arrangements. The requirement for provinces to consult with First Nations on resource development may also provide an important impetus for forest co-management. However, the few active examples of forest co-management in Canada suggest government and industry may be in the early stages of supporting co-management as a pro-active strategy, rather than simply as a reactive measure.

The goals of co-management are difficult ones for resource management institutions worldwide. Terms in the co-management literature such as 'integrated resource management', 'mitigation of cumulative effects of resource development' and 'sustainable management practices' are poorly defined and require understanding of site-specific stakeholder definitions of these terms. Definitions of these terms vary to the point that it is difficult to assess the degree to which on-the-ground practices are consistent with the management philosophies underpinning these terms. In our view, active dialogue among co-management participants about the meaning of these terms,

and how they can be put into practice, is an exciting development in Canada. We argue that the experimental basis of co-management is a necessary transition toward greater collaborative management and planning between government, industry, First Nations and other forest users. Trial and error holds many lessons. To conclude, we share some suggestions for tests of success of forest co-management in the Canadian provincial context.

The most important tests of success for the First Nations involved in forest co-management in Northern Alberta will likely include their ability to influence the process and achieve improved community employment while maintaining traditional and cultural uses of the forest. In particular, the interview data suggest that the ability of the boreal forest to continue to support First Nation land uses and cultural practices in the context of industrial forestry will be a key test of success for the First Nation community members. For the provincial government, key tests of success will be the ability of the process to meet its objectives. These include establishing a process of consultation, expanding the development of forest resources in Northern Alberta and avoidance of social conflict over forest use and management. For the forest industries operating in Northern Alberta, tests of success will include their ability to adapt their planning and operations to meet these local criteria while continuing to be profitable. Industry will also need to work with others to research ways to reduce impacts of their activities on First Nation uses of the forest, in order to satisfy the First Nations' objectives for cultural sustainability. For all parties on the Board, and perhaps for society, the ultimate tests of co-management will include its ability to address existing socio-economic disparities between First Nations and mainstream society, contribute to more sustainable economic development in First Nation communities and produce ecological evidence of sustainable forest management including maintenance of biodiversity.

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