Master's Thesis

Assessing the cooperative management regime in Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site

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Declaration

I hereby confirm that I am the sole author of this thesis and it is a product of my own academic research.

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Abstract

Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site is often seen as a seemingly functional cooperatively managed protected area. Through the Archipelago Management Board (AMB), the Government of Canada and the Council of the Haida Nation manage this culturally and ecologically significant area from "mountain top to deep sea" together. In early 2014, the AMB invoked, for the first time in its history, the dispute resolution clause of its founding agreements. Based on interviews over a 5-month period with key-stakeholders, this study examined the potential repercussions of this action. The complexity that surrounds this cooperative management regime is exacerbated by the history behind each party, a shifting ecosystem it attempts to manage, and continuing disagreement over land-claims. Issues surrounding decision-making authority and governance are central to this thesis. This presents a significant challenge for the AMB, but it also provides opportunity for the AMB to clarify its role and responsibilities in managing Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site.

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List of Acronyms or Abbreviations

AMB –Archipelago Management Board

BC – British Columbia

CHN – Council of the Haida Nation

DFO – Fisheries and Oceans Canada

EBM – Ecosystem Based Management

GoC – Government of Canada

Gwaii Haanas – Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site

Gwaii Haanas Marine – Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site

Gwaii Haanas Terrestrial – Gwaii Haanas National Park Reserve and Haida Heritage Site

IFMP – Integrated Fisheries Management Plan

IHHPC – Integrated Herring Harvest Planning Committee

IPS – Island Protection Society

IUCN – International Union for the Conservation of Nature

NGO – Non-governmental Organization

NMCA(R) – National Marine Conservation Area (Reserve)

Parks Canada or **Parks** – Parks Canada Agency

PNCIMA – Pacific North Coast Integrated Management Area

TFL – Tree Farm License

TEK – Traditional Ecologic Knowledge

MaPP – Marine Planning Partnership

MPA – Marine Protected Area

RCA – Rockfish Conservation Area

UNEP – United Nations Environment Program

Acknowledgements

My Time on Haida Gwaii

Great friendships, welcoming people and great memories defined the time spent on Haida Gwaii. When I first got off the ferry from Prince Rupert, Queen Charlotte City was shrouded in clouds and rain poured. I took a skiff out to the island I would be spending my first month while getting acquainted with the archipelago and meeting those involved in Gwaii Haanas' management. After having spent only one weekend in town, and some hours in the local café "Queen B's", I had already met a number of a people who were willing to introduce me to others, let me stay with them and genuinely wanted to help me. Five months later the attitudes of the people never changed, only the number of those who became my friends. It was an outpouring of community that I had never seen before, where each individual looked out for the other. This all helped me form the connections I needed to do my research, and while more time spent on Haida Gwaii would have undoubtedly revealed more detail, I believe that it was the ability to make quick connections that led to a successful study.

The people of Haida Gwaii are a large portion of what makes the area unique, however it is the culture and environment that make it renowned. During the time spent on the archipelago I was able to participate in many cultural and community events, such as Hospital Days, Skidegate Day, Edge of the World Music Festival, the Kay Llnagaay Anniversary and the Peace Treaty potlatch between the Haida and Heiltsuk Nations. Though these were only brief observations of Haida and island culture, it provided a

significant amount of insight into the functioning of the community and provided context to the research. The treaty signing was a truly significant experience, not just personally or just for the Haida and Heiltsuk Nations, but for Aboriginals everywhere. It reiterates Aboriginal solidarity and the growing influence they have over their traditional territories. I was also able to explore the archipelago's natural side. Going on numerous hikes including Sleeping Beauty, Slatechuk, around Rennel Sound and Grey Bay. I was able to see first hand the biodiversity that resides around Haida Gwaii. A 80km beach hike from Tlell to Tow Hill through Naikoon Provincial Park allowed me to see beaver, deer, bear, river-otters, bald eagles, whales and the signs of the elusive feral cattle. The trip down to Gwaii Haanas was important for my research, so that I could gain a good idea of what was being protected. While never actually being able to step onto the ground itself, simply viewing the enormous cedars and unbroken landscape from the boat provided a solid foundation of understanding.

I would like to thank all those I met while in Haida Gwaii and helped me along. I would also like to thank my supervisors, for their patience, trust and reliability. I would finally like to thank my family and friends for their continual support.

This study is a culmination of all these experiences and more during my time on the archipelago.

1. Introduction

1.1 Context

Protected areas are key components to any conservation strategy. However, their ability to conserve nature is directly related to the effectiveness of the governance being employed (Dearden *et al*., 2005). It is increasingly recognized that by involving a range of stakeholders, management decisions and planning can be better informed and consequently management objectives are more likely to succeed (Dearden *et al*., 2005). Co-management is a form of governance that allows stakeholders, such as fishermen, academic institutions, hunters, farmers, local businesses, industry, non-governmental organizations and others, to work together with governments to make decisions and participate in the management of the area (Armitage, Berkes & Doubleday, 2007). There are several definitions of co-management. To better conceptualize these differences this study draws upon Carlsson & Berkes' (2005) diagram (Figure. 1). In it the "C" represents resource users, private actors and/or Aboriginals (hereafter referred to as the Community). The "S" represents the State, for the sake of simplicity it will represent the Canadian government. The first grouping can be thought of as the first stages of co-management, in which there is information exchange and some consultation between the two groups. This is often the

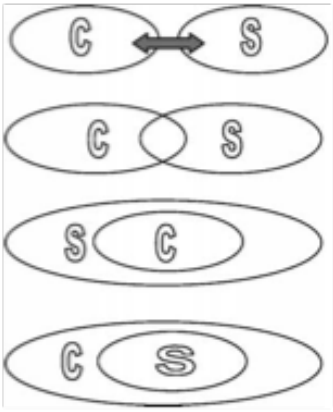

Figure 1. Four images of co-management (Carlsson & Berkes, 2005)

case in most Canadian national protected areas where agreements or land-claim settlements have not required further action on the part of the Federal government. The first grouping can also be the case even if a protected area is under a final land-claim agreement but no true joint management structure is in place, such as Aulavik National Park (Parks Canada, 2012). The second grouping, and the most pertinent to this study, depicts co-management as a joint management structure. In this grouping there are representatives from each party who form a joint management board and have shared decision-making authority. This often occurs when "each sector maintains its authority and its relative autonomy" and helps create a "formalized arena for cooperation" (Carlsson & Berkes, 2005).

In the case of Aboriginal engagement this is often the highest degree of control achieved, barring a final land-claim settlement. This study distinguishes between the first grouping and the second grouping by designating them "co-management" and "cooperative management", respectfully. While by definition these are both types of co-management, it is important to clarify the differences. Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site (hereafter referred to as Gwaii Haanas) is a cooperative management structure, whereby the Council of the Haida Nation (CHN) and the Government of Canada (GoC) share decision-making authority and both have laid independent claim to the territory.

The final two groupings are occasions where either the state or community has legal rights to the land, but the other is involved in some manner. When the community lies

within the state, for instance grouping 3, the state would own the rights to the land and the community would be placed in charge of managing certain areas. This can be the case with fisheries for instance. On the other hand, grouping 4 is a situation where the community may own the rights to the land but are limited in what they can do because of large-scale management from the state, lack of expertise or experience.

It should be noted that these four groupings are not all independent and overlap can exist between them. It is because of this that Carlsson and Berkes (2005) suggest that it may be best to visualize co-management as a network. In a network the various stakeholders and the state itself can be split into numerous entities, all interconnected and relating to each other on varying levels, both horizontally and vertically. For example, in Gwaii Haanas the Archipelago Management Board (AMB) is divided into three entities (Fisheries and Oceans Canada (DFO), Parks Canada Agency (Parks Canada) and CHN despite only two parties being at the table (GoC and CHN). The relationship between each entity is entirely unique, based on their past working relationship with each other. The situation becomes even more complex when AMB members from either party base their decisions on external stakeholders or mandates. For instance, CHN representatives have their opinions influenced mainly by other community leaders (Elders or Chiefs), local fishers/loggers or by past CHN representatives. Representatives from the GoC have their decisions influenced by the community itself, ministerial ruling or industry. As will be seen, if the influence of one of these constituents is overemphasized it may disrupt the ability for a co-management regime to reach consensus. It is this dynamic and complex nature of co-management relationships that makes them difficult to study.

Since the 1970's, the Government of Canada has slowly recognized the importance of having Aboriginals incorporated into protected area management and began establishing co-management arrangements. This has been a long process with both challenges and successes. Some important steps that have been made are in three, related areas: 1) the sharing of power and authority (co-management and cooperative management); 2) the access to benefits and resources (such and employment, resource extraction, business opportunities, ability to exercise traditional harvesting/hunting/fishing, etc.); and 3) the incorporation of traditional knowledge into management (Thomlinson & Crouch, 2012).

When applied meaningfully, Aboriginal peoples opinions, knowledge, culture and expertise can have significant affects on protected area management (Dearden & Langdon, 2009; IUCN, 2000). At the root of Canadian and Aboriginal co-management relationships lies a complex set of laws, regulations, acts, land-claim agreements, treaties and policies that have directly affected the type of management seen within each protected area, leaving room for discrepancies, flexibility and variability on a national scale (Thomlinson & Crouch, 2012). Regions that have more Aboriginal representation are often found in Northern and Western Canada, largely due to either the presence, or lack of, agreement, treaty or policy with Aboriginal groups (Dearden & Langdon, 2009). For example, in northern Canada where a number of land-claim agreements have been settled, Aboriginal interests can be safeguarded since their engagement in protected area management is a legal requirement (Dearden & Langdon, 2009; Lemelin & Johnston, 2009).

It should be noted that while final-land claims can be a powerful tool for Aboriginal rights, they do not always guarantee that Aboriginal voices will be heard. Valencia & Vanderzwaag (1989) found that Canada's Inuit who have final land-claim agreements participate largely in the management of renewable resources, such as traditional fisheries, but still have little say in how offshore oil and gas reserves are managed.

> "The high-cost technologies required for offshore mineral exploration/exploitation, the strategic importance of secure energy supplies and the lack of traditional mineral exploitation by indigenous groups, states have been hesitant to share management or revenues related to offshore mineral activities" (Valencia & Vanderzwaag, 1989).

Conversely, in many areas throughout British Columbia (BC) land-claim settlements are still being assessed and remain largely absent. This affects many aspects of local governance, including the management of protected areas. Counterintuitively, Aboriginal empowerment has radiated from this absence, since no party can act independently from the other until true land ownership is determined.

Arguably nowhere else is this more apparent than on Haida Gwaii, located just off the northern British Columbian coast. Here, the Haida people have been able to reaffirm their control over many aspects of the archipelago, despite the absence of final land-claim agreement. The Haida, through the CHN, have become a leader amongst Aboriginal groups in how they negotiate, manage and operate with Provincial and Federal governments, industry and other Aboriginal groups. They have regained influence on the two principle industries that operate on Haida Gwaii - logging and fishing. The Haida Nation's continued affirmation over its traditional territory is perhaps best observed however at Gwaii Haanas (Figure 2.).

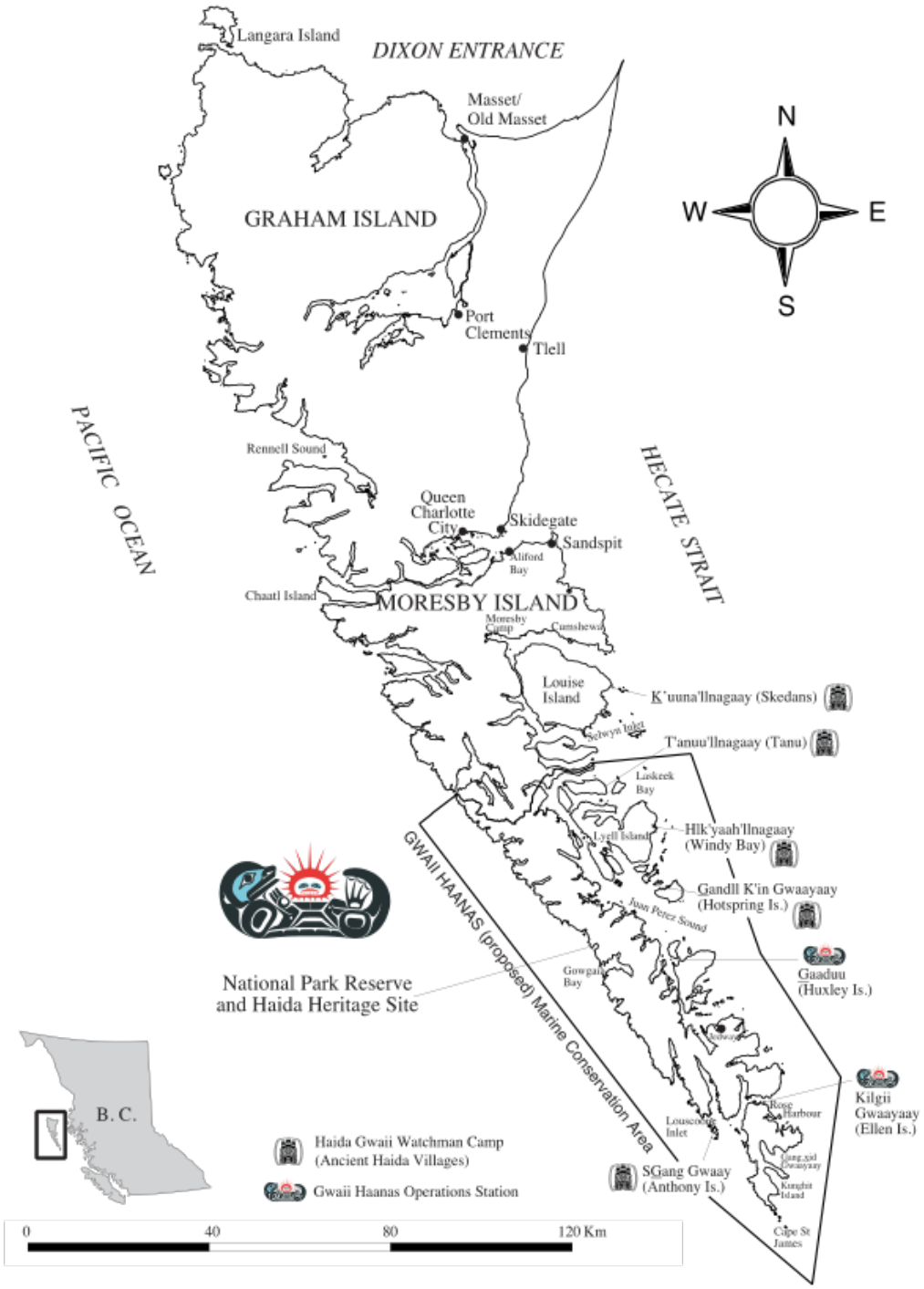

Figure 2. Map of Haida Gwaii and Gwaii Haanas (AMB, 2010)

It was with the creation of Gwaii Haanas that the Haida regained partial control over the lower third of the archipelago. In this protected area, the Government of Canada and the CHN entered into a cooperative management agreement, the first of its kind in Canada. Gwaii Haanas' core and establishing agreements begin by stating how the GoC and the CHN 'agree to disagree' over land title (GoC & CHN, 1993; GoC & CHN, 2010). However, both parties recognize the significant ecologic, cultural and social role this area represents and agree it needs to be protected.

The historic signing of the *Gwaii Haanas Agreement* in 1993 protected the terrestrial portion of Gwaii Haanas (hereafter referred to as Gwaii Haanas Terrestrial). The *Gwaii Haanas Marine Agreement*, signed in 2010, led to the establishment of the Gwaii Haanas National Marine Conservation Area Reserve (hereafter referred to as Gwaii Haanas Marine). These agreements also led to a cooperative management structure, novel to Canada's national park system. Gwaii Haanas is managed under the AMB that was originally created upon the signing of the *Gwaii Haanas Agreement* (GoC & CHN, 1993). Originally, the AMB was made up between Parks Canada and the CHN, with two representatives from each party. This first iteration mainly focused on the terrestrial aspects of the ecosystem. Then in 2010 the National Marine Conservation Area Reserve (NMCAR) portion of Gwaii Haanas was created under the *Gwaii Haanas Marine Agreement*. The structure of the AMB was modified to include a representative from DFO and one more CHN representative, ensuring equal representation from both parties. Often regarded as an international standard for engaging Aboriginal people in protected area management, Gwaii Haanas is an ideal setting for studying cooperative management

(Thomlinson & Crouch, 2012). Many studies have examined this cooperative management arrangement, looking at the decision-making process, the ability to incorporate both CHN and Parks Canada mandates/knowledge and its role within the community (Thomlinson & Crouch, 2012; Porter-Bopp, 2006; Ace, 2008 and Sloan, 2014).

This study is the first to evaluate how effectively the AMB is functioning since the relatively recent addition of DFO at the table. The main objective is to assess the viability of a cooperative management regime in which certain members are bounded by statutory decision-making processes. Statutory decision-making is a very broad term under administrative law, which encompasses decisions that are made in accordance with governing legislation (Huscroft & Taggert, 2006). Canada has delegated powers of governance between different levels of government (for example, federal or provincial) and between different administrative agencies (for example, DFO or Parks Canada). Decision makers are bound by their jurisdiction outlined in legislation (Huscroft & Taggert, 2006). Federally, Ministers can be held accountable for any decisions made under their designated statutes. For the sake of simplicity, this study will only deal with the acts pertaining to Gwaii Haanas' management. Up until the addition of DFO to the AMB, Gwaii Haanas was managed under Parks Canada legislation and the CHN's Constitution. As will be covered more extensively in the literature review and analysis sections, this changed with the creation of the *NMCA Act* in 2002. Under this *Act* (GoC, 2002), national marine conservation areas are managed under the Minister of the Environment, with certain decisions being delegated to other Ministers (Sections

9(4)(4.1); 15(2)(3) or 16(2)). Most pertinent to this thesis are decisions revolving around fisheries. Under the *NMCA Act*, NMCA(R)'s require consultation, and ultimately approval, from the Minister of DFO (GoC, 2002). Since conservational objectives in NMCA(R)'s are largely focused around fisheries, a DFO member was added to the AMB so that this interest could be accounted for.

In order to evaluate the apparent functionality of the AMB an in-depth examination of the decision-making process was undertaken. This study took place when the final conflict resolution process of the AMB was enacted for the first time, and uses this process as a case example to evaluate the AMB's functionality. The way the final and clear conflict resolution process was originally designed provides that, if the AMB is unable to reach consensus on any issue involving Gwaii Haanas' management, the issue shall be held in abeyance at the AMB level and be elevated to the higher-level authorities of each party (GoC & CHN, 1993; GoC & CHN, 2010). The AMB would then continue to operate normally while higher-level authorities attempt to find a solution, acting in good faith under the Agreements.

The final conflict resolution process being examined is based on the herring fishery surrounding Gwaii Haanas Marine and whether or not it should be opened to industrial fishing. This will be discussed more thoroughly in Section 2.6. In order to give a brief overview and provide context it will be summarized now. The herring fishery has been recently closed due to low stock sizes. However, in 2013 it was predicted by DFO models that the 2014 stock would be large enough to allow the fishery to be opened. The decision

to open the herring fishery is based on whether or not the stock size is above a set cut-off, calculated by DFO. Despite the stock being above cut-off, recommendations to keep the fishery closed were made by the AMB, coastal First Nations and DFO scientists to the DFO Minister. Some AMB members, First Nations, academic institutions and DFO scientists claimed that the model used for stock predictions needed improvement and that opening a re-building fishery would damage any progress that had been made. Nonetheless, the Minister opened the fishery, thereby requiring the GoC representatives to side with the DFO Minister under statutory law. This led to the CHN and the GoC AMB representatives being unable to reach consensus, leading to the invocation of the final and clear dispute resolution clauses found in the Agreements (GoC & CHN, 1993; GoC & CHN, 2010). This case study examines the effects statutory decision-making processes can have on cooperative management functionality.

In order to assess the current situation surrounding the AMB in-person interviews with Parks Canada/CHN/DFO staff, AMB board members, community leaders, local business owners and the wider public were conducted throughout a five-month period ensuring a comprehensive assessment could be carried out. Three main questions were formed to help guide the research (Table 1).

Table 1. Research Questions

Question	Rationale	Indicators/Resources
1) How did the current iteration of the management regime in Gwaii Haanas come into being?	Allows for context to be given behind the history of Gwaii Haanas' management giving more strength to subsequent analysis, this will be largely covered in the literature review.	Management Plans, Interviews, Personal communication, Agreements/Legislature Previous studies, Newspaper articles,
2) How does the occurrence of the herring fishery final conflict resolution process reflect the ability of the AMB to make management decisions regarding Gwaii Haanas?	The herring fishery conflict is the first initiation of the AMB's final conflict resolution process and will reveal potential lapses in the decision-making model itself. This will be covered in the literature review, results and analysis sections.	Management Plans, Interviews, Personal communication, Agreements/Legislature Newspaper articles, Previous studies
3) In what ways can the AMB's decision-making authority be clarified so that, in the future, statutory decision-making processes do not undermine it?	After having analyzed the decision-making and final conflict resolution processes of the AMB, suggestions will be made so that conclusions can be drawn regarding the functionality of Gwaii Haanas' cooperative management regime.	Management plans, Interviews, Personal communication, Agreement/Legislature, Newspaper articles, Previous studies

These three questions target the functioning of cooperative management in Gwaii Haanas. As all decisions regarding the management of Gwaii Haanas stem from the capacity for the AMB to work cooperatively and reach consensus, it is evident that their success can be assessed based on the effectiveness and efficiency with which the Board comes to decisions.

In order to answer the research questions, this study draws heavily on Carlsson & Berkes' (2005) suggested steps in assessing cooperative management. As will be covered in the literature review, there are multiple ways to evaluate cooperative management regimes, however previous studies investigating Gwaii Haanas have not thoroughly or systematically evaluated Gwaii Haanas Marine (Ace, 2008; Poter-Bopp, 2006; Sloan 2014; Thomlinson & Crouch, 2012). Carlsson & Berkes (2005) suggested a six-step analytical approach to investigating co-management with Aboriginal peoples, summarized in Table 2.

Table 2. 6 steps for assessing co-management/cooperative management regimes adapted from Carlsson & Berkes (2005).

Analysis Steps	Explanation	Section covered
1) Define the social-ecologic system under focus.	This helps narrow the cooperative regime being evaluated. Setting the boundaries of the management being evaluated is imperative because it helps outline the stakeholders that need to be included in the assessment itself. This step will be accomplished in the literature review by examining Gwaii Haanas' characteristics, the key stakeholders, the AMB, and important events that defined the history of the protected area.	Sections 1-2
2) Map the essential management tasks to be preformed.	The second step is to describe how the protected area is managed. This includes explaining what activities are being done, the "types of management decisions that must be made, and who is entitled to make these decisions" (Carlsson & Berkes, 2005). This, like the first step, will be largely covered in the literature review. The role of each AMB party will be covered, as well as some of the main management strategies being implemented in Gwaii Haanas.	Sections 2 and 4

3) Clarify the participants in co-management activities and related problem-solving processes.	The third step helps conceptualize the roles of each party involved in the management of the protected area. A part of this focuses on decision-making authority and who manages certain sectors within the area in question. It also examines any dispute resolution process. This, like the previous steps, is largely covered in the literature review. The decision-making authority for each AMB party is stated, and the dispute resolution process introduced. The Results section will discuss the dispute resolution process further based on information acquired through the literature review and interviews.	Sections 1,2 and 4
4) Analyze linkages.	This forth step takes the description of the dispute resolution process, the background of all parties, their mandates/responsibilities and the areas history into consideration, to help form connections between the past and the present. The complexities of the cooperative relationship are brought together here. This step addresses the second research question directly, by answering whether or not the AMB's decision-making authority was undermined by the herring fishery dispute resolution process.	Section 5
5) Evaluate capacity-building needs.	The purpose of the fifth step is to evaluate how to engage all parties in the decision-making process. The aim is to promote internal functioning so that disputes may be resolved without having to depend on outside or higher authority. The 5th step begins to answer the 3rd research question. It is heavily focused on the dispute resolution process itself, attempting to identify what might be altered to lessen the chances of a dispute opening up once more.	Section 5

6) Prescribe remedies.	This section is concerned with suggesting potential ways future disagreements can be avoided. It does not aim to solve any specific issues, but instead looks at larger themes. With regards to Gwaii Haanas, this section will recommend certain steps that could be taken so that management issues may be resolved internally to the AMB. It does not suggest ways to resolve the herring dispute specifically, but instead fisheries management as a whole in Gwaii Haanas. It is important to focus on both relationship building and adjusted policy/legislation.	Section 5

1.2 Introduction to Haida Gwaii and Gwaii Haanas

Haida Gwaii is found roughly 100km off the coast of Northern British Columbia, making it one of the most remote archipelagoes of the western Americas (Fedje & Mattewes, 2005; Sloan 2014). It is made up of two main islands, Graham Island to the north and Moresby Island to the south. Gwaii Haanas, which comprises both the terrestrial and marine protected areas (MPA's), includes the southern third of Moresby Island.

With over 200 smaller islands, the entire archipelago is around 10,000km^2 (Fedje & Mattewes, 2005; Lee, 2012). The main villages/towns are Queen Charlotte, Skidegate, Masset and Old Masset, all of which are connected by one paved road, extending north to south. Logging roads cover a large portion of both Graham and Moresby Islands. Haida Gwaii, more specifically its protected areas, including Gwaii Haanas, represent some of the more pristine wilderness and is home of the Haida Nation. It is unquestionably linked to these people and their culture.

1.2.1 Climate and Geography

The ocean has a large influence on Haida Gwaii, as no portion of it is more than 20km away from the coast (Lee, 2012). Haida Gwaii has a mild climate with average temperatures varying from around 3°C in the winter to 15°C in the summer (Sloan, 2014). Annually, the archipelago receives ~1.5m of precipitation, the majority of which falls as rain, with some minor snowfall between January and March (Sloan, 2014). The precipitation is not uniform along the archipelago as the west coast usually receives the majority of rainfall throughout the year. Due to climate change, the already minimal snowfall is likely to be reduced, as temperatures on the British Columbian coast have risen 1.2°C over roughly the past half-century (Sloan, 2014). Climate change has also resulted in sea-level rise, which at its current rate of 1.6mm/yr could raise the level between 11-22mm by 2100 around Haida Gwaii (Sloan, 2014). This may impact some of the communities and ancient Haida sites through erosive processes (Personal Communication with Dr.Hillary Thorpe, 2014). The majority of this erosion is powered by the strong waves generated either by south-easterly winds coming up the Hecate Straight or by westerly winds generated over the Pacific. Western Moresby Island has some of the most exposed coast in British Columbia, strongly influencing the shoreline and the type of organisms that can survive there (Sloan, 2014).

The landscape of Haida Gwaii is highly variable, having both mountainous and flat lands. The mountains along the West coast have sub-alpine characteristics, with some peaks reaching around 1100m. This is contrasted with North-eastern Graham Island where hills reach a maximum of 700m, though the majority is flat floodplains, wetlands, forests and

fields (Sloan, 2014). The archipelago itself sits atop the North American Plate, where it is susceptible to geophysical processes such as earthquakes and tsunamis (Sloan, 2014; Parks Canada, 2014). Perhaps the best-known earthquake in Gwaii Haanas occurred in 2012. It was the second largest (Magnitude 7.7) ever recorded in Canada (Sloan, 2014). This earthquake was so severe that it caused the hot-springs at Gandll K'in Gwaay.yaay (Hotspring Island) in Gwaii Haanas to become inactive, though in May 2014 signs of hot-water returning was observed by Parks staff (Parks Canada, 2014). Gandll K'in Gwaay.yaay has been a strong draw for tourists, but more importantly is a traditional site of the Haida. Elders would go there to rejuvenate when the springs were active but remains a source of food and sustenance for the Haida (Parks Canada, 2014).

1.2.2 Flora and Fauna

Despite the small size of Haida Gwaii, the archipelago boasts a rather diverse range of organisms. Given the diversity of the landscape, a "wet hyper-marine" biogeoclimate and a tolerable average temperature the area is a desirable habitat for many species (Sloan, 2014). Haida Gwaii is extremely rich in biodiversity despite its remoteness. It provides a haven for numerous migratory species, while also providing habitat for many endemic species of plant and animal (Sloan, 2014). Like most long-inhabited places humans have had a significant role in the evolution of Haida Gwaii's ecosystems. The introduction of certain species and the hunting of others has resulted in a landscape modified by anthropogenic forces over thousands of years. Arguably the three most problematic species that have been introduced are the Sitka black-tailed deer (*Odocoileus hemionus sitkensis*), raccoon (*Procyon lotor vancouverensis*) and two species of rat (*Rattus rattus, Rattus norvegicus*) (Golumbia, 1999; Sloan, 2014). The deer has been a managerial

challenge in both Haida Gwaii and Gwaii Haanas due to its intensive foraging of understory and saplings, impacting the functioning of the forests and potentially removing some species entirely (Golumbia, 1999). With no real predators or competition the deer is thriving on the archipelago (Golumbia, 1999). The rat, particularly the Norwegian rat, has been decimating sea-bird colonies, including the endangered marbled murrelet. Steps have been taken to monitor and address the impacts of these species in Gwaii Haanas. These management strategies will be further discussed in Section 2.5.1.

In the marine environment, a preliminary estimate shows that around 400 species of fish, 360 types of seaweed and 26 marine mammals dwell in Haida Gwaii's waters (Sloan, 2014). Of the marine mammals 20 are whales, which up until the 1960's were being hunted industrially (Sloan & Dick, 2012; Sloan 2014). There are also harbour seals (*Phoca vitulina*), some Stellar sea lions (*Eumetopias jubatus*) and the Pacific white-sided dolphin (*Lagenorhynchus obliquidens)*. The sea otter (*Enhydra lutris*) is perhaps the most threatened marine mammal in the area (Sloan, 2014). As is covered in Section 2.3.2, the once numerous otter had been extirpated through intensive hunting. More recently, other otter populations have been migrating from southern Alaska (Sloan & Dick, 2012). Otters are regarded as a keystone species in many marine environments (Sloan & Dick, 2012). They play a vital role in regulating sea urchin populations, which are a main source of food for this predator. Without sea otters, urchin populations go unchallenged. Eventually, large urchin populations can severely deteriorate kelp forests and consequently the surrounding environment. Kelp forests provide essential nutrients, breeding grounds for fish and dampen wave energy along the shore; therefore, without sea otters the entire ecosystem is potentially jeopardized (Sloan & Dick, 2012). Of the

fish species, the rockfish is of particular interest, as it is a relatively long-lived fish with a low reproductive rate. It has been affected by being by-catch and more recently being a targeted fishing as a result of shifts in demand by Asian markets (Personal Communication with Mr. Peter Kitinic, 2014). This has resulted in depleted stocks along the BC coast, requiring urgent action by DFO (Personal Communication with Mr. Peter Kitinic, 2014). In Gwaii Haanas Marine there are now conservation areas set up, with the intention of protecting this species.

Terrestrially, there are relatively few large mammals native to the Archipelago. The largest land predator is the endemic sub-species of black bear (*Ursus americanus carlottae*), which relies heavily on surrounding vegetation and abundant salmon populations for nourishment (Golumbia, 1999; Sloan, 2014). At one point the Dawson caribou (*Rangifer tarandus dawsoni*) was the largest herbivore, but due to overhunting is now extinct. Introduced elk (*Cervus elaphus nelsoni*) have somewhat replaced its role in the ecosystem (Golumbia, 1999). The archipelago plays host to roughly 125 marine-bird species. As stated, the marbled murrelet is one of the most threatened, however there are a remarkable amount of waterfowl, raptors and seabirds throughout the region. In terms of vegetation the western red cedar (*Thuja plicata*), Sitka spruce (*Picea sitchensis*) and western hemlock (*Tsuga heterophylla*) largely dominate the landscape (Sloan, 2014). While all of these species provide wood and bark for the First Nations, the red cedar holds a particular strength in Haida culture. It is used for weaving, building canoes, tools, art and making long-houses (Lee, 2012; Fedje & Matthewes, 2005). Logging has reduced

the amount of old-growth significantly, especially on Graham Island. The following section gives an overview of the main industries and demographics of Haida Gwaii.

1.2.3 Demographics and Industry

Haida Gwaii's remoteness, pristine nature, size and strong culture all shape the types of people and industries that come to its shores. Based on the latest census the current population is 4,812, the majority of which reside in Queen Charlotte (948), Skidegate (709), Masset (884) or Old Masset (614) (BC Stats, 2011; Misty Islands, 2011; Observer, 2012). The overall population has been in decline over the past decade, with numbers now close to what was seen in 1971 (Observer, 2012). Between 2006-2011 the archipelago lost 9% of its inhabitants, partially attributed to the slowing of logging and fishing industries (Observer, 2012; Personal Communication, 2014)[1]. There are roughly 5000 Haida throughout Canada, the majority of which live on Haida Gwaii, representing around half of the total population (BC Stats, 2011). This is one of the factors that led to them gaining increased power over their traditional territory.

Haida Gwaii has a highly diverse demographic despite its small area and population. There are a growing number of non-permanent residents, who are not quite tourists but stay for weeks to months at a time. Some of these transients are coming for the Haida Gwaii Higher Education Society, which brings an influx of university students to learn about Haida culture, the surrounding environment, ecology and forestry. While the majority of students eventually leave, some stay or come back. This can reinvigorate

[1] Throughout this study "Personal Communication" will be cited without disclosing who provided the information. The nature of this study gave interviewees the option to remain anonymous and this type of citation takes this into account. This will be discussed further in the Method Section.

many of the communities that have ageing populations. Another source of transient residents are those in the workforce. For example, during the research period of this study, Queen Charlotte was building a new hospital. With not enough qualified local workers, many were brought in from Vancouver or the mainland. These workers would spend a couple of weeks working and then fly back home (Personal Communication, 2014). Similar cases exist in the tourist business with seasonal workers in hunting/fishing lodges (Personal Communication, 2014).

A large portion of the total population works for government services (37%), industrial fishing (3%), logging/forestry (15%), and more recently tourism industries employs 21% of the population (Misty Islands, 2011). There is some agriculture, mostly near the community of Tlell, but this only represents 1% of employment. The isolated community of Sandspit on Moresby Island is dependent on logging and tourism; however, the domestic airport also provides employment opportunities in the area. Of the major employers on Haida Gwaii (logging/forestry, tourism and government services), all have or continue to play a role in Gwaii Haanas. Government services have a direct role in Gwaii Haanas in terms of management and monitoring. The tourism sector has particularly benefitted from Gwaii Haanas' establishment. Logging, on the other hand, was negatively affected by the creation of the protected areas. In fact, logging became the main catalyst for its creation and will be focused on in Section 2.3.3. Of the 2,220 km^2 of forest in good growing sites, ¾ has already been harvested around Haida Gwaii (Takeda & Ropke, 2010; Gowgaia Institute, 2008). Despite years of protests, stands and legal battles, only 10-15% of high quality old-growth forest remains (Takeda & Ropke, 2010).

Significant efforts have been made to protect these remaining areas. Under the Haida Gwaii Land-Use Plan signed in 2007 between the CHN and the Government of British Columbia, nearly 50% of the archipelago became protected from logging (Gowgaia Institute, 2008; CHN[a], 2010). Prior to the signing, only 23% had been protected, including Gwaii Haanas (Gowgaia Institute, 2008).

The goal of this section was to provide an introduction to the thesis as well as Haida Gwaii. The Theoretical Overview section opens with a discussion around co-management/cooperative management and decision-making, specifically addressing the incorporation of Aboriginal groups in protected areas. It is essential to understand what co-management is, its inherent complexities and how decision-making authority influences it. There is then a brief discussion around the history of how Aboriginals and the Canadian Government began developing co-management regimes in protected areas. The subsequent section continues to discuss Gwaii Haanas and Haida Gwaii, delving more into the history of the archipelago. It covers pre-glacial and post glacial Haida Gwaii, the time of European "discovery", leading to industrial scale logging and the eventual creation of Gwaii Haanas and Gwaii Haanas Marine.

2. Literature Review

2.1 Theoretical Overview

2.1.1 Co-Management and Cooperative Management

Stakeholder engagement, and if appropriate, co-management, is widely regarded as an important step towards establishing better protected area management (Usher, 2000; Pinkerton, 2003; Berkes, 2009; Feyerabend *et al*., 2004). According to the 2011 United Nations Environment Program report on MPA governance there are three ways protected areas are currently managed (Jones, Qiu & De Santo, 2011). The first is top-down or centralized governance of a protected area. This is based on the state using laws and regulations to enforce management strategies and promote environmental stewardship from a distance. This type of governance has the potential to be highly inefficient if there is no effective engagement with local stakeholders, helping inform management decisions (Jones, Qiu & De Santo, 2011). The second option is bottom-up governance, where local-communities are given decision-making responsibilities and are intimately engaged in the protected areas management (Jones, Qiu & De Santo, 2011). This may also pose challenges as localized management groups may lack the expertise, resources or legal authority (Stohr *et al*., 2014). The third option protected areas may be governed according to UNEP (Jones, Qiu & De Santo, 2011) is through market incentives. What this generally refers to is the economy driving management decisions after attaching economic value "to biodiversity in terms of natural capital and ecosystem services" (Jones, Qiu & De Santo, 2011). An issue around this option is that biodiversity or ecosystem services may have inappropriate economic values attached to them, misinforming management decisions. Co-management is seen as a way to remedy the

faults of these options, while combing the benefits of each (Jones, Qiu & De Santo, 2011). By including multiple stakeholders into decision-making, that includes the state, the potential for innovative and informed problem-based solutions increases (Usher, 2000; Natcher, Davis & Hickey, 2005). Despite the heralded successes of co-management, there remain some difficulties surrounding its application (Nadasdy, 2003).

One of the issues in applying co-management strategies is the lack of universally agreed upon definition between resource managers. A reason for this is perhaps because 'co-management' is a relatively recent term. Its earliest use has been traced to the 1970's, despite some co-management strategies having been used as early as the 1890's (Pinkerton, 2003; Jentoft & McCay, 1995). A definition offered by Berkes (2009) is that co-management is "a range of arrangements, with different degrees of power sharing, for joint decision-making by the state and communities (or user groups) about a set of resources in an area." Berkes continues to state that co-management is related to several other multi-stakeholder arrangements such as policy networks, polycentric governance systems and epistemic communities, all of which potentially add confusion amongst resource managers. Despite existing terminology, it appears that the continual addition of new definitions exacerbates this confusion. The definition for collaborative management (co-management) offered by the UNEP (Jones, Qiu & De Santo, 2011) report is:

> "A partnership by which two or more relevant actors collectively negotiate, agree upon, guarantee, share and implement institutions that provide for the governance of a particular area or natural resource."

The International Union for Conservation of Nature (Feyerabend *et al*., 2004) offered another definition, defining a co-managed protected area as a:

> "Government-designated protected area where decision-making power, responsibility and accountability are shared between governmental agencies and other stakeholders, in particular indigenous peoples and local and mobile communities that depend on that area culturally and/or for their livelihoods."

Although the definitions by Berkes (2009), UNEP (Jones, Qiu & De Santo, 2011) or the International Union for the Conservation of Nature (IUCN, 2004) all have similar traits, its important to recognize how the subtle differences may create confusion. The IUCN definition puts emphasis on the importance of incorporating indigenous people in protected area management (Feyerabend *et al*., 2004). Indigenous people can contribute to developing conservation objectives when meaningfully engaged in decision-making processes. For any co-management strategy to be applied in an effective manner, all stakeholders involved need to have an understanding of what role each stakeholder has in the decision-making process (Berkes, 2009; Natcher, Davis & Hickey, 2005; Stohr *et al*., 2014). The ability for a co-management regime to achieve conservation objectives is directly related to how early stakeholders are included in the process (Feyerabend *et al*., 2004). Their ability to participate meaningfully is also impacted by the usefulness of the information the stakeholders bring to the protected area management, as the information may not always be directly applicable (Wohling, 2009). The experience and resources indigenous peoples have could potentially strengthen the management of a protected area. A large amount of discussion around incorporating indigenous people in co-management is around the application of their traditional ecologic knowledge (TEK).

Similar to co-management, TEK is a relatively recent term with no clear definition (Usher, 2000). Some scholars believe that the term "traditional" should not be applied, as

cultures are often changing their practices, therefore arguments can arise as to what is meant by "traditional" (Berkes, 1993, 2009; Natcher, Davis & Hickey, 2005). Furthermore, "ecologic knowledge" when defined by Western science is based on a particular area of biology (Berkes, 1993, 2009; Natcher, Davis & Hickey, 2005; Huntington, 2000). This can cause problems as TEK most often applies to Aboriginal people who may not be scientists. With the wide range of opinions and definitions it can create problems when attempting to establish the role of TEK in co-management regimes (Berkes, 1993, 2009; Natcher, Davis & Hickey, 2005). In an attempt to combine various works, Berkes (1993) offered the definition that TEK as:

> "A cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. "

There are many who question the utility of TEK in terms of its application to protected areas management, as it is not an established type of Western Science. Huntington (2000) suggests that inertia and inflexibility has hindered the application of TEK to resource management. Inertia is simply the resistance to change. Resource managers are comfortable using Western Science for management decisions, and changing their methods to fit in TEK can be difficult. Inflexibility focuses on resource managers questioning the reliability of TEK. It also can include the unwillingness to work with "non-scientists, indigenous or otherwise" (Huntington, 2000). Huntington concludes that, while TEK can be useful, one should not blindly accept TEK as truth. Instead, it should be "scrutinized as other information is scrutinized, and applied in those instances where it makes a difference in the quality of research, the effectiveness of management and the involvement of resource users in decisions that affect them" (Huntington, 2000).

The aim of TEK is not to replace Western science, but instead add to the knowledge base and compliment it (Manseau *et al.,* 2005). TEK differs from Western science in many respects. For example, TEK is largely based around social interactions between people. Given the large time frame that TEK is accumulated, it relies heavily on oral traditions, worldviews and the ability to share knowledge (Berkes, 1993; Manseau *et al*., 2005). The passing of knowledge through time is what allows for Aboriginal people to gain such an intimate relationship with their environment. TEK is often qualitative and holistic in nature (Berkes, 1993). The acquisition of TEK is often based on trial and error, over long periods of time. TEK becomes ingrained in local culture and spirituality and can play an important part in the livelihoods of local indigenous populations (Berkes, 1993; Dearden and Langdon, 2009). Co-management has been regarded "as a belated recognition of the knowledge and wisdom of indigenous people" (Natcher, Davis & Hickey, 2005).

The degree of Aboriginal involvement in the management of Canada's national parks varies on an "ad-hoc, case-by-case basis" (Thomlinson & Crouch, 2012). This can vary between being directly and intimately connected to the decision-making process and management, such as in Gwaii Haanas, to minimal consultation (Thomlinson & Crouch, 2012). Because of this, there are subtle, yet important, differences when discussing co-management and cooperative management.

2.1.2 Decision-making and Governance

In a recent report by Burt *et al*. (2014) on the development of MPA networks in British Columbia, they devote Chapter 3 to addressing the significance of having good governance at the heart of their establishment. This report elaborates in detail some of the important theoretical points behind effective governance in protected areas. It begins by using the IUCN's four types of governance. The first type is described as "governance by government" whereby the government is the final decision maker. Ministers can distribute this decision-making power to other officials. The second type is "shared governance" and is what is largely seen at Gwaii Haanas. In this type of governance there is "some degree of joint decision-making, facilitated through arrangements such as co-management bodies" (Burt, *et al*., 2014). The third type is "private governance" whereby individuals or private actors are the final decision-makers. The final type is based on local decision-makers and is called "governance by indigenous and local communities" (Burt *et al*., 2014).

There are various opinions on the usefulness of co-management and whether or not it actually works (Carlsson & Berkes, 2005; Natcher, Davis & Hickey, 2005). What is central to this debate are issues surrounding governance and decision-making within co-management systems. As Natcher *et al.,* (2005) points out, co-management "has more to do with managing human relationships than resources". For relationship building and trust to be gained a myriad of steps need to be taken. Stohr *et al.,* (2014) state that for effective co-management, all participants need access, standing and influence so that "tensions, limited effectiveness and escalating conflicts" can be minimized. Briefly,

access refers to the ability for a stakeholder to physically come to co-management meetings, having the opportunity to speak at the meetings and be informed/educated so to participate meaningfully (Stohr *et al*., 2014). Standing refers to the "legitimacy of actors" and how well respected their opinions are to the co-management process. Influence refers to the opinions of a stakeholder being meaningfully considered before a decision is made (Stohr *et al*., 2014). All of these factors influence who is the final decision-maker in a co-management relationship. If it is true co-management all parties will have a role in forming a collective management decision, rather than one party making a unilateral move.

Burt *et al*., (2014) build off Stohr *et al*., (2014) and others by listing six types of good governance. They somewhat reiterate the points put forward by Stohr *et al*., (2014) by dividing access, standing and influence into sub-categories. Legitimacy is perhaps the most similar to Stohr *et al*.'s (2014) term "standing", as Burt *et al*. (2014) uses it to refer to parties representing credible institutions. Burt *et al*. (2014) states that coordination/collaboration are also important to good governance. This refers to different actors working in harmony and unifying their objectives, despite the potential overlap in jurisdictions. Inclusion/fairness and knowledge integration/adaptability are somewhat similar, and could be compared to Stohr *et al*.'s (2014) definition for "influence". They refer to stakeholders being meaningfully engaged at all stages of management and that their opinions/knowledge is taken into account. Capacity/performance refer to the governance regime being able to adequately meet their objectives given their resources. The last important step for good governance is the need for transparency/accountability

of the governance structure. The way decisions are made needs to be communicated so that adjustments can be made if needed to ensure the other types of good governance are present.

The degree to which a stakeholder has access, influence or standing are largely impacted by what Kiser & Ostrom (1982) calls “the three layers of rules” (Figure 3). In Kiser & Ostrom (1982) they present these layers as a hierarchy, however this thesis adjusts it, allowing each “layer” to influence the other reciprocally. This simplified illustration demonstrates how each co-management regime is embedded within a larger institutional boundary. The three layers of rules are constitutional, collective-choice and operational.

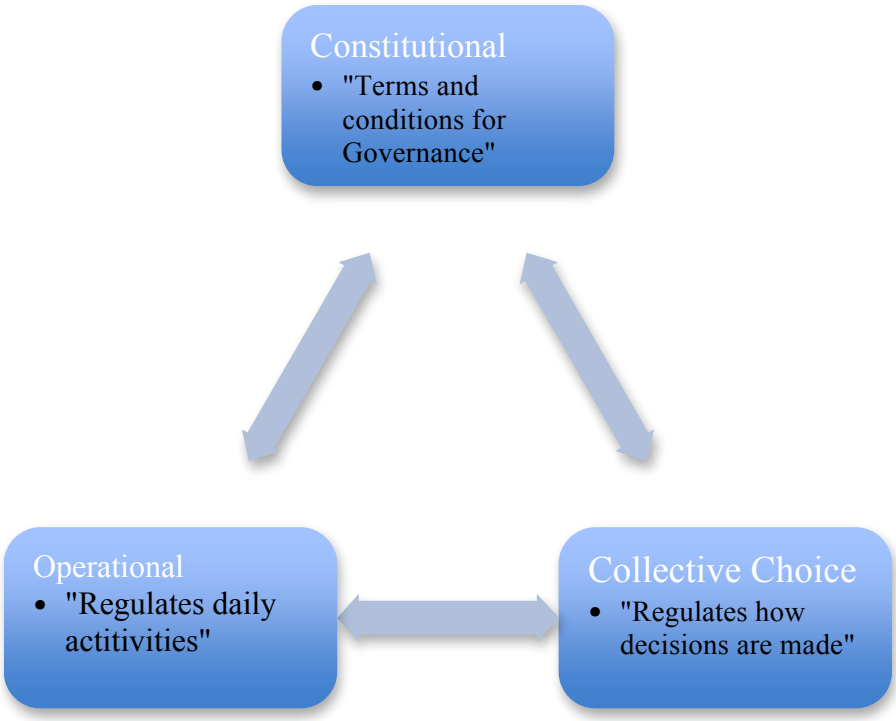

Figure 3. Modified three layers of rules (Kiser & Ostrom, 1982)

This rule set forms boundaries around any co-management arrangement. Constitutional rules are the very relevant to this study. They dictate who has the decision-making authority over the utilization of resources and who can benefit from them. In the case of Gwaii Haanas there are two constitutions (The Constitution of Canada and the Haida Constitution) that currently claim to have jurisdiction over Haida Gwaii. It should be noted, that the legal strength of the Haida Constitution has not been challenged in the courts. As it stands, the Haida Constitution does not have equal legal standing when compared to the Canadian Constitution. In Gwaii Haanas, decision-making authority is shared through the AMB based on the Agreements. As will be discussed, however, this creates a complex multifaceted issue when discussing management of resources that transcend jurisdictional boundaries, such as fisheries. The second set of rules, collective-choice rules, are very pertinent to this study as well. Collective-choice rules state how decisions will be made concerning resource extraction, for instance the amount of fish needed before the fishery can open. Collective-choice rules can be constrained or fettered by constitutional rules. For example, it may be that a co-management regime collectively agrees to a amount of fish needed for a stock to be opened. Regardless of their decision, the final decision-maker is designated by constitutional rules and can choose to open the fishery or not. Finally, operational rules state how resources will be extracted and the intensity of that extraction. In terms of fishing, this might concern fishing techniques and equipment.

In Gwaii Haanas, all AMB members are bounded by constitutional rules. What the herring dispute resolution process is revealing are the roles and responsibilities of the

AMB. It is providing a more in-depth understanding of where each entity rests within the constitutional constraints. This, in turn, affects the collective-choice rules that can be made by the AMB and how the cooperative management regime can influence the management of the protected area. This will be be discussed more thoroughly in the Analysis Section.

2.1.3 Basis for Analysis

Previous studies investigating Gwaii Haanas' management regime were analyzed, such as works done by Ace, (2008) Porter-Bopp, (2006), Sloan (2014) and Thomlinson & Crouch, (2012). As Carlsson & Berkes (2005) point out there are multiple ways to assess co-management with no universally agreed upon method. This is in large part to do with the uniqueness of all co-management relationships and the difficulty of forming a methodical system that would be capable of targeting all of these complexities. Carlsson & Berkes (2005) state:

> "There are a number of complexities rarely accounted for in conventional conceptualizations of co-management: (1) complexities of the State, (2) complexities of the community, (3) complexities of the dynamic and iterative nature of the system, (4) complexities of the conditions available to support the system, (5) complexities of co- management as a governance system, (6) complexities as a process of adaptive learning and problem solving, and finally (7) complexities of the ecosystem that provides the resources that are being managed."

These complexities were somewhat touched on in the introduction, in which this study placed the management regime of Gwaii Haanas in the second grouping of cooperative management. To some extent this defined the relationship between the Government of Canada and the CHN concerning Gwaii Haanas. However, it did not address the underlining complexities as put forth by Carlsson & Berkes (2005). Studies done by Ace (2008) and Porter-Bopp (2006) are largely based on document analysis and reviewing

how Gwaii Haanas was created. This study drew upon their findings to provide context to the current situation, however; neither study applied a systematic analysis of the co-management regime. A large portion of their work was devoted to recounting the narrative of Gwaii Haanas' creation, while adding their perspective on the impact of colonialism or a primary critique of the management. Ace (2008) puts forward certain recommendations of how the AMB might be improved, but because Ace's study was conducted prior to the formation of Gwaii Haanas Marine it consequently does not address the contemporary situation at Gwaii Haanas.

Sloan (2014), the most recent analysis of the management of Gwaii Haanas, is partially a narrative and partially an overview of Haida Gwaii/Gwaii Haanas' natural systems; such as geography, biology, ecology and its other unique characteristics. It also communicates how Gwaii Haanas went from "conflict to cooperative management". Again Sloan (2014) does not systematically evaluate the functionality of its cooperative management, as it appears the objective of the article is to inform the reader of the sequence of events, from Gwaii Haanas' creation to present day. It does not delve very deeply into the continued evolution of this relationship, such as the addition of DFO to the AMB, or the unresolved issues surrounding the herring fishery. Thomlinson & Crouch (2012) perhaps provides the most recent structured analysis of Gwaii Haanas' management by taking the IUCN Principles on Indigenous People and Protected Spaces document. This document provides criteria for "managing partnerships with indigenous people in the management of protected spaces" (Thomlinson & Crouch, 2012).

What is important to note is that Thomlinson & Crouch (2012) do not address Gwaii Haanas Marine or DFO's role in the AMB. Instead they focus on the established relationship between Parks Canada and the CHN. Consequently the findings may not reflect the entire inner-workings of the AMB as it is today. On the following page are the five principles, with the general findings of the study concerning Gwaii Haanas beside them according to Thomlinson & Crouch, 2012 (Table 3).

Table 3. Criteria of Gwaii Haanas evaluation by Thomlinson & Crouch (2012).

1. Common Objectives • It was found that the CHN and Parks Canada shared common objectives for the protection of Gwaii Haanas, as stated in the *Gwaii Haanas Agreement.*
2. Mutual Understanding • According to Thomlinson & Crouch (2012) Gwaii Haanas management parties understand and respect each others perspectives and opinions.
3. Open Partnership • Transparency and accountability according to this study are all evident in Gwaii Haanas' management. This conclusion was again made with no mention of DFO's role in the AMB.
4. Equitable Benefits • This study uses employment, promotion of local culture and businesses as well as some environmental benefits as examples of how Gwaii Haanas is equitable in benefit sharing.
5. Cross-jurisdictional Agreements • This study merely mentions how Gwaii Haanas' management works along with the CHN, Parks Canada and DFO. This is adequate enough for the study to deem this principle completed, but does not investigate whether these agreements are

What will become clear in the Analysis Section is that when the NMCAR was established, the cooperative management environment completely shifted. In order to build the body of research concerning Gwaii Haanas' cooperative management this study combines many of the methods in the aforementioned studies. Co-management, though having great potential, is only as useful as the relationships it is built upon. Some, like Natcher, Davis & Hickey (2005), postulate that Aboriginals representatives "are being forced to participate in an institutional process that is in many ways culturally inappropriate", with others (Thomlinson & Crouch, 2012; Feyerabend *et al*., 2004) suggesting that co-management is the best available tool for meaningful Aboriginal engagement in protected area management. What is universally accepted however, is that for co-management regimes to function, a certain degree of trust and relationship building needs to occur, especially if the relationship between the two parties has been as tumultuous as between the Canadian Government and Aboriginal peoples of Canada. The following section covers a brief history of this relationship and the formation of some of Canada's first co-managed protected areas.

2.2 Aboriginal Engagement in Canadian Protected Areas

Across Canada there has been a longstanding relationship between Aboriginal peoples and Parks Canada. It is an evolving relationship that has come a long way, as will be illustrated. In order to examine the relationship in its current form it is necessary to understand its origins. Dearden & Langdon (2009) give a comprehensive review of the relationship, beginning with the creation of the first national park in North America. In 1872, Yellowstone National Park was created in the United States. Its formation came at the cost of relocating Native Americans off their traditional land. Banff National Park (at

the time Rocky Mountain National Park) was created 13 years later in southern Alberta. Using Yellowstone as a template, the Blackfoot and Stoney tribes were essentially forced to cede their territory to the Crown (Dearden & Langdon, 2009; Thomlinson & Crouch, 2012). Aboriginal cultures are deeply rooted in the places they were formed. By removing these people from their territory, it removed their ability to practice their culture. The way Canada's first national park was created set a precedent. For example, the Keeseekoowenen Band had their houses burnt upon eviction so that Riding Mountain National Park could be created in 1933 (Morrison, 1995). These events created a large amount of tension between Parks Canada and Aboriginal people, some of which remains unresolved (Dearden and Langdon, 2009).

In the 1970's Parks Canada began to recognize the role Aboriginal peoples could play in park management (Dearden and Langdon, 2009). A breakthrough for indigenous rights came in 1973 during the Calder case, where the Supreme Court of Canada ruled that the Nisga'a First Nation land rights had not been extinguished (Thomlinson & Crouch, 2012). This was the first time the Federal government was forced to acknowledge Aboriginal land claims (Takeda & Ropke, 2010; Thomlinson & Crouch, 2012). Despite this ruling, following the Calder decision, the BC government of the day continued to assert that Aboriginals had no right to land claims due to a past century of occupation (Takeda & Ropke, 2010), or that if such a thing as Aboriginal title did exist, it was a federal responsibility. Another important case for Aboriginal rights was the Sparrow Case (1988), which also went to the Supreme Court of Canada. The Supreme Court ruled that both provincial and federal governments have a duty to consult with Aboriginals if any

development or change in legislation could impact them negatively (Thomlinson & Crouch, 2012).

Another key step came with the Berger Inquiry (1974-1977) into the proposed MacKenzie Valley pipeline, where the preservation and management of wildlife and the conservation of Aboriginal culture and livelihood were first suggested to be inherently linked (Dearden and Langdon, 2009; Thomlinson & Crouch, 2012). Parks Canada addressed the Berger Inquiry by stating the need to "reduce the impact of park establishment on occupants or other users of lands acquired for a national park" and hinted at the possibility of co-management for the first time (Dearden and Langdon, 2009; Thomlinson & Crouch, 2012). The Canadian Federal government followed through in 1982, with the addition of the Canadian Charter of Rights and Freedoms, specifically Section 35 of the Constitution Act (GoC, 1982). The Constitution Act ushered in new rights for Aboriginal people, most relevant to protected areas, is that the "property rights, customary laws, and governmental institutional of Aboriginal peoples were assumed to survive the Crown's acquisition of North American territories" (Dearden and Langdon, 2009). Since the creation of Section 35, Dearden and Berg (1993) believe that "it is the [First Nations] that would now appear to be most powerful in their influence wherever national parks exists with land claim areas" and have become the principal driver in national park creation. This was to be the case with Gwaii Haanas, where the Haida were the driving force behind its creation (Thomlinson & Crouch, 2012). Following the Constitution Act more advances were made in policy and practice to allow for a better working relationship between the Aboriginal peoples and numerous federal and

provincial resource management agencies, including Parks Canada.

Most notably, the 1994 revision of Parks Canada's *Guiding Principles and Operational Policies* emphasized the need to work with Aboriginal and local people during the establishment and continued management of protected areas (Dearden and Langdon, 2009; Parks Canada, 1994). Furthermore, some Aboriginal groups regained the right to traditionally hunt, harvest and fish in national parks (Thomlinson & Crouch, 2012; Parks Canada, 1994). The revised policies opened the door to co-management that would respect the traditional uses and occupancy of land. Any new national park on traditional Aboriginal land would be required to go through proper consultation with Aboriginal communities. There are numerous other policies in the Guiding Principles and Operational Policies that addressed Aboriginal interests including the incorporation of traditional ecologic knowledge and its value to park management (Parks Canada, 1994).

The 1997 National Parks System Plan addressed the dual role protected areas can play, by both conserving representative natural areas while meeting "the specific needs of native communities" (Parks Canada, 1997). The systems plan continues to state how cooperative management approaches should "reflect Aboriginal rights and regional circumstances" (Parks Canada, 1997). Also in 1997 came the Supreme Court of Canada ruling of the Delgamuukw case, which was concerned with extent and content of Aboriginal title as stated in the *Constitution Act* (1982). The court ruled that oral history could be used to demonstrate continued occupation when concerning Aboriginal title over land and water. Perhaps more significantly, the case also ruled "Aboriginal title had not been

extinguished by colonization or settlement" (Takeda & Ropke, 2010). This was another defining case concerning Aboriginal title claims, which directly influences the Haida title case, and consequently Gwaii Haanas.

In 2001 there were several amendments made to the *National Park Act* that affects Aboriginals usage, engagement and consultation. A key change was that in areas where final land-claims had not yet been issued, Aboriginal communities and organizations are required to be consulted prior to the establishment/continued management of a protected area. On top of this, Aboriginals are now able to harvest, hunt, catch and trap traditionally within protected areas throughout Canada.

In 2002 the *NMCA Act* was passed and is administered by Parks Canada. It would eventually pave the way for the creation of Gwaii Haanas NMCAR, and there are certain sections of the Act that warrant focus. The *NMCA Act* varies drastically from the *Parks Canada Act* (GoC, 2000) in many respects. As the *NMCA Act* was being developed it became clear that managing marine and terrestrial environments required different strategies. One aspect that vastly differs between the two acts concerns resource extraction. Terrestrial national park (reserves) allow for "traditional renewable resource harvesting activities by Aboriginal persons" (Section 40- GoC, 2000), but otherwise have a minimal amount of resource extraction. For instance, commercial fisheries are not allowed to operate in national park (reserves), but recreational fishing is allowed in certain locations (GoC, 2000). This differs from NMCA(R)'s that allow sustainable commercial resource extraction with prohibitions only being placed on the exploitation

and exploration of "hydrocarbons, minerals, aggregates or any other inorganic matter within a marine conservation area" (Section 18 – GoC, 2002). NMCA(R)'s, like Gwaii Haanas, are not intended to be completely no-take areas, but instead be multi-use areas with conservation objectives central to their management. This is highlighted in Section 4(4) of the *NMCA Act* which states that NMCA(R)'s will be divided into zones.

> "Each marine conservation area shall be divided into zones, which must include at least one zone that fosters and encourages ecologically sustainable use of marine resources and at least one zone that fully protects special features or sensitive elements of ecosystems, and may include other types of zones" (GoC, 2002).

The *NMCA Act* also discusses how the Minister of the Environment may enter into agreements with other bodies, including aboriginal governments, to carry out the purpose of the Act (Section 8(4) - GoC, 2002). The Minister of the Environment administers this legislation, but is not the sole Minister with decision-making powers under the *NMCA Act*. For example under Sections 9(4)(4.1); 15 (2)(3) and 16(2) the DFO Minister and Minister of Transport maintain their mandated authority over the marine environment under their specific legislation. One limitation the Minister of the Environment faces is found in Section 16(2) which states that matters concerning "fisheries management and conservation or restricting or prohibiting fishing or aquaculture may be made only on the recommendation of the Minister [of the Environment] and the Minister of Fisheries and Oceans" (Government of Canada, 2002). This Section is important because it highlights why NMCA(R)'s like Gwaii Haanas require DFO representation. It also clarifies why DFO maintains the decision-making authority regarding fisheries, such as the herring in Gwaii Haanas, despite the area being largely administered by Parks Canada under

Canadian Law. The importance of these Acts are reiterated in Section 2.5.2, and further analyzed in Section 5.

What should be stated, if simply to add context, is that the federal government has three mechanisms to create MPA's. As was just covered, Parks Canada, and consequently the Minister of the Environment, can create NMCA(R)'s through the *NMCA Act*. Environment Canada can also create National Marine Wildlife Areas after an amendment was made in 1994 to the *Canada Wildlife Act* (Dearden & Canessa, 2009). DFO is also capable of creating national MPA's under the *Oceans Act*. All of these types of protected areas have a different set of representative areas, potentially complicating marine spatial planning. In British Columbia, the provincial government can also establish MPA's. An attempt to coordinate these different groups was made nationally, and is covered in Section 2.5.2.

Gwaii Haanas was and continues to be at the forefront of creating a true cooperative management regime. The following section goes into the history of Haida Gwaii, exploring the ancient past and the events ahead of European "discovery". It goes onto describing the incidents that led to the formation of Gwaii Haanas as it is today, revealing the effort it took to protect the area.

2.3 Haida Gwaii – Islands of the People

The intent of this section is to give a concise review of Haida Gwaii's ancient past and an overview of some of the key events leading up to the formation of Gwaii Haanas. It is believed that in order to fully understand the complex nature behind the AMB's

functioning and the roles of each party, a rudimentary grasp of the archipelago's history is needed. This section begins by touching on the Western and traditional Haida points of view of Haida Gwaii's ancient past. The impacts of the fur trade and subsequent colonization are then briefly investigated. This leads to the final portion that examines the events that led up to the formation of Gwaii Haanas.

2.3.1 Haida Gwaii's Ancient Past

There are two principle views on when and how Haida Gwaii was originally populated based on both western science and *K'aygang.nga* (Haida oral tradition) (Fedje & Matthewes 2005; Wilson & Harris, 2005; Lee, 2012). Each offers a somewhat unique perspective on the history of the archipelago, however it is increasingly being found that each knowledge set is complimentary to each other. Throughout the British Columbian coast, traditional oral stories coincide with geologic and archeological evidence. As an example, past earthquakes and tsunamis are well documented in the geologic record and oral traditions (McMillian & Hutchinson, 2002). This section will focus primarily on the archeological and documented history and will attempt to tie in certain Haida stories where applicable.

A theory of how Haida Gwaii came to be populated suggests a migration through the Hecate Straight following the last ice age, around 12 000 years ago, based on both geologic and archeological findings (Fladmark, 1975; Fedje & Matthewes 2005; Sloan, 2014). This theory surmises that due to the glacial retreat and low sea-levels an open coastal plain would have been exposed between Haida Gwaii and the mainland, thereby facilitating colonization (Fladmark, 1975; Fedje & Matthewes, 2005). A fluctuating

coastline due to sea-level changes has made archeology somewhat difficult; however, based on radio carbon dating it is widely accepted that people were living on Haida Gwaii at least 10 500 BP, perhaps even earlier (Fedje & Matthewes, 2005; Hume, 2014). Indications of an early human maritime adaptation on Haida Gwaii occur in what is known as the Kiingii Complex (~9 500 – 8 900 BP). Sea-levels fluctuated dramatically during this time with some sites being found in present day intertidal zones and others, perhaps, to 15m above current sea-level. During this period the Haida would have seen a fluctuation of around 4-5m (Lee, 2012). During the Late Moresby Tradition (~8 000 – 5000BP) stone technology remained largely unchanged, however, though activity sites, such as middens and structural features, became more prominent. The arrival of cedar trees allowed for technologies to evolve and develop (Lee, 2012). The Late Graham Tradition (~2 000 – 200BP) saw the development of intricate woodworking, large habitation, extensive warfare and complex trade (Fedje & Matthewes, 2005). The establishment of complex trade routes facilitated the development of the coming fur trade of the 1700's when the first European explorers arrived.

Traditional stories, in this case *K'aaygang.nga,* have been found to coincide with history as told by western science. *K'aaygang.nga* is also able to "provide information that cannot be easily obtained, or can be completely missed by the methods of archeology and geology" (Wilson & Harris, 2005). The depth of this traditional knowledge will never be fully known. Due to the impacts of colonialism much of the original knowledge base has been eroded away. The ramifications of residential schools, banning of potlatches, diseases, shifts in traditional economics/family structure, among other impacts are still

being felt (Wilson & Harris, 2005). In spite of this, there is substantial amount of applicable knowledge remaining. The subjects of these stories vary from one to another. Some of them touch on the usage of plants, the origin of family lineages and even the beginnings of Haida Gwaii itself. Stories such as "The Story of the Mountain Goats" or "The Dead Tree" reveal the glacial/post-glacial landscape on Haida Gwaii. Stories relating to sea-level rise, tsunamis and earthquakes are also extensive in *K'aaygang.nga* (Wilson & Harris, 2005). It is not the place of this study to recount these stories as they belong to the Haida, however Wilson & Harris (2005) have selected some and related them to western knowledge. Their continued application in management strategies may assist in revealing the potential usefulness of the *K'aaygang.nga* and the knowledge it contains. These ancient stories have survived throughout many generations, however as was stated, with the advent of European contact, Haida culture was significantly impacted. It should be reiterated that Section 2.3.1 is only covering a brief history of Haida Gwaii, where the underlying complexities and a much richer chronicle have been extensively addressed by other studies (McKechnie *et al*., 2014; Wilson & Harris, 2005; Fedje & Matthewes, 2005).

2.3.2 Sea Otter fur trade and impacts of colonialism

The impacts of European contact in North America are innumerable and are continually being reassessed. The first Europeans to make contact with the Haida came from Spain on July 18, 1774 (Sloan & Dick, 2012; Sloan, 2014). A peaceful exchange unfolded between the two peoples, revealing for the first time the natural wealth that surrounded the North-West coast of the America's to the Europeans. The material that proved to be the most lucrative was the sea otter pelts (Sloan & Dick, 2012). These pelts were highly

sought after by the Chinese and became an essential part of maritime trade. Sea otter pelts had traditionally been used by the Haida and other coastal people. They were used to adorn traditional ceremonial clothing and were usually worn by people of high status. In 1787 the first British trading ship arrived on Haida Gwaii's shores with the intention to trade for furs, specifically otter pelts. The vessel *Queen Charlotte*, commanded by Captain George Dixon, would later give the archipelago its colonial name (Sloan & Dick, 2012; Lee 2012). The pelt trade began in earnest around 1785 and lasted until 1840. Mostly British and some American traders engaged in what would become one of the most intensive and profitable fur trades. Single vessels would acquire 1000-3000 pelts during each visit. In return the Haida were acquiring goods such as firearms, fishing gear, cloths, tools and tobacco. The peak of the trade came in 1805-06, where roughly 18 000 pelts had been collected. Driven by global trade, the rapid decline of sea otter populations became inevitable. Although the traders were becoming aware of the increasing scarcity of the pelts, the hunt continued. Slowly, trade decreased as demand and availability for the pelts diminished. Nevertheless**,** significant damage had been done to the fragile ecology of Haida Gwaii from the pelt trade. The sea otter would soon become extirpated from Haida Gwaii with remaining populations being found along the Alaskan and southern mainland coasts.

By the mid-1800's the majority of large trading ships stopped coming to Haida Gwaii. The enormous quantities of otter pelts were no longer available, however the transmission of disease became increasingly rampant. Prior to 1774, the population of Haida Gwaii is estimated to have been between 14,500 – 30,000, with the later being more widely

accepted (Sloan, 2014). Following the small pox epidemic of 1862-63, in which 80% of the North-West indigenous population were decimated, only 600 Haida remained by 1915 (Lee, 2012). This epidemic not only reduced the Haida's ability to remain competitive traders but clearly had wider implications on their traditional way of life and sovereignty. A significant amount of oral knowledge, tradition, and culture were lost during this time. Those with knowledge died before being able to pass it on. The social fabric of the communities was uprooted as hereditary lines became disrupted, leaving clans in precarious states. The damage brought on by diseases became exacerbated when the Canadian government, missionaries and an influx of migrants began imposing their principles, policies, and ideologies on the Haida people. The British claimed Haida Gwaii as their territory in 1853 without consulting the Haida or any relinquishment of title actually taking place. In 1884 the Federal government banned the potlatch under the *Indian Act* (Lee, 2012). The potlatch is an essential piece of Haida culture. It allows for the re-distribution of wealth, the establishment of social dynamics and governance (Lee, 2012) This section of the law was only repealed in 1951.

At the turn of the 20th century the Haida had lost a substantial amount of control over their land. The Haida people, which previously occupied numerous villages throughout the archipelago, were consolidated into two of the last remaining villages, Skidegate and Old Masset, which would later become reserves under the *Indian Act* (Lee, 2012). Industrial logging and fishing became widespread, often unmanaged and unchecked. Similar to the sea otters, Haida Gwaii's forests were now being harvested at an unsustainable rate.

2.3.3 From logging, to Lyell Island and then Gwaii Haanas

In 1940 through to 1960 Aboriginal people gained rights both domestically and internationally, coinciding with a change in how environmental resources should be managed (Takeda & Ropke, 2010; Dearden & Langdon, 2009). In British Columbia, 110% of the land was subject to First Nation land-claim, due to a large degree of overlap between First Nations traditional territories. Despite this, the Province believed that "accumulated events over the past century" had extinguished Aboriginal title rights (Ace, 2008; Takeda & Ropke, 2010). Logging and other forms of resource extraction across the Province were in direct violation of "Great Britain's Royal Proclamation of 1763 which called for a formal agreement or treaty to be signed before an indigenous population could be disturbed from their title to the land" (Takeda & Ropka, 2010). This had only been done with roughly 3% of BC First Nations.

The provincial government saw the post-World War II economic boom and demand for timber as an opportunity for the Province, with areas like Haida Gwaii being planned for exploitation (Jackson and Curry, 2004; Takeda & Ropke, 2010). In 1974 the debate on sustainable harvest reached Haida Gwaii's shores (Takeda & Ropke, 2010; CHN[a], 2010; Lee, 2012). An island around northern Moresby, called Talunkwun, had been extensively logged in 1974. This severely damaged the surrounding ecosystems, including salmon streams and left the land susceptible to erosive processes (Lee, 2012; Sloan, 2014). With plans to move logging to Burnaby Island, the Skidegate Band Council organized a meeting between themselves, the newly formed Island Protection Society (IPS) and the logging company who held the Tree Farming License (TFL), Rayonier (CHN[a], 2010;

Lee, 2012; Porter-Bopp, 2006; Personal communication with Guujaaw, 2014). It was here that the IPS first proposed that South Moresby, referred to as Gwaii Haanas, should be protected under the *South Moresby Wilderness Proposal* (CHN[a], 2010; Lee, 2012; Porter-Bopp, 2006). This proposal was agreed upon by the Skidegate Band Council, and later verbally agreed to by Premier Dave Barrett; however, this agreement only delayed logging on Haida Gwaii (CHN[a], 2010; Porter-Bopp, 2006). The CHN was formed in the later part of 1974. It was to be a unified voice for the Haida and quickly became a political force by challenging the federal government over comprehensive land-claim titles (Takeda & Ropke, 2010; Lee, 2012; Porter-Bopp, 2006). With the Haida Nation coming together to stop logging on Burnaby Island, the logging companies turned to Lyell Island (*Athlii Gwaii*) in 1975 (Sloan, 2014; Takeda & Ropke, 2010; Lee, 2012). The planned logging of Lyell Island sparked what would become a defining moment for Haida Gwaii, Parks Canada and Aboriginal rights.

Logging began on Lyell Island in 1975 despite condemnation from the Haida and environmentalists (CHN[a], 2010; Lee, 2012; Porter-Bopp, 2006). Rayonier's TFL expired in 1978 allowing room for Chief T'aanuu (Nathan Young) and Guujaaw to take Rayonier and the Minister of Forests to court (CHN[a], 2010). "Timber barons were the kings them days, and everybody was beholden to them." (Personal Communication with Guujaaw, 2014). The Supreme Court of BC suggested a meeting between the parties take place before a renewal was issued. During this meeting the Haida proposed certain clauses, which both parties subsequently agreed upon. The court seeing this believed the Haida's concerns were dealt with and reissued the TFL. A day later the company dropped all clauses. The Haida appealed to the Supreme Court of Canada but lost, with the ruling that

it was a provincial issue (CHN[a], 2010; Personal Communication with Guujaaw, 2014; Porter-Bopp, 2006). Logging was to continue.

In 1985 the conflict came to a crescendo. Despite protests and the formation of the Haida Gwaii Watchmen Program (See Section 2.5.1(b)), logging went unabated (CHN[a], 2010; Lee, 2012; Thomlinson & Crouch, 2012; Personal Communication with Guujaaw, 2014). The provincial Minister of the Environment stated that logging should stop in 40 days or the "Haida shall consider it an act of aggression" (Porter-Bopp, 2006). The Province later reneged on these statements and issued three new licenses and logging was set to continue in October of that year (CHN[a], 2010; Porter-Bopp, 2006). With confidence in the provincial government all but gone, the Haida prepared to block logging roads on Lyell Island (Sloan, 2014; CHN[a], 2010; Porter-Bopp, 2006). On October 28th, 1985 the first group of Haida went out to Lyell Island to build cabins and prepare for the blockade. RCMP officers were brought in and the first arrested were elders Ethel Jones, Gaahlaay (Watson Price), Ada Yovanovich and Adolphus Marks, in what was to become a very evocative moment. With intense media coverage new information and allegations began to surface. It was alleged by the Haida that the majority of the cabinet, including the Premier, had shares in Western Forest Products, who now held the TFL to Lyell Island (CHN[a], 2010; Personal Communication with Guujaaw, 2014). With growing scrutiny of the provincial government, the new Premier Vander Zalm who had replaced Premier Bill Bennett in 1986, saw the need to end the conflict. It was becoming "more and more of an embarrassment" and a political liability for them (Lee, 2012; CHN[a], 2010; Personal

Communication with Guujaaw, 2014). The blockade ended in late November 1985 (Porter-Bopp, 2006).

A long process of intense negotiations followed between Canada and BC and in 1986 federal Minister of Environment Tom McMillan announced in Skidegate that the provincial and federal agreed to designate South Moresby a national park (CHN[a], 2010; Porter-Bopp, 2006). This announcement led to the signing of the *South Moresby Memorandum of Understanding* in July 1987 between the provincial and federal governments. It would stop logging and committed the governments to the protection of Gwaii Haanas' terrestrial and marine environments (Porter-Bopp, 2006; CHN 2010[a]; Parks Canada, 2012; Parks Canada 2007). A series of sub-agreements also provided for compensation and assistance in the transition to a new conservation-based economy. Although logging stopped, a new debate came to the forefront. Who had sovereignty to manage South Moresby, was it the Government of Canada or the Haida? This is a continuing debate, and one that is central to this thesis.

Initially there was strong opposition towards the formation of a national park by both the Haida and the BC government. Neither party wanted to relinquish control over the territory, especially the Haida. The Haida also did not want South Moresby to become a tourist hotspot, as they believed the ecology would not be able to handle such pressures (Personal Communication, 2014). Despite the CHN's disproval over how vague the discussions were regarding governance, the *South Moresby Agreement* was signed in 1988 finalizing the land transfer between the provincial and federal government (Porter-Bopp, 2006). With it came a $106 million fund that was used to compensate logging

companies, aid in transition funding and social infrastructure, as well as a $32 million fund to stimulate the local economy (CHN[a], 2010).

The protection of South Moresby was insured now that the *South Moresby Agreement* had been signed. However, who was to manage the territory was still to be decided. A major issue for the CHN revolved around the ability for the federal Minister of the Environment (who is responsible for Parks Canada), to be the final decision-making authority in a protected areas, as stated in the under the *National Parks Act* (Porter-Bopp, 2006). Without equal representation and decision-making authority the CHN were not willing to sign any agreement. The Haida began managing the area themselves through the Watchmen Program in 1988, introducing fees, permits and tours throughout South Moresby. The Government of Canada would finally propose a National Park Reserve with joint management in 1989. This was a significant leap forward in the negotiations. With the area being designated a "national park reserve", rather than just "national park", the Haida would maintain their land claim on South Moresby as well as the ability to use it for traditional purposes such as hunting, harvesting, trapping and collecting materials to promote their culture. A referendum was held amongst the Haida to decide whether this new offer was acceptable, and it passed. The *Gwaii Haanas Agreement* was signed in 1993 between the Government of Canada and the CHN. In this agreement, Section 2.6 included the provision for the creation of a National Marine Park (GoC & CHN, 1993). What lacked at the time was legislation for such a marine protected area to be created. This took until 2002 with the passing of the *NMCA Act*.

2.5 Gwaii Haanas

This section continues the narrative of Gwaii Haanas and Haida Gwaii since 1993. There were many important events following the establishment of Gwaii Haanas, such as the transfer of the Watchmen program management to the AMB, the signing of the *Haida Gwaii Strategic Land Use Agreement*, the court challenge by Moresby Explorers Ltd. v. Canada, as well as the establishment of novel management strategies in Gwaii Haanas. While not all directly influencing Gwaii Haanas' management per say, they do illuminate some of the contentious issues that will be explored in the Analysis Section; such as, the delegation of decision-making authority, land claim over Haida Gwaii, and current Gwaii Haanas management strategies.

2.5.1 After the creation of Gwaii Haanas - Agreements, planning and court cases

At the signing of the *Gwaii Haanas Agreement,* the Gwaii Haanas Terrestrial component was officially established. In it the Government of Canada and the Haida Nation continue to see Haida Gwaii as their independent and sovereign territory. Both parties mutually "agree that long-term protective measures are essential to safeguard the Archipelago [Gwaii Haanas] as one of the world's great natural and cultural treasures, and that the highest standards of protection and preservation should be applied" (Gwaii Haanas Agreement, 1993). The *Gwaii Haanas Agreement* also put forth innovative and progressive steps by being the first "nation-to-nation cooperative protected-area management for Canada" (Sloan, 2014; Takeda & Ropke, 2010). Under Section 4.0 of the *Gwaii Haanas Agreement,* the AMB was established. The cooperative board was tasked with creating the management plans, purpose and objective statements, monitoring cultural and traditional use activities, equally distributing economic and employment

benefits - with a focus on Haida communities - as well as other administrative tasks. The initial Board was made up of 4 individuals, 2 from each party ensuring equal representation. Operating on a consensus-based model, the Board makes recommendations to each party's higher authorities, either the CHN President or the Minister of the Environment (Government of Canada). Once approved the recommendations would be put into action. What is essential to note for this study is Sections 5.3-5.5 of the Agreement, which discusses the procedures of when a clear and final disagreement occurs. Section 5.3 of the agreement state that:

> "In the event of a clear and final disagreement of AMB members on a matter, related decisions and any actions arising will be held in abeyance, and will be referred to the Council of the Haida Nation and to the Government of Canada to attempt to reach agreement on the matter in good faith. The parties may request the assistance of an agreed neutral third party(ies) in attempting to reach an agreement."

It continues in Sections 5.4 and 5.5 that the AMB shall continue to operate as normal until a final decision has been made by higher-level authorities. This process had never been initiated prior to the current situation involving the herring fishery. The implications of this process on the decision-making authority and the AMB's power over Gwaii Haanas will be explored in the Analysis Section. Since the signing of the *Gwaii Haanas Agreement* there have been numerous challenges, disagreements, as well as opportunities, including the establishment of important programs, continued trust building, pivotal court rulings and protests, all affecting Gwaii Haanas' management both internally and externally.

Despite the creation of Gwaii Haanas NPR, issues still revolved around land use, especially in forestry and fisheries sectors around Haida Gwaii. For instance, in 1995 it was seen that timber was being harvested 2.2 times faster than what is sustainable over the long-term on Haida Gwaii (Takeda & Ropke, 2010). Consequently, the CHN brought the BC government to court over the renewal of the largest TFL on Haida Gwaii, TFL 39. It took until 2001 for the BC Court of Appeal to rule that Aboriginal title has not been extinguished until proven otherwise, and that the Province and industry needed to consult with the Haida Nation regarding TFL 39 and future TFL's (CHN[a], 2010). While this was happening a co-chaired land use planning process between the CHN and the BC government began (CHN[a], 2010; Takeda & Ropke, 2010; Lee, 2012). The overall goal was to put in place a comprehensive plan for the future development of Haida Gwaii. According to Takeda & Ropke (2010) the BC government had other motives as well, such as "the need to resolve rising conflict and falling profits in the forest industry." More importantly it "aspired to many of the conditions for creating a power-neutral forum" allowing for meaningful engagement by Haida leaders, the CHN, local community members and businesses.

The process began in earnest in 2003. The BC government and the CHN began the co-chaired Haida Gwaii Land Use Planning process that brought together 29 members representing tourism, forestry, environment, CHN, minning and local/provincial governments (Lee, 2012). What is important to note is how the CHN affirmed their title claim and were recognized by the Province as a sovereign authority (Takeda & Ropke, 2010). This process was very thorough; however, it was to be undermined by the BC

government and the forestry industry (Takeda & Ropke, 2010). The court case regarding TFL 39 had risen to Supreme Court of Canada by this point. In 2004, during the final appeal, the Court ruled that the Haida Nation should have been and should now be consulted by the Province and companies with regards to the renewal of TFL 39 and subsequent TFL licenses on Haida Gwaii (Takeda & Ropke, 2010).

Despite this ruling, the Province had in the meantime removed a large portion of its responsibilities with regards to TFL's and had placed the industry in charge. Consequently, when the license for TFL 39 was transferred between companies without rightful consultation with the Haida only weeks after the Supreme Court ruling, there was strong opposition throughout Haida Gwaii. The issue reached a boiling point after the Province then allowed logging in culturally important areas, in direct contradiction of the *Haida Land Use Vision* (Takeda & Ropke, 2010). This sparked the Island Rising Campaign, something very reminiscent to the Lyell Island protest only 30 years prior. Blockades were established, preventing loggers and Provincial Forestry employees from going to work. Because of the Supreme Court ruling, the Haida had a significant amount of legal strength behind their movement and quickly gained support from environmentalists, other First Nations and international NGO's. Eventually, three years after the blockade, the *Haida Gwaii Strategic Land Use Agreement* was signed between the Province and the CHN (CHN[a], 2010; Takeda & Ropke, 2010). This 2007 Agreement placed over 50% of Haida Gwaii in protected areas, with the entirety of the archipelago being managed based on ecosystem based management (EBM) principles (CHN[a], 2010; Takeda & Ropke, 2010). It was fully consistent with the *Haida Land Use Vision*,

coinciding with cultural, economic and environmental objectives. The signing of this agreement was arguably the largest step forward in collaborative management between the CHN and the Province, and speaks to the amount of change that has occurred since the establishment of Gwaii Haanas and the effort and leadership that allowed it to happen.

After the *Haida Gwaii Strategic Land Use Agreement* had been signed Haida Gwaii was faced with another court case in 2001. South Moresby Explorers, a local tourism company operating in the protected area, brought Gwaii Haanas management to court. They alleged the Superintendent illegally enacted a user quota by refusing Moresby Explorers' application for quota for its float camp. The quota was first put in place in 1993 to "freeze business at existing levels until the impact of those activities on the Park's ecological and cultural integrity and the quality of the visitor experience could be assessed" (Moresby Explorers Ltd. v. Canada, 2001). The conflict revolving around the float camp began in 1989 when the camp was first built in the proposed Gwaii Haanas Marine area. After being forced to move their camp in 1998 by Parks Canada and having been refused user quota in 1989, 1998 and 2001, Moresby Explorers applied for judicial review (Moresby Explorers Ltd. v. Canada, 2001). This court case has some parallels to what is now occurring with regards to the final and clear disagreement on the herring fishery and should be examined.

Questions around fettering decision-making authority and around jurisdictional boundaries were central to this case. Moresby Explorers claimed that the Superintendent, as delegate of the Minister's authority, wrongfully delegated her decision-making

authority to the AMB with regard to user quotas. The court first ruled that it was within the Superintendents power to refuse quota allocation under the *National Parks Act* "in order to preserve [Gwaii Haanas] for future generations and maintain its ecological integrity" (Moresby Explorers Ltd. v. Canada, 2001). Furthermore, the court ruled that policy decisions, such as limiting quota, are not justiciable because "pure policy decisions […] engage the political accountability of those who make such decisions" and that "courts are reluctant to interfere with "political decisions" except in response to a constitutional challenge to their validity" (Moresby Explorers Ltd. v. Canada, 2001). The court did rule however that the *Gwaii Haanas Agreement* was legally insufficient for the Superintendent to delegate her decision-making authority to the AMB. The court put forward that it would be illogical for any party on the AMB to completely delegate their decision making power to the AMB because it would undermine each parties authority and thereby the reason for the AMB existence. In other words, the CHN and the Government of Canada regard themselves as separate entities, with equal claim to govern, administer and manage Haida Gwaii. The court found that the AMB is a tool by which each party can act under its own authority to influence the decision-making and administration of Gwaii Haanas, while still remaining independent and maintaining their case for a final land claim. If either party delegates its decision making authority completely to the AMB then that party would essentially stop playing a role in Gwaii Haanas' management because the representatives would now be independant from that party.

Somewhat removed from this thesis is the ruling by the court claiming the Superintendent did over exercise her powers by refusing quota once the float camp was outside of Gwaii Haanas' boundaries. From this court case, the complexities surrounding the AMB came to light. Perhaps underappreciated at the time, this was an important ruling by the court with regards to the limits of the AMB's power and the legal strength of the *Gwaii Haanas Agreement*. It reiterated the purpose of the AMB as a cooperative management tool and not a separate entity in of itself. This is an important distinction that will be made clearer in the Analysis Section with regards to the herring fishery, and how certain potential solutions are unworkable.

2.5.1 After the creation of Gwaii Haanas - Major Projects in Gwaii Haanas

As active as the political and judicial sectors were in Haida Gwaii since 1993, the AMB continued to operate and lead the creation of important programs to manage and protect Gwaii Haanas' ecologic fragility and cultural significance. One major program that has been managed by the AMB since 1993 is the Gwaii Haanas Watchmen program. Originally created by the CHN before the establishment of Gwaii Haanas, this program has two important roles (CHN[a], 2010; AMB, 2010[a]). First it provides a way of continuing Haida presence, connection and culture at their traditional villages and sacred sites. Haida Nation members go to K'uuna Llnagaay (Skedans), T'aanuu Llnagaay (Tanu), Hlk'yah GawGa (Windy Bay), Gandll K'in Gwaay.yaay (Hotspring Island) or the World Heritage Site SGang Gwaay Llnagaay (Anthony Island) between May and October (Parks Canada, 2013). Going in groups of three or more, for at least a month, young and old Haida get to reconnect to their past (Personal Communication with Mr. Jason Alsop, 2014). The second service the Watchmen program provides is one of cultural

conservation and monitoring. By maintaining a presence at these sites, visitors can be guided through Haida history and traditional knowledge, while at the same time Watchmen making sure the sites are being respected. As the sites age they naturally decay. This can be minimized as the Haida Watchmen often remove vegetation that can deteriorate the cultural sites.

The program has largely been successful, although there are some recent challenges. For example, more and more elders are becoming less interested in participating, leaving youth without the cultural exchange the program that was originally intended to have (Personal Communication, 2014). A Parks Canada official said (Personal Communication with Mr.Dave Argument, 2014) that even though the program has been extremely successful, there are areas where changes could be made. For instance, having the Watchmen expand the interpretative parts for visitors, or by having the Watchmen more engaged in monitoring programs, by having them observe and record ecologic data. The official said this would require work by both parties but believes it would be a positive step for the protected area. That aside, the Watchmen program has been a point of pride in Gwaii Haanas.

Two other more recent programs are the Yahguudang Dlljuu (A Respectful Act) restoration program on Tllga Kun Gwaayaay (Lyell Island) and the SGin Xaana Sdiihltl'lxa (Night Birds Returning) program that is an attempt to save the endangered murrelets. Both are largely funded by Parks Canada's "National Action-on-the-Ground" program that is "concerned with the protection and restoration of our ecosystem,

maintenance and sustainability of our ecologic integrity but also the involvement of visitor experience and education to the public" (Personal Communication with Mr. David Argument, 2014). The Lyell Island restoration project is focused on re-establishing stream complexity to facilitate the return of salmon spawning. The original logging that had taken place on Lyell Island significantly damaged the streams. Logs would have been skidded down the stream channels, in the process destroying the necessary pools, ripples and beds needed for salmon spawn. The main goal is to return the ecosystem back to a state that, as closely as possible, replicates the conditions before logging had been conducted. To do this, logs were placed in the stream, replicating fallen old-growth, stands around the stream were thinned to increase diversity and allow for trees to grow. This labour-intensive program was relatively successful, with around 5 km of stream being reclaimed (Personal Communication with Mr. David Argument, 2014).

The second program, the Nightbird Returning - unofficially called the "Rat Eradication Project" - is the larger of the Action-on-the-Ground programs in Gwaii Haanas. As was covered in Section 1.2.2, rats are an invasive species that have devastated murrelet populations throughout the archipelago. Initial steps were taken in 2011 to begin removing rats off islands in Gwaii Haanas that previously had abundant murrelet populations. After using rodenticide for three months on Bischof and Arichika Islands, a noticeable reduction in rat populations was observed (Personal Communication with Mr. David Argument, 2014). As of 2014, there have been no signs of rats, but at the time of writing it was to early to tell if it was completely successful (Personal Communication with Mr. David Argument, 2014).

As monitoring continued, the program expanded to begin aerial broadcasts of bait containing rodenticide on the larger Murchison and Faraday Islands in 2013. Mr. Argument believes that it has also been really successful in terms of creating awareness of Gwaii Haanas. “We’ve had some really big success in our outreach efforts, a lot of media attention things like that.” “Everything looks like it went off smoothly and some of our international experts told us that they gave us great reviews and that it was perfectly executed and they believe there shouldn’t be a problem. So that was a big success” (Personal communication with Mr. David Argument, 2014). The true success remains to be seen though, as rodenticide aerial broadcasts have never been attempted before in this habitat. One area of concern is the intercept of rodenticide by the thick canopy. If the pellets do not reach the ground, the rats will clearly not be affected. That being said, rat populations on these islands following the aerial broadcast were largely diminished, to the point where they are undetectable using Parks Canada’s current methods. Mr. David Argument says that it is to early to tell if the rats were completely eradicated, and it will take 2 years before the populations may reach detectable levels again. Monitoring is continuing to help inform management of how successful the program was and what may need to change in the future.

There was a significant amount of trust built between Parks Canada and the CHN during the period 1993-2010. Trust and relationship building is imperative for any cooperative management regime, as stated in Section 2.1.1. The successes of these programs played an important role in developing that trust, but what was also important was a strong and

functional AMB. In 2010 the AMB was expanded to include a DFO and another CHN representative with the establishment of the Gwaii Haanas NMCAR.

2.5.2 Gwaii Haanas National Marine Conservation Area Reserve

In January 2010 the *Gwaii Haanas Marine Agreement* was signed by the CHN and the Government of Canada (CHN[a], 2010). With the addition of the National Marine Conservation Area component, Gwaii Haanas became the first protected area in Canada to be managed from "mountain top to sea floor", covering "nearly 5,000km^2 (1,500km^2 of land and 3,500km^2 of seas) (AMB[b], 2010; Sloan, 2014). Much had to be developed concerning marine management around Haida Gwaii before its establishment. In a lot of ways, it continues to develop.

The creation of Gwaii Haanas Marine component was envisioned in the original agreement with the Province of BC and began in earnest with the signing of the *Gwaii Haanas Agreement* between Canada and the CHN in 1993. In it, Parks Canada called for the creation of a marine park to coincide with the terrestrial portion of Gwaii Haanas, while CHN agreed the waters required proper management and protection (Section 1.1 of the *Gwaii Haanas Agreement*). How the Gwaii Haanas Marine component was to be established was unknown for there was a lack in federal legislation and unclear understanding of who needed to be involved. What could be reasonably assumed was that DFO would be playing a role in its management to some capacity. Inadvertent steps towards building a cooperative relationship between DFO and the CHN for Gwaii Haanas Marine began in 1994 over the management of the razor clam fishery. As Lee (2012)

points out - “In many respects, the razor clam fishery was an easy win for both parties because the fishery occurs exclusively on the beaches of northeast Haida Gwaii and over 95% of the fishers are Haida”. She continues to explain that the CHN was then put in control of allocating fishing licenses, conducting monitoring and surveys. She stated that this had “potential to set precedent for future co-management of other fisheries between the CHN and federal agencies within Haida territory” (Lee, 2012).

During this time there was movement going on at the federal level with the signing of the *Oceans Act* in 1996. This ambitious act was the first to aim for the protection of a nations seascape. With DFO as the lead agency, the *Oceans Act* was to use an integrative approach, precautionary principles, and EBM to establish “the sustainable development of oceans and their resources” and MPA’s (DFO, 2002; Dearden & Canessa, 2009). DFO was meant to work with other groups, agencies and communities while applying the *Oceans Act* (DFO, 2002). The *Oceans Act* reinforced DFO’s original mandate as laid out in the long-standing *Fisheries Act*. Under the *Fisheries Act,* DFO has three major responsibilities. The first is the conservation of fisheries, the second is supporting the continued use of Aboriginal subsistence and the third is for the development of commercial and recreational fisheries (Sloan, 2014). The *Oceans Act* was seen as a significant step in the management of Canada’s ocean environment on an ecosystem basis. Meanwhile, there continued to be troubles in fisheries management around Haida Gwaii. Perhaps most notably is *Operation Herring Storm* in 1998. This event, along with the history and biology of herring will be covered in Section 2.6, but what is important to note is that in 1998 there remained significant differences in how DFO and the Haida

believed fisheries should be managed. Nonetheless, following *Operation Herring Storm*, a Canadian wide oceans strategy continued to develop, which culminated in the *Canada Ocean Strategy* (DFO, 2002).

The *Canada Oceans Strategy* was a response to the *Oceans Act*, and was the first clear step DFO had made in developing an oceans management plan. The *Canada Oceans Strategy* called for the creation of Large Ocean Management Areas (LOMAs), dividing Canada's waters into more manageable sectors (DFO, 2005). Based on environmental, ecologic and jurisdictional principles, the hope was that by dividing Canada's waters collaborative management would be easier. LOMA's are perceived as overarching management areas, and are not meant to address day-to-day fisheries and marine management issues on smaller scales. The collaborative process was to involve local management bodies, commercial/recreational users, NGOs, Aboriginal bodies, scientists and locals (DFO, 2005). Representing 102,000km^2 of Canada's Pacific coast was placed within the Pacific North Coast Integrated Management Area (PNCIMA). This area included the waters surrounding Haida Gwaii. PNCIMA was to be managed between DFO, the BC government and First Nations (Sloan, 2014). On Haida Gwaii the CHN established the Marine Work Group, largely composed of elders, community members and fishers. Funded by DFO, it was created so that they could voice their concerns and opinions in a meaningful manner to the PNCIMA process (Lee, 212). The Haida Oceans Technical Team largely supported the Marine Work Group with science and research recommendations (Lee, 2012).

The highly ambitious PNCIMA initiative continued planning and consultation between 2008 and 2010; however, DFO cancelled the funding agreement in 2011. The reason why DFO, the main financer and driver behind PNCIMA, did this was because of a donation of $8 million by the Gordon and Betty Moore Foundation to the Canadian NGO Tides Canada, to help manage PNCIMA (Sloan, 2014). This American philanthropic organization was seen by DFO as foreign influence over Canadian resources, giving them credence to cancel the funding agreement for the PNCIMA process. DFO did this regardless of the fact they and First Nations had agreed to the funding initially (Sloan, 2014). DFO's decision to cancel the funding agreement with TIDES Canada for the PNCIMA initiative was met with substantial protest. It was seen as a direct contradiction to the foundations of the *Canada Ocean Strategy* and *Oceans Act* to work collaboratively with all partners. Nonetheless, with continual support from the Moore Foundation, the BC government and First Nations began the Marine Planning Partnership for the Pacific North Coast (MaPP) in 2011 (Sloan, 2014). While PNCIMA completed its draft management plan, MaPP came with funding and momentum. Under the same principles as PNCIMA, the goal for MaPP was to achieve an integrative, collaborative and comprehensive management plan for Canada's west coast. This was to be done without the lead agency for Canada's *Oceans Act* directly involved. It should be noted though that PNCIMA and MaPP managers regularly coordinate their plans.

These efforts to coordinate various levels of government and departments through PNCIMA and MaPP reflect the complexity touched upon at the end of Section 2.2. In 2002 the *NMCA Act* was passed creating the ability for Parks Canada to create its own

MPA's. The Minister of the Environment largely administers this Act; however, there are certain areas where he/she is not the sole decision-making authority (Refer to Section 2.2). Meanwhile, in April 2007, the CHN and DFO signed a Memorandum of Understanding to create the SGaan Kinghlas (Bowie) Seamount Marine Protected Area under the *Oceans Act* (Sloan, 2014). It would take another 8 years for the *Gwaii Haanas Marine Agreement* to be signed, establishing the first NMCAR in Canada.

Under the *NMCA Act*, an interim management plan needs to be submitted prior to a NMCA(R) being created. This is unlike national park (reserves), where they may be established before a formal management is created. For Gwaii Haanas Marine the interim management plan and zoning plan was signed in May 2010. A large area of contention was around the amount of area that would be fully/partially protected. Internationally the standard for fully protected areas in an MPA is around 30%, and this was the original plan proposed by Parks Canada for Gwaii Haanas (Personal Communication, 2014; Vandeperre, *et al*., 2011). The *NMCA Act* was never designed to create fully protected MPA's, instead it would allow multiple sustainable tourism, fisheries or aquaculture, only fully excluding the possibility of gas/mineral extraction (Government of Canada, 2002; Sloan, 2014). As is stated in Section 2.2, NMCA(R)'s are required to have at least on zone designated as no-take. The 30% fully protected was unacceptable to fisheries and they voiced their concerns with DFO, who in turn refused to sign the *Gwaii Haanas Marine Agreement* unless the number decreased. Finally, after much deliberation, the fishing industry agreed on 3% being fully protected. The 3% that was selected was already protected by the Haida and was of little commercial value (Personal

Communication, 2014). The remaining 97% of Gwaii Haanas Marine allows sustainable fishing to some capacity, though this is highly regulated and monitored. Rockfish Conservation Area's (RCA) has been designated in 14% of this area by DFO (AMB, 2010[b]). Rockfish are generally long-lived species that reproduce slowly. Although not part of a viable fishery they are often caught as by-catch and if a significant number get caught as by-catch, it can severely impact the species (Personal Communication with Mr.Peter Kitinic, 2014). Recently their numbers have dwindled along BC's coast leading to a large-scale conservation effort by DFO.

It should be said that according to some interviewed, there is no portion of Gwaii Haanas, or Haida Gwaii that is completely no-take. The Haida exercise their right to traditionally harvest and fish throughout the protected area and consequently have an impact, however minor, on the areas marine ecosystem. At times some questioned the logic behind the Haida protesting the opening of a fishery, deeming it to small for commercial harvest, but then continuing to subsistence harvest. The ecologic impacts of the subsistence harvesting are not completely known (Personal Communication, 2014).

2.6 Herring Fishery

Herring (*Clupea pallasi*) have long been a source of sustenance for the Haida and other coastal First Nations. There has been rising contention over how they have been managed. Coastal First Nations and some local fishers believe that overfishing and poor management has resulted in depleted stocks, where fishery managers contend that while overfishing has played a role, factors like recent increases in predator abundance, climate change impacts and shifts in herring ranges have exacerbated the low stock numbers

(McKechnie, *et al*., 2014). This section investigates some of the current research concerning herring and its historic abundance. Beginning with the biology of herring, the history of the fishery to more recent conflicts around its management. It is important to review the history of the fishery to understand the cause of the current dispute.

2.6.1 Biology and Management

Herring are an important species in BC's coastal food web, including Haida Gwaii. These relatively small fish are a source of prey to wide range of animals. Fish, such as Pacific Salmon (Coho (*Oncorhynchus kisutch*) and Chinook (*Oncorhynchus tshawytscha*)), Pacific Hake (*Merluccius productus*), Halibut (*Hippoglossus stenolepis*) or Dogfish Shark (*Squalus acanthias*) are some the herring's main predators (DFO, 2014[a]). Many marine mammals, such as seal lions, dolphins, seals and baleen whales also prey heavily on herring (See DFO, 2014[a] for a comprehensive list). Herring provide a key link between upper and lower trophic levels, feeding on plankton for nourishment (Sloan, 2014).

This migratory pelagic species moves between open water feeding grounds and inshore spawning areas between October and December. Coastal First Nations have associated many place names with areas that historically have had large levels of spawning herring, such as Teeshoshum (Waters white with herring spawn), in the eastern Salish Sea, British Columbia (McKechnie, *et al*., 2014). Swimming in large schools, numbering in the thousands, they enter inner bays and sheltered areas to begin spawning between February and July, with peaks from March to April (Sloan, 2014; McKechnie, *et al*., 2014; Lordon, 1998). During these spawning events the males' sperm (milt) clouds the waters while

females deposit their eggs (roe) on kelp (Sloan, 2014; Lordon, 1998). Herring mature and begin reproducing at age 3, being the most productive between ages 4-5. Herring are able to live up to 10 years (DFO, 2014[a]; Lordon, 1998). In British Columbia, DFO has grouped herring into 5 major stock areas (Haida Gwaii, Prince Rupert, Central Coast, Straight of Georgia and West Vancouver Island) as well as two minor stock areas found on the west coasts of Vancouver Island and Haida Gwaii (DFO, 2014[a]). The Haida Nation, on the other hand, assert that each local stock can be subdivided into substocks, and that current management strategies do not account for this (Lordon, 1998). This is only one of the divisive issues surrounding contemporary herring management.

As noted, DFO has separated herring into distinct stocks around Haida Gwaii. The major stock area goes from Louscoone Inlet, through Gwaii Haanas and around to the East side to Cumshewa Inlet. The minor stock assessment area stretches along the East coast of Haida Gwaii, between Engelfield to Port Louis (Personal Communication with Mr. Peter Katinic, 2014). In order to assess herring population DFO uses two methods of acquiring data to inform their models. The first is "to quantify the deposition of eggs along the shoreline in the different areas" (Personal Communication with Mr. Peter Katinic, 2014). Originally DFO would simply take samples from the upper levels of water, but in the 1980's a more accurate diving technique was employed that samples as far down as 60 feet (Personal Communication with Mr. Peter Katinic, 2014). The second is where DFO actively takes samples from the herring population, using commercial seine nets, to assess a variety of biological parameters (DFO, 2014[a]; Personal Communication with Mr. Peter Katinic, 2014). These two methods inform the statistical catch-at-age models used

by DFO to predict the following year's herring populations and whether a stock will be opened or not. DFO also uses 1951 historical catches as a baseline reference of how large stocks could be to help them assess the relative abundance of herring. There is significant debate regarding using 1951 as a baseline, since herring populations by that time had already been commercially exploited for decades (Lordon, 1998; McKechnie, *et al*., 2014). Furthermore, First Nation traditional knowledge and archeological studies have shown that herring populations used to be significantly larger (McKechnie, *et al*., 2014).

It should be said that DFO continues to adjust their models so that they take into account the best available methods for stock assessment. They have changed it three times since the 1980's to further refine its fisheries management techniques. DFO also uses a 20% fixed catch limit. The theory is that "you can fish it up to 20% without influencing the population, you know driving it down" (Personal Communication with Mr. Peter Katinic, 2014). This maximum exploitation rate is in place throughout BC's herring fisheries. So, for instance, "in the Strait of Georgia the herring population is really high. Some of the highest we've seen in over a decade. They could fish it, […], quite a bit but it's still limited by that 20% just so that you're not taking half the population. You still have lots of fish left over" (Personal Communication with Mr. Peter Katinic, 2014).

Management decisions regarding opening herring fisheries are based on point-estimates. If a stock is above a point-estimate, by any margin, DFO is allowed to open the fishery based on their current policies. What DFO management is now realizing, however, is there is a large degree of uncertainty around predicting stock levels. So when managing

stocks based on point-estimates, it is not accounting for this variability. For instance, the degree of natural mortality varies significantly each year and can affect stock abundance dramatically. If a stock is deemed above cut-off based on previous years data, when natural mortality was high, the stock assessment might not take this into account. This could potentially result in detrimental impacts to the stock because management did not take into account the uncertainty around natural mortality. Some DFO scientists believe that the scientific methods behind stock assessment are sound, it is the management decisions behind them that need to be adjusted to account for uncertainty (Personal Communication, 2014).

As much as science informs DFO's decisions regarding Pacific herring, the Integrated Herring Harvest Planning Committee (IHHPC) plays an important role as well. The IHHPC is a cross-sectoral group made up by representatives from the fishing industry, the spawn on kelp industry, sports fishing, the Marine Conservation Caucus, special use herring industry, the province of BC and First Nations (DFO, 2010; 2014[b]). The purpose of this DFO funded committee is to have a forum where interested parties are able to voice their concerns about herring fishery management. The IHHPC is not a decision-making authority, but more of a management tool that can help inform DFO's decisions. Concerning First Nation representation, there are five members, each from one of the large herring stock assessment areas (DFO, 2010). The Terms of Reference for the IHHPC acknowledges that a multi-sectoral group may not be the most effective platform for First Nations to voice their concerns/opinions. It states: "DFO recognizes that some issues are best addressed in bilateral processes. The results of these bilateral processes

may subsequently lead to improved effectiveness of multi-sectoral processes" (DFO, 2010). The IHHPC plays an important role in establishing harvest rates and developing the Integrated Fisheries Management Plan (IFMP) concerning herring (DFO, 2013). The IFMP is meant to establish management objectives and develop ways they can be accomplished (DFO, 2013). Through the IFMP and the IHHPC it is clear that DFO has created forums that allow for First Nations to be meaningfully engaged, if they choose to do so.

2.6.2 Fishery

Herring has been a staple in coastal First Nation's diet for thousands of years (McKechnie, *et al*., 2014). They also hold important cultural significance, being intertwined with traditional stories and locations (McKechnie, *et al*., 2014). Traditionally they would be harvested year-round, although the heaviest harvesting occurred during spawning events. First Nations would also build kelp gardens to facilitate sustainable harvesting techniques. A recent study by McKenchnie *et al*. (2014) attempted to assess the distribution and abundance of past herring stocks along BC coast using zooarcheological methods. After examining 171 middens throughout the Pacific Northwest, dating herring remains between ~10,700 BP to ~1860, they found that herring remains were dominant compared to other species in the majority of sites. By incorporating traditional and local knowledge into their methodology it became clear that herring stocks "exhibited higher abundance and greater consistency in their distribution than is indicated by the dynamics of industrially harvested populations over the past 50-100 [years]". What this paper essentially shows is that, while there were fluctuations in

herring stocks, especially during Holocene climatic shifts, "there was adequate herring available for indigenous fishers to sustain their harvest but avoid extirpation of local populations" (McKechnie, *et al*., 2014). Moreover, McKechnie, *et al*. (2014) suggests that the reason for depleted herring stocks is not associated with climate change or predator abundance as DFO (2014) claims, but rather that depleted stocks were directly caused by overfishing and poor management, something coastal First Nations have been suggesting for decades (McKechnie *et al*., 2014). The study by McKechnie *et al*. (2014) is extremely important in assessing the efficacy of modern fishery models because, as was discussed, current models are based on baseline data acquired when the fishery was already nearing collapse, in 1951.

The commercial herring fishery began in the late 19th century. The large amounts of herring being harvested were being reduced to fishmeal or oil (DFO, 2014[a]; McKechnie, *et al*., 2014; Lordon, 1998). As McKechnie, *et al*. (2014) points out, in 1927, "31,103 tons of herring, which is roughly two times the annual harvest rate in 2012 and ~38% of the 2013 biomass estimate for the entire Straight of Georgia" was caught off eastern Vancouver Island. Haida Gwaii saw its peak harvest of 77,500 tonnes in 1956 (Sloan, 2014; Lordon, 1998). The BC reduction fishery continued until the 1960s, when in 1967 the federal government was forced to close the now collapsed fishery (DFO, 2014[a]; McKechnie, *et al*., 2014). Asian markets demand for roe increased substantially when their respective fishery had collapsed in the 1970s. This led to a capped small-scale roe fishery beginning in the 1980s (DFO, 2014[a]). Since then, the herring fishery has opened sporadically around Haida Gwaii when herring numbers were above DFO's point-

estimate, however it has yet to return to where it was as indicated by historic catches, based on First Nation traditional knowledge and archeological evidence (DFO, 2014[a]; McKechnie, *et al*., 2014). In 1998 the discontent regarding how fisheries around Haida Gwaii had been managed came to a climax with the Haida making a stand against the proposed opening of the herring fishery.

The herring fishery around Haida Gwaii was opened March 14, 1998 with one of the lowest quota's set in its history, 1,500 tonnes (Lordon, 1998). DFO had decided that herring stocks had sufficiently recovered, even though only 4 years prior they closed the roe fishery because populations were to small. The Haida adamantly objected to the opening of the herring fishery, prompting a Haida-led protest called *Operation Herring Storm* (Lee, 2012; Lordon, 1998). As the first fishing vessels arrived, many loud Haida in skiffs and other fishing boats met them. They drove the herring away from the nets of the commercial fisherman (Lordon, 1998). In a fishery that normally reaches its quota minutes after its opening, this target was missed the first day. It took two more days, with less Haida interference, for the quota to be reached. Nonetheless, the Haida had made their position known.

Including the 1998 herring fishery, over the past 20 years the fishery has been opened only four times. More recently, the herring populations around Haida Gwaii have increased gradually, albeit still having the second lowest abundance of all major stock areas (DFO, 2014[a]). In 2013 the stocks were close to the DFO cut-off but remained below, and accordingly no fishery was opened. In 2014, however, the stocks were

estimated to be above the cut off. It was not significantly above this threshold, but enough for DFO to legally open the fishery (Personal Communication, 2014). This situation would end up being the catalyst for the first clear and final disagreement in the AMB's history and the main subject of this thesis.

3. Methods

This section covers the steps taken throughout this research. It touches on the literature review process and how interviews were structured.

3.1 Literature Review

In order to get a clear understanding of the functioning of the AMB and its decision-making process, an initial literature review was conducted. Relevant documents were collected from local, regional, national and international sources. This assemblage included scientific articles, reports, management plans, past studies, legislature, communicating documents and newspaper articles. The literature review and research were focused on two major points. The first was to explain and target the key concepts of the thesis itself, such as co-management and decision-making. The second major point was to communicate the narrative of Gwaii Haanas. This necessitated exploring both the past of Haida Gwaii as well as the historic relationship between Aborignals and Canadian protected areas.

3.2 Interview and Gaining Contacts

In advance of arriving on Haida Gwaii some Parks Canada staff were made aware of the proposed research that would be undertaken throughout the 2014 summer. Some of the initial research was concerned with who would be important to interview. Haida Gwaii is a small and tightly knit community. It was imperative that initial contacts played principle roles in the community and the management of Gwaii Haanas so as to form connections with other potential participants. Furthermore, it was important that the researcher was perceived as arriving with an unbiased approach to the research given the

sensitive nature of some of the topics being covered. In order to gain candid, honest and informative interviews, this was essential. During the first month on Haida Gwaii initial contacts were engaged and interviewed while the researcher also gained a foothold in the local community. What needed to be communicated was the nature of the research, how it may be beneficial to Gwaii Haanas, how the researcher recognized the importance and sensitivity of the issues covered and to respect the wishes of any of those interviewed to remain anonymous. Given the short time frame with which to conduct research as many key community members were contacted as possible. Those who were interviewed included Haida officials/respected leaders, CHN staff, Parks Canada staff, DFO staff, business owners, local researchers, and community members.

Informal and semi-formal interviews were conducted throughout a 5-month period. Informal interviews allowed for a more relaxed and open environment for discussions. These discussions were largely used to inform the researcher of where to focus subsequent interviews as well as build relationships with community members. Relationship building is central to this type of research as investigators may appear as "outsiders" and consequently have a more difficult time trying to gain important information. Principle participants were seen as Haida and Government of Canada employees, as they represented the groups most involved in the management of Gwaii Haanas. The 15 interviews with principle participants were held. Each interview lasted around 45 minutes, totaling ~11.5 hours of material. This was on top of all the informal discussions with other participants. Once information was beginning to become repeated

and less new/pertinent information was being revealed it was believed the majority of the interview-based research had been concluded.

Potential participants were initially contacted via e-mail either acquired through websites, literature or personal contacts. The e-mails informed potential participants of the research goals, objectives and why their opinions were valuable to the study. Any responses were to be addressed as they came in, answering any concerns potential participants may have. If there was no response after one week a follow up e-mail was sent asking the participant if they wish to participate in the study. The majority of these interviews were conducted in a semi-formal format, with interviews scheduled at the interviewees convenience. The semi-structured interviews followed a guide, insuring that overarching topics in the study would be covered in each interview; however, the benefits are seen with the ability of the investigator to pose follow-up questions. Follow-up questions are tailored to the unique responses, experience, culture and background of the participants allowing the researcher to understand the reasoning behind the responses (Given, 2008). All of the interviews with principle participants were recorded and transcribed as promptly as possible. The participants also had the option to be anonymous or not, to ensure candid responses. Thusly, in this thesis participants are either cited using their names or simply as “Personal Communication”. The participants were then allowed to omit/add/edit their responses as they saw fit to ensure their perspectives and opinions were voiced correctly.

4. Results

Section 4 is focused on completing Step 3 of Carlsson & Berkes' (2005) suggested methods of analyzing cooperative management regimes, which is designed to help clarify the roles and responsibilities of each party within the management regime. In the case of Gwaii Haanas, this largely falls on the parties represented through the AMB. A large portion of the literature review was focused on completing this step. However, the review was mostly focused on past events, where as this section recounts and provides context for what was revealed through interviews and current documents. The herring dispute resolution process is the focus of the thesis and this section. It demonstrates the complexity of Gwaii Haanas' management and the complications that can arise when legislation, agreements and jurisdictions begin to overlap. This section is organized with major themes covered in interviews in the headings. Broadly, these sections are the current functioning of Gwaii Haanas' management and its management programs, the continued development of the relationship among the AMB's parties, and the current situation revolving around the herring dispute resolution process.

4.1 Gwaii Haanas' management programs

As described in Section 2.5.1, there are three primary conservation and cultural programs currently in place in Gwaii Haanas, those being the Lyell Island Restoration, the Nightbirds Returning and the Watchmen programs. Based on interviews with Parks Canada and Haida staff, these programs appear to be mostly fulfilling their purposes Mr. David Argument, a Parks Canada representative on the AMB and manager of all field operations in Gwaii Haanas, believes that there has been significant success in these

programs, though he believes there is some room for some improvement. As was stated when reviewing these programs in Section 2.5.1., the Lyell Island Restoration program was very labour-intensive and managed to only restore around 5km of streams. Furthermore, the program was originally meant to reintroduce salmon from a DFO funded hatchery in Pallet Creek on Moresby Island. Using native salmon and rearing the juveniles in the hatchery, they would be reintroduced to the stream. It was hoped that by doing this the population would rebound more quickly. It also served as a way of educating the local population about the salmon lifecycle, as fry were taken to every classroom on Haida Gwaii, and the children had the opportunity to release the fish in Gwaii Haanas (Personal Communication with Mr.David Argument, 2014). Then the hatchery was closed due to federal budget cuts. With no financially viable hatchery located nearby, the program was forced to rely on natural rebuilding processes. Nonetheless, he, along with other staff believe that restoration has been successful. Monitoring continues to see how effective their efforts were.

The other half of Gwaii Haanas' Action-on-the-Ground projects, the Nightbirds Returning, is regarded as one of Gwaii Haanas' largest projects. Mr. Gladstone, the Superintendent, believes it has been a significant success. Having been the first aerial rat eradication project in Canada, it went without any observable issues. This program not only plays an important ecologic role in attempting to restore ancient murrelet populations, but also holds meaning for the Haida. The project has now entered the monitoring phase, like Lyell Island, to see how effective the aerial broadcasts have been. When asked about the degree of monitoring happening in Gwaii Haanas there were two

responses. The more prevalent opinion was that the amount of current monitoring being done is adequate. According to the Parks Canada's Monitoring Ecologist, Dr.Wojtaszek: "I think we are doing a pretty good job. Like we are out there doing what we need to be doing, we are on the ground, we are monitoring, on a number of different fronts" (Personal Communication with Dr.Wojtaszek, 2014). That being said, there are some who voiced that the capacity for Parks Canada to apply the data they get through monitoring towards meaningful management decisions is questionable. At times understaffing and under funding have cut into the interpretation of data. Regardless of this, the majority of Parks Canada staff believe that the degree of monitoring should continue. If rats do return to some of the treated islands, it is through monitoring that management strategies can be adjusted and appropriate measures taken (Personal Communication, 2014).

Similarly to the other two programs, the Watchmen Program has seen good success. Having operated for over 20 years it continues to be a rich source for promoting Haida culture, while protecting sites that have global significance. It was mentioned in some interviews with Haida that Gwaii Haanas can be somewhat inaccessible, so by having this program it allows old and young Haida to reconnect with their traditional territory. "Nowadays people don't have their own gillnetters or boats that everyone did for a long time. So access is a challenge. Anything that helps gets our people down there and experiencing and just being there is important" (Personal Communication with Mr. Jason Alsop, 2014). The Watchmen Program also demonstrates Gwaii Haanas' ability for adaptive management, as there are continual discussions on how to improve the program

as it stands. For instance, some mentioned that it would be good to develop the visitor experience by forming a more structured interpretation aspect. It is believed the Haida do a very good job at engaging and explaining the history behind the sites to visitors. However, by forming a more structured program it may improve visitor experience. It was also mentioned that, by some Parks Canada employees, that it may be beneficial to have some Haida helping with monitoring programs since they are there for long periods at a time. It should be reinforced though that "the primary consideration for the Watchmen is to protect those sites" (Personal Communication, 2014).

Gwaii Haanas is also a source of economic benefits for the Haida and wider communities. Employment remains a contentious issue in AMB meetings. Currently around half of the employees are Haida, however the CHN would like to eventually see 100% Haida employment in the area. It remains to be seen how this will progress. The Watchmen program employs around 30 Haida every year and there are Haida tour operators who are benefitting by the protected area as well. According to Thomlinson & Crouch (2012) the certification process for tour operators under Canadian law remains controversial, as the Haida believe they do not require certification if they have sufficient local and Haida cultural knowledge.

As may be apparent, there is not firm set of programs established for the management of Gwaii Haanas Marine. This is large in part because the *NMCA Act* is a relatively recent mandate, and Gwaii Haanas Marine was created only a few years ago. As Dr. Wojtaszek points out "We are the first protected marine area under that particular Act, and because

that act is so new regulations are still being developed to support the [*NMCA*] Act. It's just how the justice system in the legal system works. […] We are actually doing quite a bit of work towards development of regulations under that Act, we are really at the forefront." She goes onto say that "Maybe 15 years down the road as other marine conservation areas become enacted because of that act, because of the work we do, it'll make their job easier" (Personal communication with Dr.Wojtaszek, 2014). The 2015 management plan is currently being developed and is meant to incorporate both terrestrial and marine portions of Gwaii Haanas into a comprehensive management plan. It is intended that this plan will develop and establish more explicit marine management programs.

Nevertheless, based on interviews, Gwaii Haanas' programs seem to be operating smoothly. The adjustments that are being made or are proposed are simply indications of a continual, iterative dialog between the two parties. The following section examines the development and current state of this relationship between the Government of Canada and the CHN as revealed during interviews.

4.2 Developing working relationships

One of the primary purposes of the literature review was to document the long and storied history of Haida Gwaii and Gwaii Haanas. Originating from initial European contact, dynamic relationships have been, and continue to be, developed. Such relationships are instrumental in how the AMB is structured and operates. This section reviews some of the opinions raised by interviewees concerning the evolution of the relationship between Canada and the Haida Nation. Unlike the previous section, this one answers more directly

Step 3. Many of the roles and responsibilities of each party are reflected in how these relationships have been developed.

The long, and many times divisive, process for Gwaii Haanas' establishment had provided opportunity for trust and understanding to be built. How Parks Canada and the CHN approached this was through the mutual agreement that this area required protection. As this was a novel experience for both parties it required continual effort for trust to grow. Disagreement involving certain management proposals came up from time to time. For instance, a Haida leader pointed out that in 1993 "There was no trust. You know, right away we had to deal with managers who wanted to put in picnic benches and fix up the hotsprings with a big cement pond" (Personal Communication, 2014). This aside, both parties were adamant on working together for the betterment of Gwaii Haanas. According to interviews from both parties, the court case involving Moresby Explorers Ltd. v. Canada (See Section 2.5.1) in 2001 was an important step in developing a trusting relationship. In it, both parties stood by each other against a private entity for what both believed to be the greater good of Gwaii Haanas. From some Haida perspectives, it showed Parks Canada was willing to sacrifice visitation numbers so that they could protect Gwaii Haanas' ecological and cultural integrity, strengthening the bond between the parties. Another key aspect to Gwaii Haanas' management and the continued building of trust has to do with Ernie Gladstone, the Superintendent. He has a unique role in that he is Haida, a community member and working for Parks Canada. As Mr.Alsop, a CHN representative on the AMB, states: "He really understands both worlds politically and organizationally. I think he's been crucial, I don't know if things would be

as smooth if it wasn't a Haida person like Ernie in that role." (Personal Communication, 2014).

After 17 years of building communication, understanding and compromises Parks Canada and the CHN had formed a solid working foundation. As mentioned in the previous section, the AMB has been able to work together to create, manage and monitor numerous successful programs. Despite some minor setbacks, the cooperative management regime had yet to invoke the final dispute resolution process.

4.3 Herring Fishery Dispute Resolution Process

In 2010 the AMB faced a dramatic shift, with repercussions that are still being assessed. The addition of a DFO member at the table changed the dynamics between the parties involved and consequently clarified some of the role and responsibilities it has. This section will simply recount what was said in interviews, with a focus on the herring dispute resolution process.

Debate began early, over what portion of Gwaii Haanas Marine would become no-take marine reserves. The original proposal was that 30% would be no-take, with both Parks Canada and the CHN believing this to be the appropriate goal (Personal Communication, 2014). "The fishing industry responded negatively to that [30% no-take] and there were a lot of letters that went back and forth, and for a time it seemed that the NMCAR wouldn't get established because of the controversy and the outrage of the fishing industry. In the end though it got established and there was 3% no-take." (Personal Communication, 2014). This was to be the first controversy involving DFO that remains unsettled.

Interviewees from all parties pointed out that only having a 3% no-take reserve does little in terms of actual conservation. "So the initial idea was to protect 30% of the area. Now we are down to 3%. And the reason is because when [DFO] approached they said they were supportive of having protected areas provided it didn't impact commercial fishing areas or commercial fisheries. So those are very counter-active kind of approaches" (Personal Communication, 2014). The interviewee continued to state that the areas that became protected were non-controversial because they held little commercial value. When asked if Gwaii Haanas Marine was a paper park, the interviewee responded "Exactly. Absolutely. They were non-contentious areas and that's why they went through" (Personal Communication, 2014). DFO's role as both a conservation and industry-oriented department was clearly causing complications from the beginning. Hope was expressed by some interviewees, from all parties, that the 2015 management plan will expand the no-take areas, however with the degree of influence the fishing industry seems to possess with DFO, this will remain to be seen. Even though this was a defining moment for how Gwaii Haanas Marine protects the marine environment, it did not invoke the dispute resolution clause of the agreement because it occurred before any marine agreement had been signed.

In 2013 herring stocks were recovering but were still below DFO's cut-off threshold, making them unable to open the fishery. DFO models predicted that in 2014, herring populations would be above cut-off for the first time in years. As one Parks Canada employee points out – "In 2014, the stocks were above cutoff. Like fairly above, like they weren't just squeaking above cut off but they were a bit above cut off" (Personal Communication with Dr. Hillary Thorpe, 2014). There was significant division on

whether to open the fishery or not, not just with regards to Gwaii Haanas but also throughout BC. At the AMB table, debates on what to do with the herring opened up. Since the AMB operates on a consensus-based platform, if any decision/recommendation surrounding the management of Gwaii Haanas is to be made, all members need to agree. In the fall of 2013, all parties of the AMB reached consensus and recommended to the DFO Minister that the herring fishery should remain closed (Personal Communication, 2014).

During this time DFO scientists were using their latest herring stock assessment model - which nearly all interviewees believe is not perfect- and were able to clarify that the stocks were above cut-off. There are internal DFO reviews already in place concerning herring stock assessments, as well as studies being done at Simon Fraser University, the University of British Columbia, the University of Toronto and Dalhousie University, all concerning herring stock assessment models (Personal Communication with Dr. Norm Sloan, 2014). Interviews made it clear that DFO scientists believed that herring fishery model was flawed (Personal communication, 2014). As part of the Ahousaht First Nation v. Canada, 2014 court-case, it became public knowledge that DFO scientists echoed the AMB's recommendation to the DFO Minister, recommending that the herring fishery remain closed.

> "DFO science crunched their numbers and got themselves above that cut off where their decision rule says that we should have an opening. They prepared a briefing note for their Minister, which is now in the public domain and was released as part of the injunction the Nuu-chah-nulth won against the herring fishery opening. So the briefing note from DFO science to the Minister recommended the fishery remain closed even though they were above the cut off. So DFO recommended to their own Minister saying we want the fishery to stay closed until we see more significant signs of

> population rebuilding because they're just above the cut off." (Personal Communication, 2014).

With that, all AMB members, local DFO scientists and 5 coastal First Nations were all recommending to the DFO Minister that the herring fisheries remain closed for the 2014 season. After reviewing these recommendations in December 2013 the DFO Minister opened the fishery nonetheless. Exercising her authority under the *Fisheries Act* she decided, "instead of 20% of the stock being opened for harvest, 10% would be available for harvest. She decided that would be conservative, I don't know where she got that number from" (Personal Communication, 2014). The reason for her opening the fishery at all is the source of much animosity, as many interviewees believe her decision was solely influenced by industry:

> "Basically the herring fishery […] had convinced the Minister to approve it." (Personal Communication with Guujaaw, 2014)

> "Its my sense that the industry was getting desperate and wanted to reinsert itself and get a toehold back. Despite the fact that there wasn't much of a fishery. There wasn't much. But they're fighting." (Personal Communication with Mr. David Argument, 2014)

This caused a severe rift in the AMB, because as legally required under statutory law, the DFO member had to support his Minister's decision to open the fishery. Since Parks Canada and the CHN believed the fishery should remain closed, the first ever dispute resolution process to be invoked in the AMB's history was initiated. Since the *Gwaii Haanas Agreement* is signed by two parties (The Government of Canada and the CHN) and not by Parks Canada, DFO and the CHN separately, Parks Canada was placed in a difficult situation. Though their mandate advocates for conservation, they were required to side with DFO because they both represented the Government of Canada. Even though

Parks Canada answers to the Minister of the Environment, in the *NMCA Act*, it is clear that:

> "The Minister of the Environment doesn't make decisions regarding fisheries. Within the Government of Canada the authority of fisheries remains with the Minister of Fisheries." (Personal Communication with Dr.Hillary Thorpe, 2014)
>
> "Once the [DFO] Minister says its open well then DFO and Parks sort of have to follow suit." (Personal Communication, 2014).
>
> "DFO retains unfettered responsibility for fisheries management within the NMCA irrespective of any other arrangement. But DFO sits on the AMB, and the AMB through the signed agreement between Parks, DFO and the CHN is responsible for the ecosystem outcomes of fisheries but not for the execution of fisheries. Which is the heart of the fight" (Personal Communication with Dr. Norm Sloan, 2014).

What is interesting to note is that the dispute resolution process is intended to be invoked when the AMB is unable to reach consensus on their level. The dispute would then be brought to higher-level authorities so that a solution could be found with the spirit of the *Gwaii Haanas Agreement* in mind. In this instance however, the herring fishery dispute originated at the higher level, disturbing the consensus that was originally reached by the AMB. With that in mind it was postulated by some interviewees that the DFO Minister undermined the purpose of the AMB and called into question its purpose and role.

CHN representatives believed that when the AMB originally reached consensus recommending the fishery stayed closed, they believed that this meant that no matter what, the fishery would be closed. When the decision of the DFO Minister was made it came as a surprise and a "very busy time for the AMB" (Personal Communication, 2014). The Nuu-chah-nulth, Haida and Heiltsuk First Nations banded together opposing the fishery, with the Nuu-chah-nulth even taking DFO to court (Ahousaht First Nation v.

Canada, 2014). The Haida threatened to "bring out the war canoes" and re-create Operation Herring Storm seen in 1998 (Personal Communication, 2014). They wrote letters to the Minister asking her to review her decision. They also contacted the industrial fishers themselves, telling them to not come. In a turn of events, the fishing industry listened, and despite the fishery being opened, the fishers did not come. In the opinion of Mr. Jason Alsop, the CHN representative on the AMB "it was the CHN reaching out to industry directly that stopped the fishery. It had nothing to do with DFO. What does that say about who runs the fishery?" (Personal Communication with Mr. Jason Alsop, 2014).

Since the fishers chose not to fish the herring stocks in 2014 it bought the AMB some time to find a solution to the final dispute process. It also allowed stocks to re-build further. At the time of writing, much remained undecided regarding what roles the AMB, CHN and DFO have over fisheries in Gwaii Haanas. Based on the *NMCA Act* it appears that the DFO Minister has the final decision-making authority but from the CHN's perspective the *Gwaii Haanas Marine Agreement* has "very clear language that makes us [The AMB] the authority to make fisheries decisions" within Gwaii Haanas (Personal Communication, 2014). Furthermore, there are continuing discussions revolving around the purpose and effectiveness of the NMCA(R) if the consensus recommendations of the AMB, with regard to commercial fishing, are set aside because of opposition by the industry.

5. Analysis

Continuing with Carlsson & Berkes' (2005) steps on assessing co-management regimes this section begins by looking at Step 4. The fourth step takes the description of the dispute resolution process, the background of all parties, their mandates/responsibilities and the areas history into consideration, to help form connections between the past and the present. The complexities of the cooperative relationship are brought together here. This step addresses the second research question directly, by answering how the herring fishery dispute resolution process reflects the AMB's ability to make cooperative management decisions (Table 2).

5.1 How has the AMB's decision-making authority been clarified by the invocation of the dispute resolution process?

Based on the extensive and thorough literature review, as well as informative discussion with key stakeholders, it is believed that a clearer picture of the perceived authorities, roles and intended roles of the AMB is emerging. There appears to be substantial divergence in the opinions held by DFO and the other two parties concerning what role the AMB plays in the decision-making process regarding fisheries in the NMCAR. As one interviewee states: "Herring isn't the issue, managing fisheries is the issue. Herring is the first example" of a potentially more persistent problem. It is also believed that based on the recent events pertaining to the dispute resolution process raised by the herring fishery, that it has become apparent that the AMB's authority over Gwaii Haanas may be more constrained than certain parties believed, although this was somewhat revealed during the Moresby Explorers Ltd. v. Canada (2001) court case.

This study finds that differing interpretations of agreements/legislation were important factors that led to roles and responsibilities not being completely understood between the parties. This is one factor that led to the dispute resolution process. It could be argued that before Gwaii Haanas Marine was even established, the parties differed on important issues. The amount of no-take area needed for the NMCAR to be effective was one such issue. As is made clear in the *NMCA Act*, NMCA's are not meant to wholly exclude fisheries from operating in their boundaries. The sole industrial activity that is prohibited in NMCA(R)'s is the extraction of oil and gas reserves, and this was banned from Gwaii Haanas in 1997 (CHN[a], 2010; DFO, 2002), with outstanding offshore leases later acquired by the Nature Conservancy of Canada. In the stated opinion of DFO, who have to manage for both utilization and conservation, a 3% no-take reserve was acceptable where as both other parties believe at least 30% is needed to achieve conservation goals. This study is not advocating for either percentage of no-take, but is simply highlighting how disagreements existed between the parties before the NMCAR was even established.

The *NMCA Act* is carefully worded to give the DFO Minister decision-making authority over fisheries within an NMCA(R). So, while division between Parks and DFO regarding this issue remained, it is important for the GoC to act as a unified entity, and they are legally obligated to do so. If either party, DFO or Parks, acts without proper deliberation with its counterpart, it has the potential to complicate AMB processes and hurt gained relationships between the GoC and the CHN. For instance, if the CHN sees that DFO is continually favoring industry, it will weaken the trust between the two partners. Furthermore, if Parks is forced to follow DFO's lead on issues regarding fisheries, then

CHN might extend this mistrust to Parks. During AMB meetings, DFO and Parks representatives can voice separate opinions, and have done so regarding the herring fishery in the past. When a decision is needed however, the representative representing the department with legislated authority over the specific issue holds more power. Regarding the 3% no-take, DFO's recommendation for it went through. Though this did not cause an invocation of the final and clear disagreement clause, it remains a deliberated issue. With the new Gwaii Haanas management plan due for late 2015, it remains to be seen if all three parties will be able to agree for the expansion of the no-take areas (Personal Communication, 2014).

The herring fishery dispute, on the other hand, did ultimately lead to the invocation of the final and clear disagreement clause, setting a new precedent for the AMB. Here, Parks Canada and DFO again had differing opinions. Parks Canada advocated for the herring fishery to remain closed, while DFO ultimately decided the stocks in question could support a limited harvest. The dispute resolution process was an area that the AMB had no experience in before. Since the clause was enacted, they have spent a large amount of time attempting to understand its wording. (Personal Communication, 2014). Section 6.0-Dispute Resolution, was originally meant to solve disagreements radiating from the AMB's level, allowing higher authorities to solve the issue (GoC & CHN, 2010). The herring dispute represents a disagreement that began at the Ministerial level, and has consequently forced the AMB into disagreement. Section 6.0 will continue to operate as it was originally intended; however, DFO now has a set position, as dictated by its Minister. Where the other parties may shift their opinion it appears DFO must hold firm.

The parties must now work towards understanding how to move forward and attempt to resolve this dispute. It was revealed during interviews that CHN representatives recognize the complexity behind the herring fishery dispute, and why Parks must side with DFO. They understand that this action does not reflect Parks Canada's opinion regarding the herring fishery, but by compromising with DFO it may put a strain on the relationship they have built.

How the *Gwaii Haanas Marine Agreement* is being interpreted is of principle importance to the herring fishery dispute. One interviewee pointed out, those who wrote the agreement are not necessarily those who are enacting it. This has left some AMB members to interpret what certain sections mean. One observed point of contention surrounds the roles and responsibilities of the AMB. Section 4.1(b) states that the AMB is in charge of "developing ecosystem objectives for the management of activities, **including fisheries**, as selected by the AMB" (AMB, 2010). The meaning behind this clause is important. To the CHN it means the AMB, and by extension the CHN, has authority to manage the fisheries found within Gwaii Haanas' boundaries. On the other hand, the Government of Canada believes that the statutory-decision making authority still lies with the DFO Minister based on the *Fisheries Act* and the *NMCA Act*. It was made clear through Moresby Explorers Ltd v. Canada (2001), that the *Gwaii Haanas Agreement(s)* were legally insufficient for decision-making authority to be fully delegated to AMB representatives. The complexities of co-management as a governance system, as postulated by Carlsson & Berkes (2005), are rooted in this debate. This brings the subject

back to the quote from the beginning of this section – "Herring isn't the issue, managing fisheries is the issue. Herring is the first example".

One element that is lacking with regards to this new iteration of the AMB and the AMB pre-Gwaii Haanas Marine, is time. Parks Canada and the CHN had 17 years to start understanding how the other functions before DFO was incorporated. The CHN and Parks' continued efforts steadily allowed trust to be built. This is not to imply that there were no differences in opinion from 1993-2010 between the two parties. It merely suggests that the parties were committed to finding solutions without invoking the final dispute resolution clause. Thomlinson & Crouch (2012) discuss how Parks Canada and the CHN were able to respect others perspectives and opinions, even if they did not always agree. Perhaps by both parties having relatively mutual conservation objectives facilitated the building of this relationship. What is clear, however, is that Parks Canada's head AMB representative and Superintendent plays a pivotal role in strengthening this association. By being both Haida and a prominent member of the local community, both sides are ensured representation.

The relationship between Parks Canada and the CHN can be contrasted against the continually evolving relationship between DFO and the CHN. While the CHN and DFO have had a long working relationship prior to the formation of Gwaii Haanas Marine, as covered in the literature review (ie. *Operation Herring Storm,* Sgaan Kinghlas-Bowie Seamount, the IHHPC and the Razor-clam fishery), trust and understanding appears to need strengthening. Gwaii Haanas, and by association the AMB, arguably represent the

most significant step made between these two parties. This relationship is still in its infancy, being only 5 years old at the time of writing. As DFO enters the AMB, there is a steep learning curve for all parties in how this new relationship will function. The herring dispute resolution process represents the first real test for Gwaii Haanas' new cooperative management regime.

DFO is rather unique when compared to the other parties of the AMB. Not just because of how long it has been a member, but also because of its triple mandate (Aboriginal rights, conservation and industry), as underlined by the *Fisheries Act*. Where fishery managers often see complications is when managing the seemingly dichotomous objectives of conservation versus utilization. While this may not always be the case, it has the potential to cause significant difficulties. Possible benefits for having DFO at the AMB table is, for example, DFO being able to correlate its large-scale management and monitoring strategies to local Gwaii Haanas objectives. DFO is also able to represent various constituents the others parties may not, for example commercial or recreational fishers. This can potentially assist and expedite management decisions, as the fishing industry continues to have a large degree of influence over the area. Had DFO not been invited to the AMB during the creation of Gwaii Haanas' MPA, it can be reasonably assumed that the fishing industry would have found other ways to have their opinions heard, especially regarding the no-take portions of the MPA. Conversely, DFO also has the potential to spark internal debates within the AMB because of the very same reason, representing both conservation and utilization. This is perhaps best illustrated with the herring fishery dispute. No longer were AMB members focused primarily on

conservation and Aboriginal rights. Industry began playing a prominent role in management decisions as well.

What the herring dispute resolution process revealed is the complexity of cooperative management and the "Complexity of State" (Carlsson & Berkes, 2005). By assembling various parties, all with different chains of command, mandates, and representatives who have varying degrees of representative capacity, it created a disjointed cooperative management regime. The IHHPC represents another co-management process that attempts to address this. The IHHPC's goal is to help inform the decision-making of DFO, the development of its IFMP and allow for various stakeholders to come together, including First Nations. With that being said, the IHHPC differs from the AMB in that it specifically addresses herring across the province. Comparatively the AMB has a much broader mandate over a relatively smaller marine area. The IHHPC was established with the sole purpose of informing DFO management decisions regarding the herring fishery but the AMB was not. This distinction is important. These two co-management processes should find a way to cooperate, especially CHN representatives. The importance of this is discussed in Section 5.2.

It was revealed that the DFO representative's position weakens when recommendations he supports, like to keep the herring fishery closed, are trumped by the Minister of DFO.

> "Its really challenging to sit across from someone and say " I know you're trying your best, but what's the point of us doing all this work?" Are we wasting our time, are we spinning our wheels? If we are going to spend all this time and then its going to go up and someone at the high level is going to say no, let's not do that, or gets a whisper from industry saying we want

> to be in there and change their decision." (Personal Communication, 2014).

In the future, what may occur is that representatives are aware of what they are allowed to agree to, or what may need further discussion, before voicing a decision at the AMB table. This would minimize contradictions between representatives and higher authority, and potentially lessen the chance for final and clear disagreements to open up. Parks Canada has given its Superintendents across Canada a large degree of autonomy over their designated protected areas (Thomlinson & Crouch, 2012; Dearden & Langdon, 2009). Mr. Ernie Gladstone, the Superintendent and Parks Canada's AMB representative, has an even broader degree of discretion and authority when compared to other superintendents across Canada. It is apparent Mr. Gladstone has a unique situation when compared to the DFO representative. It is possible that this can shift, with a change in Parks leadership centralizing protected area management, but this seems unlikely. If it does though, it is possible Parks Canada representation finds themselves in the same position the DFO representative is currently in.

What this study, through the herring dispute, has shown is fractures in what was previously touted as a stable cooperative management (Thomlinson & Crouch, 2012). Previous studies did not have the opportunity to observe the new iteration of the AMB, nor its first final and clear disagreement. The herring dispute has challenged, for the first time, the AMB's ability to resolve a major disagreement. The AMB was able to reach consensus, recommending that the herring fishery remain closed for 2014. The DFO Minister, acting under a broader mandate, effectively ignored the AMB's recommendation and opened the herring fishery by what she considered was a

conservative amount. By definition, where a government actor makes the decision, no matter how carefully the other positions are considered, this is not really co-management, but engagement. The action by the DFO Minister has created a new management landscape, one where the AMB's authority has come into question. The Moresby Explorers Ltd v. Canada (2001) court-case revealed how the AMB is not an entity in of-itself, but a tool to facilitate cooperative management.

5.2 In what ways can the AMB move forward so that fisheries can be more effectively managed in Gwaii Haanas?

Given all that has been examined, this study puts forward certain steps that may be taken by the AMB to help clarify each parties role and thereby minimize the potential for another final and clear disagreement to occur. This section does not claim that the solutions suggested are a panacea to the complexities that exist within Gwaii Haanas' cooperative management structure. They simply attempt to address the issues identified in the section above and more specifically issues concerning fisheries. The aim of this section is to answer the third research question, and attend to Carlsson and Berkes' (2005) Steps 5 and 6 of analyzing co-management regimes. This Section is structured around three primary ways the AMB can move forward. In no specific order they are: 1) To maintain the status quo and recognize the limits of the AMB; 2) Amend legislation and delegate decision-making authority; and 3) Develop policies, protocols and procedures to manage the relationship between the AMB and the statutory decision-makers.

1) To maintain status quo and recognize the limits of the AMB

The herring dispute brings forward some limitations of the AMB that were originally highlighted during the 2001, Moresby Explorers Ltd. v. Canada case. The court ruled that no Minister could completely delegate their statutory decision-making authority to the AMB as the *Gwaii Haanas Agreement* currently stands. Legally, it is not strong enough to overrule the Canadian Constitution. Therefore, it is currently unlawful for the AMB to be the final decision-maker regarding fisheries within the NMCA(R), as that decision rests with the DFO Minister. The AMB is simply positioned to make recommendations to the Minister. This relates to the set of rules proposed by Kiser & Ostrom (1982). These rules suggest that all co-management regimes are bounded by constitutional rules. Again, these are high level rules that allocate decision-making authority regarding resources to final decision-makers. The *Gwaii Haanas Agreements* acknowledge both the Canadian and Haida constitutions, and consequently gives equal decision-making authority, in areas of their established legal competence, to either party. This does not however extend to the CHN managing fisheries throughout Haida Gwaii. During the herring fishery dispute the DFO Minister exercised her constitutional right to open the fishery. What remains to be seen is what the CHN will do because of this. The CHN would ideally like to see all fisheries surrounding Haida Gwaii be managed by the Haida, but this is unlikely to happen in the near future.

One potential solution this study suggests is that DFO maintains its position as final decision-maker regarding fisheries, including those within NMCAR's. This would require no re-writing of any laws or acts. It would allow for coordination with other

regional marine management strategies, such as the IHHPC. As was discussed in Section 5.1, a clarification of the AMB's role may rest with the recognition of IHHPC and its influence over the herring fishery. If no changes are made to statutory-law and the Minister of DFO retains final decision-making authority, it may be in the CHN's best interest to link their IHHPC and AMB representatives. Furthermore, this may clarify the AMB's role regarding fisheries within the MPA. What it would be required to avoid further disputes is DFO taking the AMB's recommendations and meaningfully applying them to their decisions. They should use the AMB as it was intended, and as was clarified by the courts (Moresby Explorers Ltd. v. Canada, 2001). It is a tool for cooperative management. Recommendations made by the AMB should help inform DFO, and guide its decisions. Ideally the AMB would be the informant for all decisions that would affect Gwaii Haanas' mandate. If this solution were taken it would be largely the responsibility of DFO to make the relationship work. This solution has large potential to help gain trust and strength between the GoC and the CHN, but it also could potentially set them apart.

2) Amend legislation and delegate decision-making authority

The second solution is again rooted in decisions that the Moresby Explorers Ltd. v. Canada (2001) brought forward, and also considers issues that became apparent when the herring dispute resolution process was invoked. The complexity of managing fisheries should not be understated. Highly migratory pelagic fisheries, such as herring, that move in and out of various jurisdictions are extremely difficult to manage. Having a managerial body that covers all jurisdictions would facilitate the management of such fisheries.

Initiatives such as MaPP, IHHPC or PNCIMA are examples of this. It would be impractical for fisheries management to delegate decision-making authority to individual localized management groups, such as the AMB, when concerning migratory fisheries. This solution suggests that DFO would maintain its role in managing migratory fisheries but legislation would be amended to leave room for delegation of decision-making authority regarding other fisheries. While the *Gwaii Haanas Agreement* is legally not strong enough to contest with the Canadian Constitution, certain fisheries decisions could be allocated to the AMB. This has already been done in the past, as discussed by Lee (2012). For instance, the razor clam fishery that was delegated from DFO to the Haida, and is now being successfully managed. DFO regularly delegates management of fisheries to the provincial government as well. The delegation of sedentary fisheries is clearly much easier to do than migratory ones, but even so, this solution could be a step towards the AMB increasing its decision-making authority within the NMCAR.

If the AMB acquired decision-making responsibility over sedentary fisheries, through amendments made to legislation (ie. *NMCA Act* and *Fisheries Act*) it could potentially resolve some key issues. In order for this to function, the AMB needs to have the capacity to make well-informed decisions. Its members need to be able to speak for the institutions/constituents they represent. No only that, but AMB members need to be able to participate meaningfully for trust and understanding to be gained between parties. The CHN representatives are arguably in the best position to do this, as they are elected to be the CHN representatives by the Haida. Parks Canada representatives are nearly equally able to do so, as was discussed with regards to its Superintendent for instance. The DFO

representative should be as well, but as was observed during the herring dispute, the representative agreed to a recommendation that the Minister later disagreed with. It is important that in the future the representative be familiar with department's stance on potential issues, especially ones so clearly contentious. This could potentially alleviate future issues.

This suggested solution represents a compromise between completely delegating decision-making authority to the AMB and maintaining the status-quo, where DFO maintains its position as the sole final decision-maker. How this may be immediately applicable is through the herring roe/spawn on-kelp fisheries found within Gwaii Haanas. These are culturally important fisheries to the Haida, which are still being traditionally harvested. If DFO delegated their decision-making authority to the AMB, with regards to this fishery specifically, it could represent a positive step in the cooperative management regime. This, again, would require amendments made to federal legislation and coordination with DFO's larger fisheries management. Precedents have already been set for the delegation of management authority; this should be built upon carefully. The chance of this solution being applied immediately in the future is unlikely. The *NMCA Act* was worded carefully so that DFO retained its position as final-decision-maker regarding fisheries. Attempting to change this would assuredly meet resistance, especially from DFO. Nonetheless, it still represents a potential solution to a very complex problem.

3) Develop policies, protocols and procedures to manage the relationship between the AMB and the statutory decision-makers.

The two previous solutions could arguably be positioned on two ends of a spectrum. The first working with the status quo, and maintaining DFO as the final decision-maker regarding fisheries in an NMCAR. The second solution attempts to begin delegating decision-making authority to the AMB. This third option tries to bring these two suggestions together. It focuses on Ostrom & Kiser's (1982) collective-choice rules, which dictate things such as how large a fishery needs to be before it is opened; as it stands this decision remains with DFO, who is informed by both the IHHPC and scientific stock assessments. Where the AMB might be able to begin negotiating a solution is by informing and influencing the Minister's decision.

It is again clear, based on the ruling by Moresby Explorers Ltd v. Canada (2001) and the *Gwaii Haanas Agreement(s)*, that the AMB is unable to receive decision-making authority regarding fisheries, or arguably anything else, from either the GoC or the CHN without amendments being made to legislation. Where the AMB may be able to affirm its position as a management body, is by collectively agreeing on clear ecosystem objectives for the NMCAR. This would make each party responsible for accomplishing these objectives, but not shift the final decision-making authority away from any of the parties. As an example this study will use the herring fishery.

In this example, the AMB would agree to an ecosystem objective of having a certain herring stock size within Gwaii Haanas by a certain date. It would be important for all representatives to deliberate with their constituents before all parties sign the ecosystem objective. Working together, all parties could collaborate their respective monitoring programs and resources, potentially providing more detailed stock estimates. Once all parties signed onto the management objective the Minister of DFO would remain ultimately responsible for accomplishing this objective. This solution would keep the Minister as the final decision-making authority under statutory law. This solution would not challenge constitutional rules, or strengthen of any subsequent land-claims from either the GoC or CHN. It would however keep the CHN engaged and play an important role in Gwaii Haanas' fishery management. What would be important is that these management objectives are clearly articulated in all management plans for Gwaii Haanas. A potential reason for the herring dispute is that the marine management plan has no specific ecosystem objectives. If the 2015 management plan is able to remedy this, then further disputes may be alleviated. As was perhaps observed when discussing Gwaii Haanas' signature management projects, there were none that addressed Gwaii Haanas Marine's management. This is largely attributed, at least in part, to the MPA being so recently established, as it takes time to develop such programs. It is reasonable to anticipate that in the future Gwaii Haanas Marine will have unique programs of its own, which aid the AMB to accomplish their ecosystem objectives. It would be imperative that monitoring programs are established to ensure that objectives are being accomplished. The results of these monitoring programs would be critical to assessing the effectiveness of the management actions taken by the decision making authorities to

evaluate whether the management objectives established by the AMB for the NMCAR are being achieved. As an illustrative example, either independently monitoring the status of the herring stocks, or more actively engaging with DFO on the design, implementation, and interpretation of results of their herring stock monitoring program, would be essential in determining if the management decisions of DFO are achieving the NMCAR objectives for fisheries management.

It is important for language to be clarified within the *Gwaii Haanas Agreement(s)*. There is much left up for interpretation concerning who is in charge of managing fisheries in Gwaii Haanas. As was seen during the initial formation of the *Gwaii Haanas Agreement*, a major issue for the CHN revolved around the ability for the Minister of the Environment to be the final decision-making authority in a protected areas, as stated in the under the *National Parks Act* (Porter-Bopp, 2006). Without equal representation and decision-making authority the CHN would never had signed any agreement. This sentiment is reiterated concerning the *Gwaii Haanas Marine Agreement* and the DFO Minister's decision-making authority regarding fisheries. As new board members come to represent their parties, it is important for them to understand the wording behind the agreements so that they may act as the agreements intended and in a manner consistent with legal realities under federal statutes. It is also important for new members to get a thorough history, as was presented in this study, to grasp the complexity and sensitive history surrounding Gwaii Haanas and Haida Gwaii. By doing this it will facilitate trust building and make any transitions easier.

Linkages should be made between the AMB, the IHHPC and other collaborative marine resource and spatial planning processes. This could be done with regards to representation and information exchange. As was mentioned before, by having the CHN's representatives to the AMB and IHHPC be in close communication with each other, it may more clearly articulate and reinforce a more unified presentation of the CHN's position and perspective in these deliberations. In the terms of reference of the IHHPC it explicitly mentions how working with First Nations may require bilateral processes (DFO, 2010). It could provide the opportunity for the AMB to be represented on this important co-management body. Consistent with both the IHHPC terms of reference and with the intent of the GH agreements to establish an effective co-management arrangement with regard to these resources within the NMCAR. This could also be broadened to include other marine spatial planning processes, such as MaPP or PNCIMA. It is becoming increasingly important to develop linkages between collaborative, co-management processes. As it stands, the IFMP makes no mention of marine managed areas. It would be important for it to mention areas that are being managed under the PNCIMA and MaPP processes. By linking the AMB to the IHHPC, PNCIMA and MaPP, when concerning fishery management, it could improve overall management.

Any one of these solutions will not solve all of the complex issues that arise when managing areas as complex as Gwaii Haanas on their own. This highly ambitious protected area is attempting to cooperatively manage both marine and terrestrial landscapes, between three distinctive entities. As the new AMB managerial landscape

presents itself following the conclusion of the herring fishery dispute, it will be up to the parties to determine the strength and weight the AMB. This study believes that the third option -having the AMB establish specific ecosystem objectives to help guide statutory decision-makers and build linkages with other marine spatial planned processes– is the most practical and favourable solution.

5.3 How can this study be built upon or improved?

It is hoped that this thesis has revealed the complexity that lies within a cooperative management regime, such as Gwaii Haanas. Although this study was conducted over many months and built on numerous studies there still is room for improvement and areas that need to be explored further. One of the major characteristics of this study was the time-frame with which it was placed. One major advantage is that it took place as events were unfolding concerning the herring fishery dispute. This allowed for a new perspective and narrative to form concerning Gwaii Haanas' management. Conversely, it remains a very sensitive subject and some interviewees were hesitant to engage the investigator or wished to remain anonymous. Another point of improvement is the length of the study. The investigator only had 6-months to contact and interview potential interviewees. Though every effort was made there were a number of potential contacts that never responded or wished to not participate. Trust needed to be gained quickly and when conducting qualitative research based around interviews, it is imperative that good connections are made. In the future, it is recommended that the researcher spends more time in the community and establish themselves more.

Regarding the interviews themselves, there were some potential drawbacks from conducting semi-formal interviews. A semi-structured interview style was chosen for several reasons. The types of knowledge, experience, and resources vary enormously, not just vertically between those interviewed, but laterally between each group as well. Semi-structured interviews accounts for these differences in knowledge, experience and resources so that a more comprehensive idea could be formed. While follow-up questions can add another dimension to interviews, their value is directly related to the investigators active listening skills and the ability to avoid leading questions that elicit certain responses (Given, 2008). In order to mitigate this issue an interview outline was created prior to the interviews being carried out. The interview outline is to act as a guide so that key topics are addressed in all interviews. Additionally, potential follow-up questions were created to ensure the strength of the interviews, although they may not be always used given the context. While every effort would be made to ensure that the participants were asked fair and equal follow-up questions, it was possible that some questions could have been misleading and this would have been taken into account when interview analysis occurred.

This study was concluded in December 2014 before a decision regarding the 2015 herring fishery could be made. It would be interesting to see how the AMB or DFO responds to either higher or lower herring stocks. Based on interviews with some DFO scientists they believe the herring stocks continue to increase, leaving room for a re-opening and potential clashes between the CHN and the Government of Canada once more. On top of the continued developments being made concerning the herring fishery, a new

management plan is set to be concluded by December 2015. This integrative management plan will take into account Gwaii Haanas Marine and Gwaii Haanas Terrestrial, in an attempt to manage the two ecosystems collectively. This new management plan will also attempt to form new marine programs so that the area can be better actively managed. It remains to be seen if the 3% no-take in Gwaii Haanas Marine will increase, but if it is the case it will signal a shift away from DFO's industrial mandate towards one more focused on conservation and sustainability.

6. Conclusion

This study is an initial step towards understanding the innovative management regime surrounding Gwaii Haanas. As is continually reiterated throughout this paper, co-management/cooperative management is extremely variable and is very difficult to analyze. When research is undertaken, it is important to set limits on how deep one will explore. As discovered through this research, there are endless avenues to investigate. However, knowing those avenues that are most important is essential. It is believed, that this study has contributed to the discussion around how to improve management practices in this protected area, and potentially others. Gwaii Haanas will remain an extremely important protected area globally. Its long history has provided initial steps in developing strong cooperative management regimes and is the first to be managed from "mountain top to sea floor". With a powerful Haida First Nation cooperating with a purposeful Canadian Government, Gwaii Haanas is positioned to become an exemplary protected area, not just in Canada, but also in the world.

It will take continued effort on both sides to resolve the herring fisheries dispute. This study believes that if the AMB's role is clarified then future fisheries disputes in the AMB may be averted. The relationship between DFO and the CHN will continue to evolve, just Parks Canada and the CHN did. It is up to the parties to reach an understanding of what their roles will be and how they will communicate these roles to each other.

References

Ahousaht First Nation v. Canada (Fisheries and Oceans). (2014). Federal Court of Canada, Ottawa. 2014 FC 197. Retrieved online August 2014 from: http://decisions.fct-cf.gc.ca/fc-cf/decisions/en/item/72420/index.do.

AMB (Archipelago Management Board). (2010[a]). Gwaii Haanas national park reserve and Haida heritage site: Management plan for the terrestrial area. Government of Canada and the Council of the Haida Nation. Retrieved online February 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/Plan2.aspx.

AMB (Archipelago Management Board). (2010[b]). Gwaii Haanas national marine conservation area reserve and Haida heritage site: Interim management plan and zoning plan. Government of Canada and the Council of the Haida Nation. Retrieved online February 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/plan1.aspx.

Armitage, D., Berkes, F., & Doubleday, N. (2007). Introduction: Moving beyond co-management. In Adaptive Co-management: Collaboration, learning and multi-level governance. pp. 1-15. UBC Press. Retrieved online June, 2014 from http://site.ebrary.com/id/10203177?ppg=31.

BC Stats. (2011). 2011 + 2006 Census, Statistics Canada. BC Stats, Ministry of Labour, Citizens' Services and Open Government. Retrieved online September 2014 from:http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2011Census/PopulationHousing/CensusSubdivisions.aspx.

Berkes, F. (1993). Traditional ecological knowledge in perspective. In: Inglis, J. Traditional Ecological Knowledge: Concepts and Cases. pp. 1-10. International Program on Traditional Ecological Knowledge: Ottawa, Canada.

Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. Natural Resources Institute. 90: pp.1682-1702. University of Manitoba, 70 Dysart Road, Winnipeg, Manitoba R3T 2N2, Canada.

Burt, J.M., Akins, P., Lathem, E., Beck, M., Salomon, A.K., & Ban, N.C. (2014). Marine protected area design features that support resilient human-ocean systems- Applications for British Columbia, Canada. Simon Fraser University, British Columbia, Canada.

Carlsson, L & Berkes, F. (2005). Co-management: Concepts and methodological implications. Journal of Environmental Management. 75: pp. 65-76. doi:10.1016/j.jenvman.2004.11.008.

Council of the Haida Nation (CHN). (2010[a]). Athlii Gwaii 25 Years for the road. Haida Las. November 2010, Skidegate. Retrieved online June 2014 from: http://www.haidanation.ca/Pages/haida_laas/pdfs/journals/jl_nov.10.pdf

Council of the Haida Nation (CHN). (2010[b]). Remembering Athlii Gwaii: Lawrence Jones speaking. Haida Las. October 2010, Skedigate. Retrieved online June 2014 from: http://www.haidanation.ca/Pages/haida_laas/pdfs/newsletters/2010/oct.10.pdf

Dearden, P., Bennett, M. & Johnston, J. (2005). Trends in global protected area governance, 1992-2002. Environmental Management. 36 (1): pp. 89-100.

Dearden, P., & Canessa, R. (2009). Marine protected areas. In: Dearden, P and Rollins, R. (Eds.), Parks and Protected Areas in Canada. pp. 401-431. Ontario, Canada: Oxford University Press.

Dearden, P., & Langdon, S. (2009). Aboriginal peoples and national parks. In: Dearden, P and Rollins, R. (Eds.), Parks and Protected Areas in Canada. pp. 373-402. Ontario, Canada: Oxford University Press.

DFO (Fisheries and Oceans Canada). (2010). Integrated herring harvest planning committee: Terms of reference. Fisheries and Oceans Canada, Ottawa. Retrieved online October 2014 from: http://www.pac.dfo-mpo.gc.ca/consultation/pelag/ihhpc-ccpih/tor-man-eng.pdf.

DFO (Fisheries and Oceans Canada). (2002). Canada's ocean strategy: Policy and operational framework for integrated management of estuarine, coastal and marine environments in Canada. Fisheries and Oceans Canada, Ottawa. Retrieved online October 2014 from: http://www.dfo-mpo.gc.ca/oceans/publications/cosframework-cadresoc/pdf/im-gi-eng.pdf.

DFO. Fisheries and Oceans Canada). (2013). Pacific herring integrated fisheries management plan summary. Fisheries and Oceans Canada, Ottawa, Canada. Retrieved online June 2014 from: http://www.pac.dfo-mpo.gc.ca/fm-gp/mplans/2014/herring-hareng-2013-2014-sm-eng.pdf.

DFO (Fisheries and Oceans Canada). (2014[a]). Stock assessment and management advice for British Columbia pacific herring: 2013 status and 2014 forecast. Fisheries and Oceans Canada, Ottawa, Canada. Retrieved online June 2014 from: http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2014/2014_003-eng.pdf.

DFO (Fisheries and Oceans Canada). (2014[b]). Integrated herring harvest planning committee (IHHPC). Fisheries and Oceans Canada, Ottawa, Canada. Retrived online September 2014 from: http://www.pac.dfo-mpo.gc.ca/consultation/pelag/ihhpc-ccpih/index-eng.html.

Fedje, D.W. & Matthewes, R. W. (eds. 2005). Haida gwaii: Human history and environment from the time of loon to the time of the iron people. UBC Press, Vancouver.

Fladmark, K. R. (1975). A paleoecological model for northwest coast prehistory. No. 43. Ottawa: National Museums of Canada.

Feyerabend, G., Pimbert, M., Farvar, A., & Renard, Y. (2004). Learning by doing in co-management of natural resources throughout the world, IIED and IUCN/ CEESP/ CMWG, Cenesta, Tehran.

Given, L. (2008). The SAGE encyclopedia of qualitative research methods: Semi-structured interview. Sage Publications Inc. pp. 811-813. doi: 10.4135/9781412963909.

Golumbia, T.E. (1999). Introduced Species Management in Haida Gwaii (Queen Charlotte Islands). Proceedings of a Conference on the Biology and Management of Species and Habitats at Risk, Kamloops, B.C., 15 - 19 Feb.,1999. Vol. 1. pp. 327-332.

Gowgaia Institute. (2007). Forest Economy Trends and Economic Conditions on Haida Gwaii. Retrieved online August 2014 from http://www.spruceroots.org/Booklets/ForTrends.pdf.

Gowgaia Institute. (2008). Some highlights of the Haida Gwaii land use plan. Retrieved online September 2014 from: http://www.mieds.ca/images/uploads/Highlights%20of%20the%20HG%20LUP.pdf.

Government of Canada (GoC). (1982). Constitution acts, 1867 to 1982. Retrieved online November, 2014 from: http://laws-lois.justice.gc.ca/eng/Const/page-16.html#docCont.

Government of Canada (GoC). (2000). Canada national parks act. Minister of Justive. Ottawa, Canada. Retrieved online July 2014 from: http://laws-lois.justice.gc.ca/eng/acts/n-14.01/.

Government of Canada (GoC). (2002). Canada national marine conservation areas act. Minister of Justice. Ottawa, Canada. Retrieved online July 2014 from: http://laws-lois.justice.gc.ca/eng/acts/c-7.3/index.html.

Government of Canada (GoC) & the Council of the Haida Nation (CHN). (1993). Gwaii Haanas Agreement. Retrieved online March 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/plan1.aspx.

Government of Canada (GoC) & the Council of the Haida Nation (CHN). (2010). Gwaii Haanas Marine Agreement. Retrieved online March 2014 from:http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/plan1.aspx.

Government of Canada (GoC). (2002). Canada national marine conservation areas act. Minister of Justice. Ottawa. Retrieved online July 2014 from:http://laws-lois.justice.gc.ca/eng/acts/c-7.3/index.html.

Hume, M. (2013). Rat patrol: Blitzing the bird killers of haida gwaii. The Globe and Mail. Retrieved online July 2014 from http://search.proquest.com.ezproxy.library.uvic.ca/docview/1440657201?pqorigsite=summon.

Hume, M. (2014). Haida Gwaii find could rewrite North America's history. The Globe and Mail. Retrieved online June 2014 from: http://www.theglobeandmail.com/news/british-columbia/bc-researchers-may-have-found-earliest-site-of-human-habitation-incanada/article20737278/.

Huntington, H. P. (2000). Using traditional ecological knowledge in science: Methods and applications. Ecological Applications, 10(5), 1270-1274. doi:10.1890/1051-0761(2000)010[1270:UTEKIS]2.0.CO;2.

Huscroft, G., & Taggert, M. (2006). Inside and outside canadian administration: Essays in honour of david mullan. University of Toronto Press. Retrieved online June, 2014 from: http://site.ebrary.com.ezproxy.library.uvic.ca/lib/uvic/reader.action?docID=10218978&ppg=390.

IUCN. (2000). Indigenous and traditional peoples and protected areas: Principles, guidelines and case studies. ed. Javier Beltran. Gland, Switzerland: IUCN.

Jackson, T., & Curry, J. (2004). Peace in the woods: Sustainability and the democratization of land use planning and resource management on crown lands in British Columbia. International Planning Studies: 9 (1), pp. 27-42.

Jones, P.J.S., Qiu, W., & De Santo, E. (2011). Governing marine protected areas: Getting the balance right. Technical Report, United Nations Environmental Programme.

Kiser, L. & Ostrom, E. (1982). The three worlds of action – A meta-theoretical synthesis of institutional approaches. In: Ostrom, E. (Eds.), Strategies of Political Inquiry. pp.179-222. Sage, Beverly Hills.

Lemelin, R. and Johnston, M. (2009). Northern parks and protected areas. In: Dearden, P. and Rollins, R. (Eds.), Parks and Protected Areas in Canada. pp. 373-402. Ontario, Canada: Oxford University Press.

Lee, Lynn. (2012). People land and sea: Environmental governance on Haida Gwaii. the action canada northern conference, Haida Gwaii. Retrieved online June 2014 from http://www.actioncanada.ca/wp-content/uploads/2014/04/Haida-Gwaii-Environmental-EN-Oct-2012.pdf.

Lordon, I. (June, 1998). Fishing for our future. Spruceroots Magazine. Retrieved online July 2014 from: http://www.spruceroots.org/June98/Herring.html.

Manseau, M., Parlee, B. & Ayles, G. (2005). A place for traditional ecological knowledge in resource management In: Berkes, F., Huebert, R., Fast, H., Manseau, M. and Diduck, A. Breaking ice: renewable resource and ocean management in the Canadian north. pp. 141-164. University of Calgary Press:Calgary, Canada.

McKechnie, I., Lepofsky, D., Moss, M., Butler, V., Orchard, T.J., Coupland, G., Foster, F., Caldwell, M., & Lertzman, K. (2014). Archaeological data provide alternative hypotheses on Pacific herring (Clupea pallasii) distribution, abundance, and variability. Proceedings of the National Academy of Sciences, 111(9), E807. doi:10.1073/pnas.1316072111.

McMillan, A. D., & Hutchinson, I. (2002). When the mountain dwarfs danced: Aboriginal traditions of paleoseismic events along the cascadia subduction zone of western north america. Ethnohistory, 49(1), 41-68. doi:10.1215/00141801-49-1-41.

Misty Islands. (2011). Haida Gwaii: Investment ready – Community profile. Misty Islands Economic Development Society. Retrieved online August 2014 from: http://www.mieds.ca/images/uploads/Community%20Profile-Haida%20Gwaii.pdf.

Morrison, J. (1995). Aboriginal Interests. In: Hummel, M. (Eds.), Protecting Canada's Endangered Spaces: An Owner's Manual. Toronto: Key Porter.

Moresby Explorers Ltd. v. Canada (Attorney General) (July 9, 2001). Supreme Court of Canada. Retrieved online September 9, 2014 from: http://reports.fja.gc.ca/eng/2001/2001fct780.html.

Natcher, D., Davis, S. & Hickey, C. (2005). Co-management: Managing relationships, not resources. Human Organization. 64 (3): 241-250. doi:0018-7259/05/030240-11.

Observer. (2012). Census reveals massive population loss on Haida Gwaii. Haida Gwaii Observer, February 10, 2014. Retrieved online August 2014 from:http://www.haidagwaiiobserver.com/Article.aspx?Id=5328.

Parks Canada (Agency). (1994). *Guiding principles and operational policies*. Department of Canadian Heritage. Ottawa, Canada. Accessed online January 14, 2014 from: http://www.pc.gc.ca/docs/pc/poli/princip/index.aspx.

Parks Canada (Agency). (1997). *National park system plan*. (3rd Eds.). Department of Canadian Heritage. Ottawa, Canada. Accessed online November 15, 2013 from: http://www.pc.gc.ca/eng/docs/v-g/nation/index.aspx

Parks Canada (Agency). (2012). History of the establishment of Gwaii Haanas. Retrieved online September 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/plan/plan1/Plan1C.aspx.

Parks Canada (Agency). (2013). Haida Gwaii Watchmen. Retrieved online June 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/natcul/natcul6.aspx.

Parks Canada (Agency). (2014). Haida cultural sites: Gandll K'in Gwaay.yaay (Hotspring Island). Retrieved online July 2014 from: http://www.pc.gc.ca/eng/pn-np/bc/gwaiihaanas/natcul/natcul4/natcul4d/natcul4di.aspx.

Porter-Bopp, S. (2006). Colonial natures? Wilderness and culture in Gwaii Haanas National Park Reserve and Haida Heritage Site. York University, Toronto, Canada.

Thomlinson, E., & Crouch, G. (2012). Aboriginal peoples, parks canada, and protected spaces: A case study in co-management at gwaii haanas national park reserve. Annals of Leisure Research, 15(1), 69-86. doi:10.1080/11745398.2012.670965.

Sloan, N. A. & Dick, L. (2012). Sea otters of Haida Gwaii: Icons in human-ocean relations.

Sloan, N. A. (2014). Chapter 10 - Gwaii Haanas: From conflict to cooperative management. In: Ray, G. C., McCormick-Ray, J. (1st Eds.), Marine Conservation: Science, Policy and Management. pp. 261-287. John Wiley & Sons. Ltd.

Usher, P. (2000). Traditional ecological knowledge in environmental assessment and management. Arctic. 53 (2): 183-193.

Valencia, M. J., & Vanderzwaag, D. (1989). Maritime claims and management rights of indigenous peoples: Rising tides in the pacific and northern waters. Ocean and Shoreline Management, 12(2), 125-167. doi:10.1016/0951-8312(89)90050-7

Vandeperre, F., Higgins, R. M., Sánchez-Meca, J., Maynou, F., Goñi, R., Martín-Sosa, P., Pérez-Ruzafa, A., Afonso, P., Bertocci, I., Crec'hriou, R., D'Anna, G., Dimech, M., Dorta, C., Esparza, O., Falcón, J.M., Forcada, A., Guala, I., Le Direach, L., Marcos, C., Ojeda-Martínez, C., Pipitone, C., Schembri, P.J., Stelzenmüller, V., Stobart, B., & Santos, R.S. (2011). Effects of no-take area size and age of marine protected areas on fisheries yields: A meta-analytical approach. Fish and Fisheries, 12(4), 412-426. doi:10.1111/j.1467-2979.2010.00401.x

Wilson, B.J., & Harris, H. (2005). Chapter 7 - Tllsda Xaaydas K'aaygang'nga: Long, long ago Haida ancient stories. In: Fedje & Matthewes, D. W., Haida gwaii: Human history and environment from the time of loon to the time of the iron people. pp. 121-139. UBC Press.

Wohling, M. (2009). The problem of scale in indigenous knowledge: A perspective from northern australia. Ecology and Society, 14, 1.