INDIGENOUS GROUP SOVEREIGNTY AND PARTICIPATORY AUTHORITY IN INTERNATIONAL NATURAL RESOURCE MANAGEMENT REGIMES

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For Nanny, who kick-started my asking of the questions

And

For Lin, who taught me how to go about answering them
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“Indigenous Group Sovereignty and Participatory Authority in International Natural Resource Management Regimes”

What explains the variation in the levels of participatory authority enjoyed by indigenous groups in international natural resource management institutions, and through what processes have these groups attained their positions? This study examines how institutional rules are arrayed in such a way as to shape the relative levels of indigenous participation among six cases dealing with international fisheries management. These include American and Canadian indigenous collectivities in the Pacific Salmon Commission (PSC) and the International Pacific Halibut Commission (IPHC), and two individual cases of non-participation in the PSC, the Colville and Nisga’a, where participation might otherwise be expected.

The processes by which these groups have been included in these institutions, or failed to participate in them, are distinct for each case. I argue that inclusion is more a function of domestic-level political processes than of nation-states compelled to act due to customary international legal norms pertaining to indigenous participation. Furthermore, variability in the levels of participatory authority is due to several factors. Higher levels are tied to the existence of specific treaty rights to natural resources along with the willingness on the part of the nation-state to legally recognize these sovereign rights. This willingness is more likely to occur in federal systems in which jurisdiction is shared across multiple orders of government, and where the complexity of the resource creates multiple group conflicts in which indigenous groups possess a significant degree of leverage to mediate inter-group rivalries. This leverage is furthermore accentuated by the presence of effective inter-tribal collective action organizations which aggregate indigenous interests into a singular political body. Such participation has been generally positive in terms of inter-group trust building, improvement of technical information, and the sustainable management of the fishery.
Chairperson, Matthew R. Auer, Ph.D.

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List of Acronyms and Abbreviations

AABM – Aggregate Abundance-Based Management
AAROM – Aboriginal Aquatic Resources and Oceans Management
ABM – Abundance Based Management
AFS – Aboriginal Fisheries Strategy
AK DFG – Alaska Department of Fish and Game
BCAFC – British Columbia Aboriginal Fisheries Commission
BCFNFC – British Columbia First Nations Fisheries Council
BCTC – British Columbia Treaty Commission
BCTP – British Columbia Treaty Process
CPMPNAS – Committee on Protection and Management of Pacific Northwest Anadromous Salmonids
CPR – Common Pool Resource
CRITFC – Columbia River Inter-Tribal Fisheries Commission
DFO – Department of Fisheries and Oceans Canada
EEZ – Exclusive Economic Zone
ESA – Endangered Species Act
ESU – Ecologically Significant Unit
FAO – Food and Agricultural Organization of the United Nations
FNS – First Nations Summit
IAD – Institutional Analysis and Development Framework
IEP – International Environmental Policy
IGO – International Governmental Organization
IPHC – International Pacific Halibut Commission
IPSFC – International Pacific Salmon Fisheries Commission
IPO – Indigenous Peoples Organization
IR – International Relations
IRB – Institutional Review Board
ISBM – Individual Stock-Based Management
ITQ – Individual Transferable Quota
IVQ – Individual Vessel Quota
IWC – International Whaling Commission
MDSD – Most Different Systems Design
MSFCMA – Magnuson-Stevens Fishery Conservation and Management Act
MSSD – Most Similar Systems Design
NGO – Non-Governmental Organization
NMFS – National Marine Fisheries Service
NOAA – National Oceanic and Atmospheric Administration
NPAFC – North Pacific Anadromous Fish Commission
NPFMC – North Pacific Fishery Management Council
NWIFC – Northwest Indian Fisheries Commission
OAP – Oceans Action Plan
OECD – Organization for Economic Cooperation and Development
ONA – Okanogan Nation Alliance
PA – Participatory Authority
POST - Pacific Ocean Shelf Tracking Project
PFMC – Pacific Fishery Management Council
PSC – Pacific Salmon Commission
PST – Pacific Salmon Treaty
QCA – Qualitative Comparative Analysis
SAIA – Survival of the American Indian Association
SES – Social-Ecological System
TAC – Total Allowable Catch
TFAS – Treaty Access Fishing Site
UBCIC – Union of British Columbia Indian Chiefs
UNDPRIP – United Nations Declaration on the Rights of Indigenous Peoples
USFWS – United States Fish and Wildlife Service
WADFW – Washington State Department of Fish and Wildlife
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Chapter One: Indigenous Group Sovereignty and Participation in International Natural Resource Management Institutions

1.1. Introduction:

Indigenous groups represent a unique set of actors in international relations, public policy, and, particularly, natural resource management. The uniqueness of their position rests in their status as "quasi-sovereigns", political units with some measure of sovereign authority over their internal legal affairs, but with limitations placed on such authority by their respective nation-state government, particularly in the conduct of international relations (Benton, 2008). Furthermore, due to the vagaries associated with how to accommodate these groups’ demands for recognition of sovereign status within international institutions, the political status of indigenous groups in the international system is nebulous and in flux. This dissertation attempts to yield greater clarity about the positions and policy roles held by various indigenous groups in international institutions, particularly those dealing with issues of environmental policy and natural resource governance.

“Participatory authority” is the term used throughout this dissertation to denote the level of authority held by indigenous groups to participate across the range of decision functions associated with an authoritative decision-making body, and to do so with high degrees of autonomy and a minimum amount of constraints placed upon them by other actors that are constituent members of the institution, in particular actors representing the nation-state. The first question addressed is how do institutional rules shape the level of indigenous participatory authority in international institutions? I argue that the participatory authority of indigenous groups is fundamentally tied to the configuration of several broad types of rules which either constrain indigenous group activity or give them broad license to perform a number of potential policy functions. Various position, boundary, choice, and aggregation rules and norms at various levels of rulemaking are key determinants of how much latitude indigenous groups enjoy in participating in policy-making according to their own policy preferences.
This inquiry was inspired by the unusually prominent role that American Indian groups play within the Pacific Salmon Commission (PSC), a formally bilateral fishery management institution aimed at resolving a variety of fishery management disputes between the United States and Canada. American Indian groups enjoy remarkable participatory authority in the PSC due to, among other things, the formal allocation of indigenous-specific positions within the PSC, the relatively free reign with which tribal groups can select the individuals who fill these positions, the opportunity to have a formal role in formulation of any and all decisions made by the PSC, and perhaps most significantly, the veto authority that they have over any formal policies enacted by the institution. The high level of authority enjoyed by the American treaty tribes in the PSC relative to the other cases examined in this dissertation inspired the primary research questions that are central to this dissertation: what explains the variability in the levels of indigenous participatory authority in international institutions, and how did these groups attain their positions and levels of decision-making authority in these institutions? Thus the primary dependent variable examined in this dissertation is “level of participatory authority”.

In answering these questions, I compare and contrast a total of six cases of indigenous group participation in international fisheries management institutions. These cases differ considerably in terms of the level of participatory authority enjoyed by the indigenous groups in question. The aforementioned American Indian tribes in the PSC represent the highest levels of indigenous participatory authority among the six cases presented in this study (and may very well prove, after additional casework to be conducted in the future, to be the most significant example of indigenous participatory authority in any international institution anywhere). The second case involves the role that Canadian First Nations play within the Canadian delegation to the PSC, which is characterized as being somewhat influential, yet not rising to the level of authority enjoyed by tribes in the American delegation to the PSC. The third and fourth cases were drawn from a peer institution to the PSC called the International Pacific Halibut Commission (IPHC). These two cases involve the American Indian and Canadian First Nations participation in the IPHC, which are both characterized as possessing relatively low levels of participatory authority. Two final cases, characterized as “non-participation” by particular indigenous groups in PSC
processes where such participation might otherwise be expected, were identified in the course of fieldwork. The Nisga’a First Nation of Canada represents a case of willful non-participation, while the status of Confederated Tribes of the Colville Reservation in the United States represents a case of formal exclusion from PSC processes, despite compelling reasons for why the PSC could be used as a forum for addressing transboundary appropriation and provision issues on the Columbia River. Both cases are primarily used to develop hypotheses regarding the variables behind relatively higher levels of indigenous participatory authority.

The primary thesis presented in this study is that higher levels of participatory authority are associated with instances in which these groups’ sovereign rights are codified in specific treaty provisions, which are subsequently recognized and upheld through domestic case law. In this light, sovereignty is a necessary, but not sufficient, condition for participation – the level of an indigenous group’s participatory authority is tied to the willingness of their respective nation-state to grant them a seat at the table. This willingness of the nation-state to acquiesce to indigenous groups’ demands for participation is tied to several factors. First, the nature of the system of intergovernmental relations appears to be a significant barrier in situations in which authority over the policy area in question is unshared with other orders of government. Secondly, the existence of effective pan-tribal collective action organizations serves to both solve inter-tribal collective action problems and to marshal greater levels of political leverage vis-à-vis non-tribal actors. Lastly, the level of participation that each group ultimately achieves is tied to the degree to which the nation-state perceives that these groups hold some sort of utility for the institution and its operation, which in turn is correlated with the overall level of complexity of the resource system governed by the institution.

Given the more significant roles played by the American treaty tribes in the PSC, and to a lesser extent, by Canadian First Nations in the PSC, I also examine secondary research questions relating to the outcomes of such participation. What impact has such authority had on the decision-making processes of these institutions? How has such participation affected issues pertaining to the sustainable management of the resources under their jurisdiction? And finally,
are there particular impacts associated with the participation of each of these groups, reflecting each groups’ differing levels of participatory authority within the institution? I argue that the participation by both of these groups has been influential and generally positive in terms of inter-group trust building, improvement of technical information, and the sustainable management of the fishery. This stands in contrast to the work of other scholars, who argue that tribal participation is a recipe for institutional inertia and gridlock. I also find that the participation by both groups has had significant impacts on the operation of the PSC, but that the types of impacts of each group are markedly different, owing to each group’s relative level of participatory authority.

Finally, a note on nomenclature: in order to consistently differentiate between indigenous groups from the United States and Canada in a culturally sensitive manner, the terms “tribes”, “American Indians”, and “Native Americans” will denote indigenous groups based in the United States, while “First Nations” will be used to denote indigenous groups in Canada. Each of these terms are contentious and in some cases considered offensive by indigenous groups themselves. However, there are no universally agreed-upon terms of reference for indigenous peoples associated with particular nation-states. Usage of these terms does not necessarily imply their endorsement, and cultural opposition by some groups to any of these particular terms is duly noted. The terms are merely adopted to consistently differentiate between American and Canadian indigenous groups in such a way that is reflective of the dominant cultural conventions used in both of these nation-state contexts.

1.2. Research Design

This research was motivated in part by a long-running interest in salmon fisheries management and my past work for the United States Forest Service and Defenders of Wildlife. During these years I became increasingly fascinated by the sheer number of institutions engaged in salmon management and restoration, the linkages between them, and the significantly disaggregated chain of authority that characterizes the salmon management regime. A particular puzzle arose over the role of American tribes at multiple scales within the regime and the unusual
level of power and influence the tribes had at all levels, including at the international level through the auspices of the PSC. The PSC provides a unique example of where indigenous groups are afforded formal representation and significant decision-making authority within an international natural resource management institution. In particular, Washington and Oregon based “treaty tribes” wield significant authority through their “veto power” over the official position of the United States delegation. Furthermore, the tribes are granted two commissioner positions, out of a delegation of eight, and significant representation within the Panels and Technical Committees where most of the policy decisions are actually hashed out. The unique configuration of institutional rules, at both the domestic and international level, that afford such a high level of authority on the part of the treaty tribes in the PSC also significantly impacts the bargaining relationships between all institutional actors.

1.2.1. Case Selection

The cases examined in this study are several tribal collectivities which are active to varying degrees in international fishery management. Thus the unit of analysis may be defined as “tribal collectivities.” An exception to this is the two cases of individual tribes that do not belong to the collective groupings of tribes examined in the other cases, as will be explained in a moment. As previously mentioned, this study derives from a primary interest in the case of American treaty tribes in the PSC. It is quite possible that no other indigenous group or set of groups has such a high level of participatory authority in other international institutions as in this particular case, as it has become clear during the course of my research that the potential universe of cases of indigenous participatory authority in global natural resource governance is likely to be quite limited. While this may limit the generalizability of inferences made in this dissertation, and pose potential problems of over-determination, I argue that this case nonetheless still has value for generating hypotheses related to the research questions explored in this dissertation, and may serve as a potential roadmap for other indigenous groups that aspire to similar positions in other institutional settings.
A core decision criterion in case selection beyond the principal case involved was to identify cases in the same general policy area of fisheries, in order to control for rough comparability in the types of management decisions undertaken by the institutions in question. Furthermore, I was concerned with identifying a range of cases that differed on the core dependent variable in question in order to identify key explanatory factors behind varying levels of such indigenous participatory authority. I am thus employing a “most similar systems design” (MSSD), which attempts to explain variation in an outcome or dependent variable (Faure, 1994; Przeworski and Teune, 1970). A key element to MSSD studies is comparing cases that share common features, in order to draw inferences based on the logic that variation between cases in terms of the dependent variable are attributable to any variations in the key explanatory factor or factors that differentiate cases (Landman, 2008). Thus, I wished to identify cases in which the groups in question were similar to one another in order to control for cultural and other variations, given that the indigenous peoples of the Pacific Northwest and British Columbia are generally similar to one another in in terms of their cultural, socio-economic, and other traits.

I had initially considered examining the case of the Makah in obtaining whaling rights under the Aboriginal Subsistence Exemption under the International Whaling Commission, but ran into complications during field work which prohibited an examination of this particular case. I ultimately hope to examine this case in the future as I expand my research into additional cases of indigenous participation. The most obvious case for inclusion in this study is that of the Canadian First Nations groups within the PSC, a case that offers something of an interesting contrast insofar as many of these groups are of the same cultural background as the American treaty tribes, have a similar degree of representation within the PSC as the American tribes, but lack the same degree of decision-making authority as that enjoyed by their American counterparts.

Furthermore, an additional institution was suggested by interview subjects during the course of my fieldwork, as it became apparent that the American tribes held specific allocation rights to halibut of a level similar to that of their right to salmon harvests. Interestingly however,
they do not enjoy the same participatory rights and privileges under the International Pacific Halibut Commission (IPHC) as they do under the PSC. Furthermore, I became aware of Canadian First Nations participation within the IPHC during the course of my interviewing. The IPHC offers compelling case studies for comparative purposes due to its similarity with the PSC in terms of its bilateral makeup, consisting as it does of both an American and Canadian delegation, rough similarity between the nature of the management issues facing both salmon and halibut, and due to the fact that the IPHC was founded around the same time as the predecessor to the PSC, the International Pacific Salmon Fisheries Commission (IPSFC). As we shall see, the IPHC offers a striking contrast to the PSC in that both American and Canadian indigenous groups have a lower level of participatory authority than they do within the PSC.

Finally, several cases of “non-participation” by indigenous groups were uncovered during the course of fieldwork, two of which are examined in this study. On the Canadian side is the case of the Nisga’a First Nation, who used to be active in the PSC process but has subsequently retreated from participation since signing a treaty with the Canadian and Provincial governments which recognizes a specific allocation to certain salmon harvests. Additionally, the Confederated Tribes of the Colville Reservation are purposefully restricted from participation in the PSC despite having significant transboundary fisheries conflicts with Canada, as the Colville frequently intercept sockeye salmon migrating through the Okanagan River towards spawning grounds located within British Columbia. Both of these cases will be used as counterfactual cases to examine how and why these groups differ from the other cases in order to help uncover key variables behind the levels of indigenous participatory authority. While these cases involve individual tribes, and the other cases involved conglomerations of tribal governments, I do not believe that there is a major issue of comparability between these two different units of analysis, primarily because the conglomerations of tribes are grouped together out of convenience rather than disaggregating them into individual tribes. This is due to the fact that each of the treaty tribes, for instance, shares the exact same characteristics in terms of treaty rights and other factors which in turn contrast these groups with other tribes such as the Colville. In summary then, this dissertation will examine six total cases: American treaty tribes within the PSC,
Canadian First Nations bands in the PSC, American tribes in the IPHC, Canadian bands in the IPHC, the Nisga’a’s lack of participation in the PSC, and the Colville Tribes’ lack of participation in the PSC. Table 1.1. provides an overview of the cases examined, organized by their level of participatory authority, and separated by the institutions in which these groups participate:

<table>
<thead>
<tr>
<th>Level of Participatory Authority</th>
<th>PSC</th>
<th>IPHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>American Treaty Tribes in PSC</td>
<td>N/A</td>
</tr>
<tr>
<td>Medium</td>
<td>Canadian First Nations in PSC</td>
<td>N/A</td>
</tr>
<tr>
<td>Low</td>
<td>N/A</td>
<td>American Treaty Tribes in IPHC;</td>
</tr>
<tr>
<td>None</td>
<td>Colville Tribe in PSC; Nisga’a Tribe in PSC</td>
<td>Canadian First Nations in IPHC</td>
</tr>
</tbody>
</table>

1.2.2. Data and Methodology

Given the different yet interrelated research questions posed in this study, I will be employing multiple methods, with each chapter organized around a primary methodological approach. Because of this, I will presently forgo a detailed discussion on methodology, reserving a section under each chapter for these purposes. However, each chapter will draw from the same general pool of data.

1.2.2.1. Archival Data Sources

Because the research design employed here revolves around several case studies revolving around the PSC and IPHC, I consulted existing archival sources and official policy documents of the institutions under examination in order to uncover the relevant rules-in-use governing the participation of indigenous groups in each of the institutions examined. In the course of my fieldwork, I also became aware that many of the institutional rules-in-use are provided for through domestic legislation and/or formalized policy within each country’s respective political processes. Therefore, I ultimately consulted a wide range of archival and policy documentation from several organizations, including the PSC, the IPHC, the North Pacific
Anadromous Fish Commission (NPAFC), Government of Canada’s Department of Fisheries and Oceans, the National Oceanographic and Atmospheric Administration, the Alaska Department of Fish and Game, the Washington Department of Fish and Wildlife, the Northwest Indian Fisheries Commission, the Columbia River Intertribal Fisheries Commission, the Pacific Fishery Management Council, the North Pacific Fishery Management Council, and the British Columbia Aboriginal Fisheries Commission. This range of archival research was also supplemented by a variety of published articles written by academics and policy actors pertaining to the institutions in question, in particular the PSC, which has generated a fairly large amount of academic interest.

In regards to the question of how these groups attain their status as active participants in international institutions, during the course of research it became evident that a primary source of participatory authority stems from litigation and case law that has mandated a variety of policy responses to indigenous group demands for more inclusive participation in policy-making. Key components to these bodies of case law are the treaties signed between indigenous groups and their respective governments. Therefore the treaties themselves and a variety of judicial opinions in several precedent-setting cases in both Canada and the United States serve as an additional key source of information for this dissertation.

1.2.2.2. Interview Data

An additional major source of information was collected during in-depth elite interviewing of individuals that served in some official capacity within the institutions examined. Extra care was taken to identify and approach individuals from as wide a cross-section as possible, including official PSC and IPHC staff, federal government representatives, state/provincial representatives, tribal representatives, and other key stakeholders that served in an official capacity within the institutions, such as commercial and recreational fisheries interests in the Canadian delegation to the PSC. The ultimate population of potential interview subjects was quite limited however by the relatively few numbers of the official positions available through the official PSC/IPHC Secretariat staff, or within the political delegations/Commissioner structure of Canada or the United States.
All interviews concluded with two questions, the first asking if the interview subject knew of any official documentation that I could consult, and the second asking if there were other individuals whom I should approach for an interview. Thus, interviewees were selected largely through a snowball sampling method, in which I first identified key PSC and IPHC Secretariat staff and American and Canadian Commissioners to the PSC, and then later approached individuals identified through interviewing these initial contacts.

In-person interviewing during fieldwork took place between November, 2009 and April, 2010, with a few follow-up interviews via telephone conducted in subsequent months. Ultimately, twenty-eight interviews were conducted. While this is a somewhat low number, the total number of potential interview subjects was quite constrained, however the individuals that did agree to be interviewed constituted a representative sample of all key stakeholders, including secretariat staff from the institutions in question, Commissioners from every one of the stakeholder groups represented in the PSC, a handful of individuals with positions in the PSC Panels and technical committees, staff members from relevant indigenous group collective-action organizations, and staff members from domestic-level fishery management bureaucracies. An anonymous list of interview subjects and their affiliations is provided in Appendix D. All interviews were conducted personally without the use of research assistants. All potential interview subjects were initially contacted via telephone, email, or letter. Non-responding individuals were contacted one additional time after a waiting period of about two weeks, and a second non-response was taken to be a denial of the interview request. Thirteen potential interview subjects, including individuals initially contacted to discuss the Makah experience with the International Whaling Commission, ultimately declined to be interviewed outright or were dropped from consideration due to non-response. All interviewees were provided with a Human Subjects Review Form, a copy of which is provided in Appendix B. The script for initial contact is provided in Appendix A.

All interviews were semi-structured, based around a list of questions approved through Indiana University’s Institutional Review Board (IRB). These questions are listed in the Research Guide located in Appendix C. Not all questions were asked of every interview subject, as the
topics covered were not of equal importance to all interview subjects, and some questions were omitted due to time constraints. Interviews were anticipated to take about 45-90 minutes, but varied considerably due to the relative willingness of interview subjects to speak to the range of questions being posed. Thus, interview times ranged between 15 minutes to over three hours. The style of interviewing was rather open-ended, as interview subjects could, and often did, deviate from focusing on answering the question posed, which turned out to often be the source of valuable information that I did not anticipate during construction of the Research Guide. Interviews were conducted in a conversational style, and the choice of questions asked tended to follow the flow of conversation. In only a couple of instances did an interview subject refuse to answer a particular question. At no point did any interview subject choose to disclose any information “off the record”. Interviews were not video or audio recorded, as responses were written down by myself on printed copies of the Research Guide with additional blank spaces provided for taking of field notes. After interviews concluded, I immediately typed the notes and saved them in a MS Word document. In accordance with IRB procedures, both the handwritten notes on individual blank copies of the Research Guide and the transcribed Word documents contained no identifying information other than an identifying code number, thus maintaining anonymity of the research notes. All contact information and identifying information is held separately in a single database file.

1.3. Literature Review

1.3.1. Indigenousness Groups Defined

One of the first tasks necessary for this research is to settle upon a working definition of indigenousness. Perhaps telling is the fact that United Nations, in spite of attempting to grant rights and privileges to indigenous peoples through a variety of resolutions, including the newly adopted UN Declaration on the Rights of Indigenous People, espouses that “the prevailing view today is that no formal universal definition of the term is necessary” (UN Department of Economic and Social Affairs, 2004). The UN does, however, provide a “commonly accepted” working definition formulated by Martinez-Cobo (1986), in which these groups are defined as having pre-
dated a colonial society that now prevails over the territories that the indigenous group once held, and that exhibit a “historical continuity” and determination to preserve their unique ethnic/cultural/linguistic identities, occupation of ancestral lands, and “other relevant factors”. Presumably then, any group that doesn’t presently occupy “at least part” of their ancestral lands could be considered no longer “indigenous”.

As Maybury-Lewis (2001, 6) puts it, “the very term indigenous peoples is confusing because most people in the world are ‘indigenous’ to their countries in the sense of having been born in them.” He goes on to provide a definition that makes a few further distinctions. The first is that they hold prior claim to lands because their ancestors have occupied them since time immemorial; the second is that they “have been conquered by peoples racially, ethnically, or culturally different from themselves... [and] have thus been subordinated by or incorporated in alien states that treat them as outsiders and, usually, as inferiors”; and the third is that they are conscious of their separate identities (Maybury-Lewis, 2001, 6-7). There are several problems with this definition as well, as illustrated by the Hopi-Navajo land dispute, in which the Hopi believe that Navajo land claims cannot be defended by a claim to possession “since time immemorial” since Hopi settlement in the area predates that of the Navajo by several hundred years (Goodman and Thompson, 1975). Secondly, there is an implicit normative claim to subjugation as a salient characteristic of indigenousness that, while perhaps the overwhelming historical pattern, may not obtain in reality, as certain tribal groups either have never been contacted by colonizing peoples and/or are even currently unaware of their existence. This is hinted at by Maybury-Lewis’ claim that “Isolated or marginal groups that have not yet been conquered by a state are also considered indigenous because it is only a matter of time before they are subjugated” (Maybury-Lewis, 2001, 6). Beyond the fact that this definition compares two distinctly different political realities in terms of “subjugated” vs. “not-yet subjugated” peoples, it fails to capture the true range of political authority resting with indigenous groups – even the subjugated often have at least some measure of independent political authority, thus raising the question of the degree to which they have been truly “subjugated”.

12
Others appear to assert that the salient characteristic of indigenousness is a difference in cultural values, comparing indigenous values to “non-Eurocentric perspectives and practices” and “destructive Western values such as separation from nature, individualism, and pursuit of profit” (Berman-Santana, 2005, 211). Other scholars have argued that a salient characteristic of indigenous groups is their close ties to land and more harmonious relationship with nature (Erni, 1997; Grinde and Johansen, 1995; Ranco, 2007), a rather romanticized view that perpetuates the stereotype of the “ecological Indian” and runs the risk of essentializing a uniform value orientation among all indigenous groups that is not likely empirically valid (Krech, 2007; Krech, 1999). The implication of these types of definitions is that indigenousness is apparently anything that runs counter to European or “modern” cultural values.

Still another approach is identified by the World Bank’s Operational Directive on Indigenous Peoples, which asserts that these groups can be identified by these characteristics: “1) close attachment to ancestral territories and natural resources; 2) self-identification and identification by others as members of a distinct cultural group; 3) possession of an indigenous language, which is often distinct from a national language; 4) presence of customary social or political institutions; and 5) subsistence-oriented production systems” (Hitchcock, 1994, 4). This too is problematic, as it raises the specter of some groups who have lost attachment (physically, if not mentally) to ancestral territories, such as the many Indian tribes re-located to present-day Oklahoma in the 19th Century, not being considered “indigenous”. Similarly, if everyday use of an indigenous language has died out, does this mean that the group is no longer “indigenous”? There is also a definitional question of what constitutes a customary social or political institution, and what qualifies as a “subsistence-oriented production system”.

For the purposes of this paper, I will define indigenous groups as characterized by 1) a group sharing social and political space with another group considered as outsiders, due to the former group possessing clear claims of prior ownership of territories that are now encompassed by a larger polity of outsiders that have achieved political dominance, usually through conquest; 2) self-identification as a distinct cultural group, reinforced by recognition of this status by others,
especially by the dominant group which shares space with this distinct cultural group; and 3) some measure of social and/or political collective action that attempts to internally manage the group’s affairs and/or to improve the well-being of the collective group. Thus indigenousness is a construct that is simultaneously political, social, and psychological. I believe this to be a more encompassing definition as it addresses criteria that could be used to deny indigenous status to groups that have clear claims to indigenousness, and it side-steps the issue of non-dominance and subjugation, bringing into the fold some groups who operate alongside and/or within the social, economic, and political processes of the “dominant” group to which they are attached.

1.3.2. Global Governance and Non-State Actors in International Relations Theory

Given this definition, how do indigenous groups relate to other non-state political actors? Are their policy roles generally analogous to those of NGOs, or do they possess certain qualities that warrant treating them as a special class of actors in international relations and global governance theory? Conventional international relations scholarship is largely focused on the relationship between states, with some approaches, such as neo-realism, largely dismissing the role of all non-state actors in international relations as inconsequential. Because this dissertation focuses on transnational natural resource governance, it is helpful to examine international relations theory and its approaches to the study of governance and the relative role of nation-state and non-state actors.

International relations theory is commonly broken down into three dominant paradigms and their sub-variants, realism, liberalism, and Marxism; as well as a variety of “reflectivist”, or post-postivist, approaches that challenge the core rationalist and state-centric assumptions made by the three “mainstream” IR paradigms (Smith, 2001). Many scholars also identify “constructivism” as a fourth paradigm which bridges the mainstream and reflectivist approaches by suggesting that the fundamental assumptions made by mainstream theories, such as the concepts of sovereignty, anarchy, etc. are social constructions that may obtain in reality, but as social constructs are subject to transformation (Adler, 1997; Smith, 2001; Viotti and Kauppi, 1999; Wendt, 1999). However it is debatable whether constructivists as a whole represent an
ontologically cohesive corpus of work, and thus constructivism may not truly constitute an identifiable paradigm in IR theory (Adler, 1997; Thies, 2004).

Regardless, one of the primary debates within the field pertains to the role of the nation-state in international politics. A wide range of reflectivist and constructivist work challenges the view that states will continue to dominate the international system, while mainstream approaches, to varying degrees, continue to emphasize the role of the state in international affairs, either as the fundamental actor or unit of analysis, or as a proxy for underlying social forces such as economic classes. Here it is useful to distinguish between two broad types of non-state actors: international governmental organizations (IGOs), which are created by and consist of groups of nation-states, and international non-governmental organizations (NGOs), which are created by a wide range of individuals, corporate entities, and broader social forces (Miller, 1994). Some scholars conflate these two, considering non-state actors to include groups such as non-governmental organizations, knowledge-based communities, multi-national corporations, and international/regional organizations (Auer, 2000a), while others make an active distinction, considering non-state actors as “actors participating in international policy-making efforts that do not act on behalf of a government or an intergovernmental organization” (Skodvin and Andresen, 2004, 62), presumably on the basis that governments and intergovernmental organizations have at least some measure of sovereign authority while groups such as NGOs or epistemic communities do not. The approach taken throughout this dissertation is to view the variety of non-state actors as separate from both nation-state actors and IGOs.

According to realist theory, power is the key variable in explaining the behavior of states. States are rational actors whose primary concerns are related to survival and self-help in an international system characterized by anarchy. As such, they are the primary actors in international affairs, with IGOs simply serving as the instruments of states, thereby not possessing any serious ability to change the beliefs nor behaviors of states (Waltz, 1997). NGOs are similarly inconsequential to realist thought (Gilpin, 2002). One approach for characterizing the importance of the nation-state in international affairs is to distinguish between a state’s “domestic
agential power”, defined as “the power of the state to determine policy and shape the domestic realm free of domestic structural constraints or non-state actor interference”, and its “international agential power”, defined as its relative power “to determine policy and shape the international realm, free of international structural constraints” (Hobson, 2000, 5-7). Using this lens, the different variants of realism are differentiated in terms of the international agential power of the state, with neorealism holding that the structural condition of anarchy fundamentally limits a state’s international agential power (Hobson, 2000). All variants of realism however hold that the political sovereignty of the state is timeless and in possession of absolute domestic agential power (Hobson, 2000). Thus all variants of realism give little credence to the ability of non-state actors and international institutions to fundamentally influence and constrain state behavior.

Most Marxist perspectives meanwhile approach the study of international relations from a structural perspective that emphasizes the role of oppositional classes that operate through a wide variety of political institutions, including states, international organizations, and non-state actors, particularly multi-national corporations and social/national liberation movements (Viotti and Kaupi, 1999). The basic causal variable for Marxist theories is the capitalist mode of production, which concentrates wealth allowing for the capitalist class to dominate and determine state behavior, resulting in low domestic and international agential power on behalf of the state (Hobson, 2000). Therefore there need not be any active distinction between state and non-state actors, as both of these merely serve as proxy venues for class conflict, with both being dominated by the advantaged position of the capitalist class. This can be illustrated by the account of Murphy (1994) who holds that the greatest impact of international organizations and non-state actors have been the transformation of the scale of world capitalism to predominately advantage the industrial class, while nonetheless giving venue and legitimacy to the role of social movements whose aims are, in many instances, to transform the underlying system. Thus Marxism tends to view non-state actor activity as being merely another venue for class conflict, pitting multi-national corporations against a variety of social movement organizations. At its core, then, Marxism tends to view the distinction between state and non-state actors as largely irrelevant, and the real key to politics is an understanding of class dynamics.
The challenge to both of these perspectives comes from several schools of thought that are grouped together under umbrella terms such as “pluralism” or “liberalism”. The fundamental critique of the various strains of liberalism stems from a recognition of an increasing level of international interdependence, and a willingness on the part of both state and non-state actors to collaborate, especially on problems that can be characterized as operating at a scale larger than that of the nation-state, whether these be regional or truly global in nature. Most variants of liberalism “endow the state with less domestic agential power to over-ride domestic interests, but much higher degrees of international agential power to reconstitute and shape the international structure” (Hobson, 2000, 65). That is to say, the state is fundamentally constrained at the domestic policy level by a host of domestic non-state interests, and may develop norms and rules to buck the logic of anarchy in the international system. The many variants of liberalism differ, however, in their characterizations of how this latter process comes about. For “classical liberalism”, this is predicated upon the belief that the state should be minimally involved in economic affairs, and that the economy will self-generate if left free from political interference. The real role of the state would come in at the international level, where state interaction would enable the design of institutions to enable the development of liberal capitalism through free trade. This suggests that states have high international agential power, are the source of creating institutions to govern world affairs, but that the system is based upon “minimalist” states that for the most part minimize their tendency to try to use such institutions to advance their own relative gains (Hobson, 2000).

This last provision is the primary source of criticisms levied by theories of liberal institutionalism, which, rooted in idealism, challenged the belief in minimalist states. Liberal institutionalism instead advanced the perspective that a strong system of state collaboration was necessary to create international governance which would enhance the domestic power of states to go against organized privileged interests, enable international free trade, and enhance the power of the state internationally by creating a binding court of arbitration whose decisions would be enforced by agreement on the part of states to militarily uphold its decisions (Hobson, 2000, 74).
The implication of approaches based on liberal institutionalism is that the sovereignty of the nation-state is in a process of withering away in favor of an international system of rules and norms that will overtake the power of the state. This gave rise to a variety of “state-centric” liberal theories which challenged this supposition. For Hobson, such theories differ from other liberal theories in that they assert high levels of both domestic and international agential power of the state. Such variants as “English school rationalism” held that states, as sovereign rational actors, and through a complex mix of international law, diplomacy, and great power balancing, upheld the relative stability of an international system that was capable of bucking the logic of anarchy. This contrasts with neo-liberal institutionalism and international regime theory, which sees international regimes as a “relatively autonomous” intervening variable between the underlying collective action problem created by anarchy in the system, and the possibility of a self-sustaining complex system of international regimes whose legitimacy stems from the interests of states in maintaining the absolute gains provided by the system (Hobson, 2000, 95-97).

Thus for neo-liberal institutionalism/regime theory, the state plays a central role in international affairs, with high levels of both domestic and international agential power, although this has been used in such a way as to willingly place limited constraints on the ability of states to do as they please in favor of a system that emphasizes the absolute, rather than relative, gains of all states in the international system (ibid). This has furthermore accentuated the potential role for non-state actors in global governance, either through a “top-down” processes by which governance functions are passed on to newly empowered regions and municipalities, by “supranational” processes whereby nation-states cede a certain amount of their authority to international organizations, and/or by “lateral” processes whereby non-governmental organizations and/or multinational corporations take over some governance functions formerly held by the nation-state (Kahler and Lake, 2003). Furthermore, this influence of non-state actors is held to be “most fully developed and most consequential in liberal [democratic] states.” (Lake, 2008).
The broad theoretical approach to international relations applied in this dissertation then is based upon neo-liberal institutionalism. A central assumption is that the nation-state continues to be the most significant actor in international governance and will continue to be so for the foreseeable future. However a variety of non-state actors are increasingly finding new avenues for participation that prevents the nation-state from exercising a monopoly of power in international governance. The question that emerges is through what processes have non-state actors been able to achieve these possibilities for participation?

1.3.3. Neo-Institutionalism and Indigenous Groups

An issue that this dissertation attempts to remedy however is that existing scholarship within the paradigm of neo-institutionalism has neglected an examination of the roles that indigenous groups, as a special class of non-state actors, might play in these processes. A recent major work on the role of non-state actors in international affairs neglects any reference to these groups altogether (Reinalda, 2011). Nor have recent treatments on international environmental law, despite having sections dedicated to the roles and influence of non-state actors, explored indigenous groups as actors in international environmental governance (Birnie, et al., 2009; Bodansky, 2010). A generalization is that NGOs may participate in meetings only with “observer status” if allowed to do so by the particular organization, with states frequently resisting inclusion of NGOs in real decision-making processes (ibid).

Part of the problem is that this body of theory accepts that there are indeed multiple instances of non-state actors conducting a variety of important policy functions typically considered the domain of the nation-state, such as negotiation, monitoring, and implementation activities (Auer, 2000a; Betsill and Corell, 2008; Betsill and Corell, 2001; Haas, 1992; Raustiala, 1997). However, the general focus on this work is on political activities that attempt to affect state decision-making from the “outside”, suggesting that NGO activity is restricted to direct negotiation with state governments, and that when such negotiations fail, NGOs simply resort to “world civic politics”, or pressure exerted through “transnational economic, social, and cultural networks” (Wapner, 1995, 315; see also Betsill and Corell, 2001). Nation-states are seen as tolerating
and/or listening to these groups in order to reap the purported advantages of such NGO participation, which includes access to additional sources of policy advice from outside government circles, assistance with monitoring policy compliance and commitments by governmental authorities, the existence of additional sources of political pressure which are held to minimize ratification risk, and the role of NGOs in signaling processes between governments and their constituents (Raustiala, 1997). The emphasis of such literature thus is on the role of NGOs as pressure groups, as suggested by the characterization that “NGOs influence government decisions to develop domestic policies to protect natural resources and to negotiate international treaties, as well as how individuals perceive environmental problems” (Betsill and Corell, 2008, 2, emphasis mine).

This bias towards highlighting the “outsider” role of NGOs is generally consistent with the variety of reflectivist and critical approaches of IR theory, which have been the predominant locus of indigenous studies within the broader IR literature, in that both tend to emphasize pressure group tactics rather than a fully-fledged participatory role across the entire range of activities in the policy cycle. However the critical and reflectivist approaches tend to characterize the policy activities of indigenous groups as existing solely within the realm of “contentious politics”, thus neglecting or ignoring even the limited policy roles that non-state actors can have as outlined above. According to this view, indigenous groups work “outside” the system through a variety of social movement activities, protests, and hortatory appeals for codification of greater rights within international law (Stubben, 2006; Tarrow, 2001; Brysk, 1999; Brysk, 1996; Wilmer, 1993). More radical work simply attacks the international system and concept of sovereignty itself as being a colonial tool of oppression which must be altered in order to achieve some sort of normatively superior political system (Beier, 2005; Keal 2003). A key finding of this study is that indigenous groups do in some instances participate from “inside” the system, due to the fact that they possess at least some degree of participatory rights within international institutions and thus occupy a legal status higher than that of other non-state actors in international relations. Therefore the emphasis on indigenous group policy activity as existing within the realm of contentious politics only captures part of the reality of indigenous group political activity.
Where indigenous groups as non-state actors are mentioned in the literature, scholars simply tend to make a nominal distinction between “indigenous people's organizations (IPOs)” and mainstream NGOs without indicating what specifically differentiates the two from one another, other than highlighting the indigenousness of the former (Humphreys, 2008). There also appears to be a common assumption that indigenous groups are merely “offered opportunities for consultation but little true power” and are fundamentally shut out of international institutions because these institutions remain “committed to membership comprised exclusively of nation-states” (Harvard Project on American Indian Economic Development, 2008, 88). This dissertation fundamentally challenges such an a priori assumption.

Another problem with neo-liberal institutionalism is that most scholars appear to dichotomize between the concepts of non-state and state actors on the basis of sovereignty. The specialized international relations literature pertaining to international environmental policy (IEP) in particular tends to have difficulties with the distinction between sovereign and non-sovereign actors. While it is on the forefront of work that somewhat loosens assumptions about the state-centric role in international governance and policy-making by emphasizing a limited policy role for actors other than the nation-state, the overriding emphasis of this work is on the roles of non-sovereign actors such as NGOs, multi-national corporations, epistemic communities, and social movements, and the vertical linkages between these groups and nation-states, with non-state actors simply “influencing” governance through articulating demands, highlighting issues, or writing text that subsequently affects the negotiating stance of key state actors (Auer, 2000; Betsill and Corell, 2008; Betsill and Corell, 2001; Corell and Betsill, 2008; Haas, 1992; Kanie, 2004; Princen, 1994).

By dichotomizing between sovereign entities such as the nation-state and “non-sovereign”, “non-state” actors, IEP literature tends to view policy roles as existing at two extremes: the authoritative decision-making process dominated by the nation-state on one hand, and the “outsider” role of non-state actors who may influence policy decisions but that do not possess any real authoritative role in decision-making. As Skodvin and Andresen (2003, 62)
suggest, a non-state actor is a group that does not act on behalf of a government or an intergovernmental organization while participating in international policy-making efforts. Where then does this leave indigenous groups, particularly if they are acting on behalf of their own tribal governments?

The importance of indigenous groups in global environmental governance lies in the key distinction that these groups are different from other NGOs due to their sovereign status, which is manifested through their articulation of their sovereign rights to independently exploit natural resources as well as demands for “seats at the table” in participating in authoritative decision-making within the institutions charged with managing these natural resources. This latter principle is especially articulated in Articles 18 and 19 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which state:

Article 18: Indigenous peoples have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions.

Article 19: States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.

Such rights have been construed by many to entail a privileged access to decision-making authority at all levels of governance, including the international level, on any matter which would affect a list of rights specific to indigenous groups, even though this has not always been observed by nation-states and international organizations (Koivurova and Heinamaki, 2006; Weissner, 2009). However, it is important to realize that as a declaration, the principles embodied in UNDRIP are non-binding on nation-states, unlike conventions under international law. UNDRIP thus represents a roadmap of principles that may someday become “binding” under customary international law once enough states behave in a manner consistent with the various principles contained within the treaty.
Furthermore, the participation by indigenous groups in decision-making is particularly relevant to the areas of environmental policy and natural resource management, due to stipulations in Article 29 of UNDRIP:

1. Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources. States shall establish and implement assistance programmes for indigenous peoples for such conservation and protection, without discrimination.

2. States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.

3. States shall also take effective measures to ensure, as needed, that programmes for monitoring, maintaining and restoring the health of indigenous peoples, as developed and implemented by the peoples affected by such materials, are duly implemented.

These evolving norms of indigenous human rights law, if recognized and implemented by nation-states, would therefore appear to indicate that indigenous groups, in terms of natural resource governance in particular, should be fundamentally differentiated from other non-state actors. This is especially true in light of general norms in international law, which “does not establish general rights of NGO participation in international institutions” (Bodansky, 2010, 129). Thus should indigenous groups be treated and analyzed like “non-state actors”, sovereign authorities akin to the nation-state, or some sort of intermediate classification between these two extremes?

Furthermore, “Most research on non-state actors in global environmental affairs deals with organizations and individuals that operate in international rather than subnational or local settings. This is a less-than-ideal problem orientation for addressing problems that are simultaneously global and local, like global climate change.” (Auer, 2000a, 156). It is my argument that indigenous groups have the potential to serve as a unique type of institutional actor that simultaneously acts in international and national/local settings and thus forms a kind of institutional “vertical linkage” (Young, 2002) that facilitates sustainability by managing the interdependencies between different components of a multi-scale, polycentric policy regime. Put another way, does indigenous group participation in policy-making at multiple levels suggest that indigenous groups serve as “boundary spanners” (Ansell & Weber, 1999, 74), and does this help
coordinate the environmental regime and facilitate sustainability of the social-ecological system in question? My tentative answer to this question is “yes”, but only if indigenous groups possess relatively high degrees of participatory authority across multiple levels of decision-making and as long as they are successful in managing their own collective action problems. Ample research has illustrated that indigenous groups do possess significant policy roles at the sub-national and local levels (in the case of salmon management, this includes work by Ebbin, 2002, and Singleton, 1998), but comparatively little research has been done on such activity at the international level.

1.3.4. Corporatism

Another potential avenue for explaining the emergence of indigenous groups in international governance is provided through the literature on corporatism. Starting with Schmitter’s 1974 definition, “Corporatism can be defined as a system of interest representation in which the constituent units are organized into a limited number of singular, compulsory, non-competitive, hierarchically ordered and functionally differentiated categories”. Such a system entails government carefully controlling its subordinate corporatist partners, adjudicating conflict from the top, emphasizing consensus and stability, and demanding loyalty and obedience to the system (Jordan, 1981). A key issue in corporatist studies is that government actors play an advantaged role in that they fundamentally determine the specific actors that are granted special representation and a seat at the table with government decision makers (Ottaway, 2001), with government serving to both offer “inducements” for participation and subsequent “constraints” on the actors that are incorporated into corporatist political systems (Collier and Collier, 2009). In most analyses of corporatist systems, the primary actors identified as having a stake in the system are government actors, the private industrial sector, and labor groups. This process of interest group aggregation and representation stands in stark contrast to the model of interest group pluralism, in which interest groups compete in the political sphere, articulating their demands to government through lobbying and other activities, and government serving as a mediator between these competing interests (Dahl, 2005).
corporatism not as a process of interest representation, but as an institutionalized pattern of policy making involving state and non-state actors, especially in the area of economic policy (Lehmbruch, 1979).

In recent years, the concept has been expanded to analyze the emergence of transnational NGOs in global governance, a situation known as "global corporatism" in which modern global governance is seen as roughly analogous to domestic level corporatism, with the trinity of the state, transnational business interests, and a loosely-organized "social sector" being represented by transnational NGO networks, with international organizations, especially the United Nations, loosely coordinating activities and serving as gatekeeper for which specific NGO interests get represented (Ottaway, 2001). In contrast to traditional models of domestic corporatism however, the organization of transnational NGOs is fundamentally different than the highly centralized and hierarchical organizations of the labor peak associations that are a primary player in most corporatist systems, with transnational NGOs being highly diverse and decentralized (ibid). Thus global corporatist policy-making, rooted as it is in soft law, represents a softening of Schmitter’s emphasis on compulsory and hierarchically ordered relationships in which a government actor is able to establish clear superior-subordinate relationships and to compel obedience of social sector actors in the governance system.

Given the emphasis of the corporatist literature on the neo-corporatist systems of government-business-labor relationships in economic policy making, the inclusion of other types of interest groups, such as indigenous groups, in corporatist-like systems represents an extension of the corporatist concept. The question which emerges is whether indigenous groups are akin to other types of interest groups, or if they possess qualities which differentiate themselves from mere interest associations.

1.3.5. Indigenous Group Sovereignty

An examination of the concept of indigenous sovereignty is necessary for this study for at least three reasons. First, claims of inherent sovereignty are the basis of the desire of many
indigenous groups to be formally included in authoritative decision-making by governments and
ingovernmental organizations, and are the fundamental drivers behind these groups pressing for
their recognition as political actors with a level of authority akin to that of the nation-state.
Secondly, where indigenous groups are shown to actually have some measure of formal inclusion
and/or decision-making authority within international institutions, as this dissertation will
demonstrate, this challenges dominant state-centric theoretical perspectives in international
relations theory regarding global governance. Finally, such high levels of decision-making
authority can be interpreted as a hallmark of international legal sovereignty, a characteristic which
I argue differentiates indigenous groups from other so-called “non-state actors” and warrants a
special theoretical classification of indigenous groups as “quasi-state actors”\(^1\).

However, the concept of sovereignty itself is hotly contested. Contention is exacerbated
by the lack of an agreed-upon definition of sovereignty and its contours. There are at least two
different broad approaches to the study of sovereignty: power-centric/territorially-based
sovereignty (see for instance Krasner, 2001/1999; and Ansell and Weber, 1999), and a variety of
critical approaches that conceive of sovereignty as a set of cultural, community, or even individual
level rights that should serve as a basis for challenging the hegemony of the nation-state as a
source of authoritative decision-making (Alfred, 2005; Alfred and Corntassel, 2005; Barker, 2005;
Christie, 2011; Cobb, 2005; Holm, et al., 2003), to realize avenues for maintaining a group’s
cultural integrity (Cobb, 2005; Deloria, Jr., 1996; Graham and Wiessner, 2011; Holm, et al.,
2003), or to fundamentally reshape the political order in order to cope with the problems of
environmental change (Litfin, 1998; Lipschutz, 1998; Deudney, 1998; Litfin, 1997). Some critical
theories go so far as to suggest that the very concept itself is a tool of oppression, constantly
redefined in ways that merely advantage the oppressor, and that any definition of sovereignty
would merely serve to limit its exercise, and should therefore be jettisoned (Alfred, 2005; Deloria,

\(^1\) This term should not be confused with the concept of “quasi-states”, a term denoting nation-states that
owe their existence more through recognition by the international community than by their own
capability to provide adequate governance (Jackson,1990).
The unfortunate reality is that these various approaches speak at cross-purposes and are irreconcilable. That is to say, mainstream power-centric definitions emphasize an examination of the *de facto* ability of government units to exercise full, unshared sovereign authority, whereas critical theories attack the very notion of sovereignty necessarily equaling power, and instead advantage *de jure* concepts for achieving indigenous autonomy within an imbalanced power dynamic between sub-national groups and their respective nation-states. It is thus necessary to settle in on a working definition of sovereignty as a way of side-stepping the irreconcilable philosophical differences between the two.

Therefore the approach taken in this dissertation is to adopt a primarily power-centric definition of sovereignty in order to be able to say something about the actual level of power and decision-making authority of indigenous groups. This is not without its difficulties. If one accepts the orthodox view that sovereignty entails the exclusive right to have control over an area of governance, people, or oneself, and that a sovereign is a supreme lawmaking authority, then most indigenous groups are clearly not fully sovereign. This is due primarily to the ability of their respective colonizing state to restrict the range of sovereign actions available to these groups (Christie, 2011; Cobb, 2005). That is to say that at the core of power-centric definitions of sovereignty lies the concept of political recognition, as any political unit’s actual ability to fully exercise its sovereignty is based on the acknowledgement and respect that political units accord each other (Cobb, 2005; Lyons, 2000). This advantages the nation-state as both holder of sovereign authority and as the locus of decisions on whether and how to acknowledge other political units’ sovereignty under international law.

Conventional power-based definitions of sovereignty have thus had to grapple with how to evaluate indigenous sovereignty and the relationship between indigenous groups and the nation-state. Most of the literature on *indigenous* sovereignty that is based on a power-centric definition appears to retain an emphasis on a “closed systems” approach that conceives of sovereignty as a simple dichotomous construct that conflates *de jure* and *de facto* dimensions of sovereignty. For instance, LaForme views tribal sovereignty as “…simply the right of self-
government or self-rule which the Aboriginal people neither surrendered nor lost by way of conquest.” (1991, 256). LaForme goes on to assert that sovereignty “allows for the recognition of their inherent right to self-government and provides guarantees that this right would have constitutional protection and thereby not be subject to the passing whims of non-Aboriginal governments” (LaForme, 1991, 259). That he goes on to acknowledge that current Canadian law, governed by the Indian Act and reinforced by the Supreme Court of Canada case *R. v. Sparrow*, “is now subject to the vagaries of the judicial temperament” and subject to amendment or even repeal “by the federal government without Indian consent or approval” (LaForme, 1991, 259-60) is suggestive of an over-reliance on *de jure* constructs of sovereignty without reference to political reality.

Furthermore, some commentators believe that most tribal authorities in the United States possess something akin to “national sovereignty”, as tribes are “nations” that pre-existed the United States, mutually recognized through treaty, with tribal rights “not based on or subject to U.S. Constitutional law”, and thus possessing an “extraconstitutional” relationship with the United States government (Wilkins and Stark, 2011, 34). This is another example of over-reliance on *de jure* notions of sovereignty, as a whole host of legal and political instruments constrain treaty rights and bind tribes to a subordinate position vis-à-vis the United States government, thereby diminishing any *de facto* claims to sovereign authority. In their definition, tribal nations have “a number of integral attributes, including a bounded land base, an appropriate economic system, a governmental system, and sociological distinctiveness” that enabled them to engage in treaty making, thereby conferring upon them a nation-to-nation relationship (ibid).

This has resulted in essentially a parallel governance system where tribal governments enjoy a superficially equal status with the federal government as co-sovereigns, a political position that would seemingly put them in a political status higher than that of the states (DeLoria, Jr. and Lytle, 1984). However these rights are significantly constrained by constitutional-level rules that have been interpreted as giving the federal government broad authority to determine the political status of American Indians without their advice and consent. Constitutional level
rules, including the outlining of congressional plenary power, the “trust relationship” between the national government and tribes, and commercial relations are laid out by the US Constitution, with other constitutional level rules being laid out by the respective tribal constitutions (Wilkins and Stark, 2011, 36-39). Of primary importance is the issue of congressional plenary power, which on one hand precludes the states from having any direct legislative control over the tribes, while on the other hand apparently granting Congress (and presumably administrative agencies acting on its behalf) power to legislate for the tribes, particularly in the realm of regulation of commerce, even in the absence of their consent (Wilkins and Stark, 2011, 37). This sets up a potential conflict between tribes and the federal government over collective-choice level rules, that is to say, there is a potential for conflict between Congress and tribal governments over, among other things, the parameters under which tribes are able to regulate such things as natural resource extraction on their own lands. Hence it is highly debatable that Native American tribes can be considered de facto fully sovereign entities insofar as another sovereign has the capacity to override the “sovereign” decisions made by these tribes.

Finally, because of the ad-hoc process of negotiated sovereignty that is likely to occur in federal systems, and due to the vicissitudes of political/popular opinion regarding indigenous peoples and the differing political, social, and economic needs of individual indigenous groups, I argue that it makes little sense to suggest an overall pattern of sovereignty amongst indigenous groups within a given federal system. Instead, indigenous groups within federal systems are most likely to be quite heterogenous in the degree of sovereign authority they enjoy.

Sovereign rights are also likely to vary by substantive, functional issue areas. For instance, Bish (1990; 1987) takes a structural-functionalist approach to tribal governance and suggests that tribal governments, by their nature, are primarily occupied with a limited set of governance functions. Bish argues that all governments potentially perform various tasks that must be prioritized due to capacity constraints (as in those placed on tribes by constitutional limitations) and the impossibility of meeting all of the demands of their constituencies simultaneously. Bish identifies 47 different functions potentially performed by tribal governments,
with remaining functions, e.g. defense, coming under the domain of the federal government, an arrangement akin to the system of “dual federalism”. However, there is no singular process by which potential tribal activities are enumerated to the tribes, and therefore, tribal governments are likely to vary across the functions they choose to perform (or are allowed to perform). Because of this, I argue that it is important to disaggregate the concept of indigenous group sovereignty by analyzing the specific rules pertaining to tribal authority and responsibility in particular policy areas.

Such a perspective is reflective of an “open-systems” approach to the study of sovereignty. Consider the following quote:

“The sovereign state is distinguished in the ideal by several characteristics. The state claims exclusive jurisdiction on a piece of territory over activities, which are then labeled domestic. There is mutual recognition by states of these claims. Mutual recognition constitutes each state formally as an equal actor. The state monopolizes the legitimate use of violence to sustain its authority internally and to protect it from external intrusion... This is a clearly delineated closed-systems perspective on the organization of world politics. The central issue is property rights, which are clearly defined by hard boundaries that distinguish domestic from international, and authority from anarchy” (Ansell and Weber, 1999, p. 74).

Given this closed-system perspective, tribal governments in the United States would clearly not be considered “sovereign”. Ansell and Weber, mirrored by Krasner (2001; 1999), go on to make a further claim that even the modern nation-state, due to the increasing porosity of international political borders and other factors, may not be able to make such a claim of sovereignty, and that the concept itself makes little sense when constructed as a dichotomous proposition (1999, p. 75). Therefore, what is needed is an “open systems” approach that assumes multidimensional, fluid boundaries:

“Part of the promise of [open systems thinking] is that it allows for stable and significant forms of organization that lie off the continuum of states and markets. In other words, sovereignty created two categories of organizing principles: politics, with coercion, power and violence at its center, vs. economics, which is about Pareto-improving voluntary exchange. Forms of organization in the middle, or off the continuum entirely, appear to be vague, unstable, and marginal” (Ansell and Weber, 1999, p. 76).
Such an approach essentially provides a more encompassing vision of power without veering into the territory of critical sovereignty theories and their emphases on cultural and systemic transformation.

An example of such open-systems thinking is reflected by the work of Krasner (2001/1999), who makes the distinction between at least four different dimensions of sovereignty that he criticizes as being often awkwardly lumped together under a general, holistic definition of sovereignty. "Interdependence sovereignty" is a concept that pertains to the capacity of states (and by extension, I will assert, any other political authority with a claim to sovereignty) to control the flow of people, material, and information across their borders. "Domestic sovereignty", on the other hand, "refers to authority structures within states and the ability of these structures to effectively regulate behavior." (Krasner, 1999, p. 231). Thus domestic sovereignty reflects the legal authority to engage in a wide range of governance functions within a polity's borders, from the provision of public goods to the regulation of all manner of human activity. "Westphalian sovereignty" meanwhile refers to a political authority's monopoly over the use of force and decision-making authority within its own defined boundaries, with the implication that other political units must not intervene in these authorities' internal affairs. Clearly then, the nation-state is the political unit that has the clearest claim to high levels of Westphalian sovereignty. Finally, "international legal sovereignty" pertains to the processes of mutual recognition: "the basic rule of international legal sovereignty is that recognition is accorded to juridically independent territorial entities which are capable of entering into voluntary contractual agreements." (Krasner, 1999, p. 233).

It is this final dimension of sovereignty which is the primary emphasis of this dissertation. Indigenous groups have long pressured the international community for recognition of special rights, among them the rights to participation as articulated in Article 18 of the United Nations Declaration on the Rights of Indigenous Peoples:

"Indigenous peoples have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in
accordance with their own procedures, as well as to maintain and develop their own indigenous decisionmaking institutions.”

However a major potential barrier to the participation of indigenous peoples within international organizations and in processes of international governance lies in the nebulous status of indigenous groups and their organizations in international law. International law has historically entailed two parallel and often competing doctrines impacting indigenous groups. First, the recognition of “statehood” as the central precept of international law has served to both “view as unqualified for statehood non-European indigenous peoples and to instead favor the consolidation of power over them” (Anaya, 2004, 6), fundamentally restricting the recognition of indigenous groups as a subject of international law, and served to shut these groups out from formal membership in international institutions. Secondly, a newer discourse on the rights of peoples has made “individuals and certain associational entities… subjects of international norms or included as participants in treaty-governed international processes” (Anaya, 2004, 50). This clearly creates a tension with the first doctrine, upon which the sovereignty of the nation-state itself rests. By suggesting that indigenous groups may receive both recognition to participate within international institutions and a body of rights that are adjudicated in the normative system of international law and overseen by a range of international institutions, Anaya hints that the international legal sovereignty of indigenous groups consists of both participatory and legal recognition dimensions.

A central assertion of my dissertation then is that international legal sovereignty, when applied to indigenous groups, would entail a political recognition of these groups as at least quasi-sovereign entities with a legal standing to participate within international institutions that goes above and beyond the status accorded other non-state actors, as well as the possession of a body of rights that create obligations on the part of nation-states vis-à-vis their respective indigenous populations. On the participatory side of the equation however, there continues to be a bias towards viewing the nation-state as possessing a monopoly of power and membership in international institutions, with only governments possessing the right to vote and/or to exercise decision-making authority in international institutions (Birnie, et al., 2009; Bodansky, 2010;
Klabbers, 2002; Susskind, 1994). Existing scholarship typically only emphasizes differences between types of membership in international institutions, highlighting the existence of "associate member", "partial member", "affiliate member", or "observer" status in such organizations (Klabbers, 2002, 105). Furthermore, these "special" membership classifications are typically seen as the domain of "mini-states" rather than other types of actors in international affairs, such as indigenous group governments or NGOs (Klabbers, 2002). Insofar as these "other" entities are addressed, it is typically within the framework of "entities that are not themselves responsible for the conduct of their international relations (i.e., dependent territories)… [in which case] the typical construction is that such entities are entitled to participate fully in the work of the organ, but do not have the right to vote" (Klabbers, 2002, 112). A notable example of such a situation involving indigenous groups is the special "permanent participant" status accorded to six indigenous group councils and associations within the Arctic Council, something of an "intermediate" status that confers consultative rights but no formal decision-making power (Bloom, 1999; Koivurova and Heinamaki, 2006; Koivurova and Vanderzwaag, 2007). Therefore, insofar as indigenous groups possess full voting membership in any international organization, it challenges the orthodox scholarship pertaining to international organization membership and raises the question of under what circumstances states acquiesce to membership by non-nation state actors.

1.3.6. Participatory Democracy, Collaborative Governance, Co-Management, and Participatory Authority

There is a wide body of work in various sub-field literatures focusing on the enhanced role of non-state actors in public policy decision-making. However there is a lack of consistency in terminology employed, and resultant vagaries in what concepts such as "collaboration", "co-management", "cooperation" actually entail. The purpose of this section is to define in greater detail the concept of participatory authority as used in this dissertation, and to relate it to other concepts that come from the literatures on participatory democracy and collaborative public management.
It is common to read of the “retreat of the state” (Strange, 1996) in response to the rise of global capitalism, as a variety of market actors achieve levels of power and influence that threaten to side-step the nation-state as an effective regulatory entity. Alternatively, the rise of a variety of non-state actors are held by some to be a function of the “new public management” in which the state purposefully “hollows” itself out in the pursuit of greater efficiencies in service delivery (Lovon, Murray, and Shaffer, 2004; Osborne and Gabler, 1992). This is held to be a top-down process in which governments relinquish control over policy-making through a range of activities including privatization of government services, contracting of services with other jurisdictions or non-profit organizations, decentralization of decision-making authority, etc. (ibid). The landscape has changed to such a degree that many scholars argue that is more relevant to speak in terms of “governance” instead of “government”, with governance defined broadly as “the processes and institutions, both formal and informal, that guide and restrain the collective activities of a group” (Keohane and Nye, 2000). A more narrow definition of governance focuses on the authority relationships between actors, in which one actor can compel action from another (Kahler and Lake, 2003). Regardless of the definition used, a general consensus has emerged that multiple social and political entities have some measure of governance authority, and that the nation-state’s supremacy over authoritative decision-making is waning (Lovon, et al., 2004; Kahler and Lake, 2003). This is held to be particularly true in the policy areas of environmental policy and natural resource management (Ansell and Gash, 2008; Beierle and Konisky, 2000; Koontz and Johnson, 2007; Singleton, 2002).

An outgrowth of this perspective is that there is a burgeoning literature focusing on different dimensions of the “new governance” and the enhanced role of non-state actors in the policy process, with buzzwords such as “decentralization”, “cooperation”, “participation”, “collaboration”, “co-management”, and “consultation” often used interchangeably with little common definition nor discrimination between what are distinct classes of policy activity. At the broadest level, the concept of “participatory democracy” refers to arrangements that go beyond the simple exercise of voting in representative democracies by building in some measure of active and authoritative decision-making by all members of a political grouping. For instance,
“deliberative” or “discursive democracy” is an approach to institutional design rooted in a critique of instrumental rationality, arguing that instrumental rationality is the primary justification behind the design of the political institutions associated with representative democracy (Bohman and Richardson, 2009; Dryzek, 1990; Gutmann and Thompson, 2000). Institutions based on representative democracy are further critiqued as being anti-democratic, repressive of individual freedom, and incapable of dealing with complex social problems, for “even if they are elected, someone (or some group) must do the engineering; that is, they must exercise power over others” (Dryzek, 1990, 5). This serves to actively shut out diverse interests while advantaging the perspectives of elites who gain control of authoritative decision-making processes. Discursive democracy proponents believe instead that active deliberation amongst all members of a social grouping, rather than the simple act of voting, is or should be the primary source of legitimacy of the rules-in-use in any political grouping (Dryzek, 1990). Thus active participation by citizens in decision-making is advocated as a more democratic and “open” process than provided for through institutions associated with representative democracy.

“Discursive designs” are seen as social institutions operating in a “public space between individuals and the state” where individuals participate as individual citizens rather than representatives of some corporate/hierarchical sub-grouping (Dryzek, 1990, 41-43). Where then does this leave the state? According to Dryzek, where state actors are present in a discursively designed institution, they should operate merely as any other individual actor, representing their particular interests and operating in a non-hierarchical environment with a minimum of formal rules (1990, 43). Thus discursive designs can be seen as occupying one end of a continuum between “no” and “maximum” citizen participation in decision-making. Examples of such discursive designs include formalized civil mediation processes, alternative dispute resolution, regulatory negotiation, problem-solving workshops, etc., with each sharing common features such as a shared context of a pressing social problem of interest to multiple parties with conflicting perspectives, a neutral third party that oversees a prolonged face-to-face discourse that abides by the informal “canons of reasoned discourse”, and an end-product of the process being
consensus-based decision-making between the parties and in absence of an authoritative judgment by a third party (Dryzek, 1990, 44).

In reality, the possibility of truly inclusive discursive designs is limited by the fact individuals will not deliberate according to truth-sensitive principles due to the fact that information is imperfect and costly to collect, leading individuals to rely on “folk knowledge” that is manipulated by politicians and others for crass electoral purposes. This leads to a “discourse failure” characterized by perpetuation of factual errors, manipulation by elites, and willful non-participation by impacted interests (Pincione and Tesón, 2006). Therefore the state remains a necessary instrument in authoritative decision-making, and levels of “participation” most commonly occupy the middle ground of the continuum, falling short of the ideal of maximum participation articulated by scholars of discursive democracy.

Different approaches at characterizing this middle ground between “no” and “maximum” participation abound in the literature. “Collaboration” and “participation” are two of the more frequently referenced terms for what occurs in this middle ground, with participation being a slightly more encompassing term that captures concepts ranging from radical social change, as in the discursive democracy approach, to simple managerial practices seeking input from citizens (Sidaway, 2005, 119). At its most basic, the term simply denotes a “commitment to people having a say in decisions that affect their lives” (ibid). Collaboration meanwhile is defined by Gray as “a process through which [stakeholders] who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (1989, 5). This is held to be distinct from other “lesser” forms of cooperation due to the interdependence between stakeholders, joint ownership of decisions, and collective responsibility for the future of the partnership (O’Leary, Gazely, McGuire, and Bingham; 2009; Gray, 1989).

“Collaborative resource management” or “co-management” is a term particularly associated with natural resource management which builds upon this more general definition of collaboration. The OECD (2007) defines co-management as “a process of management in which
government shares power with resource users, with each given specific rights and responsibilities relating to information and decision-making”. It may also be similarly defined as a process involving diverse stakeholders and government regulators working together to resolve shared dilemmas, divvying up the tasks of designing and implementing remedies to environmental problems (Heikkila and Gerlak, 2005; Koontz, et al., 2004 Singleton, 2002). Thus co-management involves some kind of relationship between state and non-state actors with a range of responsibilities being assigned to each. As such, co-management can be seen as network arrangements differentiated by the types of non-state actors involved and the tasks associated with these actors. Carlsson and Berkes (2003) for instance find it useful to differentiate between “epistemic communities” (Haas, 1992), “issue networks” (Heclo, 1978), “policy communities” (Jordan, 1990), and “boundary organizations” (Cash and Moser, 2000), each with their own organizing logic. Purported advantages of co-management include increasing broad accountability by involving local authorities; moving decision making to the scale of organization that is best equipped to deal with the problem (aka the “principle of subsidiarity”); establishing cross-scale linkages between local, regional, national, and international actors; risk sharing; reduction of transaction costs; exchange of resources; increased flexibility allowing for experimentation and search for least-cost alternatives that enhance efficiency; expansion of mutually beneficial “win sets” due to face-to-face interactions that lower information costs; and positive externalities associated with community building and democratization (Carlsson and Berkes, 2003; Singleton, 2002; Wondolleck and Yaffee, 2000).

“Collaborative governance” meanwhile is a term employed by many different research programs across multiple subfields, with no clear consensus definition. Ansell and Gash define collaborative governance as:

“A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage programs or assets. This definition stresses six important criteria: 1) the forum is initiated by public agencies or institutions, 2) participants in the forum include nonstate actors, 3) participants engage directly in decision-making and are not merely “consulted” by public agencies, 4) the forum is
formally organized and meets collectively, 5) the forum aims to make decisions by consensus (even if consensus is not achieved in practice), and 6) the focus of collaboration is on public policy or management.” (2008, 544-545).

Such a definition clearly falls short of the prescriptions for maximum citizen participation made by proponents of discursive democracy, given the emphasis on the state as an initiating and coordinating mechanism. It also contrasts with certain definitions of collaborative governance made in the public management literature, which tends to emphasize collaboration between distinct governmental organizations through interagency coordination, contracting arrangements between federal and state/local governments, and the like, thereby tending to neglect the non-state actor segment (see for instance O’Leary, et al., 2009). Furthermore, it clearly suggests that collaboration is something distinct from mere consultation.

Several approaches have tried to analytically distinguish collaboration from other buzzwords such as consultation, co-management, cooperation, etc. For instance, the public management literature tends to conceive “collaboration” as something more than just simple cooperation between various distinct stakeholders, with collaboration resting in the middle of a continuum between “cooperation” and “service integration”, with simple cooperation implying greater degrees of autonomous relationships among all actors which are overseen by an actor (almost always governmental) with higher degrees of authority, and “service integration” implying the greatest degree of interdependence between actors and less clear relational authority patterns (O’Leary, et al., 2009). The result of this definitional approach is a tendency to emphasize network relationships between public actors, especially “public managers”, whether this be organized horizontally (i.e. collaboration between city managers for service delivery) or vertically (i.e. collaboration between national, state, and local government officials, as in a contracting arrangement) (ibid). Figure 1.1. illustrates this continuum based on the level of autonomy of actors in collaborative policy environments.
An alternative, broader definition of collaborative governance is that it is governance in which various stakeholders representing different interests are allowed to collectively make a policy decision, or at least recommendations, that will not be substantially changed by an authoritative final decision-maker. It thus entails something more than just “informing” or “consulting” with the public, who are instead empowered insofar as their direct participation constrains the decision-making authority of the ultimate decision-maker (usually held to be a governmental authority) (Ansell and Gash, 2008; Sidaway, 2005). It is useful at this juncture to view decision-making as a three-stage process involving pre-decision, decision, and post-decision (Lasswell, 1971). The process can be further broken down into seven “decision functions”, starting with “intelligence” collection and communication; “promotion” of courses of action/policy alternatives; “prescription” of basic goals, norms, and values of the community; “invocation” of administrative arrangements to follow the prescribed rules; “application” or implementation of the rules/policy; “appraisal” of the implemented policy; and “termination” or large scale adjustment of an existing prescription (Clark, 2002; Lasswell, 1971). These functions need not be viewed in isolation from one another, as certain actions may simultaneously affect more than one broad decision function, nor are these functions necessarily sequential. The primary point here is that there are several broad functions of the decision-making process during which active participation by the public may occur.
Sidaway (2005) adopts an approach whereby different participatory techniques can be located on a continuum between non-participation and full empowerment, in which public participation is maximized, as in discursive institutional designs. At one end of the extreme is “non-participation”, also known as “managerialism” in which public agencies make decisions unilaterally through closed decision processes with little or no public input (Ansell and Gash, 2008, 547). “Information provision” is seen as slightly more participatory in that government at least tries to provide the public with information to aid them in understanding public problems and the alternatives being considered in addressing them. “Consultation” entails a range of activities that open the possibilities for citizen feedback. For instance, “Information gathering”, in the form of focus groups, social surveys, interviews, etc. is seen as slightly more participatory given the active input citizens are making in the governance process, however this still implies little real decision-making authority by non-state actors, as input is mostly restricted to the “intelligence” and “promotion” functions of the policy cycle. A variety of other “consultative techniques”, including public meetings, open houses, and elements of e-governance enhance public input in the sense that government actors are less able to control the context of discourse. “Collaboration” kicks in when government actors actively delegate certain decision-making functions to non-state actors at various stages of the policy process, albeit in a context where the government maintains a final say over any authoritative decisions to be taken. Finally, full “empowerment” entails a situation where the public are involved at each successive stage of the decision process and have final decision-making authority that cannot be usurped by a governmental entity. Figure 1.2. illustrates the relationship between these concepts based on the level of stakeholder input.
In order to avoid confusion over terms generated by the lack of consensus over definitions of such terms as collaboration, participation, co-management, etc., I will be using the term “participatory authority” throughout this dissertation to denote the relative authority of non-state actors vis-à-vis governmental decision-making authorities. This construct will be based on two different dimensions corresponding to the continuums outlined previously: the relative autonomy of non-state actors in any collaborative process and the breadth of input of non-state actors across all decision functions performed within an institutional/organizational setting. Thus “high” levels of participatory authority may be defined as participation by non-state actors that is present across most or all of the decision functions of the institution, and significantly constrains the autonomy of state/governmental actors by requiring some measure of non-state actor buy-in in order for an authoritative decision to take effect. “Medium” levels of participatory authority may be defined by either a relative lack of authority in some of the decision functions of the institution or the relative autonomy on the part of state actors to make decisions with or without buy-in from governmental actors. “Low” levels meanwhile may be defined as situations in which non-state actors are relegated to input on only a couple of key decision functions, typically limited to intelligence or promotion functions, and lack the means to alter authoritative decision-making other than through processes such as interest group pressure, lobbying, etc. Thus low levels of participatory authority would be associated with what is invariably referred to as “consultation” or “cooperation”. Finally, “no participatory authority” would entail situations in which non-state actors are fundamentally removed from a collaborative process whether through purposeful exclusion by
state actors or willful non-participation of a non-state actor that might otherwise be eligible for such participation. Figure 1.3 illustrates the relationships between participatory authority, breadth of involvement, and autonomy of actors.

**Figure 1.3. Schematic of Levels of Non-State Actor Participatory Authority**

Finally, another useful approach to understanding the participation of actors in natural resource management, specific to fisheries management, is provided by Schlager and Ostrom (1992). Based on the Institutional Analysis and Development (IAD) Framework, Schlager and Ostrom differentiate between subsets of property rights, particularly at the operational rule level, which shape the set of authorized actions of policy actors in inshore fisheries. Specifically, distinguishable subsets of property rights relevant to fisheries include “access” rights, which entail
the right to enter a delineated physical property; “withdrawal” rights, which entail the right to appropriate a resource, in this case fish; “management” rights, which entail the ability of actors to engage in collective-choice level rulemaking that regulates how, when, and where appropriation of the resource may occur and decisions regarding how the resource may be changed or improved; “exclusion” rights, which entail the authority to determine which actors may be allotted access rights and the process by which these access rights may be transferred to other actors; and “alienation” rights, which entails the right to sell or lease an actor’s management and/or exclusion rights (Schlager and Ostrom, 1992, 250-251). Policy actors may be differentiated from one another based on the “bundle” of property rights that they possess. For instance, an “authorized user” is simply a fisherman who has rights to access and withdrawal, but no additional management, exclusion, nor alienation rights (Schlager and Ostrom, 1992, 252). “Claimants” meanwhile are actors with management rights in addition to their access and withdrawal rights, although due to the absence of exclusion or alienation rights, claimants may not dictate who may have access to resources nor sell their own rights of management (ibid). As such, claimants have an accentuated policy role similar to that of actors who have a legal right to policy consultation, as they must be given avenues for feedback on management decisions, but cannot unilaterally dictate policies regarding who may have access to a resource and how those resources may be utilized.

More significant are actors who are labeled as “proprietors”. These actors possess the access, withdrawal, and management rights held by claimants, yet hold additional rights of exclusion that gives them at least some authority to make binding decisions on access to resources and how they are to be utilized (ibid). Finally, “owners” are characterized as holding each of the bundles of rights of proprietors, but with the added rights of being able to sell or lease their rights to management and exclusion to others (ibid).

I believe that this approach is compatible with the concept of participatory authority as outlined above, particularly in regards to the “management rights” of fishery policy actors. However, one drawback of the Schlager and Ostrom approach is that it appears to conceive of
management rights as a dichotomous variable, with actors either possessing management rights or not. It seems reasonable to assume that a bundle of management rights could be unpacked, with different actors possessing some specific management rights but not others. As we will see for instance in the case of Canadian indigenous actors in the PSC, they have recognized positions within the PSC and recognized access to influence decisions regulating use patterns, but cannot regulate said patterns of usage due to constraints placed upon them by the Canadian government regarding the parameters under which they are allowed to negotiate on the behalf of the Canada. In other words, Canadian indigenous actors actively participate in formulation of management decisions, but in a constrained fashion that may not correspond wholly with their particular interests. In contrast, American tribes in the PSC, due in large part to their power of veto, can be seen as having much more ability to effect and affect regulatory decisions made by the PSC. These rights furthermore extend into exclusionary rights due to their ability to affect the overall target harvest numbers of fish and to negotiate percentage shares between diverse stakeholders of particular fish stocks within the PSC process. As such, in the case of American tribes in the PSC, they can be seen as approximating the actor model of “proprietor”, since they are not allowed to sell or lease their management authority to other actors, whereas Canadian First Nations in the PSC are best seen as “claimants” with at least some measure of management rights and authority. These themes are taken up in more detail in Chapter 3.

1.3.7. The Importance of Natural Resource Management to Indigenous Groups

Natural resource management is a particularly germane issue to many indigenous groups, including most of those of North and South America, given the significant proportion of tribal income that is derived from natural resource extraction (Cornell and Kalt, 1992b; Erni, 1997), the cultural and/or religious significance that certain natural resources play within a given group (Grinde and Johansen, 1995), a long history of indigenous institutional arrangements designed to promote sustainability of resources that has facilitated inter-tribal communication and shared sense of identity (Clow and Sutton, 2001; Singleton, 1998), and the fact that in many instances, issues of environmental policy and natural resource management are the only policy...
areas where “retrenchment away from inherent sovereignty” has not occurred, a statement which suggests that tribal sovereignty and authority is generally higher on issues of environmental policy and natural resource management (Nettheim, et al., 2002, 32).

1.4. Outline of Dissertation

The remainder of this dissertation will be structured as follows. Chapter Two provides the necessary background behind salmon and halibut lifecycles and the structures of the complex management regimes of which the PSC and IPHC are only a part. The overarching ecological and management problems are portrayed through the lenses of social-ecological systems theory, polycentricity, and institutional analysis, drawing heavily from a new approach at combining institutional analysis and social-ecological systems thinking within a single overarching framework.

Chapter Three provides an institutional analysis of the rules governing indigenous group participation in the institutions examined in this study. It focuses on a particular subset of rules under the IAD horizontal typology of rules, particularly position, boundary, choice, and aggregation rules that facilitate or constrain decision-making authority of indigenous representatives in these institutions. From this analysis, I categorize each of the cases according to the relative levels of participatory authority enjoyed by the indigenous groups under consideration, coding each case as having “high”, “medium”, or “low” levels of authority, pursuant to the discussion in section 1.2.3 above. The cases of the Nisga’a and Colville are also briefly examined as cases of no participatory authority, in order to set the stage for a comparative analysis that is presented in Chapter Five.

Having characterized each of the cases based on the levels of indigenous participatory authority, I then explicitly examine the question of how these groups attained their relative levels of authority in Chapter Four. This chapter is based on qualitative time-series analysis, also known as “process tracing”, which aims to “identify the intervening causal process – the causal chain and causal mechanism – between an independent variable (or variables) and the outcome
of the dependent variable” (George and Bennett, 2004, 206). The outcome in this sense is the position/level of authority of these groups in the institutions under examination, focusing on the cases of American and Canadian tribes in the IPHC and PSC, setting aside the cases of the Nisga’a and Colville due to the fact that they do not have authority in these institutions and thus there is no process to “trace”. Using data culled from archival research and interviewing, I identify critical junctures during the history of the development of both the PSC and IPHC without which indigenous participation might likely have never come about. In doing so, this chapter begins to develop a theory about the relevant factors behind differing levels of participatory authority, and develops hypotheses regarding potential situations in which indigenous actors may attain standing and authority in international institutions.

Chapter Five develops these hypotheses further in the form of a Qualitative Comparative Analysis (QCA) comparing all six of the cases outlined above. Due to the fact that the dependent variable in question, level of participatory authority, is not being operationalized dichotomously, the basis of this analysis will be “fuzzy set” QCA. I inductively identify several independent variables based primarily on interview data that are posited to be necessary conditions behind differing levels of participation. Due to the relatively few number of cases examined in this study, care is taken to not draw overly strong generalizations from the cases at hand. Instead, the chapter develops a theory regarding the situations in which high levels of indigenous participatory authority may be possible, and outlines a structure for a more robust QCA study to include additional case studies in the future.

Chapter Six turns to an analysis of the effects of indigenous group participation, focusing on the PSC due to the high levels of authority enjoyed by the American tribes and moderate level of authority enjoyed by Canadian First Nations in this institution. The starting basis of this analysis is a critique of existing game theoretical work that predicts bargaining stalemate and a “race to the bottom” in terms of sustainable management of the resource due to the unique voting structure of the Commission as detailed in Chapter Four. A key finding here, supported by ample interview data, suggests that American tribes in particular hold a stronger bargaining position vis-
à-vis the other actors in the American delegation due to their legal position. In particular, the impact of the "All Citizens Case" serves to constrain the behavior of Alaska and accentuates the influence of American tribes in the overall structure of the PSC, enabling both inter-delegation and bilateral (USA-Canada) consensus building. Other effects of IG participation examined include how tribal influence was key behind a number of developments in the overall evolution of the PSC, including the move to abundance-based management, the development of the PSC Enhancement Funds, the pre-eminence of tribal negotiators in the Fraser Panel in particular, the re-negotiation of the Chinook and Coho Chapters of the Treaty, and the key operational role of both American and Canadian indigenous groups in data collection and technical expertise, without which the PSC would have significant difficulties in the conduct of its stock assessment and other management activities.

Chapter Seven concludes with a summary of the preceding chapters, aiming to draw generalizations regarding how institutional rules configure in such a way as to grant relatively high or low levels of authority to indigenous groups, the processes through which these groups have attained such levels of authority, the independent variables which are hypothesized as being significant behind instances of high levels of participatory authority, and, in the case of the PSC at least, a general characterization of indigenous actors as being "good partners" whose participation has significantly influenced bargaining relationships between all of the institutional actors in the institution, the result of which has been that the evolution of the institution has been in the direction of more sustainable management of the resource. The chapter concludes with an identification of additional research questions that emerged during the course of research, as well as an outline of a research agenda designed to extend the scope of this inquiry in order to more rigorously test the hypotheses posed and to strengthen the inferences drawn in the present study.
Chapter Two: Understanding Salmon and Halibut Fisheries as Nested Multi-Level Social-Ecological Systems

2.1. Introduction

Environmental problems are complex. The interrelationships between human and ecological systems involve a potentially extraordinary number of variables that are important drivers of sustainability and other outcome variables of interest to both social scientists and ecologists. As a consequence, they defy easy solutions: it is difficult to ascertain what the effect of a change in one system variable may have on others (Ostrom, 2007). Most, if not all, environmental and natural resource issues are best characterized as “systems problems” due to the complicated and often unpredictable nature of human behavior, the common presence of multiple causal pathways, and the complexity of critical feedback processes between social and environmental systems across multiple spatial and temporal scales (Holling, et al., 1998).

Social-ecological systems theory takes into account these coupled linkages between human and ecological systems. A social-ecological system (SES) may be defined as “[consisting] of a bio-geo-physical unit and its associated social actors and institutions. Social-ecological systems are complex and adaptive and delimited by spatial or functional boundaries surrounding particular ecosystems and their problem context” (Glaser, et al., 2008). Taking a similar approach, Berkes, et al., define the component systems thusly:

“Social systems… include those dealing with governance, as in property rights and access to resources. Also of key importance are different systems of knowledge pertinent to the dynamics of environment and resource use, and world views and ethics concerning human-nature relationships. Ecological systems (ecosystems) refer to self-regulating communities of organisms interacting with one another and their environment. When we wish to emphasize the integrated concept of humans-in-nature, we use the terms social-ecological systems and social-ecological linkages” (2003, 2-3).

Utilizing this approach is a conscious attempt to recognize that human actions impact ecosystem dynamics and vice-versa, and that analyzing each in isolation is an arbitrary distinction that hinders our ability to truly understand issues of sustainability.
Using social-ecological systems theory coupled with an emphasis on mapping the polycentric relationships among component institutions of the relevant SESs is particularly useful for this study for at least three broad reasons. First, it helps to highlight the interconnectedness between component institutions operating at international, national, and local scales. Secondly, it can help highlight inter-group dynamics between indigenous and non-indigenous actors across these scales and within particular sub-sectors of the resource system. Finally, it is useful for examining the effects of indigenous group participation in regards to both institutional and ecological outcomes attributable to the operation of the institutions in question. Towards that end, the remainder of this chapter will be focused on the specification of the halibut and salmon SESs, an identification of the most relevant second-tier variables impacting the system, specification of relevant action situation dynamics, and identification of the primary types of disturbances that impact both salmon and halibut fisheries. This will help situate the position of indigenous groups in the overall SES context and will set forth a subsequent examination to be conducted in later chapters of how the institutions in this study reflect the design principles for sustainable SES management as articulated by other scholars currently developing a framework for analyzing complex SESs (Cox, et al., 2010; Anderies, et al., 2004; Ostrom, 1990).

2.2. Fisheries as Complex Social-Ecological Systems

The term “fishery” is used to define multiple concepts, and is thus an imprecise term that means many different things to different readers. For instance, the Food and Agriculture Organization (FAO) of the United Nations defines a fishery as “generally... an activity leading to harvesting of fish. It may involve capture of wild fish or raising of fish through aquaculture” (FAO Fisheries Glossary). The FAO further defines a “fishery resource” as “elements of a natural aquatic resource (e.g. strains, species, populations, stocks, assemblages) which can be legally caught by fishing. May sometimes be taken as including also the habitat of such resources” (ibid). These definitions thus make a distinction between an anthropocentric activity and the natural resource that such activity targets. A more encompassing definition that attempts to couple these dimensions is provided by Fletcher, et al. (2002), who define a fishery as, “a unit determined by
an authority or other entity that is engaged in raising and/or harvesting fish. Typically, the unit is
defined in terms of some or all of the following: people involved, species or type of fish, area of
water or seabed, method of fishing, class of boats and purpose of the activities”. Therefore a
“fishery” is complex system consisting of multiple social and ecological variables.

As a result of the nomenclatural vagueness surrounding this concept, many individuals
tend to use the term to denote a single dimension of the more encompassing definition, thus, for
some a fishery entails simply a population of a given species or type of fish, while for some others
the term principally refers to a specific type of human interaction with a specific population of fish,
for instance a recreational fly-fisherman fishery that targets trout in a specific watershed, which
would be distinct from a commercial operation that farm-raises the same species of trout within
the same watershed. I argue that it is important to take into account all of these social and
ecological dimensions of fisheries in a comprehensive fashion in order to address the potential
“Babel problem” that might arise given the contested definition of the term.

2.3. Social-Ecological Systems Theory

2.3.1. Resilience, Disturbance, Response, and Robustness

Several theoretical concepts have emerged as social scientists and ecologists have
attempted to analyze complex SESs. “Sustainability” is the most frequently used buzzword in
environmental policy and natural resource management circles, but it is a very broad concept and
its meaning is imprecise, leading some to advance a preference for more nuanced terms and
concepts (Bartlett, 2006). “Resilience” is a term used to denote a “measure of the persistence of
systems and their ability to absorb change and disturbance and still maintain the same
relationships between populations or state variables” (Holling, 1973, 14). A “disturbance”
Furthermore can be defined as “a relatively discrete event that disrupts social or ecological
communities, resulting in changes to the physical or social environment” (Fleischman, et al.,
2010). A wide variety of disturbances may thus occur in reality, stemming from social or
ecological sources, whether endogenous or exogenous to the system, and varying in terms of
their magnitude, spatial scale, and temporal scale (ibid). Thus, resilience refers to the ability of a system to remain fundamentally unchanged in terms of its functioning and overall structure despite a change in one of the variables that define the system (Walker and Salt, 2007).

Given that disturbances are differentiated in terms of magnitude and spatial and temporal scales, it becomes important to be able to define systems in terms of their relative stability, equilibrium states, the responses of the system to disturbances, and the thresholds under which the system can withstand a disturbance without a resultant fundamental change to the system. Because of the sheer complexity of SES’s and the fact that they are “adaptive”, it is highly debatable whether equilibrium states are even identifiable. A “complex adaptive system” is one in which there are multiple actors within a network, with a constant set of actions and reactions amongst actors as they interact within the system. As a result, patterns of behavior at the broader system level arise out of the collective behavior of the relevant actors within the system (Axelrod and Cohen, 2000). Assuming a multiplicity of actors in any given SES, it is unlikely that identifiable equilibrium points exist, leading some to instead voice a preference for pinpointing systemic eras of stability or “stability domains” (Schoon, 2008).

Thus, identifying the ways in which a system responds to disturbances in order to maintain its own relative stability is a complicated task. Some scholars find it useful to differentiate between social and biophysical responses to disturbance. Biophysical systems respond through a process of natural selection, with the aspects of a system that work remaining and adapting, and those aspects that fail ceasing to exist (Fleischman, et al., 2010). In social systems, human agency allows for a certain extent of planning capacity that allows for social systems to consciously design their social and physical surroundings. This allows for actions that anticipate a disturbance before it takes place and to take mitigating action, or conversely, to not respond at all either through willful inaction, ignorance, or inability to act (ibid). Two further concepts are instructive here – “adaptability” and “transformability”. Adaptability refers to the capacity of actors to purposefully and reflexively impact resilience (Levin, 1998). Adaptive capacity is a system property that refers to the ability of the system to avoid drastic shifts from
one stability domain to another by mitigating threshold effects once encountered (Walker et al., 2004). Transformability meanwhile refers to the emergence or creation of a fundamentally new system if the old system proves unsuccessful, for any reason, to deal with disturbance thresholds (ibid).

Responses are thus classified as being adaptive, maladaptive, or neutral. Adaptive responses are those that allow the system to successfully cope with changing conditions, thus maintaining system stability (Fleischman, et al., 2010; Smit and Wandel, 2006). Conversely, “maladaptive responses hinder the ability of the system to cope with, manage, or adjust to a change in condition, stress, hazard, risk, or opportunity” (Fleischman, et al. 2010). Finally, neutral responses are those that “do not alter the ability of the system to cope with, manage, or adjust to a change” (ibid). Determining whether a response is adaptive, maladaptive, or neutral is furthermore largely a normative exercise in evaluation, based on varying definitions of “success”, identification of stability domains, specific identification of the relevant state variables, identification of clear threshold levels, definition of potential alternative states, and measurement difficulties inherent in identifying clear measures of sustainability and other outcome variables. In other words, drawing a clear line of causation between a response to a disturbance and the relative ensuing stability of the system is very difficult, simply due to the nature of system complexities as outlined above. Furthermore, complications arise when attempting to establish that responses to disturbances lead to regime shifts or stability in light of threshold effects, given that the many variables present in any SES operate at dramatically different temporal scales, with both “slow” and “fast” drivers of system dynamics (McGinnis and Ostrom, 2010).

Finally, the term “robustness” refers to the ability of a system to adapt to and survive disturbances/destabilizing forces without collapsing or undergoing fundamental transformative changes, along the same lines as the concept of resilience (Young, 2002). However, the focus of robustness is more on the social side of the system, emphasizing the design characteristics of the institutional dimensions of the SES due to the fact that they are the result of conscious design (Anderies, et al. 2004). While resilience theory emphasizes uncertainty over potential exogenous
shocks to the system, such as a natural disaster, robustness emphasizes uncertainty about institutional design characteristics endogenous to the system in the form of mistrust, lack of communication, etc. between institutional actors and uncertainty about the capacity of institutional design to mitigate social and/or ecological disturbances. Robust systems are defined as those that have the capacity to withstand shocks fundamentally due to conscious human decisions (Anderies and Janssen 2007). However, it should be cautioned that robustness is not a dichotomous construct: trade-offs are inherent in any system and institutions designed to be robust in the face of certain types of disturbances may be less robust in response to other types of disturbances (ibid).

2.3.2. Multi-Scale/Multi-Level Analysis and Polycentricity

One hallmark of social-ecological systems is that they are almost always comprised of multiple independent yet overlapping institutional arenas. This fragmentation of authority is known as "polycentricity", a term borrowed from Polanyi (1951) by Ostrom, Tiebout, and Warren (1961) to denote a political system characterized by multiple centers of political decision-making authority, which while formally independent of one another, interact in an ordered relationship towards the purpose of production and provision of public goods and services (McGinnis, 1999; Ostrom, 1999). Analysis of polycentric systems rests on identifying "predictable patterns of ordered relationships" (Ostrom, 1999). These relationships can be patterned in a multitude of fashions, with patterns particularly characterized by the "scale" and/or "level" of the actors involved in a network. In the literature, these terms are frequently used interchangeably. For instance, for some "scale" is a concept that refers to the "spatial, temporal, quantitative, or analytical dimensions" used to measure an object of interest, while "level" refers to different regions along the scale being utilized (Gibson, et al., 2000, 219). Thus, in the area of polycentric governance, the scale being examined is collective decision making, as opposed to an emphasis on individual political behavior, with levels typically being differentiated from one another geographically, with local, regional, national, and international levels all being potentially included in a pattern of polycentric organization.
The literature on international regime theory offers a useful approach to mapping these patterned relationships among institutional arenas, by differentiating between horizontal and vertical interactions. Arenas of authority interact with one another horizontally when the organizations in question are at the “same level of social organization”, that is, at the same scale, while vertical interplay entails interactions between organizations at multiple levels (Young, 2002, 23). Thus “scale” in this usage more closely approximates the concept of “level” as used in Gibson, et al. (2000). The term “linkage” refers to a point of interaction between two or more collective bodies, in this case, units of government (Heikkila, et al., 2011; Young, 2002). Thus a “cross-scale linkage” entails interactions between different collective bodies operating at different levels of social organization, as in a regime in which international organizations, national governments, and local governments all play a role in the production or provision of collective goods or services (Young, 2002). However, simply reducing vertical interplay as occurring between international, national, and local governments is analytically imprecise, as nation-states differ dramatically in terms of their geographic scale - some local jurisdictions may actually be geographically larger than some nation-states - and because various sub-state and supra-state regional organizations are increasingly becoming active in multi-scale/multi-level governance (Young, 2002, 23-24). “Horizontal linkages” meanwhile would entail interactions between like units, as in a municipal governance system in which local governments contracted with one another, and outside of additional interactions with government actors at higher levels, for provision of particular services. Furthermore, the nature of the interactions occurring between distinct government units can be differentiated on the basis of whether the actions occur due to “functional interdependencies” in which government actors are forced to address similar problems that link these actors in biophysical or socioeconomic terms, or due to the “politics of design and management”, in which government actors purposefully forge links with one another to pursue individual or collective goals (Young, 2002, 23).

Approaching institutional analysis from a polycentric and multi-level analytical perspective is important for a variety of reasons. The genesis of the concept of polycentricity for instance was in reaction to conventional wisdom that suggested that fragmented political authority in
metropolitan governance systems, consisting of several city and county governments alongside a variety of special districts and other government units, led to a decrease in efficiency in the provision of public goods and services (Ostrom, Tiebout, and Warren, 1961) and governance instead should be conducted within the context of a single overarching governmental unit (Friesema, 1966; Gulick, 1957; Anderson and Weidner, 1950). Instead, polycentric systems may actually improve efficiency, and have been shown to do so in diverse policy settings such as water utilities, metropolitan policing, and regulation of use of a variety of common-pool resources (see for instance Ostrom, 2010 for an overview). In the context of social-ecological systems, the key question of institutional design is thus matching institutions to the appropriate social and ecological level in order to manage the diverse decomposable governance systems affecting the overall system (V. Ostrom, 1999).

In terms of multi-scale analysis, a potential positive lies in the fact that insights might be lost by focusing analysis at only one level, and because policy outcomes may stem more from the interaction between multiple decision-making bodies than the actions of a single body. This should serve as a caution for ideological proponents of both decentralization and globalization and their normative preferences for policy actions being focused at a particular level, as actors at all levels and scales have critical roles to play in natural resource systems (Andersson and Ostrom, 2008). Furthermore, different levels of social organization may possess innate advantages that recommend particular functions to be performed at particular levels, with interactions between levels providing some measure of coordination. For instance, Young (2002) suggests that local-level organizations are functionally oriented towards day-to-day governance specific to different common pool resources, whereas global organizations are ill-suited to these kinds of functions, and are rather more suited towards addressing general collective action problems. Similarly, local governments tend to be built upon spontaneous governance, whereas global organizations are built through formal negotiation, distinct processes which are posited to have differential effects on the rule-making environments of local versus international organizations (Auer, 2000b).
In general, local governments may be more adept at actual implementation and enforcement of policies aimed at solving environmental problems at a local scale, whereas the advantage of the international level lies in its ability to coordinate action over situations in which local environmental problems that, while global, are driven by stressors identifiable at the local level (ibid). Although in the absence of coercive authority by international organizations, free riding and noncompliance by nation-states are common problems (ibid). An additional potential advantage of the global scale lies in the fact that there may be fewer actors who are participating in formal decision-making, at least in terms of the number of nation-states supposedly acting as unitary actors. However, such a critique must be tempered by the fact that decision-making processes at the global scale are subject to two-level games, implying two different negotiation environments for collective choice rule-making, one within the international context, and one within the domestic context where various stakeholders aim to shape the position that nation-state actors will take when it comes time for international negotiation (Putnam, 1988).

Additional complexity in the analysis of multi-scale/multi-level regimes lies in the fact that these comprise multiple action situations that are operating simultaneously. In order to grapple with this, McGinnis (2011) introduces the concept of “adjacent action situations” in which the outcomes generated in one action situation impact in some way the rules or structural attributes of additional “adjacent” action situations. For instance, a decision by an international body to set a lower than anticipated target for the aggregate harvest levels of a fishery resource may necessitate other bodies at lower levels of organization, such as national or state regulators, to adjust specific allocations to particular users in order to be in compliance with the rule set forth by the international body. Furthermore, adjacent action situations may occur within a single organization, as in a situation where a decision by an organizational secretariat to reach decisions by consensus forces other decision-making bodies within the organization to abandon their historical use of a simple majority decision rule. The implication of this work is that multi-level analysis needs to be cognizant of the multitude of action situations impacting a focal resource, and thus regimes should be conceptualized as “networks of adjacent action situations” that simultaneously and interactively impact a wide range of social and ecological outcomes.
Finally, two concepts stemming from multi-scale analysis, “scaling up” and “nestedness”, will be important in the chapters to follow. The challenge of “scaling up” refers to a variety of processes by which successful policies at lower levels are adopted at higher levels of social organization. Difficulties in these processes lie in whether policy processes and cultures at one level are similar enough to allow for successful adoption at other levels (Young, 1995, 28).

Challenges with scaling up include the increasing number of actors/stakeholders and resultant heterogeneity between actors’ preferences (Young, et al., 2006) and the decreasing likelihood of finding shared interests and understandings (Ostrom, et al., 1999, 281); the increased difficulty of organizing diverse interests at larger and larger scopes (Olson, 1965); the increased difficulty in comprehending the linkages between the resource and social sides of an SES, particularly at larger and more global scales (Ostrom, et al, 1999); the increased vulnerability of local institutions to being marginalized within broader scaled regimes (Berkes, 2002); and the potential for bringing in to the policy process certain actors, particularly international NGOs or private organizations, that may be at odds with particular local concerns (Young, 2004). Berkes (2002) outlines five methods for addressing this vulnerability of local institutions when scaling up: officially legitimizing local institutions, legally allowing for a nested system of institutions, empowering cultural and ideological diversity, building governance capacity at the local level, and creating an environment for institution building. As we shall see, the salmon regime in particular embodies each of these broad principles.

Berkes’ second principle, legally allowing for a nested system of institutions, highlights the importance of nestedness in multi-scale/multi-level analysis. The concept of nestedness refers to a large-scale system whereby a good mix of local, regional, national, and international institutions each address interrelated problems largely independently but with careful coordination with one another, since the establishment of rules at one level but not at others “will produce an incomplete system that may not endure over the long run” (Ostrom, 1990, 102). For instance, in a highly nested system, various actors with heterogenous values can be active in the appropriate venues where their primary interests are addressed, local knowledge will trickle up through a well-connected polycentric system while sidestepping the problem associated with negotiations
between a multitude of actors, and a rich array of cross-scale linkages will be provided for through a general commitment to adaptive management (Berkes 2002). The halibut and salmon regimes provide particular insights into how a rich array of actors can be incorporated into the overall regime managing these fisheries, and how multiple organizations are nested within each other to allow for a coordinated approach to responding to rich array of disturbances affecting fish resources.

2.3.3. Identification of Key Variables Using the IAD/SES Framework

A large amount of recent work has been conducted to identify, in a generic way, the key variables behind both social and ecological system components of SESs and the relevant linkages and feedback loops between them, and to do so in such a way as to develop a common lexicon for scholars coming from multiple disciplines. Building upon an analysis by Agrawal (2001) that identified 33 key variables posited as enabling conditions for sustainability, Ostrom (2009, 2007) begins to develop a nested framework for analyzing complex SESs. This “SES Framework” can best be seen as combining existing theoretical foundations in social-ecological systems thinking with the IAD Framework referenced earlier. As a framework it provides at the broadest level a bounded set of concepts and terms to be used in developing causal theories, which are in turn comprised of more specific “models” that depict the relationships between variables posited in a theoretical explanation as affecting an outcome of interest (for a detailed distinction between the concepts of frameworks, theories, and models, see Schlager, 2007).

At its core, the framework identifies eight subsystems, each of which is in turn “decomposable” into “second-tier” variables (ibid). At the heart of any SES lies an “Action Situation”, which in recent iterations of the SES Framework is seen as a single subsystem consisting of both the “Interactions” (“I”) and “Outcomes” (“O”) subsystems mentioned in earlier iterations of the framework (McGinnis and Ostrom, 2011). Many natural resource management problems can be classified as common-pool resource (CPR) problems. In these contexts, the goods in question are characterized by their subtractability, meaning that one user’s consumption of a good will impact what is available to other users, and by their excludability, meaning the great
difficulty and high costs of excluding potential actors from using the resource (Ostrom, 2010). These give rise to two overarching yet distinct collective action problems pertinent to CPRs: appropriation problems related to constraining the impulse of individuals to overexploit the resource to the detriment of social utility and the sustainability of the resource, and provision problems related to motivating individuals or groups to contribute to the infrastructure that helps to perpetuate the resource (Ostrom, et al., 1994). For the purpose of the SES Framework, the action situation consists of four generic action dynamics that speak to both appropriation and provision problems: actors may “appropriate” a resource within or without the boundaries of the relevant norms or rules for such appropriation, “invest” in the construction or maintenance of the natural or man-made infrastructure that allows for the provision of the resource, “monitor” the overall health and quality of the resource as well as monitor the appropriation and investment activities of other actors, and/or “sanction” violators of the established norms and rules (McGinnis and Ostrom, 2010, 4). These four generic actions lead to a multitude of “interactions” that in turn result in a wide range of potential social and ecological outcomes relevant to any particular SES.

Action situations are fundamentally impacted by four “core” subsystems referred to as “Governance Systems” (“GS”), “Actors” (“A”), “Resource Systems” (“RS”), and “Resource Units” (“RU”) (ibid). Resource Systems are the delineated natural resources systems such as a fishery, forest, water system, etc., which reproduce naturally and/or through human intervention, as in a fish hatchery. Resource Units are the specific “goods” generated by the resource system that are exploited by humans for economic or other purposes, such as a tree, fish, etc. Thus resource systems and resource units comprise the ecological side of any SES. Governance systems comprise part of the social side of an SES and consist of the system of rules, norms, and procedures governing use of an ecological resource and the rule-making organizations that develop and enforce these rules. Actors refer to individuals or collective entities that have an active stake in the natural resource in question.

These core subsystems are considered to comprise a logical whole, which can be exogenously affected by the final two subsystems, which are referenced as “Related
Ecosystems” (“ECO”) and “Related Social, Economic, and Political Systems” (“S”) (ibid). These exogenous influences may be felt at any point in the overall system, however it is posited that the “ECO” subsystem variables predominately operate on “RS” and “RU” subsystems while “S” variables predominately impact “GS” and “A” subsystem variables. Figure 2.1 represents the relationships between these core subsystems.

**Figure 2.1. SES Framework With Multiple First-Tier Components**

Each of these subsystems is further broken down in the SES Framework into the second tier variables referenced earlier, with each variable being given a shorthand code consisting of the relevant subsystem code and a number assigned to the second-tier variable. The second tier variables may also have multiple dimensions or decomposable features that warrant them being broken down into third or even fourth tier variables. Where relevant, in this dissertation third tier variables will be noted by a lower-case letter. Therefore, for instance, variable codes such as “RS2a” or “RS2b” would denote third tier variables pertaining to clarity of the resource system boundaries, in this case a differentiation between the ocean and freshwater systems as they pertain to salmon. Variable codes will frequently be used in tables and figures, however I will
predominately use the variable name in the text in order to avoid confusion. Furthermore, as demonstrated in the original formulation by Ostrom (2007), not all second-tier variables are equally relevant for all social-ecological systems given the specific resource and/or user characteristics of a particular SES. Therefore some second-tier variables, such as storage characteristics of the resource system, will not be explicitly evaluated in this paper. Table 2.1 outlines the list of relevant second-tier variables as conceived by the current iteration of the SES Framework. Rather than define each of them individually, the next section will illustrate these through an explicit examination of the specific salmon and halibut fisheries systems explored in the rest of this dissertation.

Table 2.1. Second-Tier Variables of an SES

<table>
<thead>
<tr>
<th>Resource Systems (RS)</th>
<th>Governance Systems (GS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS1: Sector (e.g., water, forests, pasture, fish, etc.)</td>
<td>GS1: Rule-making organizations (e.g. government, private, NGOs, etc.)</td>
</tr>
<tr>
<td>RS2: Clarity of system boundaries</td>
<td>GS2: Informal procedures</td>
</tr>
<tr>
<td>RS3: Size of resource system</td>
<td>GS3: Network structures</td>
</tr>
<tr>
<td>RS4: Human-constructed facilities</td>
<td>GS4: Legal and property rights systems</td>
</tr>
<tr>
<td>RS5: Productivity of the system</td>
<td>GS5: Rules-in-use</td>
</tr>
<tr>
<td>RS6: Equilibrium properties</td>
<td>GS6: Policy tools and instruments (e.g. monitoring processes, etc.)</td>
</tr>
<tr>
<td>RS7: Predictability of system dynamics</td>
<td></td>
</tr>
<tr>
<td>RS8: Storage characteristics</td>
<td></td>
</tr>
<tr>
<td>RS9: Location</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource Units (RU)</th>
<th>Actors (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU1: Resource unit mobility</td>
<td>A1: Number of actors</td>
</tr>
<tr>
<td>RU2: Growth or replacement rate</td>
<td>A2: Socioeconomic attributes of actors</td>
</tr>
<tr>
<td>RU3: Interaction among resource units</td>
<td>A3: History of use</td>
</tr>
<tr>
<td>RU4: Economic value of resource units</td>
<td>A4: Location</td>
</tr>
<tr>
<td>RU5: Size</td>
<td>A5: Leadership/entrepreneurship</td>
</tr>
<tr>
<td>RU6: Distinctive markings</td>
<td>A6: Norms/social capital</td>
</tr>
<tr>
<td>RU7: Spatial and temporal distribution</td>
<td>A7: Knowledge of SES/mental models</td>
</tr>
<tr>
<td>RU8: Location</td>
<td>A8: Importance of resource (dependence)</td>
</tr>
<tr>
<td>RU9: Technology used</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action Situations: Interactions (I) → Outcomes (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1: Harvesting levels</td>
</tr>
<tr>
<td>I2: Information sharing</td>
</tr>
<tr>
<td>I3: Deliberation processes</td>
</tr>
<tr>
<td>I4: Conflicts</td>
</tr>
<tr>
<td>I5: Investment activities</td>
</tr>
<tr>
<td>I6: Lobbying activities</td>
</tr>
<tr>
<td>I7: Self-organizing activities</td>
</tr>
<tr>
<td>I8: Networking activities</td>
</tr>
<tr>
<td>I9: Monitoring activities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Ecosystems (ECO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO1: Climate Patterns. ECO2: Pollution patterns. ECO3: Flows into and out of focal SES.</td>
</tr>
</tbody>
</table>

(Adapted from McGinnis and Ostrom, 2011)
2.4. Components of the Salmon SES

The social-ecological system of salmon management is incredibly complex, due to the unique lifecycle of the fish, a wide range of natural and anthropogenic impacts that threaten the species, and a complex jurisdictional matrix that involves local, state, tribal, regional, national, and international authorities with often overlapping interests. Salmon have a unique life cycle that makes the species susceptible to a variety of natural and anthropogenic disturbances. Because all salmon, with the exception of self-sustaining landlocked species that are generally considered freshwater subspecies, are anadromous, meaning they spend portions of their lives in both freshwater and saltwater, they face different threats to their survival in each environment. The orthodox approach to examining the variety of human impacts on salmon has been the categorization of the “4 H’s”: Harvest, Habitat, Hatcheries, and Hydropower (United States Fish and Wildlife Service).

Complexity is further caused by the fact that there are seven distinct species of salmon, Chinook/King (*Oncorhyncus tshawystscha*), Coho/Silver (*Oncorhyncus kisutch*), Sockeye/Red (*Oncorhyncus nerka*), Chum/Dog (*Oncorhyncus keta*), Pink/Humpie (*Oncorhyncus gorbuscha*), Steelhead (*Oncorhyncus mykiss*), and Cherry/Masu (*Oncorhyncus masou*), each of which has their own unique lifecycle, ecological niches, and migratory patterns. Six of these species are prevalent in the Eastern Pacific and fall under the regulatory regimes examined in this paper, with the Cherry salmon being the exception, as it is largely concentrated around Japan and thus will not be examined in this paper. Furthermore, each species of salmon has further sub-groupings called “ecologically significant units” (ESUs) that roughly correspond to the watershed the fish originate from. An ESU is legally defined as “any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature” (Lackey, 1996). Where relevant, I will decompose the second-tier variables pertaining to “resource units” into third-tier variables for each of the six different salmon species, due to the fact that interactions between the species pose a variety of management problems facing key stakeholders. Further decomposition into fourth-tier variables highlighting issues specific to an ESU of a particular species of salmon, such as Hood River Chum, is certainly possible and advantageous for more direct examination of
fisheries management at lower levels of social and ecological organization. However in the interest of at least relative parsimony I will eschew breaking things down to this level of detail for the current purposes of this paper.

It is also important to realize that no single institution or organization sets the rules and governs interactions between all relevant stakeholders. Due to the migratory patterns of Pacific salmon, multiple jurisdictions (local, state, and international) are involved in a wide variety of management decisions. Therefore, the section on the governance systems of the SES will examine a wide range of institutions and their interactions, with special emphasis on the Pacific Salmon Commission as the focal governance system for the purpose of this analysis. This is consistent with the recognition by other SES scholars that the framework may need to accommodate multiple instances of the first-tier components, rather than restricting analysis to a focal action situation involving only one overarching set of users involved in a single governance system, as well as a need to explicitly examine the interactions between adjacent action situations (McGinnis and Ostrom, 2011; McGinnis 2011).

2.4.1. Resource System

The focal resource system (RS1) is obviously fisheries, although it should be noted that a wide range of other resource systems and related ecosystems have significant effects on the propagation of salmon, as will be discussed in the section on related ecosystems below. Because salmon are anadromous, it is useful to disaggregate their location into two different environments: the ocean environment (RS9a) and their freshwater habitat (RS9b) in which adults spawn and juveniles rear before heading to the ocean to live out their adult lifecycle. One significant problem pertaining to salmon management is the clarity of system boundaries due to their anadromous lifecycles. Here it is useful to differentiate between system boundaries in the ocean and freshwater habitats. Clarity of system boundaries in the ocean environment (RS2a) is muddled due to the long-range migratory patterns and intermingling of the various fish species which occurs across a complex jurisdictional matrix including international waters, different nations’ exclusive economic zones, and in the case of the United States, different state
boundaries. In freshwater habitat (RS2b), clarity of system boundaries is greater due to the fact that the vast majority of fish within a cohort from a specific ESU return to their native streams to spawn. This enables, among other things, subnational and national political units being able to claim property rights over fish according to the "location of origin" principle, which will be discussed in a following section.

Measurement of the size of the resource system could be operationalized in a number of ways, including the geographic scale of salmon habitat and the overall biomass of all salmon species. In terms of geographic scale (RS3a), the size of the system is enormous, as salmon populate most of the North Pacific, although predominately located within a few hundred miles of shore, as well as their freshwater habitat. If one extends the boundaries of the freshwater system beyond in-stream habitat to encompass the entire watershed in order to account for the variety of land use issues that impact salmon productivity, the size of the system would constitute the extent of ocean habitat plus much of the Russian Far East, parts of China and the Koreas, virtually all of Japan, and major parts of the states and provinces of Alaska, British Columbia, California, Idaho, Oregon, and Washington. Figures 2.2.-2.8. provide maps detailing the ocean and freshwater ranges for all salmon, broken down by species (maps are reprinted courtesy of State of the Salmon, www.stateofthesalmon.org, and originally appeared in "Atlas of Pacific Salmon: The First Map-Based Status Assessment of Salmon in the North Pacific", by Xanthippe Augerot, 2005).
Original Distribution of Genus *Oncorhynchus* (Pacific Salmon)

(Source: Augerot, 2005)
Figure 2.4.: Distribution of Coho

Coho Distribution

(Source: Augerot, 2005)
Figure 2.5: Distribution of Sockeye

Sockeye Distribution

(Source: Augerot, 2005)
Figure 2.6: Distribution of Pink Salmon

Pink Distribution

(Source: Augerot, 2005)
Figure 2.7.: Distribution of Chum Salmon

Distribution of Chum (Oncorhynchus keta)

(Source: Augerot, 2005)
Figure 2.8.: Distribution of Steelhead

Steelhead Distribution

(Source: Augerot, 2005)
One way of yielding clarity to the enormous geographic scale of this system is through identifying multiple ecological scales of the overall resource, based on natural hydrological boundaries that help to determine the migratory patterns of salmon. These “salmon ecoregions” serve as a basis for delineating, in progressively greater detail, the specific attributes of different fish populations based upon their ocean and freshwater habitats and how these impact migratory patterns and specific management needs of different sub-populations. The approach presented by Augerot (2005) is to identify four progressively decomposed levels, starting with an initial differentiation between two “level one ecoregions”, the Pacific Ocean, which produces the vast majority of the overall salmon resource, and the Arctic Ocean, which primarily produces fairly limited quantities of Chum and Pink salmon. “Level two ecoregions” are differentiated from one another on the basis of patterns of ocean currents and bathymetric (concerning ocean depth characteristics) qualities, which identifies two different Arctic Ocean regions, and 16 regions in the Pacific Ocean. “Level three ecoregions” further break down these 18 regions into 39 distinct regions based upon “coastal discontinuities within each semi-enclosed sea or major circulation system, including fjords, straits, and areas with distinct production processes” (Augerot, 2005, 6). Finally, 66 distinct “level four ecoregions” are identified based primarily upon major watersheds of large geographic scale, or coastal systems fed by multiple stream systems that share general water quality patterns, ocean current patterns, and other qualities, such as the Puget Sound-Georgia Basin system. Each of these can be further broken down into specific species-based ESUs as previously mentioned, if the morphological and other qualities of a given stock of fish so warrants.

In terms of the overall biomass of the fishery resource (RS3b), data is problematic due to the sheer global scale of the resource and the uncertain science of stock assessment. Stock assessments essentially combine data on how productive fish stocks have been, using statistical extrapolations based on sampling numbers of juvenile fish migrating towards the ocean, comparing this to historical abundance, and calculating estimates on the percentage of the stock being harvested (Hilborn and Hilborn, 2012). In the case of salmon, the process of stock assessment is complicated by, among other things, the fact that data on juveniles are collected
in-stream on a stock-by-stock basis, but ocean predation and harvesting occurs in a commons, the open ocean, where multiple ESUs of a single species intermingle and adult mortality can occur through a wide variety of processes. Aggregating stock-by-stock data into an overall measure of stock size is thus susceptible to numerous potential measurement errors due to the wide range of disturbances that can occur while various stocks are intermingled in the ocean environment during salmon’s adult lifecycle, and/or on a stock-by-stock basis during the adult spawning cycle and during juvenile out-migration to the ocean.

Therefore I argue that catch data provides the hardest data by which to evaluate the overall size of the resource, although this is an imperfect proxy measure. If one had evidence that the fishery is being exploited at the maximum sustainable yield, and that yearly trend data was more or less steady, such an approach would enable one to estimate the overall biomass of the resource, assuming of course stable disturbance patterns and the absence of unforeseen shocks to the system. Because salmon face so many sources of both juvenile and adult mortality, and susceptibility to multiple disturbances, caution should therefore be employed when interpreting data on abundance based solely on catch data. With these cautions in mind, the data reported here are taken from ten year running averages for the period of 2001 to 2010 for the worldwide capture production of five species of salmon in the Eastern Pacific (steelhead are omitted due to lack of data). Chinook capture production (RU5a) has averaged 24,442 tons per year, Coho (RU5b) 144,455 tons, Sockeye (RU5c) 138,734 tons, Pink (RU5d) 380,929 tons, and Chum (RU5e) 314,428 tons (Food and Agriculture Organization, 2012b). Thus the average worldwide annual harvests for all species of salmon, excepting steelhead and Cherry, is approximately 1,002,988 tons per year.

Due to the sheer size of the system and the vast number of potential disturbances impacting salmon populations, it is difficult to measure with any certainty what the productivity of the system (RS5) is. One approach to doing so is to draw a comparison between the current aggregate size of fish runs returning to their native streams and the historical sizes of runs before European settlement (Lackey, et al., 2006). Gresh, et al. (2000) have estimated that Alaskan
stocks (RS5a) are, in aggregate, at 106.7% of their historical size and thus healthy. However the same study estimates that aggregate runs from British Columbia excluding the Columbia River (RS5b), which is a transboundary stream that reaches the ocean at the border between Washington and Oregon, are at 36.2% of their historical size, and those of California, Washington, Oregon, and Idaho combined (RS5c) only at 5.2% of their historical productivity. Furthermore the historically most productive system in the lower 48, the aforementioned Columbia River and its many tributaries, is producing at only 1.7% of its past production rate (ibid). Thus productivity could be characterized as highly variable, yet generally diminished outside of Alaska.

One attempt to mitigate this decreased productivity has been the proliferation of hatchery systems, a human constructed facility (RS4a) of particular relevance to the salmon SES. Hatcheries and their various impacts on salmon have long been recognized as one of the primary impacts on salmon, although the overall effects are hard to assess. On the positive side of the ledger, hatcheries are a stop-gap measure for perpetuating salmon runs that would have otherwise likely died out as a consequence of dam construction and other impacts, and hatcheries can produce large numbers of young juveniles, or fry, relatively easily and at low cost, although marking of hatchery fish may significantly increase labor costs (Lackey, et al., 2006, 34). However there is a growing chorus of those who believe that the negatives outweigh these positives. These negatives include genetic deterioration of hatchery fish which make them susceptible to diseases that they then pass on to wild fish, alteration of genetic diversity through instances of interbreeding with wild fish, competition for space and food with wild fish, and the fact that they mask the decline of wild stocks in the minds of the public, who witness plenty of returning hatchery fish and sense that the "salmon problem" is overblown (ibid). Furthermore, in the ocean environment, hatchery fish and wild fish co-mingle, resulting in the simultaneous harvesting of both in what is known as a mixed stock fishery (Lackey, et al., 2006, 35). While it is possible to differentiate between wild and hatchery produced fish (see section on resource units below), because of intermingling in the ocean environment it is nearly impossible to conduct a fishery that does not result in mortality of wild fish. This is due to numerous factors, including the
fact that certain fishing methods such as gill netting result in the deaths of most captured salmon, making return of identified wild fish impossible; the increased difficulty in monitoring illegal fishing when some measure of legal fishing is permitted, potentially easing the ability of illegal fishers to conduct harvests; noncompliance by legal fishermen in returning wild fish, as they may claim that any wild fish were already dead and thus not returnable to the ocean; and the fact that release of captured fish will always entail some measure of subsequent mortality (ibid).

As suggested in the previous paragraph, another class of human-constructed facilities, hydroelectric and flood control dams (RS4b), have major impacts on the overall resource system. The impacts of dam construction are manifold. For instance, the most noticeable impact is that dams impede the passage by adult spawners to upper reaches of a watershed, which can be somewhat mitigated by the construction of “fish ladders”, although these have not been installed in all facilities, as in the case of the Columbia River where the Grand Coulee Dam has permanently cut off access to the upper one third of the river that historically produced fish (Lackey, et al., 2006, 33). Additionally, hydroelectric dams are the source of significant mortality of juvenile fish out-migrating to the ocean, due to the fact that reservoir water becomes slow moving, altering the water temperature and concentrations of dissolved gas, leading to confusion and altered behavioral patterns of juveniles that contribute to them being sucked into the dam turbines (ibid). Furthermore, sedimentation in reservoirs degrades major sections of river that were historically productive spawning habitat (ibid).

Finally, the predictability of system dynamics (RS7) and system equilibrium properties (RS6) for the salmon SES are very difficult to assess. Predictability is quite low due to the sheer number of impacts on salmon mortality, and despite vast improvements in data, fisheries managers can still be confronted with sharp divergences between predicted and actual returning run sizes, as illustrated by the surprising, and still unexplained, shortfall of the 2009 Fraser River Sockeye run (English, et al., 2011). Similarly, equilibrium of system properties is difficult to evaluate. While it may be tempting to suggest that equilibrium is suggested by sustained numbers of returning fish consistent with historical run figures, as mentioned previously, and/or
consistency between predicted and actual numbers of returning fish, these approaches can be misleading. For instance, these methods of measurement obscure variations in the size of runs for particular ESUs, thus masking the potential destruction of particular ESUs which could be overlooked due to stability in the aggregate numbers of salmon. Nor do they account for the specific wild versus hatchery produced composition of stocks. Thus I measure the predictability of the salmon resource system as “very low”, and the equilibrium properties as “largely unknown”.

2.4.2. Resource Units

Each species of salmon has a unique lifecycle that contributes to the complexity of natural resource management. Patterns in the juvenile lifecycles of the different species vary considerably, leading to juvenile fish occupying different freshwater ecological niches and necessitating different approaches to freshwater habitat management to minimize juvenile mortality. In terms of adult lifecycles, species vary considerably in their migratory patterns, growth rates, and other factors which necessitate different management approaches for each species.

Each species of fish have their own distinctive markings that fortunately make species identification easy even to untrained eyes. The differences between species are especially pronounced during the spawning phase, with each species developing unique and unmistakable physical characteristics, with males and females easily differentiated from one another due to the males developing arched or humped backs and a pronounced hook, called a kype, in their upper jaws/snouts (Washington Department of Fish and Wildlife, 1998). Differences are less pronounced during the adult ocean lifecycle, but it is here where distinct markings are especially useful in order to enable better data collection for management decisions, to enable targeting of specific species, and to minimize bycatch. Even during the ocean lifecycle, it is easy to differentiate between male and female fish due to the male’s generally larger size and more elongated upper jaw/snout.
Chinook (RU6a) are generally easily identified by their size, although size alone cannot be used to identify Chinook due to the common occurrence of smaller early returning males known as “jacks” (Augerot, 2005). Beyond size, Chinook are easily identifiable by the prevalence of large black spots on their backs and all over their tails and their black jawlines (ibid). Coho (RU6b) are the most similar in appearance to Chinook, but generally have fewer spots, show spots only on the top part of their tails, and have white jaws (ibid). Sockeye (RU6c) are noted for their more slender physique and spotless, silver bodies (ibid). Pink salmon (RU6d) are the smallest of the salmon species and are easily identified by the pronounced humps they develop even before entering freshwater to spawn, and the large irregular spots on their backs and tails. Chum (RU6e) are readily identified by the relative lack of spots and their pronounced teeth, which are the source of their secondary name “Dog salmon” (ibid). Steelhead (RU6f) meanwhile are unique in that they are technically oceangoing rainbow trout emulating the general lifecycles of salmon and are thus grouped in with them. Steelhead are a bit more distinct and identifiable by the proliferation of spots on the backs and tails, the faint pink stripe running down their sides which is the source of the term “rainbow trout”, and the squared off shape of their tails (ibid). Finally, juveniles also have distinct markings that can be used to differentiate young fish that are rearing in freshwater habitat, which enables sampling and identification that can be used for stock assessment.

In order to distinguish between wild and hatchery produced fish, a dominant, but not universal, industry practice is to clip the adipose fin, a small fleshy dorsal fin near the tail of the fish, of all hatchery produced fingerlings before they are released to begin their journey to the ocean. Thus most hatchery fish, regardless of species, have distinctive markings (RU6g) that enable easy identification and differentiation from fish reproducing in the wild.

The various species are furthermore differentiated by their average sizes. Chinook (RU5a) demonstrate the most variability due to variations in their lifecycles, spending anywhere from two to six years in the ocean, thus leading to significant differences in their sizes, with averages ranging from ten to twenty-two pounds (Augerot, 2005), but with some especially long
lived specimens growing up to 135 pounds (Washington Department of Fish and Wildlife, 1998). Coho (RU5b) average between six to twelve pounds, with an upward size range of 31 pounds (ibid). Sockeye salmon (RU5c) are a bit smaller, averaging between five and eight pounds and ranging up to fifteen pounds (ibid). Pink salmon (RU5d) are the smallest species in the Eastern Pacific (Cherry salmon in Japan are of a similar size range), averaging between three and five pounds with an upward limit of around twelve pounds (ibid). Chum salmon are the second largest species (RU5e) next to Chinook, averaging between ten and fifteen pounds and commonly growing past thirty pounds (ibid). Finally, steelhead, due to the high degrees of variability in the lifecycles of individual fish, demonstrate a wide range of sizes, with some citing average weights of five to nineteen pounds (Augerot, 2005) and others citing averages between eight and eleven pounds with an upward range of around forty pounds (Washington Department of Fish and Wildlife, 1998).

One of the most significant factors which differentiate the species from one another is their mobility (RU1). The United Nations Convention on the Law of the Sea (UNCLOS) differentiates between “highly migratory species”, “straddling stocks”, and “transboundary stocks”. The UN does not provide a strict definition of highly migratory species, but provides a list of species, as agreed upon by member states, that qualify as highly migratory in Annex One. Generally speaking, these fish range over a wide area, and are frequently located in international waters, meaning the area of open ocean outside of any country’s exclusive economic zone (EEZ). Straddling stocks are fish species that frequently migrate across the boundaries of the EEZ of two or more states and the open ocean outside of any country’s EEZ, in which case UNCLOS holds that “the respective coastal state and the states that fish in the adjacent high seas area shall seek to agree on the necessary conservation measures, either directly or by means of the appropriate organizations” (Vicuña, 2001). Transboundary stocks are those that migrate across the EEZ’s of two or more nations but which do not journey into the open ocean. While all species of salmon are very migratory, they are not included in the Annex One list of highly migratory species, and are thus treated primarily as “straddling stocks”, although certain species are relatively more prone than others to range into the open ocean.
The distribution of salmon in their ocean environment is highly variable and dependent upon the particular species as well as its point of origin. However, a great deal of uncertainty still exists, a situation trying to be remedied by the use of acoustic tagging markers in a program known as the Pacific Ocean Shelf Tracking Project (POST). While variation within a single species can be very great, some overall patterns can nonetheless be discerned. Chinook salmon are among the most migratory species of salmon, and range further out into the open ocean than other species, frequently traveling over several thousand kilometers (Payne, et al., 2010). Thus the mobility of Chinook (RU1a) is incredibly high. The mobility of Coho (RU1b) meanwhile is much more constrained, with adult fish making the shortest feeding migrations and predominately congregating near shore in the Gulf of Alaska and Strait of Georgia (Payne, et al., 2010; Augerot, 2005). Sockeye salmon are comparatively much more mobile (RU1c) than Coho, with fish from Washington, Oregon, and British Columbia drifting in a counter-clockwise current known as the Alaska Gyre in the Gulf of Alaska and sometimes ranging well out past the EEZs of Canada and the United States, while fish from Alaska congregate in both the Gulf of Alaska and the Bering Sea (Alaska Department of Fish and Game, 2012). Pink salmon (RU1d), as the smallest species of salmon, are also the least widely ranged, frequently only migrating around 150 miles from the mouths of their native streams (US Fish and Wildlife Service). Thus pink salmon may be considered primarily a transboundary, rather than straddling, stock. Chum salmon are the most mobile (RU1e) of all species undergoing the longest migrations of any salmon (Augerot, 2005). Finally, steelhead (RU1f) are also highly migratory, but do not form large ocean population cohorts/schools and maintain highly varied adult lifecycles that make it hard to determine overall mobility patterns (Payne, et al., 2010; Augerot, 2005). However it is known that they can migrate extremely long distances with remarkable speed, and are thus potentially amongst the most mobile species of salmon (Payne, et al., 2010).

The economic value (RU4) of each species also varies considerably, although some market variability exists, such as the case with chum, which is generally considered the lowest quality fish in American and Canadian markets, but which commands greater prices in Russian and Japanese fish markets due to its highly prized caviar, which is preferred over the caviar of
other salmon species (Augerot, 2005). Generally speaking, however, the hierarchy of economic value tends to be highest for Chinook, followed by Sockeye, Coho, Chum, and Pink, in descending order. Steelhead are no longer harvested commercially and are primarily harvested through a sport fishery, thus their economic value is largely determined by the price sport fishermen are willing to pay to (Augerot, 2005). By means of illustration, the total landings, by American fishermen only, between 2000 and 2010 for Chinook (RU4a) amounted to a total of 201,619,474 pounds, at an ex-vessel value of $395,538,169 for an average value of $1.96 per pound, although the price per pound steadily increased over the decade, rising from $1.63/pound in 2000 to a value of $2.86/pound in 2010, making Chinook by far the most valuable species by weight (National Marine Fisheries Service Fisheries Statistics Division, 2012). American Sockeye (RU4c) harvests between 2000 and 2010 meanwhile totaled 2.645 billion pounds, commanding an ex-vessel total value of $1,809,038,469 for an average value of $.73/pound (ibid), making it the most lucrative salmon fishery in terms of total value. Total harvest values for the decade for Coho (RU4b) amounted to 390,983,929 pounds with a total value of $291,306,904, for an average value of $.75/pound (ibid). Pink salmon (RU4d) meanwhile totaled 3.578 billion pounds for the decade, with a total value of $556,598,364, for an average value of $.16/pound (ibid), making it the largest fishery in terms of harvested weight. Finally, Chum (RU4e) harvests totaled 1.28 billion pounds with a net value of $426,069,473 for the decade, for an average value of $.33/pound (ibid). Generally speaking, these values are reflective of the different markets surrounding each fish, with the vast majority of Chinook, Sockeye, and Coho being consumed in fresh, frozen, or smoked fillet form, the majority of Chum being canned or dried and its roe being processed separately, and Pink being almost exclusively canned (Augerot, 2005). Furthermore, the economic value for certain sport fisheries targeting particular species can be significantly higher, albeit highly variable, with Chinook, Coho, and Steelhead enjoying a higher status amongst sport fishermen, with steelhead constituting a significant freshwater recreational fishery due to the fact that they feed while in freshwater unlike other salmon species (Augerot, 2005). Also, intra-species price variability can be significant, as certain stocks are considered to be of particularly high quality, and in recent years have been able to command much higher market
prices than the average species price, as illustrated by the marketing success of Copper River salmon from Alaska (Babcock and Weninger, 2004).

Interactions between resource units are a major source of difficulty in harvest management and can contribute to the susceptibility of certain stocks to particular types of disturbances. At least three broad types of interactions are of note. First, interactions between hatchery produced and wild fish (RU3a) complicate harvest management and can have major implications for commercial harvesters. For instance due to the listing of several ESUs of Chinook, Coho, Sockeye, and Chum fisheries in the lower 48 as endangered or threatened under the Endangered Species Act, wild fish are highly valued and are not supposed to be targeted for harvest. This differentially impacts the different types of commercial harvesters based upon the type of gear they use to catch fish, an issue which will be taken up in the section on “actors” below.

Secondly, despite being of the same species, stocks originating in different streams have developed unique genetic characteristics and are considered “ecologically significant units”, which are typically delineated from one another based on the watershed or cluster of watersheds where a given stock will spawn (Lackey, et al., 2006). During the adult lifecycle, ESUs of the same species frequently intermingle in the ocean environment, thus it is nearly impossible to differentiate between, for instance, a critically endangered Chinook originating from the lower 48 and a Chinook from a more robust Alaskan stock, when caught together in the open ocean. Thus inter-ESU mingling (RU3b) can be a major complication for management decisions designed to protect fish from less abundant ESUs. Furthermore, there is a generalized tendency, known as “straying” whereby a small percentage of each ESU will spawn in a stream different from the one in which they were born, thus complicating efforts to protect any given ESU (Quinn, 1997).

Finally, interspecies mingling (RU3c) can be a major issue in terms of targeting particular fish for harvest. This is less of an issue in the open ocean environment where schools of fish from different salmon species do not frequently overlap, but can be a major issue for near-shore fisheries targeting fish as they begin their migrations back to freshwater. For instance, due to the
temporal overlap between Pink salmon and Spring Chinook returning to streams in Washington State and British Columbia, near-shore fisheries targeting Pink salmon may frequently intercept endangered Chinook salmon, a particular problem during the odd-numbered years in which Pink salmon return to these streams (interview).

These patterns of interactions are dictated by the spatial and temporal distribution of the specific species (RU7). This is complicated further by the fact that some species also demonstrate significant intra-species variation. This is particularly true of Chinook (RU7a) who primarily spawn in the mainstem of large rivers due to their size, which allows them to spawn in coarser gravel (Augerot, 2005; Committee on Protection and Management of Pacific Northwest Anadromous Salmonids (CPMPNAS), 1996). There are two broad types of Chinook with distinct lifestyles, “stream-type” Chinook which rear as juveniles for up to two winters in the larger channels of their native freshwater streams before heading to the ocean, and “ocean-type” Chinook that leave freshwater within weeks and spend between 4 and 6 years in the ocean before returning to spawn (ibid). Furthermore, Chinook spawn at two different times during the year in different cohorts, a spring/summer run that enters streams starting in late March, depending on the specific stream and its geographic location, and fall runs that typically use smaller and shorter coastal streams and which return between August and October (Washington Department of Fish and Wildlife, 1998). A phenomenon mentioned earlier that is particularly relevant for Chinook is the common occurrence of younger two to three year old males known as “jacks” returning early to spawn with fish from older generational cohorts (Pacific States Marine Fisheries Commission, 1996). Lastly, Chinook in the open ocean do not frequently school in large groups, thus the predictability of their ocean movements is very low. Therefore, Chinook demonstrate an enormous degree of variation in their spatial and temporal distributions.

In contrast, Coho (RU7b) have a much more simplified and regularized life history, as these fish spawn almost exclusively in the upper reaches of small streams and smaller tributaries of larger rivers with middle-velocity water and small to medium-sized gravels, thereby occupying a different freshwater ecological niche than Chinook (Augerot, 2005; Washington Department of
Fish and Wildlife, 1998). Adult spawners typically enter streams in late summer and early fall, being among the last species to migrate in most rivers. Juveniles emerge in spring and migrate out to the ocean during their second spring, spending about 18 months in freshwater after the adults have spawned, and then spending two to three years at sea (ibid). As mentioned previously, they do not frequently range into the open ocean, preferring to stay in near-shore areas, although similar to Chinook they frequently do not congregate together in the ocean environment unlike schooling species such as Sockeye, Chum, and Pink (Augerot, 2005). Therefore the spatial and temporal distribution of Coho is much more predictable than many other salmon species.

Sockeye salmon’s temporal and spatial distribution (RU7c) is particularly unique among salmon species due to the fact that juvenile Sockeye rear from several weeks up to three years near the bottom of a lake in order to avoid predators, therefore Sockeye are present only in river systems that include a lake downstream from tributaries in which the adults spawn (ibid). Some sockeye do not migrate to the ocean at all, remaining in freshwater for their full lifecycle, with these fish referred to as Kokanee salmon, particularly in river systems where migration to the ocean has been cut off either naturally, as through glaciation, or through man-made obstacles such as dams without fish passage (ibid). In terms of those fish that do return from the ocean, most fish spend between one and three years in the ocean, congregating in large school and drifting around the Gulf of Alaska before entering river systems during the summer. Therefore intra-species temporal distribution for Sockeye salmon is highly varied, although somewhat more regularized in terms of their spatial distributions.

The spatial and temporal distribution of Pink salmon (RU7d) is the most predictable of all salmon species, with Pink salmon spending two years at sea and returning to spawn in the fall in strict generational cohorts (Augerot, 2005). Thus, pink salmon runs are absent from rivers every other year, with runs outside of Alaska only occurring during odd-numbered years (Washington Department of Fish and Wildlife, 1998). These fish do not migrate very long distances in freshwater, preferring to spawn in mainstem rivers and some tributaries relatively close to the
ocean, as juveniles migrate to the ocean almost immediately upon hatching (ibid). As previously mentioned, these fish do not range very far from their native streams, preferring to remain close to shore in groups, and are thus primarily considered a transboundary fishery stock.

Similar to Pink salmon, juvenile Chum salmon (RU7e) migrate to an estuarine zone almost immediately upon hatching, and adults spawn close to the ocean in smaller coastal streams than those used by Pinks, thereby frequently migrating to the same rivers as Coho salmon but occupying different ecological zones of the river (ibid). Adults live between three and five years, and return at various times of the year, with both summer runs (especially in northern rivers) and late fall runs (Augerot, 2005). They are therefore fairly predictable in terms of their spatial and temporal distributions, although not as predictable as Pink salmon due to adult Chum returning at different levels of maturity. As previously discussed, Chum are the most highly mobile species of salmon, thus constituting a straddling stock that ranges well into the open ocean, choosing to congregate in schools unlike more solitary species such as Chinook.

Finally, Steelhead are perhaps the most unpredictable species of salmon in terms of their temporal and spatial distributions due to the fact that, as ocean-going rainbow trout, they are distinct from other forms of salmon, with a greater capacity to move back and forth between salt and freshwater systems. Another major distinction is that steelhead can by iteroparous, meaning they have the capability to spawn more than once, with the consequence that steelhead have a longer lifespan, sometimes living more than seven years (Augerot, 2005). Steelhead spawn in the spring, but migrate in several different runs throughout the year, lingering and feeding in freshwater habitats unlike other species of salmon (Washington Department of Fish and Wildlife, 1998). Much of the juvenile lifecycle is a mystery, as many young never migrate to the ocean, choosing to live out their lifecycle in freshwater, thereby living simply as rainbow trout. Those that do migrate to the ocean may do so after anywhere from one to four years of living in their freshwater streams (ibid). As a consequence of the high degree of variation in individual lifecycles, steelhead in the ocean environment are dispersed and mostly solitary.
Table 2.2 summarizes the various spatial and temporal distributions of each species of salmon:

<table>
<thead>
<tr>
<th>Species</th>
<th>Ocean Distribution</th>
<th>Adult Spawning Migration</th>
<th>Time Spent at Sea</th>
<th>Where Adults Spawn</th>
<th>Juvenile Out-Migration</th>
<th>Location of Juvenile Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook</td>
<td>Straddling stock</td>
<td>Two cohorts - spring vs. late fall</td>
<td>2-6 years</td>
<td>Primarily mainstem rivers</td>
<td>Stream-type: 1-2 years; Ocean-type: within weeks</td>
<td>Stream-type: mainstem rivers; Ocean-type: ocean/estuary</td>
</tr>
<tr>
<td>Coho</td>
<td>Near-shore</td>
<td>Early fall</td>
<td>2-4 years</td>
<td>Smaller coastal streams and tributaries</td>
<td>Around 18 months</td>
<td>Smaller side-channels</td>
</tr>
<tr>
<td>Sockeye</td>
<td>Straddling stock</td>
<td>Summer</td>
<td>1-4 years</td>
<td>Tributaries feeding into a lake</td>
<td>Between several weeks and up to 3 years (some do not migrate)</td>
<td>Lake</td>
</tr>
<tr>
<td>Pink</td>
<td>Near-shore</td>
<td>Fall</td>
<td>2 years</td>
<td>Mainstem and some tributaries; close to ocean</td>
<td>Almost immediately</td>
<td>Estuary</td>
</tr>
<tr>
<td>Chum</td>
<td>Straddling stock</td>
<td>Two cohorts - summer and late fall</td>
<td>3-5 years</td>
<td>Smaller coastal streams; some larger rivers close to ocean</td>
<td>Almost immediately</td>
<td>Estuary</td>
</tr>
<tr>
<td>Steelhead</td>
<td>Mix - although mostly straddling stock</td>
<td>Two cohorts - summer and winter (spawn in spring)</td>
<td>4-7 years</td>
<td>Every section of the river, including large mainstems</td>
<td>Highly variable - many do not migrate at all</td>
<td>Highly variable</td>
</tr>
</tbody>
</table>

2.4.3. Actors

There are a multitude of actors involved in the appropriation and provision of salmon as a natural resource. Thus the number of actors (A1) active in the salmon SES can be characterized as extraordinarily high. In terms of appropriation, one can distinguish between commercial fishermen, whose motivation for harvesting fish is predominately profit-driven, sport fishermen, whose motivation is predominately recreational, sport fishing guides, who have an additional profit motivation in addition to the motivations of their client fishermen, and indigenous groups, whose relationship to the fishery resource is complex, combining spiritual, recreational, and in
some instances financial motivations for exploiting the resource. Additionally, because of the iconic status that salmon enjoy amongst the various populations inhabiting areas in which they spawn, wide-spread support for salmon conservation amongst sizable portions of the general public who value salmon merely for their existence value suggests a sizable contingent of political support for the provision of salmon “as a symbol of the Pacific Northwest” (CPMPNAS, 1996). In short, there are an extraordinary number of potential stakeholders/actors involved in salmon policy.

These groups are furthermore differentiated by their socioeconomic attributes.Parsed in terms employed by the value orientation of Harold Lasswell, commercial fishermen (A2a) may be characterized as preoccupied with a “wealth” orientation, and are currently operating in a milieu in which decreasing prices have made fishing less and less profitable, leading many to take advantage of fishing license buy-back programs (CPMPNAS, 1996). The commercial and recreational fishing sectors have long had major disputes between them, with the recreational sector frequently complaining that too many fish are taken in the ocean-based commercial fisheries (interview, PSC Commissioner, 1/11/10). The economic dependence on the resource of commercial fishermen (A8a), especially in smaller communities that are fundamentally dependent on fishing, is therefore quite high.

As targeted harvest numbers have decreased in order to increase the escapement (i.e. number of fish returning to freshwater in order to potentially spawn) of fish, the relative influence, and potential profitability, of recreational fisheries has increased (citation). Sports fishermen (A2b) may be characterized by value orientation focused on “skill” and “well-being”, while the expanding industry of guide services (A2c) have the additional “wealth” motivation due to the potential prices fishermen are willing to pay for such services. However, it is very difficult to quantify the value of recreational fisheries, with wildly varying figures based upon the method used to estimate (e.g. the contingent valuation method versus the total cost method) and the types of costs that should be included in the analysis (see for instance Layman, et al., 1996).
Finally, the socioeconomic attributes of indigenous groups (A2d) vary considerably, with some groups having more of a “wealth” interest in the resource than others, which is a major distinction between Canadian and American indigenous groups, but with almost all indigenous groups valuing the salmon for a variety of cultural values including “rectitude” or spiritual connections, social purposes (aka “affection”), as well as individual “skill”. Therefore indigenous groups can be distinguished from other groups by having a significant cultural dependence on the resource (A8b), as well as a variable level of economic dependence (A8a) on the resource based upon whether these groups have specific harvest allocations to the resource as well as the right to commercially sell any harvested fish.

The history of use by each of these groups is also a source of contention between them. Many indigenous groups in particular have a long history of use (A3a), with many of them basing significant portions of the culture around the harvesting, processing, and trading of salmon. Therefore many indigenous groups claim primary fishing rights over salmon due to their use of the resource “since time immemorial”. History of indigenous use is a particularly thorny issue in Canada, where courts deciding questions pertaining to the tribal rights to fish are currently evolving legal norms surrounding the admissibility of oral histories as evidence of the specific nature of historical indigenous resource use (Rich and Kirchner, 2009), and with specific rights to commercial harvests being denied by the Canadian Supreme Court based on the findings that past use was not commercial in nature (Fitzpatrick, 2011). It is widely held that past exploitation by indigenous groups occurred at a sustainable level far below the maximum sustained yield, although in certain local contexts aboriginal fishing may have led to population declines, although prior to the 16th Century “a rough equilibrium existed between the size of the salmon catch and the region’s human population because the number of salmon that could be consumed, sold, or traded was constrained” by low population density and technological limitations pertaining to storage, transportation, and trade (Lackey, et al., 2006). However, upon European settlement usage rates quickly became unsustainable, especially with the advent of industrial canning operations in 1864 which quickly and in some cases irrecoverably depleting salmon stocks, particularly in California and in the Columbia River basin (Augerot, 2005). Decreased abundance
and attempts to manage the harvest of the resource at the maximum sustainable yield, especially in the lower 48, has characterized the history of use post-European settlement (A3b) ever since. The specific geographic location where appropriation of the resource takes places is also a major dimension of conflict between actors. Generally speaking, ocean-based fisheries (A4a) have first access to harvesting salmon species such as Chinook, Sockeye, and Chum that are more migratory and thus more widely-ranged. In these fisheries, even in those that are conducted within the 3-200 mile EEZs of a particular nation, it is virtually impossible to discriminate between fish based on the nation-of-origin principle. In near-shore fisheries (A4b) however it is frequently possible to discern that fishermen from one jurisdiction (e.g. Canada) are harvesting a share of fish that are destined to return to streams within another jurisdiction (e.g. Alaska or Washington), based upon what is known of common migration patterns and comparing the aggregate abundance of a particular species to the relative productivities of all streams producing a given species, a problem that is commonly referred to as the “interceptions issue” (Buck, 2007, 5).

Once the fish enter their freshwater stream of origin, clearer property rights to harvesting can be established, except of course in the case of several transboundary rivers that originate in Canada and cross into the United States (Buck, 2007, 15). In this context, determining national shares of the overall allocation of salmon according to the nation-of-origin principle becomes much more difficult. Furthermore, in-stream recreational, small-scale commercial, and aboriginal harvests of salmon in their freshwater habitats experience numerous conflicts based upon the location of specific stakeholders in a specific watershed. In general, shorter coastal streams that usually produce species such as Coho, Pink, and Chum experience much fewer conflicts than much longer mainstem river systems that typically produce higher-value species such as Chinook and Sockeye. Because of this, it is useful to distinguish between actors that are present at three different zones (lower river (A4c), middle river (A4d), and upper river (A4e)). The primary issue here is that conflicts frequently arise between actors in these three locations and the ocean-based (A4a) and near-shore (A4b) fisheries, with stakeholders in river locations complaining that
ocean and near-shore based harvesting exploit more than their fair share of the resource. Similar conflicts also emerge between these three river-based groups, with upper river groups frequently complaining that by the time certain species reach the terminus of their migration, too many have already been taken to ensure optimal escapement and recruitment, resulting in upper river fisheries being shut down without the chance for these various groups to engage in fishing (CPMPNAS, 1996). This particularly relevant for especially long rivers such as the Fraser River in Canada, as well as the Okanogan River, a transboundary tributary of the Columbia River that crosses between British Columbia and Washington State and which is not under the regulatory domain of the PSC, as will be discussed in subsequent chapters (interview, PSC Panel Member, 2/9/10; interview, PSC Commissioner, 2/10/10).

These problems can thus be collectively considered as a set of different yet interrelated interceptions issues, which is the predominant appropriation issue concerning institutions such as the PSC. The following summary (Buck, 2007; Jensen, 1986) of the primary interceptions issues facing the PSC is by no means an exhaustive list, but highlights the most contentious issues facing the two countries:

1. Chinook salmon which spawn in rivers in Oregon, Washington, and Idaho, migrate to and spend the majority of their adult lives in the Gulf of Alaska. During both in and out migration, they are subject to interception by both Canadian and, especially, Alaskan fishermen. This is particularly important for runs of Chinook from the Columbia and Snake rivers which are listed as endangered under the Endangered Species Act.

2. Coho and Chum salmon from largely coastal streams in Oregon and Washington are intercepted by Canadian fishermen off of the British Columbia mainland and the west coast of Vancouver Island, and, to a lesser extent, by Alaskan fishermen in Southeast Alaska.

3. Sockeye, Pink, and Chum salmon from the Fraser River in British Columbia are intercepted by Washington State fishermen in Puget Sound and the Strait of Juan de Fuca, as well as Alaskan fishermen, primarily in Southeast Alaska.

4. All species of salmon produced in more northerly British Columbian river systems are intercepted by Alaskan fishermen, primarily in Southeast Alaska, but in the case of Chinook stocks, also further North in the Gulf of Alaska.

5. The three “transboundary” river systems (Alsek, Stikine, and Taku) which originate in British Columbia but pass through the Alaskan panhandle. Most spawning habitat is located within Canada, but adult fish migrating back to these rivers are subject to both open-ocean and in-river interceptions by Alaskan fishermen.
6. Sockeye salmon spawning in Canadian tributaries of the Columbia River, especially the Okanogan River, are subject to in-river and open-ocean interception by Oregon and, especially, Washington State fishermen.

Given these interception patterns, some key generalizations can be made. First, salmon originating from Alaskan rivers are primarily harvested by Alaskan fishermen and not subject to major interceptions from the other parties. Salmon from Canadian sources are intercepted by both Alaskan and Washingtonian fishermen, the former intercepting a wide variety of stocks and the latter intercepting portions of the especially valuable and productive Fraser River stocks. Especially valuable Chinook and Coho stocks from Oregon and Washington are intercepted by both Canadian and Alaskan fishermen, with Chinook being particularly and iteratively prone to several interceptions due to its longer lifecycle compared to other species. The overall pattern is thus that Alaska does not lose much in the way of interceptions of fish from their streams, and thus face little incentive for cooperation, while Canadian, Oregonian, and Washingtonian fishermen are subject to significant interceptions from Alaska, as well as sometimes significant interceptions between each other depending on the particular run of fish.

The technology used for both appropriation (A9a) and monitoring (A9b) of the resource also varies by actor, with sometimes far reaching consequences on management decisions. In terms of appropriation technologies, a broad distinction exists between fishing methods in the ocean environment as opposed to freshwater environments. In the past, high seas fisheries were prosecuted through the use of drift nets, which were large nets, sometimes up to 65 kilometers in length, that were left out to indiscriminately ensnare everything that came into contact with them (Augerot, 2005). Since 1992 there has been a moratorium on their use, although the practice continues in the form of illegal pirate fishing in the high seas (ibid). Current practices of ocean harvesting include five broad methods. Gillnetting is similar to driftnets, albeit on a smaller, more regulated scale, in which a wall of netting held up by floats with the bottom weighted down is placed in the path of schooling fish in order to ensnare them. These are particularly used in near shore fisheries and are closely monitored and regulated. Purse-seine fishing involves the use of a net that encircles an area of ocean, slowly closes off at the bottom, and then is raised into a boat, resulting in less indiscriminate bycatch due to lower mortality and the ability to return non-
targeted species (ibid). Long-line trolling is a method used to target non-schooling species such as Chinook and Coho, and involves laying out several long lines with intermittently placed baited hooks. Single hook-and-line trolling is the hallmark of ocean-based recreational fishing, as the method most recognizable to members of the general public who have experienced fishing with a rod and reel. Finally, fish weirs are a wide variety of contraptions that are placed in tidal zones, as well as freshwater locations, which obstruct fish passage while allowing water to pass through. Historically, indigenous groups used a mix of gillnetting techniques, using nets made out of cedar bark or other natural fibers, and fish weirs when fishing ocean environments.

Freshwater salmon fishing likewise employs a variety of appropriation technologies, although many past techniques have been outlawed. The recreational fishery is exclusively based on hook-and-line methods. In the past, a variety of fish wheels, traps, and weirs were used, especially by river-based canneries, and were so efficient that overharvest was common, leading to various bans on their use between the 1920’s and 1950’s (Augerot, 2005), although the use of fish wheels, a kind of water mill with large baskets that are spun by the current of the river, is still permitted on the Yukon and Copper rivers in Alaska on a tightly regulated basis (Alaska Department of Fish and Game). A unique historical practice by many indigenous groups, particularly on the Columbia River, was the practice of constructing platforms near waterfalls and other impediments to fish passage, from where fishermen would use spears or dip nets to catch individual fish as they attempted to jump over the barriers (CRITFC, N.d.). Dip-netting is still used by some indigenous groups and for individual subsistence use in some rivers in Alaska, such as the Kenai (Alaska Department of Fish and Game, 2012).

Monitoring technologies (A9b) meanwhile refer to a wide variety of techniques used to collect data pertinent to a wide variety of management functions. Coded-wire tags, which are implanted in hatchery or wild fish before they migrate to the ocean, are used for a wide variety of applications, including, hatchery rearing and release experiments; estimating hatchery production; natural stock evaluation; natural stock spawning composition; stock distribution among fisheries and spawning areas; run size estimation; smolt to adult return rates; estimation
of stock composition in mixed stock fisheries; and estimation of harvest rates, although there are a variety of concerns about the statistical validity of such methods (Pacific Salmon Commission, 2005). Acoustic transmitters, similarly implanted in juvenile and adult fish, have been used to map the migration of fish, but are impractical for many of the purposes listed above due to their expense. Also, as previously mentioned, a prevalent practice known as “mass marking”, in which the adipose fin of hatchery fish are cut off in order to selectively manage harvests by enabling the return of captured wild fish, is a common monitoring technology that can have controversial management implications. For instance, long-line trollers view mass marking as an inappropriate tool, as it forces an inefficiency in that it lengthens their time on the water as they have to sort through the fish that they catch as if they were a recreational fishery. From their perspective, it would be better for them to have a constrained fishery, maybe even just a day or two, to fish for as many as they can up to their specific allocation, which might include wild fish, even if it might mean getting fewer total allocations than they might otherwise get – this would allow for a much lower effort-to-harvested fish ratio, and thus lower operating costs (interview, NWIFC official, 2/18/10).

Because of the economic and cultural value attached to salmon by both Europeans and indigenous groups, a great deal of effort has been put forth to increase the overall knowledge of the focal SES (A7). For the purposes of this paper, this is important for two reasons. First, the quest for better data has been a fundamental driver of mission drift of certain organizations involved in salmon management. Secondly, it is a significant driver behind the inclusion of various local groups, both indigenous and otherwise, in the various institutions managing the resource, due to the fact that local groups, especially in the frequently remote areas in which salmon spawn, have detailed historical knowledge of stock behavior, environmental conditions, and other factors relevant for making sound management decisions. As will be argued in later chapters, this greater degree of knowledge of the salmon SES is one of the key explanatory factors behind the more accentuated role of certain groups within the PSC as compared to the IPHC.
Due to this relative inclusion of locally-based actors at various levels in the salmon regime, a concomitant increase in opportunities for leadership positions within these various organizations is accentuated. Leadership (A7) is another key “actor variable” identified by the SES Framework, and citation of the leadership effects of various indigenous group representatives became a frequent occurrence during the course of fieldwork. Therefore leadership will be a significant focus of later chapters, particularly Chapter 6 examining the effects of indigenous participation within the PSC.

2.4.4. Governance System

As illustrated by Ostrom, et al. (1994), common pool resource problems face at least two broad types of collective action problems, “appropriation” problems and “provision” problems. One of the things that makes the salmon SES so complex is that the various governance functions addressing these types of problems are disaggregated across a wide range of institutions at multiple levels. Furthermore, many actors within the salmon SES “wear multiple hats” insofar as they are formal members of more than one of the constituent institutions in the overall SES, thereby constituting policy “boundary spanners” that serve to connect the multiple actors within the SES and may engender a greater degree of coherence to the overall system. Therefore it is necessary to map the institutional relationships that exist and to locate where various governance functions reside before zooming in on the set of action situations within the institution which is the focus of this study, the PSC. It will be useful to distinguish between at least four levels of institutional rule making government organizations: international, transnational, regional, and local. Figure 2.10. geographically maps the various nested marine jurisdictions that are detailed in the next secti
Figure 2.9: Marine Jurisdictions

Marine Jurisdictions

(Source: Augerot, 2005)
2.4.4.1. International and Transnational Governance

At the international level, the North Pacific Anadromous Fish Commission (NPAFC) (GS1a) is an organization created to implement the various provisions of the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, which was negotiated by the United States, Canada, Japan, the Republic of Korea, and the Russian Federation and which entered into force in 1993 (NPFAC website). Essentially, the focus of this convention is to prohibit the targeted fishing of salmon on the high seas (i.e. the areas beyond each nation’s EEZ) in order to maximize the numbers of fish returning to each country’s waters, and to collaborate in minimizing the bycatch of salmon in all other fisheries within each nation’s EEZ (NPAFC website; Miles, 2002). Each party to the convention can nominate up to three representatives to the Commission, however decisions must be made by consensus with each party receiving one vote, according to Article VIII, Sec. 10 of the Convention.

A more significant management role is played at the transnational level in the Eastern Pacific by the Pacific Salmon Commission (GS1b). The PSC is a bilateral organization created by the United States and Canada to address the issue of interceptions and over harvesting of fisheries that span the borders of these two countries. The Pacific Salmon Commission can be seen as the culmination of attempts to address the macro-scale (transnational) appropriation problems relating to salmon, although the institution has evolved beyond its original exclusive focus on appropriation issues to include a variety of provision activities, which will be detailed shortly. The Commission itself does not have regulatory authority over the salmon fisheries but provides regulatory advice and recommendations to the two countries. A key exception to this is that the PSC does exercise regulatory authority over Fraser River Sockeye and Pink salmon stocks through the Fraser River Panel, a regulatory authority that is a vestige of bilateral salmon management agreements which were administered through the International Pacific Salmon Fisheries Commission (IPSFC), the organizational precursor to the PSC (Jensen, 1986; Yanagida, 1987; Roos, 1991). PSC staff promulgate and enforce fishing regulations in both American and Canadian territorial waters known as the “Fraser River Panel Area”, which
encompasses the areas around southern Vancouver Island, the Washington Coast, the Strait of Juan de Fuca, Puget Sound, and the Strait of Georgia. In-stream enforcement of fishing on the Fraser is the responsibility of the DFO, and must comply with the overall target harvest allocations set by the PSC.

Beyond this, the PSC has responsibility for “all salmon originating in the waters of one country which are subject to interception by the other, affect management of the other country’s salmon or affect biologically the stocks of the other country” (PSC Website). Under the terms of the Pacific Salmon Treaty (PST) and the 1999 Agreement, the PSC consists of a sixteen member body, with four commissioners and four alternates from each side. The Commission’s primary role is to hash out agreements regarding the targeted escapement goals for each species of fish that is known to migrate across national boundaries and thus become susceptible to interception, and then to set specific American and Canadian harvest allocations for particular stocks. Each country is responsible for making regulatory decisions to implement the suggestions of the PSC, thus in effect the PSC gives both countries a forum through which to resolve their differences and collaboratively determine acceptable harvest levels and decisions regarding targeted habitat improvements. According to Article II, Sec. 6 of the PST, “Each section shall have one vote in the Commission. A decision or recommendation of the Commission shall be made only with the approval of both sections.” This effectively gives each country veto power over any activity of the Commission.

2.4.4.2. Regional Governance

Once allocations are agreed upon and set by the PSC, harvest management activities proceed to the regional level. Under Part II of the United Nations Conference on the Law of the Sea, nations have sole natural resource exploitation rights in the area extending 200 nautical miles from their coastal “baseline”, which is the average low water mark. Furthermore, a nation’s “territorial waters” are defined under Part II as extending twelve miles from the coastal baseline,
an area in which nations have additional regulatory rights on issues such as foreign vessel passage, environmental pollution, etc.

Each country is distinct in the processes they use to handle their own regional appropriation and provision policies. On the American side, the so-called “Magnuson-Stevens Act Institutions”, as created by the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265) and its amending reauthorization act (Public Law 109-479), exercise regulatory authority over fisheries within both EEZ and territorial waters. However there are two different patterns regarding which specific actors have regulatory authority over salmon, one for Alaska, and one for the lower 48 states. In the lower 48, this regulatory authority is exercised through the Pacific Fishery Management Council (PFMC) (GS1c), and covers the area extending from three nautical miles to the 200 nautical mile limit. According to Sec. 302 (a)(1)(F) of the Act (16 U.S.C. 1852; 97-453, 101-627, 104-297), the Council consists of 14 voting members “including 8 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State), and including one appointed from an Indian tribe with Federally recognized fishing rights from California, Oregon, Washington, or Idaho in accordance with subsection (b)(5).” The predominant work of the PFMC, like the other Magnuson Act institutions, is to set appropriation/harvest regulations, however it also engages in some provision-type activities through its Habitat Committee, which “evaluates essential fish habitat… including adverse impacts on such habitat and the consideration of actions to ensure conservation and enhancement of such habitat [and] provides expert advice on the effects of proposed management measures on fish habitat and other habitat related matters brought before the Council for action. The Habitat Committee also reviews activities, or proposed activities, to be authorized, funded, or undertaken by any federal or state agency that may affect habitat of a fishery resource under the jurisdiction of the Council.” (PFMC, 2010).

In Alaska, the North Pacific Fishery Management Council (NPFMC)(GS1d) exercises similar authority, with the exception of salmon, crab, and herring fisheries, as the Council delegates this regulatory authority to the State of Alaska (GS1h), primarily because, in the case of
salmon, the vast majority of prosecuted fisheries lie within the 3 nautical mile zone (NPFMC website). This represents a significant devolution of regulatory control from the federal government to the State of Alaska which is exceptional amongst the eight regional “Magnuson Act Institutions”. According to Sec. 302 (a)(1)(G) of the Act, “The North Pacific Council shall have 11 voting members, including 7 appointed by the Secretary in accordance with subsection (b)(2) (5 of whom shall be appointed from the State of Alaska and 2 of whom shall be appointed from the State of Washington)”, with the State of Washington being granted formal membership in order to provide a forum for addressing Washington’s concerns over Alaskan interceptions of migratory fish that range into Washington waters, especially salmon.

In the lower forty-eight states, once allocations and other regulatory issues are determined by the PFMC for the ocean fisheries within the three to 200 mile nautical mile range, regional regulatory oversight shifts to the states. For the states of Oregon and Washington, the “North of Falcon” planning process (GS1e) coincides with the March and April meetings of the PMFC (Washington Department of Fish and Wildlife, 2012). The term “North of Falcon” refers to Cape Falcon in northern Oregon, which marks the southern border of active management for Washington salmon stocks. It is during this process that near-shore commercial troll and recreational fishing seasons and catch limits off the coasts of Washington, Oregon and California are made (ibid). This process involves state government representatives from the state governments of Oregon and Washington, and representatives from the treaty tribes within each of these states engage in a co-management process with input from federal representatives from the National Marine Fisheries Service. This process should be seen as an integral step in the hierarchical process of setting specific appropriation regulations. According to the Washington Department of Fish and Wildlife, “The North of Falcon process starts in late February when the run-size forecasts are first available. Wild and hatchery run sizes for all salmon species from various areas of the state are considered in planning fisheries for the upcoming season. Expected Alaskan and Canadian harvest levels are also considered, as fishery managers and the public consider the seasons that will meet conservation goals for all salmon stocks.” (ibid).
Therefore, two broad regional patterns in the United States can be discerned. In Alaska, all regulation of salmon from the shoreline to the 200 mile EEZ limit is exercised by the State of Alaska, although the NPFMC nominally has this authority and delegates it to the state under special agreement. In the lower 48, the PFMC has regulatory oversight for fisheries between the three and 200 mile nautical mile range, while the state and tribal governments have collective management authority from the shore to the three nautical mile mark.

On the Canadian side (GS1f), the federal Department of Fisheries and Oceans (DFO) holds sole regulatory authority (with the exception of Fraser River stocks, which is regulated by the PSC as mentioned previously) over both EEZ and internal waters, thus in Canada, as with Alaska, regional and local appropriation policy is fused and under the domain of a single organization. After negotiating the shared allocation of salmon between the USA and Canada, DFO allocates ocean commercial harvests and then allocates recreational and First Nations in-stream harvests. First Nations have a wide range of specific allocation rights to salmon that vary considerably from group to group, which requires DFO to address this on a case-by-case basis that complicates planning and decision-making. Specifics of this will be addressed in subsequent chapters, but the following is a simplified version in order to paint a general picture of the process.

Formal recognition of a First Nation fishing right stems from Sec. 35 of the Constitution Act, although rights specific to fishing were not formally affirmed until the Canadian Supreme Court decision in the case of R. v. Sparrow, which recognized “food, ceremonial, and social” allocations to a wide number of First Nations bands. While these rights are supposed to take priority over all other considerations, except for conservation, the ill-defined nature of the rights and how they should be used in setting allocations continues to be a point of contention between DFO and many First Nations groups, who believe that commercial and recreational fishing interests continue to take priority (Environmental Law Center of University of Victoria, 2009; interview, PSC Commissioner, 1/14/10). Furthermore, some tribes have specific rights that go beyond these basic food, ceremonial, and social rights, as in the recently court-recognized right of the Nuu-Chah-Nulth to conduct commercial fisheries (Rich and Kirchner, 2009) and a specific allocation to the Nisga’a First Nation of each year’s adjusted total allowable catch for Nass River salmon.
under the Nisga’a Final Agreement, which amounts to 13% of the Sockeye harvest and 15% of the Pink harvest (Aboriginal Affairs and Northern Development Canada, 2000). When it comes to allocating specific numbers of fish to First Nations, this is done on a watershed-by-watershed/species-by-species basis. Thus the distribution of indigenous property rights to fish (GS4b) is very heterogeneous, but in no case approximates the position enjoyed by American treaty tribes. DFO is 100% responsible for determining not only the total allowable catch, in accordance with guidelines handed down from the PSC, but also the specific numbers of fish allocated to First Nations, commercial, and recreational fisheries, as well as all determinations regarding the processes by which allocation decisions are made (interview, DFO representative, 1/12/10). Furthermore, this must be done in accordance with a set of federal guidelines which collectively constitute what is known as “consultation policy”, which requires that regulatory agencies consult with recognized stakeholders regarding any proposed regulatory action (ibid). As a consequence of this, any group identified as a relevant stakeholder must be consulted during policy development decisions, which has served to include certain NGO groups (various First Nations, the Pacific Salmon Foundation, the Sport Fishing Institute of BC, and various commercial fisheries interest groups) in formal consultations at multiple levels, including the PSC as will be detailed in Chapter 3 (interview, PSC Commissioner, 1/11/10).

In terms of regional provision activities, under the Oceans Act of 1997 DFO is the lead agency for developing and implementing a national strategy for the management of Canada’s estuarine, coastal and marine ecosystems (Fisheries and Oceans Canada, 2008). DFO’s Oceans Action Plan (OAP) is a set of principles and strategic initiatives, including ecosystem monitoring activities and development of Marine Protected Areas, meant to coordinate the activities of 20 federal government organizations over a wide variety of habitat improvement and other programs in saltwater environments (ibid).

2.4.4.3. Local Governance

On the United States’ side, there is again a distinction between the local management regimes of Alaska and the states in the lower 48, due to the fact that the State of Alaska has
regulatory authority over the entire fishery from stream to the 200 mile limit of the EEZ. Thus in the case of Alaska, regional and local management authority is integrated. In the lower 48, after the “North of Falcon” process regulatory authority over internal waters falls under the jurisdiction of state-tribal co-management, which is performed on a watershed-by-watershed basis. There are two distinct governance systems at this local level. In the case of Washington State (GS1g), the Washington State Department of Fish and Wildlife coordinates with 20 “treaty tribes”, each of whom hold special treaty rights “to fish in usual and accustomed places” and “in common with the citizens of the territory”. These treaty rights have been interpreted by the courts in US. v. Washington (a case commonly referred to as the “Boldt decision”) and various ancillary cases, which were subsequently upheld by the US Supreme Court, to allocate roughly fifty percent of the annual salmon harvest to the tribes, to allow tribal fishing beyond reservation borders, and to grant the tribes “co-management authority” with the state. These tribes are collectively assisted by the Northwest Indian Fisheries Commission (GS1i) which acts as a support agency that attempts to resolve inter-tribal collective action problems and to provide political and technical assistance to each of the member tribes.

In the case of Oregon, the co-management regime (GS1h) involves four tribes – the Umatilla, Nez Perce, Yakima, and Warm Springs – that collectively regulate a commercial fishery over a shared common fishing area on the Columbia River. Due to dam construction on the Columbia, which disrupted traditional platform fishing areas, lands known as “treaty fishing access sites” (TFAS) were set aside to replace those usual and accustomed fishing areas which were flooded. This access is regulated under Public Law 10-581, which, among other things, provides for the following:

1. § 401(a) designates certain federal lands along the Columbia River between Bonneville and McNary dams to be administered by the Corps of Engineers to provide access to usual and accustomed treaty fishing places and other ancillary fishing activities for member of the four tribes.
2. § 401(b) requires the Corps of Engineers to (1) identify and acquire at least six additional sites adjacent to Bonneville Pool from willing sellers; (2) improve the federal lands and acquired lands to provide facilities for treaty fishing and ancillary activities and then transfer those lands and facilities to
the Department of Interior; and (3) make improvements at the five existing (original) in lieu sites.

3. § 401(d) authorizes appropriation of $2 million to acquire the Bonneville Pool sites from willing sellers.

4. § 401(e) provides the Secretary of Interior with the right of first refusal to accept any excess federal lands adjacent the Columbia between Bonneville and McNary dams.

Therefore, it is useful to differentiate between tribal co-management roles. In the case of Washington coastal and Puget Sound tribes (GS1g), each individual tribe coordinates technical and regulatory activity with the State Department of Fish and Wildlife, assisted by the NWIFC. In the second co-management regime (GS1h), the Nez Perce, Warm Springs, Yakima, and Umatilla tribes, working collectively through the Columbia River Inter-Tribal Fisheries Commission (CRITFC), predominately deal with the Federal government in the establishment of sites to mitigate loss of usual and accustomed fishing grounds, and then negotiate with the States of Oregon (primarily, as most TFAS’s are located on the Oregon side of the Columbia River) and Washington to ensure target escapement totals of returning salmon, after which tribal, commercial, and recreational inland allocations are negotiated according to the 50/50 share provisions outlined in US v. Washington and its sister case US v. Oregon (GS4a).

Finally, due to the vast array of land use practices that have potential impacts on salmon productivity, a wide range of provision-type activities are conducted by a host of state and local governments in conjunction with particular private organizations. For instance, various rules pertaining to logging practices on private lands have been promulgated in Washington State under the “Forests and Fish Plan”. This particular policy regime is of interest to this study in that American treaty tribes play significant monitoring and enforcement roles (Washington Forest Protection Association, N.d.). As there are such a wide variety of these types of provision arrangements, entailing everything from agricultural practices to mining practices and beyond, no effort will be spent here to catalogue them all. Suffice it to say that a whole host of provision-related activities are carried out in a very disaggregated and rather ad-hoc basis when it comes to activities that impact salmon’s freshwater habitats, and typically involve a high degree of
collaboration involving multiple stakeholders, with the state and treaty tribes being consistently present as co-managers.

2.4.4.4. Network Structure

Given the complicated pastiche of institutional networks, there are a wide range of action situations that link the different governance structures of the overall salmon natural resource management regime, as explained in the previous section. Figure 2.10 maps the action situation network at the various levels of the salmon regime. Unidirectional arrows indicate a hierarchical process between levels, with the choice sets of lower levels being impacted by decisions made at higher levels. Double arrows indicate interactive relationships between different adjacent action situations that are directly linked to one another, indicating that decisions made in one can potentially impact the others. A dotted line indicates a tenuous relationship between action situations, suggesting that the level of coordination across levels may not be fully developed.

Several concepts taken from social network analysis are useful here. “Network centrality” refers to the density of linkages to a particular node, or actor, in a network, with the assumption that “well connected nodes, i.e. hubs, in the network are most likely of higher importance than others that are not so well connected” (Janssen, et al., 2006). “Network segmentation”
meanwhile refers to the extent to which communication between actors in a network is blocked by some kind of barrier, which can be characterized by the “average number of intermediate steps necessary to reach any node in a network from any other node (Diani, 2003, 306). By combining these two dimensions, one can characterize the “network structure”, or pattern of formal linkages between network members.

In terms of the American delegation, it is important to note that federal, state, and tribal interests are formally represented at virtually all levels of the salmon regime, for both appropriation and provision functions. A notable exception is the NPAFC (GS1a), although again, that particular institution has a relatively innocuous and constrained mandate largely revolving around monitoring of the moratorium on high seas fishing. Because of this, each actor, federal, state, and tribal, can be characterized as having a high level of network centrality (GS3a), who due to their complex matrix of interactions, have virtually direct contact with one another resulting in virtually no network segmentation (GS3c) on the American side. Network structures with these characteristics are generally characterized as “clique structures” (GS3e), which suggest “a pattern of linkages with a strong expressive dimension, and a high investment in the building and maintenance of the network” (Diani, 2003, 307). On the Canadian side, one actor, DFO, has a high degree of centrality (GS3b) and serves to coordinate the exchanges between actors across all actors within the network, with very little direct linkages between actors outside of the context of the PSC, which results in a relatively higher degree of segmentation (GS3d). Such a structure is sometimes characterized as a “wheel/star structure” (GS3f) for the depiction of a central actor with dyadic connections to the various peripheral actors in the network (Diani, 2003, 310).

Within the context of the PSC, the overall structure may be considered as a “policephalous structure” (GS3g), with a dense clique network on the American side that has direct connections to the central actor, DFO, on the Canadian side, and in some instances maintains linkages with additional peripheral actors as exemplified by the joint tribal caucus. It will be argued that the nature of these network ties goes a long way in determining the available
access points of indigenous participation in the PSC, a theme that will be explored in greater detail in subsequent chapters.

2.4.5. Action Situations within the PSC

Now we can turn to the specific set of action situations within the PSC itself, which will be the focus of the rest of this dissertation. The PSC has multiple natural resource management responsibilities and has disaggregated specific functions to several panels and committees who have primary responsibility in certain areas. At the highest level of decision-making authority are the sixteen commissioners, who represent the final authority of the PSC through serving as the primary bilateral deliberation process (I3a) and conflict resolution mechanism (I4). Beyond the sixteen commissioners, the organization consists of four panels ("the panels"), which serve as the venues for setting targeted escapement levels and harvesting levels (I1) for stocks subject to international interceptions. The Fraser River Panel (I1a), as mentioned previously, is unique among the four panels in that it holds in-season management authority, having the authority to cancel fishing seasons in response to monitoring data, as it did recently with a full closure of the Fraser River Sockeye fishery in 2009 due to an unanticipated return of only 600,000 fish in contrast to the 8.7 million which were anticipated (CBC News, 2009). A determination to close a fishery in any other river would be the sole determination of either the respective American or Canadian fishery management institutions, subject to advice given by the PSC. The predominant interceptions issues for this panel are the Alaskan interception of Fraser River Sockeye and Pink salmon in Alaskan waters, and interceptions of the same fish by fishermen from Washington State as the fish migrate around Vancouver Island before entering the Fraser.

The Southern Panel (I1b) sets target escapement and harvest levels for all rivers south of Cape Caution, near the northern tip of Vancouver Island, except of course for the Fraser River. This includes Alaskan interceptions of both Canadian and Washington/Oregon bound fish, Canadian interceptions of Alaskan bound fish, and Canadian interceptions of Washington/Oregon bound fish. Coho and Chum fisheries are a particular concern for the Southern Panel. The Northern Panel (I1c) meanwhile has responsibility for runs that enter streams whose mouths lie
between Cape Caution in British Columbia, and Cape Suckiling near Cordova, Alaska. The majority of Alaska’s especially productive river systems, such as the Copper River, lie to the north of this area, and the fish produced in these areas predominately range into the Gulf of Alaska where they are not subject to significant Canadian interceptions issues. Three rivers - the Alsek, Stikine, and Taku - which would otherwise be included in the jurisdiction of the Northern Panel are instead addressed in the Transboundary Panel (I1d), due to the unique circumstance that these rivers originate in Canada and cross the panhandle of Alaska before entering the ocean. The Pacific Salmon Treaty also designates a fifth Panel to govern the Yukon River, another transboundary river system, “subject to the approval of the Parties”, but it is currently not in operation (Annex IV, Chapter 8, Pacific Salmon Treaty).

Nine “technical committees”, the Chinook, Coho, Chum, Data Sharing, Fraser River, Northern Boundary, Selective Fishery Evaluation, Transboundary, and Habitat and Restoration Technical Committees, serve as the primary monitoring activity (I9) and information sharing (I2) venues of the institution and address a variety of technical issues relevant to management of salmon in general. Two “standing committees”, the Finance and Administration Committee and the Committee on Scientific Cooperation, predominately serve as deliberation processes (I3b) on more mundane organizational management issues. Finally, two additional special “Restoration and Enhancement Fund Committees”, one for the North and one for the South, exist to provide funding for a variety of habitat restoration efforts and improvements in technical data gathering and sharing. These were created by the 1999 renegotiation of the Pacific Salmon treaty and can best be construed as bodies involved in “investment activities” (I5) related to “provision problems” rather than the typical “appropriation problems” that have traditionally been the focus of the work of the PSC. Therefore these represent a significant “institutional drift” in the responsibilities of the PSC into non-harvest related activities.

In addition, a few instances of relevant “self-organizing activities” (I7) are of particular interest to this study and will be taken up in greater detail in Chapter 3. Starting around 2003 several Canadian First Nations representatives, including the two First Nations Commissioners in
the PSC, pushed for the creation of a First Nations Caucus to serve as a direct consultative body between First Nations representative and DFO within the PSC (interview, PSC Commissioner, 1/14/10). This was seen as a necessary tool for First Nations interests in light of the fact that no organization collectively speaks for First Nations interests in the way that the NWIFC and CRITFC organizations do on the American side (ibid). First Nations were successful in obtaining limited funding under a program called the Aboriginal Aquatic Resource and Oceans Management (AAROM) Program designed to improve the consultative capacity of DFO vis-à-vis indigenous groups. In the absence of a true pan-First Nations representative body, it is perceived that this forum has worked fairly well at mitigating inter-tribal disputes that have frequently come up during PSC negotiations, although this has raised some concerns from the Canadian PSC Commissioners representing the commercial and recreational fisheries sectors, who are suspicious of behind doors meetings because they feel it should be the position of the Canadian delegation to always show a unified voice in opposition to the Americans (ibid; interview, PSC Commissioner, 1/11/10).

Secondly, building off of the precedent set by the First Nations Caucus, since 2008 there has been a “joint tribal caucus” where all tribal and First Nations representatives at the Commissioner, Panel, and Technical Committee levels meet to try to work out differences between American and Canadian indigenous groups before official negotiations take place at the annual meetings (interview, PSC Commissioner, 2/8/10). This is particularly relevant for the deliberations of the Fraser River Panel, as nowadays almost all of the American allocation of Fraser River Sockeye accrue to particular American treaty tribes in Northern Puget Sound, such as the Tulalip and Swinomish, and this pits these groups against the various Fraser River First Nations groups who themselves face major inter-tribal conflicts based fundamentally on their geographic locations on the river as discussed previously (ibid). Because this is a new development, it is yet to be seen how effective it will be in facilitating compromise between the American tribes and First Nations groups, but it does represent an interesting new dimension of cross-border indigenous interaction that the indigenous group representatives themselves believe to be useful and of high value (ibid). It is not without controversy however, as the DFO and other
Canadian stakeholders have expressed reservations about the legal authority of First Nations groups to engage in “foreign” negotiations, leading the American tribal delegation to characterize the forum as just another example of the many “hallway conversations” that occur during PSC meetings (ibid).

The commission is assisted in its work by a 26 member staff consisting of general administrators who carry out a variety of administrative support functions such as general support to the Commissioners and Panels in the conduct of their duties, facilitating the implementation of Commissioner decisions and recommendations, preparing official reports, coordinating the official meetings of the Commission and subsidiary bodies, disbursement of funds to outside implementing organizations for monitoring and restoration activities under the Restoration and Enhancement Funds, and operation of the PSC library (PSC, N.d.). In addition, there is a standing staff of biologists that provide technical advice and information regarding the Fraser River Sockeye and Pink salmon harvests, and are in charge of the day-to-day regulation of these stocks in collaboration with staff biologists from both countries who sit on the Fraser River Panel (ibid). Thus the majority of the work of the Secretariat staff may be characterized as largely administrative and managerial, with the exception of the staff biologists engaged with management of the Fraser River. Technocratic work is conducted collaboratively between fisheries managers from both countries who sit on the various Panels and Technical Committees.

In conclusion, a generalized characterization of the policy decision-making process within the PSC proceeds according to the following logic:

Step 1: Each country provides technical information (I2) to the Commission on the conduct of its fisheries, pre-season expectations and enhancement activities, which is:

Step 2: analyzed by bilateral technical committees (I9)/(I2), which then report to:

Step 3: Panels, which use these reports to develop their escapement and harvest allocation (I1) recommendations. From here the various area plans are:

Step 4: Sent to the Commissioners for consideration (I3). At this stage, various self-organizing activities (I7) of the different sectoral interests within each national delegation meet to discuss strategies before the Commissioners meet to review and deliberate on the plans, which are then:
Step 5: transmitted to the Governments of Canada and the United States for final approval and regulatory implementation
(Adapted from Pacific Salmon Commission, N.d.)

At this point significant differences between the two delegations emerge. On the Canadian side, as discussed previously, the Federal government retains sole regulatory authority over fisheries through the Department of Fisheries and Oceans, whereas on the American side, the Federal government, a host of Native American tribes with protected treaty allocations of harvest rights, and the States of Alaska, Oregon, and Washington all share regulatory authority over salmon. This results in dramatic differences both in the way in which decisions are made by the national delegations, and in the degree of participatory authority enjoyed by indigenous groups on both sides of the border. Specific action situations relating to the participation of indigenous groups in the PSC will be the focus of Chapter 6.

2.4.6. Related Ecosystems and Social, Economic, and Political Settings

Several other related social and ecological systems impact the core system as outlined above. In their ocean habitat, several factors are posited to impact the sustainability of salmon. In terms of their ocean environment (RS9a), salmon are obviously faced with natural predation from killer whales, sea lions, and other predators while at sea (ECO3b), with certain “resident” (i.e. less migratory) killer whale populations relying upon salmon for up to 96% of their diet, with a particular affinity for the relatively rare and in some instances endangered Chinook salmon (Ford, et al., 2010). The setting of target escapement goals must take into account these flows out of the system lest targeted fisherman harvest rates be set too high, resulting in human-natural competition that could overexploit the resource. The issue of non-human predation can also be exacerbated by interaction effects with other variables. For instance, the construction of dams (RS4b) frequently causes backups in fish passage as fish try to negotiate entry into fish ladder mitigation systems. This has enabled certain predators such as sea lions to congregate at the base of dams in order to capture migrating salmon with relative ease (CPMPNAS, 1996, 42-43). Furthermore these individuals, obviously ill-inclined to easily surrender such an easy meal, frequently become "nuisance" predators that have thwarted capture and relocation attempts that
have shipped them as far away as the Mexican border, as in at least one instance, "they almost literally beat the truck back to Washington State" (Mott, 2006).

The issue of human predation in the ocean, meanwhile, is usually characterized as a common pool resource appropriation problem, although because of the moratorium on high seas salmon fishing under the NPAFC (GS1a), only a negligible amount of anthropogenic disturbance occurs outside of the EEZ area. What human predation does occur is usually associated with either illegal fishing or incidental bycatch from fisheries targeting highly migratory species such as tuna. However, bycatch is held to be particularly problematic for fisheries conducted within the EEZ, especially bycatch associated with the Pollock fishery (Robbins Gisclair, 2009) (ECO3c). Therefore, not accounting for estimated bycatch levels from other unrelated fisheries could result in a decrease from projected return numbers, which requires greater collaboration between fisheries management institutions governing specific species, and/or closures of mixed stock “hot spots”, modification towards species-specific harvesting gear, or better data gleaned from on-vessel harvest “observers”, which obviously increase the costs of conducting a fishery (Hilborn and Hilborn, 2012, 56-58).

Also of importance are long time-scale changes in ocean temperatures, known as the Pacific Decadal Oscillation phenomenon (ECO1), which have been shown to impact salmon migrations, exacerbate predation at sea, and disrupt the food chain by displacing certain species of fish and other sea life which salmon depend upon. Generally speaking, there are two large-scale temperature zones in the Pacific, and these tend to swap locations every decade or so, with warm water located in the South and cold water in Alaska, and then vice-versa. Data suggest a strong correlation between ocean temperature and reproduction numbers, with a general rule of thumb being that salmon abundance is high in the zone that currently enjoys the cold water pattern, and suppressed in the warm water zone (Lackey, et al., 2006; Mantua, et al, 1997; Miller, 2000). At least part of this effect is attributable to the effect that ocean climates have on the propagation and distribution of food sources that salmon predate upon (ECO3a) (CPMPNAS, 1996). Salmon typically feed on aquatic insects, amphipods, krill, and smaller species of fish
such as herring, especially as adults. A notable exception to this is the case of Sockeye salmon, who are filter feeders that strain plankton through specialized organs called gill rakers (US Fish and Wildlife Service). Thus the management of Pacific salmon needs to be sensitive to the effects that ocean climate can have on food availability and the resultant productivity or mortality of adult salmon as well as the species of salmon whose juveniles immediately migrate to the ocean to rear, such as Pink and Chum.

In terms of their freshwater habitat, there exists a litany of factors that are posited to impact productivity of the resource. Various land use practices such as forestry, agriculture, and mining (ECO2) degrade water and/or streambed quality for spawning, and increased urbanization resulting from demographic trends (S2) crowds out fish from certain stretches of river in addition to a wide variety of deleterious effects on water quality stemming from such things as petroleum run-off from paved surfaces (see for instance Augerot, 2005; CPMPNAS, 1996; Lackey, et al., 2006 for comprehensive overviews). These various impacts are the subject of a rich array of provision activities at the state and local levels as mentioned previously.

Furthermore, there is a perception problem among the general public, who question the official warning statements of salmon decline and Endangered Species Act listings due to the widespread market availability (S5a) of salmon for human consumption, as well as frequent opportunities to view migrating salmon in their figurative “backyards” (Lackey, et al., 2006; White and Hall, 2006). In addition, peculiar market dynamics stemming from the dramatic increase in aquaculture production of Atlantic salmon, which in the minds of most consumers is equivalent to wild Pacific salmon and competes with it directly, have contributed to a long-term trend of decreasing aggregate market prices (S5b) which have not been significantly impacted by the advent of point-of-origin labeling due, in part, to poor regulatory oversight (Asche, et al., 1999; Jacquet and Pauly, 2008).

In summary, table 2.3. compiles the set of variables outlined above, to serve as a reference point for the various properties of the salmon SES:
<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Tier 2/3 Codes</th>
<th>Variable Name</th>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS1</td>
<td></td>
<td>Sector</td>
<td>Categorical</td>
<td>Fisheries</td>
</tr>
<tr>
<td>RS2a</td>
<td></td>
<td>Clarity of Ocean System Boundaries</td>
<td>Ordinal</td>
<td>Very low</td>
</tr>
<tr>
<td>RS2b</td>
<td></td>
<td>Clarity of River System Boundaries</td>
<td>Ordinal</td>
<td>Medium</td>
</tr>
<tr>
<td>RS3a</td>
<td></td>
<td>Geographic Size of System</td>
<td>Ordinal</td>
<td>Very large; varies by species</td>
</tr>
<tr>
<td>RS3b</td>
<td></td>
<td>Estimated Size of Biomass</td>
<td>Continual</td>
<td>1,002,988 tons/year average harvest</td>
</tr>
<tr>
<td>RS4a</td>
<td></td>
<td>Human-Constructed Facilities: Hatcheries</td>
<td>Categorical</td>
<td>Negative externalities</td>
</tr>
<tr>
<td>RS4b</td>
<td></td>
<td>Human-Constructed Facilities: Dams</td>
<td>Categorical</td>
<td>Negative externalities</td>
</tr>
<tr>
<td>RS4c</td>
<td></td>
<td>Productivity: Alaska</td>
<td>Proportional</td>
<td>106.7% of historical size</td>
</tr>
<tr>
<td>RS5b</td>
<td></td>
<td>Productivity: British Columbia</td>
<td>Proportional</td>
<td>36.2% of historical size</td>
</tr>
<tr>
<td>RS5c</td>
<td></td>
<td>Productivity: Washington, Oregon, Idaho, California</td>
<td>Proportional</td>
<td>5.3% of historical size</td>
</tr>
<tr>
<td>RS6</td>
<td></td>
<td>Equilibrium properties</td>
<td>Categorical</td>
<td>Unpredictable/unknown</td>
</tr>
<tr>
<td>RS7</td>
<td></td>
<td>Predictability</td>
<td>Ordinal</td>
<td>Very low</td>
</tr>
<tr>
<td>RS8a</td>
<td></td>
<td>Location: Ocean Environment</td>
<td>Descriptive</td>
<td>N/A</td>
</tr>
<tr>
<td>RS8b</td>
<td></td>
<td>Location: Freshwater Environment</td>
<td>Descriptive</td>
<td>N/A</td>
</tr>
<tr>
<td>RU1a</td>
<td></td>
<td>Mobility: Chinook</td>
<td>Ordinal</td>
<td>Very high</td>
</tr>
<tr>
<td>RU1b</td>
<td></td>
<td>Mobility: Coho</td>
<td>Ordinal</td>
<td>High</td>
</tr>
<tr>
<td>RU1c</td>
<td></td>
<td>Mobility: Sockeye</td>
<td>Ordinal</td>
<td>Very high</td>
</tr>
<tr>
<td>RU1d</td>
<td></td>
<td>Mobility: Pink</td>
<td>Ordinal</td>
<td>High (but lowest of all species)</td>
</tr>
<tr>
<td>RU1e</td>
<td></td>
<td>Mobility: Chum</td>
<td>Ordinal</td>
<td>Very high (highest of all species)</td>
</tr>
<tr>
<td>RU1f</td>
<td></td>
<td>Mobility: Steelhead</td>
<td>Ordinal</td>
<td>Very high</td>
</tr>
<tr>
<td>RU2a</td>
<td></td>
<td>Interactions between hatchery and natural fish</td>
<td>Categorical</td>
<td>Crowding out of wild fish; genetic depletion</td>
</tr>
<tr>
<td>RU2b</td>
<td></td>
<td>Interactions between ESUs of same species</td>
<td>Categorical</td>
<td>Issue of straying</td>
</tr>
<tr>
<td>RU2c</td>
<td></td>
<td>Interactions between species</td>
<td>Categorical</td>
<td>Interruptions between co-mingled stocks</td>
</tr>
<tr>
<td>RU3a</td>
<td></td>
<td>Ex-vessel economic value: Chinook</td>
<td>Continual</td>
<td>$1.96/pound (USA only)</td>
</tr>
<tr>
<td>RU3b</td>
<td></td>
<td>Ex-vessel economic value: Coho</td>
<td>Continual</td>
<td>$0.73/pound (USA only)</td>
</tr>
<tr>
<td>RU3c</td>
<td></td>
<td>Ex-vessel economic value: Sockeye</td>
<td>Continual</td>
<td>$0.75/pound (USA only)</td>
</tr>
<tr>
<td>RU3d</td>
<td></td>
<td>Ex-vessel economic value: Pink</td>
<td>Continual</td>
<td>$1.14/pound (USA only)</td>
</tr>
<tr>
<td>RU3e</td>
<td></td>
<td>Ex-vessel economic value: Chum</td>
<td>Continual</td>
<td>$0.33/pound (USA only)</td>
</tr>
<tr>
<td>RU4a</td>
<td></td>
<td>Size: Chinook</td>
<td>Average</td>
<td>10-22 pounds</td>
</tr>
<tr>
<td>RU4b</td>
<td></td>
<td>Size: Coho</td>
<td>Average</td>
<td>6-11 pounds</td>
</tr>
<tr>
<td>RU4c</td>
<td></td>
<td>Size: Sockeye</td>
<td>Average</td>
<td>5-8 pounds</td>
</tr>
<tr>
<td>RU4d</td>
<td></td>
<td>Size: Pink</td>
<td>Average</td>
<td>3-5 pounds</td>
</tr>
<tr>
<td>RU4e</td>
<td></td>
<td>Size: Chum</td>
<td>Average</td>
<td>10-15 pounds</td>
</tr>
<tr>
<td>RU5a</td>
<td></td>
<td>Size: Steelhead</td>
<td>Average</td>
<td>5-19 pounds</td>
</tr>
<tr>
<td>RU4f</td>
<td></td>
<td>Species Distinctive Markings</td>
<td>Categorical</td>
<td>Various (see table 2.7)</td>
</tr>
<tr>
<td>RU4g</td>
<td></td>
<td>Distinctive Markings: Hatchery Fish</td>
<td>Categorical</td>
<td>Clipped adipose fin distinguishes hatchery from wild</td>
</tr>
<tr>
<td>RU4h</td>
<td></td>
<td>Temporal and spatial distribution by species</td>
<td>Various</td>
<td>(see table 2.7)</td>
</tr>
<tr>
<td>A1</td>
<td></td>
<td>Number of actors</td>
<td>Ordinal</td>
<td>Very high</td>
</tr>
<tr>
<td>A2a</td>
<td></td>
<td>Socioeconomic attributes of commercial fisheries</td>
<td>Categorical</td>
<td>Wealth driven</td>
</tr>
<tr>
<td>A2b</td>
<td></td>
<td>Socioeconomic attributes of recreational fisheries</td>
<td>Categorical</td>
<td>Skill and well-being driven</td>
</tr>
<tr>
<td>A2c</td>
<td></td>
<td>Socioeconomic attributes of indigenous groups</td>
<td>Categorical</td>
<td>Wealth, rhetoric, skill, affection, and well-being driven</td>
</tr>
<tr>
<td>A2d</td>
<td></td>
<td>History of use: pre-European settlement</td>
<td>Categorical</td>
<td>Sustainable</td>
</tr>
<tr>
<td>A2e</td>
<td></td>
<td>History of use: post-European settlement</td>
<td>Categorical</td>
<td>Varies - but frequent unsustainable use post-1840</td>
</tr>
<tr>
<td>A3a</td>
<td></td>
<td>Location of actors: ocean fisheries</td>
<td>Categorical</td>
<td>Privileged harvest access</td>
</tr>
<tr>
<td>A3b</td>
<td></td>
<td>Location of actors: near-shore fisheries</td>
<td>Categorical</td>
<td>Lowered harvest access</td>
</tr>
<tr>
<td>A3c</td>
<td></td>
<td>Location of actors: middle river</td>
<td>Categorical</td>
<td>Very low harvest access</td>
</tr>
<tr>
<td>A3d</td>
<td></td>
<td>Location of actors: upper river</td>
<td>Categorical</td>
<td>Least harvest access</td>
</tr>
<tr>
<td>A3e</td>
<td></td>
<td>Leadership</td>
<td>Ordinal</td>
<td>Varies by actor (see text)</td>
</tr>
<tr>
<td>A3f</td>
<td></td>
<td>Knowledge of SES</td>
<td>Ordinal</td>
<td>High, especially by may local groups</td>
</tr>
<tr>
<td>A3g</td>
<td></td>
<td>Economic dependence on resource</td>
<td>Ordinal</td>
<td>High for commercial fisheries; varied for indigenous groups</td>
</tr>
<tr>
<td>A3h</td>
<td></td>
<td>Cultural dependence on resource</td>
<td>Ordinal</td>
<td>High for indigenous groups</td>
</tr>
<tr>
<td>A4a</td>
<td></td>
<td>Appropriation technology</td>
<td>Categorical</td>
<td>Various methods of harvest with varied impacts (see text)</td>
</tr>
<tr>
<td>A4b</td>
<td></td>
<td>Monitoring technology</td>
<td>Categorical</td>
<td>Methods used impact management practices (see text)</td>
</tr>
</tbody>
</table>
2.5. Components of the Halibut SES

In contrast to the multi-scale complexity of the salmon management regime, the regulatory regime governing Pacific halibut (*Hippoglossus stenolepis*) is relatively straightforward. There are fewer appropriation and provision problems associated with these ocean fisheries, which is due in large part to the lifecycle of halibut, which is a demersal fish that occupies the seabed on the continental shelf, which rarely extends past the 200 mile EEZ. There are also no freshwater-based fisheries associated with the species, thus involving fewer inter-group conflicts than those found in the salmon SES. The result is a much less complex institutional environment, which enables the IPHC to be the primary harvest management and data collection authority in the overarching halibut management regime.

2.5.1. Resource System and Resource Units

As with salmon, the sector (RS1) in question is obviously fisheries. Since halibut are a deeper water migratory species, the clarity of the system boundaries (RS2) is somewhat low due to scientific uncertainty of lifecycle, production, etc., although it is comparatively higher than the clarity of the salmon SES boundaries. This is especially due to the relatively consistent locations and migratory patterns of halibut. The size of the system (RS3a) is also much more constrained
than that of salmon, although still at a very broad scale. Halibut distribution extends from Santa Barbara, CA to Nome, AK, with a primary population concentration in the central Gulf of Alaska, in part due to the north-flowing Alaska Current which brings warmer water into the Gulf (Trumble, et al., 1993). Smaller resident populations of adult halibut are located off the coastline from British Columbia to Northern California and in the Bering Sea, and can also occur in very limited numbers in the Gulf of Anadyr in Russia, extending as far south as Hokkaido, Japan (IPHC, 1998; Trumble, et al., 1993).

Within these areas, adult fish are typically located (RS9a) on the continental shelf and upper continental slope at depths greater than 90 meters in their summer feeding grounds (Trumble, et al., 1993). However, specific location varies seasonally and by stage in lifecycle. In contrast to salmon, halibut are iteroparous, with the majority of fish being annual spawners, which occurs near the edge of the continental shelf at depths of 180 to 550 meters, in winter spawning areas located predominantly in the Bering Sea and Gulf of Alaska (RS9b) that are separate from and deeper than their summer feeding grounds (IPHC, 1998; Trumble, et al., 1993). Spawning occurs between November and March depending on the particular spawning ground location, and is conducted randomly, with both genders broadcasting eggs and sperm in spawning grounds where fish congregate, with fertilization occurring randomly (Trumble, et al., 1993).

Upon fertilization, halibut eggs drift down to the bathypelagic zone (RS9c) at depths greater than 1,000 meters, where they are subjected to less predation by other fish species (ibid). Juveniles mature slowly, subsisting on their yolk sac before becoming capable of exogenous feeding after about 250-300 days (ibid). As larvae mature, they randomly float and slowly move up the water column, subjected to circular ocean currents that widely redistribute them long distances from their spawning grounds towards nursery areas (RS9d) with a predominant pattern of northerly movements carried by the Alaska Current and lesser numbers being distributed southerly through the California Current (ibid). At around three to five months juveniles are located at depths of 180 meters or less, before being carried towards shore by currents that deposit them in relatively shallow (<60 meters)nursery grounds where they settle towards the
seabed where they will live out the rest of their lifecycle (ibid). Between the ages of two and six years, juveniles will then migrate to deeper and deeper waters, typically undertaking a genetically-programmed directed migration to settle in summer feeding grounds (RS9a) towards the east and south to counter the northerly and westerly drift of eggs and larvae (IPHC, 1998; Trumble, et al., 1993). This juvenile migration (RU1a) is extensive and does not follow a regularized pattern, meaning individual juveniles are widely dispersed over a long time period (RU7a) by numerous environmental drivers as well as individual whims, suggesting that “halibut stocks are interrelated and that intermingling is extensive, a factor that complicates management of the fishery” (IPHC, 1998, 15). 

At around the age of seven or eight years old, halibut will typically establish themselves in a specific summer feeding area and demonstrate little net movement from one summer habitat to another after spawning (IPHC, 1998; Trumble, et al., 1993). Thus adult migration (RU1b), while still extensive – the longest adult migration was over 2,500 miles (IHPC, 1998) - is characterized by winter movements towards spawning grounds, followed by a return to their usual summer feeding grounds. There is some variation in terms of what limited emigration from one summer area to another does exist, with the probability of emigration in northern and western areas in a given year decreasing with the increasing length of fish (Valero and Webster, 2011). In the southern areas however, there is a greater propensity for younger mature fish to migrate northwards after a brief period of residence, although this process is poorly understood and based on limited data (ibid). Management decisions to limit harvest allocations in these areas in order to avoid over-exploitation of smaller, yet legally harvestable, seven to nine year old fish so that they may grow in size and in value in other areas can be a source of conflict, as will be taken up in a later chapter. In short, the temporal and spatial distribution of adult halibut (RU7b) is much more regularized than that of salmon, although variation between northern and southern areas does exist. Similarly, interaction between resource units (RU3) is highly regularized, with cohorts of fish residing in particular summer feeding locations and then intermingling with other cohorts in common spawning grounds.
However, temporal and spatial distribution can be affected by differential growth rates in the different coastal zones in which halibut live. The onset of sexual maturity is strongly correlated with size and regular growth rates, and fecundity is related more closely to size than to age (Trumble, et al., 1993). Thus if there is a change in the average growth of fish, the onset of maturity and thus juvenile migration will be affected. Furthermore, the average age of maturity tends to vary by region. For instance halibut in the Bering Sea typically mature between seven and thirteen years for males and nine to fifteen years for females, while fish in the Gulf of Alaska typically mature at five to eleven years for males and eight to sixteen years for females, reflecting different growth rates that are probably attributable to environmental factors such as availability of prey (ibid).

Due to these much more regularized patterns the relative predictability of system dynamics (RS7) is much higher than that for the salmon SES, although still fairly uncertain. There are for instance significant difficulties pertaining to modeling the productivity of the system, which is largely conducted through evaluation of recruitment, or the survival rate of fish to the age they enter the fishery and/or to some other life history stage. Because halibut mature quite slowly (RU2) compared to other fish species, this has been a major area of debate between fisheries managers. For halibut, recruitment is measured by the abundance of eight year old fish - the average age of sexual maturity - and a rate that has been demonstrating a general downward trend (Trumble, et al., 1993). Part of the issue is disagreement over whether recruitment is density dependent, or whether it is induced by intermediate environmental cycles. This affects estimates of spawning biomass upon which the setting of harvest rates depends. For instance, some scientists believe that both spawning biomass and recruitment is density dependent, and thus that harvests set to maximize yield should be in place in order to make room for greater juvenile recruitment (ibid). However, in such a case “An objective to maximize yield (a risk-neutral strategy) would result in increased spawning escapement during good conditions, but decrease escapement during poor conditions. This strategy provides a feedback leading to a boom-bust cycle… [and] result in high variability in annual harvest (Trumble, et al., 1993, 56-57). Conversely, if recruitment fluctuations are a function of environmental cycles, the negative effects
of increasing fishing mortality would be greater on abundance and production, leading to a potential for significant levels of over fishing (ibid). Thus overall harvest rate decisions (I1), which are solely under the domain of the IPHC, are dependent on good productivity data that are subject to a great deal of scientific uncertainty that makes identification of equilibrium properties (RS6) quite difficult. What is known however is that the fishery is well-managed and not thought to be in danger of collapse, although it is subject to major cyclical fluctuations. Trumble et al. (1993) report an average annual harvest rate of around 30,000 metric tons, or 66,138,000 pounds, since 1930, with major peaks and valleys as illustrated by a period of very low abundance between 1972 and 1980, and near-record highs in the early 1990s. The past decade has seen a trend of decreasing abundance, with harvests in 2010 totaling 49,718,000 pounds (IPHC, 2010), or approximately 75% of historical average (RS5).

A consequence of these complications is that the size and number of resource units (RU5) demonstrate long-time scale trends in abundance. Halibut themselves are one of the largest teleost fishes in the world, measuring up to nine feet in length and frequently weighing over 150 pounds, with the record for the largest landed fish at 459 pounds (Bethers, 2007; IPHC, 1998). However, the relationship between weight and age is not constant and currently demonstrating a decreasing trend, with fish being smaller today than in previous decades (IPHC, 1998). Fish are managed in such a way that only sexually mature fish are retained, with the majority of the catch being fish between eight and fifteen years old (Trumble, et al., 1993, 33). This is in part due to the setting of minimum size limits guidelines of 81.3 cm set by the IPHC, a figure that takes into account that adult growth increments are fixed once fish reach this approximate size, despite the variability of growth rates of juveniles (Trumble, et al., 1993, 35).

The estimated overall size of the “exploitable biomass”, defined by the aggregate weight of fish over this minimum size restriction, was 260 million pounds in 2012, down from 317 million pounds in 2011 (Hare, 2011). Optimal harvest rates since 1986 were set at 35% of exploitable biomass (Trumble, et al., 1993), but have been decreasing incrementally, with current policy since the early twenty-first century dictating a 20% optimal harvest rate generally, with a 15% rate that can be applied in areas of particular concern (Hare, 2011).
The economic value of the resource (RU4) is significant, although variable year to year. Using ex-vessel trend data for the Alaska commercial fishery between 2000 and 2009, similar to the data used for salmon above, the average ex-vessel price for the period was $3.06/pound (NOAA, 2011). Given IPHC data on the total commercial catch, which Alaska dominates year-to-year, for instance accounting for over 86% of the catch in 2009, the average total commercial catch over the same period equaled 67,317,540 pounds (IPHC, 2010), which would amount for a total ex-vessel value of $205,991,672.

2.5.2. Actors

Historically, several coastal Native American and First Nations groups actively fished for halibut for subsistence and limited trade with inland tribal groups who did not have access to the resource (A3a) (Bell, 1981). Indigenous groups used a system of specialized floats, lines, and hooks made of bladders, wood, bone, and cedar fibers that were taken out to sea by canoes which could venture out as far as twenty miles off-shore (IPHC, 1998; Trumble, et al., 1993). These fisheries were quite effective and typically out-performed early European efforts at targeting the resource (Trumble, et al., 1993).

The non-Indian commercial harvest (A3b) began in Puget Sound in 1888, with fishermen using baited handlines similar to the technology used by the indigenous fishery, with slow expansion offshore along the coasts of Washington and Oregon before resource depletion led to an eventual expansion north to British Columbia and later to Alaska (ibid). As the fishery moved further offshore, longlines set from diesel powered boats, similar to those used in the salmon troll fishery, replaced the handlines which were fished from smaller dories (ibid). This technology has been universal and consistent ever since, save for a change towards more effective circle hooks from the traditional "J" hooks (ibid). Thus in contrast to the salmon fishery, there is no need to regulate across a range of technologies (A9) used to target the resource.

Gear selectivity allows for the targeting of only larger sized fish, leading to decreased problems of bycatch of younger halibut, allowing relatively higher levels of maturation and
recruitment into the commercial fishery (Trumble, et al., 1993). A more significant problem of bycatch stems from landings of immature halibut that are caught by Alaskan fisheries targeting other groundfish, which accounts for 85-90% of total bycatch mortality, with the rest occurring from Alaskan crab and shrimp fisheries and Canadian groundfish fisheries (ECO3a) (Trumble, et al., 1993, 65). Incidental bycatch from sport salmon fisheries (ECO3b) is another known source of bycatch mortality, but is thought to be fairly limited, and is accounted for as a portion of the overall commercial catch in order to offset these numbers from the targeted catch of exploitable biomass (IPHC, 1998). The problem of bycatch from the Alaskan groundfish fisheries is a problem being addressed through regulation of these fisheries within the context of the NPFMC, which provides bycatch data to the IPHC which subsequently uses these figures as offsets of the estimated exploitable biomass, an approach that is apparently unique to the IPHC (Trumble, et al., 1993, 65).

The current fishery can be broken down straightforwardly by differentiating between the commercial fishery, sport/subsistence fishery, and indigenous fishery. The commercial fisheries (A1a) target larger sized fish that are typically 8 years old or older. Historically, over 70 percent of the commercial fishery has been conducted in Alaska (IPHC, 1998, 31), with these figures being much greater in recent years as referenced earlier. Fish are caught in decreasing abundance as one moves south down the coast of Southeast Alaska, British Columbia, Washington, Oregon, and then California.

The commercial fishery grew substantially in the middle to late 20th century, growing from a few hundred licensed vessels to over 4,000 between the 1950s and 1980s (Hilborn and Hilborn, 2012). According to NOAA data (2012), there are currently 5,524 quota holders in the commercial fishery, although not all of these are active, with the fishery occurring in a wide swath of Alaskan territorial waters with the bulk of the fishery occurring in the Gulf of Alaska. The commercial fishery in Washington, Oregon, and California is very limited, harvesting only 127,000 pounds, or .0025% of the total catch (IPHC, 2010). The Canadian commercial fleet is a limited entry licensed fishery with 435 licenses granted to "halibut harvesters that could demonstrate
extensive historical participation in the fishery” (Fisheries and Oceans Canada, 2011a) and confined to the Canadian EEZ, which corresponds to IPHC regulatory area 2b. Approximately 16% of the commercial halibut total allowable catch is conducted by First Nations bands and tribal councils who happen to possess commercial licenses, but this does not entail an active distinction between commercial and indigenous fisheries. Locations of the commercial fishery (A4a) are broken down by regulatory areas as will be discussed in the discussion on governance systems below. Due to the seabed location of mature adults on the continental shelf, productive fishing typically occurs only beyond the 3 nautical mile zone and within the 200 nautical mile zone, thus high seas fishing for halibut is a non-issue (Trumble, et al., 1993). Because of the high commercial value of the resource (A8a) and the use of an individual transferable quota (ITQ) system, the value of vessel licenses and quotas can be worth hundreds of thousands of dollars (Hilborn and Hilborn, 2012), thus the socioeconomic status of commercial fishery actors (A2a) can be characterized as potentially quite wealthy and profit-driven.

The sport/recreational fishery (A1b) has been historically insignificant (A8b), only becoming relatively more common in the 1980’s (Trumble, et al., 1993). The scale of the fishery is still relatively small however, accounting for only about 5% of the overall total directed harvest, with 75% of the sport/subsistence fishery occurring in Alaska (A4b) (Trumble, et al., 1993). The socio-economic qualities of the fishery (A2b) are the same as that for the salmon fishery.

On the American side, there are two distinct indigenous group fisheries (A1c). Thirteen treaty tribes have a recognized 35% share to halibut allocations (GS4a) in the area of the coastal waters of Washington and Oregon, an allocation derived from a legal case, which will be examined in subsequent chapters, that is related to U.S. v. Washington which extended similar fishing rights to halibut, shellfish, and other fisheries. These allocations are meted out within the confines of the Pacific Fishery Management Council, however, once overall area catch quotas are set by the IPHC, such that the IPHC does not directly determine catch quotas for these groups (interview, IPHC staff, 3/18/10; Trumble, et al., 1993). Also, in 1990, the U.S. Department of Indian Affairs authorized a specific limited commercial fishery, initially on a test basis and to be

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taken from the overall allocation in regulatory area 2c, for the Metlakatla Indian Community (A1d) of Annette Island, AK, to be conducted within the area immediately surrounding the reservation. The IPHC has no jurisdiction over the specific season and total allocation for the tribe, but do cooperate with these vessels to collect catch data, and once the catch limit for the regulatory area is reached, the Metlakatla fishery ends as well (IPHC, 1998). In order to coordinate and to avoid over-harvest, the Metlakatla fisheries are given short notice of 48 hour windows during which they are allowed to conduct harvests, with no further windows opening up once the area catch limit for the year has been reached. Thus the total number of fishing days and harvest totals will vary year-to-year, in 2011 amounting to thirteen total 48-hour openings and a total of 61,947 pounds (IPHC, 2011). There is also an additional indigenous ceremonial and subsistence fishery on the Canadian side (GS4b) that is estimated to take 24,500 pounds (IPHC, 2012). The specific location of the indigenous fishery is constrained to areas of lower productivity in extreme southeast Alaska, British Columbia, and the Washington/Oregon coast (A4c). Finally, the halibut fishery for indigenous peoples does not appear to have the same cultural importance as salmon, insofar as halibut were not central to diet, nor encountered in everyday life, but is certainly deemed commercially important (A8c) by the treaty tribes who have specific allocations (interview, NWIFC staff, 3/30/10).

2.5.3. Governance Systems

Fisheries management for halibut has been transnational from the outset, with the IPHC (GS1a) being the first organization with management authority over halibut, predating any efforts at the national or local levels (Trumble, et al., 1993). The organization was created by the Halibut Convention of 1923, with subsequent conventions being signed in 1930, 1937, 1953, and an amendment negotiated in 1979 (IPHC, 1998). The IPHC was formed upon the initiative of fishermen and processors, “who petitioned the governments of the United States and Canada to provide for joint management” (Trumble, et al., 1993, 58). The authority and responsibility of the institution has grown over time, and has a current mandate to maintain stocks at a level that permits the optimum yield (Trumble, et al., 1993). As an ocean groundfish resource with few, if
any, connections to human activities that can serve to directly propagate the resource, the potential for provision problems are significantly constrained, thus the ability to “maintain stocks” is restricted to monitoring the resource and making decisions pertaining to appropriations problems.

Recall that halibut are considered a single stock because of larval intermingling and wide redistribution. The IPHC however regulates the fishery by management areas in order to distribute the catch, due to the relatively consistent return of adult halibut to the same summer feeding grounds year-to-year (Trumble, et al., 1993). This is due to the fact that localized depletion could occur in specific areas, especially closer to major ports or processing facilities, if a single catch limit was applied to the entire area under the jurisdiction of the IPHC (Trumble, et al., 1993). Figure 2.11. provides a map of the various regulatory areas as used by the IPHC.

![Image of Regulatory Areas of the IPHC]

The Commission consists of six commissioners from each side, which serve as the core decision makers of the organization. Every January the Commissioners meet to review scientific assessment data and to agree upon overall catch limits for each regulatory area and to pass other regulations such as changes in assessment and modeling approaches carried out the IPHC.
technical staff (IPHC, 1998). Each country also appoints one scientific advisor from their respective fisheries management agencies who monitors Commission activities on a part-time basis (ibid). The day-to-day operations of the organization are overseen by a Director, who is appointed by the Commissioners, and currently has a staff of 28, who predominantly carry out the scientific monitoring and assessment functions of the organization (IPHC, N.d.). The work of the organization can thus be seen as largely technocratic in nature, which contrasts with the more political and administrative nature of the work conducted by the PSC Secretariat staff.

The action situations within the IPHC are relatively straightforward compared to those of the PSC. The two national delegations have pooled their information sharing interactions (I2) and have made the IPHC the central institution for this function, which stands in contrast to the PSC, where each national delegation maintains its own information generation activities and uses the Panels to resolve disagreements over the data. The US National Marine Fisheries Service does conduct its own sampling activities, but these serve as supplemental activities and all data are directly shared with the IPHC (IPHC, 1998). The two scientific advisors to the IPHC serve as a mechanism of monitoring the quality of scientific work of the organization, but there does not appear to be any major issues or conflicts in this area. Commissioners take into the advice the recommendations of the scientific staff for the setting of harvest levels, and I did not uncover any instances in which the Commissioners diverged from the opinions of the scientific staff over the setting of harvest levels (I1). Therefore in contrast to the highly politicized nature of the Commissioners in the PSC, IPHC Commissioners appear to undertake a much more "rubber stamp" approach to governance, deferring to the findings of the organization's professional staff. This is at least in part attributable to the lack of any significant interception-type disturbances affecting halibut, which more easily enables transnational collaboration and consensus between the two countries.

Once catch limits have been set by the IPHC, it is up to each national jurisdiction to conduct enforcement and to set specific allocations to different stakeholders (IPHC, 1998). In the United States, these functions are divided regionally, with allocations and enforcement in Alaska
conducted under the auspices of the NPFMC (GS1b), and decisions for Washington, Oregon, and California falling under the jurisdiction of the PFMC (GS1c). In Canada, allocations and enforcement are the sole responsibility of the DFO (GS1d). Each of these areas conducts their fisheries in subtly distinct ways. For instance, since 1979 in Canada the fishery has been split between the very limited ceremonial allocation mentioned previously, and a limited-entry commercial fishery with licenses distributed by vessel, with allocations being set according to a formula that takes into account vessel length and past vessel fishing history (IPHC, 1998).

In Alaska, the fishery was historically an open access fishery where anybody who wanted to fish could simply get a license, which led to an enormous increase in the number of vessels engaging in the fishery (Hilborn and Hilborn, 2012). With this increase in the number of vessels, and since the total allowable catch as determined by the IPHC could not be increased, the only way to manage the resource to be in compliance with IPHC harvest caps was to progressively shorten fishing seasons. The result is that the fishery became a “derby fishery” with the fishing season constituting a single day per year in some areas (ibid). A consequence of this was that fish had to be frozen, which devalued the resource and led to unnecessary waste as vessels would lay more lines than they could legally retrieve within 24 hours (IPHC, 1998). Market pressures (S5) for the more valuable fresh fillet market and concern over wastage ultimately necessitated the implementation of an individual fisherman’s quota system in 1995, which has resulted in increased returns accruing to fishermen and created a valuable market for transferable quotas, with each individual subject to a cap of .5% of the overall total allowable catch in order to prevent individuals cornering too much of the market (Hilborn and Hilborn, 2012; PFMC, 2012). A very small portion of the total allowable catch in area 2c is allocated by the NPFMC to the Metlakatla Indian Community and overseen by the Bureau of Indian Affairs, as mentioned previously.

In the states of Washington, Oregon, and California, the total allowable catch for area 2a is split between tribal and non-tribal fisheries, commercial and recreational fisheries, and between the recreational fisheries of each of the three states according to a “catch sharing plan” which is
promulgated annually through the PFMC (PFMC, 2012). Under this plan, the current allocation is 35% to the treaty tribes, 23.8% to the Washington sport fishery, 20.6% to the Oregon/California sport fishery, and 20.6% to the commercial fishery, with each fishery conducted under a different system of rules, with the commercial fishery for instance operating under a derby system similar to the historical practice in Alaska (ibid). Inter-tribal allocations are hashed out within the context of the NWIFC (GS1e). A consequence of this is that for American treaty tribes, the most significant institution impacting their allocation to fish is the PFMC. Clearly, the number of fish that a particular tribe may harvest is impacted by IPHC decision-making, and decisions to decrease the total allowable catch from year to year can be controversial. As a result, the thirteen treaty tribes actively attend the IPHC meetings in January and monitor proposed rule changes. The IPHC sees itself as having nothing to do with the tribal fishery, and that if the tribes want more fish, they need to address this within the context of the PFMC (interview, IPHC staff, 3/18/10; interview, NWIFC staff, 3/30/10).

Figure 2.12. visually represents the relationships between these different management organizations, emphasizing the hierarchical process of setting of total allowable catch at the transnational level and the setting of specific allocations between stakeholders at the regional level.

Figure 2.12.: Map of Network of Action Situations of the Pacific Halibut Regime

The position of the treaty tribes as essentially outside observers to the IPHC rule-making process also highlights the roles played by other groups that may be considered as

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nongovernmental/private organizations that serve as lobbying interests in the IPHC. The Conference Board (GS1f) is a group that has been recognized as an official advisory panel to the IPHC, and consists of commercial and sport fishery representatives from both Canada and the United States (IPHC, 1998). This body meets formally with Commissioners after the official IPHC staff presentations and proposals submitted at the Annual Meeting, where they are allowed to provide feedback to the Commissioners (ibid). A similar role is held by the Processor Advisory Group (GS1g) which was formed in 1996 to represent the interests of buyers and processors, many of whom did not like the move towards the ITQ system in Alaska because of the greater control which fishers would have regarding when to sell fish, thus increasing costs to processors who would otherwise be able to conduct transactions in the very limited time window of the original open access fishery (ibid).

2.5.4. Related Ecosystems and Social, Economic, and Political Settings

Beyond the related ecosystems properties relating to bycatch listed above, there are several additional variables affecting the core action situations of the halibut SES. Juveniles and adults are somewhat distinct in terms of their prey, with juveniles feeding on a mix of invertebrates such as hermit crabs and shrimp and smaller teleost fish, before gradually depending largely on other fish such as walleye pollock and sand lance as adults (Trumble, et al., 1993, 37). Thus the management of these fisheries, particularly for the walleye pollock, is potentially important, as this may be a key flow into the halibut SES (ECO3c). Overall Alaskan harvests are significant, totaling 1,947,580,000 pounds in 2010, primarily in the Bering Sea, making it the largest fishery in the State of Alaska and accounting for 24% of the total domestic US catch for all fish species (NMFS, 2010). The fishery in the Gulf of Alaska, which is important due to its co-location with the primary summer feeding grounds of halibut, is relatively new, having begun as a foreign-based fishery in 1964, before scaling up in 1977 with the emergence of the domestic fishery (Dorn, et al., 2011). The fishery reached a peak harvest total of 307,401 tons in 1984, with decreasing abundance and resultant harvest rates in subsequent years,
reaching a post-1977 low of 44,003 tons in 2009 (ibid). The average catch from 1977 to 2010 was 102,519 tons (ibid).

Adult halibut are furthermore near the top of the food chain due to their size and location on the seabed, which largely prevents prey by marine mammals, although sea lions are known to snatch hooked halibut from fishing lines as they are being drawn to the surface (ECO3d), which although a considerable nuisance to the fishery, is not thought to be a significant source of decline (Trumble, et al., 1993, 39). In summary, table 2.4. compiles the set of variables outlined above to serve as a reference point for the various properties of the halibut SES:
2.6. Conclusion

The sheer complexity of this mapping of the key variables impacting both the salmon and halibut SESs is duly noted, yet this particular identification of key variables still represents a gross simplification of two very complicated systems. Nonetheless, it sets the stage for examinations of how these variables interact and what implications they have for institutional design; what opportunities exist for indigenous participation in institutional decision-making and an exploration of the processes by which they attained, or did not attain, positions of considerable influence; and
how specific outcomes such as sustainability may or may not be attributable to the operation of these institutions; and especially, how these outcomes may be attributable to indigenous group participation in these institutions. These are the questions that will be the focus of the following chapters.
Chapter Three: The Institutional Rules Impacting Relative Levels of Indigenous Group Participation

3.1. Introduction

This chapter examines how specific institutional rules configure in such a way as to grant higher or lower levels of participatory authority by non-state actors in international natural resource management institutions. Using the Institutional Analysis and Development (IAD) framework, I examine a range of rules within the Pacific Salmon Commission (PSC) and International Pacific Halibut Commission (IPHC) and advance a theoretical model that emphasizes certain classes of rules and norms that either grant or constrain the relative participatory authority of these groups in these particular institutions. Specifically, I argue that the participation is especially impacted by "position", "boundary", "choice", and "aggregation" rules, and that rules and norms at all levels – "constitutional", "collective-choice", and "operational" – play significant roles in determining the opportunities for participation by non-state actors. Because of this, I argue that analyses of participation which focus solely on the constitutional architecture of institutional governance miss important dimensions of participation which may result in downplaying the roles that certain non-state actors may have in international governance.

The empirical findings of this analysis suggest that American tribes in the PSC have relatively high levels of participatory authority due to position rules that grant them a specified number of formal positions at the Commissioner, panel, and technical committee levels; boundary rules that defer authority to the tribes themselves in choosing the individuals who fill these roles; choice rules which grant them a voice on all issues brought before the commission; and aggregation rules which grant them veto authority over all issues heard by the commission. Canadian tribes in the PSC have a middle-range level of authority due to the formal position rules which grant them specific positions within the PSC structure, and choice rules which obligates DFO to formally provide for consultative forums with First Nations representatives. However, Canadian First Nations are limited by boundary rules which leave selection of tribal representatives in the hands of the DFO, operational norms which prevent them from expressing positions independently of the Canadian delegation, and aggregation rules which grant sole
voting authority to the DFO Regional Director. Meanwhile, in the IPHC, both Canadian and American tribes have low levels of authority. This is due to the relatively few formal positions available in the IPHC, boundary rules regarding the individuals who fill these positions, institutional rules and norms which do not recognize indigenous groups as active co-managers of the resource, and a resultant lack of choice rules which constrains the policy-making authority of indigenous groups in the IPHC. This forces both Canadian and American indigenous group actors to operate more like lobbying groups which attempt to influence the decisions of the IPHC from the outside looking in.


The IAD Framework’s emphasis on analyzing the rules in any action situation will be particularly important for this study. An important distinction is made between the “vertical” approach to classifying rules, which attempts to characterize underlying authority relationships in an action situation, and a “horizontal approach” which differentiates between “types” of rules that govern the specific relationships between the components of an action situation (Ostrom and Crawford, 2005, 187). The “vertical approach” to rule classification differentiates between “constitutional”, “collective choice”, and “operational” level rules. Constitutional level rules refer to rules that “affect collective-choice activities by determining who is eligible to be a participant and the rules to be used in crafting the set of collective choice rules” (Ostrom, 2005, 58). In other words, constitutional level rules are largely concerned with the determination of what actors are eligible to authoritatively participate in policy-making, and shape all subsequent avenues for rule and decision-making through outlining the fundamental constitutional principles governing an action situation at the broadest level. Collective-choice level rules in turn are those that “affect operational activities and results through their effects in determining who is eligible to be a participant and the specific rules to be used in changing operational rules.” (ibid). This suggests that collective choice rules are largely concerned with laying out the specific rules governing a general action arena already constituted through constitutional level rules. Finally, operational
rules are those that “directly affect day-to-day decisions made by the participants in any setting” (ibid).

Meanwhile, the horizontal approach differentiates among seven types of rules. “Position rules” specify the specific positions of authority in any decision process, connecting particular actors to authorized actions (Ostrom and Crawford, 2005, 193). “Boundary rules” are similar to position rules, although are more specific to the process of who fills particular positions. Boundary rules define at least three processes: “1) who is eligible to enter a position, 2) the process that determines which eligible participants may enter (or must enter) positions, and 3) how an individual may leave (or must leave) a position.” (Ostrom and Crawford, 2005, 194). Thus boundary rules are directly related to the issue of the right of particular actors to fill authoritative positions in an action situation. “Choice rules” are a third type of rule that specifies the range of actions that a “participant occupying a position must, must not, or may do at a particular point in a decision process.” (Ostrom and Crawford, 2005, 200). Thus choice rules fundamentally outline the conditions under which authoritative decisions may be made by particular actors in a decision process. A fourth type of rule – “aggregation rules” – are related to choice rules in the sense that they specify whether an authoritative decision may be made by a single participant, or require multiple participants to collaboratively make a decision (Ostrom and Crawford, 2005, 202).

“Information rules” refer to a broad category of rules that govern the flow of information between participants in an action situation, specifying everything from the allowable channels of information between participants, to the rules governing the “obligation, permission, or prohibition to communicate” between different participants at different levels of authority, and to the specific way in which communication is to take place (Ostrom and Crawford, 2005, 206). “Payoff rules” meanwhile refer to the sanctions or rewards that may be assigned to participants in an action situation, often in response to particular actions that have been taken (Ostrom and Crawford, 2005, 207). Finally, “scope rules” are directly related to “outcome variables that must, must not, or may be affected as a result of actions” taken within any action situation (Ostrom and Crawford, 2005, 208). Thus scope rules specify the range of allowable outcomes from an action situation, rather than specific actions to be taken in any action arena.
Broad classes of rules and norms may furthermore be distinguished from one another through analyzing the language used in specific “institutional statements [that] describe opportunities and constraints that create expectations about other actors’ behavior” in any particular action situation (Crawford and Ostrom, 2005, 137). The ADICO syntax developed by Crawford and Ostrom identifies five broad components of institutional statements. “Attributes” (A) specifies to whom the institutional statement applies. “Deontics” (D) refer to three broad classes of verbs that permit, oblige, or prohibit a specific activity. These are frequently coded in terms of actions that “may”, “must”, or “must not” be undertaken. The “Aim” (I) of any institutional statement refers to the particular actions or outcomes that are the focus of the deontic, that is, the particular thing or action that is permitted, obliged, or prohibited. “Conditions” (C) specify when and where the particular action or outcome takes place. Finally, the “Or Else” (O) component of an institutional statement refers to a specific and articulated consequence for not following the prescriptions of the institutional statement (Crawford and Ostrom, 2005, 139-152). Further refinements to the ADICO syntax, self-identified as the “institutional grammar tool” by its authors, also identify the “oBject” (B), or receiver, of any specific action (Siddiki, et al., 2012).

The utility of the syntax lies in the ability to standardize language and compare statements with one another, an outgrowth of which is the development of a taxonomy of institutional statements. For instance, “rules” are held to involve all five components of the ADICO syntax, in that an actor is expected to conform to a prescribed action under particular conditions or face a specific consequence. “Norms” meanwhile consist of only the ADIC components of the syntax, that is to say, there are no specific articulated consequences for failing to follow a prescribed course of action. Finally, “shared strategies” refer to actions that only contain the AIC components of the syntax. For example, there are specific identified actors with specific attributes that undertake specific actions under particular conditions, but without any specific expectation to do so or not (Crawford and Ostrom, 2005, 140). Where useful, I will re-articulate rules and norms that have been identified through legal analysis and elite interviewing in terms of the ADICO syntax in order to differentiate between rules, norms, and shared strategies as well as to maintain general analytical consistency.
I argue that position, boundary, choice, and aggregation rules are particularly important in understanding the concept of participatory authority. I believe position rules to be important in the sense that having multiple representatives for a particular national delegation increases the likelihood that indigenous groups obtain some measure of formal representation, in contrast with the one-member/one-vote form of representation that characterizes many international organizations. As will be illustrated shortly, when multiple member delegations are coupled with choice and aggregation rules that enable multiple representatives to determine the delegation’s position in a one-country/one-vote system, this potentially breaks the stranglehold of decision-making authority by the nation-state. Even more interesting are boundary rules that specify who is able to fill a given position and the process by which this selection occurs. For instance, if a particular position is designated to be filled by an indigenous representative, and the process by which this selection is entirely up to the indigenous group in question, it could be said that boundary rules bestow a degree of power to the respective indigenous group. Because there are a wide range of potential rule configurations that may place various constraints on when and how indigenous groups can enter and exit from positions of authority, this is a dimension of participation that is likely to be quite variable between cases.

Choice rules meanwhile are important in that they fundamentally outline the conditions under which authoritative decisions may be made by particular actors filling particular positions in a decision process. In a general sense, choice rules impacting indigenous sovereignty in international institutions would entail the degree to which such groups have a formal vote on all, some, or few/none of the decisions taken by the organization. Such provisions would grant some measure of joint control over decisions made by the institution in question. Because this category of rules is broadly encompassing, it may make sense to disaggregate this into several different categories. For instance, rules that govern whether a particular actor can initiate new agenda items, whether a particular actor can control the agenda by having the power to consider only certain actions to be taken on the agenda item, or undertake a particular action in light of some predetermined condition, each have significant impact on the relative power of different positions vis-à-vis one another within any action situation.
Finally, aggregation rules are potentially very important to the participatory dimension of indigenous international legal sovereignty because these are related to conditions under which an authoritative decision can be made. Whether the aggregation rules in effect are non-symmetric or symmetric will significantly influence the level of authority of any actor in an institutional setting (Ostrom, 2005, 202-203). For instance, if an authoritative decision can be made unilaterally by a specific actor within an institutional setting, a non-symmetric rule, then aggregation rules favor the decision-making power of that particular actor. However, if all actors must agree upon any decision taken by the group – a symmetric aggregation rule which effectively grants each actor veto power – then all actors could be termed as relative co-equals in terms of power within the institution, a situation which would likely be significant in determining bargaining relationships and coalition forming within groups.

As applied to indigenous group participation in international institutions then, a “high” level of authority granted by aggregation rules would be characterized by the indigenous group possessing unilateral authority to make decisions for the entire institution (a situation unlikely to be found in any institutional setting), or possessing veto power over all or most of the decisions made by the institution. A “medium” level of authority meanwhile might entail a situation where democratic rules specify a vote threshold in which indigenous group representatives are often likely to represent key swing votes, with this level likely diminishing as the relative proportion of indigenous group representatives in the organization likewise diminishes. Finally, a “low” level of authority would be illustrated by a situation in which a particular actor does not have a formal say or vote on any decision taken by the institution, as in a case where another actor with “high” levels of authority under aggregation rules can make a unilateral decision for the entire institution.

3.3. Institutional Rules in the Pacific Salmon Commission Affecting Indigenous Participation

Position rules pertaining to Commissioners for both delegations are spelled out at the constitutional level in Article II of the Pacific Salmon Treaty (PST). Paragraph 3 of Article II states that “The Commission shall consist of not more than eight Commissioners, of whom not more
than four shall be appointed by each Party. Each Party may also appoint not more than four alternate Commissioners, to serve in the absence of any Commissioner appointed by that Party."

In addition, Paragraph 4 of Article II stipulates that each delegation shall choose an individual to serve as the delegation’s primary representative, with these two individuals serving as Commission Chairman and Commission Vice-Chairman, with the positions alternating between the two countries on an annual basis. It is worthwhile to note here that informal norms at the operational level have evolved such that there is virtually no differentiation between the “formal” and “alternate” commissioner positions, such that all eight members are essentially co-equal (interview, PSC Commissioner, 12/16/09). This is in large part due to the basic aggregation rule of the organization as spelled out in Paragraph 6 of Article II, which states that “Each section [the United States and Canada] shall have one vote in the Commission. A decision or recommendation of the Commission shall be made only with the approval of both sections”.

Because each delegation has established its own aggregation rules for determining what the position of the national delegation will be in any particular instance, as will be demonstrated shortly, the active differentiation between Commissioners and alternates essentially becomes moot. Boundary rules in Paragraph 4 specify that both Commissioners and alternates “shall hold office at the pleasure of the Party by which they were appointed”, essentially deferring decisions on who is eligible to serve at the Commissioner level, the process by which potential individuals may enter these positions, and processes by which individuals may leave these positions to a collective-choice process governed independently by each delegation.

The Commission represents the most authoritative level of decision-making within the PSC given the broad authority granted to it by choice rules articulated at the constitutional level in the PST. In particular, Paragraph 7 of Article II states that “Subject to the approval of the Parties, the Commission shall make such by-laws and procedural rules for itself, for the Panels…, and for the committees… as may be necessary for the exercise of their functions and the conduct of their meetings”. Thus, all determination of constitutional-level rules governing collective-choice processes at the Panel and committee levels rests with the Commissioners. Furthermore, “The Commission may make recommendations to or advise the Parties on any matter relating to the
Treaty” (Article II, Paragraph 8, Pacific Salmon Treaty). Other choice rules granting sole authority over budgeting (Article II, Paragraph 12), disbursement of funds (Article II, Paragraph 13), appointment of and oversight over the Secretariat staff (Article II, Paragraphs 15 and 16), and creation and elimination of Panels and committees (Article II, Paragraphs 17 and 18) grant the Commission broad latitude over the entire range of decision functions undertaken by the organization. Figure 3.1. provides an organizational chart of the PSC, reflecting the relationship between the Commissioners, Panels, Committees, Enhancement Fund Committees, and Secretariat:

At the Panel and committee levels, various rules set at the constitutional level and embodied in the PST determine the range of authority exercised by these bodies. Specific choice
rules for each body are determined at the Commissioner level, as articulated in Paragraph 19 of Article II: “The Panels shall provide information and make recommendations to the Commission with respect to the functions of the Commission and carry out such other functions as the Treaty may specify or as the Commission may direct”. Therefore the Panels, as well as the committees, are fundamentally creatures of the Commissioners, with authority over only those issues that are specified by the Commission. All recommendations by the Panels must be approved by the Commission, thus constraining the relative independent decision-making power of the Panels.

A general position rule for all Panels is articulated in Paragraph 21 of Article II, which mandates that “Each Panel shall consist of not more than six members from each Party. Each Party may designate alternate Panel members to serve in the absence of any Panel member appointed by that Party”. In addition, various choice rules are spelled out specifically at the constitutional level within the Treaty itself. Annex I creates the various Panels, while the various Chapters of Annex IV articulate position, boundary, choice, and aggregation rules specific to each Panel. A consequence of this is that each Panel has a different set of rules unique to it alone that spells out in a specific fashion what it may or may not do. The Fraser Panel has additional rules specific to it laid out in Article VI of the PST, which is the source of its unique position vis-à-vis the other Panels. Specifically, Paragraph 6 of Article VI outlines the in-season regulatory authority of the Panel, a set of choice rules no other Panel possesses: “During the fishing season, the Fraser River Panel may make orders for the adjustment of fishing times and areas stipulated in the annual regulations in response to variations in anticipated conditions”.

A variety of additional rules are spelled out at the collective-choice level in the by-laws of the PSC. These primarily deal with rules of procedure and aggregation rules as they apply at the Panel and committee levels. Chapter III, Rule 7, Chapter IV, Rule 6, and Chapter IX, Section F, Rule 27 dictate that the general consensus rule of the Commission shall apply to the Panels, committees, and Enhancement Fund Committees respectively. Unlike the situations faced by the Panels and committees, the decisions of the Enhancement Fund Committees are final and “not subject to review by the Commission” according to Chapter IX, Section F, Rule 27(d).
Furthermore, the PSC by-laws specify various ethical guidelines pertaining to the committees, which are directed to serve as scientific bodies and are mandated to differentiate between technical problems and policy issues. In particular, Chapter V, Rule 10 states that “joint technical committees shall not attempt to resolve policy matters”, while Appendix TC1 specifies that “policy issues should be discussed in Technical Committee meetings only to the extent necessary to clarify relationships or interactions between policy and technical issues”. Therefore, technical committees are to provide technical advice to Panels, who provide policy recommendations to the Commission which then votes on whether to approve any and all recommendations coming from the Panels.

Therefore the decision-making process of the PSC would appear to be relatively straightforward. However, because of the broad deference granted to each delegation to determine additional rules at the collective-choice level for its own delegation, additional complexity is created regarding decision-making processes, the resulting negotiation patterns existing between different members of the two delegations, and relative influence of indigenous groups in particular. As a result, divergent patterns of decision-making exist within each of the delegations which impact the relative participatory authority held by American versus Canadian indigenous groups in the PSC. The various position, boundary, choice, and aggregation rules for each delegation are the subjects of the sub-sections which follow.

3.3.1. Rules-in-use at the Commissioner Level for the American Delegation

The situation of the so-called “treaty tribes” of Washington, Oregon, and Idaho stands out as the most significant level of indigenous participatory authority in the cases examined in this study. At this point is important to distinguish between two broad groupings of American indigenous groups that are considered distinct due to the specific areas in which they are located and the different collective fishing regimes that each group employs. The first group consists of twenty “treaty tribes” which hold special treaty rights “to fish in usual and accustomed places” and “in common with the citizens of the territory”. These treaty rights have been interpreted by the
courts in *US. v. Washington* (a case commonly referred to as the “Boldt decision”) and various ancillary cases to allocate roughly fifty percent of the annual salmon harvest to the tribes, to allow tribal fishing beyond reservation borders, and to grant the tribes “co-management authority” with the state. These tribes fish *independently* of one another but are collectively assisted by the Northwest Indian Fisheries Commission (NWIFC), which acts as a support agency that attempts to resolve inter-tribal collective action problems and to provide political and technical assistance to each of the member tribes.

The second group consists of four Indian reservations in the Columbia River basin of Washington, Oregon, and Idaho – the Umatilla, Nez Perce, Yakima, and Warm Springs – that have similar treaty provisions to fish. These tribes *collectively* regulate, through the Columbia River Inter-Tribal Fisheries Commission (CRITFC), a commercial fishery over a group of shared common fishing areas on the Columbia River. Due to dam construction on the Columbia, which disrupted traditional platform fishing areas, “treaty fishing access sites” (TFAS) were set aside under Public Law 10-581 to replace the usual and accustomed fishing areas which were flooded.

This distinction is important because boundary rules regarding who may serve as PSC Commissioners actively distinguish between the NWIFC and CRITFC tribes. In the case of the American delegation to the Pacific Salmon Commission, Public Law 99-5, 99 Stat. 7 serves as the implementing legislation of the PST, and outlines most of the rules at the collective-choice level that impact the participatory authority and roles that the various individual actors in the Commission play. Section 3(a) mandates a series of boundary rules that govern the selection and removal of the four PSC Commissioners. Specifically, individuals are to be “knowledgeable or experienced concerning Pacific salmon [and] to be appointed by and serve at the pleasure of the President”. Furthermore, the four positions are allocated according to a set formula by which:

"one shall be an official of the United States Government who shall be a nonvoting member of the United States Section; one shall be a resident of the State of Alaska and shall be appointed from a list of at least six qualified individuals nominated by the Governor of that State; one shall be a resident of the States of Oregon or Washington and shall be appointed from a list of at least six qualified individuals nominated by the Governors of those States; and one
shall be appointed from a list of at least six qualified individuals nominated by the treaty Indian tribes of the States of Idaho, Oregon, or Washington” (Public Law 99-5, Sec. 3(a)).

Section 3(b) of the same statute outlines a similar formula for the Alternate Commissioner positions within the PSC, with the exception that these are appointed by the Secretary of State in consultation with the Secretary of Commerce, in the case of the Federal and State representatives, and the Secretary of Interior in the case of the treaty Indian tribes. However, due to significant backlogs in the confirmation processes for Presidential appointees across all departments and agencies of the Federal government, all parties essentially have de facto authority over who fills these positions, with both Commissioner and Panel/Technical Committee representatives often serving without formal confirmation (interview, PSC Commissioner, 12/16/09). Because of the evolution in norms in the rules of procedure of the PSC, which effectively no longer distinguishes between the roles of Commissioners and alternates, the structure of the American delegation thus consists of two Federal representatives, two State of Alaska representatives, a representative from Washington, one from Oregon, and two from the treaty Indian tribes.

In terms of the treaty Indian representatives, a significant operational level norm pertaining to the nomination process that is not codified in the statute is that the tribes have unshared nominating authority for who fills these positions. An operational norm has been to have both the NWIFC and CRITFC submit a list of three nominees, with one individual selected from each list (interview, NWIFC staff, 2/18/10). Historically, additional boundary rules determined at the operational level and negotiated between representatives of the NWIFC and CRITFC rotated the positions of full and alternate tribal commissioners between the NWIFC and CRITFC representative on an annual basis. However in light of the fact that full and alternate Commissioners are no longer effectively distinguished from one another, whichever of the two treaty tribal groups serves as full or alternate is merely a nominal matter (interview, PSC Commissioner, 12/16/09). Combined with the fact that none of the Commissioners to the PSC in recent years have been selected according to the confirmation process outlined in Section 3(a),
the treaty tribes hold *de facto* authority to fill their allocated commissioner positions with virtually anybody they see fit (interview, NWIFC staff, 2/18/10). Thus the nomination and selection processes for filling the Commissioner positions are essentially internal processes of the NWIFC and CRITFC despite the boundary rules set forth in Section 3(a) of Public Law 99-5.

Aggregation rules pertaining to decision-making of the Commissioners from the American delegation are somewhat complex. Section 3(g)(1) of Public Law 99-5 specifies that “the United States Section shall operate with the objective of attaining consensus decisions in the development and exercise of its single vote within the Commission. A decision of the United States Section shall be taken when there is no dissenting vote”. Unwritten operational level rules in recent years have been to have all eight full and alternate Commissioners collectively determine the position of the American delegation (interview, PSC Commissioner, 12/16/09). Recall however that the Federal representative is declared to be a nonvoting member according to Section 3(a). This would appear to effectively grant individual veto power to each of the two Commissioners representing the State of Alaska, the Commissioner from Oregon, the Commissioner from Washington, the Commissioner representing the NWIFC tribes, and the Commissioner representing the CRITFC tribes. This veto authority is limited however by the preemption clause contained in Section 6 of Public Law 99-5, which states:

“If any State or treaty Indian tribe has taken any action, or omitted to take any action, the results of which place the United States in jeopardy of not fulfilling its international obligations under the Treaty, or any fishery regime or Fraser River Panel regulation adopted thereunder, the Secretary [of Commerce] shall inform the State or tribe of the manner in which the action or inaction places the United States in jeopardy of not fulfilling its international obligations under the Treaty, of any remedial action which would relieve this concern, and of the intention to promulgate Federal regulations if such remedial actions are not undertaken within fifteen days unless an earlier action is required to avoid violation of United States Treaty obligations… regulations may be promulgated by the Secretary pursuant to section 7(a) of this title which shall supersede any State or treaty Indian tribal law, regulation, or order determined by the Secretary to place the United States in jeopardy of not fulfilling its international obligations…”

This has served to temper enthusiasm for the veto authority held by the tribes in particular, who view the perspective that the Federal government representatives are “nonvoting members” with a healthy dose of skepticism, believing that preemption effectively gives the Federal government
veto authority over their veto in any case where an inability to reach consensus between the tribes, State of Alaska, State of Oregon, and State of Washington might jeopardize the international obligations of the United States (interview, PSC Commissioner, 2/8/10; interview, NWIFC staff, 2/18/10). However, the general perspective held by all participants, Federal, State, and tribal, is that the mere threat of veto authority by the States and tribes, and the power of preemption by the Federal government effectively forces negotiation between each of the parties, as evidenced by the fact that neither an official veto nor act of preemption has taken place (interview, PSC Commissioner, 2/8/10). This rather positive perspective of the American voting structure is not universally held by all participants in the PSC, however. Fears of gridlock, concerns that this complicates intra-delegation and bilateral negotiation patterns, and/or unease over the precedence that this could set for increased demands for participation by First Nations representatives are widespread in the literature and were mentioned several times during the interviewing process (Miller, et al., 2001; McDorman, 2000; Schmidt, 1996; interview, PSC Commissioner, 1/11/10; interview, PSC Commissioner, 3/8/10).

In terms of choice rules directly pertaining to the tribes, any tribal representative can initiate any item at both the domestic section and joint international sessions at the full Commission, Panel, and Technical Committee levels (interview, PSC Commissioner, 12/16/09). This gives them an enhanced agenda setting role that the tribes have often used to push particular issues, as will be detailed in Chapter Six. Due to the fact that all decisions made by the PSC must be approved by the Commission, the tribes through their Commissioner positions have a formal vote on all items of business (interview, PSC Commissioner, 12/16/09).

3.3.2. Rules-in-use at the Panel and Committee Levels for the American Delegation

Position and boundary rules for the Panels, Technical Committees, and Enhancement Fund Committees typically try to achieve a similar balance between the Federal, State, and tribal actors of the American delegation as outlined above for the Commissioner level. Specific position rules for each of the Panels are set by each national delegation, subject to the restriction of a
maximum of six members set forth by Article II, Paragraph 21 of the PST. An informal agreement between the treaty tribes and the State of Alaska established an operational norm that the tribes would not seek representation in the Northern and Transboundary Panels, while Alaska would not seek representation in the Southern and Fraser River Panels, thereby granting deference to each other’s “spheres of influence” (interview, PSC Commissioner, 1/13/10; interview, PSC Commissioner, 2/8/10). This norm was subsequently codified by specific position rules outlined in Section 3 of Public Law 99-5. While this would seem to be a major concession on the part of the treaty tribes to willingly forgo access to positions of potential influence, the tribes themselves appear to view the arrangement as largely inconsequential due to the fact that their veto authority over any decision over a recommendation coming out of the Panel process allows them to derail any Panel decisions that would run counter to their interests (interview, PSC Commissioner, 2/8/10).

Position and boundary rules relevant for the American treaty tribes at the Panel level are thus restricted to rules governing representation on the Southern and Fraser River Panels. Section 3(c) of Public Law 99-5 specifies that the Southern Panel shall consist of six members, one from the Federal Government, one from Oregon, one from Washington, two from the treaty tribes, and one from the commercial or recreational fisheries sector. An operational norm has been for both the NWIFC and CRITFC to nominate their own representatives, with each receiving one of the two allocated positions (interview, PSC Commissioner, 2/8/10). These positions are subject to appointment by the Secretary of the Interior after receipt of nomination lists supplied by the treaty tribes, pursuant to Section 3(f). As with the Commissioner positions, however, Secretary of Interior approval has essentially been a rubber stamp of the preferred candidate being nominated by either the NWIFC or CRITFC (ibid).

Section 3(e) of Public Law 99-5 meanwhile stipulates that the United States representation on the Fraser River Panel consist of four members, a Federal representative, an official from the State of Washington, a representative from the commercial fishery sector, and an individual “appointed from a list submitted by the treaty Indian tribes of individuals with salmon
fishery management responsibility and expertise for the fisheries for which the Fraser River Panel is responsible" (Section 3(e)(4), Public Law 99-5). This essentially earmarks a position for, and grants significant regulatory authority to, a member of a Puget Sound region tribe whose fisheries are known to target Fraser River Sockeye and Pink stocks. This position is currently held by Lorraine Loomis of the Swinomish Indian Tribal Community (Pacific Salmon Commission, N.d.).

Aggregation rules at the Panel level are somewhat different than at the Commissioner level. For the Northern and Southern Panels, “all decisions and recommendations of the United States Section… shall require the concurring vote of a majority of the United States Panel members present and voting, except that decisions and recommendations of the Southern Panel shall require the concurring vote of [the representatives of Washington and Oregon] and one of the members [representing the two groups of treaty tribes]” (Section 3(g)(2), Public Law 99-5). For the Fraser River Panel, most decisions and recommendations must be reached by a consensus vote of all Panel members that are present and voting, with the exception of in-season adjustments to fishing times and areas stipulated in annual regulations as set forth in Article VI, Paragraph 6 of the PST (Section 3(g)(3), Public Law 99-5). For these actions, decisions must be made on the basis of a majority, “provided that the Panel members representing the State and Tribal fishery management authorities concur” (ibid). What this effectively means is that the only way in which a decision by the American delegation to the Fraser River Panel could be derailed by a lack of a majority is a situation in which the Federal representative and commercial fishery representative were at odds with the State/Tribal perspective on a particular issue.

Position, boundary, choice, and aggregation rules for the committees are laid out at the collective-choice level in the PSC by-laws, as constitutional-level rules under the PST regarding the creation of committees are largely left open-ended, consisting only of the right of the Commission to “eliminate or establish committees as appropriate” (Article II, Paragraph 17, Pacific Salmon Treaty). General guidance on position and boundary rules are provided for under Chapter V, Rule 3 of the PSC Bylaws, which states that joint committees may “consist of such technical representatives as may be designated by each national section to the Commission"
Therefore the representation on these bodies is solely up to operational-level rule making within each national delegation. A consequence of this is that the size and composition of the various committees varies considerably. For instance, the American side of the Joint Chinook Technical Committee consists of twenty-three members, while the Canadian side consists of thirteen members, making it the largest of the technical committees, whereas the Joint Chum Technical Committee consists of five members from each delegation (Pacific Salmon Commission, N.d.). A general norm for the American delegation has been to have the membership of the technical committees be reflective of the general composition of the respective Panels to which each particular committee offers technical advice, although there are no guaranteed spots allocated to particular State, Tribal, or commercial sectors (interview, PSC Commissioner, 2/8/10). Thus the composition of the technical committees, at least on the American side, tends to be rather ad hoc. Aggregation rules specify that the objective of decision-making is to seek consensus, but if consensus cannot be attained, the technical committee has the authority to present different viewpoints held by individual committee members without identifying the individuals in question (Chapter V, Rule 9, PSC Bylaws).

Choice rules at the Panel and committee levels are fundamentally constrained by the terms of the PST which establishes each of the Panels and outlines general management rules for each, as well as certain guidelines regarding scientific integrity and ethics as contained in the PSC Bylaws. There are a multitude of such rules, which are specific to each Panel, but they will not be explored in significant detail here. For illustrative purposes, Paragraph 2 of Chapter 4 of Annex IV of the PST specifies the formula for allocating the annual American percentage share of the Total Allowable Catch (TAC) of Fraser River Sockeye and Pink salmon, at 16.5% and 25.7%, respectively. Thus the Panel has no authority to unilaterally adjust specific allocations on a year-to-year basis. Furthermore, certain actors within the Panel are given specific duties via a variety of choice rules, as in the case of the Canadian delegation, which must set the overall target spawning escapement objective (Annex IV, Chapter 4, Paragraph 3(b), Pacific Salmon Treaty). Specific choice rules pertaining to different management regimes for different Chinook salmon stocks under Annex IV, Chapter 3 are another example of ways in which the relative latitude of
Panels to make independent choices has been constrained at the constitutional level by the Commission. When relevant, specific rules of interest are explored in greater detail in Chapter 6 of this dissertation. But for the purpose of this discussion, choice rules at the Panel and committee levels have been constrained by a wide variety of rules and norms developed at the Commission level, thereby making the Panels largely subservient to the Commissioners.

Finally, position and aggregation rules for the Enhancement Fund Committees are set forth under Chapter IX, Section F, Rule 27 of the PSC Bylaws, which specify that each of committees shall consist of six members, with three members selected by each national delegation. Furthermore, decisions must be made by consensus. As referenced earlier, these committees have greater leeway to make independent decisions that are not subject to review by the Commission, highlighting a potential avenue for influence for those who sit on these committees. Boundary rules for each national delegation are set at the operational level, with a general norm on the American side being that the Southern Fund shall consist of one Federal, State, and Tribal representative, while the Northern Fund shall consist of Federal and Alaskan representatives in accordance with the general norm regarding “spheres of influence” between the tribes and Alaska as referenced earlier. However, as these boundary rules are set according to operational norms, the specific individuals who fill these positions need not come from a particular interest section within the national delegation, and the Commissioners have leeway to appoint members to these committees as they see fit (interview, PSC Secretariat Staff, 1/14/10).

3.3.3. Summary of American Delegation to the PSC

I am arguing that the participatory authority of the American treaty tribes within the PSC is high due to a number of provisions embodied in the institutional rules of the organization. The first is that choice rules for the Commissioner level of decision-making give the Commissioners broad leeway to make decisions across the entire range of decision functions, as articulated by Lasswell (1971), affecting how “intelligence” is collected, allowing for individual Commissioners to “promote” any course of action, enabling the Commission to “prescribe” rules governing particular
activities of the subsidiary organs of the organization, giving the Commission broad powers of “appraisal” of PSC programs, and even allowing for the Commission to “terminate” any program or activity of the organization. Because the treaty tribes have a guaranteed allocation of two of the eight Commissioner positions, this gives these groups almost unlimited ability to bring any issue to the table and to impact the formal decision-making processes of the organization.

Secondly, although there are rules that could technically restrict the treaty tribes from selecting the particular individuals who serve in these roles, due to ancillary bureaucratic issues pertaining to the confirmation process, the tribes have de facto authority to fill these positions with whomever they please. Because this ability is not codified in constitutional-level rules however, this power is much more tenuous and could be easily taken away if the Federal government so chose to invoke its confirmation authority. For now however, both NWIFC and CRITFC have an enhanced ability to influence the composition of the American delegation of Commissioners to the PSC, as well as the Southern and Fraser River Panels, by placing their preferred individuals in the positions that are specifically allocated to indigenous group representatives.

Thirdly, because many of the rules governing participation are codified at the national level through implementing legislation, rather than embodied in the treaty language itself, the composition of the American delegation is not subject to alteration or manipulation by Canada at the international level. The inclusion of the treaty tribes in the PSC process was not popular among officials in the IPFSC, the precursor to the PSC, and some interests in Canada (Roos, 1991; interview, PSC Commissioner, 1/11/10; interview, PSC Commissioner, 3/8/10). By keeping the setting of boundary and aggregation rules within domestic policy-making environments, the tribes are thus insulated, to a certain degree, from challenges at the international level to their inclusion in the PSC policy-making process.

Finally, and perhaps most significantly, the existence of tribal veto authority effectively grants a great deal of influence to the tribes and ensures that decisions that would be anathema to their interests will not be passed. The existence of the potential for Federal preemption
somewhat tempers this power, of course, but also ensures that all interests in the American
delegation negotiate in good faith and reach compromise solutions that do not run too afoul of
their individual perspectives. The veto power also accentuates the prestige of the tribes and
serves to make them a focus of lobbying efforts by other stakeholders in situations where the
interests between certain non-tribal and tribal actors align, as will be established in later chapters.
Lastly, the existence of the tribal veto at the Commissioner level allows the tribes and Alaska to
focus their endeavors on the primary issues of concern to them in their respective “spheres of
influence”, while avoiding potentially confrontational issues with one another that are nonetheless
of relatively smaller importance to tribal interests. This helps to ratchet down tensions between
the various stakeholders of the American delegation and has helped to improve the levels of trust
between them, as will be discussed in Chapter 6.

3.3.4. Rules-in-use at the Commissioner Level for Canadian Delegation

The relative participatory authority of the different Commissioner positions of the
Canadian delegation offers a stark contrast to that of the United States’ delegation. A very broad
distinction between Canada and the United States is the nature of each country’s federal system.
Canada represents a sort of “double federation” based on both territory and special recognition of
the rights and political status of particular peoples, rather than a federalism based primarily on
territory as in the United States (Smith, 2010). A consequence of this is that the national
government is pulled in different directions by various stakeholders and the provinces
themselves, with the federal and provincial governments asserting authority over their own
spheres of influence and sometimes fighting for ascendancy vis-à-vis one another in particular
policy areas, especially in situations where the special status of a particular protected class of
people serves to pit the provincial and federal governments against each other.

In particular, environmental policy in Canada is quite complex and represents a major
fault line between the provinces and the federal government. In contrast to the “cooperative
federalism” which characterizes the modern application of federalism in the United States,
environmental policy in Canada conforms more to a “dual federalism” model of shared authority in which the different orders of government have sole spheres of influence, which frequently results in coordination problems and “jurisdictional confusion about which problems can or should be attacked by which level of government” (Howlett and Joshi-Koop, 2010, 471). The general relationship is that the provinces retain control over natural resource development and exploration, while the Federal government has sole jurisdiction over designated federal lands, international trade, shipping/navigation, and fisheries (ibid). Virtually all authority over fisheries policy, save for some limited inland jurisdictions granted to the provinces, is vested in the federal government through the Fisheries Act, which designates the DFO as the sole regulatory agency.

The Fisheries Act contains a multitude of provisions that grant the Minister of Fisheries and Oceans broad discretion in setting a wide range of regulatory policies pertaining to fisheries. For instance, Part 1, Section 37 grants the Minister power to issue an order allocating “any combination of quantities or shares of the fish that may be fished among any groups or communities that the order specifies”. Similarly, Part 1, Section 38 specifies that the Minister may promulgate fisheries management orders with respect to any species of fish or marine plant, up to and including an outright prohibition of harvesting a specific species. Such rules are subject to various conditions laid out in the Act, such as various stipulations regarding due process and certain exemptions from policies which have been stipulated by court orders or agreements made external to the Act. A notable example of such a constraint on Ministry authority is the international treaty agreement to exercise joint regulatory power over Fraser River salmon stocks under the auspices of the PSC. Therefore, the broad discretion of the Minister, and his or her delegates such as the Regional Directors General, provides a stark contrast to the pattern of fisheries co-management in the United States.

As a consequence of this broad authority, boundary, choice, and aggregation rules for the Canadian delegation are often exercised at the operational level, with specific rules often not being formally articulated or written down as official policy. The general implication of the Fisheries Act is that DFO calls all of the shots when it comes to passing and enforcing regulations
pertaining to fisheries. In the context of the PSC, this is most notably manifested by the informal, yet powerful, aggregation rule that specifies that the position of the Canadian delegation is solely determined by the Regional Director General for the Pacific region, who always sits as the Commission Chairman of the Canadian delegation (interview, PSC Enhancement Fund Committee Member, 3/2/10; interview, PSC Commissioner, 3/8/10).

An outgrowth of this unilateral decision-making authority on the part of DFO within the PSC is that there is a strong informal rule mandating the maintenance of a unified Canadian position in the context of bilateral negotiations within the PSC (interview, PSC Commissioner, 1/11/10; interview, DFO Staff, 3/9/10). In the ADICO syntax, this would be articulated as “all individual Commissioners must advance the policy position of the Canadian government during bilateral negotiations or else the individual’s seat within the Commission shall be terminated”. During the course of interviewing it was common to hear statements suggesting that disagreements between Commissioners could only be articulated within the confines of the domestic caucus that precedes bilateral negotiation (interview, PSC Commissioner, 1/11/10; interview, Former PSC Commissioner, 3/8/10), that DFO has one hundred percent of the responsibility for all decision-making within the PSC process (interview, DFO Staff, 1/12/10; interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 2/10/10), and/or that generally the majority opinion will prevail and DFO will vote accordingly, although the DFO vote fundamentally determines the Canadian position and could feasibly contradict a majority opinion within the commission (interview, PSC Commissioner, 2/9/10). That being said, every individual interviewed stated that any Commissioner could initiate any agenda item, although this was restricted within the context of the domestic caucus only. The implication here is that the asymmetric aggregation rule implies a general informal choice rule that gives the Regional Director General the sole discretion to make decisions for the entire Canadian delegation. The ability of the other Commissioners to initiate action items is thus restricted solely to what amounts to a domestic policy process within the confines of the domestic caucus before PSC meetings.
This sets up a peculiar situation due to the fact that constitutional level rules in the PST dictate the four commissioner/four alternate commissioner structure, which was demanded by the American negotiating team and reluctantly accepted by the Canadians during the treaty negotiations leading up to the original 1985 treaty (interview, PSC Commissioner, 3/8/10).

Similar to the American delegation, but for obviously different reasons, the Canadian delegation does not actively differentiate between the full and alternate Commissioner positions. This is primarily due to the fact that with sole decision authority within the context of the PSC process being vested in the Regional Director General, the seven other full and alternate Commissioners are essentially co-equal in terms of their relative lack of power to impact decisions. Thus in contrast to the United States delegation, which could be characterized as consisting of eight co-equal Commissioners, the Canadian delegation is best characterized as consisting of a single Commissioner in congress with seven assistants.

Boundary rules specifying who fills these Commissioner positions are highly informal and fluid. A general pattern throughout most of the history of the PSC has been to have two Commissioners represented by DFO personnel, two Commissioners representing commercial fishery interests, two Commissioners representing recreational fisheries, and two Commissioners representing First Nations groups, although there is no official written policy in this regard (interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner 2/9/10). In recent years, there has been a slight shift such that the delegation now consists of two DFO officials, two First Nations representatives, and one representative each for the commercial fisheries sector, recreational fisheries, the Province of British Columbia, and a representative from an environmental group (interview, PSC Commissioner, 1/14/10; interview, Former PSC Commissioner, 3/8/10). The ability to shuffle the specific sectors represented in the Commission stems from DFOs status as sole authority over fisheries policy and the fact that there is no official policy delegating seats on the Commission to particular interests (interview, Former PSC Commissioner, 3/8/10).
The process for appointing Commissioners is similarly informal, although general practice has become regularized in recent years. The Regional Director General solicits nominations for each position, and then narrows this list down to a list of three finalists, which is reviewed by the Minister of Fisheries and Oceans in Ottawa who ultimately appoints the individual (interview, PSC Commissioner, 1/11/10; interview DFO Staff, 1/12/10). Thus the Regional Director General has significant input and serves as a sort of gatekeeper, in that he or she controls the solicitation process and has deference to identify his or her three preferred candidates. This has led to some criticism by various stakeholders that the solicitation process is not comprehensive and is targeted towards individuals or groups sympathetic to the general DFO position on salmon fisheries (interview, PSC Commissioner, 1/14/10). Another criticism lies in the fact that the relatively few positions available at the Commission, Panel, and committee levels means that DFO cannot possibly accommodate all indigenous groups in the process since there are over 250 such bands in British Columbia (interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 3/8/10). An affiliated problem in this regard is that there is no effective pan-First Nations representative body akin to that of the NWIFC and CRITFC, although attempts to develop such institutions have occurred in the past with the now-defunct British Columbia Aboriginal Fisheries Commission (BCAFC) and, since 2007, with the British Columbia First Nations Fisheries Commission (BCFNFC) (interview, PSC Commissioner, 1/14/10; British Columbia First Nations Fisheries Commission, N.d.).

All of this begs the question of why DFO makes room to accommodate these particular interests in the Commission. The entrée of Canadian stakeholders into the PSC process stems from a general culture of public-private consultation, which is fundamentally different than in the American delegation which is rooted in the Federal Government's recognition of state and tribal governments as co-managers of fishery resources. “Consultation policy” refers to a complex array of rules and norms derived from court mandates, general policy directed from the Privy Council of Canada, and in the case of DFO, a general bureaucratic culture dating back to the 1970’s (interview, DFO Staff, 1/12/10). The obligation on the part of DFO to consult each specific class of stakeholder is different for each of them. However DFO has been at the forefront of
formalizing consultative policy before it was mandated to do so under the directive of the national government, using the PSC process in particular as an experiment in involving multiple stakeholders in order to defuse group conflict between the various Canadian stakeholders, and thus setting a precedent that creates an expectation by various groups that they will be actively consulted by DFO during the regulatory process (interview, PSC Commissioner, 1/11/10; interview, Former PSC Commissioner, 3/8/10). A more detailed account regarding the specifics of consultation policy is provided in Chapter Four. For now however, the primary point is that the duty to consult is the source of the inclusion of non-DFO stakeholders into the PSC process, as DFO could quite feasibly decide to reserve all positions on the Commission to its own staff due to the broad discretion granted to the Minister.

3.3.5. Rules-in-use at the Panel and Committee Levels for the Canadian Delegation

The broad discretion of DFO is similarly reflected in boundary, choice, and aggregation rules at the Panel and Committee levels, although interestingly, more formalized rules have been developed for guidance at this level in contrast to the rather informal norms and rules at the Commissioner level. The office of the Regional Director General – Pacific Region is presently in the process of formalizing policies intended to “ensure transparency, consistency, and fairness in the management of requests from external parties to participate” as Canadian PSC representatives (Fisheries and Oceans Canada, 2010b). While these are draft policies and thus have not yet been codified as official policy, they give insight into the general principles of the Department and represent an attempt to more formally outline its general philosophy regarding stakeholder consultation and engagement.

Similar to the general operation of the Canadian delegation at the Commissioner level, the positions of Chair and Vice-Chair of each Panel and Technical Committee is reserved for officials from DFO (Fisheries and Oceans Canada, 2010a/2010b). In contrast to the appointment process for Commissioners, however, the discretion to make both Panel and committee appointments rests with the Regional Director General of the Pacific Region (ibid). The draft policy for appointments to the Panel level also outlines the specific stakeholders who are eligible
to seek out representation, and outline a set of principles and considerations to be taken into account when making a decision between individuals who will fill particular positions. In particular, DFO has explicitly stated that “non-governmental representatives on the Panels should be chosen to represent the geographic area [of the respective Panel] and, where possible, from the following interests and sectors: First Nations, commercial harvest interests, recreational harvest interests, and environmental interests” (Fisheries and Oceans Canada, 2010a). The draft policy also formalizes a nomination process, in which DFO states its intention to solicit nominations from various “coordinating bodies” such as the Sport Fisheries Advisory Board, Marine Conservation Caucus, BCFNFC, and others (ibid). This could be meant as a signal that DFO desires a more directed relationship vis-à-vis First Nations groups, rather than having to go through the expense of contacting the multitude of individual bands on an ad hoc basis (interview, PSC Commissioner, 1/14/10). DFO indicates however that a standardized nomination and selection process will not be followed and that “the actual nomination process will vary depending on the interest group(s) and whether there is a region-wide or more localized organization that can make recommendations on its behalf”, that DFO reserves the authority to identify the particular groups from which they will solicit nominations, and that they reserve the right to engage band tribal councils at the individual level on a case-by-case basis (Fisheries and Oceans Canada, 2010a).

Once nominations have been received, DFO has indicated that they will be evaluated based on several considerations. A few of these are noteworthy for this study. For instance, “the ability of individuals to represent, broadly, the interests of Canada (not solely the interests of the sector or interest group they represent)”, “the experience, technical, and/or traditional ecological knowledge, communication skills, and team-work required to successfully fulfill the role of Panel member”, “respect for the interests and views of others”, and “ability to compromise to seek common solutions to complex issues” (ibid) are all reflective of the general operating norm for maintaining a unified front against the United States within the organization, and a desire for willingness to subsume one’s own interests to that of Canada’s, as reflected by the official position on issues as directed by DFO.
Similar provisions have been promulgated for participation at the committee level, with a few additional stipulations. Technical Committee staff composition, in contrast to the Panels, is expected to consist primarily of DFO technical staff (ibid). The draft policy on committee membership also does not specifically address the desire for inclusion of individuals representing specific sectors, and reiterates the PST’s ethical guidelines that distinguish between scientific and policy roles at the committee level (Fisheries and Oceans Canada, 2010b). That being said, the policy clearly articulates a desire to include non-DFO individuals whose utility to DFO lies in their access to data and knowledge of very localized populations of salmon (ibid). As such, there is no clear expectation of inclusion of other sectoral actors who have allocated positions at the Commissioner level, such as recreational fishery interests. This accentuates the potential relative influence of First Nations groups due to their intimate knowledge of many key stocks, particularly in remote locations, and in practice, an informal norm has evolved within DFO such that First Nations should be represented within all decision-making bodies, Commission, Panels, and committees, making First Nations the second largest group in terms of representation in the PSC after DFO officials (interview, PSC Commissioner, 1/14/10). Also in contrast to guidelines promulgated for the Panel level, the draft policy specifies that new technical committee members will be invited to participate for a preliminary period of one year, at the end of which their performance will be assessed by various DFO officials against the list of guidelines and work requirements listed in the draft document, after which they may be renewed for an additional period of two years (ibid). However because the draft policy pertaining to Panels is silent on the issue of terms, similar yet less formalized norms are likely to be in operation for the Panels as well, especially in light of the broad discretion of the Minister and the Regional Director General.

Finally, there has been no formal attempt at promulgating guidelines for participation in the Enhancement Fund Committees, although this is an area where First Nations influence has been noted as being rather substantial, as will be demonstrated in Chapter 6 (interview, PSC Secretariat Staff, 1/14/10). In keeping with the general informal norm that First Nations groups should be represented in every decision-making body of the organization, at least one First Nations representative has served on each of the committees since their inception (ibid).
3.3.6. Summary of the Canadian Delegation to the PSC

The participatory authority of First Nations groups relative to that of the treaty tribes of the United States is thus much more constrained. Lacking any real decision-making authority given the monopoly over decision-making for the Canadian delegation by the Regional Director General, the choice functions of First Nations groups are essentially restricted to bringing agenda items to the attention of DFO within the confines of the domestic caucus, and mechanisms are in place for the removal of individuals who do not “toe the party line”. Also, First Nations groups have much less power to choose their own representatives to the body than that enjoyed by the American treaty tribes. On the other hand, First Nations representation is much broader than that of the treaty tribes, with First Nations representatives occupying positions within every Panel and committee, unlike their American counterparts, although the allocation of these positions are not guaranteed by strong boundary rules as in the American case. Due to the recognized “duty to consult” however, it may be infeasible for the Government of Canada to totally do away with some degree of First Nations representation in the PSC, even if it wanted to do so. By virtue then of the relative entrenchment of these positions, the PSC at least represents a formal forum through which First Nations can bring to the attention of DFO issues of concern to them, and a number of individuals from each of the sectors represented in the Canadian delegation indicated that this has resulted in a marked increase in the “face time” experienced between First Nations representatives and DFO officials. Therefore it might be said that the relative influence of First Nations groups within the PSC is much more subtle than that of American treaty tribes, and that the PSC offers these groups an advantaged behind-closed-doors lobbying position to advance their particular interests.

3.4. Institutional Rules in the IPHC Affecting Indigenous Participation

Because the IPHC has a much more simplified structure relative to the PSC, consisting of a Commission which oversees the activities of a professional technical staff and appoints its leadership, an institutional analysis of the rules pertaining to indigenous participation within the organization is much more straightforward. Even though there is no formal recognition on the
part of the IPHC or its constituent national delegations of a right of formal representation for
indigenous groups within the IPHC, an examination of the rules of the organization nonetheless
provide a number of interesting comparisons to the PSC which can help elucidate the potential
avenues or barriers to indigenous participation in international institutions.

The IPHC was created by the 1923 Convention for the Preservation of the Halibut
Fishery, and subsequently amended by new Conventions in 1930 and 1937 (IPHC, 1998). The
current version of the treaty that is in effect is known as the Convention for the Preservation of the
Halibut Fishery of the Northern Pacific Ocean and Bering Sea, which was signed and ratified in
1953, and subsequently amended in 1979 due to requirements contained in the Magnuson
Fisheries Conservation and Management Act of 1976 that forced the United States to renegotiate
all international fisheries treaties (ibid). These changes are officially known as the Protocol
Amending the Convention between Canada and the United States of America for the
Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea, and will
henceforth be referred to as the 1979 Protocol. Any reference to the “Halibut Treaty” will be in
reference to the 1953 treaty unless otherwise noted.

Original position rules in Article III of the 1923 treaty stipulated that the Commission
would consist of four members, two to be appointed by each party. Choice rules specified in the
same article of the treaty specified that the Commission carry out collective scientific investigation
into the life history of halibut, report results to both governments, and pass “recommendations as
to the regulation of the halibut fishery… which may seem desirable for its preservation and
development”. Furthermore, Article IV mandated that the contracting parties agree to enact and
enforce the regulations recommended by the Commission, effectively binding each other to joint
management unless either side decided to terminate the treaty as stipulated in Article V.
Therefore the IPHC would appear to have a rather free mandate to set regulations as it sees fit
that are binding to both parties.

The 1953 treaty subsequently expanded the membership of the Commission to three
members from each party, and the 1979 Protocol added language that stipulated that each
Commissioner shall serve at the pleasure of the appointing party, and that each party has sole authority to fill vacancies as they occur. No official aggregation rule was set in the original treaty. Aggregation rules embodied in the 1953 treaty specify that “all decisions of the Commission shall be made by a concurring vote of at least two of the Commissioners of each Contracting Party”, known as the “two plus two” rule. Because the Fisheries Act grants sole implementation authority over fisheries to DFO, no additional legislation was needed to pass the 1953 treaty or the 1979 protocol. The implementation legislation for the American delegation is the Northern Pacific Halibut Act of 1982, which contains, along with its subsequent amendments, additional important boundary, choice, and aggregation rules applicable to the American delegation.

3.4.1. Rules-in-use for the American Delegation

Section 773a(a) of the Northern Pacific Halibut Act details boundary rules for who shall fill the positions on the Commission allocated to the United States in the Halibut Treaty. All positions are to be appointed by the President and serve at his pleasure, serving two year renewable appointments. One of these positions is reserved for an official of NOAA, while the other two “shall be knowledgeable or experienced concerning the Northern Pacific halibut fishery; of these, one shall be a resident of Alaska and the other shall be a nonresident of Alaska”. Furthermore, there is a stipulation that at least one of the three shall be a voting member of the NPFMC. Section 773a(b) further allows for the appointment, by the Secretary of State in consultation with the Secretary of Commerce, of up to three alternate commissioners who may, in the case of the absence of the full Commissioner, fill in and exercise all powers and duties of the particular Commissioner. Thus alternate commissioners do not hold the same status of the alternate commissioners in the PSC.

The Act in section 773b also grants a veto authority to the Secretary of State, with the concurrence of the Secretary of Commerce, over any recommendation made by the Commission regarding specific annual total allowable catch levels and recommendations for reallocations once 75 percent of the annual TAC has been taken, as provided for in Paragraphs 14 and 15 of the Annex in the 1979 Protocol. Doing so would obviously lead to the potential termination of the
treaty, and has not been exercised by the Secretary of State, but this does highlight the fact that the Federal government has an accentuated role in the IPHC relative to that of the PSC, in which each Commissioner has veto authority.

The official structure of the IPHC does not open any explicit avenues for participation by the American treaty tribes, despite their recognized legal allocation to halibut. However, they are not formally excluded from the process either. The treaty tribes obtained a formal recognition of their right to take halibut under sub-proceeding No. 92-1 to *U.S. v. Washington*, upon which in 1994 the Makah tribe in particular began attending IPHC and PFMC meetings asserting their rights to the resource (interview, NWIFC Staff, 3/30/10). However, the IPHC does not recognize the treaty tribes as co-managers of the resource, viewing them instead as a special class of commercial harvesters (interview, IPHC Staff, 3/18/10; interview, NWIFC Staff, 3/30/10). Because the IPHC has formalized procedures for working with commercial and sport fisheries and processors, the treaty tribes were initially instructed to submit their issues through the formally recognized Conference Board (interview, NWIFC Staff, 3/30/10). However, the Conference Board initially refused to meet with treaty tribe representatives until additional tribes, working with the IPHC Commissioner representing NOAA, threatened legal action, upon which the Conference Board acquiesced and granted the treaty tribes access to the body (ibid). As a result, the treaty tribes maintain a vocal presence at the January IPHC meetings, and use the Conference Board and IPHC Commissioners, in particular the Commissioner representing NOAA with whom they report having a good working relationship, as conduits for expressing their positions on stock assessments and the setting of annual total allowable catch limits by the IPHC (ibid). Thus, short of having direct representation, and thus privileged access to the direct decision-making processes of the organization, indigenous groups essentially behave as lobbying/interest groups through processes officially recognized and sanctioned by the IPHC.

3.4.2. Rules-in-use for the Canadian Delegation

The general pattern of fisheries management in Canada as described in the section pertaining to the PSC also holds for the IPHC. As with the American delegation, the general
structure of the Canadian delegation is governed by the original convention, which creates three commissioner positions for each side. Because of the broad discretion of the Minister and Regional Director General of DFO, the specific boundary rules pertaining to which individuals fill these positions is rooted in informal norms at the operational level and reflect the general policies regarding the duty to consult. The Canadian delegation has a long-standing norm that allocates these positions to a representative from DFO, one representative of the processing industry, and one representative of the commercial fishery (interview, DFO Staff, 3/9/10; IPHC, 1998). This reflects the historical foundation of the Commission, which as detailed in Chapter 2 was initiated by commercial fishers and processors who lobbied both countries for the need for a treaty to help restrain collective-action problems related to overfishing.

Similar to the process used in the PSC, the DFO solicits nominations from the industry groups representing both of these sectors and then determines the individual who will fill these roles. Unlike the PSC, in which the Regional Director General for the Pacific Region serves as the primary Commissioner, the current Commissioner representing the DFO is Michael Pearson, the Director General of the International Affairs Directorate based in Ottawa. This is reflective of the lower level workload associated with IPHC Commissioners relative to that of the PSC. Because of the “two plus two” aggregation rule employed by the IPHC, it is feasible that these two industry representatives could vote for a provision that would run counter to DFO interests. However, due to the fact that these positions are fundamentally dependent upon DFO appointment, such a situation is very unlikely (interview, DFO Staff, 3/9/10). Therefore the process of selecting the IPHC Commissioners on the Canadian side advantages the DFO representative in a way similar to that of the Canadian delegation in the PSC.

An interesting contrast between the Canadian and American delegations in regards to First Nations involvement in the IPHC is that members of First Nations bands have frequently held the Commissioner spot granted to the processing industry (interview, DFO Staff, 3/9/10; interview, NWIFC Staff, 3/30/10). This has been due to the fact that coastal first nations have historically dominated that particular sector of the industry through the market competitiveness of
First Nations owned firms in the industry (ibid). It should be noted however that this position is designed to represent the processing industry writ large, and not First Nations perspectives tied to their natural law rights to fish for food and ceremonial purposes. This is especially true given the very limited food and ceremonial allocation granted to a handful of coastal First Nations bands, which is estimated to be a relatively insignificant 24,500 pounds annually (IPHC, 2012) making it a much less significant fishery to First Nations groups, at least taken collectively, than the salmon issue. While the DFO duty to consult with any group with active interests in particular fisheries is still part of the overarching DFO consultation policy, there is not a considerable First Nations stakeholder group related to halibut fisheries. So the primary interest of First Nations groups in the halibut fishery is related to the industry niche that certain First Nations bands have in the processing industry. Thus First Nations are not viewed as a distinct stakeholder by DFO in the way that First Nations are in relation to the salmon issue. Coupled with the lack of a formal First Nations commissioner position within the IPHC, First Nations activity within the IPHC lacks the quasi-corporatist character of their participation as distinct stakeholders with privileged access to representation in the PSC. Therefore their participatory authority within the IPHC is even lower than that of the American tribes.

3.5. Conclusion:

The ways in which various position, boundary, choice, and aggregation rules configure have a direct bearing on the level of participation that indigenous groups may have in international natural resource management institutions. The cases provided illustrate that there is a continuum in the relative levels of indigenous participatory authority, with American treaty tribes and First Nations having low levels of authority in the IPHC due to a lack of formal representation for individuals dealing with issues specific to indigenous groups. Canadian First Nations meanwhile can be seen as having a mid-range level of authority within the PSC due to formal representation that permeates every level and body of the organization, but constrained authority over decision-making due to DFO’s relative monopolization of decision-making authority within the organization. Out of all of the cases, the American treaty tribes stand out as having a high level of authority within the PSC due to their formal representation, veto power, deference to
choose their own representatives to the body, and ability to push agenda items that reflect their particular interests. Furthermore many of these rules are codified at the constitutional level, making it more difficult for other actors to alter the rules in such a way as to diminish the level of authority enjoyed by the treaty tribes.

These levels of authority furthermore characterize each groups’ behavior and policy roles within the organizations, with American treaty tribes and Canadian First Nations behaving essentially as interest groups within the IPHC, Canadian tribes enjoying a sort of advantaged quasi-corporatist role in the PSC as secondary partners to the DFO, and American tribes as important and powerful quasi-state actors with a level of authority equal to, or as I will argue in the chapters to come, higher than, other governmental actors in the American delegation of the PSC.
Chapter Four: The Process behind the Establishment of Institutional Rules Impacting Indigenous Group Participation

4.1. Background and Methodology

Both the Pacific Salmon Commission and International Pacific Halibut Commission are institutions that have attracted a wide range of scholarly inquiry from social and natural scientists. A fair amount of work chronicling the histories of each organization exists, but there is a wide degree of variation in the attention given to the roles that indigenous groups have played in the formation of these institutions, and almost no attention paid to specifically addressing how these groups attained their respective formal positions and levels of decision-making authority within the organizations. Given the relative lack of participatory authority of indigenous groups in the IPHC, this is quite understandable. In the case of the PSC, many scholars have conducted research on the bilateral treaty process and the formation of the organization, with some explicitly examining the indigenous role in the process (Boxberger, 1988; Buck, 2007; Environmental Law Centre, University of Victoria, 2009; Jensen, 1986; Schmidt, 1996; Smith, 1998; Yanagida, 1987; Williams, 2007), while others tend to de-emphasize or largely ignore it (Knight, 2000; McDorman, 2000; Miller, et al, 2001; Miller, 1999; Stevens, 1986). Very good accounts of the evolution of co-management at the domestic level in the United States also exist (Ebbin, 2004; Ebbin, 2002; Singleton, 1998; Woods, 2005). However I have been unable to find any work that explicitly addresses the processes behind the development of the institutional rules that have shaped the level of authority held by the different indigenous groups examined in this study.

This chapter will examine the question of how each group attained the positions of authority they have in each of the institutions examined in earlier chapters. It will also introduce two cases, each uncovered during the course of research, of indigenous groups that do not participate at all in an institutional setting when such participation might otherwise be expected. This analysis triangulates data from existing histories of the development of these institutions, archival materials, and the various interview subjects as outlined in Chapter One. The general methodology to be employed in this chapter will be a qualitative time series analysis and case study method called “process tracing”, a “within-case” form of analysis that “focuses on whether
the intervening variables between a hypothesized cause and observed effect move as predicted by the theories under investigation” (Bennett, 2004, 22).

Furthermore, “Process tracing provides a common middle ground for historians interested in historical explanation and political scientists... who are sensitive to the complexities of historical events but are more interested in theorizing about categories of cases as well as explaining individual cases” (George & Bennett, 2004, 23). When coupled with elite interviewing as a particular form of data collection, process tracing has been applied for at least four broad uses: to corroborate or refute what has been established by other scholars; to establish the various subjective viewpoints on an issue that are held by key individuals; to make inferences about a larger population’s characteristics, decisions, and actions in a specific situation; and to reconstruct the evolution of a set of events (Tansey, 2007). The specific approach taken in this chapter is to apply what other scholars have termed a “theory-guided process tracing” method, which seeks to provide “theoretically explicit narratives that carefully trace and compare the sequences of events constituting the process [of interest]. By comparing sequences, we can determine whether there are typical sequences... and can explore the causes and consequences of different sequence patterns.” (Aminzade, 1993, 108).

The central task of such an approach is to identify the key events and decisions, or “critical junctures”, which link the hypothesized cause with the outcome of interest to the researcher (Faletti, 2006). This requires an identification of the beginning and end of a particular sequence, and identifying a causal argument that views the sequence as essentially path dependent and based on the critical intervening events which led to the ultimate outcome (ibid). Thus the identification of the critical junctures that are posited to be significant in a path dependent causal argument is crucial, and often “tested” through counterfactual analysis which hypothesizes what the outcome might have been had a posited critical juncture not occurred (Bennett, 2007). The difficulty of this lies in the risk of confirmation bias or spuriousness, and researchers need to be wary of using poorly reasoned counterfactual analysis to prop up their own causal theories. This requires that both the causal argument and its equivalent
counterfactual arguments must be equally plausible lest a causal theory be open to criticisms of bias and validity (ibid).

4.2. The Process of the American Treaty Tribes' Entry into the PSC

The process by which the American treaty tribes attained their positions of authority within the PSC is long and convoluted, and rooted in the struggle to have their treaty rights to fish recognized by Federal and state government officials. Because these rights are based on treaties which were signed in the 1850’s, the relevant time scale is quite long, covering over 160 years. The evolution of events through which these rights were finally upheld and affirmed, and subsequently translated into the recognition of their right to participate in international natural resource management, covers several distinct eras and represents a progression of demands from the mere recognition of the right to fish to demands for management roles as co-equal government partners, first at the domestic level and subsequently at the international.

Several critical junctures in the process by which the American treaty tribes achieved their positions and participatory authority in the PSC are identified in the sections which follow. However, a general model of the process can be distilled into several broad steps:

1) Establishment of tribal treaty rights
2) Crises related to decreased fish populations lead to US-Canada bilateral cooperation, and increased discriminatory regulatory actions by State governments
3) Tribes respond with collective action, civil disobedience, and litigation
4) Media coverage leads to a shift in public opinion in favor of the tribes
5) Federal courts uphold treaty rights, mandating state-tribal co-management and harvest allocation formula
6) Tribal collective action organizations, NWIFC and CRITFC, created with federal financial assistance
7) International and state regulators resist accommodation of tribal fishing allocations and co-management roles
8) Trust-building between states and tribes leads to development of state-tribal coalitions
9) New crises and improved scientific data highlight new interceptions issues and create multi-faceted rivalries between AK, Canada, and WA/OR/treaty tribes
10) Alaska withdraws support for treaty, stalemate in bilateral negotiations ensues
11) Tribes apply leverage through All Citizens case and Pacific Salmon Treaty coalition to pressure Federal and Alaskan state governments to finalize a treaty

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12) PST is signed and tribes attain positions of authority in recognition of their leverage vis-à-vis Alaska

Various sub-developments pertinent to many of these broad factors are important in tracing the narrative which follows in subsequent sections. Therefore Table 4.1. provides a more detailed outline of specific events, as well as the key actors that were involved in each step, to be detailed in the following sections:
<table>
<thead>
<tr>
<th>Time Period</th>
<th>Event</th>
<th>Key Actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850’s</td>
<td>Stevens and Palmer Treaties signed</td>
<td>Territorial Governors serving as Indian Agents; tribal leaders</td>
</tr>
<tr>
<td>1870’s-1930’s</td>
<td>Dramatic decrease in returning numbers of salmon</td>
<td>Rise of commercial fisheries; state and federal agencies in charge of land use practices, hydropower development</td>
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<tr>
<td>1870’s-1930’s</td>
<td>State governments assert jurisdiction over Indian fishing rights; implementation of discriminatory regulations</td>
<td>State fisheries agencies</td>
</tr>
<tr>
<td>1905</td>
<td>U.S. v. Winans case upholds tribal fishing right, and right of State to regulate the fishery</td>
<td>US Supreme Court</td>
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<tr>
<td>1914-1915</td>
<td>Railway construction obstructs Fraser River, decimates Fraser salmon populations</td>
<td>Canadian Government</td>
</tr>
<tr>
<td>1915-1930</td>
<td>US and Canada negotiate terms of joint efforts to remediate Fraser River</td>
<td>US and Canadian Governments</td>
</tr>
<tr>
<td>1930</td>
<td>US and Canada finalize treaty; IPFSC created; US receives 50/50 share of Fraser sockeye in exchange for tech and financial assistance</td>
<td>US and Canadian Governments</td>
</tr>
<tr>
<td>1930’s-1960’s</td>
<td>Series of court cases find that state can regulate fisheries if &quot;necessary for conservation&quot;</td>
<td>State and Federal Courts</td>
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<tr>
<td>1950’s-1973</td>
<td>State governments implement increasingly discriminatory fisheries regulations</td>
<td>State fisheries agencies</td>
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<tr>
<td>1957</td>
<td>US/Canada treaty amended to provide 50/50 share to Fraser Pink Salmon</td>
<td>US and Canadian Governments</td>
</tr>
<tr>
<td>1957</td>
<td>Dalles Dam construction floods traditional Celilo Falls fishing grounds</td>
<td>US Army Corps of Engineers</td>
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<tr>
<td>1960’s-1970’s</td>
<td>Returning fish populations decline significantly, new scientific data identifies additional interceptions issues</td>
<td>American, Canadian, and tribal fisheries managers</td>
</tr>
<tr>
<td>1960’s-1970’s</td>
<td>Survival of the American Indian Association formed; civil disobedience &quot;fish-ins&quot; begin; popular opinion turns in favor of tribes' position</td>
<td>Various Individual tribal leaders; local and national media</td>
</tr>
<tr>
<td>1971</td>
<td>US and Canada begin negotiations over a new comprehensive salmon treaty to govern additional fisheries</td>
<td>US and Canadian Governments</td>
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<tr>
<td>1974</td>
<td>NWIFC and CRITFC founded; Federal money provided to build capacity</td>
<td>Various individual tribal leaders; US Government</td>
</tr>
<tr>
<td>1974</td>
<td>Magnuson-Stevens Fishery Conservation and Management Act passed; creation of NPFMC and PFMC; fishery jurisdiction extended to 200 mile EEZ</td>
<td>US Congress</td>
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<tr>
<td>1974-1979</td>
<td>Washington state refuses to abide by Boldt decision</td>
<td>WA State government</td>
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<tr>
<td>1974-1979</td>
<td>IPFSC resists accommodating tribal fishing allocation to Fraser Salmon</td>
<td>IPFSC</td>
</tr>
<tr>
<td>1977-1979</td>
<td>US District Court takes over management of fishery</td>
<td>US Federal District Court</td>
</tr>
<tr>
<td>1979</td>
<td>Boldt decision upheld</td>
<td>US Supreme Court</td>
</tr>
<tr>
<td>Early 1980’s</td>
<td>Climatological shifts impact interceptions issues</td>
<td>Related ecosystems/climate patterns</td>
</tr>
<tr>
<td>1981</td>
<td>Governor of Washington appoints new Department of Fisheries staff; Port Ludlow meetings begin trust-building between State and tribes</td>
<td>Governor John Spellman, Bill Wilkerson, various individual tribal leaders</td>
</tr>
<tr>
<td>1981</td>
<td>WA/OR/NWIFC/CRITFC pressure AK to reduce Chinook catches; AK increases fishing in SE AK; Canada retaliates by targeting WA/OR fish</td>
<td>WA/OR state governments; NWIFC/CRITFC; DFO</td>
</tr>
<tr>
<td>1982</td>
<td>Draft Treaty agreed upon; Alaska withdraws support; treaty tribes file &quot;All Citizens&quot; case</td>
<td>US and Canadian Governments; NWIFC and CRITFC attorneys; Alaskan Senator Ted Stevens</td>
</tr>
<tr>
<td>1983</td>
<td>Tribal attorneys become involved in drafting of new agreement</td>
<td>NWIFC/CRITFC attorneys</td>
</tr>
<tr>
<td>1994</td>
<td>Acid rain issue sours US-Canada relations</td>
<td>US and Canadian governments</td>
</tr>
<tr>
<td>1994</td>
<td>Tribes take lead in creation of Pacific Salmon Treaty Coalition, which pushes Federal government to conclude a treaty</td>
<td>Various tribal, state, environmental, commercial fishing, and recreational fishing interests; US Federal government</td>
</tr>
<tr>
<td>1994</td>
<td>Tribes approach AK and Federal government, offer to suspend all citizens case in exchange for Alaskan participation in PSC</td>
<td>NWIFC/CRITFC; AK state government; US Federal government</td>
</tr>
<tr>
<td>1995</td>
<td>PST signed</td>
<td>US and Canadian governments</td>
</tr>
</tbody>
</table>
It is furthermore important to realize that the process model outlined here is not necessarily linear, with several developments occurring in parallel with one another, and certain exogenous shocks exacerbating other developments at particular points in time. Figure 4.1. illustrates the general process model of how the tribes attained their positions of authority within the PSC:

Following the graph provided in Figure 4.1., the general process can be outlined as follows. The first critical juncture was clearly the establishment of the tribal treaty right to fish, which at first was considered inconsequential by American settlers. When overfishing and various habitat degradation issues resulted in dramatic decreases in fish populations, the treaty right became much more controversial, and two outcomes occurred. First, a precedent for bilateral cooperation over Fraser River fish stocks was set in the form of the creation of the IPFSC. Secondly, state regulators in the United States targeted tribal fisheries to bear the brunt of regulations designed to conserve the dwindling resource. Tribal resistance to these discriminatory regulations emerged in the 1960’s during the Civil Rights Era, and media attention ultimately led to a partial shift of popular opinion in favor of the Indian position. Soon thereafter, court decisions upheld the Indian fishing right, which was met by resistance by both the IPFSC and state regulators.

During the era of the late 70’s the confluence of several events led to the emergence of an international crisis between the United States and Canada. First, bureaucratic turnover in the
Washington Department of Fisheries and facilitative leadership by new political appointees led to a process of trust building, which ultimately led the treaty tribes and the states of Washington and Oregon to realize a common interest vis-à-vis harvest competition with Canadian and Alaskan fishing interests. Secondly, an exogenous shock occurred in the form of climatological changes in ocean temperatures, which shifted interceptions patterns between Alaskan, Canadian, and Washington/Oregon/tribal fishermen. The identification of these new interceptions patterns, reinforced by improved scientific data collection methods, highlighted the disproportionate share of interceptions taken by Alaskan fishermen. Finally, the existing international salmon management institution, the IPFSC, resisted demands to accommodate an extension of the 50% tribal harvest allocation to include a share of the American allocation of Fraser River salmon.

All three of these events precipitated an international crisis between the United States and Canada that was resolved only through pressure exerted by the tribes to finalize an agreement, and their willingness to table pending litigation with Alaska which threatened to extend the tribal allocation to include up to a 50% share of Alaskan salmon. In exchange for Alaska’s agreement to sign off on the PST, the tribes agreed to table their lawsuit as long as the treaty was in place. In recognition of this leverage brought against Alaska, which enabled an agreement to be finalized between the United States and Canada, the tribes were included as active participants in the PSC and granted veto authority over the American position on all management agreements made by the institution.


The genesis of tribal participation and co-management over fishery resources lies in the process by which the twenty-four tribes of Washington, Oregon, and Idaho signed treaties which held special stipulations pertaining to their rights to hunt and fish in areas that extend beyond the borders of the reservations which were set aside in these same treaties. These treaties were conducted by two principal federal negotiators, Joel Palmer, Superintendent of Indian Affairs for the Oregon Territory, and Isaac I. Stevens, Governor of the Washington Territory, which has resulted in these treaties being collectively referred to as the “Stevens-Palmer Treaties” (Bernholz
and Weiner, 2008; Woods, 2005). Treaty-making did not commence until 1853 with the separation of the Washington Territory from the rest of the Oregon Territory. Washington Territory in 1853 comprised all of present-day Washington State, the northern portion of Idaho, and the area of present-day Montana located west of the continental divide, while Oregon Territory corresponded to the modern-day boundaries of the State of Oregon, which formally joined the United States in 1859. Given these jurisdictional boundaries, Palmer negotiated all treaties pertaining to the Oregon tribes, Stevens negotiated all treaties pertaining to the tribes of Washington, northern Idaho, and Western Montana, and the two jointly negotiated treaties with tribes such as the Nez Perce whose lands straddled the two territories.

Treaty-making in the Northwest commenced with Joel Palmer’s signing of the Treaty with the Rogue River and Treaty with the Umpqua-Cow Creek Band in 1853 (Bernholz and Weiner, 2008). These two treaties are notable however in that they were limited largely to the business of codifying land cessations on the part of the Indians in exchange for various monetary and material concessions. This pattern was repeated in several additional treaties negotiated by Palmer in 1854 and 1855 (ibid). During this same era, Commissioner of Indian Affairs George W. Manypenny personally negotiated a series of treaties with various tribes in Kansas and Nebraska, which encapsulated the general policy of the federal government to negotiate as few treaties as possible by consolidating tribes into confederated units to share collective reservations, to minimize the monetary and material payoffs to the tribes, and to reflect broader assimilationist goals such as individual land allotments and annuities devoted to agricultural development of tribal lands (Richards, 2005). These early treaties were cited by Commission of Indian Affairs leadership as advantageous models for subsequent treaty-making which exhibited “provisions proper on the part of the Government”, and these served as the basic template for all of the treaties signed in the Pacific Northwest (ibid).

However, it is important to note that not all treaties concluded by Palmer and Stevens contained the same stipulations. In fact, Palmer personally negotiated a total of eight treaties, Stevens negotiated a total of ten treaties, and the two collectively negotiated two treaties, of
which a total of ten stand out as containing specific provisions that went beyond the basic land-for-payoffs formula characterized by the earlier Manypenny and Palmer treaties (Bernholz and Weiner, 2008). There is evidence to suggest that Stevens in particular was influenced by advice by Palmer and other Indian Affairs officials that the tribes had grown distrustful of government promises and opposed to the kinds of treaty stipulations embodied in the early Palmer treaties of 1853 and 1854 (ibid). Furthermore, individuals within Stevens’ inner circle had floated the idea of reserving specific natural resources such as salmon to the tribes for their sole use, and the idea of creating a massive reserve east of the Columbia as a collective Indian territory where the tribes were free to roam, thereby addressing the concerns expressed by many tribes of being restricted to small individual reservations (ibid). The tribes themselves meanwhile had begun to react to the unfavorable terms of such treaties as the Cow Creek Umpqua Treaty, with various leaders beginning to insist upon inclusion of specific treaty rights related to hunting, fishing, and other resources that would not be limited to activities solely on the reservation (interview, PSC Commissioner, 2/11/10).

The first treaty submitted by Stevens, the Treaty of Medicine Creek signed December 26, 1854, was negotiated between the Federal government and nine tribes in the southern Puget Sound region, and was significant in setting a precedent for the other nine treaties that would become known as the Stevens-Palmer Treaties or “usual and accustomed treaties”. The treaty is notable for consolidating several bands into three small reservations (Richards, 2005), and especially for Article 3 of the treaty, which specifies that “the right of taking fish, at all usual accustomed grounds and stations, is further secured to said Indians in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses on open and unclaimed lands: Provided, however, that they shall not take shellfish from beds staked or cultivated by citizens, and that they shall alter all stallions not intended for breeding horses, and shall keep up and confine the latter”. Therefore the rights embodied in this treaty pertain to several issues: the right to fish, with neither an official identification of specific species to be fished, nor the discrimination between fish and shellfish; the right to hunt; the right to gather; and
the right to keep and breed horses. Furthermore, each of these rights applied to “usual and accustomed places”, that is, locations outside of the reservations set aside as part of the treaty and identified by the tribes as being the historical locus of their various activities.

The remaining nine treaties were all signed within thirteen months of the Treaty of Medicine Creek, in the following order. The Treaty of Point Elliott, which dealt with several tribes in the Puget Sound region, was signed on January 22, 1855 and largely mirrored the same provisions of the Treaty of Medicine Creek, consolidating several tribes into a handful of reservations and containing stipulations virtually identical to the Treaty of Medicine Creek, save for the omission of rights specific to horse breeding. This was followed by the Treaty of Point no Point, negotiated with the Jamestown S’Klallam, Port Gamble S’Klallam, Lower Elwha, and Skokomish tribes, signed on January 26, 1855. This treaty represents a notable departure from the other two treaties in that each of the four tribes received their own small reservations and did not have to consolidate on collective reservations, and by the changing of the language of the fishing, hunting, and gathering provisions, in this instance incorporated in Article 4, to read that these rights were to be held “in common with all citizens of the United States” (emphasis mine) rather than solely with the citizens of the Territory. The next treaty, the Treaty of Neah Bay, was signed on January 31, 1855 between Stevens and a single tribe, the Makah, and also included the “all citizens” clause of the Treaty of Point no Point. This treaty is additionally unique in that it secured for the Makah an additional right to conducting whaling and sealing, also in usual and accustomed places, that no other treaty tribe possesses.

Two separate treaties were signed on the same day, June 9th, 1855 in the Walla Walla Valley. The first, the Treaty with the Yakama was a treaty negotiated between the Yakama Tribe and Governor Stevens. It represents a return to the language “in common with the citizens of the territory”, and also grants rights to pasturing horse and cattle similar to that of the Treaty of Medicine Creek. It also represents a subtle departure from the other treaties in that it also granted an “exclusive right of taking fish in the streams running through and bordering” the reservation (emphasis mine). The other treaty signed that day, the Treaty with the Walla Wallas,
was negotiated by both Palmer and Stevens, given that this treaty dealt with the Walla Wallas, Cayuse, and Umatilla, each of whom straddled the eastern border between Washington and Oregon. Interestingly, this treaty, despite being signed on the same day as the Yakama treaty, used the “all citizens” language incorporated by the Neah Bay and Point no Point treaties. It also incorporated language pertaining to the exclusive right to fishing on reservation lands and for pasturing livestock, similar to that of the Yakama treaty. Two days later, the Treaty with the Nez Perces was negotiated by both Palmer and Stevens and signed with provisions virtually identical to that of the Treaty with the Yakamas, including a return to the usage of the language “in common with citizens of the territory”. Both the Yakama and Nez Perce treaties are furthermore notable for replacing the “at all usual and accustomed grounds and stations” language of the other treaties with “at all usual and accustomed places”.

After the Treaty with the Nez Perces, Palmer negotiated the Treaty of Wasco, also known as the Treaty with the Tribes of Middle Oregon, which was signed on June 25, 1855. This treaty consolidated several bands, some of whom were historical enemies, on a single reservation that came to be known as the Warm Springs Reservation in central Oregon. This treaty retained the exclusive right of fishing on reservation, and marked a return to the “all citizens of the United States” language embodied in the three treaties mentioned earlier. This treaty is thus unique amongst the treaties that Palmer negotiated individually, and clearly reflects the influence of Stevens’ precedents on fishing and hunting rights as codified in the earlier Stevens treaties. Palmer went on to sign one more treaty, the Treaty with the Molala, on December 21st, 1855, which did not incorporate any of the special fishing or other rights of the “Stevens-Palmer Treaties”, and in fact resembles the monetary agreement struck with the neighboring Cow Creek Umpqua tribe in that both tribes were compensated for their respective land cessations with the sum of $12,000. Meanwhile Stevens negotiated the Treaty of Olympia, which set aside reservations for three tribes, the Quinault, Hoh, and Quileute, and which was signed by the parties in two different stages on July 1, 1855 and January 25, 1856. This treaty uses language almost identical to that of the Treaty of Medicine Creek, eliminating the clause of an exclusive
right to fishing on reservation and specifying that these rights are “in common with all citizens of the Territory”.

Stevens went on to negotiate two additional treaties with tribes in Idaho and Montana. The Treaty of Hellgate was negotiated by Stevens with the Flathead, Kootenai, and Pend O’Reille tribes, which were collectively relocated to a reservation in western Montana. This treaty incorporated many of the same provisions as the other nine, but because salmon no longer migrate to the more inland usual and accustomed fishing grounds of the these tribes due to the construction of the Grand Coulee Dam in Washington State, specific rights to salmon do not extend to the Flathead Reservation. The final treaty, the Treaty with the Blackfeet, did not discuss fishing rights and is thus not considered one of the “Stevens-Palmer Treaties” (Bernholz and Weiner, 2008).

4.2.2. Initial Opposition to the Tribal Treaty Right

The special treaty rights to fishing were initially innocuous and of little note to white settlers, who did not participate in any notable fishing activities until the opening of commercial salmon canneries on the Columbia River in the late 1860’s (Brown, 1994; Deloria, 1977; Woods, 2005). With the advent of larger scale white settlement, however, conflicts began to emerge regarding the contours of the fishing right, and involving increased fishing pressure by whites, especially at the mouth of the Columbia River (Brown, 1994). This ultimately led to litigation which challenged the treaty right to fish, especially regarding the ability of Native Americans to conduct fishing on private property owned by white settlers. In a series of decisions, the Washington Territorial Supreme Court and the U.S. Supreme Court upheld the right to fish in usual and accustomed places, stating that Indians essentially had an easement which allows them to take fish on private property (Woods, 2005). However, during the course of litigation, culminating in the decision in the 1905 case of U.S. v. Winans, the court found that the treaty language did not preclude the State from regulating the fishery resource, a decision which set forth decades of state-tribal conflict (ibid).
The impact of increased fishing pressure, particularly from the commercial canneries in the lower Columbia River basin, galvanized both Oregon and Washington to enact conservation efforts in order to avoid a fishery collapse of the sort which decimated salmon canneries in California in the 1870’s (Black, 1995; Woods, 2005). The approach taken by state fisheries managers was to force all fishermen to obtain a state license, to enforce season restrictions, and to regulate the technologies used by fishermen. Many of these regulations were seen as discriminatory and illegal under the terms of the initial treaties. For instance, Washington State attempted to force licensing requirements on Indians fishing five miles beyond their reservation boundaries, and outlawed fishing methods that snared or snagged salmon, i.e. dipnets, weirs, and other technologies used by many Indian tribes, particularly on the Columbia River (Woods, 2005). Attempts to enforce season closures, licensing requirements, and gear restrictions gradually resulted in Indians purposefully engaging in “illegal” actions which forced the state to defend its regulations in court. Through the 1930’s and early 1960’s, a series of court cases essentially allowed for the state to regulate fisheries if such regulation was “necessary for conservation”, a nebulous standard that essentially ensured that any attempt to regulate Indian fishing would wind up in court if challenged (Woods, 2005). The willingness of the State to enforce regulations that were seen by Indians to be increasingly more discriminatory also gradually culminated in the emergence of Indian activism and civil disobedience in the 1960’s and 1970’s, which will be discussed in a following section.

4.2.3. Creation of the International Pacific Salmon Fisheries Commission

A parallel development to the states’ growing interest in regulating the fishery was the emergence of transnational cooperation between the United States and Canada. During railway line blasting in 1913, and again in 1914, crews triggered major landslides which obstructed several sections of the Fraser River system, cutting off fish passage to inland spawning streams. In 1930, the two countries signed the Fraser River Convention in order to address the situation of these suppressed stocks, with the United States providing financial and technical assistance for river remediation on the Fraser, in exchange for a fifty percent share of the Sockeye fishery
The convention created the International Pacific Salmon Fisheries Commission (IPFSC), which was charged with assessing fish stocks and recommending to both nations fishing seasons and total allowable catch regulations with the overall goal of restoring these stocks (Jensen, 1986). In response to the successful restoration of Fraser Sockeye, the Convention was amended in 1957 to allow for joint enhancement activities and a 50/50 allocation share of Pink Salmon from the Fraser as well (ibid). While the IPFSC was considered a success, it should be noted that it was limited to a single watershed, and only two species out of the five which spawned there. The potential for greater cooperation between the two countries within the context of the IPFSC was impeded in part due to a lack of scientific knowledge of how the two countries’ fishing fleets intercepted each other’s stocks of salmon, and by a shift in focus towards regulating increased open-ocean fishing pressure in the North Pacific, particularly by Japan (ibid).

However, the IPFSC is notable for this study for a number of reasons. First, it was a precedent-setting institution of transnational cooperation, created and negotiated in the 1920’s during a milieu of increased transnational cooperation which also saw the creation of the IPHC. Its organizational structure and joint regulatory authority over the Fraser River stocks also set a precedent that significantly influenced the structure and operations of the PSC. And as will be demonstrated in a following section, the IPFSC’s resistance to the inclusion of American Indians as co-managers of the resource would ultimately lead to its demise and the resulting drive for a more comprehensive treaty governing American-Canadian fish interceptions.

4.2.4. State-Tribal Conflict and the Rise of Indian Activism

Several events touched off widespread conflict between the tribes and states of Oregon and Washington between the 1950’s and 1970’s. Dam construction on the Columbia River, designed for hydroelectric production and flood control purposes, began in the 1930’s with the initial completion of three major dams, including the Grand Coulee Dam, which were instrumental in the development of defense industries and nuclear research programs on the Hanford Reservation. Given the “success” of these projects, the U.S. Army Corps of Engineers pushed
for the development of eight more additional dams on the Columbia between 1954 and 1971. Three additional dams were built in British Columbia under the terms of the Columbia River Treaty. In 1957, one of these projects, the Dalles Dam on the border between Washington and Oregon, flooded an area known as Celilo Falls which had been a major fishing and trade site for Native Americans for thousands of years (Blumm and Steadman, 2009; Fisher, 2004; Woods, 2005). By the 1960’s, fish populations on the Columbia had decreased dramatically. Under subsequent regulations promulgated under the Columbia River Fish Compact, an interstate regulatory compact between the states of Washington and Oregon, all commercial fishing upstream from Bonneville Dam, which is the first dam encountered when moving upstream along the Columbia, was prohibited in the name of conservation, and major restrictions were placed on sport and subsistence fisheries as well (Harrison, 1986). Because the four Columbia River tribes’ fishing sites were concentrated above the dam, this ensured that the tribes bore the brunt of conservation efforts (ibid). While restitution totaling nearly $27 million was ultimately given to the Yakama, Umatilla, Warm Springs, and Nez Perce tribes for this loss of their usual and accustomed fishing grounds at Celilo, and designated Treaty Fishing Access Sites (TFASs) in the reservoirs were created to provide Indians a replacement site to fish (Binus, 2004), the loss of this area was traumatic for the tribes and generated a groundswell of civil disobedience and legal action, and continues to be a source of friction between the government and tribes, who believe that remediation efforts have been insufficient given that many fish stocks on the Columbia are increasingly suppressed (Hansen, 2005).

Meanwhile, the perceived discriminatory regulations of the Washington Department of Fisheries (which would ultimately come to be known as the Washington Department of Fish and Wildlife (WDFW)) reached a boiling point in the 1960’s and 70’s, with the creation of the Survival of the American Indian Association (SAIA), who in association with Indian leaders such as Robert Saticcum and Billy Frank, Jr., initiated a deliberate series of civil disobedience events known as “fish-ins”, which drew upon tactics employed in the broader Civil Rights activities of the era in consultation with other leaders such as Martin Luther King, Jr., with whom Billy Frank, Jr. was associated (Ebbin, 2002; Interview, NWIFC Staff, 4/1/10). Increased scarcity of fish had led to
conflicts between Indian and white fishermen, the latter of which engaged in a coordinated campaign to call in authorities to arrest Indians who were “fishing illegally” since they did not have state licenses (Interview, NWIFC Staff, 4/1/10). At the same time, the State was engaging in promulgating total allowable catch quotas that were allocated almost exclusively amongst ocean fisheries. Once these quotas were met, the State would then announce “conservation closures” for all other fisheries, meaning those occurring in the rivers. In response to these events, beginning in 1964 protest leaders would randomly announce a specific fishing activity to both their own activists and State authorities, in which Indians fully expected to be arrested (ibid). The State of Washington reacted to the “fish-ins” by conducting mass arrests, which ultimately led to a significant turning of sympathies towards the Indian cause, which was also influenced by other focusing events at Alcatraz and Wounded Knee. In particular, the participation by celebrities such as Marlon Brando and Dick Gregory, both of whom were arrested along with the Indian protestors, drew the spotlight of the national media (Ebbin, 2002). Billy Frank, Jr. himself was arrested over 100 times throughout the 1960’s and 1970’s (interview, NWIFC Staff, 4/1/10).

As the scale of the protests grew, the resources of state and local law enforcement became taxed, while the violence associated with the arrests also intensified (ibid). The majority of these events were concentrated in the urban areas of Tacoma and Olympia on the Nisqually and Puyallup Rivers, which were highly visible from Interstate 5. A consequence of this was that the State chose to prosecute protestors in Pierce County, which was dominated by elected judges who were sympathetic to the State’s perspective (ibid). However, such a move placed an enormous burden on local and county jailers, who were ill equipped with the necessary resources to process the numbers of people being arrested (ibid). This finally drew the attention of the larger metro newspapers, which began writing editorials that were either sympathetic to the Indian’s perspective, or at least questioning the expense of State law enforcement activities (Chrisman, 2006; interview, NWIFC Staff, 4/1/10). This led directly to a massive encampment of more than 400 Indians on the Puyallup in 1970 within full sight of Interstate 5. The tribes had been petitioning the Federal government to back them in a series of lawsuits, and Federal officials came to personally monitor the events on the Puyallup. The State dispersed the
encampment with tear gas, during which several Federal officials, including U.S. Attorney Sam Pitkin, were gassed, and over 200 individuals arrested, which overwhelmed City of Tacoma resources (interview, NWIFC Staff, 4/1/10). From a tribal perspective, this was the “straw that broke the camel’s back”, which would ultimately lead to the Federal government joining tribal lawsuits against the State (Brown, 1994; interview, NWIFC Staff, 4/1/10).

4.2.5. U.S. v. Oregon, U.S. v. Washington, and Sub-proceedings

Most legal cases that dealt with treaty rights claims and which emerged out of the protest era were defenses to criminal prosecutions (Blumm and Steadman, 2009). However, in 1968 fourteen members of the Yakama tribe filed suit against the Oregon Fish Commission in the case of Sohappy v. Smith, claiming that the Columbia River Compact’s conservation efforts, much like those of Washington State’s activities in Puget Sound, interfered with their treaty rights to fish (Blumm and Steadman, 2009; Ebbin, 2002; Harrison, 1986). The three other Columbia River tribes – the Umatilla, Warm Springs, and Nez Perce – as well as the Federal government eventually intervened in the case, which then became known as U.S. v. Oregon, or the “Belloni decision” named after the Judge who oversaw the case (Ebbin, 2002). The case was significant in that it mandated that protection of tribal treaty fishing rights be considered coequal with the State’s conservation efforts, that the tribes were entitled to a “fair share” of all of the fish produced in the Columbia River system, and that the State and tribes should engage in a “cooperative approach” to fisheries management (ibid).

Meanwhile, in Washington State, a trilogy of cases known as the Puyallup cases had found that Washington’s “conservation closures” and other actions were discriminatory, and that the State could not pass on an unfair share of the burden of conservation efforts to the tribes (Blumm and Steadman, 2009). These cases called upon both parties to negotiate a settlement on harvest allocations between the State and the tribes, but in the absence of such an agreement, did not specify whether the treaties entitled the tribes to a particular share, nor did the courts attempt to quantify such a share (ibid). As they did with the Columbia River tribes, the Federal government joined with several Puget Sound tribes in filing a case against Washington
State, which would become known as *U.S. v. Washington*, or the “Boldt decision”. This case was much broader in scope, consisting of two “phases”, the first phase dealing with harvest shares, and Phase II dealing with the questions of whether hatchery-produced fish should be included in the tribal allocations and whether the treaty right protected fish from habitat destruction (Blumm and Steadman, 2009). The case also ultimately came to include numerous sub-proceedings as tribes attempted to clarify their rights to other fisheries beyond salmon.

Judge Boldt’s 1974 decision in *U.S. v. Washington* was profound for a number of reasons. The court struck down Washington State’s fishing regulations as discriminatory, rebuffed the State’s claim that “illegal” tribal fishing was the source of overharvesting, interpreted the treaty language “in common with” as implying an equal share of the fish as well as an authority to collaboratively manage the resource with the State, provided that the tribes could develop competent leadership, fisheries scientists, and enforcement capacities (Blumm and Steadman, 2009; Ebbin, 2002; Singleton, 1999). In doing so, he explicitly quantified a 50/50 share of the resource, with the State having to guarantee 50 percent of the allocation to tribes before setting allocations for all other stakeholders.

Public outcry and official State of Washington resistance to the decision was immediate. The State appealed the decision, while the State Attorney General instructed all State agencies to not enforce it (Brown, 1994; Ebbin, 2002; Singleton, 1999). In the meantime, Boldt mandated the establishment of a Fishery Advisory Board in 1975 to serve as a forum for resolving state-tribal disputes extra-judicially (Ebbin, 2002). However, the recalcitrance of the state to meet the court’s orders ultimately led to the extraordinary decision by Judge Boldt to take away fishery management authority from the State for the Puget Sound and coastal Washington fisheries from 1977 to 1979, essentially taking over management of the fishery through the use of court orders enforced by Federal Marshals (Blumm and Steadman, 2009; Singleton, 1999). The State was consistently unsuccessful during the appeal process, with the Ninth Circuit Court of Appeals issuing the extraordinary statement that “except for some desegregation cases… the district court has faced the most concerted official and private efforts to frustrate a decree of a federal court
witnessed in this century” (Brown, 1994, 2). Ultimately, a 1979 U.S. Supreme Court decision over a consolidated set of fishing cases largely upheld the Boldt decision, exhausting the appeal process and returning fishery management authority to the State, which was forced to accommodate both the sharing formula and the mandate for co-management (Blumm and Steadman, 2009).

By 1980, Judge Boldt had retired, and a determination of the questions under Phase II was left to Judge William Orrick, who determined that hatchery-bred fish were to be included in the tribal share, and that the fishing right extended to the right to have the fish resource protected from environmental destruction (ibid). However, the Ninth Circuit Court of Appeals struck down this “absolute right to environmental protection”, instead finding that future court proceedings must be based on specific cases of environmental damage for the courts to review (Brown, 1994). Thus, the rights to habitat must be determined on an ad hoc basis in response to actual environmental damages before remedies can be set. It was not until 2007 that the first major case on the habitat right, a sub-proceeding of U.S. v. Washington known as the “Culverts Case”, was decided (Blumm and Steadman, 2009). In what became known as the “Martinez decision”, the court followed Judge Orrick’s original logic and found that the treaty right does impart an environmental right – in this case, preventing the State from constructing or maintaining culverts, which are water diversion pipes under roads that can block fish passage (ibid). This case thus sets a remarkable precedent which could have far-ranging consequences for virtually any human activity that may be deemed as destructive to salmon habitat. Rather than setting off a whirlwind of litigation, however, the effect has been to push stakeholders together in order to collaboratively develop rules for activities such as agriculture, forestry, mining, etc. that could negatively impact salmon habitat.

4.2.6. Creation of CRITFC and NWIFC

In order to meet the governance capacity stipulations for co-management as specified in the Boldt decision, the tribes immediately set about lobbying the Federal government for assistance in developing their fishery management capacities. The tribes which were party to
the *U.S. v. Washington* case formed the NWIFC in 1975 in order to serve as a unified voice in dealing with the Federal and State governments when it came to the process of determining how the 50% share was to be allocated, and to serve as a collective support agency for the development of each individual tribes’ fishery scientists and management personnel. The organization has since grown to encompass all twenty of the Washington State tribes, outside of the Columbia River tribes, that have explicit treaty rights to fishing as outlined in the Stevens treaties. Meanwhile, CRITFC was founded in 1977, largely to enable the four Columbia River tribes to collaboratively manage their collective fishing in the TFASs on the Columbia River and to manage their own inter-tribal allocations in these areas.

These organizations receive substantial financial support from the Federal government, amounting to around $2 million per year for NWIFC and $1 million per year for CRITFC (interview, PSC Commissioner, 12/16/09). From the Federal perspective, this is money well spent in the sense that both organizations have been enormously successful in sorting out their own inter-tribal rivalries and allocation issues, and have been instrumental in more smoothly building trust between tribal and state agencies, both of which has probably decreased the amount of costly litigation that would have otherwise likely been expected (ibid).

4.2.7. Evolution of Co-Management within Domestic Institutions

In order to accommodate tribal co-management roles in the domestic salmon fishery, as mandated by the Boldt and Belloni decisions, a sea change in the state-tribal relationships was clearly going to be necessary. This evolution of state-tribal co-management has been the subject of multiple studies by other scholars, but for the purposes of this study, several developments are of note. First of all, the passage of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1976 was spurred by several developments. The first of these was the desire on the part of Congress to incorporate customary international legal principles in anticipation of the ultimate passage of the UNCLOS, which would extend national marine jurisdiction to 200 miles off shore, the area which would ultimately become known as the EEZ (Magnuson, 1977). Secondly, a guiding principle behind the MSFCMA was to create a
“comprehensive resource management scheme” implemented through the use of the “Magnuson-Stevens Institutions”/Regional Fishery Management Councils, which would incorporate multiple stakeholders in order to avoid the costs of litigation and to provide avenues for incorporating the best available scientific information (ibid). As a Senator from Washington State, Warren Magnuson was clearly aware of the mandates for co-management embodied in the Boldt decision of 1974, and the creation of the Regional Fishery Management Councils provided one avenue for institutionalizing such cooperation.

Meanwhile, the recalcitrance of the State to abide by the Boldt decision and consequent conflict between tribal and non-tribal fishermen led to widespread illegal fishing by both parties, motivated by political protest or simple opportunism, which in turn led to extremely high enforcement costs that could not be sustained by the State (Singleton, 1999; interview, NWIFC Staff, 4/1/10). These high enforcement costs, in conjunction with the costs of litigation and other transaction costs associated with the Fishery Advisory Board, essentially exhausted all of the parties. In 1981, tired of the ongoing litigation and conflict, the new Governor of Washington, John Spellman, appointed Bill Wilkerson, an attorney, to serve as the new Director of the Washington Department of Fisheries (Singleton, 1999). Wilkerson has been credited by all parties as initiating the dialogue that would lead to rapprochement between the tribes and the State, by inviting tribal leaders to a series of face-to-face meetings at a retreat in Port Ludlow (Singleton, 1999; interview, PSC Commissioner, 2/18/10; interview, NWIFC Staff, 4/1/10). Furthermore, several upper-level bureaucrats within the Department of Fisheries were either replaced or left voluntarily, which mitigated opposition to collaboration from the State side (Singleton, 1999). In doing so, Wilkerson, through facilitative leadership, initiated a process of trust-building which ultimately led to a mutual commitment to the process of co-management and development of common problem definitions, which is consistent with Ansell and Gash’s (2007) contingency model for the initiation and development of collaborative governance regimes.

Finally, the emergence of the tribes as co-managers of the resource created a crisis within the IPFSC. Northern Puget Sound tribes asserted their 50/50 share of salmon should
include Sockeye and Pink of Fraser River origin, and sought accommodation of this through receiving 50% of the United States allocation of these stocks, which would amount to 25% of the overall Fraser River stocks. However, the IPFSC, as sole regulatory authority over Fraser River stocks at the time, decided that it did not have the authority to make this specific allocation to Indian fisheries and refused to deal with the matter of treaty Indian fisheries, determining that it was “wholly a United States domestic matter” (Roos, 1991, 243). However the IPFSC did regulate the types of gear that would be used and set specific fishing seasons by gear user groups, which did impact Indian fisheries due to their reliance on reef net methods. As a result of these regulations, the proportion of the overall catch by Indians of the Fraser River Sockeye stocks was only 1.4% (Roos, 1991, 244). Because the IPFSC was unwilling to accommodate special regulations for treaty Indians, the United States Government sought to meet the obligations of the 50/50 sharing arrangement by allowing treaty Indians extra time to conduct fisheries in order to increase their share of the American catch, while unilaterally restricting the non-Indian catch. This ran afoul of both the Government of Canada, which believed such a move would amount to the United States taking more than its aggregate share and was not under the legal purview of the IPFSC anyway, and the individual Commissioners from the United States, who bristled against being issued directives by the Departments of State and Commerce (Roos, 1991).

The unilateral initiation of additional fishing time for treaty Indians by the US government led the IPFSC to implement an emergency order in 1977 that stated that “its regulations applied to all citizens without exception”, thus setting up a showdown between the Commission and the US Government. At this stage, both sides began discussing ways to get out of the crisis. The United States sought to have a seventh commissioner position created that would represent tribal interests in the IPFSC, as consistent with the general approach implemented at the domestic level of granting positions to tribal representatives to facilitate co-management, but this was opposed by both Canada and the Commission itself (ibid). Meanwhile, the NWIFC requested direct access to IPFSC technical data in order to help regulate their own Sockeye and Pink salmon fisheries, which the IPFSC steadfastly refused on the grounds that they were the sole
management authority over these fisheries and were not bound by shared management responsibilities (ibid). This led to the observation that “elements of the [IPFSC] were among the interests that opposed implementation of U.S. v. Washington” (Yanagida, 1987). Ultimately, both sides came to the conclusion that the only way out of the crisis was through the renegotiation of a new Pacific salmon treaty that would not only resolve the issue of how to accommodate the treaty Indian catch, but extend the scope of the agreement to encompass all fish stocks which were known to be subject to interceptions (Roos, 1991).

4.2.8. The Pacific Salmon Treaty and Creation of the Pacific Salmon Commission

In 1971, general dissatisfaction with the existing regulatory regime under the IPFSC and increased data on other interceptions issues beyond the Fraser River led to negotiations over a proposed comprehensive agreement. Each nation had dramatically increased their hatchery programs, which were expensive to maintain and thus adding extra impetus to each nation to seek to maximize the number of hatchery fish being harvested by their own fishing fleets, lending additional weight to the nation-of-origin principle (Knight, 2000). Washington State in particular had augmented its hatchery program in order to try to boost the number of fish to accommodate the 50/50 split with the treaty tribes while providing the same number of fish to non-tribal commercial and recreational fishermen (Jensen, 1986). The aftermath of the Boldt decision also placed additional strain between the two countries as the United States grappled with how to ensure the 50/50 allocation, especially within the context of Puget Sound fisheries which intercepted Fraser River stocks managed by the IPFSC, as previously noted.

Because of the stonewalling of the IPFSC, treaty tribes were among the most vocal pushers of the negotiation of a comprehensive treaty on salmon interceptions. The complexity of negotiating a comprehensive treaty that covered all salmon species known to be subject to interceptions was a major barrier however. As outlined in Chapter Two (pg. 93), the interceptions issue is asymmetric, with Alaska being subject to few interceptions of its fish, while Alaskans intercept fish bound for both Canada and the contiguous United States. Furthermore fishermen from Canada and Washington were intercepting fish bound for the Columbia River, and fishermen
from Washington and Canada were intercepting each other’s stocks, of which the Fraser River stocks were the most significant. The result was that Canada, Washington, and Oregon were united in their perspective on the need to reduce Alaska’s catch, but also faced major issues between each other, which made negotiation extremely difficult.

Meanwhile, in the late 1970’s, salmon runs were particularly subject to drastic year-to-year fluctuations, which fueled mistrust between the two countries, each of whom believed that the other was overharvesting (Knight, 2000). In this climate, neither side was willing to invest in habitat protections, which were being primarily pushed by the American treaty tribes within the context of Phase II of U.S. v. Washington, since the benefits of such expenditures would accrue to the other nation because of the interceptions issue (ibid). Therefore, no real progress on the negotiation front was made throughout the 1970’s.

By 1979, new data suggested that overharvest due to targeted interceptions, especially of Chinook salmon bound for the Columbia River by both Alaska and Canada, was a significant source of decline of several fish stocks (Jensen, 1986; Miller, 1999; Williams, 2007). Clearly, the major issue was how to get Alaska incorporated into the agreement, which was the key demand made by the Canadians (interview, PSC Commissioner, 3/8/10). This led to the CRITFC tribes suing the Secretary of Commerce and the State of Alaska, claiming that the NPFMC process unfairly allowed overharvest of Columbia River Chinook by Alaskan fishermen (Jensen, 1986). Eventually, most of the coastal and Puget Sound tribes joined the lawsuit, Confederated Tribes and Bands v. Baldrige, seeking to extend their 50/50 allocation to fish from Alaska on the basis of those treaties that employed the language that the treaty fishing right was to be held in common with all citizens of the United States (Confederated Tribes is thus also known as the “All Citizens Case”). Meanwhile, by 1981 the bureaucratic turnover within the Washington Department of Fisheries had initiated a thawing of relations between the tribes and the State. CRITFC and NWIFC tribes used their newfound leverage to push Washington and Oregon to apply pressure on Alaska to decrease their Chinook harvests in order to address the coastal and Columbia River tribes’ interests (ibid). Alaska responded by directing their own fishermen to fish in areas which
were more likely to intercept Canadian and continental US Chinook stocks, which in turn led Canada to target various species bound for streams in Washington and Oregon (ibid).

In 1982, a draft treaty was concluded between the two nations, in which allocation formulas, and, for the first time conservation principles, were explicitly outlined (ibid). The draft treaty also stipulated immediate limits on both Canadian and Alaskan Chinook harvests (ibid). Canada, Washington, Oregon, and most of the treaty tribes, with the exception of Puget Sound tribes reliant on Fraser River stocks, the share of which would have been decreased under the terms of the draft treaty in order to meet a key demand by Canada, were strongly supportive of the draft, and Alaska had initially indicated its support (Jensen, 1986; Knight, 2000). Before the treaty could be signed, however, the newly elected Governor of Alaska, Bill Sheffield, refused to endorse the treaty and encouraged Alaskan fishing interests to pressure the Alaskan Senate delegation to tie up the treaty in the State Department (Jensen, 1986). Alaskan opposition was rooted in a lack of support for the nation-of-origin principle – which is understandable given that few Alaskan stocks were intercepted by the other parties to the treaty – and that Alaska was unfairly burdened by the Chinook harvest limitations (Stanley, 1998; Stevens, 1986). The basic line of argument was as follows:

“For years, the United States requested Canada to take action in its fisheries off the west coast of Vancouver Island to protect southern U.S. Coho and Chinook salmon stocks that were, and still are, depressed. Canada indicated that such action would have to be tied to the United States giving up the harvest of healthy stocks in Alaska so that the alleged equity imbalance in favor of the United States would be redressed.” (Stanley, 1998, 129).

Essentially, the Alaskans believed that they were paying the price for what was fundamentally an interceptions issue between Canada and stocks from the continental U.S. Unsurprisingly, the draft treaty failed, leading Canada to voice its outrage and to threaten a new round of “fish wars” (Jensen, 1986).

Negotiations picked up again in 1984, but soon fell apart over the United States’ unwillingness to adequately address the Alaskan interception issue while demanding a continuance of the status quo on Fraser River allocations (ibid). Around the same time, a more
publicized and heated dispute between Canada and the United States, over the acid rain issue, had "stung" the Reagan Administration, which, "generally desirous of improved relations with the Ottawa government, turned its eye to this opportunity to improve relations with the Canadians" (Jensen, 1986, 397). Meanwhile, the NWIFC and CRITFC, tired of the stalemate and in the process of litigating the All Citizens Case, pushed for the creation of the informal yet broad-based Pacific Salmon Treaty Coalition, which came to encompass state, environmental, commercial fishing, and recreational fishing interests (Jensen, 1986; interview, PSC Commissioner, 2/8/10). Putting pressure on the Federal government to resolve the issue, the tribes then negotiated with the Federal government, expressing a willingness to force Alaska into the agreement by suspending their litigation in the All Citizens Case (Jensen, 1986; interview, PSC Commissioner, 2/8/10). The tribes in turn demanded equal representation and veto authority within the Commission which would become known as the PSC in order to address the problems of data sharing and lack of representation in the IPFSC (Yanagida, 1987), and intra-American negotiations essentially predetermined the Commission structure and other institutional rules, which were presented to Canada at the negotiation table, that would shape the tribal participatory authority within the PSC (interview, PSC Commissioner, 2/8/10). Canada reluctantly acquiesced to the proposed Commission structure and inclusion of tribal interests in the PSC, although many on the Canadian side remain wary of the veto-authority and voting structure of the American delegation (McDorman, 1998; interview, PSC Commissioner, 1/11/10).

The All Citizens Case was thus essential to the final negotiation of the PST in 1985. In exchange for their inclusion in the PSC, the tribes agreed to a stipulated order in All Citizens which precluded a decision over the issue of a 50/50 split of Alaskan fish so long as an international treaty was in force (Yanagida, 1987). In other words, so long as Alaska negotiates in good faith within the context of the PSC, they do not need to worry about a court decision which would give the treaty tribes a share of the Alaskan harvest. Furthermore, "once a tribal representative on the Commission, a panel, or the U.S. section votes for a measure, the tribes cannot credibly turn to federal courts to reverse these decisions" (Yanagida, 1987, 584). This helped to placate the Canadians, who had vigorously opposed the two-track system of
management which had been occurring in the IPFSC (Roos, 1991), by essentially guaranteeing that the Americans would be bound by any vote in the PSC, which could not be subsequently overturned by domestic legal action in the United States. From the tribal perspective,

“...a victory on the merits in Confederated Tribes would have been a hollow one without the Treaty. Their dilemma was that any reduction in Alaskan harvests would have been fruitless unless Canada committed itself to making corresponding reductions, for without such a commitment, Canadian rather than Indian fishermen would harvest the foregone Alaskan catch... Unless the tribes agreed to a stay [in Confederated Tribes], Alaska’s senators would have blocked Senate advice and consent to ratification of the Treaty.” (Yanagida, 1987, 584).

This does reflect a loss of individual tribal autonomy, however, in that they must collectively exercise what was initially a single vote (now two votes given the informal evolution of norms that no longer differentiate between full and alternate Commissioners, as explained in Chapter Three) and can no longer unilaterally resort to litigation. This places a lot of onus on leadership within NWIFC and CRITFC to solve inter-tribal collective action problems before the tribal vote is submitted within the context of the PSC (Yanagida, 1987).

4.2.9. Summary

Several critical junctures can be identified from the preceding narrative. First of all, without the insistence of the treaty tribes’ leadership to secure the kinds of special rights and treaty terms that they did, regardless of whether Stevens, Palmer, and other Indian Affairs agents viewed these as innocuous or inconsequential (Woods, 2005; Bernholz and Weiner, 2008), it is virtually certain that the tribes today would not enjoy the access to fishing and co-management rights that they presently have, especially in light of the subsequent interest in and development of non-tribal commercial fisheries in the decades after the treaties were signed. Furthermore, without the active violation of the terms of these treaties by the State, in some instances upheld by the courts in cases such as U.S. v. Winans, the spurring of Indian activism in the 1960’s and 1970’s would likely have not been as intense.

A question which remains is why such activism was successful in getting the Federal government to side with the tribes against the states of Washington and Oregon? The
participation of the Federal government in the cases of *U.S. v. Oregon* and *U.S. v. Washington* was instrumental in lending legal and material support to the tribes which undoubtedly contributed to their ultimate victory in these cases. The general consensus of individuals interviewed for this study was that the help of celebrities such as Marlon Brando generated publicity, which helped to frame these issues as being part of the broader Civil Rights Era. The subsequent publicized use of violence against Indians who were merely exercising their fishing rights, and the legal and administrative expenses of the State's campaign to suppress fishing rights, ultimately led to a “historic window of opportunity” in which general sentiment, aided by favorable editorial positions of the major newspapers, was on the side of the Indians, and that rank-and-file citizens were willing to put pressure on the Federal government to address the issue (interview, NWIFC Staff, 4/1/10). Clearly, the outcomes of the legal cases themselves were absolutely pivotal for all subsequent developments.

The development of the inter-tribal organizations NWIFC and CRITFC were also consistently cited as a necessary step for both resolving inter-tribal disputes, and providing a focused organizational setting for negotiation and the breaking of the cycle of state-tribal conflict during this area. Similarly, political turnover in the Governor's mansion, and subsequent bureaucratic turnover in the Department of Fisheries, enabled leadership of both sides to work towards a thawing of their relationship. Furthermore, the slow yet successful development of co-management at lower scales in the American salmon fishery regime, such as tribal participation in the PFMC, North of Falcon process, etc., led to trust-building amongst all stakeholders which helped to mitigate concerns over the ability of the tribes to negotiate in good faith. Again, the political leadership and development of technical expertise within the NWIFC and CRITFC also contributed to this warming of the relationship between domestic stakeholders, at least within Washington and Oregon. The détente between the two sides was also facilitated by the volatility in the numbers of wild/non-hatchery Chinook and Coho returning to freshwater habitats during the late 1970's and early 1980's, a disturbance which galvanized both domestic interests in the United States to reconcile their differences, as well as to address the worsening of relationships between Canada and the United States in the form of a more comprehensive treaty which for the
first time addressed habitat and conservation issues. The refusal of the IPFSC to work with the tribes also played a significant role behind the push for a new comprehensive treaty, which forced both sides to start from scratch, which opened up a window for creating a new structure which would formally incorporate the tribes at the international level, where they had been formally excluded under the old regime.

Finally, the failure of the draft treaty in 1982, coupled with strained relations between the United States and Canada on other environmental issues such as acid rain, incentivized the Federal government to grant concessions to the Canadians in order to thaw the bi-lateral relationship. However, Alaska continued to be the wild card in the process. Here is where the leverage of the treaty tribes was absolutely essential, since without the tribal willingness to table their lawsuit in the All Citizens Case, Alaska would have never had any incentive to participate in the comprehensive treaty. As one PSC Commissioner put it, Alaska has *never* gotten anything out of the PSC other than not having to deal with even more restrictive policies, which could have happened if the tribes had won All-Citizens (interview, PSC Commissioner, 3/8/10). The Federal government thus was presented with an opportunity in which it could achieve its foreign policy goals vis-à-vis Canada without having to take on Alaska, and in particular its strong Senate delegation, in exchange for granting an unprecedented policy role for the treaty tribes in an international organization, which was the bargain struck between the Federal government and the tribes for their willingness to table the All Citizens Case.

Therefore, the process of the American treaty tribes’ inclusion in the PSC is fundamentally rooted in domestic political-legal processes. This runs counter to a potential rival argument that would posit that such inclusion stems from obligations on the part of the nation-state under UNDRIP to accommodate indigenous participation in policy decision-making. If such obligations were taken to heart by nation-states, one would expect that the American treaty tribes would hold similar positions in other institutions, and in particular, the IPHC, which is a peer institution to the PSC. The key distinction here is that in contrast to situation of the American treaty tribes in the IPHC, the tribes in the salmon case served a political purpose from the
perspective of the Federal government, which was feeling pressure to improve bilateral relations with Canada. Because Alaska was an obstruction of that foreign policy goal, and because the treaty tribes had legal leverage vis-à-vis Alaska, the treaty tribes were able to do the dirty work in forcing Alaska to the bargaining table.

Furthermore, the contrast between the PSC and IPHC cases also suggests that a corporatist explanation for why the tribes were included in the process is mostly insufficient for explaining the process of tribal inclusion at the international level. Corporatist theory provides a compelling account for why tribal interests, as well as other actors such as commercial and recreational fishing interests, are represented in domestic-level fishery management institutions such as the PFMC, although it should be noted that in the case of indigenous groups, such inclusion is different from other stakeholders in that their inclusion does not stem from an executive or administrative decision, as posited by most theories of corporatism. Recall that tribal inclusion in the PFMC has been legally mandated to facilitate harvest allocations of both salmon and halibut. The key contrast here is that at the international level, the relative lack of participatory authority in the IPHC compared to the PSC is rooted in the difference, from the Federal government’s perspective, in the level of utility that the tribes had in mediating inter-group conflicts in the institution. This utility was rooted in the newly-recognized sovereignty that accentuated the tribes’ leverage as intergovernmental actors. Thus their inclusion does not follow a logic of top-down imposition of constraints by government actors who seek to co-opt tribal interests. Rather, their inclusion serves a broader political purpose of binding the various orders of government – federal, state, and tribal – into a structured negotiating forum to resolve intergroup differences and enable bilateral cooperation with Canada. Furthermore, the granting of tribal veto power clearly limits the ability of the state to hierarchically order relations between actors, violating one of the core tenets of the corporatist model as posited by Schmitter (1974).

4.3. The Evolution of Consultation and Inclusion of Canadian First Nations in the PSC

While Canadian First Nations groups hold similar positions within the PSC structure as their American tribal counterparts, and actually enjoy a greater measure of representation
terms of their numbers on certain panels and technical committees as outlined in Chapter Three, the process of their inclusion is fundamentally different. Unlike the position of American treaty tribes, whose inclusion is rooted fundamentally in sovereign treaty rights and their political leverage in solving intra-delegation collective action problems, Canadian inclusion is rooted in the general duty of the national government to consult with key stakeholders during the policy-making cycle. The status of Canadian First Nations as “key stakeholders” is furthermore rooted in a complex history of case law based on natural and common law which grants First Nations certain, yet often ill-defined, rights to the resource.

As in the American case, the events leading up to the signing of the PST and the inclusion of First Nations groups in the PSC begin with the settlement of British Columbia in the mid 1800’s. However, in contrast to the American case, treaty-making in Canada had largely ceased by the time that settlement began in earnest. Thus the trajectory of First Nations affairs in Canada took a dramatically different course than in the United States. Key events in the development of indigenous affairs and fisheries policy, and how First Nations came to be considered key stakeholders, are outlined in Table 4.2. below:
The process by which Canadian First Nations came to be involved in the PSC was significantly influenced by two significant structural factors. First, the lack of treaty-making in British Columbia left the legal status of First Nations groups, including their rights to fish, in limbo,
a situation which largely persists to this day. Secondly, in the late 1800’s, exclusive jurisdiction over both fisheries policy and indigenous affairs was granted to the national government, by the Fisheries Act and Indian Act. Thus the national government has been the predominant player in shaping developments in both of these policy areas.

As a result, the process of First Nations inclusion in the PSC proceeded along three parallel tracks. On the one hand, Government of Canada actions in the late 1960’s, which threatened to terminate the legal status of indigenous groups, spurred indigenous group activism and the subsequent development of case law aimed at resolving outstanding land claims and aboriginal rights issues. These two issues, the treaty process/land claims issues and the resolution of specific aboriginal rights (in this case the right to fish), have typically been addressed contemporaneously, with developments in one area often having effects in the other. Therefore, these two parallel tracks are depicted together in the upper most timeline depicted in figure 4.2. below, which provides a graphical summary of the process model which is explored in greater detail in the sections which follow.

One of the key developments of increased First Nations activism was the explicit recognition of vague and unspecified aboriginal natural law rights in the Constitution in 1982. In response to increased activism and pending litigation over a specific aboriginal right to fish, DFO began engaging with First Nations groups as key potential stakeholders, alongside the commercial and recreational fishing interests with which DFO had a longer history of collaborative policy-making. Thus DFO appears to have anticipated developments in aboriginal law and began engaging in consultation before there was a legal obligation to do so. Subsequent case law, and
in particular the *R. v. Sparrow* case in 1990, recognized a limited natural law right on the part of aboriginal groups to fish, as well as a legal obligation on the part of the Government of Canada to consult First Nations groups over any issue that could impact this right. DFO was thus well-situated to meet the demands of consultation policy given its active consultation with First Nations groups over salmon policy, which pre-dated the *Sparrow* decision. Further developments in Canadian case law have extended the scope of consultation policy, which has served to entrench their positions as stakeholders in the PSC, such that recent changes to the membership structure of the Canadian delegation has not resulted in any net losses of First Nations positions within the PSC. However, the nature of the aboriginal fishing right has been problematized by recent case law, as well as the finalization of certain treaties and comprehensive land claims settlements, which has led to a lack of consistency in the rights possessed by First Nations groups, and necessitated a rather ad hoc process of engagement and consultation between DFO and First Nations groups on a tribe-by-tribe basis.

The third track pertains to the development of bilateral cooperation over salmon fisheries between Canada and the United States. The creation of the IPFSC set the precedent for such cooperation. However, as detailed in the preceding section, various crises and exogenous shocks led to an international crisis between the two nations which complicated efforts at finalizing a more comprehensive treaty that would extend cooperation to virtually every salmon stock, as opposed to the IPFSC’s exclusive focus on Fraser River stocks. This crisis contributed to DFO’s decision to involve all major stakeholders, including First Nations, as a means of establishing a unified Canadian position in order to apply leverage against the United States in treaty negotiations. Again, it is important to realize that this pre-dated the legal recognition of the aboriginal fishing right and duty to consult. Furthermore, when the PST was ultimately signed, the Commission structure was largely imposed upon the Canadians, who were weary of negotiations and wary of the multiple-member structure and voting arrangements for the American delegation. However, this provided the Government of Canada with a built-in structure to accommodate the stakeholder processes they had already been engaging in. Thus, the decision to involve First Nations in the PSC process stemmed from both an imperative to involve
key stakeholders in negotiations with the Americans, and a prescient recognition of the potential emergence of a strengthened aboriginal fishing right. As a result, the DFO in Canada has been at the forefront of developing the parameters of consultation policy and implementing it at both the domestic level and within the context of the PSC, which DFO sees as an important avenue for carrying out its consultation responsibilities (interview, DFO Staff, 1/12/10; interview, DFO Staff, 3/9/10).

4.3.1. The History of Treaty-Making in Canada

As with the United States, Canada inherited from Great Britain a long legacy of treaty-making with aboriginal populations as a matter of official policy (McKee, 2009). In general, treaties form the basis of the government-to-government relationship between the vast majority of First Nations and the Canadian government. However, the situation of First Nations in British Columbia represents an exception to this rule, as the treaty-making process as official policy was ended by the time most of British Columbia was settled, as the British Colonial Office and various colonial authorities in British Columbia viewed each other as having the fiduciary responsibility for concluding treaties (ibid). In other words, nobody wanted to bear the costs of negotiating land settlements, so they essentially chose to ignore First Nations groups to the extent that they could. Subsequent colonial authorities attempted to simply extinguish aboriginal land title by proclaiming that:

“The Indians really have no right to the lands they claim, nor are they of any actual value or utility to them; I cannot see why they should either retain these lands to the prejudice of the general interests of the Colony, or be allowed to make a market of them either to Government or to individuals.” (Trutch, quoted in McKee, 2009, 19).

The result of official policy in the 19th Century, and failure to address the underlying land claims in the 20th Century, is that the vast majority of First Nations bands in British Columbia, which currently number nearly 300, depending on the calculus, do not have treaty rights explicitly codified. The exception to this rule are fourteen treaties, known as the Douglas Treaties, signed between various small bands on Vancouver Island and the Vancouver Island Colony between the years of 1850 and 1854, and Treaty 8, which covered a handful of bands in Alberta and
northeastern British Columbia (ibid). These treaties, however, were limited in scope, dealing almost entirely with land cessations in exchange for material concessions, although the bands involved in the Douglas Treaties retained the "liberty to hunt over unoccupied lands" and the right to "carry on their fisheries as formerly" (Ministry of Aboriginal Relations and Reconciliation, N.d.). However, the specific parameters of these particular treaty clauses are currently the subject of litigation and have not been settled (Harris, 2007). Regardless, the First Nations bands involved represent only a small fraction of the overall First Nations fishery.

4.3.2. The Indian Act

The underlying relationship between First Nations groups and Canada after its partial independence from the United Kingdom – "partial" in the sense that London still retained control over foreign policy and other issues under the terms of the Constitution Act of 1867, until passage of the Statute of Westminster in 1931 – was clarified with the passage of the Indian Act in 1872 (Newhouse and Belanger, 2010). The Indian Act grants the federal government exclusive authority over First Nations affairs, giving the national government sole authority to legislate all issues in relation to those classified as Indians as well as lands that have been explicitly reserved for them under the terms of various treaties and statutes (ibid). The act furthermore defines who is an "Indian" and outlines various legal rights for registered individuals, as well as conditions under which such recognition may be revoked (Newhouse and Belanger, 2010; Posluns, 2007). In doing so, it establishes the primacy of the national government over First Nations affairs, and outlines various obligations of the government vis-à-vis First Nations groups and individuals, but is largely silent on the issues of specific rights and the issue of outstanding land claims. This has led to a great deal of uncertainty regarding the status of many First Nations groups, thereby leaving unresolved questions largely to the courts to decide, primarily on the basis of constitutionality. However, from 1931 to 1982, constitutional law in Canada was murky, in part due to disagreements over the process of amending the constitution, which left the process of constitutional amendment in the hand of the British parliament until the constitution was
“repatriated” with the Constitution Act of 1982 (Russell, 2010). In the interim, the legal status of non-treaty First Nations bands and their various lands and rights claims were highly uncertain.

4.3.3. Case Law Impacting Aboriginal Rights

The lack of treaties in British Columbia has thus led to a litany of land claims and other rights cases in Canada. However, the various bands in British Columbia were geographically dispersed and, in many cases, sparse in population, which has continued to be a barrier to effective inter-tribal collective action (McKee, 2009). Nonetheless, by the 1970’s First Nations bands began to muster the resources necessary to litigate their outstanding land claim issues. This was in part spurred by the threat to aboriginal rights posed by the so-called “White Paper” of 1969, an official policy document drawn up under the supervision of Jean Chretien, the Minister of Indian Affairs, which would have repealed the Indian Act, allotted Indian reserves to individual ownership, and gradually phased out all privileges of status Indians and obligations of the Canadian government towards them (McKee, 2009; Newhouse and Belanger, 2010). This galvanized pan-tribal activism, leading to a rebuttal by the Indian Chiefs of Alberta titled “Citizens Plus”, which put in no uncertain terms that First Nations would not peacefully allow the principles of the White Paper to be implemented (ibid). The reaction by First Nations leaders both initiated the modern era of pan-First Nations advocacy and led to a complete withdrawal of the White Paper by the Government of Canada (ibid).

Shortly thereafter, the first major case to address the general land claims issues, Calder v. British Columbia, was brought by the Nisga’a who argued that they held title to lands in the Nass Valley before British colonization, and that this title had not been lawfully extinguished (McKee, 2009). On the first question, the Supreme Court of Canada held that the Nisga’a did in fact have title, but the court evenly split on the question of whether said title had been lawfully extinguished (ibid). The practical effect of Calder was to force the issue of land claims settlement onto the government’s agenda, since the fundamental questions had not been resolved due to the split decision. This led to the creation of the Office of Native Claims in 1973, which was charged with resolving both specific and comprehensive First Nations Claims (Aboriginal Affairs
and Northern Development Canada, 2003). However, the slow progress of this process led to dissatisfaction by both parties, and in the case of British Columbia, the province refused to participate (ibid).

Meanwhile, complications arose out of the passage of the Constitution Act of 1982, which repatriated the Canadian Constitution from Britain. In particular, Sec. 35(1) of the act specifies that “the existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed” (emphasis mine). While seemingly straightforward, this clause has proven to be problematic because it does not define what constitutes aboriginal rights nor provide a list of specific rights, leaving it up to the courts to decide the parameters of aboriginal rights (Dickason, 2002; Harris, 2007). Thus there are two classes of rights embodied in the Constitution Act, specific statutory rights codified in specific treaties, and aboriginal rights stemming from natural or common law rights. It thus fell to litigation to solve the unresolved questions pertaining to land rights and the specific parameters of aboriginal rights, particularly in the area of fisheries.

On the land rights front, litigation was initiated in 1987 by the Gitxsan and Wet’suwet’en First Nations in the case of Delgamuukw v. British Columbia, in which they sought title and jurisdiction over 22,000 square miles of traditional territory on the grounds that their title was never ceded nor purchased by the United Kingdom or Canada (McKee, 2009). In 1991, the Chief Justice of the Supreme Court rendered an opinion that rejected the claim, agreeing with the province’s position that all First Nations land rights in British Columbia were extinguished by the colonial government before it became part of Canada, and finding that aboriginal rights existed “at the pleasure of the Crown” and could be extinguished at its will (Korsmo, 1999; Roth, 2002). Furthermore, the court rejected the applicability of oral tradition as a basis for establishing the contours of aboriginal title (ibid). However, the Court also granted leave to petition the British Columbia Court of Appeal, which subsequently rejected the Chief Justice’s opinion, but held that it did not have power to resolve the issue (McKee, 2009). This thus led to a sort of stalemate that galvanized the province and First Nations representatives to form a task force for setting the parameters of the settlement of outstanding land claims through a re-opening of a government-to-
government treaty process which came to be known as the British Columbia Treaty Process (BCTP), which was to be negotiated under the auspices of the British Columbia Treaty Commission (BCTC) (Roth, 2002).

The BCTP is a voluntary six-stage process by which First Nations may choose to enter negotiations (McKee, 2009). However, only sixty bands are currently in the process, and only two actual treaties have been concluded (ibid). As a result, the process has been roundly criticized by all parties as fruitless, expensive, and from a First Nations standpoint, not as likely to yield as favorable results as litigation testing the parameters of the aboriginal right to fisheries (interview, PSC Commissioner, 2/10/10). Such a perspective appears to be based on the observation of the success of the American treaty tribes in the cases of U.S. v. Washington, U.S. v. Oregon, and their various sub-proceedings. A common perspective uncovered during the course of fieldwork, expressed in various interviews and overheard in various caucus meetings and informal hallway conversations, is that First Nations are “twenty years behind” the treaty tribes of the United States. Such a perspective seems to suggest that the recognition of aboriginal rights is path dependent, and that co-management and equal sharing arrangements are inevitable. In fact, some First Nations representatives explicitly invoke the situation of the treaty tribes in their calls for an immediate “starting point” of negotiations to be a 50% share of all fisheries, while even going further to suggest that this starting point comes “with the understanding that this may eventually reach 100 per cent in some fisheries” (Jones, Shepert, and Sterrit, 2004).

From a Canadian government perspective, such demands are a “non-starter” (interview, PSC Commissioner, 3/8/10). However, support for some kind of quota has been expressed by task forces formed to address the issue, with the “Pearse-McRae Report” even going so far as to recommend allocating individual license quotas, which would set no upper limit to what First Nations fisheries could get, especially if they were able to buy up all individual permits (McRae and Pearse, 2004). This would be particularly feasible if the national government would be willing to purchase licenses for various First Nations bands, as recommended by Jones, Shepert, and Sterrit (2004), although this would likely set up fierce inter-tribal competition for specific licenses.
and would not likely be politically feasible to the general public (interview, PSC Commissioner, 3/8/10). Many are similarly skeptical of the ability of the First Nations to achieve allocations similar to those of the American treaty tribes through litigation, given that such claims are rooted in common law and not specific treaty stipulations as in the American case (interview, PSC Commissioner, 1/11/10; interview, PSC Commissioner, 2/9/10; interview, former PSC Commissioner, 3/7/10; interview PSC Commissioner, 3/8/10).

Meanwhile, while the more general policy issue of land claims was working its way through the courts, litigation specific to fishing rights came to the forefront. In the 19th Century as the commercial fishery developed, Canadian policy was implemented to recognize an "Indian food fishery" whereby individuals could apply for a permit to catch fish for familial consumption (Harris, 2007). First Nations were also technically eligible to participate in the commercial fishery just like anyone else, although they were actively discriminated against in the allocation of some licenses and barred outright from obtaining others (ibid). Nonetheless, the creation of the food fishery legal construct set a precedent which would inform Canadian fisheries policy to the present day.

Like the general policy area of aboriginal affairs, fisheries policy is one of the few policy areas in which the national government has virtually sole authority, by virtue of the Fisheries Act and Constitution Act of 1982 (Fisheries and Oceans Canada, 2010c; Howlett and Joshi-Koop, 2010). In general, the Government of Canada is responsible for the sea, coastal and inland fisheries, while the provinces have the right to make laws governing property, public lands and property rights (Fisheries and Oceans Canada, 2010c). This essentially means that the central government has the authority to manage fish habitat, but the provinces have control over other uses of inland waters (ibid). This is indicative of the peculiarities of Canadian federalism, which unlike the cooperative model of federalism in the United States, exhibits features of “dual” or “double” federation characterized by each level jealously guarding its respective spheres of influence and relying upon “executive federalism” to defuse provincial-federal conflicts (Murray, 1992; Smith, 2010).
It is within this context that the 1990 case of *R. v. Sparrow* attempted to clarify the vagaries of "existing aboriginal" rights to fish in the absence of a treaty. Similar to the American cases which dealt with discriminatory regulatory measures, except in this context dealing with aboriginal rights rooted in common and natural law instead of treaties, and with the national government rather than the states being the target of litigation, the *R. v. Sparrow* case involved a Musqueam fisherman who was fishing with net gear that did not comply with DFO regulations as an act of public protest claiming an inherent aboriginal right (Harris, 2007). As in the American cases, the Canadian government's response was that such regulations were necessary under the sole regulatory authority to manage the fishery for conservation purposes (ibid). While the Supreme Court found that the national government did have jurisdiction over the fishery and that it *could* be justified in infringing aboriginal rights, this specific regulation was unjustified (ibid). Furthermore, extending the logic and practice of the pre-existing recognition of aboriginal food fisheries, the Court found that the aboriginal right consisted of “food, social, and ceremonial uses”, and that these were to be given high priority by DFO (ibid). The first obligation of DFO was to ensure sufficient escapement to sustain the resource, after which it had to account for the food, social, and ceremonial allocation to First Nations, and then it could turn to commercial and recreational allocations (ibid). Furthermore, First Nations are free to participate in the commercial fisheries if they are able to obtain a license, however, only 14% of the total landed value of the total commercial catch of all fish species (Pearse and McRae, 2004).

In response to the Sparrow decision, in 1992 DFO initiated an official Aboriginal Fisheries Strategy (AFS) to provide a framework for determining the specific food and ceremonial allocations to First Nations bands that have not concluded treaties under the BCTP (Fisheries and Oceans Canada, 2003; Harris, 2007). Under the AFS, DFO will negotiate “fisheries agreements” on an ad-hoc basis with individual bands to set the parameters of their food, social, and ceremonial allocations (ibid). Where agreements cannot be made with a particular First Nations group, the Minister of Fisheries and Oceans has authority to unilaterally issue a communal fishing license to the group (Fisheries and Oceans Canada, 2003). This has led to discord among many members of the First Nations community, which generally views the policy
as too ad hoc, complicated, lacking in transparency, and a hindrance to long term strategic planning (Fisheries and Oceans Canada, 2003; interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 2/10/10).

4.3.4. The Legal Duty to Consult

The recognition of an aboriginal right to fish in and of itself does not guarantee First Nations participation or co-management authority. But one of the outgrowths of the Sparrow decision, as well as other contemporaneous cases, has been the development of a general and decentralized body of policy generally referred to as “consultation policy”. In general, the “duty to consult” stems from a complicated set of case law, although in response to the plethora of decisions mandating consultation, there have been recent attempts to codify general policy in this area (Treasury Board Secretariat, 2001). Consultation policy is further complicated by the fact that while there are general guidelines for consultation, the specific guidelines for consultation are developed on a Ministry-by-Ministry basis (Treasury Board Secretariat, 2001; interview, PSC Commissioner, 2/10/10; interview, DFO Staff, 3/9/10). Thus consultation may be defined and operationalized quite differently within each Ministry. Indeed, among the interview subjects contacted for this study, each individual expressed a hazy understanding of what consultation actually entails, although a strong consensus existed that the Ministry of Fisheries and Oceans has been at the forefront of developing meaningful consultation (interview, PSC Commissioner, 1/11/10; interview, DFO Staff, 3/9/10).

In the context of First Nations policy, the legal obligation to consult stems from the legal recognition of aboriginal fishing rights under a series of legal cases starting with R. v. Sparrow, which is seen as the genesis of consultation policy and which was responsible for the implementation of consultation under the AFS. More recent cases have simultaneously extended the duty to consult while failing to specify what consultation actually must entail. In Haida Nation v. British Columbia, the Supreme Court found that the mere assertion of an aboriginal right under Section 35(1) of the Constitution Act can trigger an obligation to consult (Lawson Lundell, LLP, 2005).
Furthermore, the duty to consult occurs whenever the government knows about, or should know about, a potential aboriginal right and is undertaking activities that might adversely affect the right (ibid), something akin to the mandate for Environmental Impact Statements under the National Environmental Policy Act in the United States. The Court also refused to define consultation and how much of it is required, instead stating that governments at all levels had to address this on a case-by-case basis (ibid). In a case that was decided simultaneously with the Haida Nation case, *Taku River Tlingit First Nation v. Ringstad*, the Supreme Court found that consultation processes need not be standardized, and articulated a legal standard that such efforts merely need to “represent a reasonable effort to consult and inform” (ibid).

Furthermore, the legal justification of First Nations consultation is not the same as that as other stakeholders. Essentially, First Nations set a precedent for consultation which opened the door to other interests demanding similar inclusion in consultative processes, which has contributed to the development of more broad-based consultative guidelines being drawn up by the Treasury Board Secretariat and other national and provincial departments (interview, former PSC Commissioner, 2/7/10). However, consultation with other stakeholders is fundamentally different in that it is not rooted in a rights discourse. Recall that throughout the history of the PSC, First Nations, as well as commercial and recreational fisheries, have been deemed as constituting the key stakeholders in fisheries by DFO, and thus warranted co-equal representation and access to consultation. With commercial fisheries, the close ties between fishermen and the DFO went back decades, constituting a certain kind of cozy lobbying relationship which until recently was not termed “consultation” (ibid). There has always been a popular saying along the lines of “the first meeting of any new DFO Regional Director General was always with commercial fischers”, although since the implementation of the AFS this is not as pronounced as it has been in the past (ibid). Regardless, the impetus behind consultation with First Nations, commercial fisheries, recreational fisheries, and in
recent years, conservationist groups, comes from different socio-political-legal histories (ibid).

From DFO’s standpoint, the imperative to consult is to establish harmony in all consultative processes, which they accurately note that they were doing anyway before such consultation was mandated and the use of the word “consultation” became prevalent (interview, DFO Staff, 1/12/10; interview, DFO Staff, 3/9/10). If DFO does not negotiate in good faith in one area, their reputation is damaged in others (ibid). Furthermore, consultation is seen as a necessary first step in resolving outstanding comprehensive/specific claims processes in British Columbia – if the government does not consult in good faith, there is the perception that the courts will grant wide-ranging rights to First Nations in fisheries which could threaten the balance of federal-provincial policy roles in their respective spheres (interview, PSC Commissioner, 2/9/10).

The DFO and First Nations furthermore have different views of what consultation means. DFO’s perspective is that they must consult with First Nations on all issues, but that in instances of disagreement, DFO retains sole decision-making authority, as evidenced by the AFS in cases where no agreement can be reached. The general First Nations’ perspective is that they should have a formal vote or say on all issues (interview, DFO Staff, 1/12/10). The overall situation is that there is a lot of legal risk around not consulting. DFO’s perspective is that they are trying to foster a “culture of consultation” above and beyond the base legal obligations to do so, and as a result DFO has a reputation of being better at this than most other departments and Ministries. One of the major questions pertaining to consultation policy is exactly when do ministries have to consult? In general it is held to not be necessary at the policy development phase, but absolutely is necessary during the implementation phase (interview, DFO Staff, 3/9/10). A general trend however is that DFO believes that it beneficial for them to consult during the policy development phase as well, so DFO is developing policies to actively promote consultation at all stages of the policy cycle (ibid). In furtherance of this overall policy
goal, there has been the recent creation of a “Consultation Secretariat” within DFO’s Pacific Region office to provide training for DFO personnel (ibid).

There are thus several difficulties associated with consultative policy. The first is that it is ill-defined, with few legal standards for what constitutes adequate consultation and when it must be performed. This leads some to wonder if, in the context of the PSC and in salmon policy more generally, consultative policy simply means DFO needs to report that they contacted relevant stakeholders and then registered their support or opposition to a proposed policy (interview, PSC Commissioner, 3/8/10; interview, PSC Commissioner, 2/9/10). Furthermore, from both a First Nations and DFO perspective, the process is too ad hoc due to the large numbers of First Nations bands that are potential stakeholders in the process, and as a result there is a lack of consistency in the way in which DFO deals with different First Nations bands, leading to accusations of preferential treatment and the like (Allain and Frechette, 1993; interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 3/8/10).

Setting aside these critiques, the importance of consultative policy to the PSC process is that this is the conduit by which identified stakeholders have a seat at the table in terms of representation at the Commissioner, panel, and technical committee levels. Past practice has been for DFO to only recognize commercial, recreational, and First Nations fishing interests as key stakeholders, but as illustrated in Chapter Three, has now made room for conservation and provincial representation. From DFO’s perspective, due to their unshared authority over fisheries policy as specified in the Constitution, who actually sits on the PSC and in what capacity is largely immaterial, as they hold final say over all important issues (interview, PSC Commissioner, 2/9/10). However, that is not to say that consultation policy is inconsequential, as DFO tries to accommodate all interests it sees as relevant within general salmon policy processes.
4.3.5. *The Negotiation of the Pacific Salmon Treaty from a Canadian Perspective*

As referenced earlier, Canada had been desirous of a comprehensive treaty that addressed the issue of Alaskan interceptions of Canada-bound Chinook and Coho salmon, as well as an agreement on the three transboundary rivers that run from Canada through the panhandle of Alaska. When Alaska withdrew its support of the draft treaty in 1982, Canada was reportedly “furious” and “outraged”, particularly at the cooperative federalism approach to fisheries in the United States which allowed sub-national governments the power to affect what Canada viewed as fundamentally foreign policy decisions which should be handled unilaterally by the national government (Jensen, 1986; Knight, 2000; interview, PSC Commissioner, 1/11/10). By the time the treaty was concluded in 1985, it had been a fourteen year process which had left all parties exhausted, and when presented with the proposed structure of the Commission by American negotiators, the Canadians were initially reluctant, given their concerns over sub-national governments being able to hijack the American position (McDorman, 1998a; interview, PSC Commissioner, 1/11/10).

However, while the leadership within DFO initially viewed that the Commission structure was being “imposed” upon them by the United States, they quickly came to see this as an opportunity to continue their collaborative, “cozy” relationship with commercial and recreational fisheries, and to placate First Nations fishing interests, even before such consultation was mandated under the provisions of *R. v. Sparrow* (interview, former PSC Commissioner, 2/9/10; interview, PSC Commissioner, 3/8/10). From this perspective, the large number of specific positions created at all three levels, Commission, panel, and technical committee, provided them with an opportunity to incorporate multiple interests, accentuating their reputation of being at the forefront of developing consultative policy (ibid).

Thus the PSC has provided the Canadian government with an avenue for addressing not only the various fisheries management issues which are at the core of the PSC mandate, but also for facilitating the more domestic-level policy goal of fostering cooperation and collaboration through consultation policy. While initially reluctant to accept the multi-layer, multi-member
organizational structure of the PSC, the DFO now appears to wish that the body had even more seats in order to accommodate all of the interests which are pressuring them for inclusion (interview, PSC Commissioner, 2/9/10). A commonly-cited difficulty in this regard, as it pertains to First Nations, is that the legacy of divide-and-conquer, which encouraged the construction of First Nations at the band level instead of the nation level through the location of First Nations bands onto small reserves, has resulted in the proliferation of the numbers of tribal entities that are seeking inclusion in the process (interview, PSC Commissioner, 2/10/10). This is seen as a particular problem for the BCTP, which has led to some First Nations leaders to try to attempt to consolidate treaty negotiations into “nation-level” rather than “band-level” negotiations (ibid). In the context of fisheries management, DFO has attempted to address this issue through a sub-program of the overall AFS process known as the Aboriginal Aquatic Resource and Oceans Management (AAROM) program, which among other things, has attempted to consolidate groups for the implementation of other AAROM priorities such as technical capacity development (Fisheries and Oceans Canada, 2008b; interview, PSC Commissioner, 2/9/10). The guiding principle behind this is to get First Nations bands into “fewer agglomerations that better map to the salmon’s lifecycle” (interview, PSC Commissioner, 2/9/10).

4.3.6. Difficulties in Inter-tribal Collective Action

The issue highlighted above hints at the widely-held perception that an underlying structural problem with Canadian First Nations has been their failure to consolidate their interests into a single, or at least handful, of effective inter-tribal collective action organizations, as has been accomplished in the United States with NWIFC and CRITFC. In the Canadian case, inter-tribal organizations tend to evolve on an ad hoc basis on a more localized, rather than province-wide, level (interview, PSC Commissioner, 3/8/10). The most commonly cited reasons for this failure have included the greater complexity of inter-tribal harvest rivalries, especially on the Fraser River which has been characterized as containing coastal/lower, middle, and upper river fishing interests who use different gear types and are relatively advantaged or disadvantaged in regards to their temporal access to the fishery (interview, PSC Commissioner, 2/10/10; interview
PSC Commissioner, 3/8/10); the failure of the British Columbia Aboriginal Fisheries Commission (BCAFC) due to financial malfeasance and inter-tribal rivalries (interview, PSC Commissioner, 12/16/09; interview, NWIFC Staff, 2/18/10; interview, PSC Commissioner, 3/8/10); and the relative lack of funding for such efforts by the government of Canada (interview, DFO Staff, 1/12/10; interview, PSC Commissioner, 1/14/10). While a new inter-tribal organization, the First Nations Fisheries Council, has been operational since 2007, it still does not enjoy participation by all relevant First Nations bands and is hamstrung by financing issues, while the DFO attempt to address inter-tribal rivalries in the context of the PSC has been essentially limited to approximately $150,000CDN per year for the inter-tribal caucus process (interview, PSC Commissioner, 1/14/10).

4.3.7. Recent Developments in Canadian Case Law

Finally, the trajectory of recent case law has raised questions regarding both the future parameters of the aboriginal right to fishing, and to the general critique that DFO-First Nations collaboration is carried out in an inconsistent, ad hoc matter. In what is being called the most significant development in recent years regarding the aboriginal fishing right, leading some to call it “the Canadian’s Boldt decision” (interview, PSC Commissioner, 2/8/10), the Supreme Court of British Columbia in the case of Ahousaht Indian Band and Nation v. Canada (Attorney General) (hereafter referred to as the Nuu-chah-nulth case), responded to a challenge from several of the thirteen bands that comprise the Nuu-chah-nulth Nation, which resides on the west coast of Vancouver Island, who asserted a fundamental right to participate in the commercial fishery for all fish which are located in their traditional territory. This would enable these bands to sell their catch outright, which is not allowed under the food, social, and ceremonial right, without having to participate in the standard commercial fisheries licensing scheme (interview, PSC Panel member, 3/2/10). The initial case was heard in the Supreme Court of British Columbia, which found in favor of the Nuu-chah-nulth, and was subsequently upheld on appeal in the B.C. Court of Appeal, which had the final say on the case as the Supreme Court of Canada refused to hear an appeal by the province (CBC News, 2011; Smith, 2012).
The case and the precedents it has set are important for a number of reasons. First of all, the court was willing to accept oral histories as admissible evidence, overturning the precedent set by Justice MacEachern’s opinion in the Delgamuukw case (Rich and Kirchner, 2009; Steel, 2010). In doing so, the court found that the Nuu-chah-nulth sufficiently demonstrated a historical commercial interest in fisheries based on past patterns of trade, which led to the finding that they had an existing aboriginal right to sell fish based on past practices (Rich and Kirchner, 2009). The Court stopped short however of recognizing an absolute title to the resource (ibid). Second of all, the scope of the case was for all fish resources, which would compel DFO and the First Nations Bands to negotiate a comprehensive fishery management plan rather than a series of ad hoc, species-by-species fisheries agreements (Rich and Kirchner, 2009; interview, PSC Panel member, 3/2/10). Thirdly, the case was unique in that unlike other cases testing the contours of the aboriginal fishing right, which arose out of controversies surrounding criminal prosecution which tested issues of constitutionality, the Nuu-chah-nulth case was a civil law case, which is a rare conduit for questioning issues of constitutionality in the Canadian court system (interview, PSC Panel member, 3/2/10). In addition, the Nuu-chah-nulth did not directly challenge the supreme statutory authority of DFO over fisheries policy, instead trying to achieve co-management authority with DFO over their territorial waters (ibid). The Court also found that the entire regulatory regime served to infringe upon these existing aboriginal rights (Rich and Kirchner, 2009). As remedy, the Court found that the evidence warranted the delineation of fishing territory extending nine miles off shore from each band’s land territory as consistent with the best evidence regarding their past fishing practices (ibid). Furthermore, declaring that it lacked the capacity to decide the technical merits of the case, the Court declared that since the Nuu-chah-nulth did not have exclusive title to resources and expressed interest in collaborative management, that the two sides must negotiate a co-management agreement within two years (ibid).

Paradoxically, in another case known as the Lax Kw’alaams case, which was argued under similar terms as the Nuu-chah-nulth case, every level of the court system from trial court to the Canadian Supreme Court rejected a similar claim to extend commercial fishing rights to the
Lax Kw’alaams First Nations band. In this case, the Court found that the tribe’s precontact customs and traditions did not support a claim for an aboriginal right to sell fish on account of the evidence which suggested that this particular band conducted fishing merely for sustenance, and only engaged in trade in the form of a fish product derived from smelt (Fitzpatrick, 2011). Therefore, the initial optimism surrounding the “Canadian Boldt decision”, which many thought would develop a generalized right for all First Nations bands to conduct commercial fisheries, has been significantly tempered, with the likelihood being that individual bands will face the onus of proving a historical trade in fishing products before being granted commercial fishing rights (Hamilton, 2011).

The implication of these cases is that the Court system is unwilling to recognize a set of aboriginal rights to fisheries that applies consistently across all First Nations bands, instead adjudicating the parameters of rights on a case-by-case basis. The lack of a treaty right to fish that equally accrues to all First Nations bands, in contrast to the situation enjoyed by the American treaty tribes, thus inhibits the development of consistent First Nations fisheries policy. In conjunction with the ad hoc nature of the BCTP, with each individual band essentially negotiating its own specific terms pertaining to fishing rights and allocations, it is likely that the pattern of DFO-First Nations relations will be characterized by a complex pattern of individualized arrangements on a case-by-case basis. For some bands, regulations must be negotiated on a case-by-case basis under the terms of the AFS, which itself is not a standardized process, and now with the case of the Nuu-chah-nulth and those tribes that have negotiated a treaty settlement under the BCTP, individualized co-management regimes will have to be negotiated, thereby complicating fisheries management for the foreseeable future. Furthermore, while individual cases of the development of co-management regimes will be interesting to watch, none of the recent case law would appear to indicate a reduction in the supreme statutory authority of DFO, nor the concomitant development of something approaching a veto authority on the part of First Nations akin to that of the American treaty tribes.
4.3.8. Summary

The inclusion of First Nations interests in the PSC thus follows a rather nebulous path, with a great deal of uncertainty regarding what future role First Nations will have in both the PSC and in domestic consultation and co-management processes. Clearly, in contrast to the American case, the lack of treaties specifying the contours of the aboriginal right to fish serves as a fundamentally different jumping off point for tracing the development of First Nations’ inclusion in the process. The subsequent, often ad hoc, development of case law that has attempted to clarify the aboriginal right to fish, coupled with threats to First Nations posed by the White Paper in 1969 contributed to a somewhat later start to indigenous activism in Canada, at least as it pertains to land title and fishing rights. A consequence of the general uncertainty has been at least three different parallel developments that differentially impact an individual band’s status vis-à-vis fishing rights and in some cases, hinders participation by some bands.

First, the Calder case put the issue of comprehensive land claims on the government’s agenda. The slow progress of resolving these claims ultimately led to the creation of the BCTC to help facilitate the overall treaty process. However, progress is slow in this regard, with only two treaties being concluded, neither of which contain fishing allocations close to the 50/50 sharing arrangement enjoyed by American treaty tribes. However, in the context of finalized treaties, the bands involved have become integrated into very localized collaboration processes with DFO which has enabled them to have some degree of certainty regarding their share of fisheries on a year-to-year basis.

Second, and much more importantly in terms of the number of groups involved, was the passage of the Constitution Act of 1982, which opened the door for further case law to determine the specifics of aboriginal rights in regards to fisheries. In particular, *R. v. Sparrow* was a watershed moment for at least two reasons, in that it recognized at least a limited right to fish for food and ceremonial purposes, and set forth the development of consultation policy, which is still being sorted out today. The development of the AFS to manage both of these obligations has initiated an unstandardized process by which DFO deals with First Nations bands who have
never concluded a treaty. Furthermore, the negotiation of the PST during the pre-Sparrow era, and the “imposition” of the Commission structure on Canada unwittingly provided opportunities for DFO to expand upon their pre-existing stakeholder processes with First Nations, which appear to have anticipated the subsequent clarification of aboriginal fishing rights under the Constitution Act and greatly influenced the trajectory of consultation policy not only within DFO but other departments as well (interview, DFO Staff, 3/9/10).

Finally, the Nuu-chah-nulth case opens up an additional type of Federal/First Nation relationship as both parties attempt to work out steps for managing the development of a different type of commercial fishery, one which could represent the development of a true co-management type of regime, at least at the domestic level, along the lines of those developed in the United States. However, the contradictory opinions in the Nuu-chah-nulth and Lax Kw’alaams cases would seem to indicate a continuance of the status quo whereby each First Nations band enjoys a different set of specific rights pertaining to fish, with the consequence being a lack of consistency in overall policy, which will continue to foment inter-tribal conflicts and uncertainty pertaining to the roles of First Nations in the PSC as well as other domestic policy processes. The continuing difficulty in developing inter-tribal collective action organizations furthermore likely contributes to these inconsistencies and hinders the resolution of various inter-tribal conflicts.

Compared to the United States case, corporatist theory provides a better account of the inclusion of indigenous interests in the PSC. On the surface, DFO’s clearly superior position and hierarchical control over the Canadian delegation is consistent with corporatist models of decision-making. However, corporatist theory only illuminates part of the story, which can be rounded out only through reference to the underlying issue of sovereignty and indigenous rights. Without the same level of recognition of sovereign treaty rights to salmon as enjoyed by the American treaty tribes, one should predict that Canadian First Nations would not have as clear a path to participation in the PSC. Clearly, the jumping off point of their inclusion is clearly corporatist in character, given the stakeholder processes that DFO was engaging in prior to the signing of the PST. This only tells part of the story, however. At first, the PSC merely
represented an additional forum for exercising corporatist-like stakeholder processes. The subsequent development of indigenous natural law fishing rights through case law, and the concomitant development of consultation policy, established the PSC as a primary forum for carrying out the legal duty to consult. Also as a result of the continuing development of indigenous natural law rights and consultation policy, First Nations interests in the PSC have become much more entrenched than the other stakeholder groups, as illustrated by these groups losing representation to other stakeholders while First Nations representation has remained constant. Thus, the original corporatist model of inclusion has been transcended, with First Nations groups enjoying a greater degree of legal protection of their seats at the table than might be predicted by strictly corporatist characterizations of the.

4.4. The Non-Participation of Other American Tribes in the PSC

Several Federally-recognized tribes in the States of Washington, Oregon, and Idaho are formally excluded from the PSC process. In Oregon, several tribes signed treaties that did not have the fishing rights stipulations found in the treaties that created the Warm Springs and Umatilla reservations. Many others were created by Executive Orders which similarly did not contain any provisions for specific fishing rights. Regardless, the vast majority (over 60) of tribal governments in Oregon had their Federal recognition terminated in 1954 under the terms of House Concurrent Resolution 108, the Western Oregon Indian Termination Act, and Klamath Termination Act, each policies associated with the “Termination Era” of Federal Indian policy (Wilkins and Stark, 2011). Today there are only nine Federally recognized Indian tribes in Oregon, with only the Warm Springs and Umatilla having special treaty fishing rights. Similarly, the Coeur d'Alene and Shoshone/Bannock tribes of Idaho were recognized by a series of treaties and Executive Orders, but did not contain specific treaty rights of the sort embodied in the Stevens-Palmer treaties. The Shoshone/Bannock tribe has attempted to obtain such rights to fish by attempting to intervene in the *U.S. v. Oregon* case, but they were shut out of the proceedings by Judge Belloni (interview, PSC Commissioner, 2/18/10).
The situation in Washington State is somewhat more complex. Beyond the twenty treaty tribe members of the NWIFC, and the Yakama, who are part of CRITFC, there are eight Federally-recognized tribes in Washington that do not have treaty fishing rights. Tribes such as the Snoqualmie and Chehalis tribes never signed treaties, and have only recently been recognized as part of the Federal government’s new turn towards Indian self-determination and recognition policies (Wilkins and Stark, 2011; interview, PSC Commissioner, 2/18/10). While these tribes have expressed interest in obtaining fishing rights and specific harvest allocations, the treaty tribes and other stakeholders such as commercial fishing interests have adamantly opposed such a move due to the fact that they lack specific treaty rights to the fish, and because such a move would cut into the overall share of the other treaty tribes that comprise the NWIFC (interview, PSC Commissioner, 2/18/10). Two additional tribes, the Kalispell and Spokane tribes of Eastern Washington, were created by Executive Orders in the late 19th and early 20th Centuries, but possess no special treaty fishing rights, and could not exercise fishing anyways due to their locations above the Grand Coulee Dam, which cuts off fish passage (ibid).

The final tribal entity, the Confederated Tribes of the Colville Reservation, represents a unique situation in terms of participation in salmon fisheries and the PSC. Like the Kalispell and Spokane, the Colville reservation was created by Executive Order, in 1872 (Confederated Tribes of the Colville Reservation, N.d.). The Colvilles had been in a unique situation in that they had been in treaty negotiations with Governor Stevens, but never signed a treaty and were essentially left to themselves in the remote area of present-day north-central Washington and the Okanogan area of British Columbia (ibid). Further land cessions occurred in 1892, with the northern part of the former reservation being ceded to the United States, but with the Colvilles retaining the right to conduct hunting and fishing in this area, much like the “usual and accustomed” situations of the treaty tribes (ibid). However, these rights were established by Executive Order, and not a treaty, and represent a more constrained definition than that of the “usual and accustomed” territories in the Stevens-Palmer treaties in the sense that the Colville’s fishing territory is geographically specified (interview, CRITFC Staff, 3/29/10).
However unlike the Kalispell and Spokane tribes, the Colville’s access to salmon has not been completely cut off by dam construction. While a short section of the Columbia River below the Grand Coulee Dam forms the southern border of the reservation, the major fishery that the Colville has access to is a run of Sockeye salmon that migrate along the Okanogan River, which forms the western border of the Colville Reservation, to spawning streams and lake rearing habitat on the Canadian side of the border. Thus, the Okanogan River could be classified as a “transboundary stream” under the legal definitions employed by the PSC. However, the Colville have been shut out of the PSC process, which has forced the PSC to issue a policy statement deferring their authority over these stocks because they are a “low value stock”, despite recent robust returning populations (interview, CRITFC Staff, 3/29/10).

The reasons for the Colville’s exclusion from the PSC process appear to be rooted in their comparative lack of sovereign fishing rights and inter-tribal rivalries. Unlike other tribes in Washington, Oregon, and Idaho, they do have an articulated right to fish for salmon, although this is restricted to on-reservation and along the Okanogan River in their former northern territories, but this is not protected by treaty, and the Colville may have missed the opportunity to have the contours of these rights clarified by the courts. At the outset of the Sohappy v. Smith/U.S. v. Oregon proceedings, the Yakama tribe approached the Nez Perce, Umatilla, and Warm Springs tribes, as well as the Colville, to intervene in the lawsuit. As indicated in an earlier section, the Nez Perce, Umatilla, and Warm Springs tribes elected to do so, but the Colville initially did not. When the Colville ultimately filed a motion to intervene in 1989 on the basis that six of the twelve Colville bands were present at the negotiations of the Yakama and Nez Perce treaties, the Yakama opposed their inclusion on the grounds that these groups did not ultimately become part of the Yakama confederation nor the Nez Perce reservation, and thus did not have the same treaty rights to salmon, to which the courts have consistently agreed and denied their requests for intervention (Gooding, 1994; interview, PSC Panel Member, 2/12/10; interview, PSC Commissioner, 2/18/10; interview, CRITFC Staff, 3/29/10). This has resulted in a fair amount of "bad blood" between the Yakama and Colville which persists to this day, with the Yakama
accusing the Colville of trying to free-ride on the success of their lawsuit (interview, PSC Panel Member, 2/12/10).

Meanwhile, the Okanogan River Sockeye runs have garnered a lot of attention for their rapidly increasing numbers, which has been attributed to better stream flow management on the Canadian side of the border (Thomas, 2012). There are additional habitat improvements currently being discussed to open up fish passage to two additional reservoirs that could increase the productivity of the system by a factor of twenty (ibid). However, as a result of the inter-tribal rivalries between the Colville and the CRITFC tribes, who consistently oppose their entry into the PSC process, the Okanogan Sockeye fishery has to be managed outside of the PSC context. The primary fisheries on the Canadian side of the border are First Nations subsistence fisheries conducted by several tribal groups under the banner of the Okanogan Nation Alliance (ONA) (Columbia Basin Weekly Fish and Wildlife News Bulletin, 2012). There is thus an interceptions issue between these groups and the Colville tribe, who are harvesting fish that otherwise would be harvested by Canadian First Nations and recreational fishermen. The management of this interceptions issue is being conducted through the Okanogan Basin Technical Working Group, an ad hoc group founded in 1996 that drew up terms of reference under the auspices of the PSC, but which subsequently had to meet separately on account of the Colville not being granted standing in the PSC (interview, CRITFC Staff, 3/29/10). The Colville also participate in this ad hoc process, which has thus far been limited to technical issues, with no official allocation formula yet to be set between the two groups (Columbia Basin Weekly Fish and Wildlife News Bulletin, 2012; interview, CRITFC Staff, 3/29/10). However, the potential for conflict has been mitigated somewhat due to the fact that the Colville are a constituent member of the ONA, due to transboundary cultural affinities between the Colville and Okanogan First Nations Group based on the fact that the Lake band of the Colville, one of the twelve bands that comprise the Colville, is essentially the same tribe as the Sinixt First Nation group of Canada (interview, CRITFC Staff, 3/29/10). Meanwhile, the CRITFC and NWIFC tribes have maintained a keen
interest in the development of the Okanogan Basin Technical Working Group, because there is the concern that any agreement that could be formalized under the context of the PSC could serve as a backdoor way for the Colville to get into the PSC process (ibid).

In summary, figure 4.3. provides a graphical representation of the process by which the Colville have been shut out of the PSC:

![Figure 4.3: Process Model of Colville’s Relationship with the PSC](image)

4.5. The Non-Participation of the Nisga’a in the PSC

Because of the lack of overall consistency of First Nations fisheries policy, the sheer number of bands in British Columbia, and the finite number of potential positions at all three levels of the PSC, it is inevitable that some First Nations bands are shut out of the process (interview, PSC Commissioner, 2/9/10). DFO uses the nascent FNFC as a conduit for nomination of potential First Nations representatives, but this clearly constrains the choice of individuals to members of bands who are party to the FNFC (ibid). Inclusion of others is largely out of personal initiative, usually arising out of formal negotiation relationships under the AFS (ibid). Furthermore, many bands do not have a current or historic interest in salmon fisheries, and are thus willful non-participants.

However, one case of interest for comparative purposes was uncovered during the course of research. The Nisga’a people of the Nass River valley are one of the few bands to have concluded a modern day treaty with British Columbia and the national government. They
also were active participants in the PSC, holding one of the First Nations Commissioner positions for several years, up until the conclusion of their treaty process in 1998 (interview, PSC Commissioner, 1/11/10). Subsequent to conclusion of the treaty, the Nisga’a have been virtual non-participants in the PSC process. The question which emerges is why?

Unfortunately, attempts to obtain an interview with Nisga’a representatives were unsuccessful, and so the analysis which follows should be considered tentative. However, the non-participation of the Nisga’a appears to be rooted in the specifics of their treaty and their geographic location. The terms of the treaty were indeed comprehensive, turning over exclusive jurisdiction in some areas and shared jurisdiction in others (Graben, 2007). In general, the Nisga’a have exclusive jurisdiction over the determining the form of their government, determining citizenship, cultural and linguistic policy, land regulation, licensing of aboriginal healers, and distribution of cultural property (ibid). In the areas of social welfare, education, adoption, and law enforcement, “the Nisga’a may make laws which are paramount, provided those laws meet or exceed provincial or federal standards, or receive provincial or federal approval (Graben, 2007, 72). Furthermore, the treaty incorporates a Harvest Agreement which covers several marine resources. In the Harvest Agreement, the Nisga’a are allocated 13% of the total allowable catch of Nass Sockeye, and 15% of the total allowable catch of Nass Pink salmon, as determined by DFO and through the issuance of licenses to the Nisga’a Lisims Government. Any overage or underage of these totals shall be offset from future year allocations, with accounting being a joint function of DFO and the tribal government. Furthermore, these fisheries are given the same priority as commercial and recreational fisheries, and enforcement and development of fishing season plans are carried out under a Joint Fisheries Management Committee, a kind of co-management arrangement covering the area in which tribal fisheries are prosecuted, which is solely on the section of river which runs through their reserve territories. Hence, unlike the situation of treaty tribes in the United States, co-management authority is geographically bounded and does not extend into the ocean environment.
Individuals not affiliated with the Nisga’a suggested that the Nisga’a no longer participate due to the fact that their allocations are set, and nothing can be gained from the PSC process since Nass River escapement targets are set by DFO after these fish separate from mixed ocean stocks and enter the river (interview, PSC Commissioner, 2/9/10; interview, PSC Commissioner, 2/10/10). One observer was careful to point out that the granting of a specific treaty right in and of itself does not mean greater representative rights in the PSC (interview, PSC Commissioner, 2/9/10). Another interviewee suggested that initial participation by the Nisga’a was due to the fact that they were currently negotiating a treaty, and participation in the PSC was merely a sign of goodwill (interview, PSC Commissioner, 1/14/10). The imperatives of developing governance capacity in the other areas provided for under the treaty may also serve as a disincentive for PSC participation, in that the tribe has more pressing priorities (interview, PSC Panel member, 2/9/10). Another potential disincentive for participation in the PSC may be the fact that the Nass River is wholly within the province of British Columbia, and thus does not carry any of the problems posed by the transboundary rivers which give rise to potential conflicts between Alaska and Canada, including First Nations groups such as the Gitxsan, thereby taking away a potential imperative for participation in transnational governance. However, they have continued a limited relationship with the PSC in the form of serving as an implementing authority of Northern Enhancement Fund projects, as recently as 2010, that aim to improve the gathering of improved technical information on stocks in the Nass River (interview, PSC Staff, 1/14/10).

4.6. The Process of American Treaty Tribes’ Inclusion in the IPHC

Unlike the situation of international cooperation over salmon management, which is characterized by three fundamentally different treaties and two different organizations charged with carrying out the terms of these treaties, the IPHC has been a constant fixture in international fisheries management and has experienced few structural changes over the course of its history. As one interview subject put it, the differences between the two regimes come down to history more than anything else (interview, NWIFC Staff, 3/30/10). A graphical model of the process of American treaty tribe involvement in the IPHC is provided in Figure 4.4. below, along with Table
4.3., which provides a timeline of key events and important actors. Both of these will frame the analysis which follows.

As discussed in Chapter Three, the genesis of the IPHC came about at the hands of fishermen and processing interests who pressured their respective governments to devise regulations designed to stave off a rush to harvest the resource by making credible commitments
to one another to abide by specific fishing quotas. Thus, unlike the PSC, the international Pacific halibut regime did not have any specific tribal interests pushing for inclusion or special rights or privileges. Furthermore, unlike the PSC, the IPHC was the first institution created to deal with the issue of halibut fisheries management, before the development of the domestic level fisheries regimes dealing specifically with halibut (Trumble, et al., 1993). As a result, the development of the overall regime governing halibut has from the outset emanated from the IPHC itself, in contrast to the more bottom-up development of the salmon regime in which domestic management institutions have played a much more important historical role, owing to the need to regulate river-based fisheries as part of the overall management process. As such, the IPHC plays a much more central role in the overall management regime, and has carried out its duties quite successfully, which contributes to a general satisfaction with the status quo.

4.6.1. Case Law Extending Indigenous Rights to Halibut

The legal recognition of a specific right to halibut has required additional litigation beyond the original *U.S. v. Washington* case, which dealt specifically with cases and controversies dealing with salmon. Clearly, the Boldt decision was important in setting precedent for the fundamental recognition of the treaty right and what this must entail. The first case after the core *U.S. v. Washington* case that dealt with other fisheries was a sub-proceeding under *U.S. v. Washington* that dealt with rights to shellfish, particularly high-value geoduck clam fisheries in Puget Sound and coastal Washington State. In this case, commonly referred to as the “Rafeedi decision” after the presiding judge, the Court found in 1994 that the treaty right to fish was not limited to particular species, and that if tribes could show that they historically exploited a specific fishery, then their basic treaty rights applied. Allocation agreements however were more difficult to apply, given the issue of whether tribes could harvest commercially-staked shellfish beds, thus capitalizing on the efforts of others (Mapes, 2007). Therefore, there is no fundamental rule that says that the 50/50 sharing formula applied in *U.S. v. Washington* applies for all fisheries (interview, NWIFC Staff, 2/18/10). In the case of shellfish, inter-party negotiations were
necessary to hash out the allocation issue, and were not completed until thirteen years after the
decision (Mapes, 2007).

The Court’s finding in the Rafeedi decision served as further precedent for the
case Makah v. Brown. Around the time that the Rafeedi case was being adjudicated, the
Makah tribe began advocating for a specific right to halibut, which was a fishery that was
historically important for them particularly, relative to other treaty tribes (interview, NWIFC
Staff, 3/30/10). The tribe essentially began showing up to IPHC and PFMC meetings to
assert their rights, and when these organizations refused to recognize them as a formal
stakeholder, they filed a sub-proceeding under U.S. v. Washington along with twelve
other treaty tribes who claimed a history of targeting halibut (ibid). Under Makah v.
Brown, the Court upheld these rights for all thirteen treaty tribes, but refused to quantify a
specific allocation, mandating that this should be conducted through an informal process
within the PFMC which has subsequently been referred to as the “halibut sharing plan”
(ibid). In doing so, the Court did not explicitly recognize a fundamental treaty right to co-
management. Ultimately, under the terms of the sharing plan, the tribes were able to
negotiate an approximately 35% share to the halibut fishery under area 2a (interview,
NWIFC Staff, 2/18/10; interview, NWIFC Staff, 3/30/10). This further reinforced the
notion that the treaty right does not necessarily entail a 50/50 split for all fisheries.

After the recognition of this right to halibut, the various tribes, led by the Makah,
attempted to address problems they saw with the IPHC’s allocation methods between its various
regulatory areas. However, the IPHC does not recognize the tribes as co-managers, and
instructed the tribes to address their allocation issues under the context of the PFMC (interview,
IPHC staff, 3/18/10; interview, NWIFC staff, 3/30/10). The tribes responded that their issues did
not solely relate to allocations, and thus the PFMC was incapable of addressing their concerns.
As a result, the IPHC instructed them to address these issues through the longstanding
Conference Board process, a kind of corporatist arrangement in which commercial fishermen
have privileged access to the Commission and its staff. They were initially rebuffed by the
Conference Board, but the tribes lobbied the US Commissioner representing NOAA in the IPHC to put pressure on the Board, and they ultimately relented (interview, NWIFC staff, 3/30/10). Ever since, tribal interests in the IPHC have been represented through a formal seat in the Conference Board, but unlike the PSC, they do not have a formally recognized co-management authority within the organization. They thus enjoy something akin to a corporatist-style interest group access to be consulted, but lack the type of fundamental decision-making authority that would come with a Commissioner seat in the IPHC. Meanwhile, there is a general satisfaction with the structural status quo, as evidenced by the attempt by sport fishermen to obtain a Commissioner spot in the IPHC (ibid). As a result, the treaty tribes, led by the Makah, actively attend the IPHC meetings in January, and voice any concerns through both the Conference Board process and through the Commissioner representing NOAA, with whom they report having a good working relationship (ibid).

4.6.2. Reasons for Tribal Reluctance in Pushing for Formal Inclusion in the IPHC

The question which then emerges is why do the thirteen treaty tribes not actively push for a formal Commissioner position to represent their interests? In part, this is due to path dependence. Position and boundary rules governing which particular interests have access to the Commissioner spots are codified in both the treaty and domestic implementation legislation and have remained generally unchanged since the beginning of the institution. Other attempts by other groups to obtain a guaranteed Commissioner spot, as noted in the previous section, have failed, indicating a general resistance to change. This resistance can largely be explained by the good reputation of the organization in maintaining sustainable harvests due to scientific knowledge of the SES (A7) (Hilborn and Hilborn, 2012), the comparatively fewer numbers of resource users (A1) who have become entrenched in their positions, and the relatively fewer number of potential disturbances impacting halibut in comparison to salmon. For instance, because the gear which is used to harvest halibut (A9a) is identical for all fishermen in the fishery, accusations of discrimination against tribal fisheries along the basis of such things as targeted gear restrictions, as happened during the 1950’s to 1970’s in the salmon fishery, are a non-issue.
In addition, there is the perception that as the fishery in area 2a is so small in both its share of the overall biomass (RS3b) and economic value (RU4) relative to other fisheries in the Gulf of Alaska and Canada, these interests see the fishery and the tribal share of it (A8c) as a “non-issue”, and thus the tribes do not occupy a position in which they can employ leverage in disputes between other actors similar to the situation they enjoy within the PSC, thereby making it not worth their while to challenge the status quo and thus create a conflict over such a small issue (interview, NWIFC staff, 2/18/10). Because such a change would necessitate a fundamental renegotiation of the treaty, thus incurring significant costs and time, the tribes generally see this as a low priority (ibid). While they would certainly appreciate a formal spot, at least from the perspective of that this would enhance their participation and represent an expression of international legal sovereignty, the accommodation of their interests within the Conference Board process has largely placated them, and barring any unforeseen disturbance to the fishery, the status quo is likely to prevail for the foreseeable future (interview, NWIFC staff, 2/18/10; interview NWIFC staff, 3/30/10).

4.6.3. Summary

The relatively low levels of participation by the American treaty tribes in the IPHC are largely explained by path dependencies pertaining to the generally corporatist structure of the IPHC and its creation before the legal recognition of a tribal right to halibut. Because of the long-term stability of the organization and general satisfaction by the commercial interests that dominate the fishery, there is no imperative to fundamentally alter the status quo. Indigenous fishing interests are not as significant as in the salmon case, thereby providing very little incentive to expend political capital in seeking for formal representation in the IPHC. Instead, pressures for their inclusion have been partially mitigated through a sort of “global corporatist” (Ottaway, 2001) type of system whereby the IPHC has accommodated their concerns through the Conference Board. Furthermore, despite having nominal allocation and co-management rights, these rights have not been extended to the international level, reflective of the Federal perception that unlike in the salmon case, the tribes do not possess much utility in binding the different actors together.
Hence, in the absence of fundamental disturbances upsetting the status quo, the structure of the IPHC persists with little wherewithal to engage in fundamentally altering the organization.

### 4.7. The Process of Canadian First Nations' Inclusion in the IPHC

The level of participatory authority of Canadian First Nations within the IPHC is similar to that as of the American tribes, albeit for subtly different reasons. Unlike the American side, because of the broad discretion of the Minister and Regional Director General of DFO, the specific boundary rules pertaining to which individuals fill these positions is rooted in informal norms, and the long history of commercial and processing interests as the identified key stakeholders in the process essentially inhibits the inclusion of other actors (interview, DFO Staff, 3/9/10). This reflects, among other things, the quite low food, social, and ceremonial allocations granted to coastal First Nations bands, which are marginalized interests in the fishery. However, the impact of the recent Nuu-chah-nulth case and how DFO and these bands ultimately agree on how to accommodate a halibut fishery could upset the status quo on the Canadian side, although it is too early to tell what the ramifications of this case might be.

It should be noted however that individuals of First Nations backgrounds have frequently served in Commissioner positions within the IPHC. However, this has always been within the context of the commercial or processor representative positions, which reflects the prominence of First Nations in these areas. It is important to note though that these interests are not rooted in a fundamental aboriginal right to conduct halibut fisheries. Instead, First Nations activity in the halibut fishery has stemmed from their comparative advantages in developing the coastal processing industries along the coastline, which is owing to the fact that these areas are sparsely populated and relatively untouched by European settlement (interview, DFO Staff, 3/9/10; interview, NWIFC Staff, 3/30/10). Tribal fishing interests regarding halibut have thus developed within the rules governing the commercial industry as a whole, in which First Nations groups represent approximately 16% share of the total allowable catch as granted to individual license holders (Trumble, et al., 1993). As a result, individuals of First Nations backgrounds are active in the process, either as Commissioners or through the Conference Board or Processor Advisory
Group processes, but not as special interests representing fishing interests stemming from a fundamental aboriginal fishing right under Section 35(1) of the Constitution Act. This case thus most closely resembles the corporatist model of interest group participation as outlined in Chapter One.

4.8. Conclusion

Each of these cases thus demonstrates fundamentally different processes by which indigenous groups have found their way into the process of international fisheries management. The inclusion of American treaty tribes in the PSC is largely a function of their special treaty rights to fish, which were ultimately upheld by the court system after decades of state-tribal contention. During the era in which their legal rights were upheld, the confluence of several events – including a breakdown in the existing international salmon management institution, shifting climatological patterns, and improved data which highlighted new interceptions patterns – led to a shifting in the pattern of inter-group rivalries between Alaska, Canada, and the coalition of interests in Washington and Oregon. The tribes’ newfound legal status was significant in the tribes’ ability to employ leverage against Alaska, which enabled them to force Alaska’s political representatives to abandon their opposition to the PST. Furthermore, the tribes took a lead role in pushing for the treaty, and in cooperation with their allies in the Federal government, were instrumental in helping to write the terms of the treaty and in setting the ultimate structure of the Commission. In light of their instrumental role in pushing for the treaty and in enabling its negotiation, the tribes were then granted their positions of authority within the new institution, along with their accentuated decision-making authority and veto authority.

In contrast to the American treaty tribes, Canadian First Nations do not possess a high level of sovereign authority over fisheries due to the absence of formal treaties. Thus these groups have historically lacked a strong legal basis for pushing for their right to fish. However, First Nations have long been recognized by the DFO as relevant stakeholders in the salmon fishery, even before the recognition of a specific aboriginal right to fish, and the concomitant mandate for DFO to consult First Nations. This has been due in part to DFO’s attempt to provide
a unified Canadian front vis-à-vis the United States in bilateral negotiations. Once presented with the proposed Commission structure of the PSC, the DFO begrudgingly accepted it, later realizing that it provided a unique avenue for both continuing its existing stakeholder processes and accommodating its duty to consult First Nations fishing interests. The subsequent strengthening of consultation requirements through case law has served to entrench First Nations interests in the PSC relative to the other participating stakeholders, despite the fact that the rules-in-use shaping indigenous participatory authority, as detailed in Chapter Three, are much less formalized than in the American case.

For the cases involving the IPHC, tribal interests are largely shut out from the formal Commission structure due to path dependencies and the general satisfaction with the status quo. Canadian First Nations interests are primarily tied to the processing industry, due to the very small food, ceremonial, and social aboriginal halibut fishery that is recognized by DFO. Thus, there is not the same level of contention between First Nations and non-indigenous fishing interests in the halibut fishery as there is in the salmon fishery. Meanwhile, the recent recognition of a tribal fishing right to halibut on the American side has led to the American treaty tribes to articulate a desire for formal representation in the IPHC akin to their positions of authority in the PSC. However, compared to the PSC case, the tribes do not have the same degree of leverage to address inter-group conflicts between various other user groups, taking away an imperative on the part of the United States government to push for the formal representation of the treaty tribes in the IPHC. Coupled with the overall satisfaction of other users groups with the status quo, and the potentially high costs of having to renegotiate the entire agreement in order to accommodate tribal interests with formal representation in the IPHC, it is simply not that worthwhile for the tribes to push more strongly for inclusion. Any pressures for inclusion have been furthermore mitigated somewhat by the decision to allow tribal grievances to be addressed within the context of the Conference Board process.

Finally, the processes behind the non-participation of the Colville and Nisga’a appear to be quite distinct from one another. The non-participation by the Colville is rooted in inter-tribal
rivalries and a comparative lack of sovereign authority due to their lack of specific treaty provisions to fish in common and in usual and accustomed places. While they would prefer to participate in the PSC, and the PSC would serve as a natural vehicle for addressing new transboundary interceptions issues between the Colville and the Canadians, the history of inter-tribal rivalries serves to keep the Colville excluded from the organization. In contrast, the process by which the Nisga’a have backed away from participation in the PSC is related to their conclusion of a comprehensive treaty which grants specific fishing rights that cannot be fundamentally altered by an action of the PSC.

This analysis will now be used to develop hypotheses pertaining to what factors are significant in determining the relative levels of each groups’ participatory authority in these institutions, which is the subject of the next chapter.
Chapter Five: Using Qualitative Comparative Analysis to Explore the Determinants of Indigenous Group Participatory Authority in International Institutions

5.1. Introduction

The purpose of this chapter is two-fold. First, it synthesizes the information provided in the previous chapters in order to identify the principal factors that might explain the variability in the levels of participatory authority enjoyed by the various indigenous groups examined in this study. As such, it serves as a way of generating hypotheses pertaining to why some groups attain higher levels of participatory authority than others. Secondly, it sets forth a framework, based on Qualitative Comparative Analysis (QCA), for future comparative work that will directly test these hypotheses and generate stronger causal inferences, once additional cases can be included in the study.

Several well-documented challenges are associated with establishing causation when employing comparative case research. Primarily, case-oriented methods run into the problem of causal complexity. This is illustrated by traditional comparative research based upon Mill’s “method of agreement”/“most different systems designs” (MDSD) and “indirect method of difference”/“most similar systems designs” (MSSD) (Ragin, 1987). In particular, these case-oriented methods are typically used to identify patterns of constant association, either in the instance where two or more cases share an outcome while sharing only one of several possible causal factors (MDSD) or in the instance where cases may differ in terms of their dependent variable but share multiple independent variables, save for one which is used to explain the difference in outcome (MSSD) (ibid). Because relationships amongst causal factors are likely to be complex, neither of these methods is likely to fully identify a strong, valid causal argument. This is due to several problems associated with research design, including the possibility of spuriousness stemming from omitted variables, “Galton’s Problem” in which cases are not truly independent due to contamination by diffusion (especially at high levels of aggregation, as in the case where the unit of analysis is a nation-state), and the problem of “limited diversity” in which the number of cases analyzed are significantly lower than the number of all possible permutations (Kogut, 2010; Ragin, 1987).
Clearly, the kinds of case-oriented methods described above run into problems when confronted with complexity. In particular, when the number of potential causal factors increases, it becomes more and more difficult to identify ideal case types through fixing all of the values for the set of independent variables save for one variable with is allowed to vary, in which case these methods fail (Kogut, 2010). QCA is a set of research methodologies that is fundamentally designed to accommodate multiple causality – that is, it accounts for the possibility that “two distinct combinations of factors can nevertheless produce similar outcomes” (Kogut, 2010, 145). This chapter provides an initial attempt at developing a QCA study to explore the configuration of factors behind the differing levels of indigenous participatory authority in international institutions. It draws upon the six cases explored in this dissertation and selects several potential causal conditions, as identified in Chapters 2 and 4 in particular, which are posited to affect levels of participatory authority. This chapter is referred to as “an initial attempt” because of the inherent problem of limited diversity – the number of potential causal factors exceeds the number of cases employed in this study. Furthermore, each particular configuration of causal conditions has only one case associated with it, and many more hypothetically possible configurations exist than the six identified by this limited case study. This inhibits, among other things, the identification of “contradictions”, which are defined as individual cases which do not conform to the outcome predicted by a particular configuration of conditions, as demonstrated by other cases which do conform with the expected outcome (Ragin, 1987). Hence, the inclusion of additional cases will be necessary to strengthen the ability to draw strong inferences from the data at hand. This chapter can thus be seen primarily as a hypothesis-generating set of case studies that will be used to frame future study after the inclusion of additional cases.

5.2. A Primer on QCA

All forms of QCA begin with the construction of a “truth table”, in which rows represent different configurations of the variables identified in the study. Columns identify the values of the causal variables, or “conditions”, the values for the outcome variable of interest, and the frequency or number of cases which share a particular configuration of both causal and outcome
variables. Subsequent steps vary based on the type of QCA being employed, but essentially consist of identification of necessary and/or sufficient conjunctural causality (i.e. determination of sets of possible causal combinations), identification and explanation of any logical contradictions, and, in some instances, checking the robustness of results against counterfactuals (Kogut, 2010; Ragin, 1987). However, the ways in which analysis proceeds differs greatly based upon how variables are measured and operationalized.

There are two broad types of QCA studies, differentiated by the way in which variables are operationalized. In “crisp-set” studies, all variables are coded dichotomously, indicating the presence or absence of a given quality. In “fuzzy-set” studies, variables are allowed to take on values between zero and one, indicating a degree of membership in a specific set (Ragin, 2008). Both of these types of studies have advantages and disadvantages and involve several tradeoffs. In the case of crisp-set analysis, binary coding of all of the variables included in the study allows for Boolean minimization and identification of “prime implicants”, which allows for simplification and identification of combinatorial patterns amongst the full set of posited causal factors (Ragin, 1987). Care must be taken however when attempting to draw strong causal inferences from crisp-set QCA studies which employ a multitude of potential causal conditions, due to the fact that the universe of possible case configurations is equal to $2^n$ where $n= \text{the number of independent variables}$. For instance, in a study which employs nine different causal conditions, as is the case with this study, the possible universe of cases would be equal to $2^9$, or 516 potential combinations. This gives rise to the observation that the inclusion of additional variables “adds explosively to the analytic task of inferring causality” (Kogut, 2010, 165).

Furthermore, crisp-set QCA has been challenged based on the limitations imposed by binary categories. For instance, there may situations where an intermediate category, for instance middle-income nations as opposed to underdeveloped or highly developed nations, is held to do better or worse on an outcome variable than the nations at either extreme (Kogut, 2010). This issue underlies the promise of fuzzy-set QCA, which allows for a more nuanced examination of the theoretical meaning of variables and examination of subset relationships.
among variables (Ragin, 2008). This comes with at least two trade-offs when compared to crisp-set QCA, however. The first is that identification of subset relations in fuzzy-set logic “is indicated when membership scores in one set (e.g., a causal condition or combination of causal conditions) are consistently less than or equal to their corresponding membership scores in another set (e.g., the outcome).” (Ragin, 2008, 39 – emphasis mine). This implies that the establishment of consistency must rest on a larger-\( n \) set of cases than with crisp-set QCA, even in instances where analysis attempts to identify necessary and/or sufficient relationships between a relatively truncated number of causal variables and the dependent variable. The second trade-off associated with fuzzy-set QCA is that the Boolean operations associated with crisp-set QCA are not possible with fuzzy-set QCA, thus sacrificing much of the “logical sharpness” of crisp-set QCA and the ability to reduce phenomena down into general and more simplified causal factors (Kogut, 2010, 171).

At this point it will be useful to revisit the work of earlier chapters. Because Chapters One and Three operationalized the key dependent variable of indigenous participatory authority on an ordinal scale with the categories of “no”, “low”, “medium”, and “high”, in a QCA environment this dependent variable will obviously represent a “four-value fuzzy set” (Ragin, 2008). This was coded with 0 = no, .33 = low, .67 = medium, and 1 = high. However, each of the identified causal conditions, as will be established in the analysis which follows, is tractable to binary coding. Therefore, the method of data analysis that I propose for future study after the inclusion of additional cases is rooted in crisp-set QCA. However, certain Boolean operations associated with crisp-set analysis, such as the use of “DeMorgan’s Law”, which allows for a shortcut in determining the combination/s of conditions associated with the absence of an outcome based on the existing identified combinations of factors behind the presence of an outcome, will be precluded due to the four-value fuzzy set used for the outcome variable. Essentially, identification of combinations of factors through Boolean reduction must be performed individually for each value of the dependent variable: no, low, medium, and high. Because of the number of posited causal conditions and the small number of cases, with only one observation for each identified causal configuration, the usual Boolean operations for identifying prime implicants will
Therefore, it is important to view this chapter merely as an initial step in developing a research design for future analysis, and in identifying the specific causal configurations illustrated by the cases examined in this dissertation, which will help develop hypotheses related to explaining the different levels of participatory authority associated with each case.

5.3. Identification of Conditions Impacting Indigenous Participatory Authority

The following subsections draw upon the empirical findings and logic of Chapters Two, Three, and Four in identifying and compiling a list of conditions that are posited to impact the relative participatory authority of indigenous groups in international institutions. These will in turn be operationalized in a preliminary QCA research design which will be used to develop tentative hypotheses, as well as to form as a framework for the inclusion of future cases to provide a more robust set of cases for testing these hypotheses. Drawing on the work from previous chapters, a background description for each condition is provided, along with an explanation of the coding scheme and the justification for why each case was coded in the way that it was. Where relevant, the associated alpha-numeric codes for SES second and third tier variables that are associated with each condition are provided in order to provide a point of reference back to the analysis provided in Chapter Two.

5.3.1. System/Species Complexity

This condition reflects the distinction between halibut and salmon fisheries in terms of their overall complexity. This factor is based on several variables compared across both SES’s, hence it is a composite indicator of several of the resource unit, resource system, and related ecosystem variables discussed in Chapter Two. Firstly, the clarity of the system boundaries (RS2) is much lower for the salmon case than it is for halibut, leading to much more uncertainty and complexity. Second, the geographic size of the system (RS3) is larger for the salmon case, reflecting the species’ higher mobility (RU1) and much less regularized migration patterns. Furthermore, the temporal and spatial distribution of salmon (RU7) is much more complicated than that of halibut, in part due to the multi-species complexity wrought by intermingling species.
and stocks, compared to the regularized spawning and residency patterns exhibited by halibut. In addition, because of the greater susceptibility of salmon to a variety of disturbances stemming from various related ecosystems, including greater susceptibility of shocks related to climate patterns (ECO1), negative externalities from urbanization and pollution in freshwater systems (ECO2), and greater susceptibility to predation by other species due to their lifecycle patterns (ECO3), salmon must contend with a wider diversity and greater number of potential disturbances, which complicates a number of fisheries management decisions. Predictability of the system (RS7) is consequently much lower for the salmon case than it is for halibut, which contributes to greater uncertainty and complexity in making management decisions. This condition is being coded as a “one” for all cases pertaining to salmon, which as a system is considered as “highly complex”, and “zero” for all cases pertaining to halibut, whose system properties are considered as “less complex”.

5.3.2. Network Structure of the International Institution

This condition pertains to the position of the international institution within the overall system of multi-level governance. The reader will recall that two conditions, network centrality and network segmentation (GS3), refer to the density of linkages to a particular node (here, the international level institutional structure), and the extent to which communication between actors in a network is blocked by some kind of barrier. For comparative purposes, this condition is being coded as “one” in instances where the international organization is more central to decision making in terms of its network centrality and lesser degree of segmentation due to greater institutional complexity in the overall system, and as a “zero” in instances where other organizations beyond the international level are more central. Hence in the halibut case, where the IPHC plays an absolutely central role in management, in part reflective of the lack of problems associated with managing the fishery in both salt water and fresh water, as in the salmon case, this condition will be coded as a “one”, whereas in each of the cases pertaining to salmon, this will be coded as “zero”, reflecting the greater degree of network centrality of other actors on both the American and Canadian sides, as discussed in Chapter Two.
5.3.3. Date of Institutional Creation Relative to Recognition of Indigenous Resource Rights

The importance of when the relevant international institution was created, in relation to when specific indigenous property rights to the resource (GS4) were codified through binding legal recognition, goes back to the issue of the difficulties inherent in changing the organizational structure of international institutions. This condition was identified through the process-tracing analysis detailed in the preceding chapter, largely supported by interview data. Interview subjects commenting on the IPHC case indicated that a key distinction between the PSC and IPHC is that the IPHC was created long before special treaty rights to halibut were upheld through case law, and that the recognition of these rights are not significant enough to upset the status quo and thus necessitate a fundamental reorganization of the IPHC. In contrast, the PSC was created after the American treaty tribes received legal recognition of rights to salmon. Thus the American treaty tribes had a pre-existing legal status that could be invoked as justification for their inclusion into the new international salmon regime.

Recall that one of the key factors behind the demise of the IPFSC was its rigidity and reluctance to change its practices in light of changing circumstances in the governance system, due to the legal recognition of the 50% allocation of salmon to indigenous peoples in the United States, and greater degree of unpredictability of the equilibrium properties of the system (RS6) due to increased volatility in the numbers of salmon returns year-to-year, particularly for high value (RU4) stocks such as Chinook and Coho (Yanagida, 1987). This, among other factors as discussed in Chapter Four, precipitated a renegotiation of the overall international agreement, which gave rise to the PSC as a replacement institution, which in turn provided a window of opportunity for the creation of position and boundary rules which would give indigenous groups a seat at the table.

In contrast, the IPHC has had a relatively stable organizational structure that is codified in the general terms of the treaty, which pre-date the recognition of indigenous rights to the resource. Thus, if indigenous groups were insistent on obtaining positions in the IPHC comparable to those in the PSC, it would require a fundamental renegotiation of the terms of the
treaty (interview, NWIFC Staff, 3/30/10). Because the overall halibut management regime has not faced a disturbance of the magnitude faced by the regime governing salmon in the 1970s and 1980s, the wherewithal of indigenous peoples to challenge the status quo is much more diminished, and they give greater priority to fighting other fights in other arenas (ibid). In the case of American tribes in the IPHC, this is in part impacted by the relative lack of leverage they have given the much smaller halibut fishery in area 2a, whereas in Canada, this is impacted by the fact that the food and ceremonial proportion of the fishery in area 2b is very small, and those bands who do maintain an interest in the halibut fishery do so from within the mainstream commercial and processing sectors of the industry, where they have established themselves as significant players and thus are in general not pushing the recognition of special aboriginal rights to halibut in the same way as they are in the salmon fishery. Of course, the impact of the recent Nuu-chah-nulth case may upset this status quo, but the effects of the terms of this case are yet to be seen.

Hence, for the purpose of this study, cases in which the institution was established before the legal codification of aboriginal rights, and which have subsequently not faced a fundamental disturbance questioning the status quo, are coded as a “one”, whereas institutions which were created and evolved after the codification of aboriginal rights are coded as a “zero”. Thus, the cases involving the IPHC will be coded as ones, whereas the cases involving the PSC will be coded as zeros. However, in the case of the Nisga’a, this will be coded as a one since the creation of the PSC predated the finalization of their treaty. Similarly, because the right of the Colville to conduct fishing on reservation lands has always been recognized, and the parameters of how far this right extends have been constrained due to their non-treaty status and limited geographical scope, the creation of the PSC and the fundamental issues it addresses occurred at a later day, and as it were, did not fundamentally address the type of problems posed by the Colville fishery. This in turn has led to the awkward way in which the Okanogan interceptions issue is being handled outside of the context of the PSC. Hence, this case will also be coded as a “one”.

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5.3.4. Federal Structure that Facilitates Intergovernmental Rivalries

A fundamental contrast between Canada and the United States, as established in earlier chapters, is the federal structure of each national political system, particularly in relation to the relative supremacy that the national government has in fisheries policy, at all levels of the governance system from the international level down to the local (GS1a-h for the salmon regime; GS1a-e for the halibut regime). The identification of this factor was triangulated from existing theoretical work on Canadian federalism and interview data, both of which suggest that Federal primacy over fisheries policy, coupled with intergovernmental rivalries in which each order of government jealously guards its own turf, is the source of DFO's insistence on keeping tight control over decision-making in the PSC. That being said, DFO perceives a need to engage in “good politics” with various stakeholder groups, and is bound to consult First Nations in particular ever since the recognition of natural law rights to fish since 1990 (interview, PSC Commissioner, 1/11/10). In contrast, the inclusion of American treaty tribes in the PSC is related to the shared co-management authority over fisheries held by the Federal government, state governments, and ever since the Boldt decision, the treaty tribes.

The logic behind the importance of this distinction rests with the assertion that such shared authority necessitates the development of much more segmented and nested multi-level governance structures, which in turn gives rise to a greater propensity for federal-state and other rivalries. As established in earlier chapters, the emergence of such rivalries may open a window of opportunity for indigenous groups to serve as a mediator between federal and state interests, as in the case of the leverage brought by the treaty tribes against the State of Alaska. In instances where the national government has sole or virtually unshared jurisdiction over fisheries, as in Canada, cases will be coded as a “zero”, indicating the absence of federal-local rivalries due to federal structure. Where jurisdiction is shared between federal, state, local, and tribal entities, as in the United States, cases will be coded as a “one”, indicating federal-lower level intergovernmental conflicts due to collaborative federalism. However in the case of the American delegation to the IPHC, the relative lack of inter-governmental rivalries between the states and
Federal government, owing to limited interceptions problems and Federal-State collaborative planning within the context of the NPFMC and PFMC, does not give rise to a high level of intergovernmental rivalries despite possibility of such conflicts given the overall structure of collaborative federalism. Hence this case will be coded as a "zero". In addition, while there are disagreements between the Federal and state governments regarding how to best accommodate the Colville in a formal process that will address transboundary interceptions issues on the Okanogan, these do not rise to the level of a fundamental rivalry between the two which might necessitate the actions of the treaty tribes to apply leverage to address the situation. In fact in this case, it is the treaty tribes themselves who actively oppose the inclusion of the Colville. This case will be coded as a "one" however because it is the complex intergovernmental structure that gives rise to intergovernmental rivalries, only this time emanating from inter-tribal rivalries instead of Federal-State, and serving to preclude inclusion rather than provide an opportunity for it.

5.3.5. Salience of Resource to Indigenous Groups Relative to Other Stakeholders

This condition pertains to the relative importance placed on the resource, comparing the importance and salience of the resource between indigenous and non-indigenous actors, as measured by the history of use of the resource by the various actors (A3), the relative economic value of the resource (RU4), and the level of economic and cultural dependence on the resource (A8a/b) by the various actors. This factor was identified by various tribal fisheries managers on the American side, who indicated that halibut simply did not hold the same cultural significance to the tribes, despite the fishery being somewhat lucrative to certain tribes, in particular the Makah. While these groups would welcome formal inclusion in the IPHC in the form of a designated Commissioner position, they are unwilling to pick a fight in order to obtain one simply because their political capital is wrapped up in resolving outstanding issues pertaining to the more culturally significant salmon fisheries. In the Canadian context, the relative importance of salmon is related to the fact that most First Nations groups are located in inland territories, and thus have a much more intimate relationship with salmon than with halibut. Furthermore, the food, ceremonial, and social allocation to halibut (A1c; GS4b) is quite small and limited to a handful of
coastal groups, who, like the American treaty tribes, view the salmon fisheries as much more culturally and economically important.

In the context of salmon fisheries, where the cultural significance for indigenous peoples on both sides of the border is quite high, and where economic dependence on the resource can be significant as well, the salience of the resource can be quite high. This is accentuated in the American case where the 50/50 allocation formula essentially puts indigenous fishing interests on equal footing with non-indigenous groups. In the context of halibut fisheries, as a result of the relatively low harvest totals taken by indigenous peoples outside of Alaska, indigenous groups are a much smaller-scale fishery relative to the commercial ITQ halibut fisheries, in which limited licensing arrangements create a lucrative side-market for buying and selling access to the fishery. Hence the market power and level of investment by Alaskan commercial fishing fleets are accentuated vis-à-vis those of indigenous fishermen in areas 2a and 2b. From a tribal perspective, this issue salience is reflected by the perspective of one interview subject which in effect stated that the need for a tribal commissioner spot within the IPHC might be too much to ask since the vast majority of the fishery is up north, and that the tribes are generally happy to just be accommodated in management decisions, not wanting to draw the ire of the Alaska fishery (interview, NWIFC staff, 2/18/10). That is not to say that the halibut fishery is unimportant to tribal interests, just that they recognize that their relative leverage in the halibut fishery is much less than that of the salmon regime, in part due to the small halibut harvests in their usual and accustomed places relative to those in Alaska. Therefore, in the salmon cases, in which the salience of the resource is especially high for indigenous peoples, this condition will be coded as a “one”. In the halibut cases, due to the relative market power of the Alaskan fishing fleet, this condition will be coded as a “zero”, indicating a lower level of issue salience to the indigenous groups in question.

5.3.6. Level of Conflict between Resource Users

Related to this condition of issue salience is the relative level of conflict between indigenous and non-indigenous resource users in each of the cases explored in this study. As
suggested in earlier chapters, the level of conflict in the halibut regime is relatively low, which is reflective of the general satisfaction expressed by all parties in the management regime due to its relative success in sustainably managing the resource. This factor was identified through both secondary sources (e.g. Hilborn and Hilborn, 2012) and interview data that indicated that the management of halibut fisheries, in contrast to salmon fisheries, have been much more sustainably and consistently managed, with much less year-to-year volatility and thus subject to much less pronounced disturbance patterns. As a result, the majority of user groups are essentially satisfied with the regime, and inter-group conflict is comparatively low. Hence both cases under the halibut regime will be coded as zero, reflecting the relative lack of conflict.

In terms of the salmon cases, I am arguing that there is a significant amount of variance between the cases in terms of the level of conflict between resource users. Clearly, the analysis from previous chapters indicates that conflict has been high between the treaty tribes and the United States, as well as for Canadian First Nations vis-à-vis their own government. In addition, the Colville case represents a high level of conflict between that particular tribe and various other stakeholders, including Canadian First Nations, the state and national governments, and the various treaty tribes which continue to push for their exclusion from the PSC process. Each of these cases, characterized as they are by high levels of conflict, have led each of the indigenous groups in question to voice interests in inclusion in co-management regimes at all levels, from which each hopes to gain greater access to the numbers of fish they are allowed to harvest. Hence each of these cases will be coded as a “one”.

However, in the case of the Nisga’a, the level of conflict has been mitigated by the conclusion of their treaty process. As part of this process, the Nisga’a receive a predetermined percentage allocation of a specific fishery, in contrast to the 50/50 sharing allocation among American treaty tribes, who reach this overall allocation through a complex system of accounting across multiple species and stocks, sometimes taking greater than 50% of some stocks, and sometimes taking less than 50% in others, after which they must collaboratively allocate their total allocation amongst themselves. The complexities of this management scheme continue to
provide an imperative to the treaty tribes to participate in multi-level governance in order to maximize both the overall numbers of fish, and to negotiate amongst other stakeholders for allocations of specific stocks. However, in the case of the Nisga’a, their allocations are set and relatively straightforward, as their fishing grounds are very geographically specified, and which do not involve the same degree of downriver versus upriver or coastal versus river intergroup dynamics that characterize most other freshwater salmon fisheries. There is thus very little they could do within the context of the PSC to gain access to additional fish. This relative lack of intergroup conflict thus reduces the imperative to participate in the PSC, and as a result this case will be coded as a “zero”.

5.3.7. Treaty Rights to Allocation

The existence of a treaty right to a specific fishing allocation is a straightforward, yet very significant distinguishing factor among the cases in this study, as clearly demonstrated in earlier chapters. Treaty rights, or the lack thereof, were the most commonly cited factor behind the entrée of the American treaty tribes into the PSC. However, respondents did not explicitly differentiate between types of treaty rights. The identification of this factor, and the differentiation between allocation rights and co-management rights, detailed in the next section, is consistent with the theoretical distinction made by Singleton (1999) between these two forms of treaty rights.

In three cases, the American treaty tribes in the PSC, the American treaty tribes in the IPHC, and the Nisga’a, the tribes in question have a specified allocation of fish. These cases will be coded as a “one”, indicating the presence of a treaty right to fish. In regards to the other Canadian First Nations in both the PSC and IPHC, as well as the Colville tribe, these groups lack a specified treaty right, and will thus be coded as “zeros”.

5.3.8. Treaty Rights to Co-Management

The treaty right to co-management is a somewhat more difficult indicator to code dichotomously. In certain instances, such as the American treaty tribes in the PSC, the treaty stipulations of having a fishing right “in common with the citizens of [the territory, state, or country
as a whole]” was interpreted in the Boldt and Belloni decisions as entailing a fundamental right to co-management, although these decisions did not necessarily indicate at what level in the regime this was limited to, and was thus silent in regards to whether such rights also included international institutions. Due to the evolution of the system, the co-management right within domestic institutions was later extended to the international level, although largely for political imperatives related to the leverage the tribes had vis-à-vis Alaska as established in Chapter Four. Regardless, it is widely recognized that within the context of the PSC, the tribal role does emanate from their treaty rights to co-management, and this case will thus be coded as a “one”, indicating a fundamental and legally recognized treaty right to co-management.

In the context of the three Canadian cases, given the supreme regulatory authority of DFO, First Nations do not have a fundamental co-management right, at least at first glance. Recent developments, in particular the mandated two-year process for agreeing to a co-management system for the Nuu-chah-nulth in their marine jurisdictions that extend nine miles off-shore, and the Nisga’a fishery along the Nass River, have necessitated the negotiation of regimes that arguably do reach the definition of co-management, in comparison to the merely consultative processes employed under the AFS for other First Nations fisheries. However, this co-management only extends to the regional-local level within the regime, and has not been interpreted as granting any formal co-management role within the context of the PSC. Hence, all three cases will be coded as “zeros”.

Of the remaining two cases, the Colville is the easiest to define, as they do not have formal treaty rights to the salmon fishery. This case will obviously likewise be coded as a “zero”. The final case is somewhat more difficult, however. In regards to the thirteen American treaty tribes that have a recognized right to halibut, recall that the do have co-management authority within the context of the PFMC sharing plan process, but under the terms of Makah v. Brown, does not imply a co-management right at the international level. Hence this case will also be coded as a “zero” for much of the same reasons as the Canadian cases as argued previously.
5.3.9. Existence of Effective Pan-Tribal Collective Action Organizations

Finally, as argued in previous chapters, the presence of effective and well-funded inter-tribal collective action organizations that incorporate every tribal government of a similar legal status in regards to fishing rights, is a factor behind their ability to effectively engage in inter-tribal dispute resolution and effective engagement with other stakeholders. This factor was largely identified through interview data, which consistently identified this as a problem on the Canadian side, with both First Nations and non-First Nations individuals acknowledging this issue. Several commentators on the American case specified that the funding of NWIFC and CRITFC, in order to facilitate the domestic-level co-management function mandated by the Boldt decision, in part enabled the relatively quick thawing of relations between the tribes and the states. These organizations were also instrumental in the leadership development of particular tribal individuals who have held long terms in the PSC, which has helped to facilitate consistency in the representatives holding positions in the PSC, which in turn has further enabled the building of inter-personal trust between various individuals.

Because only the American treaty tribes, in the context of both the PSC and IPHC, have been able, with the help of ample government funding, to establish these sorts of organizations, only these two cases will be coded as a “one”, indicating the presence of these institutions. Each of the other cases, for reasons which should be evident given the analysis in earlier chapters, are coded as “zeros”. It is furthermore important to note that this factor in and of itself is not a sufficient condition behind the development of high levels of participatory authority, as illustrated by the thirteen treaty tribes with specific halibut rights which are represented by the NWIFC, as these groups continue to lack high levels of authority in the IPHC despite their collective leverage being employed through the NWIFC.

5.4. A Hypothesized Truth Table Mapping Configurations of Conditions

Usually, the first step in a QCA study is the development and presentation of a “representative truth table” which presents the number of logically possible combinations of
values of the causal conditions (Ragin, 1987). As previously noted, because of the large number of potential combinations deriving from the nine causal conditions identified in this study, which would result in 512 potential combinations, and because there are only six currently examined in this study, I will be forgoing this step in the interest of space and time.

Of more interest to this study is the construction of a "hypothetical truth table" which presents the number of combinations for which there are empirical instances. Such a table presents the values for the causal conditions, the values for the outcome variable of interest, and the number of cases which conform to each particular combination of conditions (Ragin, 1987). Because each of the combinations of conditions in this study derive from a single instance, the name of each case, rather than the frequency of cases, is reported in the hypothetical truth table, which is presented in Table 5.1. below:

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<tbody>
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<td>American Tribes PSC</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<td>1</td>
</tr>
<tr>
<td>Canadian FN's - PSC</td>
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<td>1</td>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>American Tribes IPHC</td>
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<td>0</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Canadian FN's - IPHC</td>
<td>0.33</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colville</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nisga’a</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<td>1</td>
<td>1</td>
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</tbody>
</table>

Hence the theoretical models that this table presents are as follows. “High” levels of participatory authority in international institutions are associated with a high degree of species complexity, requiring the contributions of multiple stakeholders to address a wide range of problems; relatively more authority in the overall multi-level regime being exercised outside of the international institution; the institution being created after formal indigenous rights were legally recognized; the presence of Federal-State rivalries in fisheries management; the relatively high issue salience of salmon to indigenous peoples; a history of a high level of inter-group conflict; treaty rights which grant both a specific allocation of the harvest as well as rights to co-management at multiple levels; and the presence of well-funded inter-tribal collective action organizations. A “medium” level of participation is associated with most of these conditions, however the relative lack of inter-governmental rivalries, which do not provide windows of
opportunity for indigenous groups to employ potential leverage, the lack of treaty rights to both allocations and co-management opportunities, and the lack of well-funded pan-tribal collective action organizations designed to mitigate inter-tribal conflicts all contribute to indigenous groups not being able to carve out more significant participatory roles.

The data also suggest two slightly different patterns of "low" levels of institutional participatory authority. In the context of Canadian First Nations in the IPHC, the comparatively easier management tasks associated with the greater degree of resource predictability, the central position of the IPHC within the overall management regime, the fact that the institution was created before the recognition of indigenous rights to the resource, the relatively low levels of intergovernmental conflict between state and Federal authorities, the relatively lower salience and conflict associated with the resource, the lack of aboriginal rights to the resource, and lack of effective inter-tribal organizations are all associated with low levels of authority. In the case of the American tribes in the IPHC, many of these factors are identical, except for the fact that the treaty tribes have a recognized treaty right to a portion of the resource, and an effective inter-tribal organization, the NWIFC, serving on their behalf. This suggests that treaty rights to specific allocations of fish, and effective inter-tribal organizations, might be necessary conditions for higher levels of participatory authority, as suggested by the salmon case, but not sufficient conditions in and of themselves. In other words, these conditions must combine with other factors in order to result in higher levels of participatory authority.

Finally, the two cases of non-participation appear to indicate two distinct pathways of non-participation. Both cases, the Colville and Nisga’a, deal with salmon management, and share six common factors: the higher level of resource system and species complexity; the lesser degree of network centrality of the international level institution; the fact that the institution was created after the recognition of their rights to conduct fishing; the high level of importance of salmon to both of these groups; the lack of treaty-based co-management authority; and the lack of effective inter-tribal organizations. In the context of the Colville case, the presence of intergovernmental rivalries act in the opposite direction than that of the American treaty tribes,
serving to exclude them from the process for reasons which will be addressed in a moment. As with the other Canadian cases, the supremacy of DFO serves as a barrier to higher levels of authority. The two cases also differ in terms of the level of conflict, as explained earlier, with the relative lack of conflict on the Nass River serving to disincentivize participation by the Nisga’a in the PSC. The third variable is perhaps the most interesting, in that the Nisga’a do have a treaty right to allocations, which might otherwise be expected to encourage participation, whereas the Colville do not.

These two cases may be characterized in different fashions then. In the case of the Colville, they have been desirous of inclusion in the PSC, but have been purposefully shut out of the process. In the Nisga’a case, the conclusion of their treaty resulted in their retreat from the PSC process, which no longer serves their interests, leading to a case of willful non-participation. Hypotheses related to the reasons for this, as well as issues pertaining to the other cases, are examined in the next section.

5.5. Preliminary Inferences and Hypotheses Relating to Each Case

5.5.1. American Tribes in the PSC

As the only case explored in this study where indigenous groups have a high level of participatory authority, the case of the treaty tribes in the PSC is perhaps the most interesting. The argument developed here is that the avenue by which the treaty tribes gained this participatory authority was shaped by a unique confluence of factors. First, the sheer complexity of the fishery serves to pit multiple actors against one another, and even serves to make allies of particular pairs of actors in one context, and rivals in yet another. Furthermore, the inclusion of these tribes in positions of authority in the PSC may be significantly due to the opening of a rare window of opportunity in which their participation at lower levels – regional and local – which resulted in a process of trust building between former adversaries, coupled with a rare opportunity to develop a new institution at the international level, which was necessitated by a series of transnational and domestic intergovernmental rivalries to which the tribes could apply leverage.
due to their litigation in the All Citizens case, enabled the tribes to negotiate with the Federal
government, who was weary of the stalemate in bilateral negotiations with Canada, for an
advantaged position of authority within the PSC. The willingness on the part of the Federal
government to agree to these positions was in turn shaped by the quick development of inter-
tribal fisheries management institutions which developed a technical capacity that would be of
use to the new organization, and served to solve inter-tribal collective action problems at the local
scale, especially in regards to inter-tribal harvest allocations. The level of importance of the
resource to each of the treaty tribes, and the history of conflict associated with the management
of the resource, ensured that they would constantly be vigilant in pressing for their rights in
multiple institutional contexts, regardless of the scale or level. But the key to this was the court-
ordered recognition of both the treaty right to harvest allocations and the right to participate in co-
management at levels beyond the local reservation. It is the recognition of these rights which
provide the tribes with the high level of leverage that they enjoy in the overall regime governing
salmon.

5.5.2. Canadian First Nations in the PSC

While Canadian First Nations interests are formally included in the PSC process, their
overall participatory authority is constrained by the predominant role played by DFO, as
discussed at length in earlier chapters. Their lack of specific treaty rights to the resource, with
some notable exceptions as previously noted, does not guarantee their seat at the policy-making
table. However, the imperative of consultation, as mandated by a developing canon of case law,
serves to force DFO to bring First Nations groups into the overall salmon management process,
at least at the domestic level. The process of their inclusion furthermore might be viewed as
something of a historical peculiarity, stemming from the so-called “imposition” of the PSC
organizational structure on the Canadians by the United States. This however presented DFO
with a built-in institutional environment through which they could continue to fulfill their obligations
under consultative policy.
However, the level of participatory authority by Canadian First Nations interests does not rise to the level of that of the American treaty tribes, due to the configuration of institutional rules as detailed in Chapter Three. There are a couple of hypotheses pertaining to the reasons for this. First, because of the “dual” structure of the Canadian federal system, orders of government which have unshared jurisdiction over particular areas of policy are likely to jealously guard these spheres of authority, thus inhibiting the opening up of greater roles for non-state actors or lower orders of government. This hypothesis is generally consistent with theoretical work on the Canadian federal system which argues that the national government must guard its relevant spheres of influence lest the purpose of the national government be deemed obsolete, resulting in the potential for national dissolution, especially in regards to the “Quebec factor” (Bolleyer, 2006; Simeon, 2001; Skogstad, 2000).

Secondly, the ad hoc nature of Federal-First Nations relations, which stems from the historical peculiarity of British Columbia tribes having, with a handful of exceptions, never formally concluding treaties, contributes to a great deal of legal uncertainty pertaining to both land rights and a wide range of additional aboriginal rights, which often include fisheries. The slow process of resolution of these comprehensive treaty claims through the BCTP, as well as the significant demands and unwillingness to compromise on the part of many First Nations bands, who are “holding out for a better deal” (interview, PSC Commissioner, 2/10/10), has resulted in a complicated set of bilateral relationships between the government and individual bands. The resultant lack of consistency in both general aboriginal rights and specific access to fisheries by individual bands is furthermore tied to a lack of effective inter-tribal organizations to solve both inter-tribal resource rivalries and to advocate for a consistent approach to Canadian-aboriginal relations. As a result, the future is likely to follow an ad hoc process of “muddling through” (Lindblom, 1959), with the consequence that individual bands end up with dramatically different resource and other rights.
5.5.3. American Tribes in the IPHC

The role of both Canadian and American indigenous groups in the IPHC is constrained vis-à-vis that of the PSC, albeit for subtly different reasons. The basic hypothesis here is that the long-term stability and network centrality of the IPHC serves to perpetuate a status quo which is not threatened by the same level of disturbances as affects the PSC, given the relative predictability and lesser complexity of the fishery. Hence, despite the existence of treaty rights, at least to a specific harvest allocation to halibut, the treaty tribes are excluded from the formal channels of decision-making. The relative stability of the organization and its track record of sustainable management have served to mitigate potential intergovernmental rivalries of the sort that served to cause upheaval in the salmon regime and necessitate a renegotiation of the international regime, which resulted in the creation of the PSC. Therefore, treaty rights may be a necessary condition for high levels of participation, but they are in and of themselves not a sufficient condition for the development of high levels of participatory authority. Furthermore, the relative lack of conflict and lower issue salience attached to the resource serve as a disincentive to the treaty tribes to attempt to upset the status quo by seeking formal positions of authority in the IPHC, despite their desire for such inclusion. Furthermore, due to their interests being accommodated through a sort of corporatist-lobbying system in the context of the Conference Board process, they are not fundamentally excluded from the IPHC process, which further mitigates any attempt to seek greater authority within the institution.

5.5.4. Canadian First Nations in the IPHC

The situation of Canadian indigenous groups in the IPHC, unlike that of the Americans, stems from their relative market power in the commercial fishery and processing industry, in which they compete along with everybody else. While there is are limited food, social, and ceremonial fisheries for certain First Nations bands, overall they are inconsequential relative to the size of the overall fishery. Thus the relationship between First Nations and the IPHC is somewhat peculiar. The limited food and ceremonial fisheries may express their wishes for greater allocations through the DFO commissioner, but otherwise a special aboriginal right to the
resource beyond the standard commercial fishery does not exist. The recent Nuu-chah-nulth case may upset this status quo, but the ramifications of this are yet to be seen. Regardless, I chose to ascribe a “low” level of participation by indigenous groups in the IPHC on the basis of their significance within the overall industry. So far, the relative lack of salience of halibut to most indigenous groups (Nuu-chah-nulth notwithstanding) and lack of conflict surrounding the fishery is unlikely to change the status quo, at least in the immediate future.

5.5.5. Non-Participation by the Colville

In regards to the Colville, the most important condition inhibiting their participation in the PSC is their lack of treaty rights to both harvest allocations and co-management rights. This is exacerbated by the overall structural complexity of the U.S. collaborative federal system, which while opening avenues for the application of tribal leverage in other avenues, serves to create inter-tribal rivalries which serve to shut the Colville out of the process. This is further exacerbated by the exclusion of the Colville from inter-tribal organizations designed to solve tribal collective action problems. At the root of the story however is the lack of treaty rights, which serves to distinguish the Colville from other tribal actors despite their shared history of fishing and the overall issue salience of salmon fisheries. This reinforces the importance of treaty rights as a conduit for tribal participation (or non-participation) in international fisheries management institutions as illustrated by the PSC and IPHC cases.

5.5.6. Non-Participation by the Nisga’a

As suggested in an earlier section, the apparent willful non-participation of the Nisga’a appears to be related primarily to the conclusion of their treaty, which paradoxically acts in the opposite direction of that of the American treaty tribes in the PSC. My hypothesis here is that a treaty right to allocations, in conjunction with a lack of an explicit treaty right to co-management authority, the sole jurisdiction of the DFO in fisheries policy which serves to constrain participation, and the relative lack of conflict in the specific geographic area of the fishery, does not make it worthwhile for the Nisga’a to participate in the PSC process. If more significant
interceptions issues existed, this might incentivize greater participation, but otherwise, the Nisga’a simply have little to gain from participation, at least in terms of increasing their overall catch of salmon. The interesting implication here is that treaty rights to allocation, when combined with other factors, actually inhibits participation rather than encourage it. However, for reasons articulated earlier in regards to the inability to speak directly with representatives of the Nisga’a, inferences regarding this case should be viewed as extremely tentative and worthy of further exploration.

5.6. Conclusion

This chapter has served to identify several hypotheses pertaining to the cases and how they relate to one another. Given the dearth of cases in relation to the number of causal conditions identified, it is impossible to run a fully-fledged QCA study given the data limitations. However, the operationalization of the data does yield some preliminary hypotheses pertaining to the cases, and the future inclusion of additional case studies will someday allow for further theoretical refinement, identification of prime implicants and necessary and sufficient conditions, and provide an avenue for testing the tentative hypotheses developed in this study.
Chapter Six: The Effects of High and Medium Levels of Indigenous Group Participation on Natural Resource Management Decision-Making in the Pacific Salmon Commission

6.1. Introduction and Methodology

This chapter turns its focus to the instances where indigenous participation is particularly significant. The Pacific Salmon Commission provides a unique example of where indigenous groups are afforded formal representation and significant decision-making authority within an international natural resource management institution. In particular, Washington and Oregon based “treaty tribes” wield significant authority through their “veto power” over the official position of the United States delegation. First Nations bands from Canada furthermore have widespread representation in the organization and carry out important function for the Canadian delegation. The unique configuration of institutional rules, at both the domestic and international level, that afford such a high level of authority on the part of the treaty tribes in the PSC also significantly impacts the bargaining relationships between all institutional actors.

The overall approach of this chapter is to catalogue and code the interview responses to the set of questions that dealt with the effects of indigenous participation in the institution. A wide cross-section of the relevant stakeholders, including PSC Secretariat staff, US Federal representatives to the PSC, DFO staff, NWIFC staff, CRITFC staff, members of American treaty tribes, Canadian First Nations representatives, Canadian commercial and recreational fisheries representatives, State of Alaska officials, State of Washington Department of Fish and Wildlife officials, and various PSC Commissioners and members of the various panels and technical committees, was conducted under a standardized set of questions that were asked of all interview subjects. Specific questions asked include, “How has resource management changed over the life of the institution?”, “Has participation by indigenous groups influenced any specific resource management decisions (e.g. harvest levels, habitat programs, etc.) made by the institution?”, “Has indigenous participation affected the formal rules and/or decision making processes of the institution?”, “What are some of the most significant challenges in getting indigenous perspectives heard by the institution?”, “What recourse is available to indigenous
groups if they oppose the official position of the institution?”, “Are you aware of any instances in which indigenous group representatives have been the target of lobbying by other stakeholders?”, “Can you think of any instances in which there were differences of opinion amongst different tribal interests? How were these differences resolved?”, “Can you think of any instances where indigenous groups helped negotiate consensus between the two national delegations? How was this accomplished?”, and “Do you believe that there have been any ancillary benefits to tribes for having participated in PSC negotiations and/or decision-making?"

Among the purposes of this chapter is to develop a typology of the effects of indigenous participation in the institution. The relative frequency of particular types of responses will be noted in order to draw inferences regarding the general consensus of the effects of tribal participation across the spectrum of stakeholders in the organization. Furthermore, distinctions will be drawn between responses concerning the impact of the American treaty tribes versus that of Canadian First Nations. Care was taken to disaggregate these two cases, as several interview subjects addressed the influence of both groups.

The coding approach in this study is an example of “axial coding” (Strauss and Corbin, 1998), in which I identify different distinct types of phenomena through the development of first tier codes, and where relevant, further break effects down into different particular contexts identified by second tier codes. For instance, if the type of effect identified is “agenda setting”, and one respondent identifies agenda setting within the context of tribal authorities setting the agenda for the creation of the institution in the first place, while another interview subject identifies agenda setting within the context of bringing particular issue areas to the table for discussion, this would warrant two different second tier codes. Furthermore, the type of codes employed are an example of what Bogdan and Biklen (1998) term “activity codes”, which denote both recurring informal and formal types of behavior.

The sections which follow will be organized by the broad classes of impacts identified by the interview subjects. Where useful, I provide additional analysis to illustrate the various effects of indigenous participation. For instance, one of the tasks of this chapter will be to challenge
existing game theoretical work examining the voting structure of the Pacific Salmon Commission, and to suggest that counter to the predictions of these models, tribal veto authority does not doom the institution to gridlock. I assert that these models suffer from an emphasis on the formal institutional rules of the PSC itself, and ignores significant institutional rules at the domestic level that shape the relationship of the various institutional actors vis-à-vis each other. The payoff structures assumed by other game theoretical models do not take into account such things as the impact of the “All Citizens Case”, which fundamentally shapes the bargaining relationship between Alaska and the Treaty Tribes. By looking at specific examples of impacts of tribal participation in decision making, including the process by which the PSC moved to “abundance based management”, the re-negotiation process of the Chinook and Coho Chapters, and influence over spending decisions under the PSC “Enhancement Funds”, I illustrate how institutional rules at both the domestic and international level advantage the payoff structure of the Treaty Tribes over other members of the American delegation, and consequently enhances their level of influence within the institution.

6.2. Summary of Identified Effects of Indigenous Participation in the PSC

The participation of both American treaty tribes and Canadian First Nations in the PSC, and their differential levels of decision-making authority have had several impacts on the operation of the institution. Ten broad types of impacts were identified through semi-structured interviewing. The following is a list of these impacts identified by the first-tier code, and the number of instances in which a particular impact was mentioned is provided in parentheses: “agenda setting” (n=40), “leverage” (n=25), “information” (n=18), “trust-building” (n=13), “implementation” (n=10), “development of technical skills” (n=10), “funding for tribes” (n=8), “leadership development” (n=7), “sustainability” (n=6), and “networking” (n=2). Each one of these impacts, as well as differentiation between specific contexts as articulated by the interview subjects, will be the subject of each of the following subsections. Table 6.1. provides summary data on the coding scheme, identifying each first-tier and second-tier effect identified by the interview subjects, and noting the frequency with which each effect was mentioned.
6.3. Agenda-Setting

Agenda-setting was the most commonly referenced impact of indigenous groups in the PSC (n=40). Several different specific contexts of agenda-setting were mentioned by interview subjects, warranting several different second-tier codes, as explored in the following sections.

6.3.1. Initial Creation of the PSC

At a fundamental level, there is ample evidence to suggest that the treaty tribes played an enormously significant role in the creation of the PSC in the first place. It is also worth noting that this effect was only noted within the context of the American treaty tribes – no respondent articulated a Canadian First Nations role in the creation of the PSC. Without the pre-existing pattern of cooperative management that was mandated by the Boldt decision, collective agreement between the various parties of the American
delegation might have never been attainable. Around the same time that trust-building and the experiment in domestic co-management was getting under way between the treaty tribes and the States of Washington and Oregon, the collapse of southern Chinook stocks and decreased returns of Fraser Sockeye led to a re-emergence of the transboundary interception issue. Tribal attorneys were a primary source for pushing for a need for an international treaty to expand bilateral cooperation beyond the Fraser River to encompass all stocks subject to significant interceptions issues, and were key players in the creation of the Pacific Salmon Treaty Coalition in the pursuit of this goal (interview, PSC Commissioner; 12/16/09; interview, PSC Commissioner, 2/8/10).

It is clear that the tribes were truly the “movers and shakers” of the initial treaty process and that without their involvement, the underlying multiple and overlapping interceptions issues between all parties would have inhibited an international agreement. Were the Alaskans to lose the All Citizens case, Alaskan harvests, at least in the south-east and Gulf of Alaska regions where southern fish are known to migrate to, could have been decreased by up to half. Using average annual harvest rates from the period of 1998-2002 as provided by the Alaska Department of Fish and Game, this could have resulted in an aggregate decrease of up to 289,766,031 pounds of salmon annually (Woodby, et al, 2009), worth more than US$80 million annually in terms of the ex-vessel value of the landed catch. This figure was calculated taking into account the fisheries in the Southeast & Yakutat, Prince William Sound, Cook Inlet, and Kodiak, a conservative estimate given that it did not take into account the other fisheries for which Alaska Fish and Game collect data, such as Chignik and the Alaska Peninsula and Aleutian Islands. This situation forced Alaska, which otherwise faced no incentive to participate in the treaty process, to the negotiating table. Among other things, an Alaskan loss in the All Citizens case would have subjected them to a greater degree of involvement in management issues of southern stocks, for instance, an Endangered Species Act (ESA) listing of Columbia River Chinook could have resulted in a closing of the entire Alaskan fishery under a strict interpretation of the Sec. 4(d) takings clause under the ESA.
Because of this, a side agreement between Alaska and the treaty tribes was necessary, and took the form of the stipulated order for a stay in the All Citizens Case. The stipulation that was filed under All Citizens Case specified that the tribes would not press the case forward as long as there is a functional Chinook agreement under the PSC always going forward. One interview subject even noted that the formal stipulation actually expired in 2008, but does not need to be re-invoked because of a sense of comfort amongst all parties of the American delegation with the overall PSC process (interview, NWIFC staff, 2/18/10). Such a remark is indicative of both the power of the threat that All Citizens would have on Alaska, and also speaks to the level of trust-building between the tribes and Alaska, such that “Alaska seems set to stay involved in the process, and everyone negotiates in good faith” (ibid).

6.3.2. Habitat and Conservation Issues

The most commonly-cited effect of the participation of indigenous groups in terms of agenda setting has been their push for inclusion of habitat and conservation issues, rather than an exclusive emphasis on harvest management, on the agenda of management institutions at all levels. One example from the domestic level has been the adjudication of cases dealing with whether treaty rights imply a right to protection of habitat under Phase II of U.S. v. Washington, as discussed in Chapter Four. Within the context of the PSC, this has played out through the introduction of Chapter 7, Attachment E to the PST in 1999, which essentially introduces a statement that both parties will bind themselves to take into account habitat issues. Specifically, this “habitat agreement” states that:

Desiring to cooperate so as to achieve optimum production, the Parties agree:
1) To use their best efforts, consistent with applicable law, to:
a) protect and restore habitat so as to promote safe passage of adult and juvenile salmon and achieve high levels of natural production,
b) maintain and, as needed, improve safe passage of salmon to and from their natal streams, and
c) maintain adequate water quality and quantity.

2) To promote these objectives by requesting the Commission to report annually to the Parties on:
a) naturally spawning stocks subject to the Treaty for which agreed harvest controls alone cannot restore optimum production,
b) non-fishing factors affecting the safe passage of salmon as well as the survival
of juvenile salmon which limit production of salmon identified in sub-paragraph 2(a) above, c) options for addressing non-fishing constraints and restoring optimum production, and d) progress of the Parties’ efforts to achieve the objectives of this agreement for the stocks identified in sub-paragraph 2(a) above (Pacific Salmon Treaty, 1999).

While some observers think this is essentially a hollow instrument with no real teeth (interview, CRITFC staff, 3/29/10), others see it as a possible legal mechanism under international law to challenge perceived abrogations of this commitment to habitat issues by either national government (interview, PSC Commissioner, 2/8/10).

6.3.3. Creation of Enhancement Funds

Yet another key change in the evolution of bilateral salmon management was the creation of two “Restoration and Enhancement Funds” under the 1999 agreement. Three interview subjects also referenced the American treaty tribes’ role in pushing for the creation of the Enhancement Funds as a way to break the stalemate between the two countries when the treaty was renegotiated in 1999. Again, only the American treaty tribes were mentioned in this context. The development of these funds has been seen by some commentators as an “implicit side payment” and a tacit admission of past disproportionate harvest rates by the Americans (Miller, et al., 2001), given that the vast majority of the funding came from a US Congressional appropriation to the tune of US$75million for the Northern Fund and US$65million for the Southern Fund, with the Canadian Government contributing CDN$250,000 to each (Pacific Salmon Commission, 2011b). The funds are designed to support habitat restoration activities, stock assessment, and other scientific research. As explained by the PSC, “the 1999 Agreement stipulates that ‘annual expenditures shall not exceed the annual earnings from the invested principal’ of the funds, a provision that essentially makes them permanent endowment funds, subject only to continuation of the Pacific Salmon Treaty” (ibid).

The creation of these funds are seen by some as stemming from continued pressure by the treaty tribes in particular for a management emphasis on habitat issues at all socio-ecological scales and within all international and domestic management organizations in order to increase
the amount of net funding for all habitat restoration projects (interview, PSC Commissioner, 2/10/10; interview, NWIFC staff, 2/18/10). Participatory authority by the treaty tribes was instrumental in the creation of these funds, as they saw this as both an opportunity to placate Canadian concerns during treaty negotiations and to push for more habitat programs as consistent with their overall push for more emphasis on habitat issues (interview, PSC Commissioner, 2/8/10). Creation of the funds is seen by some as a key development in negotiating the ultimately successful 1999 agreement (Miller, et al., 2001; interview, DFO staff, 1/12/10). Furthermore, tribal political pressure channeled through the US State Department and the Congressional delegations from the States of Washington, Alaska, Oregon, and Idaho is seen as a key step in pushing for final Congressional approval of these funds (ibid).

6.3.4. Effect of Enhancement Funds Programs on the Tribes

The enhancement funds have represented a new avenue of activity in which the tribes have become very active, both in terms of serving on the enhancement fund committees, and in directly implementing the projects. Two respondents specifically singled out the ability of the tribes to shape funding priorities of the Enhancement Funds through their representation on these special committees. This is facilitated by how funds decisions are managed, as how and where the money is spent is the prerogative of both of the fund committees, which fundamentally determine what projects are funded due to an informal norm in which the full Commission will just “rubber stamp” the fund committees’ “recommendations” (interview, PSC Secretariat staff, 1/12/10). First Nations representatives serve on both fund committees, and the treaty tribes have one representative on the Southern enhancement fund committee, consistent with the informal norm of the tribes staying out of the business of the Northern panels and the Alaskans staying out of the business of the Southern panels. Most of the enhancement funds (~60%) have gone towards assessment functions, which reflect the preferences of the treaty tribes and First Nations groups, and which have vastly improved data on abundance, returning juveniles, migratory patterns, etc. and thus facilitated the move towards abundance based management (interview, PSC Secretariat staff, 1/14/10).
Working relationships between fund committee members are apparently quite good, with virtually no evidence of fighting over how money is allocated (interview, PSC Commissioner, 12/16/09). Sixty-five percent of the money, amounting to $30,057,416 over the lifetime of the Funds, has been spent on projects in Canada, which is covered by both the Northern and Southern Funds (email correspondence, PSC Secretariat staff, 8/16/12). In the Southern Panel, a fairly significant proportion (approximately 25%) of all projects have been implemented by CRITFC and/or NWIFC scientists (interview, PSC Commissioner, 12/16/09).

From the Canadian perspective, these funds are a welcome addition and represent a win-win situation for both DFO and First Nations fishery managers. As one individual put it, the Enhancement Funds represent a potentially significant benefit to tribes as implementation authorities (interview, PSC Commissioner, 2/9/10). Furthermore, while indigenous group representation on the Enhancement Fund committees does shape funding priorities, which generally emphasize collection of technical information, there really is not a pattern of these groups using their influence to steer money in such a way as to advantage indigenous group implementation authorities over other stakeholders (interview, PSC Panel member, 3/2/10). That being said, some indigenous group representatives reflect ambivalence over their influence in the overall process, articulating that getting projects through the Enhancement Funds is good, but that they would get these projects anyways in some cases because of the fact that they are the only entities able to do the work in particular remote areas (interview, PSC Panel member, 2/10/10).

6.3.5. Move to Abundance-Based Management

A major evolution of the PSC between the original 1985 treaty and the 1999 agreement has been a shift towards abundance-based management (ABM). Several of the interview subjects in this study explicitly articulated that the move to ABM was the most significant change in the history of joint Canadian-American salmon management, and that the American treaty tribes were at the forefront of pushing this new management regime. Once again, only American treaty tribes were mentioned as being behind the move to ABM. This move to ABM is seen as
fundamental to avoiding past patterns of both bilateral discord and intra-delegation in-fighting, and is seen as a means of avoiding past patterns of brinksmanship between the two countries (Miller, et al., 2001).

Essentially, ABM differs from past “ceiling-based” regimes in that the latter entailed setting annually renegotiated catch ceilings based on anticipated returns of specific stocks such as Fraser Sockeye, whereas the former entails much more intensive monitoring and modeling of returns of adult salmon. Due to better scientific data, scientists can now more effectively model returns based on data such as the population totals of juvenile out-migration and the numbers of fish beginning to return in the vanguard of a particular salmon run. Such a management tool is aimed to prevent the kinds of poor management decisions based mostly on juvenile out-migration data that have occurred in the past, and most recently was likely instrumental in preventing overfishing of the 2009 Fraser Sockeye stocks, returns of which were only approximately 13% of anticipated returns based on juvenile out-migration data (Pacific Salmon Commission, 2009). ABM allowed the PSC to shut down the Fraser Sockeye fishery in order to ensure at least a sizable portion of their adult escapement targets and to avoid the overfishing which would have occurred under ceiling-based management practices (interview, PSC Commissioner, 12/16/09). As suggested by Miller, et al., “Under the ceiling-based approach, the nation of origin either reaped the reward or bore the brunt of any natural fluctuations in abundance. It worked well when stocks were increasing. It worked badly when stocks were declining” (2001, 24). An example of ABM was provided by a NWIFC fisheries manager: “…when escapements were abundant in Queets, but not in the Hoh, in the past harvest ceilings would be set on the aggregate data and the abundance on the Queets might lead to too many Hoh fish being caught as well. Now we have moved to management of runs on a run-to-run basis. If escapement on the Hoh is low, this will force a decrease in net allocations of other runs where Hoh fish might be co-mingled…” (interview, NWIFC staff, 2/18/10).

As one interview subject suggested, the improvements in technical data are key, and that the organization now knows what 1,000 extra fish caught in Alaska means to escapement levels
on other streams (interview, PSC Commissioner, 12/06/09). Furthermore, the same Commissioner highlighted the link between this and the generation of better technical data and information sharing which was a direct result of the inclusion of multiple stakeholders in the PSC process. Thus a crucial element of ABM is the commitment to intensive data collection and the willingness to bear the costs associated with it. Both Canadian First Nations and the treaty tribes have played a role in both pushing for funds for improved data collection and enabling it to be implemented via their role as key collectors of technical data, as will be discussed in a section which follows.

A key role in the move towards ABM was played by the treaty tribes, who were among the first to vocally agitate for the funds necessary to implement it (interview, PSC Commissioner, 2/8/10). The tribal perspective on sustainability of the resource has been influential, as has the tribes’ increased flexibility in moving away from a strict 50/50 interpretation of their allocations on a tribe-by-tribe basis towards a perspective of emphasizing the protection of vulnerable stocks, which has been a hallmark of the move towards ABM (interview, PSC Commissioner, 2/8/10). Another non-tribal fishery manager stated, “the 50/50 share isn’t always realized to the exact scripture of the law, but it is certainly close in the aggregate. Flexibility is the key and is a tribute to the willingness to negotiate on both sides [state and tribal]” (interview, PSC Commissioner, 2/18/10).

6.3.6. Placing the Chinook Chapter Renegotiation on the Agenda

The placement of the Chinook Chapter renegotiation on the agenda was the second-most cited effect of indigenous participation in terms of their agenda setting role. Indigenous groups from both sides of the border were instrumental in identifying problems associated with the Chinook harvest, in particular Alaskan and WCVI interceptions of Chinook bound for rivers in Washington and Oregon, and in proposing solutions to the Chinook problem which were subsequently adopted. The details of the Chinook Chapter renegotiation are dealt with under the section pertaining to “leverage” below.
6.3.7. Placing the Fraser Chapter Renegotiation on the Agenda

Similarly, indigenous groups from both sides of the border were strong advocates for a renegotiation of the terms of Fraser River Pink and Sockeye salmon allocations. This in part stems from the old problems pertaining to accommodating the 50/50 treaty allocation of Puget Sound tribes within the IPFSC, as well as inter-tribal rivalries between upriver, mid-river, and lower river First Nations groups which have sought to increase their social and ceremonial allocations at the expense of the old 50/50 Canadian-American allocation of Fraser River salmon. As with the Chinook Chapter renegotiation, this issue is dealt with in greater detail under the section dealing with "leverage" below.

6.3.8. Agenda Setting Regarding Domestic Issues

A peculiarity emerged during interviewing in the form of three respondents who identified agenda setting over domestic management issues within Canada as an effect of First Nations participation. What these individuals indicated is that First Nations representatives tend to use the PSC process as an additional consultative process with DFO to have their domestic allocation issues, particularly over food, social, and ceremonial allocations, addressed face-to-face. In other words, the PSC, from a First Nations perspective, provides an attractive additional forum for "face time" with key DFO leadership, in particular the Regional Director General, who serves as the sole voting Commissioner and leader of the Canadian delegation (interview, PSC Commissioner, 3/7/10; interview, DFO staff, 3/9/10). This is perhaps reflective of deficiencies in other consultative processes such as negotiations over allocations under the AFS (interview, PSC Commissioner, 3/7/10).

6.3.9. Technical Issues

Two interview subjects also indicated the influence of indigenous groups in getting technical issues pertaining to data collection onto the agenda. There are controversies surrounding the reliance on mass-marking fisheries (i.e. identification of hatchery fish through clipping the adipose fin) and the implication of this management tool on how different fishing gear
methods are impacted, (interview, NWIFC staff, 2/18/10), as discussed in Chapter Two. As a result, indigenous group representatives from both sides have been at the forefront of efforts to employ coded-wire tags and other technologies to lessen the reliance on mass-marking.

6.4. Leverage

The negotiating leverage brought to the table by indigenous groups was the second-most cited (n=25) effect of indigenous participation by the individuals interviewed for this study. Three different contexts of leverage were articulated. The most commonly cited was the leverage brought by indigenous groups vis-à-vis other members of their national delegation, a clear example of which is the ability of the American treaty tribes to force Alaska into the PSC process under the threat of litigation under the All Citizens case which would extend tribal treaty rights to Alaskan fish. In fact, all references to leverage over other domestic interests were articulated in the American context, with no respondents explicitly indicating an ability by Canadian First Nations groups to apply leverage against other interests in the Canadian national delegation. Similarly, six interviewees articulated the leverage of the American treaty tribes vis-à-vis the Canadian Government, while there were no indications of First Nations leverage vis-à-vis the American Government. Finally, eight interviewees indicated leverage applied between the two indigenous group delegations, indicating that both actively seek each other out and attempt to address tribal-First Nations issues bilaterally, as exemplified by the relatively new joint tribal caucus process. All three forms of leverage were articulated as being influential in a number of specific issue negotiation areas, which will be used to illustrate the sources of and execution of indigenous group leverage within the PSC.

The issue of tribal leverage within the American delegation is of particular significance. There has long been skepticism surrounding the multiple veto points associated with the American voting structure, with several scholarly works and several of the Canadian representatives interviewed for this study voicing general apprehension surrounding the ability of what they view as “special interests” being able to “hijack” the negotiation process (Miller, et al., 2001; McDorman, 2000; McDorman, 1998a; Schmidt, 1996; interview, PSC Commissioner,
This perspective is likely informed by the general preference of the Canadians for bilateral models of nation-to-nation negotiation, which is reflective of the unshared authority held by the national government in both foreign policy and fisheries management.

In light of this background, much public debate and scholarly work has been conducted over the impact of the multi-tiered and multi-stakeholder negotiating process, especially in regards to the multiple veto points that characterize decision-making within the American delegation. Existing game-theoretical modeling primarily characterizes the process as following the logic of “two-level games”, with a general consensus that the system will naturally tend towards stalemated decision-making as a function of the multiple veto-points within the American delegation (Miller, et al., 2001; McDorman, 2000; Schmidt, 1996). I argue however that existing game theoretical studies are flawed in that they are based on erroneous assumptions regarding the utility functions and payoffs accruing to the various institutional actors with veto authority on the American side. In particular, the assumptions made in these models do not take into account such things as the impact of the All Citizens case in altering Alaska’s payoff structure. I argue that this is the primary source of tribal leverage, which enables tribes to push for policies in line with their own preferences and leads to concessions from Alaska that otherwise would not be forthcoming. In other words, the stipulated order under All Citizens effectively alters the utility function of Alaska, such that when making strategic calculations during negotiations, Alaska must factor into account the probability that they would lose the lawsuit were negotiations to falter, thus triggering Federal pre-emption and/or leading to a breakdown in the treaty, in conjunction with a calculus of the potential costs that losing the lawsuit would entail. While the authors of these articles that provide game theoretical models rightly attribute a role of the tribes in forcing Alaska to the table via the All Citizens case in the general background sections of their papers, they confusingly do not explicitly factor into account the lingering threat of the lawsuit should stalemate occur, and its resulting impacts on Alaska’s negotiation stance.

Therefore, I believe that Alaska’s utility function is fundamentally altered by several factors related to the All Citizens case. First, they must strategically think in terms of the

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probability that they might actually lose the All Citizens case should the case go to trial. This is then factored in to the costs that would accrue to Alaska, which I argue could take several forms. First would be the aforementioned costs in terms of foregone harvests should a 50% allocation rule be applied to the tribes for the portion of Alaskan fisheries where southern stocks are known to co-mingle and thus be subject to interceptions, which as mentioned I estimate to be worth around US$80 million annually, as a conservative measure. Furthermore, Alaska would be constrained by the high transaction costs of litigation, which others have attributed as a major factor behind the State of Washington’s ultimate acquiescence to a tribal role in co-management (Singleton, 1998; interview, PSC Commissioner, 2/18/10). Additionally, a loss in the All Citizens case could have implications for the special role that Alaska enjoys within the NPFMC, as they would likely lose the delegated authority they enjoy over salmon and other select fisheries. Finally, insinuation of the treaty tribes into Alaskan politics could set a significant precedent in the relationship between Alaska and its own indigenous peoples, who have a fundamentally different relationship to the State and Federal government unlike that of most Federally recognized tribes in the lower forty-eight. Alaskan natives are governed under a different set of case law and organized into Alaskan Native Village Corporations that are an outgrowth of land claims settlements and other issues (Wilkins and Stark, 2011). Alaskan natives do not have treaties like that of the treaty tribes and thus no entrée into the PSC process. The only tribe in Alaska with anything remotely similar to the treaty process in the continental United States is the Annette Island Reservation, which already has limited unique fishing rights such as the right to use fish traps for salmon which are otherwise illegal for other stakeholders (interview, PSC Commissioner, 1/13/10). Although entirely conjectural, the specter of tribes from the lower forty-eight engaging in a direct co-management role with the State of Alaska over fishing could possibly reignite agitation for similar rights on the part of Alaskan natives which could set forth a costly re-formulation of the relationship between these groups and the State. Therefore, there are a range of potential costs associated with the potential of losing All Citizens, which are difficult to quantify with any precision.
Similarly, the leverage that the American treaty tribes have vis-à-vis the Canadian
government is related to their leverage that they have over Alaska. The Canadians recognize
that their ability to achieve some of their desired harvest reductions for particular stocks on the
part of Alaska – issues within the Transboundary Panel are much more akin to a bilateral issue
between Canada and Alaska – is fundamentally tied to the ability of other stakeholders in the
American delegation, and in particular the treaty tribes, to wrangle concessions out of Alaska
under the threat of veto authority during the determination of the American position within the
national caucus (interview, PSC Commissioner, 2/9/10; interview, PSC Commissioner, 3/8/10).
This is particularly true of particular intermingled stocks of a single species, especially Coho and
Chinook, which are bound for streams in British Columbia, Washington, and Oregon. Hence, the
Canadian delegation actively lobbies tribal interests to apply such leverage, which in turn allows
the treaty tribes to gain concessions from the Canadians through a process of issue linkage,
particularly in the context of sharing plans for Fraser River Sockeye and Pink salmon.

Bearing in mind the assertion articulated in an earlier chapter that Alaska has never
gotten anything out of the PSC other than the avoidance of potentially even greater regulatory
restrictions on their harvests (interview, PSC Commissioner, 3/8/10), any agreement that
incorporates a reduction in Alaskan harvest rates would thus indicate the application of this
leverage by the American treaty tribes. A few such instances are explored in the sub-sections
which follow.

6.4.1. Chinook Chapter Renegotiation and Harvest Reductions

The Chinook Chapter renegotiation process and success in obtaining sizable reductions
in Alaskan harvest rates speak to the impact that these considerations play on the part of
Alaska’s strategic calculations. Facing no other incentive to participate, Alaska would otherwise
not be predicted to acquiesce to any reductions and use its veto power over any reduction in its
catch, resulting in the stalemate predicted by existing game theoretical models. However, in the
case of the Chinook Chapter renegotiation, this did not occur, as Alaska acquiesced to a 15%
anual reduction in its overall targeted Chinook fisheries over the period between 2009 and 2018,
after which the Chinook Chapter would be reopened for negotiation (Pacific Salmon Treaty, Section 3). Interview data suggests that the tribes, through a combination of pushing for threats of Federal preemption and through threats that a collapse of the negotiation would result in a reopening of the All Citizens case, were instrumental in attaining this reduction (interview, PSC Commissioner, 2/11/10; interview, NWIFC Staff, 2/18/10). Such a reduction would be consistent with a utility function on the part of Alaska that would reflect a calculus that they would be better off with a 15% reduction than with the probability, however small it might be, of up to an annual US$80 million loss of fishing revenue, not to mention the costs of litigation and other concerns mentioned above.

Tribal participation was also instrumental in achieving reductions of Chinook interceptions by Canadian fishermen off of the West coast of Vancouver Island during renegotiation of the Chinook chapter. It is in this context as well that a frequent citation of tribal leverage on the part of Canadian First Nations vis-à-vis their counterparts on the American side of the border was made by several interview subjects. American treaty tribes, in collaboration with particular First Nations interests in Canada, were the source of a policy proposal of having the US government pay for a license buy-back program of Canadian fisheries, including those of the Nuu-chah-nulth, off of WCVI that had developed during the “era of dysfunction” in the mid-1990’s, which were purposefully targeting interceptions of Chinook bound for Washington and Oregon in an effort to coerce a favorable agreement on Fraser River and other fisheries of strategic importance to the Canadians (interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 2/8/10). These fisheries were known to be over-capitalized, and facing an uncertain long term future over concerns over the sustainability of the resource, concerns which were brought forth by Nuu-chah-nulth fisheries biologists who were the principle source of technical data in the area (interview, PSC Commissioner, 2/8/10; interview, PSC Panel member, 3/2/10).

The license buy-back program, which totaled approximately US$35 million, was a significant concession which helped to build trust between the two national delegations which ultimately led to the finalization of the Chinook Chapter agreement. Participation by the Nuu-
Chah-Nulth during the Chinook chapter renegotiation was significant in altering the Canadian position, as these groups were the primary source of technical data that were used to illustrate to DFO that the marginal rates of return of fishing activity were significantly decreasing and that they should thus consider a buy-out (interview, PSC Commissioner, 2/9/10). The result is that over the past several years, there are 50,000 more Chinook saved per year in terms of Chinook interceptions by Canada, and even more saved in terms of reductions of catch agreed upon by Alaska, all partially attributable to the roles that both the treaty tribes and Canadian First Nations played in the process (interview, PSC Commissioner, 2/18/10).

6.4.2. Indigenous Leverage within the Fraser River Panel

Another frequently mentioned effect of American tribal participation relates to activity within the Fraser Panel, particularly over annual Fraser Sockeye negotiations. The American tribal treaty right upheld by the Boldt decision, in conjunction with the 50/50 allocation between the United States and Canada under the auspices of the IPFSC was in fact the original entrée of the tribes into the PSC treaty process, in part due to recalcitrance of IPFSC commissioners from the American side to recognize tribal rights as recognized under US v. Washington (Yanagida, 1997). Under the old rules, where there was a 50/50 share between Canada and the United States, and after Boldt in which the tribes were to have a 50/50 share of any American harvest, this effectively gave the tribes a potential holder of 25% of the Fraser Sockeye harvest, making them very significant players on what was the single biggest issue in the Canada-US treaty negotiation.

Recent developments since the 1999 treaty renegotiation has altered the previous status quo, as the northern Puget Sound tribes have agreed to lower shares of other stocks subject to intergroup interceptions within the American domestic fishery in exchange for virtually exclusive harvest rights to the USA’s share of Fraser Sockeye. Similar to the WCVI Chinook fishery detailed in the previous section, this was facilitated through a state license buy-back program of the non-Indian commercial fisheries of north Puget Sound that historically targeted Fraser Sockeye. This buyback was further enabled by popular support among commercial fishermen for
buyback programs during a period of low abundance in which overall fishing totals were heavily suppressed and in which the sockeye fishery as a whole was shut down entirely some years, leading to an incentive for these interests to retreat from the fishery (interview, NWIFC staff, 2/18/10).

The result is that American treaty tribes are by far the primary American interest in the Fraser Panel due to the fact that they overwhelmingly dominate this particular fishery. This has raised the profile and importance of specific tribal negotiators on the Fraser Panel, such as Lorraine Loomis, to such a degree that the tribes take the lead as the principle negotiator for the USA on issues of Fraser Sockeye, representing a sea change in the bilateral relationship between the USA and Canada on management decisions on the Fraser River from what used to exist in the days of the IPFSC (interview, PSC Commissioner, 2/18/10).

Over time, the 50/50 sharing arrangement between Canada and the United States has been gradually altered through processes of issue linkage whereby the United States has garnered concessions from Canada in other fisheries of strategic importance to the American delegation, such as Columbia River Chinook, in exchange for reductions of the American share of Fraser Sockeye and Pink salmon. This would not have been feasible without a complicated pattern of negotiation involving the treaty tribes. The Puget Sound tribes were the source of policy proposals to buy out commercial fisheries in the area, without a concomitant rise in the numbers of fish being taken by the treaty tribes. This reflects inter-tribal leverage and negotiation between CRITFC and NWIFC, in the sense that Puget Sound tribes have foregone the precedent of previous allocation arrangements for Fraser salmon by maintaining generally stable levels of fishing in the area, in exchange for concessions which would bring more fish to the Columbia River (interview, CRITFC staff, 3/29/10). As a result, the overall American share of Fraser River fish has decreased significantly. For 2006, a year chosen based on the fact that it is the most recent year for which a final Fraser River Panel Report is available that also had a relatively robust rate of returning fish, the total catch was 5,439,000 fish, of which the total Canadian share was 4,572,000 (84%), and the total American share was 727,000, or 13%, the discrepancy being
made up of various test fisheries (PSC, 2011c). The treaty share of this was 487,000, amounting to 10.6% of the total catch, and 67% of the overall American allocation, thus exceeding the general 50/50 sharing formula mandated by the Boldt decision and making the tribes the single largest stakeholder in the American delegation vis-à-vis Fraser River fish (ibid).

6.5. Information

Because of the remoteness of many of the most productive salmon-bearing streams, tribal and First Nations fishery technicians are instrumental, out of necessity, in the collection of the data upon which key management processes like ABM rely, as illustrated by statements such as “DFO can’t be everywhere all the time” (interview, PSC Commissioner, 2/9/10), “fishery managers need to know local conditions and DFO doesn’t have the capacity to monitor everything, so reliance on First Nations for technical data is high” (interview, PSC Commissioner, 3/8/10), and “who else would be able to do it?” (interview, PSC Commissioner, 2/10/10). Thus two separate yet related information effects were commonly attributed to the participation of indigenous groups from both Canada and the United States: “information sharing” and “improvement of technical data”.

Information sharing was much more commonly invoked (5:1) by interviewees addressing Canadian First Nations. This is reflective of the use of the PSC by DFO as an additional consultative process between it and Canadian First Nations groups. A perspective indicative of this is the assertion that a common problem in Canada, at least from DFO’s perspective, is that some First Nations bands refuse to release technical information to DFO because they think of it as proprietary (interview, PSC Commissioner, 3/8/10). The PSC provides an avenue for bringing in these types of groups, especially through representation at the technical committee level, which may help to avoid this type of problem and in turn give DFO access to technical information possessed by certain bands, especially since DFO will essentially be paying for it through funding the participation of these First Nations bands in the PSC (ibid).
The vast improvements in technical information stemming from the inclusion of multiple stakeholders, including the indigenous groups from both nations, was a frequently cited positive development in the historical evolution of the PSC, especially after the renegotiation of the new treaty in 1999. This in turn is tied to the ability of the organization to initiate a regime change towards ABM, as argued previously. The contributions of both Canadian First Nations and the American treaty tribes were noted equally by the individuals interviewed for this study, and individuals from each country commonly noted the contributions made by indigenous groups and individuals from the other country in this regard.

6.6. Implementation

Closely related to the issue of information effects was the often-cited participation by the both nations’ indigenous groups in program implementation, especially in relation to activities funded through the PSC Enhancement Fund process. Because of the long-running status of the treaty tribes as co-managers at the domestic level since the Boldt decision and their earlier development of technical capacity, especially within the context of CRITFC and NWIFC, this is probably most significant for the Canadian First Nations. In fact, several interview respondents, both American and Canadian spoke of how Canadian First Nations are “20 years behind” the American tribes both in the development of political influence and legal rights, as well as their overall technical capacity. Certain groups such as the Nuu-chah-nulth and Haida however have a very strong reputation for their technical capacity (interview, PSC Commissioner, 3/8/10). In other cases, the quick development of technical expertise on the part of particular First Nations groups was frequently cited, and was suggested by some to be an important development in the ability of particular individuals to obtain employment within DFO and other fishery management bodies (interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 2/9/10).

Furthermore, First Nations participation was seen by some as facilitating the continued evolution towards a more generalized “grand system approach” to harvest allocations within the Canadian domestic management regime which would replace the rather ad hoc way in which DFO determines allocations on a band-by-band basis (interview, PSC Commissioner, 3/8/10).
A further dimension of implementation was attributed to the treaty tribes in terms of the overall leadership role they hold within the institution, in which they perform various administrative tasks in terms of organizing different informal meetings between stakeholders and shape the order in which issues are addressed (interview, PSC Commissioner, 12/16/09).

6.7. Funding for Tribes

This category is related to the implementation of technical functions category above, except this encapsulates an opinion of the positive financial impact of such technical funding on the local economy, such as “putting people to work”. In some instances, projects funded from the Northern and Southern funds represent sizable influxes of money into the tribal economies, which can be a very significant source of employment during the off-season from fishing (interview, PSC Secretariat staff, 1/14/10). Given that the amounts of money spent over the lifespan of the Enhancement Funds has totaled $46,582,988, (email correspondence, PSC Secretariat Staff, 8/16/12) of which only a portion has gone to indigenous implementation authorities, the net impact of this should not be overstated. Nonetheless, for smaller remote communities, the impact of these monies can be of some significance in terms of off-season employment, as previously mentioned.

6.8. Development of Technical Skills

The mere participation of indigenous groups is seen by most interview respondents as having been very beneficial in terms of the development of their technical skills (interview, PSC Commissioner, 12/16/09; interview, PSC Secretariat staff, 1/12/10; interview, PSC Secretariat staff, 1/14/10). Clearly, as implementing authorities for certain stock assessment, monitoring, and other functions, individual members of various indigenous groups have had opportunities opened to them that had previously not existed. This was especially cited by interview subjects from every stakeholder group on the Canadian delegation as being one of the most significant advantages of indigenous participation in the PSC. Another advantage of Enhancement Fund committee participation by tribes, beyond having influence over how these funds are spent, has
been the insight gleaned over how to prepare good proposals, which represents a sort of policy/technical training which tribal representatives have shared with different tribal and First Nations groups in order to help them improve their acumen in the grant process (interview, PSC Panel member, 3/2/10).

6.9. Trust Building

Two types of trust-building were frequently cited as positive effects of indigenous participation. The first of these, inter-tribal trust building, were cited frequently for both nations, which is somewhat surprising given the roles of NWIFC and CRITFC as inter-tribal collective action and dispute resolution institutions for the American treaty tribes. In the American context, the PSC serves at least two functions related to inter-tribal trust building. The first is the reciprocal arrangements between CRITFC and NWIFC tribes such as the alternation between Commissioner and Alternate Commissioner positions in the PSC (which was of more importance in the past when the distinctions between these two positions were more significant, as detailed in Chapter Three), and between American tribes from the NWIFC who have significant inter-tribal rivalries related to interceptions issues, such as the rivalry between coastal tribes and Puget Sound tribes related to the former’s earlier access to Chinook and Sockeye as they migrate into the Strait of Juan de Fuca (interview, PSC Commissioner, 2/8/10; interview, PSC Commissioner, 2/11/10). Essentially, the PSC serves as yet another institution for giving tribal representatives face time with one another, especially at the Panel and technical committee levels, in a forum outside of the NWIFC, which as the reader will recall serves as more of a technical support organization to the tribes. On the Canadian side of the equation, inter-tribal trust building was especially invoked as a means of addressing inter-tribal conflicts which are not being addressed due to the lack of an effective pan-tribal collective action institution similar to that of NWIFC or CRITFC (interview, PSC Commissioner, 3/7/10; interview, PSC Commissioner, 3/8/10).

Several developments pushed by both the treaty tribes and First Nations have accentuated the development of both domestic inter-tribal trust and transboundary inter-tribal trust. The First Nations Caucus is a new process whereby First Nations are increasingly seen as
agenda setters for the Canadian delegation (interview, PSC Commissioner, 2/9/10). This is seen as a particularly important mechanism on the Canadian side in light of the fact that an effective First Nations collective action organization along the lines of CRITFC or NWIFC has never successfully developed due to the highly fragmented nature of Canadian First Nations bands. Because many bands, especially on the Fraser River, have major allocation issues between them, the DFO has been seeking ways to initiate face-to-face meetings between opposing First Nations groups in order to facilitate trust-building between them (ibid). The First Nations Caucus was pushed for by First Nations representatives within the PSC and developed via funding through DFO’s AAROM program.

DFO has put forth $160,000 to facilitate the caucus, which from the DFO perspective facilitates both consultative policy requirements and serves as a means of mitigating inter-First Nations allocation disputes. The caucus serves as venue for the Regional Director General to meet formally with First Nations representatives. From a First Nations perspective, this is largely welcomed but insufficient in overcoming the structural constraints of the PSC process, which is seen as having too few positions available at the Panel levels to accommodate all First Nations interests (interview, PSC Panel member, 3/2/10). However, it at least provides a forum for interaction between First Nations groups to hash out their own disputes that might not occur otherwise (ibid). An outgrowth of participation in the First Nations Caucus that was cited were recent attempts to develop a new First Nations collective action organization to fill the void of the former BCAFC, which has recently come in the form of the creation of the First Nations Fisheries Council, which currently has fourteen member bands (interview, PSC Commissioner, 1/14/10).

This has not been without controversy however. The creation of the First Nations Caucus raised some eyebrows from the commercial and recreational fisheries representatives on the Canadian side, who are suspicious of behind doors meetings because they feel it should be the position of the Canadian delegation to always show a unified voice in opposition to the Americans (ibid). One non-First Nations representative indicated the need for unity vis-à-vis America, after which they can break down inter-group allocations through the domestic process,
with such unity being threatened by such behind the scenes processes which exclude other stakeholders from the Canadian delegation (interview, PSC Commissioner, 1/11/10). However, others were careful to note the success of the caucus, particularly citing the effectiveness of the caucus in getting First Nations to collectively work hard on the Chinook Chapter renegotiation (interview, PSC Commissioner, 1/14/10).

In recent years there has also been an increase in broader social, political, and economic interactions between American tribes and Canadian First Nations bands that might be attributable, at least in part, to increased contacts between these groups through participation with the PSC. Increased cross-border potlatches and the increasingly popular Tribal Journeys of the Pacific Northwest canoe congregation are but a couple of examples. There has also been an increase in tribal-First Nations cooperation and lobbying within the confines of the PSC. The new Joint Caucus is designed to share information and to express the positions of the Canadian and American indigenous groups to each other in a closed door meeting that occurs at each annual meeting of the PSC. Several interview subjects indicated that the DFO and other American and Canadian stakeholders get very nervous about this, but American tribes have tried to remain sensitive to this by indicating that it is no different than the many "hallway conversations" that all stakeholders within the PSC have with one another (interview, PSC Commissioner, 2/8/10). However, there is a degree of skepticism amongst all stakeholders that this will enable the emergence of a unified treaty tribe-First Nations voice, as significant differences of opinion remain between the sides generally and between different groups within each side. It is too early to tell what effect the inter-tribal caucus will have. Said one observer: "[It] might have had some limited influence in the respective domestic processes, but hard to say. Basically they try to bring shared values to the process and make sure they won't do to screw each other over during US-Canada bilateral negotiations, for example, the Chinook annex renegotiation (ibid).

The second type of trust-building effect that was cited was the development of trust between the national governments and their respective indigenous populations. However, a general distinction between the two contexts is that individuals from all delegations on the
American side reported generally good working relationships between one another, whereas on the Canadian side the invocation of federal-tribal trust building came almost entirely from non-First Nations stakeholder groups, while First Nations representatives were generally more negative about the relationship, often voicing disappointment that they have not attained the same level of authority with the PSC as the American treaty tribes have attained (interview, PSC Panel member, 2/9/10). On the American side, the existence of NWIFC and CRITFC is widely seen as having been enormously important in both solving their own collective action problems and serving as a conduit for better Federal-tribal relations (interview, 12/16/09; interview, PSC Commissioner 2/8/10). These mediating institutions are funded by the Bureau of Indian Affairs (BIA) to the tune of ~US$2million per year for NWIFC and $1million per year for CRITFC under the general area of “rights protection” (interview, 2/8/10). The generally high regard in which the tribes are held in terms of their willingness to compromise at all levels of the salmon regime, including within the PSC, has been instrumental in guaranteeing the continued appropriations for the activities of these organizations in that the tribes, in conjunction with the US State Department, were successful in forcing an otherwise recalcitrant BIA to fund these organizations under the general auspices of “rights protection” because of the international treaty obligations of the United States under the PST (ibid). Among other things, this represents an elevation of the stature of the tribes within the State Department and White House, which further accentuates their general international legal sovereignty (ibid).

6.10. Leadership Development

A handful (n=7) of interview subjects made specific reference to such things as the development of particular individuals’ political acumen, leadership, negotiation skills, etc. Leadership was also commonly invoked as a significant component of indigenous leverage within the institution, as previously noted. Of particular note was the observation that particular individuals, such as Ron Allen, PSC Commissioner for the NWIFC tribes, have parlayed their reputations as good negotiators and organizational leaders within the PSC process into positions of leadership within their own tribal governments or even nationally-based indigenous collective
action organizations (interview, PSC Commissioner, 12/16/09; interview, CRITFC staff, 3/29/10). Furthermore, dissemination of knowledge between the American treaty tribes and other actors at the domestic level is now firmly institutionalized (interview, PSC Commissioner, 12/16/09). Skills at intergovernmental negotiation have vastly improved, and this has helped the tribes in negotiating forestry policy at the State level (such as the Washington State Forests and Fish Plan), casino policy, marine sanctuary policy, and many other policy areas (interview, PSC Commissioner, 12/16/09; interview, NWIFC Staff, 2/18/10).

In terms of the Canadian delegation, several individuals voiced the hope that individual First Nations representatives may emerge that may help in the development of more effective inter-tribal collective action institutions, and singled out particular individuals, including the two current First Nations Commissioners and other individuals at the Panel and technical committee levels as individuals to watch for in the future in terms of development of political clout.

6.11. Sustainability

Three different references explicitly relating to the development of sustainable management practices were directly attributed to the participation of indigenous groups as drivers of improved management. Essentially, these individuals were making causal arguments linking the actions of indigenous groups within the organization with the perception that without such participation, old status quo methods of management would still be in place and that the “era of dysfunction” and unsustainable management practices would be the alternate outcome. The three types of statements pertaining to sustainability were statements of approval for the management outcomes associated with the move towards ABM strategies, which as the reader will recall was associated with the efforts of American tribes in particular in putting this on the agenda; the evolution of the organization towards longer-range planning, reflecting the appeals of indigenous groups from both sides pushing the issue of habitat protection and improved data collection; and the success with which the tribes have pressed for reduced catches in particular targeted stocks, as explained in the section on “leverage” above. Interestingly, “sustainability” effects were articulated solely within the context of the American treaty tribes, with several
observers, tribal and non-tribal alike, associating the tribes as the primary issue advocates of issues concerning habitat, conservation, and sustainability more generally.

6.12. Networking

Perhaps reflecting the notion that participation in the PSC provided opportunities for face-to-face dialogue that simply did not exist elsewhere due to either inter-tribal rivalries, geographic remoteness, or the lack of a truly pan-tribal indigenous collective action institution, a couple of individuals noted “networking” as a particular effect of indigenous participation particular to the Canadian context. Such networking activities were furthermore articulated within the context of both inter-tribal networking and networking between tribal and non-tribal stakeholders (interview, PSC Commissioner, 1/14/10; interview, PSC Commissioner, 3/7/10).

6.13. Cross-National Comparisons of Impacts

It is interesting to note that certain types of effects were attributed to only one or the other indigenous group contexts. I believe that this lends additional support to the characterization of the American treaty tribes’ level of authority as being “high”, compared to the “medium” level I have attributed to Canadian First Nations interests. Citations of the particular effects of participation for each group differed in several interesting areas. Table 6.2. compiles the most commonly cited effects of Canadian First Nations participation:
The issues pertaining to information development and sharing, development of technical expertise, funding for tribal groups, inter-tribal trust building, implementation of technical programs, leadership development, and ties to the American treaty tribes were the most frequently cited by interview subjects. In general, I believe this to be reflective of the constrained roles of these groups within the institution, and a manifestation of the overall consultative purpose that DFO uses the PSC for. Leverage with the American treaty tribes is a particularly interesting facet of participation, and is likely correlated with the overall level of participatory authority held by the treaty tribes – this serves as a magnet for lobbying by other stakeholders. Nonetheless, this does serve to accentuate the policy making roles of First Nations within the PSC, as illustrated by their role in the Chinook renegotiation.

The nature of the American treaty tribes’ participation in the PSC is fundamentally different than that of the Canadian tribes. Table 6.3. presents the most commonly cited effects of the American treaty tribes:

<table>
<thead>
<tr>
<th>Type of Effect</th>
<th>Specific Context</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>Improvement of Tech Data</td>
<td>6</td>
</tr>
<tr>
<td>Information</td>
<td>Information Sharing</td>
<td>5</td>
</tr>
<tr>
<td>Development of Technical Skills</td>
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Particular attention should be drawn to the leverage which the American treaty tribes have vis-à-vis other members of the American delegation, in particular Alaska, as well as various agenda setting functions, development of technical data and skills, direct implementation of programs, and leverage vis-à-vis the Government of Canada, which were much more frequently cited than other effects of tribal participation. This indicates a significant role for the tribes across a wide range of policy functions, one of the dimensions I attributed to a high level of participatory authority in Chapter One. Furthermore, as noted in earlier sections, certain effects were attributed solely to only one country context. In the case of Canada, this included agenda setting over domestic issues, networking, and information sharing, each of which reflects the use of the PSC by the DFO as an additional institutional opportunity for the exercise of consultative policy. For the American treaty tribes, agenda setting over the initial creation of the PSC, agenda setting relating to the creation of the Enhancement Funds, agenda setting regarding the move to
abundance based management, impacts on sustainability, and leverage vis-à-vis the Government of Canada and with other domestic actors in the American delegation, were all functions uniquely attributed to them without corollaries on the Canadian side. This serves to highlight the fact that the policy roles of each group of indigenous peoples within the PSC are quite distinct, and reflective of the higher level of participatory authority of the treaty tribes.

6.14. Conclusion

It should be evident at this point that the configuration of institutional rules greatly impacts the bargaining power of indigenous groups in such a way as to grant them a potentially significant level of power in international institutions, despite the conventional wisdom which continues to view international organizations as being the fundamental domain of state actors. While the American treaty tribes enjoy a higher degree of influence and perform a broader range of functions than their Canadian counterparts, the influence of Canadian First Nations should not be discounted, as they too play an important role in the institution. The status of American treaty tribes as co-managers under domestic law has served as an entrée into the international process of the PSC, where veto authority grants certain leverage against Alaska which otherwise would be predicted to behave in a different manner than they do in both intra-delegation and bilateral negotiation processes. The value of the technical data possessed by Canadian First Nations and their consultative role vis-à-vis DFO also has the potential to alter the official position of the Government of Canada, and recent developments in Canadian Supreme Court case law mentioned in previous chapters has the potential to accentuate this role as the evolution of the PSC progresses. As instances of high and medium levels of participatory authority, respectively, both cases should be of interest to scholars who wish to evaluate the contributions of these groups and how they impact policy-making in international natural resource management institutions. I believe these cases to be of particular interest to the study of international governance and the increasingly diversified roles which various non-state actors play in international institutions, and speaks to the contributions that indigenous groups in particular may
make to international governance despite the suspicion with which the state-centric international community tends to view these actors.
Chapter 7: Determinants of the Level of Indigenous Group Participatory Authority in International Institutions

7.1. Revisiting the Research Questions

Global governance is in a state of flux. Increasing numbers of complex policy problems that have global or transnational scale characteristics challenge the ability of nation-states to cooperate and effectively address issues of mutual concern. Furthermore, many policy problems frequently have issue dimensions that are more acutely felt at the regional or local level, thereby necessitating efforts to coordinate efforts at multiple levels and scales. This has drawn attention to the need for mechanisms to ensure that information flows down from international organizations to local authorities, and vice versa. Such complex problems also provide opportunities for experimentation in the design of regimes meant to address these problems, and windows of opportunity have emerged for non-traditional actors and organizations to step in and undertake functions which were formerly associated solely with the nation-state. As a special class of non-state actors, due to their claims to sovereignty and sets of rights often specific only to them, indigenous groups are faced with new opportunities for the exercise of their sovereignty through active political participation at multiple levels of governance as regimes attempt to tackle issues in new ways. Such policy activity at the international level represents a new frontier for these groups. In the areas of environmental policy and natural resource management, their interests in such participation is driven by the salience that these groups frequently place on environmental issues, as well as their relative social, political, and/or ecological vulnerability.

Several interrelated research questions pertaining to these broad themes of transnational and environmental governance have been addressed in this study. Motivated by several case studies, which are differentiated from one another by the level of participation and policy authority exercised by indigenous groups in international natural resource management institutions, this study has examined how institutional rules configure in such a way as to grant relative levels of indigenous participatory authority in these institutions. It then focuses on the primary research questions of what explains the variation in the levels of authority possessed by the different groups examined in this study, and how have these groups attained their positions in these
institutions? The study also addressed the secondary question of what effect has participation by American and Canadian indigenous groups in the PSC had on the decision-making processes of the institution, as well as various outcomes associated with its operation?

Several tentative answers and hypotheses related to these questions were developed over the course of this study, while careful attention was paid to how each of the broad issues in this study related to one another. Several take-away themes specific to each question will be the subject of the first part of this chapter. This will be followed by various ideas for future research which are related to one or more of the principal themes of this study in order to relate this study to the broader fields of international relations, comparative politics, public policy, environmental affairs, and indigenous politics.

7.2. The Impact of Institutional Rules on Levels of Indigenous Participatory Authority

This study argues that the level of participatory authority of indigenous groups is fundamentally tied to the configuration of several broad types of rules which either constrain indigenous group activity or give them broad license to perform a number of potential policy functions. The importance of various position, boundary, choice, and aggregation rules and norms at various levels of rulemaking are highlighted as key determinants of the latitude with which indigenous groups may maneuver through the policy process according to their own policy preferences. Groups which possess formal rights to vote on all or most of the decisions made by the organization, and which hold veto authority as well, clearly have much more influence within the institution than those who do not. Similarly, formal boundary and position rules that guarantee particular positions within the organization that are allocated to indigenous interests, coupled with rules which allow indigenous groups themselves to select the individuals who fill this positions with few or no checks on that authority, guarantee a greater degree of entrenchment of indigenous interests within the organization, as demonstrated by the contrast between the Canadian and American tribal groups in the PSC.
One of the key findings in relation to this question is that while the formal constitutional-level rules of the organization are important, there is a risk in overemphasizing this level of rule-making in analysis. This has the potential of obscuring a host of potentially important rules and informal norms that may exist at the collective choice or operational rule levels. For instance, a considerable amount of the influence exercised by Canadian First Nations in the PSC stems from more informal arrangements such as the informal stakeholder/consultation processes within the Canadian delegation, and the joint tribal caucus, which has not been formalized as an official negotiation process by the PSC itself. Similarly, an overemphasis on position rules at the constitutional rule level would obscure the fact that there is no real de facto distinction between Commissioner and Alternate Commissioner positions within the PSC, which could lead an observer to surmise that this structure could lead to a potential conflict between the NWIFC and CRITFC tribes where none truly exists, at least as a consequence of the organizational structure itself.

Furthermore, the location at which the institutional rules are set appears to be a significant factor behind the level of participation of indigenous groups in these types of institutions. Position, boundary, and choice rules set within the context of the international treaty itself appear to be more rigid than situations in which these rules are codified within national-level legislative or administrative arrangements. An illustration of this principle lies in the comparison between the IPHC and PSC, in which the IPHC system demonstrates a greater degree of rigidity and consistency in terms of the stakeholders involved in the system, whereas the PSC appears to be more fluid and accommodating to the inclusion of various actors due to the domestic-level processes which determine who may participate within the institution.

Lastly, institutions which disaggregate technical and policy decision-making functions and locate various functions across multiple hierarchical levels within the organization open up more opportunities for the inclusion of non-state actors in these types of institutions. This is most clearly evident in the case of the PSC, in which a broad range of tribal, commercial, recreational, conservationist, and lower-order government interests are formally represented in the institution.
Furthermore, the greater degree to which decision-making functions are parceled out to representative committees, as opposed to professional secretariat staff, appears to grant more opportunities for the inclusion of non-state interests. It is reasonable to assume however that this entails something of a sacrifice in terms of the transaction costs that are likely associated with such disaggregated decision-making.

7.3. Processes of Inclusion

The avenues through which indigenous peoples have attained their positions and levels of authority within the international institutions studied in this dissertation are quite distinct from one another. One of the key factors identified in this study, the existence of treaty rights with specific terms pertaining to allocation rights and co-management privileges, and the geographic scope in which these rights may be carried out, appears to not be a necessary condition for participation in these institutions per se, but may be a necessary condition for achieving a high level of participatory authority and degree of power within these institutions. Paradoxically, treaty rights may actually serve as a disincentive for participation, if these rights are not coupled with other necessary conditions, as illustrated by the case of non-participation of the Nisga’a.

Secondly, bottom-up processes of inclusion located at the domestic level appear to result in a greater level of authority on the part of indigenous groups than processes that emanate in a top-down fashion from within the institution itself. The argument I am making here is that the entrenched membership of the organization faces few incentives to broaden the scope of membership to include additional actors, which would diminish their own level of decision-making authority in the institution. Such is the case with the IPHC and IPFSC, both of which resisted any attempt to upset the status quo through the inclusion of new sectoral interests in the organization. In contrast, the pre-existence of indigenous participation or co-management at the lower levels of national and local policy making seems to serve as a more promising entrée into participation at the international level, as these groups slowly scale up the scope of their activities in response to successful collaboration and inter-actor trust building at more tractable levels of political involvement. A key hypothesis here is that the broader the involvement of indigenous actors in
co-management at lower levels of social organization, the greater the likelihood of high levels of participatory authority being granted to these groups at the international level.

Furthermore, in all of the cases included in this study, not a single interview subject identified principles of international law, such as Article 18 of UNDRIP, as being significant factors behind the inclusion of indigenous interests in the organizations in question, despite this factor being explicitly mentioned during interview questioning. The implication of this line of logic is that indigenous peoples seeking inclusion in international organizations may find it more fruitful to look towards domestic processes within their respective national delegations, than to seek inclusion solely through lobbying the international organization itself on the basis of legal rights to participate, as embodied in currently evolving principles of international law. The examination of additional cases of indigenous participation in international institutions, in which the inclusion of indigenous groups has been explicitly tied to a desire to accommodate indigenous interests consistent with evolving norms of customary international law (as may be the case with the Arctic Council), will be particularly useful in testing this assumption going forward.

Being specific to institutions engaged in issues pertaining to environmental policy and natural resource management issues, the nature of the resource itself also impacts potential avenues for the inclusion of indigenous groups in these institutions. The more complex the interrelationships are within a SES, both in terms of the numbers of actors and the linkages between them and how the resources involved are linked to human activity, the higher the likelihood of intergroup conflicts which generate additional sub-problems that may need to be addressed. This opens up avenues for indigenous groups to gain leverage vis-à-vis others in the SES, thus resulting in an ability to achieve positions of authority and responsibility if their level of leverage is sufficiently high. This principle is most clearly illustrated by the situation of American treaty tribes in the PSC and the complicated set of bilateral relationships between the various other stakeholders in the SES, which include other resource users, local and state government units, the national government, and foreign governments. Beyond the general issue of political leverage, indigenous participation is also likely tied to the degree to which these groups have
access to knowledge about the resource, which serves to accentuate their utility to the organization itself.

The examination of processes which lead to the non-participation of indigenous groups is also valuable, both as a test of hypotheses related to the processes behind groups achieving high levels of authority, and as a means of identifying differing processes which may explain the exclusion of indigenous groups in situations where their participation may otherwise be expected. The cases of the Colville and Nisga’a examined in this study for instance suggest two distinct pathways to non-participation, one in which non-participation is apparently purposeful, and the other where inclusion is desired but not granted. This is probably indicative of the existence of quite a number of distinct logical processes by which indigenous groups find themselves excluded from formal policy-making roles in international institutions.

7.4. Explaining Variation in the Levels of Indigenous Participatory Authority

Given the multiple processes through which groups find themselves included, or excluded, from formal authority in international governance, it logically follows that these groups would vary considerably in terms of the levels of authority they ultimately come to possess in specific institutions. This study has attempted to identify a number of factors which could be used to explain the variation between groups who have high, medium, low, or no levels of authority. This study argues that the way in which these factors combine serves to help determine the level of authority that ultimately falls to indigenous groups. Given the small scope of cases relative to the number of potential factors identified, it is important to be cautious about making very strong generalizations from the cases studied, as the situational specifics of the cases explored in this study may not be externally valid to other cases dealing with the issue of indigenous participatory authority.

Nonetheless, these cases are useful for identifying a number of factors that were used to develop a set of preliminary hypotheses to guide future work in this area. Treaty rights again appear to be important in achieving high levels of authority, but in and of themselves are not
sufficient, and may in fact serve as a disincentive for participation. The complexity of the resource system also influences the number of potential disturbances to the system, and thus the number of potential management problems that need to be addressed. The more proliferate these problems are, the greater the chance is for intergroup conflict, resulting in situations where certain interests may be natural allies in one context, but at odds with each other in another. Such a situation opens up windows of opportunity for particular interests to develop leverage to be applied in complex negotiating environments in which different issues become linked. This leverage may furthermore be accentuated by the existence of effective collective action organizations representing indigenous interests.

Barriers to the development of this leverage exist however in the form of domestic political structures and path dependencies associated with the creation and operation of the institution. If inclusion is more likely to occur within the context of domestic-level processes than top-down processes, as argued earlier, then the relative authority structure of the domestic governing system will be of potential importance. Specifically, the particular structural form of intergovernmental relations employed by a country may contribute to the constraints or opportunities of non-state actors to participate. If sole jurisdiction of the policy area in question falls to a particular order of government, this government is likely to jealously guard its own authority. If, however, authority is shared across multiple political actors, as in the case of models of cooperative federalism, the number of opportunities for a political actor to develop leverage with other actors increases as long as the right of the group in question to participate is recognized by other actors.

Meanwhile, organizations that are entrenched and have a high degree of centrality to the overall operation of the natural resource management regime are likely to be more resistant to change. This ties to the issue of system/species complexity, in that relatively more straightforward systems do not face as many potential disturbances, which decreases the likelihood of a disturbance event upsetting the status quo. In the absence of such a stimulus to fundamentally reappraise the *modus operandi* of the organization, the status quo is likely to
prevail. An appeal by outsiders seeking inclusion in the organization is not likely to be, in and of itself, a disturbance of sufficient magnitude to warrant such a reappraisal, as suggested by efforts by American treaty tribes and other groups to achieve inclusion in the IPHC. Furthermore, if position and boundary rules governing which interests are formally to be included in the organization are codified at the constitutional level, in the form of a treaty which would have to be renegotiated, the transaction costs of changing the rules will be quite high. Thus it should be quite difficult for indigenous groups to achieve inclusion in pre-existing organizations, especially in the absence of additional disturbances, and their willingness to challenge a recalcitrant organization to change the status quo will be related to the overall level of conflict between actors and the salience with which the group views the issues at hand. This suggests that indigenous inclusion is more likely in situations in which a pre-existing institution is faced with major disturbances that upset the status quo, and whose problems could be solved through the inclusion of actors with the leverage to do so, or instances in which indigenous actors with a high degree of initial leverage are able to compact with other actors in the creation of new institutional arrangements from scratch.

7.5. The Effects of Participation by Indigenous Groups in International Institutions

Indigenous groups have been fighting a decades-long fight in order to have their voices heard at the international level through the inclusion of indigenous representatives in international organizations. Through a variety of processes, these demands are starting to become realized. However, skepticism remains in many circles regarding the capacity of indigenous groups to effectively engage in the collaborative management of natural resources. Furthermore, biases towards the preeminent role that nation-state actors have, or should have, in international institutions remains in many organizations. One of the hopes of this research is that it illustrates the capacity of these groups to serve as good partners in governance, and that the active participation of these groups does not lead to chaos or institutional inertia, as some individuals and organizations like to believe. In contrast to this perspective, I believe that I have illustrated that the participation of indigenous groups in the PSC in particular has had a variety of positive
effects, which have served to strengthen a variety of inter-group relations and led to improved management of the fishery resources governed by the institution.

Several distinct effects of indigenous participation were identified through the course of research for this project. Furthermore, certain effects of participation were associated solely with the American treaty tribes, while other effects were more associated with the Canadian First Nations participating in the process, which reflects each group’s particular level of participatory authority within the institution. In general, the power of the American treaty tribes in setting the agenda on certain issues, applying negotiating leverage vis-à-vis other interests in the American delegation as well as the Canadian government, and role in improving the quality of technical data collected by the organization were cited most frequently as the principal effects of participation. For the First Nations groups, the collection and sharing of information and technical data, along with positive effects for the tribes themselves in the form of project funding, development of technical skills, and building of inter-tribal trust, were cited as the most significant effects of their participation. This reflects their more limited role within the organization compared to that of the treaty tribes, but nonetheless represents several positive contributions to the organization.

The most commonly cited effect was the agenda setting function by both groups, although the particular contexts of agenda setting were different for each. In the American treaty tribes case, perhaps the most significant effect of their participation lies with their push for the creation of the PSC in the first place, which helped to break the stalemate in negotiations, which took fourteen years to complete. The treaty tribes’ involvement in pushing for the creation of the Enhancement Funds was also a key contribution, which helped to break another stalemate and enabled the finalization of the renegotiation of the treaty in 1999. Their advocacy for the use of particular management tools also has served to shape the organization, enabling the move towards abundance based management, and the inclusion of specific obligations on the part of both countries to address habitat and conservation issues. This represents a new direction for an organization that has historically been solely occupied with harvest regulations. First Nations
were also cited as having opportunities to bring agenda items to the table, but interestingly, these tended to pertain to various issues at the national level, reflecting the use of the PSC as another institutional environment for the fulfillment of the Canadian Government’s legal obligation to consult.

The negotiating leverage that these groups bring to the table, and specific outcomes that were attributed to this, was also commonly cited and again reflected different types of leverage that were specific to each group. The ability to achieve significant reductions in total harvests of certain species was particularly attributed to the leverage that the treaty tribes have vis-à-vis Alaska, as well as the creativity employed by both groups to conceive of specific means by which such reductions could be effectuated. Leverage between the treaty tribes and the other members of the American delegation, as well as between the tribes and the Canadian government, and the impact that this has had on various harvest allocation issues was one of the most commonly cited effects of the treaty tribe’s involvement in the PSC. Such high degrees of leverage are clearly related to the veto authority these tribes have over the official American position that will be taken on any particular issue. This serves to make the tribes a magnet for lobbying from other stakeholders. However, contrary to game theoretical predictions that predict institutional gridlock as a consequence of this veto authority, the real effect of having the veto has been to force all parties to negotiate in good faith, lest significant consequences occur in the form of a breakdown in the treaty. Such a breakdown would entail significant litigation costs and increase uncertainty regarding the management of the resource itself. Thus the tribes have never had to formally use the veto – the mere threat of veto from any party forces everyone to negotiate a compromise position agreeable to all. Furthermore, nobody interviewed for this study expressed any degree of dissatisfaction with the process, nor acrimony towards any other particular actors within the American delegation. Meanwhile the leverage exercised by Canadian First Nations groups vis-à-vis the American treaty tribes was cited as a significant effect within the context of addressing issues such as harvest allocations of Fraser River Sockeye and Pink salmon. Such leverage can be viewed as a backdoor way in which First Nations can affect the official position of the Canadian delegation. However, the lack of a veto authority similar to that of the American treaty
tribes inhibits their ability to directly apply leverage against the other stakeholders in their national delegation.

The third most commonly cited effect of indigenous participation was the improvements in data quality that stem from both groups’ participation as implementing authorities of programs dealing with data collection and the monitoring of specific stocks’ populations and general health. Several individuals also indicated that this participation represents a cost savings over other arrangements such as having a single organization serve as the sole implementing agency for these particular functions. The improvements in data collection and monitoring have been significant factors behind the ability of the organization to move towards abundance based management. The use of ABM has enabled the organization to manage crises stemming from a variety of disturbances which have contributed to low returns of certain fisheries that were unanticipated by the organization. In particular, the organization has been able to make quick changes in regulations in response to monitoring data that have indicated lower than anticipated returns of specific stocks. This has led them to preclude fishing efforts that under the old regime would have been targeting suppressed fish stocks, thereby further negatively impacting the sustainability of these particular populations.

Other outcomes attributed to indigenous participation included the fostering of trust between the tribes and their respective governments, trust-building between the tribes themselves, and the development of better processes of information sharing between all parties. These various trust-related developments were especially cited in the context of Canadian First Nations, perhaps reflecting the continued conflicts between First Nations and national and provincial governments stemming from the comprehensive claims issue, which has hindered the fostering of trust between these groups in other forums. This highlights the potential importance of the PSC as a device for improving inter-tribal and indigenous/non-indigenous relations in Canada. That these sorts of effects were not as commonly cited by commentators on the American treaty tribes case is reflective of the fact that trust-building between the various parties
had already been taking place within various domestic level processes, which enabled decent working relationships within the American delegation from the outset of the PSC process.

Finally, several effects of indigenous participation came in the form of selective benefits accruing to the tribes themselves, as mentioned previously. These included the receipt of funding for implementation of PSC programs, which in some instances serves as a valuable source of income in local economies; the development of technical skills of specific individuals working within the process; and the development of political leadership and acumen of the individuals who represent indigenous interests within the organization. Each of these effects imply further spill-over effects in other areas which may provide additional benefits to these groups that are hard to quantify.

In summary, the participation of indigenous groups in international institutions may be seen as generally quite positive, at least within the context of American and Canadian indigenous participation in the PSC. The positive effects of such participation have included improvements in the sustainable management of the resource, the fostering of inter-group trust building, the improvement of technical data and various management tools, and the selective benefits that may accrue to particular tribal groups. These cases could serve to temper skepticism by non-indigenous peoples regarding the motivations of indigenous groups in seeking greater participatory rights, and serve as a model for how collaboration and trust-building may evolve between indigenous and non-indigenous communities. While certain aspirations of the indigenous groups in these cases may not have been fully realized as of yet, these cases nonetheless represent a positive development towards consensus-based policy making in an area historically characterized by a great deal of inter-party conflict.

7.6. Areas for Future Study

7.6.1. Expansion of QCA Study of Indigenous Participation in International Institutions

Several avenues for future research emerged during the course of this research project. Clearly, the further identification and exploration of additional case studies of indigenous group activity in international natural resource management institutions is warranted in order be able to
employ the QCA approach outlined in Chapter Five and to better test the hypotheses generated by the six case studies examined in this dissertation. Several candidate cases have already been identified. First, if contact could be established with their representatives, a more detailed examination of the Nisga’a case would serve to clarify existing uncertainty over the case which derives from the fact that only non-Nisga’a individuals were interviewed for this study. Additional identified cases include the six collective associations – the Arctic Athabaskan Council, Aleut International Association, Gwich’in Council International, Inuit Circumpolar Council, Russian Arctic Indigenous Peoples of the North, and Saami Council – which enjoy “permanent participant” status, but not formal voting authority, within the Arctic Council. Additional cases that I anticipate including in the expansion of this QCA study include the various indigenous groups that have obtained an “aboriginal exemption” by the International Whaling Commission to conduct limited subsistence whaling, including the Makah tribe of Washington State; the Annette Island limited Halibut fishery that coordinates activities with the International Pacific Halibut Commission; and participation by the Indigenous Information Network within the NGO Network which has formal access to the Assembly and Council structure of the Global Environment Facility (GEF).

Institutional analyses of these cases under the framework outlined in Chapter 3, and inclusion of these cases within the preliminary QCA framework outlined in Chapter 5 holds the potential to provide additional exploration of the inferences drawn in this dissertation, as well as to examine an additional range of research questions and to explore additional hypotheses. For instance, do institutional settings such as the Arctic Council, in which indigenous peoples derive their participation from a top-down process through processes citing legal precedents under international law (Anaya, 2005), offer lesser or greater levels of participatory authority than in situations, such as the American treaty tribes in the PSC, in which inclusion in the organization was derived from a bottom-up process through decisions made within a domestic policy process? How does formal voting authority by indigenous groups, or lack thereof, in these institutions impact the negotiation patterns between these groups and more traditional state actors? If indigenous participation is filtered through NGO processes that provide privileged access to the formal decision-making bodies of international organizations, but no decision-making authority,
does this represent a diminished level of participatory authority relative to that of some of the indigenous groups examined in this dissertation?

7.6.2. Exploration of Indigenous Co-Management Roles at the Domestic Level

Examining indigenous participation at the international level only tells part of the story of the increasingly active collaborative role that these groups play at multiple governance levels. As alluded to several times throughout this dissertation, participation by indigenous groups in the international bodies examined in this dissertation is tied to their collaborative management roles in various domestic co-management regimes. Other scholars (Ebbin, 2004; Ebbin, 2002; Singleton, 1999) have explicitly explored questions pertaining to the evolution of the various state-tribal co-management regimes involving salmon, emphasizing regimes operating at a more localized in-stream or near-shore scale. More exploration of the formalized participation of the treaty tribes in the PFMC and North of Falcon processes would contribute to rounding out the picture of indigenous participation and co-management at all levels of the salmon fishery management regime, and provide opportunities to explore questions more explicitly relating to multi-level linkages and polycentricity that involves analysis at all levels, from the local to the international. Such research themes might include the issue of coordination across levels of governance and whether indigenous participation at all levels aids or hinders coordination; the issue of how to match governance responses to different types of disturbances; and exploration of the network structures that tie each of the centers of authority together. Building upon the framework discussed in Chapter 3, the examination of such institutions would also provide additional cases for exploring the broad theme of how institutional rules impact levels of non-state actor participation in governance institutions, not only in relation to indigenous group participation, but also the participation by other classes of non-state actors, for instance commercial and recreational fishing interests who are included as voting representatives in the PFMC.

Furthermore, the evolution of the incredibly complex regime to manage the habitat impacts on salmon offers multiple opportunities to explore the participatory impact of indigenous groups at the domestic level. For instance the tribal role in facilitating the negotiation of the
Washington State Salmon Recovery Act of 1999 (aka the Forests and Fish Plan) has resulted in a set of regulations and guidelines governing a variety of forestry practices on private lands. As a consequence of this involvement, the treaty tribes have been granted specific enforcement functions which have increased the breadth of their collaborative roles to include formalized ties between themselves and other non-state actors, in this case the Washington Forest Protection Association. A multitude of additional collaborative processes modeled on the Forests and Fish Plan, to include regulations on a variety of agricultural, mining, and other land use activities, continue to be on-going and may provide a wide range of potential additional case studies in the future as these arrangements become finalized.

Another area of indigenous participation in natural resource management at the domestic level involves several collaborative transboundary natural resource management arrangements between the United States National Park Service and various American Indian governments in situations where reservation lands are adjacent to park boundaries. Collaboration between the Park Service and various reservation governments has evolved around several issues that require significant coordination between the two partners, such as eco-tourism, water rights, fisheries management, and the establishment of "green corridors" for more holistic ecosystem management and management of migratory wildlife. Several potential case studies exist, involving bilateral and multilateral relationships such as Grand Canyon National Park-Havasupai/Hualapai/Navajo reservations, Petrified Forest National Park-Navajo reservation, Saguaro National Park-Tohono O’Odham reservation, Redwood National Park-Hoopa Valley reservation, Joshua Tree National Park-Twenty-nine Palms/Cabazon/Agua Caliente reservations, Mesa Verde National Park-Ute Mountain/Southern Ute reservations, Everglades National Park-Miccosukee reservation, Glacier National Park-Blackfeet reservation, Great Smoky Mountains National Park-Eastern Band Cherokee reservation, Badlands National Park-Pine Ridge Indian reservation, and Olympic National Park-Hoh/Lower Elwha/Makah/Quinault/Quileute reservations. I have also identified seventeen additional cases of collaborative management between tribal governments and the National Park Service involving various National Monuments, which are managed under a conservationist/preservationist mandate similar to that of the National Parks.
All of these cases provide rich opportunities to examine questions of institutional interplay, management of social-ecological disturbances, and the exercise of tribal sovereign authority, which touches in various ways on the research themes examined in this dissertation.

Furthermore, additional questions not explicitly related to issues of natural resource management frequently arose during the course of research. As indicated several times throughout this dissertation, one of the variables posited to impact the level of indigenous participation in international institutions is the existence of a successful and well-funded indigenous interest association. The existence of institutions such as the NWIFC and CRITFC is an important factor in facilitating co-management and trust-building between the tribes and various federal, state, and local government organizations. The primary questions which emerge here is what factors are behind the successful evolution of cooperation between tribal groups that often have significant disagreements and collective action problems between them? What explains the efficacy of multi-tribal interest group associations in collectively representing the interests of tribes?

Several of the indigenous interest group organizations identified in this study provide further opportunities for comparative analysis as well as exploration of research questions specific to each organization. During the interviewing process a couple of interview subjects highlighted a difference in the organizational cultures of CRITFC and NWIFC, with, for instance, inter-tribal conflict being more acute in regards to the selection of Commissioners and Panel members from CRITFC than from NWIFC, and various issues pertaining to collective decision making that was attributed to the specific organizational missions of the two organizations and how they conduct their fisheries (interview, PSC Commissioner, 2/8/10; interview, PSC Panel Member, 3/29/10). The importance of leadership, and specifically the communication and management styles of specific individuals, as well as the different historical trajectories of each organization, was cited by both interviewees as notable factors behind the differences between the two organizations. Further examination of these cases could shed light on consensus-building processes and other issues related to the management of inter-tribal conflict,
development of pan-indigenous policy positions, and the efficacy of these organizations in articulating tribal policy perspectives to authoritative decision-making bodies.

As mentioned in previous chapters, the comparative lack of an effective pan-indigenous collective action organization in Canada represents a significant barrier to more effective inter-tribal cooperation and consistent tribal-federal cooperation over fisheries. Several interview subjects, from both the United States and Canada, indicated that the failure of the BCAFC was a significant event, but most were opaque regarding the reasons for why the BCAFC failed and seemed uncomfortable with addressing the issue further. I believe that a more directed case study on the failure of the BCAFC, as well as an examination of the efforts behind the recent creation of the FNFC, could shed light on the difficulties faced by BC First Nations in effectively self-organizing, as well as serve as additional cases, similar to the discussion regarding CRITFC and NWIFC outlined above, for developing theoretical explanations on the broader questions of what factors lie behind successful or unsuccessful attempts at developing inter-tribal collective action organizations.

7.7. Conclusion

Indigenous groups represent something of an intermediate classification between state and non-state actors, due to the fact that unlike most other non-state actors, the participation by indigenous groups in international institutions is predicated upon their sovereign status. Moreover, insofar as indigenous groups have attained high or medium levels of authority within these institutions, this represents a challenge to orthodox international relations theory that, in many instances, presumes the omnipotence of the nation-state in international institutions.

The general thesis presented in this study is that higher levels of participatory authority are related to particular institutional rule configurations which shape both the range of decision functions that these groups may actively participate in, and the level of autonomy with which they are allowed to do so. Furthermore, higher levels of participatory authority are associated with instances in which these groups’ sovereign rights are codified in specific treaty provisions, which
are subsequently recognized and upheld primarily through domestic case law. Thus sovereignty in and of itself is not a sufficient condition behind high levels of participatory authority. Nation-states continue to serve as a gatekeeper to these institutions, such that the level of a particular indigenous group’s participatory authority is tied to the utility that the nation-state ascribes to such participation. This willingness on the part of a respective nation-state to grant indigenous groups a seat at the table is furthermore tied to several factors. First, the nature of the system of intergovernmental relations appears to be a significant barrier in situations in which authority over the policy area in question is unshared with other orders of government. If a particular nation-state actor has exclusive jurisdiction over an issue area at the domestic level, this will serve as a barrier to higher levels of participation by non-state actors, as the nation-state actor will likely seek to protect its prerogative to control decision-making in this issue area. Secondly, the existence of effective pan-tribal collective action organizations serves to both solve inter-tribal collective action problems and to marshal greater levels of political leverage vis-à-vis non-tribal actors. This can underscore that these groups possess enough political leverage to facilitate consensus-building and collaborative decision-making between competing interests. Lastly, the general complexity of the issue area under the purview of a particular institution may open up the number of areas in which indigenous groups may serve a particular function and/or serve as a key mediator between different parties, a situation which is likely to accentuate the perception by the nation-state that indigenous group participation has something to offer for the operation of the institution.

Variability in the specific sovereign rights enjoyed by particular groups, along with the willingness on the part of the nation-state to legally recognize this sovereign authority, thus goes a long way in explaining the level of participatory authority that a specific indigenous group is likely to ultimately enjoy within an international institution. While it may be tempting to argue that the inclusion of indigenous groups in international institutions stems from the desire on the part of the nation-state to abide by evolving norms of customary international law which attempt to address various political interests of indigenous groups, the overall pattern suggested by the cases examined in this study is that such inclusion more likely stems from domestic-level
processes in which the nation-state perceives some measure of self-interest and utility in the inclusion of these groups. Similarly, corporatist models of interest group representation do not provide adequate explanations for why the American treaty tribes have attained high levels of participatory authority in the PSC, especially in light of the essentially co-equal status of tribal, state, and federal interests within the organization. Corporatist models do appear to hold more traction in situations in which indigenous groups lack the same level of sovereign authority and political leverage of the American treaty tribes, as in the cases of the Canadian First Nations in both the IPHC and PSC, although the continuing development of indigenous fishing and consultation rights through case law have served to transcend the initial corporatist logic of their inclusion in these institutions.

Furthermore, there does not appear to be an overall pattern by which the indigenous groups examined in this study have attained their positions and levels of participatory authority in their respective international institutions. As a result, general inferences regarding how other indigenous groups might attain higher levels of participatory authority in other international institutions should be avoided. Similarly, path dependent arguments that suggest that increased levels of indigenous participatory authority in international institutions are an historical inevitability, like the ones made by several subjects interviewed for this study in which they suggested that Canadian First Nations are “twenty years behind” the American treaty tribes, should likewise be viewed with a healthy dose of skepticism. Nonetheless, the cases examined in this study illustrate that indigenous groups have indeed been successful in attaining significant levels of participatory authority in these institutions, albeit through quite different processes.

Lastly, in examining the effects of American and Canadian indigenous participation in the PSC, I have challenged existing scholarship that skeptically views such participation as being a recipe for institutional dysfunction. I have argued that the participation by both of these groups has been generally positive in terms of inter-group trust building, improvement of technical information, and the sustainable management of the fishery. Furthermore, the mere fact that the PSC even exists is a testament to the ability of the American treaty tribes in particular to marshal
their leverage and to serve as an important negotiator and mediator between other actors in a complicated, multi-faceted negotiating environment in which inter-group rivalries and alliances shift from issue area to issue area. It is my hope that this study helps to illuminate the positive policy roles that indigenous groups may play at the international level, and that the future inclusion of additional cases may spotlight additional consequences of indigenous participation, as well as identify other potential pathways for the inclusion of indigenous groups in these institutions.
Appendix A: Interview Introduction

[Date]

[Contact Information]

Dear XXXX,

My name is Shane Day and I am a doctoral student at Indiana University’s Department of Political Science and School of Public and Environmental Affairs. I am conducting research on indigenous group sovereignty and political participation in international natural resource governance institutions. Specifically, I am looking at Canadian and American indigenous group participation in the Pacific Salmon Commission, and the Makah tribe’s experience in negotiating whaling rights under the International Whaling Commission. I came across your name in the course of my research and would greatly appreciate the opportunity to conduct an interview with you in order to get your perspective on several issues.

The purpose of this research is to ascertain the following: 1) the conditions under which indigenous groups attain recognized rights under international institutions; 2) if and how indigenous groups obtain formal representation and/or participatory authority within these institutions; 3) what benefits accrue to indigenous groups from such participation; and 4) whether indigenous group activity affects the management decisions and/or decision processes of these institutions. Among other things, I hope to be able to understand the relative importance of international versus domestic political processes in indigenous groups’ attempts to have their natural resource rights and political participation recognized, and to draw out specific instances in which indigenous group participation was significant in attaining consensus within the institution and/or otherwise impacting specific natural resource management decisions.

I hope that we can meet sometime soon. I hope to bounce some ideas off of you, get your perspective on how indigenous groups have attained the positions of authority and/or rights they enjoy within the International Whaling Commission, and get an idea from you about any other contacts that you think might be beneficial to my research. I anticipate the total interview time to be somewhere between 45 and 90 minutes. Because I am presently based in Seattle and am conducting research full-time, my schedule is quite flexible, I can travel easily, and am happy to meet with you whenever your schedule best allows it. Your participation is completely voluntary, and you may decline to participate or withdraw at any moment for any reason without penalty. If you are interested and willing to participate, please contact me via any of the contact information provided at the end of this letter, and I will respond promptly to arrange a mutually beneficial time to meet.

Best regards,

Shane Day
Joint Ph.D. Program in Public Policy
School of Public and Environmental Affairs & Department of Political Science
Indiana University – Bloomington

Current Contact Information:
7711 NE 175th St., Apt. A309
Kenmore, WA 98028
Phone: (812)322-5463; Email: shday@indiana.edu
Appendix B: Initial Interview Guide

Interview Guide for Indigenous Group Sovereignty Research Project:

“Indigenous Groups as Quasi-State Actors in International Natural Resource Governance”

This guide contains representative questions for interviews with state, national, tribal, and NGO officials involved with the Pacific Salmon Commission (PSC) and International Whaling Commission (IWC). All interviews will be conducted in English and all interview subjects are fluent in English.

Questions regarding sovereignty:

- Could you provide a definition of the meaning of “indigenous group sovereignty”?
- What do you think “indigenous group sovereignty” should mean?

Questions regarding recognition of tribal rights:

- Do indigenous groups have any special natural resource rights that are governed by the institution?
- How did these groups attempt to attain recognition of these rights?
- What prevents these rights from being abridged?
- Is recognition of indigenous rights at the national level a prerequisite for recognition of indigenous rights by the PSC/IWC?
- What do indigenous groups do if they lack such recognition at the national level?
- Was indigenous lobbying/collective action important in having their rights recognized at the international level?
- Were there specific individuals or organizations significant in achieving the recognition of indigenous rights under the institution?
- Is the source of these rights based on treaties between tribes and their respective national government? What explains whether or not these treaty rights are recognized and upheld?
- Are tenets of international law (e.g. UN Declaration on the Rights of Indigenous Peoples, etc.) significant in the decision to grant rights to indigenous groups?

Potential follow-up questions (specific to IWC):

- How are aboriginal rights to conduct whaling granted under the IWC’s Aboriginal Whaling Management Plan (AWMP)?
- Must the right for indigenous groups to conduct whaling be granted at the national level first?
- What are the “common components” affecting every aboriginal request for rights under the AWMP?
- What are examples of “case-specific components”?
- Might “case-specific components” be used arbitrarily or capriciously to deny an aboriginal claim to whaling rights?
Questions regarding recognition of tribal participatory authority in the institution(s):

- Do indigenous groups have formal representation and/or special participatory authority within the PSC/IWC?
- How did they obtain these positions? Who ultimately decided that they would be allowed to have these positions?
- How are the people who fill these positions selected?
- Do indigenous representatives have decision-making authority on all, some, or none of the decisions made by the institution?
- Can indigenous representatives initiate any action item?
- Has the relative authority of indigenous groups within the institution changed over time? If so, how?

Potential follow-up questions:

- Was tribal lobbying/collective action important in obtaining positions of authority within the institution?
- Were specific individuals or organizations especially significant, and would you say that obtaining these positions would not have occurred without their efforts?

Potential follow-up questions (specific to the IWC case):

- Must indigenous groups operate through their national delegation to have their perspectives heard by the IWC?
- Do any indigenous groups have a “seat at the table” independent of their national delegation?

Potential follow-up questions (specific to the PSC case):

- Are there any tribes who are not represented in the PSC? Why might this be the case?

Questions regarding impact on management decisions:

- How has the creation of the institution influenced management over the resources it oversees? Do you have a sense that resource outcomes (e.g. sustainability, etc.) are directly attributable to actions taken by the institution?
- How has resource management changed over the life of the institution?
- Has participation by indigenous groups influenced any specific resource management decisions (e.g. harvest levels, habitat programs, etc.) made by the institution? How? Can you think of any specific instances?
- To what degree are indigenous groups directly consulted on pending management decisions, regulatory actions, biological surveys, etc. undertaken by the institution?

Questions regarding tribal impact on decision-making processes within the institution:

- Has indigenous participation affected the formal rules and/or decision making processes of the institution?
- What are some of the most significant challenges in getting indigenous perspectives heard by the institution?
What recourse is available to indigenous groups if they oppose the official position of the institution?

Are you aware of any instances in which indigenous group representatives have been the target of lobbying by other stakeholders?

Potential follow-up questions (PSC specific):

- Can you think of any instances in which there were differences of opinion amongst different tribal interests? How were these differences resolved?
- Can you think of any instances in which there were differences of opinion amongst the four Commissioners from your national delegation? How was consensus achieved?
- Can you think of any instances where the tribes helped negotiate consensus between the two national delegations? How was this accomplished?

Potential follow-up questions (IWC specific):

- What policy-making roles are available to indigenous groups within the IWC?
- Have indigenous groups influenced the development of the new procedure for the management of aboriginal subsistence whaling? How have they done so?

Questions regarding other benefits of tribal participation:

- Do you believe that there have been any ancillary benefits to tribes for having participated in IWC/PSC negotiations and/or decision-making?

General questions:

- Could you identify anybody else who you would recommend that I speak with regarding this project?
- Are you aware of any publicly available documents that might be of interest to my study?
- Do you have any questions for me?
- Are you comfortable with your responses and do you wish me to delete anything from my notes?
Appendix C: Study Information Sheet

INDIANA UNIVERSITY BLOOMINGTON
STUDY INFORMATION SHEET
“Indigenous Groups as Quasi-State Actors in International Natural Resource Governance”

You are invited to participate in a research study of the policy role of indigenous groups in international natural resource management institutions. You were selected as a possible subject because you are an official representative for one of the institutions being examined, or because a previous interview subject recommended you as a potential interview subject that may have useful insights regarding the research being conducted. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

The study is being conducted by Shane Day, a doctoral candidate in the Joint Ph.D. Program in Public Policy, which is offered through the Department of Political Science and School of Public and Environmental Affairs. The study is being entirely self-funded by the researcher.

STUDY PURPOSE

The purpose of this study is to understand how indigenous groups obtain positions of authority in and/or receive recognition of special rights by international institutions with governance authority over natural resources, and to gauge the influence of indigenous groups on official policy of these institutions. In addition to the benefits to the body of knowledge in general, a summary of results may be provided upon request to all interview subjects with the hope that the findings of this research can suggest improvements to natural resource policy-making in general, shed light on the government-to-government relationships between indigenous group governments and state, national, and international governance structures, and elucidate processes by which other indigenous groups may be able to exercise their sovereignty and attain real power in institutions involved in governance over policy areas of concern to them.

PROCEDURES FOR THE STUDY:

If you agree to be in the study, you will do the following things:

I would like to sit down with you for a face to face interview that will take between 45 and 90 minutes. You will be asked a variety of questions pertaining to indigenous group sovereignty, the history of indigenous group involvement in international natural resource management institutions, the impact of indigenous group participation on management decisions, and a request for contact information for potential additional interview subjects.

CONFIDENTIALITY

Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Your identity will be held in confidence in reports in which the study may be published and in databases in which results may be stored. All interview notes will be recorded using a coding system which will be used in all future references. Interview notes will be recorded exclusively under an interview number, which will be recorded in a separate file with no other identifying notes. The identifier numbers will be kept for the duration of the project. The disposal date will
be July, 2010. All responses will be confidential and any individual responses used will be non-attributable. No subjects will be identified in reports.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the IUB Institutional Review Board or its designees, the study sponsor, and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP) and the Food and Drug Administration (FDA), if applicable, the National Institutes of Health (NIH) [for research funded or supported by NIH], etc., who may need to access your medical and/or research records.

PAYMENT

You will not receive payment for taking part in this study.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study, contact the researcher, Shane Day at (812) 322-5463.

For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the IUB Human Subjects office, 530 E Kirkwood Ave, Carmichael Center, 203, Bloomington IN 47408, 812-855-3067 or by email at iub_hsc@indiana.edu

VOLUNTARY NATURE OF STUDY

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with the investigator(s).
Appendix D: List of Interview Subjects

Respondent ID: 1. Affiliation: NWIFC Staff. Date: 11/05/09
Respondent ID: 2. Affiliation: NOAA/NMFS Staff. Date: 11/10/09
Respondent ID: 3. Affiliation: PSC Commissioner, United States Date: 12/16/09
Respondent ID: 4. Affiliation: PSC Commissioner, Canada. Date: 1/11/10
Respondent ID: 5. Affiliation: DFO Staff. Date: 1/12/10
Respondent ID: 6. Affiliation: PSC Secretariat Staff. Date 1/12/10
Respondent ID: 7. Affiliation: PSC Commissioner, United States. Date: 1/13/10
Respondent ID: 8. Affiliation: PSC Commissioner, Canada. Date: 1/14/10
Respondent ID: 9. Affiliation: PSC Secretariat Staff. Date: 1/14/10
Respondent ID: 10. Affiliation: PSC Commissioner, United States. Date: 2/8/10
Respondent ID: 11. Affiliation: PSC Commissioner, Canada. Date: 2/9/10
Respondent ID: 12. Affiliation: PSC Southern Panel Member, Canada. Date: 2/9/10
Respondent ID: 13. Affiliation: PSC Commissioner, Canada. Date: 2/10/10
Respondent ID: 15. Affiliation: PSC Southern Panel Member, United States. Date: 2/12/10
Respondent ID: 16. Affiliation: NWIFC Staff. Date: 2/18/10
Respondent ID: 17. Affiliation: PSC Commissioner, United States. Date: 2/18/10
Respondent ID: 18. Affiliation: PSC Enhancement Fund Committee Member, Canada. Date: 3/2/10
Respondent ID: 19. Affiliation: PSC Commissioner, Canada. Date: 3/7/10
Respondent ID: 20. Affiliation: PSC Commissioner, Canada. Date: 3/8/10
Respondent ID: 22. Affiliation: IPHC Secretariat Staff. Date: 3/18/10
Respondent ID: 23. Affiliation: CRITFC Staff. Date: 3/29/10
Respondent ID: 25. Affiliation: CRITFC Staff. Date: 3/29/10
Respondent ID: 26. Affiliation: NWIFC Staff. Date 3/30/10
Respondent ID: 27. Affiliation: NWIFC Staff. Date: 4/1/10

Respondent ID: 28. Affiliation: NWIFC Staff. Date: 4/1/10


Fisheries and Oceans Canada. 2010b. *Guidelines and Process for Participation as a Member of a Pacific Salmon Commission Technical Committee*. Vancouver, BC: Department of Fisheries and Oceans - Pacific Region.


**SHANE D. DAY**  
3257 S. PARKER ROAD, APT. 4-404, DENVER, CO 80014  
PHONE: 812-322-5463 • EMAIL: SHDAY@INDIANA.EDU

**EDUCATION:**  
Indiana University – Bloomington:  
Joint Ph.D. in Public Policy, **School of Public and Environmental Affairs & Department of Political Science** (October 2012). Fields: Public Policy, International Relations, and Environmental Policy. Dissertation: “Indigenous Group Sovereignty and Participatory Authority in International Natural Resource Governance Institutions”. Dissertation Committee: Matthew Auer (Chair), Jeffrey Hart, Lauren MacLean, and Michael McGinnis.

**University of Washington:**  
Master of Arts in International Studies, **Henry M. Jackson School of International Studies** (June 2002)  
Master of Public Administration, **Daniel J. Evans School of Public Affairs** (June 2001)  
Graduate Certificate in International Development Management, (June 2001)  
Bachelor of Arts, **Department of Political Science** (March 1994)

**University of Michigan, ICPSR Summer Program in Quantitative Methods, Summer 2004.**  
**Universidad de Guadalajara, Centro de Estudios Para Extrañeros, Summer 2001**  
**University of Pittsburgh, Semester at Sea, Fall 1992**

**ACADEMIC APPOINTMENTS:**  
**University of Denver,** Denver, CO.  
Lecturer, Josef Korbel School of International Studies, Fall 2012 – Present. Courses scheduled include “Social Science Research Methods”, “Comparative Public Policy and Finance”, “Environment and Sustainable Development”, and “Comparative Politics in the 21st Century”.

**Iowa State University,** Ames, IA.  
Lecturer, Department of Political Science, Fall 2010 – Spring 2012. Courses taught include graduate-level courses “Proseminar in Comparative Politics”, “Comparative Public Administration”, and “Intergovernmental Relations”; and undergraduate-level courses “Politics of the Developing World”, “Introduction to Public Administration”, and “Introduction to Comparative Politics”. Thesis Committee Service: Holly Mace, MPA; Jiaxu Liu, MA – Political Science.

**University of Washington – Bothell,** Bothell, WA.  

**University of Tennessee,** Knoxville, TN.  
Lecturer, Department of Political Science, Fall 2006, Spring 2006, and Fall 2007. Independently taught four courses per semester, including: “Urban Politics and Policy”, “Public Administration and Public Policy”, “Introduction to American Politics”, and “Introduction to Political Science”.

**Franklin College,** Franklin, IN.  
Instructor, Department of Political Science, Fall 2005. Independently taught “American Constitutional Issues”, “National Government”, and “Introduction to Political Science”.

**Indiana University,** Bloomington, IN.  
Associate Instructor, School of Public and Environmental Affairs and Department of Political Science, Fall 2003 - Spring 2006. Independently taught joint undergraduate/graduate class “Native American Policy & Governance”; and undergraduate classes “National and International Policy”, “Statistical Techniques”, “Environmental Policy”, and “Formation of Public Policy in the United States”.


University of Washington, Seattle, WA. Graduate Assistant, Hubert Humphrey and Packard/Gates Fellowship Programs, Evans School of Public Affairs, Seattle, WA. Sept. 2000 – June 2001. Assisted in logistics planning for two cohorts of foreign visiting scholars, including identification of housing options, networking with local families, and school orientation.


Teaching Assistant, Jackson School of International Studies, Spring 2000. Assisted Professor and independently led three weekly quiz sections, including the Honors Program section, for SIS202 "Introduction to Intercultural Studies".

Teaching Assistant, Department of Political Science, Fall 1999. Assisted professor and independently led two quiz sections, meeting twice a week, for POLS203 "Introduction to International Relations".

**ADDITIONAL RELEVANT PROFESSIONAL EXPERIENCE:**

Duties: Performed a variety of research functions for the Foundation pertaining to international development issues, including statistical research, literature reviews, and representing the Foundation at professional conferences and speaking engagements.


**United States Agency for International Development, Kosovo Transition Initiative,** Pristina, Yugoslavia. Consultant, July 1999 to Sept. 1999. Duties: Conducted an independent assessment of USAID’s civil society development and democratization campaign inside Kosovo, conducted a debriefing of my findings, submitted a written report of the results of my program evaluation, and assisted in efforts to streamline KTI’s grant-making process.


**Foundation for Health Care Quality,** Seattle, WA. Quality Measurement Advisory Service Program Manager, Dec. 1997 to June 1998. Duties: Planned logistics for a variety of conferences related to quality measurement of the health industry, including obtaining conference facilities and catering, and designing materials for participants. Designed marketing materials for the Foundation’s programs.

**Leukemia & Lymphoma Society,** Seattle, WA. Patient Aid Program Coordinator/Development Assistant, Nov. 1995 to Oct. 1996. Duties: Managed the Society’s patient financial assistance program for all patients in Washington and Alaska, including reviewing applications for eligibility, maintenance of the database, and budget supervision. Acted as public information officer for the Society, and assisted with the Society’s various fund raising activities.

**Olympic National Forest,** Quilcene, WA. AmeriCorps National Service Member, Oct. 1994 to Sept. 1995. Duties: Served as an assistant fisheries biologist, performing a biological survey of all of the Quilcene Ranger District’s watersheds for salmonid fish species and mapping their locations for reference purposes. Performed a variety of public works and forestry projects.


**Publications:**

**Peer-Reviewed Journal Articles:**


**Peer-Reviewed Conference Proceedings:**


**Conference Participation:**


Panel Chair and Discussant for “Constraints, Opportunities and Strategies for Native American Participation”, panel at the 64th *Annual Midwest Political Science Association National Conference*, April 20-23, 2006, Chicago, IL.


**AWARDS, GRANTS, AND HONORS:**
- Indiana University School of Public and Environmental Affairs PhD Topics Course Competition Winner.
- Indiana University Greenough Memorial Fund (2 times).
- Public Service Scholarship, awarded by the Public Employees Roundtable, June 2000.
- Dr. Eleanor M. Hadley Scholarship, awarded for Excellence in International Studies, by Mortar Board Alumni/Tolo Foundation, May 1999.

**REVIEW AND EDITORIAL SERVICE:**
- Reviewer, PS: Political Science and Politics, Nov. 2009 – Present.
- Editorial Review Committee Member, Carleton University, E-Merge, 1999 to 2000.
Additional Professional Service:
Selection Committee Member, 2010 Carrie Chapman Catt Prize for Research on Women and Politics, Iowa State University, Jan. 2011.
Steering Committee Member/Chair, University of Washington, Graduate Environmental Policy Forum (GEPFa), Sept. 1999 - June, 2001. Served as Chair for 2000-2001 academic year.
Admissions Committee Student Representative, University of Washington, Evans School of Public Affairs, 1999 to 2000.

Professional Memberships:
• American Political Science Association (including membership in the following Organized Sections: Public Policy, Federalism and Intergovernmental Relations, and Science, Technology, and Environmental Politics)
• Association for Public Policy Analysis and Management
• International Studies Association
• Law and Society Association
• Society for the Policy Sciences
• Western Political Science Association