February 26, 2001 Vince Crichton 1046 McIvor Ave. Winnipeg, Manitoba Canada R2G 2J9 1-204-945-6815 doc.moose@home.com

RH: CO-MANAGEMENT - THE MANITOBA EXPERIENCE - CRICHTON

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Vince Crichton

1046 McIvor Ave., Winnipeg, Manitoba R2G 2J9

ABSTRACT: Manitoba Conservation (formerly Manitoba Department of Natural Resources) has been involved in co-management programs involving First Nation communities as well as other organizations for some time. Those with the former attract the most attention. Some agreements in Manitoba are *ad hoc* arrangements that have been developed with various First Nation communities in an attempt to solve local problems. There is always an underlying element of skepticism that such arrangements may affect treaty rights. Manitoba's current Conservation Minister has stated that he hopes to reach a province wide accord to balance native hunting and fishing rights with conservation efforts and to include them in resource management activities. He has also indicated that treaty rights are not negotiable but that natives are willing to carry out conservation measures through co-management, and that as long as they are part of the decision making process, they will be satisfied. This statement takes on added significance in that the minister is a First Nation person.

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Co-management of wildlife, at least in Manitoba, is traditionally viewed as a wildlife management venture based on a trust relationship between the management authority and First Nation communities usually represented by the Chief and band council. It has also been viewed as government being the manager and inviting others to participate in multiple stages of the management process and not just in decision making. Co-management has also involved other elements of society in addition to First Nation peoples. In the last 10 years, there has been greater interest by various stakeholder groups wanting to become involved in wildlife management and, these interested parties have expanded from the traditional hunters and rural landowners to include a wider array of the public with different interests. This comes with additional costs and is challenging to wildlife managers who, in many cases, do not have the expertise or training in the social sciences to deal with them. Goulden (1985) suggested that not involving the public from the outset, is merely a postponement of the "day of reckoning", which when it comes, will cause much anguish which could have been avoided and that without public backing there is no guarantee of long term protection for forests or wildlife. Generally speaking, governments have not done an adequate job of involving the public in resolving contentious issues. The public is becoming more vocal and organized in expressing their concerns and viewpoints and are seeking more involvement, which should benefit natural resources over the long term and public use of them.

Currently, Treaty Indians have right of access to about two thirds of Manitoba, which is crown land and can be used for hunting throughout the year. The Supreme Court of Canada has ruled that provincial parks and wildlife management areas are not excluded areas but national parks are as their designation is a federal government jurisdiction. In Manitoba, First Nation peoples may hunt game animals at any time in any area where hunting or trapping of any species is licensed by the province. In addition, they also may hunt on privately owned lands with landowner permission.

The unfettered access by First Nation Peoples to wildlife resources and the freedom to hunt throughout the year poses a quandary for wildlife managers and First Nation peoples themselves. Some have expressed concern about the activities of their peers. If the real need is for harvest control, habitat programs and curtailment of recreational hunting will do little if Treaty Indians are not subject to some form of control, albeit voluntary, or an enforcement program is policed by the respective communities. In the absence of what I would label as progressive wildlife management, in which there is more involvement not only by First Nation peoples but other members of society in contemporary management programs, wildlife populations, especially those which are hunted will either decline or maintain the status quo. Sustainable harvests and traditional cultural uses may not be possible.

There have been 2 types of co-management ventures in Manitoba over the last half-century. These have involved formal arrangements with organizations such as Ducks Unlimited, the Canadian Wildlife Service, Parks Canada and First Nation Communities as well as *ad hoc* arrangements with First Nation communities to deal with local issues. Although the focus is often on the latter, wetland and land management issues, problem wildlife etc. have also involved co-management agreements. However, I wish to focus on the arrangements involving First Nation communities, as their participation is essential to ensuring a bountiful wildlife resource for all of society. Some of these referenced arrangements have not come to fruition, while others have had their ups and downs.

Co-management is a term used by most First Nation peoples as well as in the literature (Chase et al 2000; Osherenko 1988; Schusler 1999) and there are several definitions. The use of a particular definition depends on how the word is used (Schusler 1999). I prefer that adopted by the World Conservation Congress (IUCN 1997:43) which states that:

"co-management is a partnership in which government agencies, local communities and resource users, non-governmental organizations and other stakeholders, negotiate as

appropriate to each context, the authority and responsibility for the management of a specific area or set of resources."

Co-management does not require governments to relinquish or transfer legal authority or jurisdiction but it does require them to share the decision making power with user groups. And, with this approach users have a role, which is more than simply consultory or advisory.

Nepinak and Payne (1988) suggest that Canada, through its legislative history, has abrogated many aspects of the rights of Treaty Indians to hunt and fish but that legislation has periodically re-affirmed these rights, at least in principle. Affirmation was embodied in the Indian Act, the Natural Resources Transfer Agreements (Manitoba, Saskatchewan and Alberta) and more recently in the Canadian Constitution Act, 1982 (Payne 1987). It is also important to note that the Supreme Court of Canada has ruled that Indians are subject to Canadian law and that the Government of Canada has the right to abrogate treaties and repeal laws which affirm rights as contained in the Migratory Birds' Convention Act.

Crichton (1987) suggested that the way to deal with the issue of subsistence use of resources prior to a legislative approach should be consultation, voluntary constraints and management boards. When it is demonstrated that these techniques have been tried albeit unsuccessfully, then other options must be considered. He further indicated that the Manitoba experience clearly illustrates that many First Nation peoples are concerned about moose (*Alces alces*) conservation and wish to become involved in active management programs. But, some First Nation peoples are of the opinion that the terms of reference and voluntary constraints associated with management boards may affect their treaty rights despite assertions to the contrary by government. The issue of conservation in Manitoba has now expanded beyond moose and covers a broad spectrum of issues ranging from old growth forests to water quality.

Former Manitoba and National Grand Chief Phil Fontaine's address to the Manitoba Chapter of The Wildlife Society in 1993 is most interesting. He stated that when talking about treaties this means having access to wildlife resources and "I think the treaties mean something

much more - that wildlife resources should be available for us. What I mean is that aboriginal people have a primary responsibility for the management of these resources. However, we realize that we are not alone in society - there are others who wish to experience being close to wildlife, to hunt, to fish, and we welcome them in taking part in a dramatically revamped wildlife regime. The management of wildlife resources has to be done carefully and with obligations, responsibilities and rights well defined. But this does not mean shutting people out nor does it mean that harvesting resources can be done outside what the management regime allows.

At present, wildlife management and harvesting is a complicated legal quagmire. We are fighting, as it were, over slim pickings. Instead, I suggest we look towards the future, and build new management institutions, which fit our vision of what the future should be, within the context of the Canadian Constitution.

Non-aboriginal people would have an undisputed role both in creating these resources, and in enjoying the benefits from them. I am not talking about excluding anyone, but on the contrary, to increase access for everyone."

The mandate of government is to increase or at best maintain wildlife populations on the landscape and to allocate uses according to a defined policy. In Manitoba, this policy states that Treaty Indians are first followed by other Manitobans and then nonresidents.

Acceptance of the dilemma faced by wildlife managers also suggests acceptance of the dilemma faced by First Nation peoples. Simply put, should the uncontrolled take continue, game populations will be in jeopardy and be unable to meet the demands and expectations of First Nation peoples let alone other Manitobans. Considering all Manitobans, the social, cultural and economic impacts are significant. A workable co-management arrangement appears to be the only option at the moment and it will enable government to meet its fiduciary obligations to First Nation peoples.

The emphasis in the aforementioned is that co-management is a partnership between multiple stakeholders and that specific management arrangements will depend on the local

situation. In other words, it stresses flexibility to deal with each situation. Further, this process does not usurp the regulatory process, which remains with the provincial, state or federal governments.

Judicial rulings applicable to Manitoba and elsewhere suggest that wildlife managers should find a way to work within the Canadian Constitution and devise wildlife management strategies which are compatible with provincial scenarios. These are current issues, which are not found in traditional wildlife textbooks espousing the principles of wildlife management. Failure by all concerned offers no hope for resolution of the issues.

Judicial rulings also suggest a necessity to work cooperatively and carry on in a manner, which promotes a harmonious, rather than an adversarial relationship. The former has the potential to take wildlife management to new heights because, the involvement of First Nation peoples is the key, at least in Manitoba, to effective management of big game populations to the benefit of everyone. Such an arrangement will enhance conservation rather than undermine well-intended initiatives put forth as part of the ongoing management process.

Nepinak and Payne (1988) suggested that the rights of Indians to hunt would not be compromised by a new initiative but rather, it has the potential to demonstrate that Indian people can exercise their rights in a manner, which enhances rather than threatens conservation.

Although those without an understanding of the issue or who will not move from entrenched positions may argue to the contrary, such co-management initiatives will in fact benefit all society. Currently, we have many habitats, which are understocked for some species. To continue along the same path is tantamount to ensuring that habitats will neither produce nor sustain what they are capable of. There will be some successes but overall, the benefits will be minimal compared to what is achievable with a concerted effort. Nepinak and Payne (1988) have suggested that the benefits of involving First Nation peoples are for enhanced wildlife populations, increased harvest, and economic development opportunities.

Following are some examples of co-management initiatives undertaken in Manitoba.

Common to each is that they spell out a system of rights and obligations for those interested in the resource, a loose knit collection of rules relative to management that will be taken under various circumstances and procedures for making collective decisions for the benefit of the resource and user groups.

# Beverley-Kaminuriak Barren-Ground Caribou Management Board

The most notable example of co-management in Manitoba is the Beverley-Kaminuriak Barren-Ground Caribou Management Board, operational in Manitoba, Saskatchewan, Nunavut and the Northwest Territories since 1982. The Board is currently comprised of 4 government and 8 hunter representatives and governments almost always act on the recommendations submitted. The Board is a coordinating body for the allocation, use of, research and monitoring of the caribou (Rangifer tarandus) herd. In terms of hunting, government currently seeks input from the Board when new allocations for licenses are requested. The Board reviews this in light of current population data and known or anticipated harvests. Based on this they make recommendations which governments generally adopt. Within Manitoba, the only recommendation not adopted was that in which the Board recommended that fire fighting should occur on those caribou ranges near northern communities. Because of the costs, this recommendation was not acted upon. Demand for additional hunting opportunities on this herd currently exist. But, the Board is not recommending additional licensed hunting of the herd. The concern rests with the fact that the population data are 6 years old, and the Board is not confident of making additional allocations and maintaining a sustainable harvest without current data. This co-management regime has not solved all problems but it has been a success in that it ended a period of confrontation, which was replaced with a climate of cooperation between users and government officials. This board improved the exchange of information, the gathering of research data relevant to herd management and dramatically increased education and information about caribou to hunting

families. It is has also enabled governments to avoid far reaching political and economic costs that undoubtedly would have occurred with a more authoritative approach. Examples of this are a high level of user compliance with the decisions made and it has allowed an outfitting industry to evolve with user groups which would have not have been possible if non local outfitters were involved.

The Northern Flood Agreement and Northern Settlement Agreements

Under the umbrella of the Northern Flood and the Northern Flood Settlement Agreements, local resource management boards have been set up with the Nelson House, York Factory, Split Lake and Norway House First Nations. These documents are lengthy and were precipitated by decisions made by Manitoba Hydro to divert the Churchill River in northern Manitoba into the Burntwood and Nelson Rivers to enhance the capacity to generate electricity. In the case of the Northern Flood Agreement, Manitoba has agreed to pay approved expenses of a Wildlife Advisory and Planning Board. This Board may consider and recommend on all matters affecting wildlife within the Resource Area including the following: (1) monitoring the wildlife resources; (2) advising as to the overabundance of any species; (3) advising as to the maximum kill of any overabundant species that may be permitted; (4) encourage the annual harvest of wildlife to an extent and in a manner consistent with the perpetuation of adequate numbers of the species involved; (5) formulating and recommending the implementation of such works and programs as will be consistent with the protection and perpetuation of wildlife or with continued harvesting of it; (6) Manitoba agreed to appoint to the Board sufficient residents of the Indian Reserves to ensure they have a majority representation; (7) Manitoba agreed to provide training to Reserve residents leading to employment as conservation officers; and, (8) the parties agreed to facilitate and encourage functions served by community traplines.

The agreement has been a source of concern for the government of Manitoba and Manitoba Hydro. The latter has paid millions of dollars in compensation to northern Reserves and settlements have been reached with most (but not all).

# Waterhen Moose Management Project

The Waterhen Moose Management Project had an interesting beginning and represents one of the first of what could be referred to as contemporary, albeit *ad hoc*, co-management agreements. The Project was initiated via a request from the chief to the local conservation officer and subsequently to the author for assistance in restoring the moose population in Manitoba's game hunting area (GHA) 20. The population had decreased to less than 100 animals in about 1,536 km² (Crichton 1981). I gave a presentation about moose to the community of Waterhen, at which I raised the concept of a moose co-management board. Chief Nepinak from the Waterhen First Nation was receptive to the idea and asked that the presentation be given to his council. After a number of preliminary meetings, the Board was established with members being the chief and council, selected community members, a representative from an adjacent Metis community and a member from Manitoba Natural Resources. After many meetings, an *ad hoc* agreement was signed by the Minister of Natural Resources in 1984. This was followed by innumerable meetings over the years to discuss topics such as hunting, habitat issues, funding, a communication strategy etc.

The Board recommended when aerial surveys should be flown and the information was shared with users. With a low moose population, the Board recommended that government close the licensed hunting season in the GHA and recommended that council ask community members to refrain from hunting. Incrementally the population increased to slightly more than 200 but things slowly began to unravel once a select number of community members became aware of the increased population and despite opposition from the chief, council and the community, they saw this as an opportunity to again hunt moose. The area is readily accessible by snowmachine and

community members took a large number (about one third of the estimated population) of animals in one winter. The chief expressed his concern about council's inability to control off reserve activities by band members and this is a reflection of a major problem in that elected authorities lack the power to exert social norms beyond their communities. Following lengthy discussions to find a solution, a decision was made to open a moose season for non-residents in the area with 6 licenses being allocated to a community outfitting operation. The rationale for this was that the community might see the economic potential a larger moose herd could bring. In spite of this, the herd has again decreased to a level seen in the early 80's which is well below the estimated 1,000 moose that the habitat is capable of supporting. The periphery of the GHA along major roads has been signed indicating that it is a moose co-management area and the department periodically conducts aerial surveys in the area. The non-resident season has been terminated and replaced with a resident only season with licenses issued via a draw.

The political climate until recently has not been conducive to having an active board and it has fallen into disarray over the last 2-3 years. There is disagreement as to the number of animals in the area with the community suggesting there is more than department estimates and they are actively hunting moose. The future for this moose herd is not bright without an intense all out effort to work with all First Nations in the area. Previously, political differences between First Nation communities in the vicinity of the GHA were a factor in keeping some communities from participating.

Game Hunting Area 26 and 17A Committee for Moose Management

This committee has been in existence for approximately 4 years and involves Manitoba Hydro, Treat with Respect Earth's Ecosystems (TREE), the Manitoba Registered Trappers Association (MRTA), local Wildlife Associations, the Pine Falls Paper Company, local First Nation communities and Manitoba Conservation. The committee was formed due to expressed concerns from many sources about increased access and the need to manage it if the local moose

population was to support a sustainable harvest for First Nation communities and other Manitobans. Currently, this is the most active co-management initiative but is an *ad hoc* arrangement with no documents formally signed by the participants. The committee has recommended on such things as monitoring and access management controls. Regarding the latter, a local First Nation community has given the committee a memorandum of understanding (MOU) for their resource area in support of access control measures. If success can be measured by more moose on the landscape then this committee is well on their way to being successful. A recent population survey has shown that the GHA now contains the highest moose population since the late 70's. The continued success will be augmented as the committee gains more knowledge about biology of the local moose herd and a more thorough understanding of the management issues.

## George Barker Wildlife Refuge

The George Barker Wildlife Refuge is another cooperative moose management initiative between Manitoba Natural Resources and the Hollow Water First Nation. This concept evolved following concern from the chief and council being expressed to Manitoba Natural Resources about the uncontrolled moose harvest that was occurring along the roads within their resource area. A number of options were discussed by the aforementioned and other stakeholders and a decision made to recommend to government that a road refuge system be initiated. This involved placing a 300 m wide refuge on each side of forest access roads within their traditional resource area in which all hunting is prohibited. The refuge was named at the band's suggestion and with family consent after the late chief George Barker. A stylized teepee was erected on the roadside at the onset of the refuge and the refuge has, generally speaking, been successful in curtailing opportunistic hunting from roads so designated. When it was formally announced, the minister of Natural Resources was present for a signing ceremony with the community. This refuge has played a major role in ensuring the moose harvest remains sustainable. With more roads being

constructed to access new timber stands, the refuge system may have to be expanded and be part of a more intense management effort to ensure the moose population is protected from overharvesting.

Game Hunting Area 8 Moose Management Agreement

The Game Hunting Area 8 Moose Management Agreement was patterned after the Skownon Moose Management Board. The idea again was to try and restore the moose population within this area (GHA 8) to what it was in the past. The uncontrolled moose harvest had resulted in the population being reduced to a level that required new initiatives if the future of the herd was to be secured. The entire area is a wetland complex with assorted levees and uplifted areas that have a high capability for moose. Four communities are involved along with a local wildlife association. At the outset, there was a closure of licensed hunting in an attempt to get First Nation members to abstain from hunting. The agreement has had ups and downs and at one point when the moose population was on the upturn, a decision was made to have a limited harvest. Licensed hunting was permitted and licenses were allocated via a draw. The communities had the greater proportion of the proposed allocation. The harvest by First Nation peoples exceeded the allocation and the population, after a couple of years has again declined precipitously. The season is now closed to licensed hunters.

The concern is that some members of the local communities are not abiding by the intent of the *ad hoc* voluntarily agreement. But, it is an agreement that the chief and council have agreed to with the hope that all community members would be willing to participate in a sustainable harvest strategy. The local wildlife group has become disenchanted with the agreement because of non-compliance by First Nation peoples. It would not be wrong to characterize the agreement at the moment as being in disarray.

Split Lake Moose Management

Events in the Split Lake First Nation Resource area are an interesting example of what a local group of hunters can do. This group previously hunted their area and if 6 moose were seen, 6 were killed. A Split Lake Moose Conservation Plan was prepared in which the concept of harvesting bulls and calves only was put forth. Since 1994, they have directed their hunting efforts at bulls, calves and single cows. Currently, it is not uncommon for this hunting group to see 20 moose. Some community members have been converted to this structured harvest including one individual, who in the past shot everything seen. The group now lobbies extensively within their own and also surrounding First Nation communities. They have 2 options, namely to remain quiet about the increasing moose population within their area or, to try and educate their peers in the communities. The latter is in their own self-interest as it is inevitable that news of an increased moose population will become known. Once this occurs, others will hunt the area and most likely not in a sustainable fashion. Peer pressure is currently being used to convert others to this harvesting regime, which appears to be working.

#### Pen Island Caribou Management Council

There have been failures and the Pen Island Caribou Management Council is one example. A MOU for the establishment of a Pen Island Caribou Management Council was prepared for signing in November, 1991 following a number of meetings with the 2 communities (Shamattawa in Manitoba and Fort Severn in Ontario). The intent was to first establish a council and then to determine the responsibilities of that council in order to provide for the better management, conservation and enhancement of the Pen Island caribou herd. Representation would include 2 government representatives each from Ontario and Manitoba and 3 from each of the aforementioned communities. The objectives of the council were to promote communication, develop and implement a management program, define management problems, establish a decision making process and promote management objectives for the herd in both communities. An important aspect was that the council would be responsible for developing and making

recommendations to both provincial governments and to groups of traditional caribou users respecting the conservation and management of the herd and its habitat. These could include such things as a sustainable population size for the herd, harvest limits, research proposals, communication strategies, economic opportunities and education programs for the communities. The MOU also included rules of procedures, information on annual reports, effect of recommendations and funding. The intentions were sincere on all sides, however, things do go awry. A few days prior to a formal signing in the communities, the Fort Severn Chief called off the entire agreement due to a political dispute with the minister from Ontario. Despite the good intentions, politics reared its head and this MOU was never signed and nothing has been done since. Despite the failure, relationships were established which may augur well for future initiatives. Recently, one of the First Nation representatives involved in the initial attempts suggested to the author that it is time to try again. His concerns now focus on what he describes as an excess harvest by local First Nation users.

### Where to from here?

What happens in the in the next 10-15 years will have a major impact on what is available for those generations wanting to use wildlife in 2100. It is essential that we now lay the groundwork for the future. This is the challenge. Wildlife managers, First Nation peoples, and other members of society must collectively find a mechanism that works well within the framework of the Canadian Constitution and devise wildlife management programs that are structured for the Manitoba scene (and elsewhere) which avoid court challenges. If the latter occurs, the decisions rendered may in fact further entrench hard line positions with the end result being that the resource and users both suffer. Further, the legal process has already resulted in rulings that appear to favour First Nations but, some of these peoples are not entirely pleased with the rulings.

The issue facing wildlife managers is the need to meld 2 entirely different systems together. One system has prided itself on the use of traditional ecological knowledge (TEK) to manage resources while the other takes a more scientific approach. Osherenko (1988) suggests an important issue of the First Nation system arises when rules once widely followed, are no longer passed down to younger generations. Co-management can assist in overcoming problems associated with 2 different systems and this arrangement facilitates forming partnerships in which user groups acquire a sense of ownership which brings with it responsibility for its success. Such an arrangement may also reduce the costs of enforcing regulations since compliance almost certainly will be greater when those to whom a regulation is directed are involved in making it. There is a need to meld both systems into one to ensure that conflicts and issues are resolved to the benefit of the resource as well as the cultural, economic and recreational opportunities provided. Further, some management systems, which require licensing or hunters' reports, are impractical in many northern communities. Jentoft (1985) and Pinkerton (1989) suggest that comanagement can lead to more equitable management than that by a central government as it brings stakeholders together to address difficult issues. McCay and Jentoft (1996) describe it as a more democratic approach that can result in greater legitimacy of management because more stakeholders are involved in decision-making.

In North America, wildlife issues will become more complex and challenge the skills of resource managers to deal with them. The future of wildlife conservation can be shaped with the new technologies available to us but are we prepared to make room for wildlife. Is there the political will? Hopefully, we have learned 3 things from the past: (1) what works; (2) what does not work; and, (3) the need for all of society to work cooperatively to ensure those here in 2100 will enjoy the benefits that all too frequently are taken for granted.

I suggest that additional contemporary thinking in terms of co-management is needed and that we must be active in looking for new ways of making this concept workable and sustainable.

It is recognized that there are staunch, entrenched views, which do nothing to foster a harmonious

and respectful relationship. It is also noted that some agencies view co-management with skepticism, as they fear the loss of authority. On the other hand, some government agencies have become leaders in the field by being proactive and developing new policies. Most likely they have recognized that far too much energy is expanded in defense of special interest groups and have devoted their time to finding common ground for new opportunities, which will benefit all resources and users. Chase *et al.* (2000) suggest that agencies who are proactive in the field have developed a more supportive, educated and involved public. The future well being of wildlife rests with an involved public.

The public now recognizes their responsibility as an integral partner in wildlife management. Societal values and perceptions have changed and this dictates that management programs must also change. Wildlife managers/biologists and other government personnel involved must avail themselves of the opportunities to interact with a broader public and be proactive in seeking their support.

Wildlife managers in this new millennium are facing stakeholders with a much wider array of interests and often times contrasting values. The challenge is to balance diverse and frequently conflicting points of view pertaining to wildlife and find common ground. This presents an opportunity to experiment with numerous techniques to involve stakeholders in the wildlife management decision making process while at the same time recognizing the need for integration of biological and socioeconomic information. Chase *et al.* (2000) discuss new innovations to stakeholder involvement such as mechanisms to resolve conflicts and reduce costs of enforcing regulations, using local knowledge and educating the public so they have a greater understanding of the complexities of management and able to see beyond their personal perspectives. In addition to the aforementioned, when dealing with First Nation peoples there is a need to overcome the cultural differences between native perspectives or TEK and contemporary science.

The current Minister of Conservation in Manitoba is on record as hoping to reach a province wide accord to balance native hunting and fishing rights with conservation efforts. Specifically he has stated "My goal is to somehow find a way to include the participation of aboriginal people in resource management. Treaty rights are not negotiable, but Natives are willing to carry out conservation measures by co-management. As long as we make them part of the decision-making process, they will be happy" (Winnipeg Free Press, May 6, 2000). This statement takes on more significance due to the fact that the minister is a First Nation person.

There are 4 ingredients to making co-management partnerships workable and effective:

- governments must grant users a decision-making role in developing management programs which vary from population monitoring, to setting harvest quotas, to enforcement;
- First Nation community members must be supportive of the partnership;
- every effort must be made to remove cultural and linguistic barriers which will
  facilitate participation by native users, particularly elders and recognize long standing
  cultural and economic values which First Nation peoples place on the resources; and,
- there needs to be a dispute resolution process when governments and users cannot agree.

Co-management is not a panacea but requires substantial time, effort and resources to be successful. It can, if designed and implemented carefully, result in greater stakeholder knowledge, investment and satisfaction with the management process, which in turn can lead to a greater commitment to wildlife conservation.

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