Thinking Small: Stewarding the Artic Commons Through Interlocal Institutions

"Salmon know no borders or boundaries. The representatives from both countries recognized this fact, and had the wisdom to fashion an agreement to work for the good of the resource and its users in Alaska and Canada." U.S. Fish and Wildlife Service Alaska director Dave Allen.

Throughout the modern circumpolar North, finite natural resources dwindle as the amount of environmental degradation from heavy metals, air pollution, and municipal waste rises. The countries in the Northern latitudes all maintain federal and state, or other subnational, institutions to manage such environmental problems. They have also each negotiated agreements concerning their shared water, air, and borderlands. In spite of the domestic and international mechanisms to safeguard natural resources, the United States and its circumpolar neighbors are grappling with a complex series of shared problems related to climate change, economic globalization, and international scrutiny as well as internal conflicts over the use of natural resources. This paper focuses on Canadian and American relationships but examines them in a broader context that theorizes a Northern commons.

The physical issues facing the North are accompanied in North America by the publics' increasing distrust of government, the call for accountability from public officials, and a demand for a larger voice in the policy process (King and Stiver, 1998; Pierce, Steger, Steel, and

Lovrich, 1992). While few citizens would dispense with government management of the environment, and fewer would prefer to rely solely on market solutions, most citizens are dubious that public officials and institutions charged with managing their communities' resources are doing an effective job. Concurrent to citizen demands for accountability, both federal governments have sought to devolve many of the national responsibilities for the environment to their states, provinces, and municipalities over the past twenty years. This combination of environmental and policy conditions has shaped the implementation of Canadian- American binational commitments to shared border ecology over the past two decades. Moreover, these conditions will shape the development of new institutions for the U.S. border with Mexico to the South and the borders shared by other circumpolar countries in the future.

The issue of border ecology management has largely been neglected. Political science studies of international environmental agreements and their effectiveness retain a focus on federal level actors, institutions, and actions. They also tend to analyze multi- country agreements for global commons such as Antarctica, the ozone layer, migratory animal populations, or endangered species. On the other hand, studies of domestic environmental concerns usually stop at the border without considering domestic externalities or their consequences. Both branches of study frequently fail to include smaller scale remedial

and conservation activities occurring along borders. In spite of this, state, provincial, and local governments often create transnational sets of rules or practices to further localized international goals addressing pollution, development, or harvests in borderlands. It is especially important to examine such cooperation on a local scale for two reasons. First, local implementation of remedial actions and conservation practices are important parts of international environmental arrangements. The small- scale actions of local people and organizations may be key indicators of whether a large- scale environmental agreement will actually bring about change. Second, without accurate tools of evaluation, it is difficult to understand the effects localized transnational cooperation may have on ecological problems and border communities.

This paper aims to broadly address issues of a Northern Commons by more narrowly contributing to the understanding of the institutional performance of natural resource management mechanisms in interlocal commons. How do governments and their constituents design effective environmental institutions to protect natural resources or to clean up existing degraded sites when two countries contiguously share the resource? How successful can these institutions be in the long run at achieving their goals? Can interlocal institutional arrangements produce changes in broader social practices? How do current theories measure the successes and failures of such efforts and what policy reforms might be offered? The intent of my study is theoretical, to create a model for

interlocal environmental stewardship by examining the issues related to thinking of the North as a commons. I come at this topic from earlier research based on empirical studies of three transboundary natural resource institutions for water quality between Ontario, Canada and Michigan, United States in the Great Lakes Basin. My study of the fifteen year effort of the Binational Remedial Action Plans in the Detroit, St. Marys, and St. Clair Rivers to protect and remediate critical pollution sites with significant stakeholder involvement led me to theorize about interlocality and the artificial nature of boundaries in relationship to ecology (Suker, 2001). In this paper I hope to address some key theoretical issues of the Northern Commons and introduce four interlocal arrangements between the United States and Canada that shed light on the possibilities of "commons" style regional institutions in the North.

Problem Context

Environmental pollution crossing political borders has become a concern shared by most nations. Information technologies, industrial capabilities, and societal awareness have brought different nations into closer contact than at any other time in history. As humanity's understanding of the natural world has expanded, it has become

increasingly apparent that the water, land, air, and their inhabitants are not divided up by sharp lines or explicit borders. The lines on a map, while often drawn around natural formations such as mountain ranges, desert edges, or rivers, have clearly become political artifacts when one refers to most natural resources.

Ecosystems (communities of organisms and their habitats) function as ecological units in nature. These form the Earth's dividing lines and they blur as one moves from coastal wetlands into grasslands and out onto a prairie. They are interdependent and their inhabitants, both plants and animals, are often migratory. This mobility applies not only to humans and their resource bases but also to items put into an ecosystem by humans, such as plastic bags, polychlorinated biphenyls (PCBs), and human waste. Moreover, the impacts of human activities on ecosystem health may have long-term consequences. Recent data demonstrate that the cumulative effects of past human activities have left persistent toxic substances in the environment. Evidence suggests this may lead to reproductive problems in both animals and humans (Colburn, Dumanoski, Myers 1996; Kiss and Shelton 1991). The awareness of these facts has changed the way in which environmental stewardship mechanisms are legislated and administered. In particular, it has also sparked growth and change in international boundary diplomacy and administration. The evolution of human comprehension of the natural world must be matched with accurate policy tools to

implement and review the stewardship process. In the Northern latitudes we are especially vulnerable to pollution sinks and our ecosystems are more vulnerable to human activity than many below the Arctic Circle.

Theorizing a Northern Commons

When addressing the issue of the North, whether strictly circumpolar or as a collective definition for states and ecosystems of northern latitudes facing similar challenges, one must ask two key questions. First, what is it that is held in common? Second, to whom, if anyone, does that which is held in common belong? The first question demands a careful examination of socio- cultural and ecological components of northern latitudes. What is it that we might have in common or demand common access to or consider to be a shared good worth sustaining? The latter question taps the idea that just because something is considered a "commons" does not necessarily mean open access to everyone who comes across a certain geographic location, nor does it mean that the resource held in common is bound to a specific geographic area.

What do Northerners have in common? Technically the physical characteristics of a commons makes it only one of four types of economic goods. A common pool resource is one from which it is difficult to exclude people, and the use of the resource by each person

prevents the use of that piece by another person. For example, a fishery may be a common pool resource. It is difficult to prevent people from fishing in a lake, but each fished removed prevents another person from having that fish. Clean water presents a slightly different example. It is difficult to prevent people from using the river water for drinking, fishing, chemical outfall, and bathing yet each of these activities reduces the amount of clean water for others. The other forms of goods toll goods, public good, and private goods demonstrate variability in terms of access and subtractability.

[Insert Table 1 here]

However few resources exist as a singular "type" at all points in time. Many scholars have noted that goods once thought to be public, such as clean air, can be thought of as private goods (McKean, 1996, Keohane and Ostrom, 1995). Some private goods produce public goods, such as a beautiful landscape that can be viewed by a neighborhood. Other goods considered public goods, such as national parks are technically toll goods because we pay entry fees. We also have to figure in time scales. Is a resource renewable and perhaps public if it may expire in several generations? What about cultural differences in which something is considered common pool by one group but thought of as a private or toll good to another? The fact that natural resources can

exhibit common pool as well as other attributes depending on the resource lifecycle, the human cultural component, and changes in both over time makes the definition of a commons a potentially mutable issue and one that must be addressed with any efforts to manage a resource.

Standard ways to perceive similarities and differences across a geographic landscape such as the North would examine cultures, languages, information, territory, epistemologies, ontologies, and resource dependencies for starters. Can we argue that the North is a commons based on any one of these indicators? Even within North America the cultures vary greatly both between indigenous and white inhabitants and among the various Native Americans and First Nations as well as within the white community. In terms of language while we may now share English as a common method of communication it certainly has not always been so, nor is English the primary language of thought for many in North American – and certainly not across the North as a whole. Nor, do we share the same resource dependencies or belief systems. On the other hand, in spite of these similarities we do share a geographic realm that is more similar across circumpolar countries (or countries with circumpolar territory) than to geography of the lower latitudes. This consideration of ourselves as a geographic common area may not promote much leverage in terms of considering individual common pool resources, especially when such resources are found along nodes of difference. In other words, the conflicts over subsistence

hunting, oil development, and pollution are inherently tied to the ways in which peoples, markets, and governments view themselves as different rather than similar and connect these differences to the resource in question on a fundamental level¹. However, the fact that we share common problems does bind circumpolar actors together and dictates that we work to resolve these problems through information exchange and openness to strategies that may have worked in far off locales.

One similarity shared by Canada and the United States, and to a degree Russia, are the core-periphery conflicts related to governance by a southern national government for which the bulk of its constituents are not denizens of the North and the focus of its policies are not Northern. Each of these countries is relatively large and has a federal system of government that causes great regional variation in population, landscape, and political climate. As a consequence, numerous formal and informal strategies exist within each country to solve local and regional natural resource issues. When the environmental management problems are those of resources considered to be widely shared but subtractable it is frequently difficult to settle on an arrangement that both preserves the resource and satisfies all those who consider themselves stakeholders.

¹ By "fundamental level" I am referring to socio- cultural connections made by different people to their resources. For example, conflicts over salmon fisheries stem in part from the fact that native peoples, fishing businesses, and the public view their connection to this resource in fundamentally different ways. For one group the fish may have a spiritual cultural connection to another the fish are key to an economic marketplace and to yet another they may represent a deep tie to fishing for pleasure as a family tradition or right as a citizen.

The roots of common pool resource theory in the social sciences stem from Garret Hardin, an economist, whose 1968 work, "The Tragedy of the Commons" served as a lesson cautioning people against the overexploitation of natural resources (Hardin 1968). Hardin describes the commons dilemma in terms of conflicts encountered by herdsmen on an open pasture after the goal of social stability has been reached, i.e. violent conflict, diseases, and poaching no longer keep the numbers of humans and animals below the carrying capacity of the land. What prevents each herdsman from grazing his cattle as frequently as he likes? If all herdsmen graze their cattle without restriction this is bound to lead to overgrazing and the reduction of cow health and consequently of profits for the herdsmen. Applying this theory to the North is not difficult. Caribou, salmon, clean air, oil, and other resources may fall, in different circumstances, under the commons moniker. From the work of Hardin and other authors who wrote about commons dilemmas many scholars concluded that common pool resources inherently needed government intervention in order to regulate the resource users and maintain sustainability. Later theorists such as Elinor Ostrom (1990) refute this assumption. She proposes design principles to promote the success of self-governed institutions in which resource users negotiate strategies to maintain their resources without state or market intervention.

In the North, such an idea has great appeal. Northern Russians, Americans, and Canadians have a longstanding belief in their ability to solve their own problems born out of a shared history, or mythos depending on your standpoint, of rugged individualism and desire to cooperate without limiting the personal freedoms of others. But when one thinks of the North as a commons does this necessarily mean that strategies for self-governance proposed by many commons scholars are an appropriate response? Could the North govern itself in any politically feasible fashion? If so on what scale and by whom? Self-governance means something very different when espoused by Alaska's state legislators as compared to residents of Arctic Village or Venetie or even to landowners scattered across the rural areas of the state. While theorizing all aspects of the potential for Northern self-governance, examining some ways in which the North has introduced elements of self-governance to problems of shared concern can be detailed. In this paper I focus on three institutions, all relatively new, that first highlights a willingness in North America to create transboundary institutions when an ecological commons does not match up with a political one and second demonstrates a capacity for Northern regions to reach solutions distinctive to their cultural geographies.

Interlocal Institutions in the North

The Management Agreement for Polar Bears in the South Beaufort Sea (IGC-NSB) created in January 1988, the Alaska and Inuvialuit Beluga Whale Committee (AIBWC) formed in 1988, the formation of the International Porcupine Caribou Commission and the U.S.-Canadian Porcupine Caribou Agreement of 1987, and the U.S. - Canada Yukon Salmon River Agreement in 2002 (UCYSRA), each represent localized environmental management of internationally shared common pool resources. These institutions are neither completely self-governed nor are they simply regulatory bodies of hierarchical government management. They are tied to the marketplace but not governed by it; they are influenced by national trends but not beholden to them. Each contains both "grassroots" and "top- down" elements; as well as white, Native American and First Nations participants. They rest in-between several juxtapositions of ownership, governance, and cultural belief. Although they have been organized, funded, and staffed by federal, state, and provincial government agencies, their design also includes significant space for local resource users in the design of the institutional goals and actions taken by these institutions – there is some degree of self- governance by those who actually use the resources. Consequently, their presence overlaps several veins of literature – that of common pool resources, international regimes, and resource specific works related to whales, salmon, and caribou. It is this overlap that has prevented significant scholarly inquiry into the variables that promote or

hinder success within each institution, the degree to which each is legitimately locally empowered, and whether or not these specific institutions have had an effect on their natural resources. This paper represents the first stages of an effort to engage such an inquiry using lessons learned from studying interlocal institutions between Michigan and Ontario and the subsequent development of a model for such institutions (Suker, 2001).

The Polar Bear Management Agreement for the South Beaufort Sea represents a user- to- user agreement² between the Inuvialuit Game Council of Canada and the North Slope Borough of Alaska created in 1988 in response to the open ended wording in the United States Marine Mammal Protection Act of 1972. This act banned polar bear hunting unless by Alaska natives for subsistence. However, the act did not specify harvest numbers or methods and it did not apply to Canada. Prior to the 1980s it was believed that the Canadian and American Polar bears were distinct groups but research eventually showed the bears ranging between Icy Cape in Alaska to Pearce Point in Canada (Brower et al, 2002).

[Insert Figure 1 here]

 $^{^2}$ As opposed to a government- to- user agreement. This fact is highlighted by Brower et al, 2002.

Once it became clear that the bears were a shared resource concern in both countries rose over harvesting amounts and techniques. Each country had a different system for regulating polar bears both by national law and indigenous practices. By the mid 1980s the local hunters in the North Slope Borough and Inuvialuit Game Council had decided that a formal agreement between Canada and the United States under the 1973 Agreement on the Conservation of Polar Bears was not immediately forthcoming and they agreed, instead on a joint institution to protect their resource. The IGC-NSB provides for annual quotas (which over time has come to include some problem bears); determines hunting seasons; provides protection for bears under certain circumstances such as bears found in or constructing dens; hunting methods; and annual meetings. The agreement created a Joint Commission of two Commissioners appointed by each party and a Technical Advisory Committee appointed by the Commission. The advisory committee has been traditionally made up of biologists from governing agencies of both countries. These two groups meet annually to exchange information, set priorities, and make decisions. They must reach decision by consensus. The costs of the meetings, including travel, come from the IGC and NSB but the technical advisors are paid by their agencies. At the time of its creation,

> This Agreement, the first of its kind between aboriginal groups in the Canadian and U.S. Arctic, was simply a "gentleman's agreement": it has had no formal status in

law, though most aspects were already enforceable in Canada. In Alaska, peer pressure is the only means of enforcing the conditions of the Agreement unless the population is declared depleted under the MMPA. Remarkably, and solely because of concern for the conservation and wise use of the polar bear population, the North Slope Borough adheres to the Agreement by voluntarily committing its members to regulations that do not legally exist (Brower et al., 2002, 365).

Brower et al., (2002) claim that there has been overall success in maintaining a healthy and stable population of polar bears in the Beaufort Sea. They note that the Inuvialuit and Inupiat remain "fully committed" to this agreement and remain supported by their national, state, and territorial governments. The authors highlight widespread publicity of the agreement as well as "pride of ownership" among the parties to the agreement as reasons for its success. However, the authors are unable to make a clear argument for the role of this institution in protecting the population as opposed to other exogenous factors, nor do they discuss how the institution has fared in different years of its existence, which would facilitate understanding of the institution's own variables for success.

The Alaska and Inuvialuit Beluga Whale Committee (AIBWC) formed in 1988 on the heels of the polar bear agreement discussed above. Although, unlike the polar bear there were several key areas of information that was required for an accurate baseline in order for the

IGC-NSB to commit to an agreement. Due to this need for information an international committee comprised of members of the local hunting community was formed. This locally directed international committee has been maintained and become an integral part of beluga whale conservation. Currently, the membership of the committee consists of representatives from coastal hunting communities in Alaska and Canada, as well as federal, state, and provincial officials, and scientists and technical advisors. However, only representatives from the hunting communities may vote on hunting issues (Adams et al., 1993).

[insert figure 2 here]

This institution has ultimately led to the creation of the Inuvialuit Inupiat Beaufort Sea Beluga Whale Agreement that was formalized between the North Slope Borough, the Inuvialuit Game Council, and the Kivalina Whaling Captains Association in March 2000. So, unlike the 1988 polar bear agreement, the AIBWC existed without an more formal international agreement for nearly fifteen years. In this time the committee established beluga whale research priorities, coordinated or assisted in collecting biological information related to whale hunting and habitat, providing some research funding, commented on federal actions, produced a newsletter and sponsored the attendance of committee

members at international meetings such as those of the International Whaling Commission (Adams et al., 1993).

Representatives from multiple native communities in Northeast Alaska and Northwest Canada gathered in Arctic Village in November and December of 1982 to form a commission to protect the Porcupine caribou herd. The establishment of an International Porcupine Caribou Commission (IPCC) charged the commission "to take immediate and continuing action for the long-term conservation of the Porcupine caribou and their habitat." In March 1984 the Canadian government signed a domestic agreement on the management of the Porcupine River Caribou Herd and its habitat along with representatives from the Yukon Territory, The Northwest Territories, and three native groups – the Council of Yukon First Nations, the Inuvialuit Game Council, and the Gwich' in Tribal Council. In 1987, the United States and Canada signed an international agreement to protect the caribou, establishing an eightmember International Porcupine Caribou Board, with four members from each country.

The Porcupine herd, which migrates yearly between Alaska and Canada and whose calving grounds near the Beaufort Sea lie in both countries, is an important subsistence resource for the more than 7,000 villagers within a region the size of the state of Wyoming.

[insert figure 3 here]

This management has been more complicated than that of the polar bears or beluga whales due to the role of America's ANWR oil development proposals. The IPCC has not always agreed with the formal international board that is not necessarily an inter*local* institution, while the IPCC remains one.

Lastly, there is the recent creation between Canada and the United States of the U.S. – Canada Yukon Salmon River Agreement in 2002 as and annex to the older Pacific Salmon Treaty. UCYSRA is a separate institution from the Pacific Salmon Treaty because it sets out a distinct regime for Yukon River salmon, although it still adheres to the broad science- based management principles of the Pacific Salmon Treaty. The Yukon River originates in British Columbia and flows 2,200 miles in the Yukon Territory and Alaska before entering the Bering Sea.

[insert figure 4 here]

The negotiations for this annex included significant interlocal participation from subsistence fishers and villages in both Alaska and the Yukon Territory (as well as commercial fisheries) along with the governments. The key elements of the agreement include the formation of a binational Yukon River Panel³, the Yukon River Joint Technical

³ Although a Yukon River Panel has been in existence since the 1995 Interim Agreement between Canada and the United States.

Committee, and the Yukon Restoration and Enhancement Fund. Additionally, this agreement provides direction for coordinated management, rebuilding plans, habitat protection, restoration and enhancement. Although this institution is new its basic principles include "harvest sharing of salmon stocks will be managed according to the principles of precautionary abundance- based management. Both sides will manage their fisheries to ensure enough fish are available to meet escapement requirements and, whenever possible, to provide for subsistence and commercial harvests" (Reeker, 2002).

The three main components of the agreement are binational and tied closely to the local inhabitants but they do not necessarily make provisions for the direct inclusion of local people on the Panel, Committee, and Fund. There are provisions to include native peoples on the committee though, and it could be assumed that these individuals will be local users of the Yukon River. On the Canadian side there is a public advisory board set up under the terms of the agreement in the Yukon Territory – The Yukon Salmon Committee. Its members also sit on the Yukon River Panel, although these members represent only Canada. The agreement includes a similar advisory committee for the Alaskan side that must include two Alaskan native people. At this time I am not sure if this advisory committee has been re-assembled ⁴ or if it is considered "public" as is its Yukon counterpart.

⁴ Like the Yukon River Panel an Advisory Committee for the Alaskan side has also existed since 1995.

Even though the terms of these international agreements are not enforceable in either Canada or the United States and there is no formal oversight to measure compliance, the agreements have appeared to contribute to legal protection and regulation within the state, territory and federal governments of the involved parties. As individual cases these all seem like small steps in which a localized international resource is stewarded by a small number of individuals but they add up to a movement in common pool resource institutions that combines state, market, and local governance solutions. In this sense these cases are remarkable examples of environmental stewardship that crosses international boundaries and yet remains locally driven. These cases have not been compared with one another in any comprehensive manner, nor have their effects or internal variations been subject to institutional analysis. It is my hope that the recognition of them as a growing trend in interlocal institutions will permit such a study in order to add their information to a model for interlocal institutions that can be used by future endeavors.

Governmentality and Concern Over "Institutionalism"

While the above information demonstrates a growing trend towards interlocal solutions in the North there are some issues of concern that should be addressed, particularly when the institution is

one managing resources related to indigenous groups who have claim to a particular territory or resource. Clearly, these institutions have been designed to grapple with natural resources that cross international boundaries, and thus jurisdictions. The commons which polar bears, salmon, beluga whales, and caribou inhabit have been divided by political lines but have now been recognized by both countries as shared resources. My focus has been examining institutions that do not simply recognize an international commons but also the distinctly local nature of particular common pools and formally provide for interlocal management, at least in part. We must not forget, however, that a "commons" is a human artifice used to describe a given natural feature that we view as accessible and rival. The "resource" itself does not recognize that it is a common pool nor is it ecologically "required" to maintain a stable population. Consequently, institutions are also artifices and ones with their own logic and goals. While this may seem self-evident, recent growth in institutional literature and the interdisciplinary interest in studying (either in the field or laboratory) and creating institutions should give one pause. Many writers have theorized nature and their work to understand human interventions has been based on needing to rethink how humans describe themselves in relation to nature (Brosius, 1999; Escobar, 1996; Rabinow, 1992, 1996; Haraway, 1989; Franklin, 1995; Soule and Lease, 1995). In pragmatic terms, in each case something needed to be done to preserve a species

for human use and the institutions that evolved were forward thinking in their transnational natures. But as Escobar (1995) notes institutions come with specific discourses and these discourses both create some possibilities and preclude others.

The creation of formal institutions necessarily includes the creation of a bureaucracy and a technical- scientific format for understanding, evaluating, and solving the problem the institution has been designed to ameliorate. These bureaucracies and their "language" of problem definition are not necessarily what local inhabitants might have imagined as a solution to decreasing sustainable yields of a particular resource. Both the Territories in Canada and the state of Alaska have significant indigenous populations with their own understanding of nature and their own traditional ecological knowledges. The subject of the ongoing relations between white and native knowledge permeates Northern existence, however, here I will address two key issues related to the cases mentioned – dependence and capacity.

First, one must realize that during the lifespan of an institution it will create certain behavior patterns and epistemologies related to what it has been directed to manage. Brosius, (1999, 287) a noted anthropologist studying institutional effects in the environmental movement characterizes this issue, "defining themselves as filling particular spaces of discourse and praxis, institutions in effect redefine the space of action; they privilege some forms of action and limit others,

they privilege some actors and marginalize others." In other words, concepts like sustainable, community, rural, native, and science have explicit, behavior directing meanings imbued by an institution. In some cases locations such as Africa, Latin America, and Asia countries whose natural resources are not that different from those of the North have become subject to transnational institutions that invest large amounts of money in environmental projects and in doing so essentially appropriate the issues initially pressed by local groups (Brosius, 1999). While the institutions mentioned above have largely come about with significant local participation this is not true in all cases or time periods. Perhaps most obvious in each case the white/native dichotomy that has been internalized and acted upon. Less obvious are the more discreet power relationships among groups with differing views about sustainability and resources. For example, the IPCC takes a distinct backseat to more formal arrangements made by individuals who may study caribou but do not live in the area or utilize native knowledge. The existence of an institution and sustainable yields does not necessarily guarantee equity nor does it guarantee a form of sustainability that is considered equitable even though the initial problem of low harvests may have been solved.

Foucault's theories related to "governmentality" – "the progressive appropriation by state and expert knowledge apparatuses over everlarger domains of the cultural background and daily life of collectivities" should serve as warnings for those of us studying and engaging in

institutional creation and maintenance (Escobar, 1999, 292). While governmentality is a fundamentally modern process in the areas discussed above, the "production of nature" in these locations occurs largely outside of the modern concerns of the United States and Canada (even the modern concerns of the state and territorial governments to a degree) and sometimes in active resistance to them (Escobar, 1999). For example, the institutionalization of the sustainability of polar bears, caribou, whales, and salmon means that the legitimacy of the governing relationships to those resources and the concerns of the state and marketplaces promoted by those governing relationships are ensured. Is this necessarily a bad outcome? This depends on the perspective with which one examines the case and whether you are on the correct end of the behaviors accepted by the institution. In other words, whose commons are we discussing? In my cases studied in the Great Lakes there was active resistance by the local resource using Walpole First Nation to the formation of a Binational Remedial Action Plan to restore the St. Clair River even though there was heavily desired and respected public involvement from multiple areas of society. The resistance came from not wanting to agree with the methods and structures such an institution would bring - even though First Nation people were asked to participate⁵. So, in some senses in Alaska and the Yukon the institutions

⁵ In this case the issue was also tightly tied to the desire of this First Nation to be treated in the same manner as the two countries. The Walpole felt that if they participated as members of the public or First Nation members that this would negate their status as a nation with specific and broad claims on the river.

and their participants only tell the story of those who agree with the institution and its meaning but does not measure the socio-ecologicalcultural ramifications of the institution especially on those for whom it was not a choice. On the other hand, part of my keen interest in interlocality is that it appears to give much more latitude to local actual resource users to determine goals and means than either blanket international agreements or domestic agreements that fail to account for resource mobility.

What happens when institutions are created then later subject to funding cuts, agency reorganization, administrative priority changes, or simple shuffling of personnel? This raises the issue of dependence. How dependent do the local populations become on an institution to guide their behavior and can the resource be maintained when the institution shifts the rules of its game? This is a serious question. In the cases studied in the Great Lakes the reassignment of the lead agency official for the St. Mary's river on a regular basis and not to the St. Mary's itself but a location some distance away seriously disrupted the interlocal agency's ability to function. Funding cuts in all three cases also caused serious drawbacks and the institutions went through sharp adaptive learning curves trying to find other money. Dramatic disagreements among institution members caused the Detroit River institution to be restructured after much time was lost to ill will. While this paper is speculative about the above cases because detailed research has not yet

taken place one must consider the dependencies created. Capacity for institutional management is also a key related issue. First, it is one thing to create an institution and quite another to expect all those concerned to fully understand it and its implications a decade or five decades down the line. In other words, is there initial capacity within an affected community to understand the consequences of the institution? Second, is there capacity at the local level to maintain the institution in order to continue local control, or at least local input? In both questions capacity for Alaska and the Yukon Territory can be equated with clear understanding of (and desire to) work within a techno- scientific structure that is not what the local communities experience on a day-today basis. Furthermore, what leadership is needed to engage this demand for capacity and how does that impact the community? The Great Lakes cases repeatedly demonstrated the need for empowered local leaders with broad backgrounds. Over time, in some cases, these leaders were all that kept the local institution progressing. At the same time, others who had been placed in leadership positions became long-term detriments to positive action.

Conclusions

The Northern cases mentioned above share similarities and have differences among them. They also have different institutional arrangements both formally and informally that manage the interactions

between humans and resources. At the same time, they represent a movement towards transboundary policymaking that is local in nature. I am not making a claim that these cases are something entirely new, nor that they are the best case solution for all internationally shared resources, but that the shape of these institutions merits further study. For example, in the polar bear case science was directly responsible for changed perceptions of a commons. How is this true for the other cases? What might all the cases have in common? Do the same strategies work well in each or are their species particular issues that make lessons from one less transferable to another?

In broader terms, we should be wary that just because elements of a commons seem to be shared by more people on a macro level does not necessarily mean macro level solutions are the best. We also need to wonder if these institutions would survive without larger government support – could the state "wither away" to use a Marxist phrase and leave an independent institution? In other words, would that be the most cost effective way to do things or are having state and federal governments inherently important? We won't know these answers until interlocal institutions receive greater scholarly attention as a class of institutions distinct from both local and international institutions.

Bibliography

Department of Fisheries and Oceans. December 2000. Science Stock Status Report E5-38. Ottawa, Canada.

Press Release. December 5, 2002 (ENS). Yukon River Agreement Benefits Salmon, Fishers. Washington, DC. Available: http://www.flmnh.ufl.edu/fish/InNews/yukonsalmon2002.htm.

Adams, Marie et al., 1993. "Alaska and Inuvialuit Beluga Whale Committee (AIBWC) – An Initiative in "At Home Management"." Arctic, vol. 46 (2), 134-137.

Brosius, Peter. 1999. "Analyses and Interventions: Anthropological Engagements with Environmentalism." *Current Anthropology*, vol. 40 (3) June, 277-309.

Brower, C.D. et al., 2002. "The Polar Bear Management Agreement for the Southern Beaufort Sea: an Evaluation of the First Ten Years of a Unique Conservation Agreement." *Arctic*, vol. 5 (4), 362-372.

Escobar, Arturo. "Constructing Nature: Elements for a Poststructural Political Ecology, "in Liberation Ecologies: Environment, Development, Social Movements. 1996. R. Peet and M. Watts, eds., Routledge, London UK.

Escobar, Arturo. 1995. Encountering Development: The Making and Unmaking of the Third World. Princeton University Press, Princeton, NJ.

Escobar, Arturo. 1999. "Comment on Analyses and Interventions: Anthropological Engagements with Environmentalism." *Current Anthropology*, vol. 40 (3) June, 292.

Franklin, S. 1995. Science as Culture, Cultures of Science. Annual Review of Anthropology, vol 24, 163-84.

Haraway, Donna. 1989. Primate Visions: Gender, Race, and Nature in the World of Modern Science. Routledge, London, UK.

Hardin, Garret. 1968. "The Tragedy of the Commons," *Science* 62: 1243-48.

King and Stivers. 1998. Government is Us. Sage Publications, Thousand Oaks, CA.

Kiss and Shelton. 1991. International Environmental Law. Transnational Publishers,

McKean, Margaret, "Common Property Regimes as a Solution to Problems of Scale and Linkage" in Susan Hanna, Carl Folke, and Karl-Göran Mäler. 1996. *Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment*. Island Press, Washington D.C.

Keohane, R. and Ostrom, E. "Introduction" in Robert Keohane and Elinor Ostrom. 1995. Local Commons and Global Interdependence: Heterogeneity and Cooperation in Two Domains. Sage Publications, Thousand Oaks, CA.

Ostrom, Elinor. 1990. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press, New York.

Pierce, Steger, Steel, and Lovrich. 1992. Citizens, Political Communication, and Interest Groups: Environmental Organizations in Canada and the United States. Praeger, Westport, CT.

Rabinow, Paul. "Artificiality and Enlightenment: From Sociobiology to Biosociality" in *Incorporations* 1992. J. Crary and S. Kwinter eds., 234-52, Zone Books, New York, NY.

Rabinow, Paul. 1996. *Making PCR: A Story of Biotechnology*. Chicago University Press, Chicago, IL.

Reeker, Phillip. 2002 (December 4). Press Statement "U.S.-Canada Yukon River Salmon Agreement Signed." U.S. Department of State, Washington D.C. Available: http://www.state.gov/r/pa/prs/ps/2002/156559.htm.

Soule, M. and Lease, G. eds. 1995. *Reinventing Nature? Responses to Postmodern Deconstruction*. Island Press, Washington, DC.

Suker, Amy. 2001. Managing Transboundary Water Resources: An Analysis of Canadian- American Interlocal Cooperation. *Dissertation published through UMI*. University of Texas at Austin.