

Nunavut Fisheries Co-Management and the Role of the Nunavut Land Claims Agreement in Fisheries Management and Decision Making

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This research addresses the third core Fish-WIKS question - **Can various IKSs be used to inform and enhance an ecosystem-based approach to fisheries management in Canada and internationally, given the complexities of ecosystems and additional uncertainties posed by climate-induced changes?**

A brief introduction on the specific issue being addressed

Management of wildlife resources in Nunavut is subject to the terms and conditions of the 1993 Nunavut Land Claims Agreement (NLCA). The NLCA established five Institutions of Public Government called co-management boards. The co-managed Nunavut Wildlife Management Board (NWMB) is the main instrument of wildlife management in the Nunavut Settlement Area (NSA), including extensive marine areas extending 12 nm adjacent to Nunavut and is mandated to use the best western science and Inuit Qaujimagatuqangit (IQ, the traditional knowledge of the Inuit) knowledge systems, in making management decisions. The agreement also calls for the "Basic Needs Level" (BNL) of the Inuit to be met prior to other uses of the resources. Presently the co-management partners of NWMB (Department of Fisheries and Oceans (DFO), Nunavut Tunngavik Incorporated (NTI) and Government of Nunavut (GN)) make fisheries management decisions in the absence of fisheries regulations specific to Nunavut. Given this and the differing worldviews of the Inuit and DFO, it seems appropriate to explore the opportunities and challenges arising from the NLCA as it seeks to achieve its goal of shared decision making in the management of marine resources in Nunavut, using different fishery case studies.

Why it was important to address this issue

The Inuit's history of harvesting resources from the Arctic's rich aquatic environment pre-dates contact with Europeans. However, continued access to such resources is being threatened from an increasing number of pressures and local communities have voiced concerns over these trends. With regard to the harvesting and allocation of fisheries resources in Canada, the decision-making processes generally takes place within the Federal Department of Fisheries and Oceans (DFO) using

western science-based knowledge systems. Recognizing that the values and socio-cultural context underpinning the Inuit worldview differs from a western scientific worldview, this research examines the structure of fisheries governance in Canada with a specific focus on Nunavut and the co-management framework, created through the Nunavut Land Claims Agreement (NLCA).

What are the key findings from the research

Specific details on the effectiveness of the co-management process for three different fisheries (commercial offshore turbot fishery; non-commercial narwhal fishery; multi-type Arctic char fishery) can be found in Boudreau and Fanning (2016).¹

On the whole, our research found that fisheries data for Nunavut are not readily available, particularly the personal use, or subsistence, fisheries. However, lack of data does not indicate unimportance as evidenced by trout, Arctic char, bearded seal, muktuk (the skin and blubber of a whale), and polar bear being reported as key traditional foods in Nunavut. This lack of reporting is a challenge to fisheries managers charged with setting quotas and evaluating stock sizes using the scientific method. Basic Needs Levels (BNLs) are defined in the *NLCA* as the "level of harvesting by Inuit" and "the first demand on the total allowable harvest", suggesting that a scientifically derived estimate of the allowable harvest needs to be determined to set the BNL.

The federal *Fisheries Act* allocates fisheries into types, namely recreational (sport), commercial (for sale), or Aboriginal (food, social, and ceremonial), and these allocations are not necessarily interpreted to be in line with the *NLCA* or the Inuit approaches to harvesting. In addition to not expressly including commercial fisheries in the BNL, generally speaking, sport fishing is not a key activity of the Inuit, with subsistence fishing being most common. With the unique situation within Canada of Nunavut's population being an Indigenous majority, there is some disconnect between the federal *Fisheries Act* and regulations and the fisheries management realities in Nunavut where the notion that humans can 'manage' anything other than their relationship with

¹ Boudreau, S. A., & Fanning, L. (2016). Nunavut fisheries co-management and the role of the Nunavut

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nature is unthinkable to the indigenous worldview. An example of this disconnect, drawing on the research literature, is illustrated in Table 1 for Arctic char.

Inuit traditional management practice	Western management practice
Patience, problems will be resolved in time	Impatience, problems resolved immediately
Egalitarian organization	Hierarchical organization
Face to face government and politics	Representative democracy
Sharing by social agreement and convention	Allocation decisions made by distant authorities
Local knowledge of fish biology, e.g. spawning areas and migration times	Universal knowledge of char biology applied locally
Time management in natural cycles	Time management in small arbitrary units
Qualitative observations related to management decision-making such as monitoring CPUE, strength of runs, fat content of fish.	Quantitative data on population size by use of counting weir, age-specific growth rates, spawning sizes and frequencies, tagging
Indirect management by rotating fishing areas and spreading out fishing effort in space and time	Management by annual harvest quotas on assumed discrete stocks
Social enforcement of accepted, proper Inuit practice	Tools: quotas, gillnet mesh sizes, closed seasons
Enforcement by social mechanisms and, under the 1993 NLCA, through co-management mechanisms	Enforcement by the laws of the land, Federal Government fishery-related acts and regulations.

Table 1. A comparison of Inuit and Western scientific management practices for Arctic char

What are some of the main policy Implications arising from the findings

The *NLCA* is a very comprehensive document with positive and innovative decision making processes, albeit complex, but it also has some shortcomings. For example, it has not been able to predict or accommodate for the interests of contemporary Nunavut such as emerging fisheries and gaining additional access to commercial fisheries has proven to be difficult.

Other challenges to be addressed include the lack of Nunavut-specific fisheries regulations. However, there does not seem to be consensus on whether or not these are necessary going forward. Additionally, with respect to the BNL, some still have to be set and NTI is working to include commercial harvests in the BNL. Further, there is some discordance in how fisheries are designated in Canada. For example, recreational fisheries have the potential to bring a lot of revenue to the region, and yet the concept of a sport fishery is not an Inuit practice per

se, neither, it has been argued, are terms such as “total allowable catch”, “basic needs level”, etc.!

Key operational challenges also exist such as the need for more capacity in terms of trained personnel, enforcement, infrastructure, research, etc. With the recognition that the Federal Government retains ultimate responsibility for wildlife management in the NSA with authority to overturn decisions made by the NWMB, it is important to also acknowledge most of the decision makers within the co-management partnership are originally not from Nunavut, nor Inuit, and likely bring a ‘western’ worldview. Thus, it is imperative that managers’ enhance their ability to understand the broader integrated, social, economic, cultural and political realities that are affected by and shape their decisions in Nunavut.

Our research suggests that the co-management framework creates an opportunity for progressive management decision making but its application is still a work in progress. Furthermore, the potential to evolve from simply a co-management approach to adaptive co-management and adaptive governance appears possible within the existing legal framework of the *NLCA*. Given the requirement within the Act to bridge indigenous and western knowledge systems to achieve context specific societal goals with respect to wildlife management, the Act can serve to foster mutual exchange of knowledge and learning in a time of rapid change for the region. Incorporating the Inuit worldview, the remoteness of Nunavut, the *NLCA*, the economy, food security, institutional inertia, political influence by non-Arctic entities and, more specifically to fisheries, the lack of Nunavut specific fisheries regulations are only a few of the opportunities and roadblocks that need to be taken into consideration during decision making.

Additional and significant factors beyond the scope of this paper but which will play a key role in affecting decision making in Nunavut include dramatic changes in climate in the Arctic and development pressures from increased accessibility both within Canada and internationally, particularly in terms of increased shipping and globalization. However, consultation and both western science and Inuit knowledge systems are important complementary and mandatory pieces of the management framework for wildlife in Nunavut and any new Federal fisheries regulations specific to the Territory will need to take this into account.

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