

**Indigenous People's Clam Fisheries Access,  
Management, and Governance in the Broughton  
Archipelago, British Columbia: Tradition, Adaptation,  
and the Potential for a Future**

**by  
Neil Ladell**

M.Sc., London School of Economics and Political Science, 2009

B.A. (Hons.), University of Calgary, 2007

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**Name:** Neil Ladell

**Degree:** Doctor of Philosophy

**Title:** Indigenous People's Clam Fisheries Access, Management, and Governance in the Broughton Archipelago, British Columbia: Tradition, Adaptation, and the Potential for a Future

**Committee:**

**Chair: Duncan Knowler**  
Professor, Resource and Environmental Management

**Evelyn Pinkerton**  
Supervisor  
Professor Emerita, Resource and Environmental Management

**Anne K. Salomon**  
Committee Member  
Professor, Resource and Environmental Management

**Stephan Schott**  
Committee Member  
Professor, Public Policy & Administration  
Carleton University

**Dana Lepofsky**  
Examiner  
Professor, Archaeology

**Leslie A. King**  
External Examiner  
Professor, Environment and Sustainability  
Royal Roads University

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## Abstract

As Canada enters an era of truth and reconciliation with Indigenous Peoples, access, management, and governance of fisheries resources have been areas of tension. These tensions are often deeply rooted in centuries of conflict and questions of legitimacy of federal authority over Indigenous Peoples' fisheries. Before we can reach a place where we are effectively negotiating reconciliation, truth requires us to understand Indigenous Peoples' practices before contact, how their practices were disrupted, and how the practices were adapted when confronted by colonialism, capitalism, and associated resource extraction and management practices. In this dissertation I use a small but culturally significant intertidal clam fishery in the Broughton Archipelago, British Columbia, as a case study of how local Kwakwaka'wakw people's relationships with their clam beaches have been disrupted and altered since pre-contact, and how they have responded, resisted, adapted, and ultimately embarked on an effort to reclaim these relationships. I argue that, despite previous failures to establish a local clam co-management arrangement, the recent decline in the commercial intertidal clam fishery in the Broughton Archipelago has the potential to be an opportunity for the federal government to work with local Indigenous groups to re-examine and re-create the fishery in a manner that aligns with reconciliation principles. I draw from historical literature to identify ways in which colonialism and capitalism affected local Indigenous People's clam harvesting and management practices in the Broughton Archipelago, both directly (e.g., through the commercialization of the intertidal clam fishery) and indirectly (e.g., by cultural suppression and spread of disease). Using qualitative methods, I document the cultural and territorial significance that Kwakwaka'wakw attach to clam harvesting, even as the practice declines. I conclude that understanding the role of *maya'xala* (respect) as a guiding principle for local Kwakwaka'wakw helps explain why federal clam fisheries management and efforts at co-management have yet to succeed in the Broughton Archipelago. Adapting local Indigenous People's management of clam beaches could help resolve some of the issues within the current management approach, while also supporting long-term cultural revitalization, social-ecological resilience, and the negotiation of reconciliation.

**Keywords:** Intertidal clams; Clam gardens; Fishery management; Kwakwaka'wakw;  
Reciprocity; Respect

## **Dedication**

In memory of and gratitude to Percy Williams, a thoughtful, humorous, and passionate person who loved his Musgamagw Dzawada'enuxw family. I am grateful for the time we had together working on this project.

In memory of the research participants who passed away before this project could be completed.

## Acknowledgements

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To my supervisor, Lyn Pinkerton, who has supported, encouraged, and guided me throughout this PhD journey that I dragged out longer than she would have liked, thank you so much for not giving up on me and being patient as I dealt with various health issues and other life and schooling complications.

I thank my family and friends. To my spouse, Roz MacLean, I love you. Thank you for all the love, encouragement, support throughout this journey, especially as I

attempted to get myself back on track following each of those three concussions, through my anxieties, and all the uncertainty.

Many thanks to Too Big To Ignore (Social Sciences and Humanities Research Council grant #895-2011-1011 to Ratana Chuenpagdee) and the Social Sciences and Humanities Research Council for providing funding to “Overcoming barriers to the exercise of Aboriginal rights to healthy clam fisheries: learning through partnerships” (grant #890-2010-0141 to Evelyn Pinkerton).



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## **Notification**

This dissertation includes content on the impacts of colonialism and the Indian Residential Schools system in Canada. The Indian Residential Schools Crisis Line is available 24-hours a day for anyone experiencing pain or distress as a result of their Residential School experience. Hotline number: 1-800-721-0066.

# The Tradition of Clam Digging<sup>1</sup>

I imagine how life was like over 200 years ago; and even 50 years ago, when our grandparents were alive. Our legacy is absolutely amazing, and noble to highest extent. Evidence of clam shell goes to the back of our villages; I can only guess how old our villages have been alive because of our ancestors, and the way we lived. And, we are still here today, thanks to all of You, our Descendants.

I am so excited to be working with our Musgamagw Dzawada'enuxw People and SFU, as Clam Management Researcher. You are the Clam Managers, and I, along with SFU staff, are there to assist with research, to really help things along, to help develop a management process that's combined with our traditional ways, protocol to ensure better management of our clams.

I have no doubt in our abilities to really get it done as we'd proven throughout history. I believe we can bring all clam issues together and carry it forward as one powerful unit.

Clam management is such a sensitive, and a very real issue. It's a practice we've always had, and, like other systems, things have occurred beyond our control; now, we're going to show our ways to help fix it with our history, traditions, to prove to industry that our ways supersede. It always has. The integrity of who we are will always overcome.

I look forward to connecting with our elders, communities, youth, and technical people over the next year. Thank you so much!

- Percy Williams, June 2012

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<sup>1</sup> Written by Percy Williams. A copy was printed in the Musgamagw Dzawada'enuxw Tribal Council Newsletter, June 2012, as part of this clam management research collaboration.

# Chapter 1.

## Introduction

*No process of reconciliation or decolonization can take place without first recognizing and addressing the legacy of colonialism.*

*(Truth and Reconciliation Commission of Canada, 2015a, p. 24)*

In 2015, the Truth and Reconciliation Commission of Canada (TRC) released its findings on the history and lasting impacts of the Canadian Indian Residential School System on Indigenous students and their families. The TRC (2015b) concluded that the system amounted to cultural genocide. The final report and its calls to action have played a key role in spurring Canada into the era of reconciliation. The Commission's work has been pivotal to the negotiation of reconciliation, but it was only tasked with investigating a portion of the centuries long systemic oppression by colonial and settler governments, churches, and societal efforts to control and assimilate Indigenous Peoples. The TRC (2015a, 2015b) draws attention to the interconnectedness of residential school system and the broader imperial and colonial context, but the details of these were beyond the Commission's mandate.

In this dissertation, I consider truth and reconciliation not as an outcome, but as an ongoing process that will continue to be negotiated and navigated between Canada and Indigenous Peoples for the foreseeable future. For this process of truth and reconciliation to be undertaken in a manner that enables lasting and meaningful improvements to the Indigenous-settler relationships in Canada, we still need to investigate other impacts on Indigenous Peoples from our colonial and settler history. In other words, before we can reach a place where we are effectively negotiating reconciliation, truth requires us to understand what Indigenous Peoples' practices were before contact, how their practices and the worldviews they are rooted in were disrupted, and how the practices were adapted and changed in response to colonialism and capitalism.

Since the late 1700s, the fundamental social-ecological relationships that defined the economies, food systems, culture, and politics of Northwest Coast peoples have



experienced major disruption and loss as a result of colonization, settlement, and (sometimes unwitting) blundering intrusion in resource management (Deur et al., 2013; Harris, 2008; Turner et al., 2013). As part of Europeans' colonialization of British Columbia, Northwest Coast peoples' relationships with, and innovation (e.g., mariculture), technology (e.g., fish weirs), governance, and management institutions for, their marine and coastal territories were ignored, undermined, and in many cases destroyed in accordance with the new fisheries management regimes and rules of the English common-law system that was imposed upon them (Harris, 2008; King, 2004).

In the Broughton Archipelago and across the British Columbian coast, the intertidal clam fisheries have undergone drastic changes over this period. When explorers and colonists arrived, the local Kwakwaka'wakw<sup>2</sup> Indigenous Peoples practiced an ancient form of intertidal mariculture by constructing and managing "clam gardens" at hundreds of beaches throughout Kwakwaka'wakw territories (Deur et al., 2015; Harper et al., 1995; Weinstein, 2010; Williams, 2006). Clams supported winter food security, trade, and cultural identity (Deur et al., 2015; Heaslip, 2008a). The Kwakwaka'wakw traditional relationships with clam beaches were gradually altered and eroded by Western colonialism, capitalism, and associated resource extraction and management practices (Heaslip, 2008a; Weinstein, 2010). At the same time, the decline in traditional management of clam gardens appears to have also had ecological effects, along with other human activities (e.g., silt from industrial logging), by contributing to the degradation of clam habitats since colonialism began on the coast (Toniello et al., 2019).

From the early 1900s onward, a federally managed commercial intertidal clam fishery altered the human-clam relationships in the Broughton Archipelago. This resulted in generations of Kwakwaka'wakw clam harvesters relying on the commercial clam fishery for seasonal income in the cash economy (Heaslip, 2008a; Rohner, 1967). Gradually, as the Government of Canada took a greater interest in this fishery, it rewrote the resource access rules for clams without taking account of the original Kwakwaka'wakw rules (Weinstein, 2010). In response, Kwakwaka'wakw people adapted

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<sup>2</sup> The term "Kwakwaka'wakw" translates roughly as "those who speak Kwak'wala" and refers to around eighteen distinct bands or First Nations who have lived on northern Vancouver Island and the adjacent mainland of British Columbia for millennia (Galois, 2012; Glass, 2021). Glass (2021) notes there has never been social or political unity among all Kwakwaka'wakw bands, but some historical and current alliances, multiband councils, and treaty groups exist.

their rules and practices, but with the passing of generations, fewer and fewer people held comprehensive knowledge of their traditional relationship with clam beaches (Deur et al., 2015; Heaslip, 2008a; Weinstein, 2010).

For several decades in the mid-1900s, the Broughton Archipelago was the location of a vibrant commercial clam fishery with the highest clam landings on the coast (Quayle & Bourne, 1972; Rohner, 1967). Today, only a small number of the commercial intertidal clam harvesters that are licensed to harvest in the Broughton Archipelago are active. Many of the current clam harvesters are older adults and few younger people are getting involved. Fisheries and Oceans Canada (2022) attributes the decline in active harvesters to a decline in markets for the local butter clams and evidence indicating that the stock of area's littleneck clams has been low throughout recent decades. Meanwhile, local Kwakwaka'wakw community members are frustrated that Fisheries and Oceans Canada's (DFO) clam management strategy serves as a barrier to the traditional protocol system that was used to sustainably manage clam beaches for centuries (Pinkerton et al., 2014). Put another way, the current fisheries management system has a low level of legitimacy among community members.

The decline in the commercial intertidal clam fishery in the Broughton Archipelago and surrounding area is a potential opportunity to re-examine and re-create the fishery in a manner that aligns with reconciliation principles, including respect for Indigenous governance principles. Previously published analysis of a portion of the research data that are used in this dissertation demonstrated that, conditions (e.g., legal protection and exercising of Indigenous rights, capacity constraints in federal management, and legislative changes) are favourable for the revitalization of traditional clam management through co-management or self-management (see Pinkerton et al., 2014). These favourable conditions are further bolstered through the recent signings by the Government of Canada and various First Nations in BC of Recognition of Indigenous Rights and Self-Determination Agreements that contain fisheries and/or environmental stewardship provisions.

This dissertation is my effort to make a small contribution to the discussion of colonial and settlers impacts on Indigenous Peoples that must be reconciled. I examine key disruptions and disturbances to, and effects on and responses, resistance, and

adaptations by, the local Kwakwaka'wakw tribes in their social-ecological relationships with clams and clam beaches.

## 1.1. Research Goals

This research project builds on two previous studies about First Nations' clam management practices in the Broughton Archipelago by Heaslip (2008a) and to a lesser extent by Weinstein (2010). Those studies looked at Kwakwaka'wakw protocols (*de facto* rules), knowledge, and experiences with clam beaches and clam harvesting in the Broughton Archipelago area. Based on 23 interviews with Kwakwaka'wakw elders, hereditary chiefs, and clam harvesters, Heaslip (2008a) sought to identify and categorize protocols used by Kwakwaka'wakw to manage clam harvesting access and stewardship. But, as Heaslip (2008a) recommends, further research is required to validate her findings. As a follow-up, discussions took place between Dr. Evelyn Pinkerton (Heaslip's former, and my current, senior supervisor) and the Musgamagw Dzawada'enuxw Tribal Council (MDTC) and funding was secured through a Social Science and Humanities Research Council Partnership Development Grant from 2011 to 2016. A few months after I began my present studies at Simon Fraser University, we launched this follow up clam management research collaboration in 2012.

In this dissertation, I build on the above-mentioned research in two ways. First, drawing from literature on the Kwakwaka'wakw, colonialism, and the intertidal clam fishery, I expand on the brief historical context provided by Heaslip (2008a) and Weinstein (2010) by presenting a timeline of key events and disturbances that affected traditional clam management. Specifically, I explore ways in which colonialism and the commercialization of the intertidal clam fishery have affected Kwakwaka'wakw practices and relationships with clam beaches in the Broughton Archipelago. Second, based on fieldwork in the Broughton Archipelago and Vancouver Island, I present community members' input on the validity of Heaslip's (2008a) findings about clam harvesting access and stewardship protocols (rules).

I focus here on four tribes within the Kwakwaka'wakw, known collectively as the Musgamagw Dzawada'enuxw, whose territories overlap within the Broughton Archipelago. This focus on the Musgamagw Dzawada'enuxw is narrower than Heaslip's (2008a) more general focus on Kwakwaka'wakw in the Broughton Archipelago and

surrounding area. My focus is influenced directly by the research partnership established with the MDTC. This offers the advantage of being able to identify the specific clam management practices within a tightly connected group of tribes.

Using intertidal clam harvesting in the Broughton Archipelago area as a case study, the goals of this research were to:

- Identify to what extent and how colonialism and capitalism have affected the Kwakwaka'wakw peoples' relationship and management of intertidal clams and clam beaches.
- Examine how the intertidal clam management system of the Musgamagw Dzawada'enuxw has been adapted over time.
- Identify what actions Musgamagw Dzawada'enuxw community members view as necessary to support the continued revitalization of their relationship and management of intertidal clams and clam beaches.

## 1.2. The Musgamagw Dzawada'enuxw People

In their own words: "The Musgamagw Dzawada'enuxw are a longstanding traditional alliance between the four tribes: Gwawa'enuxw (Hopetown), Kwickwasut'inuxw (Gilford), Haxwa'mis (Wakeman) and Dzawada'enuxw (Kingcome). This relationship was re-solidified in 1938 with the raising of the Musgamagw Dzawada'enuxw Totem Pole."<sup>3</sup> The four Musgamagw Dzawada'enuxw tribes formed their own potlatch ring (as cited in Galois, 2012). Both the shared eulachon (*Thaleichthys pacificus*) fishing rights at the mouth of Kingcome Inlet and periods of shared use of Gwayasdums as a winter village by the Musgamagw Dzawada'enuxw illustrate important ethnographic and geographic connections between the groups (Galois, 2012 and citations within). Their main villages within the territories are Hegams (Hopetown), Gwa'yasdums (Gilford village), Alalco (Wakeman), and Ukwanalís village, also referred to as Gway'i (Kingcome village alongside Kingcome (Gway'i) River).<sup>4</sup>

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<sup>3</sup> <https://mdtc.ca/organizational-history> accessed January 14, 2021.

<sup>4</sup> Multiple orthographies of the Kwak'wala language, as well as anglicized rendering, have been used by ethnographers and linguists. For interested readers, Powell (2012) provides a summary of notable Kwak'wala orthographies. For readers interested in a linguistic and visual anthropological study of the Kwak'wala language, I recommend Nicolson (2013). In this dissertation, as much as possible I opt to write words according to the orthography used in recent documents and websites of the Musgamagw Dzawada'enuxw Tribal Council and member

Beginning in 1895, the federal and provincial governments allotted each Musgamagw Dzawada'enuxw Nation a limited number of "Indian Reserves" (Galois, 2012). However, their aggregated territories<sup>5</sup> cover a much larger area, extending from Dury Inlet in the west, to Thompson Sound in the east; from Gilford Island in the south, to the source of the Wakeman River in the north; and encompass the majority of the Broughton Archipelago islands (Galois, 2012). Throughout this dissertation, I refer to the aggregate territories of the Musgamagw Dzawada'enuxw as the Broughton Archipelago for simplicity.

### 1.3. Intertidal Clam Species Harvested in Research Areas

My research focuses on commercial and Indigenous food fisheries for intertidal bivalves. There are three main species of clams harvested in both of these fisheries and one only in the food fishery, as described in the following.

- Butter clams (*Saxidomus gigantean*): Historically, the main clam species harvested by the Kwakwaka'wakw in the Broughton Archipelago for commercial and food, social, and ceremonial (FSC) uses. The commercial value of these clams has been low in recent decades due to high processing costs and low market demand in Canada and the United States (Fisheries and Oceans Canada, 2010). As I describe in chapter four, butter clams are mainly sold as shucked and canned products, while littleneck and Manila clams are generally not shucked and sold fresh or frozen for steaming.
- Littleneck clams (*Protothaca staminea*): A historically important species for commercial and FSC uses on BC's South Coast (Fisheries and Oceans Canada, 2009b). Recently, their market value has been low (Fisheries and Oceans Canada, 2009b, 2022).
- Manila clams (*Venerupis philippinarum*): Introduced from Japan in the 1930s. They are the most valuable clam species for commercial and aquaculture harvests and represent much of the FSC harvest in BC (Fisheries and Oceans Canada, 2009c, 2022). However, this species is not found in the study area (R. Harbo et al., 1997).

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Nations or the U'mista Cultural Centre. However, even within the materials by the Musgamagw Dzawada'enuxw, both Kwak'wala and anglicized renderings are used. I do not change the writing of Kwak'wala words in direct quotes.

<sup>5</sup> See <https://mdtc.ca/territory> for a map of Musgamagw Dzawada'enuxw territories (accessed January 14, 2021).

- Nuttall's Cockles (*Clinocardium nuttallii*): This bivalve species is found in low densities along BC's coast. It is commonly harvested by First Nations for food, but there is no commercial fishery.

## 1.4. Dissertation Structure

The structure of the remainder of this dissertation is as follows. In chapter two, I outline the core disciplines and theories in resource and environmental management that form the theoretical perspective for my analysis of the Kwakwaka'wakw-clam relationships. In chapter three, I describe the methods used for both the literature review and qualitative field data gathering for this research, including the 41 interviews with research participants from the Musgamagw Dzawada'enuxw. Chapter four provides historical details from pre-European contact to modern times in an exploration of the extent and ways in which colonialism and capitalism have affected the Kwakwaka'wakw peoples' relationships and management of intertidal clams and clam beaches. Chapter five draws on my fieldwork (Broughton Archipelago and Vancouver Island) and qualitative interviews with Musgamagw Dzawada'enuxw research participants to explore their traditional principles, customs, and protocols in clam management, which they have adapted since the commercialization of the clam fishery. I also include their recommendations for the future of the clam fishery in their territories. I conclude this dissertation by providing an analysis of the potential for adapting local management of clam beaches that could help resolve some of the issues within the current management approach, while also supporting long-term cultural revitalization, ecological resilience, and the negotiation of reconciliation.

## Chapter 2.

### Theory

Throughout my time at Simon Fraser University's School of Resource and Environmental Management, my learning has been shaped by the School's core disciplines (policy, economics, and ecology), and related work in Indigenous studies and anthropology. Within these disciplines and related electives, the fields of study that have influenced the mental model applied to this dissertation include common pool resource management theory (e.g., Feeny et al. 1990; Pinkerton & John 2008; Schlager & Ostrom 1992), co-management (e.g., Jentoft 2000; Pinkerton 1989; 2003; Pinkerton & Weinstein 1995; Pomeroy & Rivera-Guieb, 2006), interactive governance (e.g., Jentoft & Chuenpagdee 2009; Jentoft 2014), social-ecological resilience (e.g., Walker & Salt 2006; 2012), and Indigenous Peoples' governance, rights, and culture (e.g., Galois, 2012; Harris, 2008; Harris & Millerd, 2010; Mathews & Turner, 2017; Nicolson, 2013; Trospen, 2009). To answer my research questions, my analysis draws on these fields, focusing on four components of the Kwakwaka'wakw-clam relationships: the role of Indigenous governance, Indigenous peoples' resource access and management rights and duties, resilience of the social-ecological system, and legitimacy of the management system.

#### 2.1. Indigenous Governance

My analysis of the impacts of colonialism and capitalism on the Musgamagw Dzawada'enuxw and their relationships with clam beaches is influenced by contemporary Indigenous scholars and non-Indigenous scholars who have worked with Northwest Coast peoples (Deur et al., 2013, 2015; Galois, 2012; Harris, 2008; Lepofsky & Caldwell, 2013; Mathews & Turner, 2017; Nicolson, 2013; Pinkerton et al., 2014; Pinkerton & John, 2008; Pinkerton & Weinstein, 1995; Powell & Cranmer Webster, 2012; Trospen, 2009; Turner, 2014; Turner et al., 2013; Weinstein, 2010). Historically, the Kwakwaka'wakw and other Northwest Coast peoples governed the use of an abundance of marine and coastal resources, including several species of Pacific salmon, herring, eulachons, halibut and other groundfish, seals, sea lions, sea otters, porpoises, kelp, clams, mussels, crabs, and other shellfish (Codere, 1950; Mathews & Turner, 2017). They managed a continuum of coastal and adjacent habitats (e.g., clam gardens, fish

traps, and estuarine root gardens) that are interrelated at various scales and through various processes (Mathews & Turner, 2017). They employed an array of ecological (e.g., clearing, habitat alteration, establishing borders), social (e.g., proprietorship, monitoring, trade and exchange, feasting and sharing, knowledge transmission), technological (e.g., technical innovations), and integrated multi-resource management strategies within these habitat (Mathews & Turner, 2017). However, European colonialism, English common-law, and capitalism based on the privatization, top-down management, and exploitation of resources have stood in fundamental contrast to the traditional systems of Northwest Coast peoples. In colonizing the Northwest Coast, Europeans intruded, ignored, and undermined these traditional Indigenous governance and knowledge systems to achieve their goals of territorial expansion and resource exploitation (Harris, 2008; King, 2004; Turner et al., 2013).

Scholars have highlighted the fundamental differences in worldview, economic system, law, and governance model of Northwest Coast peoples from that of Westerners (Harris, 2008; Nicolson, 2013; Trosper, 2009). In general, the economic and governance systems of Northwest Coast peoples were built on principles of communal ownership, reciprocity, and social accountability and duty, which are foundational within the traditional worldviews of Kwakwaka'wakw and other Northwest Coast peoples (Nicolson, 2013; Pinkerton & Weinstein, 1995; Trosper, 2009). This includes tending to, caring for, and enhancing marine life and lands, which are concepts outside the experience of Western explorers and colonialists and the stereotypes that they had already developed of Indigenous Peoples in North America by the time they arrived in the Pacific Northwest coast in the late 1700s (Trosper, 2009). Northwest Coast peoples' marine resource management systems were rooted in worldviews that valued respect for non-human entities, and practiced harvesting methods (e.g., capture methods, gear specifications, timing, and location), enhancement strategies (e.g., transplanting eggs, habitat manipulation and extension, returning small bivalves to the beach), and site tenure systems (e.g., species specific harvest rights, ownership of harvest sites and features, seasonal restrictions, size limits, and limits on who can harvest) in alignment with these views (Lepofsky & Caldwell, 2013).

Nicolson (2013) outlines some specific differences between Kwakwaka'wakw culture and languages from that of Westerners, along with the effects of colonization, Dominion/Canadian laws, Indian Residential School System, and capitalism. She



explains that the Kwakwaka'wakw conceptual model of the world views all as animate and granted equivalent status as humankind in a symbiotic and mutually nurturing human/land relationship wherein the Kwakwaka'wakw are as much the land as the land is them. Free market capitalism, she argues, is the antithesis of this worldview, in its view of land as a resource to be exploited and privatized for individual ownership. She points to a fundamental difference in ideological approach: "[T]he empathetic ideological approach to the landscape successfully practiced for thousands of years by the Kwakwaka'wakw did not function well with a modern capitalist system which required the land to be considered as a resource to be exploited for maximum profits" (Nicolson, 2013, p. 483). Communal ownership and social accountability are key principles within the Kwakwaka'wakw approach (Nicolson, 2013). Nicolson (2013) notes this commitment to continue to occupy and nurture a particular landscape is a social obligation to ancestors, current generation, and descendants.

Early in the European-Northwest Coast contact period, Western capitalism was introduced to the Northwest Coast peoples through the trade with Westerners and associated material wealth from their participation in the harvest and trade of marine mammals (initially sea otters, later northern fur seals and whales), which became the focus of international commercial industries (McKechnie & Wignen, 2011; Nicolson, 2013). By the mid-nineteenth century, this industry rapidly diminished these culturally and ecologically significant species (McKechnie & Wignen, 2011; Nicolson, 2013). Nicolson (2013) points out that this trading system appeared to go against the concepts of empathy and balance held within traditional Kwakwaka'wakw conceptual understanding of their relationship to the land.

To the colonial government and its Indian Agents the traditional social and economic system of the potlatch, wherein winter months were dedicated to ceremony, led to unproductive periods, which went against capitalist efforts to maximize the use of labour (Nicolson, 2013). The very nature of the potlatch system<sup>6</sup> as one of wealth distribution rather than accumulation also ran counter to capitalist principles and subject to colonial efforts to ban it, as I discuss in chapter four (Nicolson, 2013; Trospen, 2009).

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<sup>6</sup> The potlatch system also serves as a method of claiming status, leadership, and control.

## 2.2. Access and Management Rights and Duties

Schlager and Ostrom (1992, 1993) provide the foundation for my understanding of property rights regimes in coastal fisheries. They identify four bundles of property rights that users can hold in common-pool resource systems: owner, proprietor, claimant, and authorized user. These bundles of rights are comprised of five types of property rights: access, withdrawal, management, exclusion, and alienation rights. These may be *de jure* (formal, by law) or *de facto* (informal, in fact/reality) rights. Each property right is independent of the others, although in fisheries they are typically held in a cumulative manner. 'Authorized users' have the smallest bundle of rights to a resource, holding only the rights to access (i.e., right to enter a defined area) and withdrawal (i.e., right to harvest in that area) from a resource system. 'Claimants' have the same rights as authorized users plus management rights (i.e., right to determine how, when, and where harvesting may occur in an area). 'Proprietors' hold these first three rights plus exclusion rights (i.e., right to determine who can have an access right, and how that right can be transferred). Resource 'owners' hold the full set of rights, including the ability to alienate the resource itself as well as the rights to it (i.e., the right to sell or lease exclusion and/or management rights). Schlager and Ostrom (1992, 1993) argue that the more complete a set of property rights that are held by a community, the more likely the community is to invest in institutional arrangements that can address and resolve common-pool resource dilemmas. This is because communities holding both operational-level rights (access and withdrawal rights) and collective choice property rights (management, exclusion, and alienation rights) – particularly those with exclusion rights – have greater responsibility for devising institutional arrangements that can resolve problems (Schlager & Ostrom, 1993).

Schlager and Ostrom's (1992, 1993) work made important contributions to the understanding of different property regimes based on a western economic model. However, as Trosper (2009) notes, there are some differences between property systems identified by Schlager and Ostrom and how Northwest Coast peoples governed resources in their territories. Of note is the limit applied to alienation rights. For Schlager and Ostrom (1992, 1993), the importance of owners having the right to sell or lease collective-choice rights provides the opportunity for full efficiency in a market. This is achieved through the transfer of private property to someone at its highest value.

The difference within the territorial systems of Northwest Coast peoples is that a 'titleholder' – a position holding similar levels of control as an owner in a property system – is not permitted to sell their land (Trosper, 2009). While titleholders do have a great deal of influence over decisions about whom they can bequest their land to, the succession of ownership requires review and attention by others in the community to ensure qualifications for the role (Trosper, 2009). Further, Trosper (2009) states that in order to retain their role as a titleholder, a person must continuously demonstrate their competence by doing the following: (a) comply with a requirement to share the harvest; (b) preserve the quality of the land; (c) maintain the support of members of their house; (d) demonstrate knowledge of the history of their land and the land of others; and (e) train their successors. In other words, a territorial system is not only about the management *rights* of a titleholder, but also about their management *duties* (Pinkerton & Weinstein, 1995). Thus, unlike a property system, a territorial system is contingent on a titleholder's qualifications and competency (Trosper, 2009). Trosper (2009) coins the term 'contingent proprietorship' to distinguish the territorial systems used by Northwest Coast peoples from property systems. He argues that historically these systems of property, exchange, and leadership "provided incentives both to ordinary people and to leaders who supported sustainable resource use" (Trosper, 2009, p. 14).

### **2.3. Resilience and Adaptation of Social-Ecological System**

I have long appreciated Walker and Salt's (2006) straight-forward explanation of resilience thinking, "At the heart of resilience thinking is a very simple notion – things change – and to ignore or resist this change is to increase our vulnerability and forego emerging opportunities. In so doing, we limit our options" (p. 10-11). Managing for resilience requires a dynamic and adaptive approach (Walker & Salt, 2012). As Biggs et al. (2015) note, the notion that human society is embedded in and part of the Earth's biosphere is fundamental to the resilience perspective for the analysis of social-ecological systems.

Many traditional Indigenous resource governance systems have been shown to adapt and transform over time as changes occur within the larger social, ecological, economic, and cultural contexts (Berkes, 1999; Kassam & The Wainwright Traditional Council, 2001; Trosper, 2009; Turner et al., 2013; Walker & Salt, 2012; Kimmerer, 2015). Northwest Coast peoples' resource management systems have been shown to

support sustainability, social and ecological resilience, and enhance local food security (Groesbeck et al., 2014; Lepofsky & Caldwell, 2013; Pinkerton & Weinstein, 1995; Trooper, 2009). Lepofsky and Salomon (in press) surmise that “the evolution and context-dependence in clam gardening practiced across space and time, as well as the exchange of this knowledge among communities and across generations, contributes to its resilience to global climatic and socio-political change” (p. 140).

Traditional clam management was nested within a broader complex system of managing, harvesting, and processing a diversity of marine and coastal resources. This diversity supported Northwest Coast peoples’ ability to adapt to a range of external perturbations experienced on the coast (Jackley et al., 2016). In the Broughton Archipelago, local First Nations’ intertidal clam management approaches adapted and persisted in a *de facto* capacity throughout the commercialization and federal regulation of the fishery (Heaslip, 2008a; Pinkerton et al., 2014; Weinstein, 2010).

Within the studies of the management of coastal resources in BC, scholars suggest that fundamental changes to modern resource governance systems to incorporate elements of Northwest Coast territorial systems may help rebuild resilient social-ecological systems that restore ecosystem productivity and productivity, First Nations’ food security and sovereignty, and cultural identity (Mathews & Turner, 2017; Trooper, 2009).

## **2.4. Legitimacy in Resource Management Systems**

In recent decades, a growing number of resource management and governance theorists have focused on how a management regime and the governing bodies’ legitimacy among user-groups affects its success (Angel, 2017; Berkes, 2015; Chuenpagdee & Jentoft, 2009; Jentoft, 2000; Kooiman & Bavinck, 2013; Pinkerton & John, 2008). They observe that, in Canada and globally, overfishing led to a legitimacy crisis for top-down fisheries management approaches that dominated much of the twentieth century within capitalist economies (Angel, 2017; Jentoft, 2000). As scholars continue exploring how legitimacy can be established within fisheries management, one study provides evidence that local clam management by First Nation authorities can establish legitimacy among local resource users and achieve sustainable management practices (Pinkerton & John, 2008).

Throughout my research, while reflecting on reconciliation principles and First Nations communities' criticisms of the federal fisheries management regime, I was influenced by previous work on legitimacy, particularly by my senior supervisor (Pinkerton & John, 2008) and a former co-management peer (Angel, 2017). Unlike Angel (2017), I am not developing an entirely new social-ecological system framework for commercial fisheries, but I do borrow from his thinking on legitimacy, including his principle that legitimacy is only activated as a desirable function in a system when "it is rooted in diversity and serves human wellbeing in a broad sense" (p. 77).

Legitimacy is necessary both for the proper functioning of a resource governance system and as a means to an end (e.g., supporting diversity and human well-being) (Angel, 2017). A legitimate fisheries management system functions in accordance with prevailing laws, but legality is not a sufficient condition for its legitimacy (Jentoft, 2000). The worldviews, customs, and culture of resource users form the basis from which they evaluate the legitimacy of resource management institutions (Jentoft, 2000). Building on Jentoft (2000), Pinkerton and John (2008) show that legitimacy has moral, regulatory, political, and scientific components that tend to interact and be mutually reinforcing. They hypothesize that moral legitimacy is preceded by the latter three. Regarding the scientific components of legitimacy discussed by Pinkerton and John (2008), the authors define science in their case study as the natural sciences. However, the category of scientific legitimacy should be expanded to include Indigenous knowledge as a form of science that can provide legitimacy within a governance system.

## **Chapter 3.**

### **Research Methodology**

There are two components to this research on the Broughton Archipelago intertidal clam fishery: (1) a historical literature review and (2) qualitative fieldwork. Below, I describe the research methodology of each.

#### **3.1. Historical Literature**

I collected both peer-reviewed and grey literature in both digital and physical form. I consulted archival and library collections at Simon Fraser University's Library Catalogue, the Government of Canada's Federal Science Libraries Network, British Columbia's J.T. Fyles Natural Resources Library, Union of British Columbian Indian Chiefs' Digital Collections, Google and Google Scholar search engines, and other online resources. I collected and reviewed several thousand pages of reports, academic books and journal articles, photos, maps, and other materials. Focal topics of these searches included (1) fisheries data, science, and reports (particularly bivalves, but also salmon and others), (2) First Nations settlements and reserves, and (3) laws and policies on Indigenous rights and fisheries. The scope of these topic searches was generally narrowed to coastal British Columbia. The publication dates of materials ranged from the late 1800s to present.

Relevant details from the literature were organized into a timeline, then divided into six time periods based on key events that defined each (see Table 3.1). The organization of this timeline is further supported by the knowledge that I have gained over more than a decade through a combination of education, research, and experience working with Northwest Coast peoples. From 1770 onward, the division of periods in the timeline is based on evidence of new disturbances to the social-ecological system. In all periods, multiple disturbances are noted (e.g., potlatch ban, Indian reserve system, commercialization of fisheries) and in combination they are considered to define the key events of that period. Though divided, I intend the time periods to be seen as shaped by previous events, not exclusive, and the start and end years are admittedly subjective, with some overlap.

In chapter four, I describe the key events/disturbances that defined each period.<sup>7</sup> Working backwards from the present, I divided time periods based on key changes in the clam fishery and/or associated effects from colonialism and capitalism. However, the further back in time, the more approximate the dates become based the availability of data.

**Table 3.1 Colonialization and the Commercialization of Clam Harvesting in the Broughton Archipelago, BC**

<b>Time Period</b>	<b>Key Events/Disturbances</b>	<b>Select References</b>
Pre-1770	Communal ownership and social accountability among Kwakwaka'wakw and resilient social-ecological system	Deur et al., 2015; Galois, 2012; Glass, 2021; Nicolson, 2013; Toniello et al., 2019; Trospen, 2009
1770 – 1869	Early colonialism, diseases, and raids	Galois, 2012; Nicolson, 2013; Rohner, 1967
1870 – 1899	Commercialization of fisheries and imposing restrictions on Indigenous Peoples' culture and access to their land and waters	Galois, 2012; Glass, 2021; Harris, 2008; Loo, 1992; Trospen, 2009
1900 – 1949	Capitalism, scaling up of commercial fisheries, language suppression, cultural oppression, and resistance	Galois 2012; Harris, 2008; Loo, 1992; Nicolson, 2013; Quayle, 1940; Truth and Reconciliation Commission of Canada, 2015b;
1950 – 1988	High-capacity commercial fishing, and cultural restoration, reclamation, and adaptation	Quayle & Bourne, 1972; Rohner, 1967; Webb & Hobbs, 1997; Weinstein, 2010
1989 – 2019	Clam Reform strategy and experimentation of co-management in clam fisheries	Department of Fisheries and Oceans & Ministry of Agriculture, 1993; Dunham et al., 2007; Heaslip 2008a, 2008b; Webb, 2002, 2006; Webb & Hobbs, 1997; Weinstein 2010

<sup>7</sup> As I described in chapter one, TRC (2015b) spurred Canada into an era of reconciliation. While there is some overlap between this era and the final time period (1989-2019) that I analyze in this this dissertation, the era of reconciliation was still in its early stages by 2019. Federal laws and policies focused on the reconciliation process were just beginning to be developed and not yet being applied within the management of the intertidal clam fishery. Some of these key laws and policies include (1) the Government of Canada's "Principles respecting the Government of Canada's relationship with Indigenous peoples" released in 2017, (2) Fisheries and Oceans Canada's "Reconciliation strategy" released in 2019, and (3) the *United Nations Declaration on the Rights of Indigenous Peoples Act*, which received Royal Assent in 2021.

## 3.2. Fieldwork

Working with the Musgamagw Dzawada'enuxw communities to identify traditional protocols requires a research method that is both qualitative and participatory. As such, I used a mix of qualitative methods to this case study, generally undertaken in alignment with grounded theory (Eisenhardt, 1989; Glaser & Strauss, 1967; Spradley, 1979). My research combines qualitative semi-structured interviews, community meetings, participatory and field observations, and literature and historical sources. Unlike hypothesis-testing studies, building theory from case study research offers the flexibility to alter data collection methods to probe further into specific ideas and situations that emerge while gathering field data (Eisenhardt, 1989). This flexibility is beneficial to understanding the Musgamagw Dzawada'enuxw people's relationship with clams and clam beaches in the Broughton Archipelago where limited data exist. It also creates space for direct engagement of community members in discussions and actions that are focused on the collaborative nature of this research project. That being said, the fact that my research builds directly on the research of Heaslip (2008a) means there was a degree of hypothesis testing applied to part of my research: that the ten clam beach and clam population protocols identified by Heaslip (2008a) do reflect the traditional protocols of the Musgamagw Dzawada'enuxw people. As I note in chapter five, Heaslip (2008a) conducted interviews with people from a wider range of Kwakwaka'wakw tribes, and some of her findings may not apply to the practices of the Musgamagw Dzawada'enuxw people.

Early in my research, I learned that most people from the four Musgamagw Dzawada'enuxw tribes don't live in their territories. The total combined band membership for all four Musgamagw Dzawada'enuxw tribes is approximately 800 people. Many Musgamagw Dzawada'enuxw, including many elders, have relocated to places along BC's southern coast and beyond. Some of these people return to their territory once or more a year, while others have not been there in years. As I discuss in chapter four, colonialism, capitalism, and other conditions have affected Musgamagw Dzawada'enuxw people's lives and connection to their language, culture, and territory differently. As a researcher working in this context, there is no simple way or one place to find a representative sample of participants. Nonetheless, working with Percy Williams and the Musgamagw Dzawada'enuxw Tribal Council, I was able to collect data, though



interviews and community meetings, from Musgamagw Dzawada'enuxw people across the South Coast with knowledge relevant to the research topic.

The field component of this research occurred between February 2012 and May 2016. Forty-one Musgamagw Dzawada'enuxw people were interviewed, including elected councillors, elders, clam harvesters (active and retired), and other community members. Consistent with a case study research approach (Spradley, 1979), participants in this research represent key informant groups with knowledge and experience relevant to the research topics. My research includes both current band memberships from all four Musgamagw Dzawada'enuxw tribes, as well as some individuals whose family lineage is part of the Musgamagw Dzawada'enuxw, but who themselves do not have federally designated band membership with a Musgamagw Dzawada'enuxw tribe. For an overview of the complexities of Kwakwaka'wakw identity and status, see Heaslip (2008a).

Interviews took place in Gwa'yasdums (Gilford village), Ukwanalís village (Kingcome village), Alert Bay, Port McNeill, Port Hardy, and Nanaimo, BC. Travelling to Musgamagw Dzawada'enuxw participants in a variety of locations improved the representativeness of community knowledge and perspectives that is captured within this research. Most interviews were conducted by me in collaboration with Percy Williams, a clam management researcher from Gwa'yasdums who was employed as an essential component of the SSHRC partnership research.

In 2015, my supervisor and I worked with the Musgamagw Dzawada'enuxw Tribal Council staff to explore the possibility of organizing a meeting on clam protocols with Musgamagw Dzawada'enuxw elders as part of this project. Unfortunately, the timing and challenges with the travel distance for elders living throughout the southern coast of BC led to a decision by the Tribal Council staff not to proceed with the meeting. In 2016, an alternative approach was selected. My supervisor and I worked with the Musgamagw Dzawada'enuxw Tribal Council to develop a shortened list of questions. With support from the SSHRC partnership grant, the Tribal Council then hired a Musgamagw Dzawada'enuxw researcher to interview elders as part of the project. The goal was to interview up to 12 additional elders. In the end, recordings of three additional interviews were provided to me for use in this project. Apart from names and location, no personal details of these interviewees were provided to me.

Three community workshops on clam protocols were also held as part of this project. In February 2012, my supervisor and I held a facilitated half-day meeting in Gwayasdums where the 13 participants were asked to identify ideas and concerns that are related to clam beaches and clam harvesting, as well as the overall project. Unfortunately, due to a miscommunication, community members from Ukwanalis village and Alalco (Hopetown) were not sent the invitation. In March 2014, I reported on the research findings to date and sought input at a Musgamagw Dzawada'enuxw communities meeting that was held in Port McNeill, with approximately 25-30 community members. Elders, who were opinion leaders, provided important feedback at this meeting, which contributed to me re-examining the findings. In August 2014, in Gwayadums approximately nine community members and KHFN staff, and I held an informal meeting where participants shared ideas on how to implement protocols and resolve key concerns that they have about clam harvesting and management.

To ensure that the interview questions on the interview guide were culturally appropriate, questions were prepared with the assistance of the Musgamagw Dzawada'enuxw researcher, Percy Williams (see Appendix A). Due to the small population and the interest in interviewing individuals with information on the specifics of the clam fishery or related cultural knowledge, interview participants were selected through chain-referral sampling. Percy Williams also played a key role in providing me with cultural guidance, communicating with community members about the project, discussing concepts and ideas, and sharing reflections and observations with me about the research. He delivered the first conference presentation on this project as part of a discussion panel at the 2012 Rebuilding Collapsed Fisheries and Threatened Communities Symposium in Bonne Bay, Newfoundland and Labrador.

All participants have been anonymized in accordance with the university approved research ethics for this project. As such, I present quotes and information from participants using randomly assigned participant numbers and gender-neutral pronouns (they, them, and their). The following is a summary of demographic details about interview participants. Thirty men and 11 women were interviewed. While participants were not asked their age some shared this information freely or mentioned dates or decades that help determine their age. Based on interview comments and Percy Williams' knowledge, I know that participants' ages ranged from 20s to at least 80s, with the majority being over 50 years old at the time of the interview. In community meetings

on this project, the community members who participated ranged from young adults to elders and included both men and women. Announcements for the February 2012 and March 2014 meetings were shared with community members by the KHFN office and MDTC, respectively.

Initial analysis of 14 interviews and participant observations was completed by me and published in Pinkerton et al. (2014). In 2014, my supervisor (Dr. Evelyn Pinkerton), Percy Williams, and I collaboratively analyzed 34 interviewees' responses to protocol questions, reaching consensus in how responses were coded. These findings were presented at the March 2014 Musgamagw Dzawada'enuxw meeting mentioned above. Finally, I completed the analysis of the remaining interviews and interview materials not included in previous stages and have combined this analysis with previous analysis here. Interviews were transcribed manually and using transcription software. A SFU master's student was hired to assist Percy Williams and me with the transcription of the interviews prior to the March 2014 meeting.

Coding of interview material for theme and protocol categories was done both manually in Microsoft Word and through the coding functions in NVivo software. Interview participants were asked about their knowledge of clam harvesting and use, as well as to state their perspective on each of the ten protocols categorized by Heaslip (2008a). These categories were created by Heaslip (2008a) based on her interviews with 23 Musgamagw Dzawada'enuxw and other Kwakwaka'wakw people. In my research, participant comments on these protocols are coded as "agreed", "disagreed", or "mixed response/uncertain". As not all respondents were familiar with protocol categories and statements in the work by Heaslip (2008a), some interviewees responded based on preference (e.g., "Yes. I agree that should be protocol") rather than historical knowledge. Other key points mentioned by interviewees were also coded by themes that are discussed below. Some participants also chose not to respond to some parts of the interview or protocols, and in some cases the interview reached a natural conclusion before all protocols could be discussed (e.g., time availability).

Given the participatory approach to this research, my analysis is supported by extensive quotes from research participants. To ensure clarity for the reader and to help maintain the anonymity of participants, I have made a discretionary decision to remove some repetition of words or phrases and interjections (e.g., "um"), as well as incomplete

phrases when someone collects their thoughts aloud (e.g., the italicized text in “*That was... That's why I have a difficult time with it.*”). Participant views should be understood as their own. No participant was asked to speak on behalf of their band or tribal council, or any other governing or advisory body.

### 3.3. Limitations

Readers scanning through the references for this chapter may find themselves frustrated by the absence of citations of early anthropologists on the BC coast or evidence of any time searching through museum and library archives for handwritten notes by Indian Agents or other officials. There is little doubt in my mind that the absence of such citations constitutes a limitation to the breadth of understanding and conclusions of this dissertation. Practical reasons for some absences are my financial and time limitations, along with access limitations throughout much of the writing period due to COVID-19 pandemic associated restrictions. Pragmatic limitations are simply that I am neither a historian nor an anthropologist by training. Searching through library microfiche archives or field notes from early anthropologists is not within my academic strengths. Further, Indigenous Peoples and academics have drawn attention to some problematic aspects of historical ethnographic writings, including misleading generalizations, inaccuracies, efforts to prove theories, and romantic primitivism (Glass, 2021; Trospen, 2009). As a white settler with limited knowledge of the Kwak'waka'wakw language and Kwakwaka'wakw worldviews, I do not have the necessary training to correctly identify and interpret historical ethnographic materials. As such, I rely on the interpretations provided by contemporary scholars (Galois, 2012; Glass, 2021; Nicolson, 2013; Trospen, 2009; Weinstein, 2010). My area of expertise is in reading through and interpreting fisheries management plans and annual reports, which I draw on heavily in this research. Future archival-based research of microfiche material and historical notes may improve knowledge of historical events.

During my research period, I reported on the preliminary findings to Musgamagw Dzawada'enuxw, delivered multiple conference papers and presentations, presented to two DFO fisheries coordinators, and co-authored one paper. I used these activities as opportunities to test and seek feedback on my interpretations of various, but not all, components of this research. Andrea Lyall, who is a scholar in forest governance and Kwakwaka'wakw cultural protocol and a KHFN member, provided feedback on chapter

five. However, at the time of writing, I had not yet been able to present the completed analysis to the broader Musgamagw Dzawada'enuxw community members. As a result, as a white male settler, I recognize that my interpretations of the data may not be the same as some community members and scholars. So, I have made the decision to include many detailed interview quotes both to support my analysis and to provide others with the opportunity to offer alternative interpretations.

## Chapter 4.

### Recent history of the intertidal clam fishery in the territories of the Musgamagw Dzawada'enuxw

The purpose of this chapter is to show the extent of and ways that colonialism and capitalism have affected the Kwakwaka'wakw peoples' relationship and management of intertidal clams and clam beaches (see Table 3.1). In combination with chapter five, it also supports an understanding of how the intertidal clam management system of the Musgamagw Dzawada'enuxw has been adapted over time. This chapter begins in the period leading up to contact between Europeans explorers and Kwakwaka'wakw tribes and concludes in the present day.

The scope here is relatively narrowly focused on the Musgamagw Dzawada'enuxw and the clam fishery within the Broughton Archipelago. As a result, I leave out some broader historical events related to colonialism and fisheries management in BC. For readers interested in Kwakwaka'wakw culture and history more generally, my select recommendations include Galois (2012), Glass (2021), Nicolson (2013), U'mista Cultural Society (2023), or the history section on any Kwakwaka'wakw Nation's website. For history on the intertidal clam fishery in BC, see Pinkerton and John (2008), Pinkerton and Silver (2011), Quayle and Bourne (1972), and Webb (2002, 2006). For a history of the federal government's restrictions on First Nations fishing access and management rights in BC, including the application of the *Indian Act* and *Fisheries Act*, see Harris (2008) and Harris and Millerd (2010).

#### 4.1. Pre-1770: Communal ownership and social accountability

Nicolson (2013) notes that within Kwakwaka'wakw communities, there was extreme cultural significance of the winter season as the ceremonial period, and the summer season as the time of resource gathering and preservation of food for winter. Traditionally, the fundamental social unit of Kwakwaka'wakw people was the *'narima* (house, clan) (Nicolson, 2013). Nicolson (2013) explains "The *'narima* groups lived on the land in distinct locations sometimes associated with encounters with ancestors" (p.

211). These locations were most often occupied during the summer months (Nicolson, 2013). Each tribe (e.g., Gwawa'enuxw, Kwickwasut'inuxw, Haxwa'mis, and Dzawada'enuxw) was made up of multiple *narñima*. In the winter season, most ceremonial gatherings were generally in small groups with a single or multiple *narñima*, wherein a village collective would be rearranging into a tribe, while multi-tribal gatherings occurred less often (Nicolson, 2013).

Across the Northwest Coast, Indigenous Peoples' fishing sites and beaches have traditionally been owned by titleholders within Indigenous tribes (Mathews & Turner, 2017; Trooper, 2009). For the Kwakwaka'wakw, titleholders operate within a communal system. The individual is understood as part of a social whole (Nicolson, 2013). This is explained in the Kwakwaka'wakw conceptual metaphor of Body (self) equals House (*narñima*/family/community group) equals Land/World (animate landscape) (see Nicolson, 2013). Nicolson (2013) notes that notions of communal ownership and social accountability are paramount to a Kwakwaka'wakw traditional worldview.

The Musgamagw Dzawada'enuxw used a complex system of rules and practices to govern the use of natural resources. For instance, Rohner (1967) observed that in the eulachon fishery "certain tribes had fishery rights at specific locations but not at others" (p.61). Protocols were also established to govern access rights, management, exclusion, and stewardship duties for clam beaches and clam populations (Heaslip, 2008a; Pinkerton et al., 2014; Weinstein, 2010). As I discuss in chapter five, these traditional rules and practices likely included both formal (*de jure*) and informal (*de facto*).

Many clam beaches on BC's coast, particularly in the Broughton Archipelago, were altered and managed by Indigenous Peoples through a traditional form of mariculture commonly known as clam gardens (Harper et al., 1995; Williams, 2006). However, structural variation of clam gardens in different social-ecological and oceanographic contexts has been observed across First Nations' territories on the coast (Lepofsky & Salomon, in press). Historical ecology research findings from Quadra Island<sup>8</sup>, a hundred kilometres south of the Broughton Archipelago, suggest that First

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<sup>8</sup> Quadra Island is located in the territory of the Laich-kwil-tach tribes, but this area was likely previously occupied by Coast Salish tribes. The Laich-kwil-tach tribes are the southernmost Kwakwaka'wakw tribes. Their origins are thought to be to the north of their present territory, but they migrated south in the 1800s, displacing Coast Salish tribes (Galois, 2012).

Nations were building some of the first clam gardens to that area approximately 3,500 years ago and clam harvesting intensified approximately 2,700 years ago (Toniello et al., 2019). Foster (2021) conducted a comparative study of clam lengths from 3500 to 150 years ago at clam gardens on Quadra Island, where sea otters were absent, and in the Broughton Archipelago, where sea otters were present until the maritime fur trade (1700s to 1800s). She found that clam sizes were stable through time in samples from both areas, indicating that local Indigenous People were able to continuously harvest clams even where sea otters were present. Foster (2021) states “Clam gardening may have enabled stable clam harvests by increasing clam productivity, and limiting otter access by elevating beach heights out of otter-accessibility, and excluding sea otters from harvesting areas” (p. 73). There is evidence of 350 locations of clam gardens or “terraces” along five to ten percent of the Broughton Archipelago’s rocky coastline (Harper et al., 1995). Cumulatively, research findings on clam gardens suggests that these culturally modified beaches were a highly significant component of traditional food, social-ecological resilience, and management systems used by First Nations inhabiting the area for millennia.

The construction of clam gardens extended and augmented clam habitat (Deur et al., 2015). Deur et al. (2015) note that this effectively concentrated abundant and predictable invertebrate resources in readily accessible locations for harvesters and within the territorial jurisdiction of First Nations’ resource managers. These gardens were likely constructed, altered, and managed over a long period of time. Toniello et al. (2019) suggest a gradual increase in the number of clam gardens constructed likely related to human population increases, “both as an impetus for enhancing a reliable and productive food source and trade item and in turn, by allowing for the increasingly larger human population and complex social relations” (p. 22110). I suspect that settlement patterns may have also played a role in the intensity of management and use of each clam garden in any given year.

Clam harvesting overlapped with the winter ceremonial period. As an abundant and relatively predictable and immobile food source, clams provided winter food security, particularly when other food might not be available (e.g., species with a mobile and variable presence) or if stored winter supplies are used up or unexpectedly destroyed (Deur et al., 2015). Evidence suggests that even with intensive harvesting, traditional clam management practices supported thriving clam populations (Toniello et al., 2019).



Empirical and experimental evidence has shown that clam gardens likely increased clam productivity and consequently food security (Groesbeck et al., 2014; Jackley et al., 2016). Evidence from research on BC’s Central Coast suggests that butter clams had 1.96 times the biomass and 2.44 times the density in clam gardens than in non-walled clam beaches (Jackley et al., 2016). Groesbeck et al. (2014) suggest that clam gardens and the associated governance systems of Indigenous Peoples serve as “an example of an adaptive strategy that likely enhanced regional food security and thus conferred resilience to these coupled human-coastal ocean ecosystems” (p. 11).

### 4.1.1. Analysis

There is little evidence that colonialism and capitalism affected human-clam relationships in the Broughton Archipelago until the years leading up to contact with Europeans. Table 4.1 provides a summary of the features of the clam management system in the period leading up to early colonialism. My analysis in this table and later tables in this chapter is based on the relevant literature described in each subsection and listed in the introduction of this chapter.

**Table 4.1 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago before 1770**

System Feature	State	Details
Role of Indigenous governance	Likely High – Indigenous led	<ul style="list-style-type: none"> <li>• Overall governance system aligned with Kwakwaka’wakw worldviews</li> <li>• Respect for clams as kin</li> <li>• Communal ownership</li> <li>• Reciprocity</li> <li>• Wealth distribution</li> <li>• Social accountability</li> <li>• Regional trade</li> </ul>
Access and management rights and duties	Likely High – Indigenous defined	<ul style="list-style-type: none"> <li>• Rooted in Kwakwaka’wakw cultural principles</li> <li>• Complex system of rules and practices</li> </ul>
Resilience and adaptability of social-ecological system	Likely High	<ul style="list-style-type: none"> <li>• Clam gardens planned within complex interconnected system of marine and coast resource management</li> <li>• Construction and management of clam gardens extended and augmented clam habitat</li> <li>• Increased clam productivity</li> </ul>

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Legitimacy in management system	Likely High	<ul style="list-style-type: none"> <li>• Hundreds of modified beaches (redundancy)</li> <li>• Adaptability with annual variation in food sources</li>   <li>• Moral legitimacy: management system aligned with Kwakwaka'wakw worldview and customs</li> <li>• Regulatory legitimacy: compliance with protocols prevented overharvest</li> <li>• Political legitimacy: respect for titleholder authority demonstrated through potlatch system</li> <li>• Scientific legitimacy: Indigenous knowledge used to increase clam productivity and support intensive harvest activity</li> </ul>
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## 4.2. 1770 – 1869: Early colonialism, diseases, and raids

### 4.2.1. Population Decline

The Musgamagw Dzawada'enuxw and other Kwakwaka'wakw groups suffered significant declines in populations following the arrival of European explorers and colonial settlers in the 1700s (Galois, 2012). From the 1770s to the 1820s, Kwakwaka'wakw populations declined precipitously (Galois, 2012). The cause of this initial period of population loss is uncertain, as it began over a decade prior to Europeans arriving in Kwakwaka'wakw territories. An epidemic spreading from other areas of BC, where European were already present, is a possible explanation (Galois, 2012).

This initial population decline resulted in demographic, social, and political disruptions for the Kwakwaka'wakw (Galois, 2012). Beginning in the early 1800s, the tribal unit began replacing *na'mima* as the fundamental social unit for Kwakwaka'wakw communities (Nicolson, 2013).<sup>9</sup> Kwakwaka'wakw tribes also began to conduct their ceremonies more extensively with each other, which required them to come up with

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<sup>9</sup> This is not to suggest that the influence of *na'mima* ceased to play a role in Kwakwaka'wakw culture. Nicolson (2013) notes that the names of the Dzawada'enuxw *na'mima* groups, their rank in correspondence to each other and the individual standings of the *na'mima* members continued to be recorded at least to the 1960s. Further, she states “It has become part of our contemporary exercise to return the understanding of the *na'mima* ‘houses’ to contemporary ceremonialism” (p. 213).

additional ranking systems and seating arrangements in ceremonial houses (Galois, 2012).

Kwakwaka'wakw population declines continued into the early 1900s, due to outbreaks and epidemics from European-introduced diseases, as well as warfare. Major disease outbreaks that reached Kwakwaka'wakw territories include measles (1848-1849; 1868-1869; 1883), smallpox (1862-1863), and influenza (1868-1869; 1890; 1892) (Galois, 2012). Tuberculosis was likely most prevalent from the 1880s to 1920s (Galois, 2012). The impact of these epidemics on population decline was compounded by the synergistic effects of the trade in rot-gut whisky and venereal diseases (Galois, 2012, p. 39). Sometime between the late 1850s and 1880s, surviving Dlidliget people, who were a neighbouring Kwakwaka'wakw Nation in the Broughton Archipelago, were absorbed into Kwikwasut'inuxw, who assumed control of Dlidliget territory (Galois, 2012).

Galois (2012) uses a combination of data sources<sup>10</sup> containing demographics of the four Musgamagw Dzawada'enuxw Nations for 1835-1929 to estimate their population. He estimates that, at an aggregate level, the Musgamagw Dzawada'enuxw experienced a 52 percent decline in population between 1835 (pop. 1,050) and 1863 (pop. 546), a further 33 percent decline to 1881 (pop. 344), and reached a low point of 21 percent of the 1835 population in 1914 (pop. 220). By 1929, the population had increased slightly to 240. These declines would have had devastating effects on the Musgamagw Dzawada'enuxw, including their knowledge, culture, social structure, and governance.

Conflicts and raids between several Kwakwaka'wakw Nations and the Nuxalk<sup>11</sup> began taking place sometime before 1850 (Galois, 2012). Gwawa'enuxw people suffered heavy losses from Heiltsuk raids around the 1850s and 1860s (Galois, 2012). At least one Gwawa'enuxw camp, at Nimmo Bay, was wiped out (Galois, 2012). The Hudson Bay Company's decision to move a trading post from the Central Coast near

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<sup>10</sup> Galois (2012) notes the data require some interpretation and contain some inconsistencies, in part likely the result of mergers of groups and changing settlement patterns.

<sup>11</sup> Galois (2012) speculates that the closure of Ft. McLoughlin on the Central Coast, in 1843, and opening of Ft. Rupert, in 1849, may have contributed to the pattern of raids. Nuxalk found themselves further down the trading hierarchy with European traders, while the move created an improved strategic and economic position for Kwakwaka'wakw people. Nuxalk may have also been experiencing a famine.

Nuxalk territory to Fort Rupert on Northern Vancouver Island in the mid-1800s shifted economic opportunities to Kwakwaka'wakw territories. This may have contributed to tensions between Nuxalk and Kwakwaka'wakw tribes (Galois, 2012). It also brought with it a British naval presence, which would intervene in inter-tribal conflicts and enforce colonial laws.

The conflicts peaked around 1856, when the Nuxalk attacked the Kwikwasut'inuxw in Gwa'yasdums, massacring most inhabitants and destroying the village.<sup>12</sup> The surviving Kwikwasut'inuxw abandoned the village, most joining the Mamalilikulla at 'Mimkwamlis on Village Island. Census data from 1881 showed that, of the 45 Kwikwasut'inuxw people counted, there was a lack of people in the age cohorts covering the approximate date and decade following the attack: zero people aged 15-19 years and three aged 20-24 (Galois, 2012). This was likely compounded by the smallpox epidemic that followed in the 1860s (Galois, 2012).

#### **4.2.2. Changing Settlement Patterns**

Gwa'yasdums was uninhabited for a period, until the Haxwa'mis and Dzawada'enuxw began using it as a joint winter village sometime between 1865 and 1879 (Galois, 2012). Gwawa'enuxw joined them following the Heiltsuk raid on Nimmo Bay (Galois, 2012). This settlement pattern continued into the twentieth century, ending around 1922 (Galois, 2012; Rohner, 1967).

The population declines and change in settlement pattern disrupted and then altered the relationships between Kwakwaka'wakw people and clam beaches, as well as attributes of the clam populations. Results from the historical ecology study of clam gardens on Quadra Island by Toniello et al. (2019) suggest that, when compared to earlier periods with intensive management of clam gardens, clams died younger and smaller in the years following 1782 – the period when First Nations' populations were declining. The same outcome likely occurred in the Broughton Archipelago area. Then, as the Musgamagw Dzawada'enuxw tribes adapted and reorganized following several disease outbreaks and raids, clam beaches appear to have influenced their settlement

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<sup>12</sup> On September 3, 2011, peace was made between Nuxalk and Kwikwasut'inuxw Haxwa'mis when Declaration of Peace Potlatch was held in Bella Coola. See <http://www.nuxalk.net/html/peace.htm> for details of the Peace Potlatch (accessed January 17, 2021).

patterns. Rohner (1967) considers seasonal access to clams and other food sources around Gwa'yasdums as a contributing factor to their decision to jointly overwinter in the village.

One of the reasons for the annual migration to Gilford was that the Kingcome river freezes during part of the winter, making food and wood for fuel difficult to obtain. At Gilford, which is sometimes referred to by the Indians as being in the "banana belt," it was possible for the different tribes to dig clams, trap, hunt, and fish. Transportation was easier than at Kingcome. The tribes resided at Gwayasdums from about the middle of November to the middle of March, when they returned to Kingcome and their other home sites for the spring oulachon run. (Rohner, 1967, p. 32)

### 4.2.3. Analysis

Table 4.2 provides a summary of the effects on the clam management system during this period of conflict, disease, and early colonialism.

**Table 4.2 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago, 1770-1869**

System Feature	State	Details
Role of Indigenous governance	Likely Medium to high - Indigenous led	<ul style="list-style-type: none"> <li>• Population decline leads to social and political re-organization</li> <li>• Changes in settlement patterns reduces presence throughout territory</li> <li>• Kwakwaka'wakw governance system aligned with their worldviews but adapting to above changes</li> <li>• Respect for clams as kin</li> <li>• Communal ownership, but loss of some titleholders to specific beaches</li> <li>• Reciprocity</li> <li>• Wealth distribution</li> <li>• Social accountability</li> <li>• Regional trade may have been affected by colonial trading post and early colonial resource extraction</li> </ul>
Access and management rights and duties	Likely Medium - Indigenous defined	<ul style="list-style-type: none"> <li>• Still rooted in Kwakwaka'wakw cultural principles</li> <li>• Access and management threatened by raids</li> <li>• Changes in settlement patterns reduces presence and beach management throughout territory</li> </ul>

Resilience and adaptability of social-ecological system	Likely Medium	<ul style="list-style-type: none"> <li>• Complex system of rules and practices</li> <li>• Many clam gardens likely still planned within complex interconnected system of marine and coast resource management</li> <li>• Reduced construction and management of clam gardens extended and augmented clam habitat</li> <li>• Gradual decline in clam productivity where clam gardens are not maintained</li> <li>• Hundreds of modified beaches (redundancy), but new settlement patterns change presence</li> <li>• Adaptability with annual variation in food sources</li> </ul>
Legitimacy in management system	Likely High	<ul style="list-style-type: none"> <li>• Moral legitimacy: management system aligned with Kwakwaka'wakw worldview and customs</li> <li>• Regulatory legitimacy: compliance with protocols prevented overharvest</li> <li>• Political legitimacy: respect for titleholder authority demonstrated through potlatch system, but some social and political re-organization due to population decline</li> <li>• Scientific legitimacy: Indigenous knowledge used to increase clam productivity and support intensive harvest activity, but large loss of knowledge holders likely occurred</li> </ul>

### **4.3. 1870 – 1899: Commercialization of fisheries and imposed restrictions on Indigenous Peoples' culture and access to their land and waters**

#### **4.3.1. Colonial Expansion**

Harris (2008) notes that during the mid-nineteenth-century, British interests in the North American Cordillera transitioned from trading country to settlement frontier, bringing with it a fundamental change in relations with Indigenous Peoples of the region. As mentioned above, infectious disease outbreaks throughout this period continued to contribute to population decline among Kwakwaka'wakw communities. As First Nations' populations declined, the settler population increased, and its resource extraction interests began to expand. So too did the controls and restrictions that were imposed on

Northwest Coast peoples, land, and water and the resources within it by the BC and Canadian colonial governments.

As Glass (2021) states, between 1850 and 1890, Northwest Coast peoples went from being sovereign societies to being subject to church and state, “governed and surveilled by Indian administrators, employed (or not) by merchants and industrialists, ministered to and educated by clergy” (p. 43). Northwest Coast peoples’ seasonal settlement patterns (e.g., use of sites for winter villages, fishing, hunting, plant harvesting, and spiritual sites) and their titleholder system based on contingent proprietorship were now at odds with the colonizers’ notions of property rights (e.g., parceled and privatized land) (Harris, 2008; Trosper, 2009). The trajectory of capitalism began to shift away from the early trading relationship toward British colonization and the suppression of Kwakwaka’wakw cultural practices and language aimed at benefiting the Western capitalist economic system (Nicolson, 2013). Kwakwaka’wakw rights, duties, and practices that were formalized (*de jure*) in their own society through their ceremonial, oral narrative, artistic, and social structures were not recognized under colonial law. But, as I discuss in this chapter and the next, the Kwakwaka’wakw maintained and adapted some of these rights, duties, and practices internally within their societies, albeit in a *de facto* capacity under within the colonial context.<sup>13</sup>

#### **4.3.2. Commercialization of Fishing**

In 1870, as the commercial fishing industry expanded along BC’s coast, the first salmon saltery – soon after, replaced by a cannery – was established in Alert Bay. Over the subsequent decades, Alert Bay became the focal point for Kwakwaka’wakw and non-Indigenous participation in the rapidly expanding fishing and logging wage economy (Jacknis, 1996). The area as a whole saw a growth in white economic activity and settlement, which brought growing competition for Kwakwaka’wakw land and resources (Galois, 2012). Salmon was the primary focus of commercial fishing. Commercial clam harvesting would not begin in the area until the 1900s.

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<sup>13</sup> It is likely that within Kwakwaka’wakw communities, Kwakwaka’wakw rights, duties, and practices maintained *de jure* authority, at least where possible. Nonetheless, my point here is that, under the colonial system, English common-law was imposed onto the Kwakwaka’wakw and their territories,

As the commercial fish canning industry began to rapidly emerge along BC's coast in the 1870s, Canada's Department of Fisheries was working to limit Indigenous Peoples' rights to fisheries (Harris, 2008).<sup>14</sup> Harris (2008) explains that while English common-law enabled land to be held as private property, it applied a fundamentally different doctrine to water, characterizing fisheries as common property for which there was a public right to fish. Based on this principle, Canada's Department of Fisheries maintained that the exclusive rights that characterized the occupation of land in First Nations' reserves did not extend to the fisheries, effectively denying the pre-existing Indigenous laws and customary tenure in their fisheries (Harris, 2008). As Harris (2008) documents, the Department of Fisheries was persistent, and ultimately successful, in its effort to prevent the Department of Indian Affairs and reserve commissioners from designating exclusive fishing rights to First Nations in BC, asserting that fishing rights in public waters cannot be made exclusive under the authority delegated to the Department of Fisheries under the *Fisheries Act*. The one exception conceded by the Department of Fisheries was in allowing limited access to food fishing privileges for First Nations (Harris, 2008). Harris (2008) concludes that the common-law doctrine of the public right to fish was a crucial part of the legal apparatus that surrounded Indigenous Peoples, erasing their customary tenure and dispossessing them of their fisheries as the commercial fishing sector expanded and settler interests grew.

### 4.3.3. Cultural Suppression

After being lobbied by Christian missionaries, the federal government's efforts to control the potlatch system began with an 1884 amendment to the *Indian Act*, which made potlatching an indictable offense (Loo, 1992). The act was amended again in 1895 to clarify the ban after a Kwakwaka'wakw man's conviction for potlatching was quashed by the Supreme Court on an appeal (*R v. Hemasak*) (Loo, 1992). However, Loo (1992) points out that it was not until potlatching was made a summary offence through a 1918 amendment to the *Indian Act* that the ban had a significant effect on the criminalization of the ceremony – at least in terms of the number of convictions. From 1895 to 1918,

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<sup>14</sup> British Columbia joined the Dominion of Canada in 1871, handing the colonial authority over fisheries to Canada.



seventeen people were indicted for potlatching; whereas 135 were charged with violations of the potlatch ban in the four years from 1918 to 1922 (Loo, 1992).

Over the same period that missionaries were lobbying against the potlatch system, they were also setting up mission schools across Kwakwaka'wakw communities. Around 1889, a mission school was established in Gwayasdums (Rohner, 1967). The missionaries would join as the Musgamagw Dzawada'enuxw in Gwa'yasdams continued to migrate back and forth between Gwa'yasdums and Ukwanalís in their annual settlement pattern (Rohner, 1967). The school operated until the missionaries left in 1912 (Rohner, 1967). The Anglican day school in Alert Bay, which opened in 1883, became the closest school to attend.<sup>15</sup>

#### **4.3.4. Land appropriation**

Despite an absence of treaties with First Nations in most of BC – and the Crown's hesitancy to finance and negotiate such treaties – the provincial legislature passed *An Act to Amend and Consolidate the Laws affecting Crown Lands* (commonly known as the *Land Act*) in 1888, setting out the conditions for the pre-emption, sale, leasing, and licensing of "Crown land". The *Land Act* prohibited the granting of licences, leases pre-emptions, and sale of the site of an "Indian settlement" or "reserve" lands.<sup>16</sup> However, the actual protection that the *Land Act* provided to First Nations' lands was quite limited at the time. First, the joint federal-provincial Indian Reserve Commission was established in 1875 but did not begin surveying land for reserve allotments on the coast, including Kwakwaka'wakw territories, until the 1890s. As I discuss in the next section, during the 1912-1916 Royal Commission on Indian Affairs (commonly known as the McKenna–McBride Royal Commission; MMRC) many Kwakwaka'wakw Nations learned for the first time that important sites within their territories that they requested for reserves had been alienated by the province granting these to settlers and companies in prior decades, mainly as timber leases and licences (Galois, 2012).

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<sup>15</sup> <https://indiandayschools.com/en/wp-content/uploads/schedule-k.pdf> accessed October 13, 2021

<sup>16</sup> See <https://www.bclaws.gov.bc.ca/civix/document/id/hstats/hstats/1238773615> accessed April 17, 2022.

Second, as the Indian Claims Commission (1997a) notes, “At least while reserves were being established, the province placed the onus on the federal Indian Department to respond to [30 day] notices of applications under the Land Act which were detrimental to Indian lands” (p. 12). Needless to say, the federal Kwakwaka’wakw Indian Agency often did not intervene in applications to ensure that Kwakwaka’wakw lands were protected. In multiple application claims brought before the Indian Claims Commission (1998) by Kwakwaka’wakw neighbours of the Musgamagw Dzawada’enuxw in the 1990s, the commissioners found that the Government of Canada, through its Indian Agents, breached its fiduciary obligation to “Indian Settlement Lands.” But the Government of Canada refutes these findings (see Indian Claims Commission, 2000) and did not award the claims.

Kwikwasut’inuxw people began returning to Gwa’yasdums in the 1890s, though data suggests that some still remained in ‘Mimkwamlis in 1914 (Galois, 2012). In 1895, reserves for Kwakwaka’wakw allotted by the Indian Reserve Commission were surveyed and confirmed with limited input from the Kwakwaka’wakw Nations (Galois, 2012). Reserves were limited in size and number, justified on the assumptions that Northwest Coast peoples were fishers and not in need of large farm lands (Galois, 2012; Harris, 2008). Recall from above that reserve allocation was taking place at the same time the Department of Fisheries was establishing the legal apparatus to limit First Nations’ rights to fishing for economic purposes (Harris, 2008). Some reserves were allotted to the wrong tribes (Galois, 2012). This included Gwa’yasdums, which was allotted to the Dzawada’enuxw instead of the Kwikwasut’inuxw. Decisions by the Indian Reserve Commission later led to discontent among Kwakwaka’wakw Nations and other First Nations in BC, which was made apparent in their testimonies at the MMRC in 1914 (see Royal Commission on Indian Affairs for the Province of British Columbia, 1916).

#### **4.3.5. Cultural Artifact Extraction**

The systematic and large-scale collection of Kwakwaka’wakw artifacts for museums in Europe and North America began in 1881-82 with Johan Adrian Jacobsen, a Norwegian sailor traveling under the auspices of the Royal Ethnographic Museum of Berlin (Cole, 1983; Jacknis, 1996). Over the next four decades, other collectors –Charles F. Newcombe, Samuel Barrett, and Franz Boas in collaboration with George Hunt – amassed large collections of Kwakwaka’wakw artifacts for the museums that sponsored

them (Jacknis, 1996). Cole (1983) notes that while many artifacts belonging to Northwest Coast peoples were stolen or acquired through an unequal trading relationship with colonizers and explorers, Northwest Coast peoples were themselves skilled and willing traders who exchanged certain artifacts based on their own interests, values, and needs (e.g., household goods that had become obsolete through the availability of new goods). Nonetheless, as I briefly discuss in the next section, the collecting of Kwakwaka'wakw artifacts promoted the theft and confiscation of culturally significance items as part of the broader system of suppression.

### 4.3.6. Analysis

Table 4.3 provides a summary of the effects on the clam management system during this early period of fisheries commercialization and colonial suppression of Indigenous rights and authority.

**Table 4.3 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago, 1870-1899**

System Feature	State	Details
Role of Indigenous governance	Likely Medium - Suppressed	<ul style="list-style-type: none"> <li>• Population decline continues to affect social and political conditions</li> <li>• Initial colonial efforts to suppress Kwakwaka'wakw culture, potlatches, and language challenged internal governance systems</li> <li>• Application of English common-law – public right to fish challenges communal ownership</li> <li>• Expanding capitalist system but not yet to clams</li> <li>• Rapidly expanding fishing and logging wage economy</li> <li>• Changes in settlement patterns reduces presence throughout territory</li> <li>• Regional trade may have been affected by expanding colonial resource economy</li> </ul>
Access and management rights and duties	Likely Medium – Suppression and privatization	<ul style="list-style-type: none"> <li>• Likely still rooted in Kwakwaka'wakw cultural principles, where possible</li> <li>• Continuation of rules and practices in a <i>de facto</i> capacity, where possible</li> <li>• Growing competition from settlers for Kwakwaka'wakw land and resources</li> </ul>

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		<ul style="list-style-type: none"> <li>• Some beach access and management threatened by land parceling and privatization</li> <li>• Some reserves, including clam beaches, allotted to the wrong First Nations</li> </ul>
Resilience and adaptability of social-ecological system	Likely Medium	<ul style="list-style-type: none"> <li>• Some clam habitats likely damaged by logging activity</li> <li>• Reduced management of clam gardens</li> <li>• Gradual decline in clam productivity continues where clam gardens are not maintained</li> </ul>
Legitimacy in management system	Likely Mixed	<ul style="list-style-type: none"> <li>• Moral legitimacy: Kwakwaka'wakw clam management system aligned with harvesters' worldviews, BC's land privatization did not</li> <li>• Regulatory legitimacy: Kwakwaka'wakw compliance with protocols prevented overharvest, but common-law restricted their access rights and unregulated logging damaged their beaches</li> <li>• Political legitimacy: respect for titleholder authority demonstrated through potlatch system, but some federal and church trying to suppress it</li> <li>• Scientific legitimacy: Indigenous knowledge used to increase clam productivity and support intensive harvest activity, where possible</li> </ul>

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#### **4.4. 1900 – 1949: Capitalism, scaling up of commercial fisheries, language suppression, cultural oppression, and resistance**

##### **4.4.1. Reserve System**

The interference with the land occupation, settlement patterns, and governance of Kwakwaka'wakw groups that the federal and provincial governments began in the 1800s by establishing Indian Agents and reserves continued well into the twentieth century. In June 1914, the Royal Commission on Indian Affairs (commonly known as the McKenna–McBride Royal Commission or MMRC) met with the hereditary chiefs of the Musgamagw Dzawada'enuxw and other Kwakwaka'wakw Nations. It soon became clear

that William H. Halliday, the Indian Agent for the Kwakwewlth Agency<sup>17</sup>, had both failed to distribute the plans of their lands or to prepare the Nations for the McKenna–McBride Royal Commission’s process, including notifying them that the commission was unwilling or unable to recommend the establishment of reserves on lands that had been alienated in prior decades (Indian Claims Commission, 1997b). The land plans were lying in Halliday’s office until three days before the Nations met with the MMRC when the commissioners took it upon themselves to have them retrieved and distributed.

It was under these circumstances that the Musgamagw Dzawada’enuxw hereditary leaders provided testimonies at the MMRC. The hereditary leaders asserted their rights to those culturally significant places within their territories that could be provided under the circumstances (see Royal Commission on Indian Affairs for the Province of British Columbia, 1916). The leadership from each Nation listed settlements and lands, including clam beaches of cultural importance that they wanted designated as reserves or existing reserves that they noted were previously incorrectly allotted to the other tribes (e.g., Gwa’yasdums).

In 1916, the MMRC submitted its final report to BC and Canada. The Musgamagw Dzawada’enuxw Nations were only granted a handful of the reserves out of the sites that they had identified. Very few of clam sites were approved. The MMRC dismissed many First Nations applications for lands additional to reserves allotted through the Indian Reserve Commission in 1885, including more than half of the 195 sites across all Kwakwāḡwakw tribes, on the ground that sites had been alienated to white men (Galois, 2012). Kwakwāḡwakw leaders subsequently worked with the Allied Tribes of British Columbia, an Indigenous Peoples’ organization formed in response to the MMRC, to gather additional land-use information in their advisory role to the Ditchburn-Clark Commission’s review of the MMRC recommendations (Galois, 2012). British Columbia and Canada approved the MMRC report in 1923 and 1924, respectively, with only minor changes to the reserves for Musgamagw Dzawada’enuxw Nations based on the recommendations of the Ditchburn-Clark Commission.<sup>18</sup>

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<sup>17</sup> Kwakewlth Agency was federal Department of Indian Affairs’ administrative agency assigned to the Kwakwāḡwakw tribes.

<sup>18</sup> See [https://www.bclaws.gov.bc.ca/civix/document/id/oic/arc\\_oic/0911\\_1923](https://www.bclaws.gov.bc.ca/civix/document/id/oic/arc_oic/0911_1923) accessed April 17, 2022.

Another element illuminated in the testimonies provided by the Musgamagw Dzawada'enuxw hereditary leaders at the MMRC was the racism they faced at the hands of white settlers and their companies. The hereditary leaders shared their frustrations over mistreatment and abuse by white men and their companies, including destruction of graves, break and entry, appropriation and theft, obstruction of waterways, and destruction of property and lands. Such racism and land occupation by white men are a reminder that oppressive actions against Kwakwaka'wakw people were not just limited to those enacted by the federal and provincial governments but included consistent dangers from non-governmental actors in their communities and territories.

#### **4.4.2. Potlatch Ban**

At the same time, the federal government was ratcheting up its efforts to clamp down on the potlatch system after making further targeted amendments to the *Indian Act*. In 1914, the potlatch ban provision of the *Indian Act* was amended to ban the wearing of Indigenous costumes (unless expressly permitted by the superintendent of Indian affairs or his official representative) and dancing outside of a person's home reserve (Loo, 1992). Despite this, the federal government still had very little success prosecuting charges. So, a further amendment in 1918 changed potlatching from an indictable to a summary offence. The change enabled Indian agents, in their capacity as justices of the peace, to try to convict First Nations people for violations of the potlatch provision instead of submitting them for trial, as was previously required (Loo, 1992). This was a significant change that led to an increase in charges. From 1918 to 1922, 135 individuals were charged with violations under the potlatch ban law, compared to 19 individuals previously charged since 1884 (Loo, 1992).

One of the most heavy-handed enforcements of the potlatch ban followed a potlatch hosted by 'Namgis chief Dan Cranmer in December 1921. Chief Cranmer hosted a large potlatch (approximately 300 people) on Village Island. After learning of the potlatch, Indian Agent Halliday prosecuted many of the participants: 58 charges were laid, resulting in nine dismissals and 49 convictions. Of those convicted, 21 were sentenced to two months imprisonment, four to six months, and 23 received suspended sentences (Loo, 1992). This marked the peak of the federal government's crackdown on potlatching in Kwakwaka'wakw territories. The 23 suspended sentences were awarded after each of the recipients signed affirmations to stop potlatching and agreed to

surrender their ceremonial masks, coppers, and other regalia to the Indian agent (Loo, 1992). A total of 750 objects were turned in (Jacknis, 1996). Looking to profit on his oppressive actions, Halliday took advantage of the market for collect Kwakwaka'wakw artifacts. He sold 30 items to the Museum of the American Indian founder in New York City and shipped the rest to Ottawa (Jacknis, 1996).

Indian Agent Halliday's enforcement actions left its mark on many Kwakwaka'wakw communities, but he was not fully successful in suppressing their cultural practices. Throughout the 1920s and 1930s, Kwakwaka'wakw people used creative strategies to fight and subvert the ban on potlatching and related practices, including: (1) becoming familiar with the law and their rights; (2) altering the locations and elements of potlatches to reduce the likelihood of charges; and (3) regularly retaining strong and frequently successful legal counsel in prosecutions as a result of potlatch charges (Loo, 1992). According to a Gwa'ywasdums community member interviewed by Rohner (1967), in the winter of 1922 a chief held a potlatch for the four Musgamagw Dzawada'enuxw Nations in Ukwanalís to avoid discovery by Halliday. Halliday's brother ran the family farm in Gway'i, but the brother kept quiet about the potlatch because he profited from the cows the Musgamagw Dzawada'enuxw purchased for the potlatch. In 1936, to bypass the *Indian Act's* ban on traditional practice, the Musgamagw Dzawada'enuxw created and raised a totem pole disguised as a memorial for King George V in Ukwanalís. As Nicolson (2013) notes, such actions serve as examples of the Musgamagw Dzawada'enuxw and other Kwakwaka'wakw people's will to survive and maintain their traditions, which fueled creative thinking, innovation, and adaptation.

#### **4.4.3. Residential and Day Schools**

Federal and church efforts to assimilate children through both the Indian Residential and Day Schools systems negatively impacted the language and culture of Indigenous peoples, with survivors having suffered physical and psychological harm and abuse. Indian Day Schools had been operating on and off in Kwakwaka'wakw territories since the late 1800s. In 1920, the *Indian Act* was amended to allow the federal government and its agents to compel any First Nations child to attend residential school (Truth and Reconciliation Commission of Canada, 2015b). Nine years later, St. Michael's

Indian Residential School was established in Alert Bay.<sup>19</sup> That same year, an Anglican Church run day school opened in Ukwanalís. That day school was listed in the 2019 Settlement of a nation-wide class action lawsuit against Canada brought to compensate survivors for harms they suffered while attending federally operated Indian Day Schools.<sup>20</sup> The day school shut down in 1944, and then the village's children were sent to the residential school in Alert Bay. While the day school operated children remained in their community. Nicolson (2013) reports that the resulting separation of children taken from their parents to the Alert Bay residential school dealt a severe blow to the passing on of language and culture.

Throughout this period, Canada's Indian Affairs Branch exerted pressure on and offered incentives for Kwakwaka'wakw tribes to amalgamate and relocate in an effort to increase administrative efficiencies and reduce costs for the Branch (Lando, 1988). The potential of acquiring both a day school in Gwa'yasdums and access to adequate water supply created convincing incentives that influenced the decision to formally amalgamate the Kwickwasut'inuxw and Haxwa'mis in 1948 (Rohner, 1967). Prior to the amalgamation, both tribes were residing in Gwa'yasdums as separate administrative units. As such, Canada's Indian Affairs Branch treated the population of each tribe individually and refused to build a school based on the grounds that individually neither tribe had a large enough school-aged population to qualify for such capital expenditures (Lando, 1988; Rohner, 1967).

#### **4.4.4. Wage Economy**

By the start of the twentieth century, colonialism and capitalism were already reshaping life and the economy of the Kwakwaka'wakw. Some changes were more welcome than others. Alert Bay continued to be a hub for the area's economy. Over the next two decades, participation in Alert Bay's commercial fishing and logging economy led to a period of great prosperity and a shift to new forms of clothing, housing, and tools for some Kwakwaka'wakw people. The town became the site of intensive cultural change, including through the establishment and political influence of an Anglican

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<sup>19</sup> <https://www.ubcic.bc.ca/timeline> accessed January 17, 2021

<sup>20</sup> <https://indiandayschools.com/en/wp-content/uploads/schedule-k.pdf> accessed October 13, 2021



mission and school (Jacknis, 1996), and the Western wage-earning economy. This growing role of the cash economy gradually replaced Kwakwaka'wakw peoples' traditional reliance on seasonal resource harvesting, which had always held extreme cultural significance and guided seasonal settlement patterns that connected people with their territories (Nicolson, 2013). The cash economy also brought new consumer goods (e.g., sacks of flour, mass-produced bolts of fabric, outboard motors, and fishing skiffs), which were incorporated into tradition as common gifts distributed during potlatches (Loo, 1992).

Nicolson (2013) notes that the Kwakwaka'wakw peoples' traditional empathy-based ideological approach that connects them with the natural world did not function well within a modern capitalist system. This is because the latter required the land to be considered as a resource to be exploited for maximum profits, not animate and respected entities. Within this capitalist model of resource exploitation, First Nations were often excluded from ownership of the resources, even within their territories (Harris, 2008). Harris (2008) adds that First Nation workers, both men and women, were more involved in the commercial fishing industry than in any other industry in BC, but the Department of Fisheries' "refusal to recognize Native ownership of or priority to any portion of the resource meant that Native peoples' participation in the fishery depended on the usefulness of their labour" (p.128). For example, in the 1910s a crew of 'Namgis members operated one of the two seine vessels that held exclusive commercial access to the Nimpkish River (Harris, 2008). 'Namgis had been fishing on the Nimpkish River for food and trade purposes since time immemorial. But the commercial vessels and the associated commercial fishing rights were now owned by BC Packers, not the 'Namgis members. What is more, BC Packers' vessels had priority access over 'Namgis members' food fishery at their three reserves along the river (Harris, 2008).

#### **4.4.5. Commercialization of Clam Harvesting**

The early 1900s marked the expansion of the commercial clam fishery into the Broughton Archipelago for the first time. During some winter seasons in the early 1900s, Kwakwaka'wakw fishers harvested small amounts of clams for a commercial cannery in Alert Bay (Thompson, 1914). However, this clam canning operation stopped by 1913

(Thompson, 1914).<sup>21</sup> Writing in BC's 1912 annual Commissioner of Fisheries report, American fisheries scientist William E. Thompson (1913) advocates for clam beds to be divided into areas or zones containing a large number of clam beds for individual canneries to lease. The intent was to protect beds from total exhaustion of clams. He repeats his call for clam bed leasing in the 1913 annual report, while also dismissing the suggestion that Kwakwaka'wakw people in Queen Charlotte Sound should be allowed to lease clam beds (Thompson, 1914).<sup>22</sup>

Thompson's report was published shortly before the Musgamagw Dzawada'enuxw leaders provided their testimonies at the MMRC and identified beaches used for clam harvesting. Evidence of widespread clam gardens in the Broughton Archipelago (Harper et al., 1995) suggests this would not have been a complete list of important clam sites for Musgamagw Dzawada'enuxw. Had the hereditary chiefs had more time to prepare, perhaps more of these clam sites would have been included. It is likely that given the short preparation period and lack of clear guidance from Indian Agent Halliday, the leaders were strategic in their priorities. It is also likely that the use and management of many beaches had been altered or declined after over a century of population decline and the associated knowledge loss, changes in their settlement patterns, and the influx of settlers and their economic activity. Regardless, even for the few sites that the leadership listed to the MMRC, the commissioners noted that many of these locations overlapped with timber limits (areas of private timber cutting rights)

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<sup>21</sup> The first record of commercial clam canning in BC is from Rivers Inlet on the Central Coast in 1882 (Quayle, 1940). From 1884 to 1900, except for 1896, a lack of a market for canned clams halted production in BC, though a fresh market, mainly for littleneck clam in Vancouver and Victoria, appears to have occurred (Quayle, 1940; Quayle & Bourne, 1972). In 1900, clam canning resumed and production began spreading to different areas of the coast, including Kwakwaka'wakw territories (Quayle, 1940; Quayle & Bourne, 1972). Clam canning helped support the canneries during the winter, after the salmon season (Thompson, 1914).

<sup>22</sup> Thompson (1914) mentions that a suggestion to allow "Indians" as well as white men to lease clam beds for profit or personal use was made several times during his survey of clam beds in Queen Charlotte Sound. While on the one hand he acknowledges that most clam diggers were First Nations people, on the other he dismisses the suggestion that they should be given leases. He cites "the peculiarly scattered distribution of clam beds in small areas", "a lack of steadiness in Indian labour", "prejudice against restraining the Indians" by legal means to control harvest and "the Indians [...] lack of understanding as to why the yield of a bed should be regulated" as justifications for not allowing Indigenous peoples to lease clam beds. He sees the canneries' ability to stop production when clam abundance on their leased beds is getting low as the best tool for regulating harvest.

granted by the government, as if to say that English law had erased pre-existing Indigenous title.

It was not until 1936 that the commercialization of the clam fishery in the Broughton and Alert Bay area began to steadily intensify. This commercial growth was stimulated by the relaxation of tariff laws, which enabled the development of an export market for raw butter clams to the United States (Quayle, 1940; Quayle & Bourne, 1972). By 1938, the area was one of the most important regions for the clam industry in BC (Quayle, 1940).<sup>23</sup> That same year the federal government increased the minimum harvest size for butter clams from one and a half to two and a half inches in the commercial fishery; the minimum size for littleneck clams remained at one and half inches (Quayle, 1940).<sup>24</sup> These increased size limits aligned with size at maturation of the clams, allowing at least one spawning prior to harvest.<sup>25</sup>

Clam populations had time to rebuild during World War II because labour shortages led to low commercial clam landings (Quayle & Bourne, 1972). But commercial fishing was about to reach new heights, as commercial fisheries scaled up on BC's coast after the war. The Alert Bay area (Area 12) once again became the largest source of clam landings in BC (Quayle & Bourne, 1972).<sup>26</sup>

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<sup>23</sup> The years 1935 and 1936 marked a rapid increase in the commercial harvest of hard-shell clams, which was in part attributed to the new export market for raw butter clams in the United States (Quayle, 1940). Clam harvesters between Comox and Sidney began reporting lower individual returns and felt clam abundance was seriously reducing in the area (Quayle, 1940). In response, Quayle (1940), a biologist with the Fisheries Research Board of Canada at the Pacific Biological Station, called for the collection of species-specific catch statistics, including the number of diggers (forks), the number of tides, and the beach on which the clams were dug, along with the quantity of clams. The Government of Canada began collecting species-specific catch statistics for clams in 1951 (Quayle & Bourne, 1972).

<sup>24</sup> Manila clams, which were first recorded in commercial harvests in 1941, also had a one-and-a-half-inch minimum size limit (Quayle & Bourne, 1972). In my literature search, I have been unable to find details on when the minimum size for butter and littleneck clams was first set at one and a half inches. Thompson (1913) mentions commercial use of littlenecks one and a half to two inches in length and butters two and a half to three inches in length. However, there is no indication that these sizes are regulated in the 1910s. Therefore, the minimum size was likely set in the 1920s or early 1930s.

<sup>25</sup> Once they reach maturity, intertidal clams spawn each year, though some populations may fail to spawn in some years. Maturity occurs between two to five years depending on the species and growth rates in a location. In BC, littleneck and Manila clams live up to 14 years and butter clams live up to 20 years.

<sup>26</sup> The reduced harvest pressure on clams during World War II and the increased labour force contributed to an overall increase in clam harvesting in BC (Quayle & Bourne, 1972).

#### 4.4.6. Analysis

Table 4.4 provides a summary of the effects on the clam management system during the first half of the twentieth century. As I describe in the next section, beginning in the 1950s, the federal government began removing some of the most oppressive sections of the *Indian Act* that were put in place during the first half of the century. At the same time, the federal government began to take a more direct role in the management of the clam fishery.

**Table 4.4 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago, 1900-1949**

System Feature	State	Details
Role of Indigenous governance	Likely Low to Medium – Suppressed but strategically practiced	<ul style="list-style-type: none"> <li>Increased colonial efforts to suppress Kwakwaka'wakw culture, settlement patterns, education, potlatches, and language challenged Indigenous governance systems and transmission of knowledge to youth</li> <li>Kwakwaka'wakw adapt covert strategies to continue internal governance and cultural practices</li> <li>Prior to ban on legal counsel, Kwakwaka'wakw effectively resist some injustice</li> <li>Application of English common-law – expanded commercialization of fisheries challenges communal ownership and access</li> </ul>
Access and management rights and duties	Likely Low to Medium – Shifting to federal management	<ul style="list-style-type: none"> <li>Clam fishery is one of the few commercial fisheries that Kwakwaka'wakw harvesters have a significant portion of the access to the fishery</li> <li>Likely Kwakwaka'wakw cultural principles and rules adapted to new commercial practices, where possible</li> <li>Entry of settlers into clam fishery restricts application of Kwakwaka'wakw management</li> <li>Kwakwaka'wakw are denied reserve ownership of many clam beaches due to privatization</li> <li>Limited federal management or enforcement</li> </ul>
Resilience and adaptability of social-ecological system	Likely Low to Medium	<ul style="list-style-type: none"> <li>Relocation outside of territories disconnects youth and adults from clam and territorial knowledge</li> <li>Commercial clam harvest likely no longer tied to beach maintenance practices, especially with settler harvesters</li> </ul>

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Legitimacy in management system	Likely Mixed	<ul style="list-style-type: none"> <li>• Some clam habitats likely continue to be damaged by logging and other industrial activity</li> <li>• Reduced management of clam gardens</li> <li>• Gradual decline in clam productivity continues where clam gardens are not maintained</li> </ul> <ul style="list-style-type: none"> <li>• Moral legitimacy: commercial clam fishery used by Kwakwaka'wakw for economic opportunity, but federal open access management not aligned with their worldviews</li> <li>• Regulatory legitimacy: government regulations on the clam fishery were minimal until the late 1930s. Kwakwaka'wakw harvesters likely began adapting traditional principles and practices, where possible</li> <li>• Political legitimacy: Opposition to federal and provincial governments' denial of Kwakwaka'wakw territorial rights and practices. Cautious effort to preserve titleholder authority through potlatch system.</li> <li>• Scientific legitimacy: unknown. Minimal science appears to have been applied to federal management decisions. Indigenous knowledge likely had some <i>de facto</i> role in harvesting, where possible</li> </ul>
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## 4.5. 1950-1988: High-capacity commercial fishing, and cultural restoration, reclamation, and adaptation

### 4.5.1. Indian Act Amendments

Indigenous Peoples' opposition and resistance to the potlatch ban and other assimilation measures of the *Indian Act* began to pay off to a degree in 1951. Amendments to the *Act* ended the ban on potlatches and the barring of Indigenous Peoples from seeking legal advice, fundraising, or meeting in groups. Loo (1992) notes that, following the harm inflicted on Indigenous Peoples by these restrictions, the *Indian Act's* amendment was a triumph of Indigenous Peoples' own customary law over the Dominion law.

While some Canadian assimilation measures were repealed from the *Indian Act*, the overall effort by the federal government to control and assimilate did not.<sup>27</sup> Beginning in the 1940s, the federal Indian Affairs Branch began its efforts to impose the elected governance structure on Kwakwaka'wakw Nations in place of traditional hereditary governance structures (Nicolson, 2013). For example, following the amalgamation of the 'Namgis First Nation with remnants of other tribes living in Alert Bay, Indian Affairs Branch insisted that a council be elected in 1950 (Lando, 1988). The Kwickwasut'inuxw Haxwa'mis were placed under the *Indian Act* provisions requiring use of the elected band council system in 1957, but their first council was not elected until 1961 (Rohner, 1967).

In the decades following the 1951 *Indian Act* amendments, Kwakwaka'wakw people began focusing on cultural restoration, reclamation, and adaptation within Canadian law and capitalism. Examples of their efforts included, but were not limited to, political organization, intercultural performances, cultural societies, construction of new bighouses, public/tourism performances of mask dances, repatriation of confiscated artifacts, and establishing the U'mista Cultural Centre in 1980 (Jacknis, 1996).

#### **4.5.2. Residential and Day Schools**

Federal and church efforts to assimilate Indigenous children also continued through both Indian Residential and Day School systems. In Alert Bay, St. Michael's Indian Residential School continued to operate until 1975.<sup>28</sup> Indian day schools returned to both Gwa'yasdums and Ukwanalís in 1950.<sup>29</sup> Both were run by the Anglican Church. The school in Gwa'yasdums was the first school to operate in that village since 1912 (Rohner, 1967). As discussed in the previous section, Canada's Indian Affairs Branch agreed to build it following the amalgamation of the Kwickwasut'inuxw and Haxwa'mis. But the school was closed in 1968. The one in Ukwanalís operated until 1981. Both

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<sup>27</sup> Other amendments to the *Indian Act* in 1951 not discussed in this paper included women being allowed to vote in band council elections, the "double mother rule" and compulsory enfranchisement of Indigenous women who married non-status men.

<sup>28</sup> <https://www.ubcic.bc.ca/timeline> accessed January 17, 2021

<sup>29</sup> <https://indiandayschools.com/en/wp-content/uploads/schedule-k.pdf> accessed October 13, 2021

these day schools are listed in the 2019 Settlement agreement for day school survivors.<sup>30</sup>

### 4.5.3. Intertidal Clam Fishery

In response to the post-World War II growth in the commercial clam fishery, the federal government began exercising greater control over its management. The Department of Fisheries began by improving its data collection. Starting in 1951, the Department of Fisheries required commercial clam fishery landings to be reported by species (Quayle & Bourne, 1972). This led to more accurate fisher-dependent catch data, though reporting errors persist even today. To support the data collection and reporting, the Department divided the coast into smaller Fisheries Management Areas. The Broughton Archipelago/Alert Bay area clam fishery became part of Fisheries Management Area 12. Clam harvesters were free to move between areas.

Commercial clam landings in Area 12 peaked at 879 tonnes per year in 1962 (see Appendix B). As Rohner (1967) observed during his field research, by the early 1960s, Gwa'yasdums was known as the clam capital of the area<sup>31</sup>, serving as both the social and business centre for the industry. The Chief of the Kwickwasut'inuxw was the official clam buyer. During the clam season, he and one of his sons operated a scow at Gwayasdums, which was towed there from the British Columbia Packing Company in Alert Bay.<sup>32</sup> The Chief also operated a seine boat, which he used to buy clams at neighbouring villages and clam sites. During my fieldwork, community members spoke favourably about this Chief's role in the management of the clam fishery, including enforcing rules to protect food access and decisions about local fishery openings and closures. His dual role (Chief and clam buyer) and enforcement of cultural values likely added legitimacy to the federal management of the commercial fishery.

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<sup>30</sup> <https://indiandayschools.com/en/wp-content/uploads/schedule-k.pdf> accessed October 13, 2021

<sup>31</sup> Interestingly, Rohner (1967) reported that, even though an almost equal amount of time is devoted to both fishing and clam digging, the Kwakwaka'wakw in Gwayasdums considered clam digging to be less important in their overall life process and self definition. Few of them found clam digging as satisfying as fishing. It is unclear whether Rohner was referring to only the men in the village, or women as well.

<sup>32</sup> In 1963 – 1964, three fish packing companies operated in Alert Bay (Rohner, 1967).

Rohner (1967) recorded the incomes of men living in Gwaysdums in 1963-1964. Commercial fishing was the primary income source for 19 of the 24 men living in Gwayasdums, including one person whose primary income was from clam harvesting.<sup>33</sup> Twelve of the men indicated that clam harvesting was a major secondary income source for them during the winter season. Eight of the fishermen<sup>34</sup> owned gillnet boats; none of them owned or were skippers on seine boats, which are larger and can haul in higher catch. Each year from November to March, clam harvesting played an important role in the local Kwakwaka'wakw economy, providing a source of winter income and compensating for poor salmon fishing years.<sup>35</sup> In addition to commercial digging, food fishing and clam harvesting remained two of the major subsistence activities for the people of Gwayasdums. Women, with the help of children, generally tended to be responsible for harvesting clams for family use, while men harvested for commercial use.<sup>36</sup>

In the mid-1960s, the Department of Fisheries sought to further increase production and efficiencies in the commercial clam fishery. In 1964, fishery regulations were changed to enable the use of mechanical/hydraulic clam diggers with a permit (Quayle & Bourne, 1972). The Department hoped this would “increase productivity to a point where clam digging would become more attractive and ensure a steady supply of clams to help stabilize the industry” (Quayle & Bourne, 1972, p. 64). However, the technology was not widely adopted in BC. During my fieldwork, research participants often recalled frustration about mechanical clam diggers damaging some beaches and operators were told to leave Kwakwaka'wakw territories. Based on Bourne (1986), it appears that DFO's efforts to establish mechanical harvesting in BC stopped at some point before 1986 as a result of mechanical challenges, conflict with traditional hand-

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<sup>33</sup> Eighteen of the 24 men living in Gwayasdums cited fishing as a primary source of income, four cited logging, three cited art (painting or carving), and only one cited clam digging. One of the men who cited fishing as a primary source of income also mentioned logging, and another mentioned clam digging.

<sup>34</sup> Salmon was their primary target for commercial fishing.

<sup>35</sup> Income earned from salmon fishing was low in 1963 because net fishers and shoreworkers held a strike over the fish prices and wage issues. The strike ran from July 13 to August 3, which overlapped with the peak of the salmon run (Rohner, 1967).

<sup>36</sup> Based on information shared by community members during my fieldwork, women also became involved in commercial clam harvesting by the 1990s, but likely earlier.



digging harvesters, habitat disruption, and associated high clam mortality. Mechanical harvesting was later prohibited (Webb & Hobbs, 1997).

The clam fishery regulations changed again in 1966, this time to permit year-round clam harvesting; previously clam harvesting was limited to November 1 to April 30 (Quayle & Bourne, 1972).<sup>37</sup> This regulatory change mainly affected the harvest of littleneck clams (steamer/fresh market) – a smaller portion of the fishery at the time – and did not appear to have caused a major change in harvest season for butter clams. Processors would not buy butter clams when they were actively feeding from April to October because the resulting green colour of the digestive gland permeates and discolours the meat of canned clams (Quayle & Bourne, 1972).

It was changes made by the federal fisheries department – its responsibilities were transferred to the Department of the Environment, Fisheries Service in 1971 – to the salmon fisheries that had some of the most significant determinantal effects on Musgamagw Dzawada’enuxw access. These effects were felt by the commercial fishing fleet of the Musgamagw Dzawada’enuxw, as well as on the tribes’ general on-water presence in their territories. Between 1968 and 1973, the federal Fisheries Service implemented the Salmon Vessel Licence Control Program (commonly called the Davis Plan), a licence limitation plan, intending to improve the economic performance of the commercial fishery and enhance the incomes of fishers by reducing fleet capacity (Friedlaender, 1975). The Davis Plan coincided with a poor salmon run in 1969 and cannery closures and consolidations. In combination with these conditions, the Davis Plan led to a disproportionately larger decline of First Nations commercial salmon fishers than other commercial fishers.<sup>38</sup> The commercial salmon fishing fleet of Musgamagw Dzawada’enuxw communities was essentially wiped out (Friedlaender, 1975). First Nations people in other branches of the fishing sector (e.g., the majority female

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<sup>37</sup> This regulatory change mainly affected littleneck clams (steamer/fresh market) and did not appear to have caused a major change in harvest season for butter clams (Quayle & Bourne, 1972). Processors would not buy butter clams when they were actively feeding from April to October because the resulting green colour of the digestive gland permeates and discolours the meat of canned clams.

<sup>38</sup> Friedlaender (1975) estimates “Between 1964 and 1973 the number of personally licenced Native Indian fishermen in B.C. declined by 44%, from 2,498 to 1,387. (Corresponding figures for all fishermen in BC: -12%, from 13,300 to 11,717.) In relative number Indians declined gradually from 19% of all fishermen in 1964 to 12% in 1973 [...] fully 1,111 of the 1,583 decrease in numbers of fishermen between 1964 and 1973 can be accounted for by the loss of Native fishermen; for vessels, 515 of 1,782 can be so accounted for.” (p. 6)

workforce in canneries and processors) were also negatively affected (Friedlaender, 1975).

With the loss of salmon licences, many fishers in remote communities, including Gwa'yasdums, were unable to finance their vessel maintenance and repair (Weinstein, 2010). The loss of these vessels resulted in major social and economic changes, as the vessels had broad utility for communities, including transport between villages, to purchasing food and supplies, food harvesting and economic activities such as clam harvesting (Weinstein, 2010). The loss of small vessels meant that small group, household-based clam harvesting practices declined and larger crew-based clam harvesting practices using larger vessels (e.g., seiners) increased, particularly for commercial harvesting (Weinstein, 2010). As clam harvesting crew size and vessel operating costs increased, there were also increases in the need for larger commercial clam harvests to make trips economical (Weinstein, 2010). The larger vessels began to move farther from the beaches located near the communities. Weinstein (2010) states that one result of these changes was an erosion of the linkage between family and village and their historic beaches. In turn, the capacity to monitor the condition of the local clams and beaches – an integral part of the organization of their traditional clam management – was greatly diminished (Weinstein, 2010, p. 17).

Around the same time that Musgamagw Dzawada'enuxw communities were losing their fishing vessels, clam markets were also shifting away from butter clams – the most abundant commercial species in the Broughton Archipelago. Beginning in 1971, strong markets and higher prices for littleneck and Manila clams (both steamer clams) led the commercial intertidal clam fishery to switch the harvesting effort to focus more on these species than butter clams (Department of Fisheries and Oceans, 1991). Landings of butter clams (a canned product) began declining coast-wide because of the comparatively higher cost of processing, an inability to compete with foreign processors, and a shift in demand toward fresh steamer clams (Department of Fisheries and Oceans & Ministry of Agriculture, 1993; Webb & Hobbs, 1997).<sup>39</sup> The market demand for steamer clams is for a fresh or frozen whole product, with minimal processing requirements: washing, grading, and packing (Department of Fisheries and Oceans &

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<sup>39</sup> Despite efforts to revive the butter clam fishery in the mid-1990s (Webb & Hobbs, 1997), the harvest of butter clams has significantly declined since the 1970s.

Ministry of Agriculture, 1993). While historically abundant in butter clams, the Broughton Archipelago and the wider Queen Charlotte Strait have limited quantities of littleneck clams and few, if any, Manila clams (R. Harbo et al., 1997). Commercial landings of littleneck clams in Queen Charlotte Strait rapidly increased in the early 1970s, peaking in 1975, and have experienced wide fluctuations up and down since then (Dunham et al., 2007).<sup>40</sup> As a result, in the 1970s, the majority of the commercial harvest began shifting south to the Strait of Georgia and, by the 1980s, also the West Coast of Vancouver Island, where littleneck and Manila clams are more abundant.

During the recession of the early to mid-1980s, the total coastwide harvest pressure in commercial clam fishery was increasing <sup>41</sup> (Mitchell, 1995), but it was continuing to decline in Area 12. In 1982, annual landings in Area 12 dropped to 29 tonnes, the lowest since the start of detailed clam landings data collection began in 1951 (see Appendix B). The coastwide landed value of intertidal clams (mainly steamer clams harvested) exceeded that of any other commercially harvested shellfish species in BC in 1987 (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). The coastwide intertidal clam landings, peaked in 1988 at 4,515 tonnes, \$7.8 million – equivalent to \$16.5 million in 2022 dollars (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Due to concerns about overharvesting, DFO eliminated the year-round fishery and reduced opening times in some areas to either a shortened season or a reduced fishing week (Webb & Hobbs, 1997). As I discuss in the next section, with the commercial intertidal clam fishery hitting its peak across the South Coast, DFO came under pressure to make significant changes to its management of the fishery.

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<sup>40</sup> The average annual landings for littleneck clams in Clam Area G between 1970 to 2005 were 51,911 ± 24,892 kilograms (Dunham et al., 2007).

<sup>41</sup> According to Mitchell (1995), during the recession in the 1980s, a combination of factors led to the growth of the commercial clam fishery, including: (1) limited alternative employment opportunities led to increased harvesters including many new Canadians (e.g., people who fled Vietnam at the end of the war); (2) rising prices; and (3) older accumulated stocks on many beaches led to high catch per harvester ratios.

#### 4.5.4. Analysis

Table 4.5 provides a summary of the effects on the clam management system during the height of the commercial clam fishery.

**Table 4.5 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago, 1950-1988**

System Feature	State	Details
Role of Indigenous governance	Likely Low to Medium – Suppressed but restoring and adapting	<ul style="list-style-type: none"> <li>Gradually decreasing efforts to suppress Kwakwaka'wakw culture, settlement patterns, education, and language, but still challenged Indigenous governance systems and transmission of knowledge to youth</li> <li>Forced to use elected councils, Kwakwaka'wakw adapted and revitalized internal governance and cultural practices, and asserted rights</li> <li>Federal government increasingly exercises its authority in top-down fisheries management decision-making</li> </ul>
Access and management rights and duties	Likely Medium – Federal management, commercial-focused	<ul style="list-style-type: none"> <li>Federal government establishes more fishery specific <i>de jure</i> access and management rules to control harvests</li> <li>Clam fishery is one of the few commercial fisheries where Kwakwaka'wakw harvesters held a significant portion of the access</li> <li>The Davis Plan creates new access challenges for Kwakwaka'wakw harvesters due to the loss of fishing vessels</li> <li>A hereditary Chief played a <i>de facto</i> role in clam management for a period, enforcing and adapting some traditional principles and rules to the commercial clam fishery</li> <li>Involvement of non-Indigenous commercial clam harvesters restricted application of Kwakwaka'wakw management</li> </ul>
Resilience and adaptability of social-ecological system	Likely Medium then Low	<ul style="list-style-type: none"> <li>Continued relocation outside of territories disconnected Kwakwaka'wakw youth and adults from clam and territorial knowledge</li> <li>Kwakwaka'wakw adapted traditional principles and rules to the commercial clam fishery</li> <li>Some clam habitats likely continue to be damaged by logging and other industrial activity</li> </ul>

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Legitimacy in management system	Likely Mixed then Low	<ul style="list-style-type: none"> <li>• Likely very few, if any, clam gardens are maintained</li> <li>• Gradual overharvest of butter clams then littleneck clams and more concentrated harvest effort as larger groups travel to beaches together</li> </ul> <ul style="list-style-type: none"> <li>• Moral legitimacy: commercial clam fishery used by Kwakwaka'wakw for economic opportunity, but federal open access management not aligned with their worldviews</li> <li>• Regulatory legitimacy: for a period, a hereditary Chief's role as the clam buyer enforced <i>de facto</i> Kwakwaka'wakw rules, but federal regulations themselves likely held limited legitimacy on their own. When the use of traditional rules stopped in the 1980s, so did the regulatory legitimacy, as Kwakwaka'wakw became frustrated by overharvesting, low prices, and settlers use of mechanical diggers.</li> <li>• Political legitimacy: Impacts for Kwakwaka'wakw communities from the Davis Plan and overharvest of clams likely contributed to low political legitimacy of federal fisheries management decision-making.</li> <li>• Scientific legitimacy: Unclear if federal science ever held legitimacy among Kwakwaka'wakw clam harvesters, but if it did, it likely declined over time due to overharvesting. Indigenous knowledge may have had some <i>de facto</i> role in harvesting while a hereditary Chief was the clam buyer, which likely would have had legitimacy.</li> </ul>
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## 4.6. 1989-2019: Clam Reform strategy and experimentation with co-management in clam fisheries

### 4.6.1. Response to Overharvesting in the Clam Fishery

In 1989, DFO began responding to pressures from commercial clam harvesters concerned about overharvesting. The Department introduced area specific non-transferable commercial clam licences, limiting licence holders to one of six newly created clam management areas, but no limits were set on the number of licences sold

(Department of Fisheries and Oceans, 1991).<sup>42</sup> Prior to 1989, there was no unique commercial clam licence and only estimated numbers of clam harvesters based on a proportion of the 20,000 Fishers Registration Card holders, which DFO estimated at 3,000 to 4,000 in 1988 (Webb & Hobbs, 1997). In 1989, the commercial intertidal clam licence fee was set at \$10 (Department of Fisheries and Oceans, 1990), requiring all commercial harvesters, including First Nations, to pay to harvest clams commercially, even within their own traditional territories. A total of 1,870 licences were purchased coastwide in 1989 (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Other changes in 1989 included further reductions in fishing times and staggered openings across areas in attempt to maintain a year-round market supply (Department of Fisheries and Oceans & Ministry of Agriculture, 1993).

Next, in 1990, DFO began in-season monitoring of the commercial clam fishery to assist in active management<sup>43</sup> (Webb & Hobbs, 1997). The Department's management approach was still based on a top-down model, but it was becoming more responsive to the concerns of Indigenous and non-Indigenous clam harvesters and First Nations bodies. Alongside in-season monitoring, DFO adopted a more conservative approach to management, often closing areas before all legal sized clams are harvested (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Harvest pressure led to a further shortening of openings in the Strait of Georgia and West Coast of Vancouver Island (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Sales slip records from the year suggest that 87 percent of clam harvesters landed less than \$5000 of clams (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Researchers have previously discussed the vital role that this supplemental

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<sup>42</sup> In 1990, a change was made whereby clam harvesters under sixteen years old were no longer required to have clam licences (Webb & Hobbs, 1997).

<sup>43</sup> Under DFO's active management approach, beaches are closed to commercial harvest when catch per clam harvesters per tide begins to fall dramatically; reduced numbers of legal sized clams become available; a beach has been dug repeatedly; or harvesters begin harvesting on closed areas (Department of Fisheries and Oceans & Ministry of Agriculture, 1993; Webb & Hobbs, 1997). Around the late 1990s, DFO fisheries managers began using historical annual catch data in fishing areas as basis for a rough catch ceiling and closing areas once this was reached (Webb, 2006). DFO used these "precautionary catch levels" due to a lack of specific stock assessment information available (Webb, 2006, p. 54). A DFO staff member also observed the implementation of community management boards in two areas resulted in more flexibility in managing area openings due to improved local knowledge and firsthand information on stock strength (Webb, 2006, p. 54).

income from commercial clam harvesting played in many Northwest Coast peoples' livelihoods during the winter months (Heaslip, 2008a; Pinkerton & Silver, 2011).

The following year, DFO began a multi-year change in the approach to intertidal clam fishery management in BC. DFO biologists suspected the older accumulated stocks of clams had been fully harvested on all beaches, leaving the fishery dependent on annual recruitment, which varies widely year-to-year (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). DFO considered the fishery to be heavily oversubscribed, stimulated by market demand and rising prices (Webb & Hobbs, 1997).<sup>44</sup> But the market demand was almost entirely for steamer clams. By the early 1990s, butter clams accounted for less than five percent of total landings in BC (Department of Fisheries and Oceans & Ministry of Agriculture, 1993).

Between 1991 to 1994, DFO further shortened commercial clam fishery openings below 1989 levels across the South Coast of BC. Openings began to be reduced to one to two days every week or 10 days in most areas, with fisheries lasting one to two months a year (Webb & Hobbs, 1997). In addition to in-season closures for stock conservation purposes, health and safety contributed to an increase in closures. DFO attributed a reduction in the number of openings and areas open to annual and long-term conservation concerns, harmful algal blooms, growing pollution/faecal coliform contamination problems<sup>45</sup> (a 28 percent increase in shellfish area closed since 1987) (Webb & Hobbs, 1997). Pollution also led to the closure of beaches near First Nations' villages, resulting in greater travel distances to harvest clams for food purposes (Webb & Hobbs, 1997).

The shorter commercial seasons and reduction in harvestable clams had the greatest impacts on harvesters from First Nations and other coastal communities who harvested clams to supplement their incomes (Webb & Hobbs, 1997). Other factors affecting the commercial clam fishery include illegal harvesting, uncertain stock levels,

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<sup>44</sup> In price for manila clams was approximately \$1.00 per pound (Webb & Hobbs, 1997).

<sup>45</sup> Major sources of contamination include municipal sewage and stormwater outfalls, faulty septic fields, agricultural run-off or discharge from vessels. Most contamination closures occurred in the most popular and accessible harvesting areas, particularly in the Lower Mainland, Sunshine Coast, and eastern Vancouver Island (Mitchell, 1995). In 1993, 73,000 hectares of shellfish habitat had been closed due to contamination, a 40 percent increase from 1972; most seriously in the Strait of Georgia (Webb & Hobbs, 1997).

restrictions put in place by the Government of BC on the foreshore areas fronting new provincial parks, the creation of recreational harvesting reserves, the expansion of oyster and clam aquaculture tenures, and underfunding of federal monitoring water quality and paralytic shellfish poisoning (PSP) (Webb & Hobbs, 1997).

DFO published its first annual intertidal clam fishery management plan in advance of the 1992 fishery. The plan included the creation of a seventh clam management area, Area G (combined Fisheries Management Areas 11 and 12), by separating Queen Charlotte Strait from Area B (Department of Fisheries and Oceans, 1991). Seventy-six commercial clam licences are issued for Area G (Webb & Hobbs, 1997). The boundaries for Area G overlap with many Kwakwaka'wakw Nations' territories, but much of the harvest activity for all clam harvesters was concentrated in the territories of the Musgamagw Dzawada'enuxw.

#### **4.6.2. First Nations Involvement**

In response to the Supreme Court of Canada's 1990 decision in *R v. Sparrow*<sup>46</sup>, DFO initiated a process to gradually increase First Nations' access to and management of clam beaches. First, the Department began considering requests from First Nations to close select beaches year-round to commercial clam harvesting to allow First Nations to harvest for food, social, and ceremonial (FSC) purposes (Webb & Hobbs, 1997). These FSC access beaches began to be implemented as part of the 1992 management plan. In Area G, DFO closed several beaches, including in Musgamagw Dzawada'enuxw territories, to the commercial clam fishery to preserve First Nations' access for FSC purposes.<sup>47</sup> The selection of these beaches was based on recommendations from the Kwakiutl Territories Fisheries Commission<sup>48</sup> (R. Harbo et al., 1997). It is noteworthy that some of these beaches overlapped with areas where the MMRC had rejected reserve claims by Musgamagw Dzawada'enuxw leaders in the 1910s.

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<sup>46</sup> In *R. v. Sparrow*, the Supreme Court of Canada recognized an Aboriginal right to food, social, and ceremonial fishing, which takes priority, after conservation, over other users.

<sup>47</sup> Recreational clam harvesting was also permitted.

<sup>48</sup> Since disbanded, the Kwakiutl Territories Fisheries Commission supported the fisheries interests of aggregate of Kwakwaka'wakw Nations, including the Musgamagw Dzawada'enuxw.



Second, DFO started to be open to First Nations contributing to the management and monitoring of commercial intertidal clam fisheries. A pilot co-management arrangement was established by DFO with the Heiltsuk Nation for the Central Coast commercial clam fishery (Department of Fisheries and Oceans & Ministry of Agriculture, 1993; Webb & Hobbs, 1997). Discussions were also initiated between DFO and the Council of the Haida Nation about co-managing the Haida Gwaii razor clam fishery (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Funding for First Nations involvement in such arrangement was provided under DFO's Aboriginal Fisheries Strategy (Mitchell, 1995), which began in 1992 as part of DFO's response to the *Sparrow* decision.

Strong market demand and rising clam prices contributed to growth in the clam depuration<sup>49</sup> fishery and clam aquaculture. The depuration of steamer clams (mainly Manila) became economically viable following the reduction in commercial harvest due to the increased closures in the 1980s (Gillespie, 2000). Interest increased in using depuration systems for clams harvested from contaminated beaches to provide economic opportunities. In 1990, the Government of BC published a guide for designing, building, and operating depuration facilities (Cerebral Marine Research, 1990). By 1993, the federal government had licensed two private processing plants to commercially harvest and depurate clams from marginally contaminated areas in the South Coast, with potential for the licensing of other facilities (Webb & Hobbs, 1997). However, constraints on the depuration industry's expansion included limited monitoring capacity due to staff shortages within DFO and no other monitoring options (e.g., independent verifiers capable of cost recovery), and opposition from local residents in the majority of contaminated areas (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Both the DFO-First Nations co-managed and the depuration clam fisheries are managed in a more conservative manner than the conventional commercial fishery, as they set total allowable catch limits, expressed as a proportion of the available legal-size stock (Webb, 2002).

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<sup>49</sup> The depuration of live shellfish is a process of using a controlled, aquatic environment in a facility to reduce the level of microbiological contamination (Canadian Food Inspection Agency, 2022).

### 4.6.3. Clam Aquaculture

The oyster aquaculture industry had been active on BC's South Coast for over half a century by the time clam aquaculture started growing in the early 1990s. The clam aquaculture industry began expanding mainly in the Strait of Georgia. Manila clams are the primary species cultured in BC. In 1989, there were 13 clam tenures; by 1992 there were 70 clam tenures and over a tenfold increase in production of Manila clams (Mitchell, 1995). Clam aquaculture was initially restricted to areas tenured for oyster culture and First Nations operations on beaches fronting First Nations' reserves (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). Over time, shellfish aquaculture has expanded across BC's South Coast, but with varying degrees of success and controversy within Indigenous and non-Indigenous communities (D'Anna & Murray, 2015; Joyce & Canessa, 2009; Joyce & Satterfield, 2010; Pinkerton & Silver, 2011).

### 4.6.4. The Clam Reform Strategy

In response to growing concerns over the inadequacy of the federal clam management regime, in 1992 DFO and BC's Ministry of Agriculture, Fisheries and Food (MAFF) jointly initiated a consultation and review process on the proposed Clam Reform strategy, which would change the approach to clam fishery management in BC (Ministry of Agriculture Fisheries and Food & Department of Fisheries and Oceans, 1994). The next year, they co-authored a discussion paper in which they argued that a tragedy of the commons type of situation was facing the commercial clam fishery, as participants have no incentive to protect and enhance the resource (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). This type of tragedy of the commons situation can result from poorly designed and regulated state governance systems for common-pool resources that lead to non-compliance by users and create *de facto* open access conditions (Feeny et al., 1990). DFO and MAFF (1993) presented three fishery restructuring options for discussion: (1) limit fishery participation based on catch or licence history, (2) fixed harvest shares, through either individual quotas or enterprise allocations, or (3) site specific access, such as foreshore tenures or wild harvest area stakes. They consulted on these three options with First Nations, harvesters and associations, clam buyers and processors, municipal and regional governments,

community groups, and a land trust (Department of Fisheries and Oceans & Ministry of Agriculture, 1993).

DFO conceded that the existing clam management system had resulted in intensive commercial effort that resulted in the displacement of part-time First Nations commercial harvesters (Department of Fisheries and Oceans & Ministry of Agriculture, 1993; Webb & Hobbs, 1997). The intensification of the commercial fishery led to harvesting on small pocket beaches, which were previously deemed uneconomical for commercial harvest but used by First Nations harvesters (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). In response, the Department made commitments to protect existing First Nations commercial clam fisheries and encourage new First Nations entrants; negotiate fisheries agreements on commercial and FSC access with First Nations; and establish areas reserves for First Nations' subsistence fisheries (Department of Fisheries and Oceans & Ministry of Agriculture, 1993). But, as I discuss below, these commitments did not reach their full potential.

In 1994, DFO and MAFF (1994) released a summary of consultation feedback from First Nations and stakeholders on the 1993 discussion paper. Common themes among most responses included: environmental concerns (e.g., pollution and contamination of beaches), a need for more local input into management decisions (including area specific management regimes), equitable sharing of clam resources among First Nations and other groups, long term sustainable harvest, improved marketing, increased management resources (e.g., enforcement, biotoxin and contaminant testing, stock assessments, and enhancement initiatives), stable, high quality employment, and increased government coordination (e.g., wild and aquaculture clam management).

Concurrent with the release of the consultation document, the first Community Management Board, an advisory board for the commercial clam fishery involving First Nations and stakeholders, was also established in Area C (Sunshine Coast) as part of a pilot project that also included a limited entry licensing system (Mitchell, 1995; Webb, 2002). This board was to act in an advisory capacity to develop the annual fishing plan and the appeal criteria for licence applications, with the intent of the board assuming more responsibility over time (Webb, 2002). Plans were also underway for community management boards on the West Coast of Vancouver Island, and Area G (Queen

Charlotte Strait, including the Broughton Archipelago) (Ministry of Agriculture Fisheries and Food & Department of Fisheries and Oceans, 1994). As discussed below, a board in Area G has never been formalized.

No other immediate changes were announced following the release of the consultation document. DFO and MAFF preferred to monitor the progress of pilot project and continue to receive input on management changes (Ministry of Agriculture Fisheries and Food & Department of Fisheries and Oceans, 1994).

In 1998, DFO completed the implementation of the Clam Reform strategy (Webb, 2002). Limited entry licensing was brought into place in the commercial intertidal clam fishery, with a significant reduction in the number of harvesters.<sup>50</sup> An increase in fishing days was associated with the implementation of limited entry (Webb, 2006). Licences remained non-transferable, but DFO considered this an unresolved issue and aimed to make them transferable in the future (Webb, 2006), though at the time of writing this has still not proceeded.

While approximately 50 percent of the coastwide licences holders were First Nations people, many First Nations people were excluded from the commercial fishery (Webb, 2006). The Department did negotiate a number of Aboriginal Commercial Licences with interested First Nations to support access for First Nations harvesters (Webb, 2006). These licences are identical to other commercial clam licences except a Nation's Chief and Council designates them to members annually (Webb, 2006). Almost all the commercial clam licences in Area G were converted to Aboriginal Commercial Licences and most of the remaining commercial clam licences were owned by First Nations harvesters (Heaslip, 2008a). During my fieldwork, many past and present clam harvesters remarked that most of the remaining clam harvesters active in Musgamagw Dzawada'enuxw territories are from other First Nations.

DFO also opened opportunities for First Nations to co-manage beaches fronting or immediately adjacent to a First Nations' reserves. Contaminated beaches fronting reserves could be harvested by First Nations, at a total allowable catch of 25 percent,

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<sup>50</sup> Coastwide, commercial clam licences were reduced from approximately 2,000 to a fixed number of 1,344 (Webb, 2002). There were no limits placed on the number of licences for recreational or First Nation food, social, and ceremonial harvesters.

provided that they established a joint venture agreement with a registered depuration facility, held a Contaminated Harvest Licence, and completed biomass surveys (Webb, 2002).<sup>51</sup> Community Management Boards in Clam Management Areas C (Sunshine Coast) and F (West Coast of Vancouver Island) were formalized as long-term initiatives (Webb, 2002). These boards contributed to the legitimacy among local users of the updated clam management regime (Pinkerton & John, 2008; Pinkerton & Weinstein, 1995). DFO reported that attempts at structuring a Community Management Board in Clam Management Area G (Broughton Archipelago) and E (Strait of Georgia) were met with some resistance and put on hold (Webb, 2002). Whether this was resistance in general or to the specific option put forward by DFO is unclear. As discussed below, in the 2000s it is quite clear that Musgamagw Dzawada'enuxw and other Kwakwaka'wakw Nations had a strong interest in co-management, but their proposals were more comprehensive than what DFO was willing to consider at the time.

#### **4.6.5. Federal Cutbacks**

The Clam Reform strategy was developed and implemented during a period of significant cutbacks to DFO's budget, which led to a cut of nearly a quarter of full-time jobs across the Department (Lane & Stephenson, 2000). During this period, DFO also implemented more service fees as part of a cost recovery effort and there was an internal push towards co-management relationships with fishing communities (Lane & Stephenson, 2000). So, within the Clam Reform strategy, in addition to responding to criticisms, a primary driver for the inclusion of co-management opportunities may have been to address the realities faced by an under-resourced department needing to offload workload.

The departmental cutbacks that coincided with the Clam Reform strategy also limited opportunities to improve the frequency and scope of fisheries enforcement or clam stock assessments. By a Department staff's own account, resource cutbacks and reorganization made it impossible for DFO to enforce and control clam harvesting, particularly illegal harvest of clams in contaminated and closed areas (Webb, 2006).

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<sup>51</sup> By 1998, pollution from municipal sewage and storm water outfalls, faulty septic fields, agricultural run-off and discharge from vessels resulted in closures totaling 102,000 hectares including shellfish habitat (Webb, 2006). This was an approximately 30 percent increase since 1993.

DFO's clam stock assessment activities on commercially harvested beaches remained limited throughout and following the Clam Reform strategy, focusing on select areas and exploratory clam surveys (e.g., Dunham et al., 2007; Gillespie & Bourne, 2005; Webb, 2002). For example, the limited 1997 assessment activities included: (1) the development of stock estimates and monitoring of biological characteristics of clam stocks at Savary Island; (2) collaborative survey design, sample processing and analyses for the depuration fishery; and (3) collaborative survey design, sample processing and analyses for First Nations' communal commercial and depuration fisheries (Webb, 2002).

DFO staff shortages in combination with the decentralizing movement toward co-management and the availing of funding to First Nations through the Aboriginal Fisheries Strategy – launched by DFO in response to the *Sparrow* decision – contributed to increased First Nations' involvement in clam surveys in the Broughton Archipelago. The Musgamagw Dzawada'enuxw Nations began independently contracting a biological services company to conduct clam surveys on select beaches in their territories (Dunham et al., 2007). Separately, in response to concerns identified by First Nations since 2003 (see below) and at community and clam sectoral meetings, DFO staff, along with 'Namgis representatives, conducted an exploratory survey of littleneck clams on several beaches in the Broughton Archipelago (Dunham et al., 2007). The study concluded that littleneck clams could be in decline on multiple beaches that were surveyed, but the study was unable to determine which factors<sup>52</sup> were contributing to this decline.

#### **4.6.6. Overharvest in the Broughton Archipelago**

By the 2000s, the once bustling commercial clam fishery in the Broughton Archipelago was a shell of its former self. In 2005, experienced commercial clam harvesters reported declining littleneck clam stocks in Area G to DFO and annual landings declined to 41,681 kilograms (Dunham et al., 2007). To compensate, some harvesters switched back to harvesting butter clams despite the sole clam buyer in the area advising they were not interested in buying butter clams (Dunham et al., 2007). By

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<sup>52</sup> Factors considered by Dunham et al. (2007) includes disease/parasites, over-harvesting, and macro-algae mats. They do not rule out the possibility of other environmental factors contributing to the decline in littleneck clams.

then, the commercial market for butter clams was limited to a small market for processed butter clams for chowder and a small but growing market for use as commercial crab bait (Webb, 2006). In 2006, littleneck clam landings declined to 5,372 kilograms, far below previous record lows in 1982 and 1998, after all fall and winter openings in Area G were cancelled due to few clams being available and poor markets in BC (Dunham et al., 2007). In 2007, the harvest of littleneck clams in Clam Area G was closed for the long-term by DFO due to concern for the stock status, limiting the fishery to the low price, low demand butter clams (Fisheries and Oceans Canada, 2009a). The number of active clam harvesters in Area G continues to decline. Between 2005 and 2011, there was an annual average (mean) of number of active intertidal clam licences in Area G of 24 (see Fisheries and Oceans Canada, 2013b). For comparison, from 1998 (the first year of licence limitations) to 2004 the mean was 58 active licences in Area G (see Fisheries and Oceans Canada, 2009a). The coastwide total of commercial intertidal clam licences had declined from 1,344 in 1998 (Webb, 2002) to 739 in 2022 (Fisheries and Oceans Canada, 2022).

In the 2000s, the Musgamagw Dzawada'enuxw and other Kwakwaka'wakw Nations made a concerted effort to regain a greater role in the management and decision-making of the clam fishery and other marine resources in their territories. Beginning in 2001, Kwakwaka'wakw regional councils – initially KTFC, later Musgamagw Tsawataineuk Tribal Council (MTTC)<sup>53</sup> – met with DFO and stakeholder representatives annually at the Pacific Regional Clam Management Committee (PRCMC) to discuss co-management of Area G clams (Fisheries and Oceans Canada, 2001, 2002, 2003, 2004, 2006, 2007; Heaslip, 2008a). At meetings in 2002 and 2003, the Kwakwaka'wakw regional councils put forward a proposal for a comprehensive resource management board. In response, DFO representatives stated they would only support a board focused on managing clams.

In 2005, MTTC drafted terms of reference for a shellfish management board with the objectives of maximizing long-term social, cultural, and economic benefits and exploring local management options that increased First Nations involvement in decision making (Heaslip, 2008a). But DFO continued to be reluctant about negotiating terms for

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<sup>53</sup> At the time, the Musgamagw Tsawataineuk Tribal Council included the Kwikwasut'inuxw Haxwa'mis, 'Namgis, Dzawada'enuxw, and Gwawa'enuxw

a management board focused on broader objectives than single-species clam management. By 2007, DFO representatives signaled an end to negotiations by stating that they were supportive of developing a management board but “sources of DFO funding support for such boards was very limited and not identified for the Area G fishery at this time” (Fisheries and Oceans Canada, 2007). In 2012, DFO established an informal advisory committee for Clam Area G, which met annually until 2018 (Fisheries and Oceans Canada, 2022), but did not lead to a formalized co-management arrangement.

#### **4.6.7. Salmon Aquaculture**

In the 2000s, the Musgamagw Dzawada’enuxw and ‘Namgis Nations began to draw links between salmon aquaculture and their access to clams and other marine resources based on local observations and Indigenous knowledge (Heaslip, 2008b). Beginning in 2003, or possibly earlier, the Nations began protesting and taking legal action against salmon aquaculture operations in their territories, raising concerns that these operations were contaminating their marine resources, including shellfish and finfish (Krauss, 2003; Lawlor, 2003; Wonders, 2008).

Based on harvester observations and Indigenous knowledge, these First Nations also began to raise concerns with the Government of Canada about the decline in littleneck clams and changes to clams and beaches (e.g., changes to sediment colour and texture, sulphur-like smell, stained butter clam shells and meat, previously unseen species of worms, and expanded population of mussels covering clams (Dunham et al., 2007).<sup>54</sup> Leadership and technical staff from the Kwikwasut’inuxw Haxwa’mis, Dzawada’enuxw, ‘Namgis, and the Musgamagw Tsawataineuk Tribal Council spoke at the Legislative Assembly of BC’s Special Committee on Sustainable Aquaculture (Bay, 2006). They told the committee they had concerns that the environmental effects that they were observing in their territories, including changes to clam stocks and clam beach ecology, are a result of impacts from salmon aquaculture.

The Nations also applied pressure on the Norwegian salmon aquaculture companies operating in the Broughton Archipelago and the Norwegian government. In

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<sup>54</sup> Dunham et al. (2007) note that First Nations may have been raising these concerns about changes to clams and beaches with DFO earlier than 2003.



2005, an agreement-in-principle (AiP) was signed between the Kwikwasut'inuxw Haxwa'mis, 'Namgis, and salmon aquaculture company, Marine Harvest (now Mowi) to conduct research about possible environmental effects of salmon aquaculture (Weinstein, 2010). This included an Indigenous ecological knowledge study on what clam harvesters had been encountering on clam beaches and to seek out information about environmental and clam stock changes (Weinstein, 2010). Discussions at the AiP steering committee led to a second joint research project between the First Nations, company, and DFO, scoped to include aquaculture waste dispersion analysis, clam stocks, recruitment, and ecology (Weinstein, 2010). The next year, the elected Chief of the Kwikwasut'inuxw Haxwa'mis who was also the Chair of the Musgamagw Tsawataineuk Tribal Council<sup>55</sup>, traveled to Norway with a Lax Kwa'alaams representative to deliver an anti-fish farm proclamation to the Norwegian government, Canada's ambassador, and a salmon aquaculture company, Pan Fish (Canada NewsWire, 2006). There, the elected Chief stated that the Musgamagw Tsawataineuk Tribal Council member Nations are opposed to fish farms and they see fish farms as putting their traditional food sources in jeopardy, including effluent poisoning their clam beds (Canada NewsWire, 2006).

Throughout the 2000s and 2010s, Kwikwasut'inuxw Haxwa'mis, Dzawada'enuxw and some of their neighbouring Kwakwaka'wakw Nations took part in multiple protests and legal actions against salmon aquaculture operations in their territories. In 2018, a landmark government-to-government process was undertaken by the Government of BC, Kwikwasut'inuxw Haxwa'mis, 'Namgis, and Mamalilikulla on the future of finfish aquaculture tenures in the Broughton Archipelago (Province of British Columbia, 2018). An agreement was reached to transition 17 open-net pen salmon farms between 2019 and 2023. Some farms were immediately decommissioned and, by the end 2022, 10 farms would cease operations. The remaining seven farms will cease operations by 2023, unless First Nations-industry agreements and valid DFO licences are in place by 2023. The two salmon aquaculture companies operating in the Broughton Archipelago agreed to these recommendations.

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<sup>55</sup> At the time, the Musgamagw Tsawataineuk Tribal Council included the Kwikwasut'inuxw Haxwa'mis, 'Namgis, Dzawada'enuxw, and Gwawaenuk

#### 4.6.8. Demographic Recovery

A century since the Musgamagw Dzawada’enuxw population reached the lowest recorded numbers, their population has rebounded to 85 percent of the estimated 1,050 people in 1835, excluding people with Musgamagw Dzawada’enuxw who are not registered to any of the tribes (see Table 4.6<sup>56</sup>). However, the majority of Musgamagw Dzawada’enuxw people no longer reside in their home territory (see Table 4.7), though non-residents who can make the trip will return during the summer months. Limited access to housing, schools, and employment opportunities within their territories are some of the challenges that were highlighted by community members during my fieldwork. Ukwanalis is the only Musgamagw Dzawada’enuxw village with an elementary school. Students must move away for grades 8 to 12. The historical out-migration of Musgamagw Dzawada’enuxw people from their territories disrupted their settlement patterns and connection to the land and waters. Limited opportunities to reside within their home communities continue to be a barrier to the knowledge gained through regular physical presence in their territories.

**Table 4.6 Musgamagw Dzawada’enuxw Populations, On and Off Reserve, 2016**

First Nation	On Reserve and On Crown Land*	Off reserve	Total
Dzawada’enuxw	144	389	533
Gwawa’enuxw	13	27	40
Kwickwasut’inuxw	78	229	307
Haxwa’mis			
Total	235	645	880

\*Includes on their own reserve, on other bands’ reserves, lands affiliated with First Nations operating under self-government agreements.

Source: Indigenous Services Canada (2018)

**Table 4.7 Populations of the Three Musgamagw Dzawada’enuxw Villages, 2016**

Village (Reserve name)	Population
Gwa’yasdums (Gwayasdums 1, Indian reserve)	27

<sup>56</sup> While more recent population data has been published by Indigenous Services Canada and Statistics Canada, I have made the decision to include 2016 data because this is both relevant to the 1989-2019 time period discussed in this section of chapter four and it overlaps with the period of my research interview data collection that I discuss in chapter five.

Ukwanalis (Quaee 7, Indian reserve)	78
Hegams (Hopetown 10A, Indian reserve)	0

Source: Statistics Canada (2019)

#### 4.6.9. Analysis

Table 4.8 provides a summary of the effects on the clam management system as a result of the Clam Reform strategy and experimentation with co-management in the clam fisheries. While a co-management arrangement in the Broughton Archipelago has not been reached, negotiations in the era of reconciliation present opportunities for increased collaboration and self-governance. Both Pinkerton (2003) and King (2004) warn of the misapplication and co-opting of the term co-management when it is used in situations where little power-sharing is involved. Pinkerton (2003) explains that co-management:

[I]nvolves at least the right to participate in making key decisions about how, when, where, how much, and by whom fishing will occur. We need to distinguish this level of power from the right to simply access a pre-defined catch. Furthermore, certain collective rights may be too small in scope and/or in scale to confer meaningful power in the long run. (p. 63)

Lessons from case studies in other parts of BC's coast where successful fisheries co-management arrangement between DFO and First Nations were established have demonstrated that local Indigenous institutions and knowledge systems can be effective in addressing shared management concerns (King, 2004; Pinkerton & John, 2008). In chapter five, I provide a list of actions recommended by community members for building a community-driven management approach to clams and clam beaches that respects the territories, people, and culture of the Musgamagw Dzawada'enuxw.

**Table 4.8 Effects of Colonialism, Western Governance, and Capitalism on Clam Management and Harvesting in the Broughton Archipelago, 1989-2019**

System Feature	State	Details
Role of Indigenous governance	Likely Medium – Asserting and challenging status quo	<ul style="list-style-type: none"> <li>Failure of top-down approach to clam management leads DFO to incrementally open opportunities for First Nations to influence clam fisheries management decision-making</li> </ul>

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		<ul style="list-style-type: none"> <li>Continued disagreement between DFO's single-species approach and Musgamagw Dzawada'enuxw comprehensive multi-species approach minimizes opportunities for collaborative decision-making</li> <li>Kwakwaka'wakw asserting their territorial rights and applying public and legal pressure on Canadian and BC governments and companies</li> </ul>
Access and management rights and duties	Likely Mixed – Increased First Nations access and input, but lack of resources	<ul style="list-style-type: none"> <li>Federal <i>de jure</i> access rights and management rules, but increasing dialogue and conditional opportunities for co-management</li> <li>Kwakwaka'wakw clam harvesters have almost exclusive access to limited entry commercial licences, but low clam stocks (littleneck) and prices (butter) results in many exiting the fishery</li> <li>Selected beaches protected for Kwakwaka'wakw food access</li> <li>A lack of boat ownership limits clam fishing by Musgamagw Dzawada'enuxw for food and cash</li> </ul>
Resilience and adaptability of social-ecological system	Likely Low	<ul style="list-style-type: none"> <li>Musgamagw Dzawada'enuxw population rebuilding, but most people live outside of their territories and, apart from summer visits, have limited presence or territorial knowledge</li> <li>Cultural revitalization programs beginning to reconnect Musgamagw Dzawada'enuxw with their territories</li> <li>Minimal application of Kwakwaka'wakw traditional principles and rules</li> <li>No maintenance of clam gardens</li> <li>Limited harvest activity on select beaches</li> <li>Many overharvested and contaminated beaches</li> </ul>
Legitimacy in management system	Likely Low	<ul style="list-style-type: none"> <li>Moral legitimacy: federal management is openly criticized by community members and leadership, and does not align with their worldviews</li> <li>Regulatory legitimacy: Kwakwaka'wakw and DFO have differing views on the desirable scope of co-management and the level of power-sharing</li> <li>Political legitimacy: The continued decline in clam harvesting and beach conditions and limited progress on power-sharing have contributed to low political legitimacy for the federal fisheries management.</li> </ul>

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- Scientific legitimacy: Musgamagw Dzawada'enuxw community members disappointed by the lack of regular and comprehensive surveys and data collection, which leads to limited information to manage the fishery effectively. Some collaborative studies between Kwakwaka'wakw and DFO, the Musgamagw Dzawada'enuxw have contracted some surveys.
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## 4.7. Conclusion

Over two and a half centuries, colonialism, Western governance, and capitalism have had significant effects on the Kwakwaka'wakw peoples' relationship with clams, and their culture more broadly. The resilience of this social-ecological system has been weakened by the reduced application of Kwakwaka'wakw management practices and protocols, overharvesting, and contamination. But the failure of a top-down approach to manage the clam fishery sustainably over the long-term has incrementally opened a door to scrutiny and for alternative approaches to be considered. As I discuss in the next chapter, Musgamagw Dzawada'enuxw remain focused on adapting and revitalizing their cultural relationship with clams through the integration of traditional principles, customs, and protocols for clam management.

## Chapter 5.

# Principles, Customs, and Protocols for Clam Beaches and Harvesting

With posthumous co-authorship credited to Percy Williams

Along the Northwest Coast, First Nations' fishing sites and beaches were managed through tenure systems where title was designated to positions within a tribe (Lepofsky & Caldwell, 2013; Troster, 2009). In the Broughton Archipelago and surrounding area, the Kwakwaka'wakw tribes traditionally used a complex system of protocols and practices to govern the use of natural resources. For example, along river systems certain tribes had access to specific locations for fishing eulachon but did not have access at others (Galois, 2012; Rohner, 1967). Research by Heaslip (2008a) suggests traditional protocols were used in the Broughton Archipelago to establish rights to access, management, exclusion, and stewardship of clam beaches and clam populations.

The purpose of this chapter is two-fold. First, it continues my exploration of how the intertidal clam management system of the Musgamagw Dzawada'enuxw has been adapted over time. Second, it identifies actions that Musgamagw Dzawada'enuxw community members view as necessary to support the continued revitalization of their relationship and management of intertidal clams and clam beaches. Building an understanding of this system enables us to understand both the history of Northwest Coast peoples' relationships with clams and alternatives to the current federal approach to the management of clam fisheries on the BC coast. I build on a study by Heaslip (2008a) and to a lesser extent one by Weinstein (2010). These studies looked at Kwakwaka'wakw protocols, knowledge, and experiences with clam beaches and clam harvesting in the Broughton Archipelago area. This research is also complimentary to, but separate from, ethnographic research by Deur et al. (2015) on Kwakwaka'wakw clam gardens. While the principal source in Deur et al. (2015) is a traditionally trained Dzawada'enuxw clan chief, my research includes knowledge shared with me by a range of members for the four Musgamagw Dzawada'enuxw tribes.

This chapter builds on Heaslip's (2008a) recommendation for further research to be undertaken with the community members in order to both further articulate and work toward community consensus about clam protocols. The outcome of this work may support the revitalization of traditional Kwakwaka'wakw clam management practices in the future. In developing this research, I drew directly from Heaslip's (2008a) interview findings<sup>57</sup> on clam protocols as the focal points of interviews with Musgamagw Dzawada'enuxw people. The aim was to determine whether her findings were also representative of Musgamagw Dzawade'enuxw community members' knowledge and views. Heaslip (2008a) recorded and categorized ten potential protocols (Table 5.1) in her interviews with twenty-three 'Namgis, Kwikwasut'inuxw Haxwa'mis, and other Kwakwaka'wakw people. These categories are:

- Stewardship (six protocols): Rules related to acting as a steward of the resource when out clam digging.
- Indigenous authority (two protocols): Rules related to communicating with and showing respect for those who hold rights of management and exclusion.
- Order protocols (two protocols): Rules that dictate the order in which different users can access clams.

Based on an interview with an elder, Heaslip (2008a) also briefly noted that *maya'xala* was an underlying principle of stewardship protocols that guided how to behave properly when clam digging. The potential protocols categorized by Heaslip (2008a) need to be looked at in relation to *maya'xala*. In the sections below, I present and analyze the views that participants in my own research shared about the principle of *maya'xala* and associated customs and protocols, as well as actions that they recommended based on respect for their territories, people, and culture. As I discuss, the responses suggest that for present day Musgamagw Dzawada'enuxw people, and potentially other Kwakwaka'wakw, the principle of *maya'xala* is a fundamental element to building legitimacy within local fisheries management and governance. This principle likely applies not only to clams, but to relationships with people and the broader natural world.

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<sup>57</sup> Heaslip (2008a) had three Kwakwaka'wakw individuals review her findings. However, as I note in this section, she acknowledged that further research was required to validate her findings.

**Table 5.1 Potential Kwakwaka'wakw Clam Protocols Documented by Heaslip (2008a)**

Category	Potential Clam Protocol
Stewardship	Leave some behind Cultivate or "turn over" beaches through regular digging Alternate beaches Leave clams alone when spawning Leave time for regeneration between diggings Leave small ones behind
Indigenous Authority	Indicate or communicate your presence and intention Reciprocate for privileges to use the resource
Order	Those who are immediate members of a tribe or 'narñima have preference over those who may claim family connections to the immediate group. Shared residence within an Indigenous territory may define immediate membership. "Home beaches" are protected for food uses only

### 5.1. *Maya'xala* as a core principle of Kwakwaka'wakw clam protocols

In the worldviews of Northwest Coast peoples and other Indigenous peoples in North America, respect for non-human kin discourages people from taking more than what they need from the natural world (Lepofsky & Caldwell, 2013; Kimmerer, 2015). Based on an elder's statement during an interview, Heaslip (2008a) suggests that the Kwak'wala term *maya'xala* is an underlying principle for protocols that she categorized as stewardship of the resource when clam digging. *Maya'xala* translates to English as: to respect - people, property, yourself (First Voices, 2022). The elder interviewed by Heaslip provided a broad definition of *maya'xala*:

Everybody says it means respect, but respect is just one aspect of that word, it means a way of life, where things are sacred. A walk of life that is sacred and you respect everything, we are all one. (as quoted in Heaslip, 2008a, p. 51)

As I demonstrate below, Heaslip's (2008a) stewardship category does not capture the full scope of how Kwakwaka'wakw people apply *maya'xala* to clam beaches and harvesting.

Absent of the Kwakwaka'wakw worldview, the English translation of *maya'xala* as respect is imperfect and appears narrower in scope. Consider, for example, that in the



Kwakwaka'wakw worldview land is seen as animate and alive, deserving of respect and a status equal to that of humans (Nicolson, 2013). Ethnographic research by Deur et al. (2015), with Dzawada'enuxw hereditary Chief Adam Dick (*Kwaxsistalla*), stated that in Kwakwaaka'wakw worldviews "clams are regarded as having families and societies equivalent to those of humans, and with their own abilities and needs" (p. 206). As I discuss below, *maya'xala* is not only associated with stewardship. Rather, it is a core cultural value within Kwakwaka'wakw worldview. Child (2016), a Kwakwaka'wakw scholar, identifies it as one of the essential Kwakwaka'wakw leadership concepts.

I explore here how Musgamagw Dzawada'enuxw research participants described the importance of *maya'xala* or the English term respect when interviewed about clam protocols. Within the Kwakwaka'wakw cultural context of these English interviews, I assume that when the English word "respect" was used by a participant, that they were articulating a cultural meaning equivalent to the Kwak'wala word *maya'xala*.

An oversight on my part during the development of the interview guide was to exclude a question asking about *maya'xala* or respect. Fortunately, Percy Williams, who was a clam management researcher on this project, picked up the relevance of *maya'xala* when it was brought up in early interviews. Subsequently, he or I asked participants about *maya'xala* or respect in approximately half of the interviews. But it was not until after I presented the preliminary findings on protocols at the March 2014 community meeting that I started to gain a better understanding of its significance. As I discuss below, elders at the meeting did not see all the protocols in the Indigenous authority and order categories as representative of their cultural values. Exploring statements by interview participants on *maya'xala* or respect help to explain why.

## **5.2. Participants' Explanations of *Maya'xala***

Twenty-one participants discussed *maya'xala* or respect during interviews. Sixteen spoke about it in relation to the natural world. Fifteen in relation to people. Two in relation to respect for self. It was common for participants to discuss both respect for the natural world (e.g., land, territory, beaches, resources, and animals) and people (e.g., tribe, community, chief, and individuals) in association to one another.

In three separate interviews, four research participants (including two in one interview) described the meaning of *maya'xala* within their worldview. Their descriptions also drew attention to how *maya'xala* has not been understood within Western culture and institutions. In a two-person interview, one participant explained, with the other showing agreement, that *maya'xala* is not just about a cognitive understanding of what respect means, but a physical and emotional feeling within the heart:

Participant 1: *Maya'xala* is the respect.

Participant 2: Respect for all of our resources.

Participant 1: When you feel it, respect, and the true meaning of respect, like, it's for all people. All our lands and resources. Once you start doing that then you have the true meaning of *maya'xala*. From the heart. A lot of people have it up here [gesturing to their head]. Only respect so far and then when it's time not to respect, [they] kinda pull away.

[15 minutes later in the interview]

Participant 1: Getting back to the clams and that, and how people come here and dig and whatnot and talk about protocols and how Fisheries [and Oceans Canada] treats us and whatnot. I think it all revolves around respect. It really does. Like when you hear the word respect, what comes to your heart? You don't have to think about it. You have it here [gesturing to their chest]. It's coming naturally.

Participant 2: Mm hmm. It's interesting because I'm just thinking everything you're talking about.

Four participants spoke about the foundational nature of *maya'xala* as a teaching or natural law in the Musgamagw Dzawada'enuxw worldview. It was also common that, when participants were discussing *maya'xala* or respect and related protocols, they referred to it as “an automatic thing” integral to their culture. In contrast, while respect exists among Western capitalist values, its application is not necessarily as broad or automatic (e.g., a mine developer does not need to respect the mountain as a being). DFO's *Values and Ethics Code* does require public service workers to treat all people with respect and courtesy, but this too is a comparatively limited application. For illustration, an equivalent to the foundational nature of *maya'xala* in the Musgamagw Dzawada'enuxw worldview might require the purpose of the federal *Fisheries Act* to be “respect for people and the natural world” rather than utilitarian-based control and management of fisheries. Consider this next quote wherein a participant shared their

view that, by not understanding the full meaning of respect within Musgamagw Dzawada'enuxw culture, non-Indigenous fishers have misinterpreted the frustrations that Musgamagw Dzawada'enuxw express about commercial fishing and harvesting activities occurring in their territories without their permission:

Participant 24: You look at our culture and how we're all raised. And a lot of [non-Indigenous] people [say], 'oh they come up with rules and regulations.' But we only had one rule in our... we only had one that we've always followed: respect. That's what it comes down to. Respecting one another.

Williams: A few times [in interviews] we kept hearing, *maya'xala*.

Participant 24: Yeah. That's basically what it is. See. And respecting your fellow man. We've always lived for that. Same for our natural foods. We respect our lands.

Another participant used the word "loving" in their definition of *maya'xala*. In their explanation, this participant added an example of how Musgamagw Dzawada'enuxw people view the federal fisheries licensing and management system as restricting their ability to maintain a respectful relationship with people and the land in their territories:

Williams: So [*maya'xala* is] part of what you're talking about, eh?

Participant 37: Yeah. It's respect. Loving. [...] In the earlier [time], it was just an automatic thing. It's respect. But there's so much red tape and bureaucratic hurdles that have to be negotiated for us to be in a position to show respect and our generosity to strange... well not strangers, but to people you don't live with but you know of. It's a lot of bureaucratic red tape. We know when it's clam season. We know when to go and harvest. We know when not to go and harvest. It's out of season. We don't need anybody to tell us. It's the same with anything and everything, you know, bivalve products. We know what's in-season or off-season. But yeah, that's a good one back in those days. A lot of respect, a lot of loving. You know and the genuine mind. They showed. There's no acting [going] on. You know, just nature.

### 5.3. Respect for People

Research participants spoke about both respect for and from other people, as well as the reciprocal nature of respect within their worldview. Participants spoke about respectfulness applying broadly within Kwakwaka'wakw culture, and some participants also spoke about how it is specifically applied in relation to clam beaches and

harvesting. Customs that demonstrate *maya'xala* or respect for people were discussed by participants, including relationship building, following the advice or guidance of elders, sharing and reciprocating, and the community looking after visitors. Within the customs (culturally appropriate conduct) that people are expected to behave by, specific protocols (rules) may need to be complied with.

As I present below, not all participants shared the same perspectives on which behaviours or protocols demonstrated respect for people within Musgamagw Dzawada'enuxw culture. Diversity of perspectives is to be expected in any culture, let alone across four tribes. Participants' knowledge, experience within or outside of commercial and food fisheries, title or position within a Nation, and lived experiences, along with changes across generations are among factors that could explain the different views, but further research is required.

### **5.3.1. Relationship building**

Comments from some interview participants indicate that when someone from outside a Musgamagw Dzawada'enuxw Nation is using the territory for fishing or other reasons, they should take time to build and maintain relationships with community members. This is a continuous process. Research participants' expectations about levels of communication needed from a user varied but were often connected to the current or past relationship strength between the community and the user.

As the following two separate interview comments show, some participants saw the breakdown in clam protocol usage and monitoring in recent decades as having led to weakening relationships with individuals from neighbouring First Nations and non-Indigenous outsiders. First excerpt:

Ladell: I remember back in February [2012 community meeting] someone had said protocols hadn't really been used since '85ish or something.

Participant 5: Yeah, yeah. That was back when [person's name] was in power, well not in power, he was the chief and that. And they used to always have protocols. It was respect for our territories, and they knew they were in our territories, and they could come and ask if they could dig here and stuff or fish or whatever. And then they'd always distribute some to the village too right, to show appreciation for actually getting it done.

Second excerpt:

Participant 27: Nobody is supervising our clams. Nobody is supervising our fridge and the forest, our deer or whatever else we eat from there. People just go in and out of our territory, like, they got no respect, they don't care. They don't even go to the village and say 'Can we go hunting for deer over there?' or, 'We're here tonight, we're asking if we can go halibut fishing', or 'Can we please go over there and dig some of your clams?' No.

Another participant emphasized the importance of relationship building between the Nations and non-Indigenous commercial fishers and harvesters to ensure protocols are understood and respected:

Participant 33: If you can build a relationship, an understanding with the non-status people, they would have to have a good relationship with you and an understanding. An understanding that the Nations all speak the same and this is what you follow or you don't come. I think the only time anything's going to work in anything is if we all have that natural law back, of respect. And we have to, not only talk about it, but put it in action and demonstrate. And then it'll be, they'll know exactly who they're dealing with.

***Clam protocol: Indicate or communicate your presence and intention***

The potential clam protocol 'indicate or communicate your presence and intention' that Heaslip (2008a) categorized as an Indigenous authority protocol fits within relationship building conduct. Eighteen (78%) of the Kwakwaka'wakw people interviewed by Heaslip (2008a) mentioned this protocol. In my own research, there was a mix of views about whether this was or should be a protocol for the Musgamagw Dzawada'enuxw. Of the 32 responses, 21 participants agreed, seven disagreed, and four provided mixed responses or were uncertain. This potential protocol also attracted disagreement from some elders at the March 2014 community meeting on findings.

Participants who agreed that this was a protocol often mentioned that it was not necessarily a formal process (i.e., more of a custom than a rule), but it was done to show respect for the community or chief. Some participants noted that this communication helps with a Nation's ability to monitor harvest activity on beaches and avoid overharvesting in an area. Some participants stated that DFO's management of the clam fishery made it challenging for the Musgamagw Dzawada'enuxw to maintain this system of communication and monitoring. For example:

Participant 6: Well, DFO just dictates to you. Here's the policy, go by it. Slaps it down. There's no consultation or accommodation to anybody - any natives. Whereas, back then there was respect. Saying, 'I'd like to go and dig on your beach.' and then say 'Oh sure. Just take what you need and leave the rest.' and that was it. [...] That was the respect back then, of our land and people. DFO doesn't have that.

There were also differing views as to whether this protocol was developed before or in response to the commercialization of the clam fishery. For example:

Participant 33: For the Musgamagw, it was a natural thing that happened for us, for people to come and harvest. Just us, it was nature for us to go to Kingcome to do the eulachon grease or whatnot. But I know that through the commercial fishing, I mean commercial digging, people did ask for permission to come into our territory. And I know our parents used to call on people if they didn't get that permission. Because that permission is important to be able to monitor our clam beds.

At the same time, some participants, including some elders and former commercial clam harvesters, were sure that seeking permission to harvest was not a requirement. In the following quote from a joint interview, two participants were adamant about this:

Participant 37: No. There was no permission required.

Participant 38: Everybody just went out when they wanted to go out. Just when they felt like it.

Another participant did not see a requirement to ask permission to be consistent with the cultural values of sharing:

Participant 25: I don't remember to have to ask anybody. We just went and everybody used to just go out to dig the clams. [...] Everybody used to just do [it] if they wanted to go digging. Used to go to Gilford or go to another place to go clam digging. Nobody used to ask permission, 'Oh you can't come. That's our beach.' or this and you know. Nobody was doing that. I don't know right now when people are doing that. It's not right. [...] Sharing and everything is what we're like, you know?

As with many who agreed above, the following mixed response from a participant may offer some resolution. It was perhaps not so much about seeking formal permission (protocol), as it was about respecting a cultural custom of relationship building and

communication. Nonetheless, even breaking custom could lead to a loss of access rights as this participant's comment suggests:

Participant 34: I don't think they had really [a] right. There's like claims to beaches and stuff like that, but not really like owned them. We all shared. We all shared what we had in our area. But, it was, always is, customary to go over to a village and talk to people before you start clam digging. And 'it's fine, go ahead.' and just it was always just out of respect for the elders and people in the village.

[Twelve minutes later in the interview]

Participant 34: It's not really a protocol for people to come and ask permission to do stuff, but it's just out of respect for the people in the village and stuff like that. And if you've got enough to respect, to come and talk to the people around in the territory, then you're more than welcome. We're not, like I said, we don't own anything. It's just, we look after it the best we can and like you to do the same thing when you come and harvest clams and to make sure you respect the land as much as we do. So, there wasn't really no... Doesn't matter if you're second, third, fourth or fifth cousins, just as long as you respect the territory as much as we do. Then, if there was a problem or something like that, then there would be a discussion about it, and saying cause you do this to the beach you're not allowed there anymore.

So, it is likely that this may be or have been a custom, not a protocol as Heaslip (2008a) had thought. Apart from that, I have been unable to fully determine the reason behind this apparent contrast in views among participants. Neither generational difference nor experience in clam harvesting appear to be factors based on my knowledge of the respondents. In a few cases, differing responses were provided by people within the same extended family. Different views on permission and access rights continue in the next protocol.

***Clam Protocol: Those who are immediate members of a tribe or 'nañima have preferred access***

Heaslip (2008a) indicated that her interviewees suggested the following order protocol: "[T]hose who are immediate members of a tribe or 'nañima have preference over those who may claim family connections to the immediate group" (p. 60). In some cases, this may include refusing access to people who are not from the community or who fail to properly look after the beaches. She posited that priority access to clams was given by a chief (of a tribe or 'nañima) to his immediate group. Out of all the proposed

protocols this one drew the largest mix of views in my research. Of the 29 responses, 10 agreed, nine disagreed, and 10 provided mixed responses or were uncertain. This candidate protocol also drew strong criticism from elders when the preliminary research findings were discussed at the March 2014 community meeting, as they did not find it to accurately represent the Musgamagw Dzawada'enuxw worldview.

Even when a participant agreed that preferred access was a protocol, they tended to focus on situations where respect was not shown toward the community (i.e., not building relationships, acknowledging, sharing, and reciprocating) or the natural world. There was not strong agreement with Heaslip's (2008a) suggestion that access was prioritized according to whether a person had a primary affiliation with the tribe or *'namima*. Interview participants who agreed with the concept of preferred access focused on one of two types of behaviours. First, situations where someone had caused harm to a clam beach or population could result in sanctions. I discuss this type of behaviour further in the section titled Respect for the Natural World. Second, situations where a participant felt that a clam harvester was taking advantage of community relationships for their own benefit (e.g., greed) could result in that harvester being told off or called out. Participants saw this as particularly problematic when it was done by a person who had either married into their tribe or a community member who married outside their tribe and left to another community. A participant noted the sensitive nature of these internal relationships:

Participant 5: Yeah I think that's a touchy area. There is family ties and stuff, but I know that we do have to have rules and regulations on being able to let that [refusing access] happen, but in a respectful way, right? To care about our territories because they're coming into our territories. And like I said to offer a free ride [on their boat] or the odd sack of clam to [community] members and stuff. And it goes a long way, right?

Sharing and reciprocity are key elements of Northwest Coast cultures (Trosper, 2009). Interview participants who were unsure or disagreed with the validity of the preferential access concept frequently pointed to the importance of sharing and reciprocity within their culture:

Participant 15: I have to disagree with that. I used to [fish for] sockeye. It's a moving resource. Clams are just sitting in the ground. Sockeye move and moving somewhere else. Eulachons are in the river here. It's a resource. It's just going around in a circle,



eh? We just share it. These guys fish eulachons every year. They get sockeye every year. They get clams every year. We do too. But it's a shared resource. I wouldn't want to see rules like that on that cause we just share it, you see?

While emphasizing the importance of sharing access, another participant echoed the concerns mentioned above about people who harm or damage a clam beach:

Participant 9: I don't know. There's so many beaches, you can't say no to anybody. There's a lot of beaches around. Especially as we're all one big family anyways. The Musgamagw family. Help each other. Give us fish, we give them clams, sort thing.

Ladell: But what about people who aren't Musgamagw?

Participant 9: That aren't from here?

Ladell: Yeah, should they be given equal opportunity to go to the beaches as anyone who is Musgamagw?

Participant 9: Mostly, we don't say anything there. Let 'em dig. As long as they don't take all the beaches though. One day I seen [name's a person who was using with a backhoe on a beach].

Williams: Oh, I heard of that.

Participant 9: Yeah. Got rid of that guy. Ruin all the beaches.

An elder identified some generational changes in access rights to beaches. They recalled that while their cohort of harvesters were always permitted to dig on the beaches they wanted to, previous generations may have been more restrictive about who had access to which beaches, including within the territories of neighbouring Nations:

Participant 31: No. Nobody's ever, what's it called, when I clam digged. They just told us, go [to] any beach. Yeah, I guess maybe in the old days. Cause I've heard stories about the old people. I don't know. If they caught you on the wrong beach, they'd kill you in the old days. That's what I've heard years ago. Same thing was if you go and put your canoe on the beach if you're going down Vancouver Island [to another Nation's territory]. You got certain beaches to go to. You can't go to anybody else's. You gotta go to where your reserve comes from.

The Kwakwaka'wakw have traditionally recognized the right of titleholders to restrict access to land, including ceremonial areas (Powell & Cranmer Webster, 2012). Spatial controls have also been applied to resource access within Kwakwaka'wakw

management systems. Different access points can be designated for each group, but access to a resource is shared. Management of some other resources show how the Kwakwaka'wakw spatially divide shared access and proprietorship. Fourteen Kwakwaka'wakw tribes owned eulachon fishing sites next to each other along the Klinaklini River at the head of Knight Inlet (Galois, 2012). Within the Gway'i estuarine flats, root garden plots were divided and demarcated among community members (Deur et al., 2013). Two interview participants spoke about shared access in 'Namgis territory to salmon fishing along the Nimpkish River as part of the historical relationship between the Musgamagw Dzawada'enuxw and 'Namgis. The latter group in turn being granted access to clam beaches in Musgamagw Dzawada'enuxw territories.

Research participant 39 stated that every family historically had their own beaches. In a separate interview, participant 6 noted it was the chiefs who owned the beaches, not families. These responses are not necessarily contradictory. In Northwest Coast societies, houses, not individuals, are the entities with relationships to the land (Trospen, 2009). A chief is the head titleholder of a house, but family members may have been delegated lesser titles of the house, with associated responsibilities and access. In Deur et al. (2015), *Kwaxsistalla* stated this was true for clam gardens too. Harvesting, distribution of clams, monitoring, and maintenance of clam gardens were under the authority of the clan chiefs (Deur et al., 2015). However, non-walled clam beaches appear to have had fewer access restrictions, as *Kwaxsistalla* stated they were where people could dig when they travelled (Deur et al., 2015). This distinction may explain some of the variation in responses, but it does appear that community members have adopted a more collective approach to access in recent decades.

A few months following the March 2014 community meeting, I interviewed one of the elders who raised concerns that day. They emphasized the collective nature of clam digging within the communities:

Ladell: How would people know which beaches to go to? Did the different Nations have different beaches?

Participant 21: I think in some ways they did, but because there was all the intermarriages and feeling like you were in a family that had access and not. In those days, it was not looked at as ownership, really. It was, you know, you had access to certain beaches, independent of who you were with, of your large

family, you know, was where you dug clams. Cause you went with the people who had the boats.

### **5.3.2. Following the guidance of elders**

Throughout my field research, community members spoke about the importance of respecting elders and following their guidance. During interviews, 17 participants shared stories about being taught cultural practices by elders, including how to harvest clams and look after beaches. They each recalled experiences of learning from elders through verbal instruction, practice, and/or observing. Ten participants emphasized the importance of listening to elders' guidance and involving them in efforts to revitalize practices and pass on knowledge, including clam management. For example, a participant noted the importance of elders in deciding how to resolve issues with non-Indigenous commercial harvesters who overharvest:

Participant 34: It'd be up to the elders of the family, I guess. How they'd do it. It's not like we're going to be standing on a beach with shotguns or anything saying you can't, you can't harvest here. [...] A lot of us were all raised by our elders and always had respect for everybody. It's just [a problem] when these government [licensed] people start coming in with their [fishing licence] papers saying they're allowed to do that and allowed to do this.

Participants spoke about the importance of Kwakwaka'wakw people respecting guidance from elders, but some also suggested the need for non-Indigenous people to do the same.

### **5.3.3. Share and reciprocate**

The sharing of a harvest is a key element of the territorial systems of Northwest Coast peoples (Troster, 2009). Several participants recounted how traditionally respect for others underpinned access to, and trading and sharing of, a harvest within and across communities. One participant used examples of their father hunting for the communities to explain how respect through sharing has been practiced by the Musgamagw Dzawada'enuxw:

Participant 33: It was a natural thing for, especially my dad. He used to bring ducks or seal or... and just bring it to the beach and people would come and take what they need. And it was something

that everybody respected and shared and like my dad would bring ducks or seal to Kingcome or Gilford. And people who knew that he was going to offer it to them and they give him back something different that they had to offer. So that goes back to our historic way of trading. It was just the natural law of understanding and respecting each other and knowing that everybody's going to look after each other.

Another participant explained that sharing is connected to the collective responsibility that the Musgamagw Dzawada'enuxw have to each other and their territory:

Participant 24: Being the Musguamagw people we can't say this is mine. This is ours. And that's what we say. Anything that is spoken about our territory is ours. That's how I was *dlixs'ala* [definition: give advice] by my elders, my parents cause that shows the respect and the honour that you have for each other, as well as your land.

It is respectful for both community members and other people who have the means or who are earning money from their harvest to either share their harvest or reciprocate for resource access in another way. Sharing with elders appears to be particularly significant as a demonstration of respect for people. At the same time, as one participant noted, Musgamagw Dzawada'enuxw culture emphasizes the importance of extending kindness and generosity to visitors (e.g., feeding guests first):

Participant 6: That's always been that respect, eh? Guests first. 'No, no, no,' the guests will say. 'No. We don't get off this chair until you [the guest] got your food.' That's just the way it was and it is. That's a nice upbringing and really part of the way we were raised.

Some participants identified possessiveness as disrespectful. For example, when someone from outside the community behaves possessively about their property/ belongings on the one hand (e.g., refusing to share or lend a hand), while on the other hand harvesting from a Nation's territory without sharing with their people. Similarly, greediness when someone puts profit or personal benefit first, especially in the harvestable areas nearest to communities, was mentioned by some participants as being disrespectful, as described in the following quote:

Participant 1: People don't come to our band office to ask permission to dig in our lands. They just come because there's a family connection and go to Gilford and dig on their beaches, you know. But in the old days it was asked. You had to ask. Because we owned what's out there. And we could hold that firm in our

hands. It's like I said, if we just keep on watching people coming into our lands and dig, dig, dig, hunt whatever, you know, we've got really no deer around the island. Cause people are going in from Port Elizabeth, Shoal Harbour and here. And it's impacting our wildlife out there. So that's where *maya'xala* comes back in too. You gotta have that deep respect for the people. And if I walked into your house and looked in your fridge and start taking stuff out, how would you feel when I'm walking out the door kind of thing, eh?

[...]

We're really limited in what we control out there. Like I said about people who come and dig in our area. And it's not only other natives. It's non-natives too. You know it's like being spit on. That's how I feel when I see so many disrespect of our people, our lands, our resources. And, so it's hard to take.

Some participants viewed commercial harvesting in their territories as disrespectful, especially by non-Indigenous people, but others focused on whether commercial harvesters were respectful in their conduct. As one participant noted, access for food and ceremonial harvest should be prioritized:

Participant 11: I do respect people that do come here and do it commercially. I am talking about our members and then the outside people. I mean they're trying to make a dollar for themselves too. I respect that but yet food and ceremonial should always come first.

### ***Clam protocol: Reciprocate for privileges to use the resource***

The clam protocol 'reciprocate for privileges to use the resource' that Heaslip (2008a) categorized as an Indigenous authority protocol fits within sharing and reciprocating customs. This was mentioned by 14 (61%) of the Kwakwaka'wakw people interviewed by Heaslip (2008a). In my own research, 32 Musgamagw Dzawada'enuxw participants shared their perspectives on the accuracy of this protocol, with 27 agreeing and five providing mixed responses or uncertainty. Many participants said that sharing resources between each other was an important part of the Musgamagw Dzawada'enuxw culture. Below is an example quote of a participant who agreed:

Participant 37: Their kindness and generosity was extended at all time and offered at all time. I used to love going to Gilford for their clams and for their seaweed and for their barnacles and their codfish and their halibut. And we used to come by to Kingcome for salmon, eulachons, deer and trade, eh? It's through the generosity. That's how we lived. We shared with people, others.

This clam protocol also aligns with the system of reciprocity, trade, and sharing that has been well documented among Indigenous societies in the Pacific Northwest (e.g., Trosper, 2009; Turner, 2014), including amongst Kwakwaka'wakw (e.g., Codere, 1950; Glass, 2021; Johnsen, 1986; Nicolson, 2013). As the quote above affirms, processed clams (e.g., dried, smoked, barbequed) could be traded for other desired resources, which contributed to the economic and social capital of Kwakwaka'wakw communities (Deur et al., 2015).

***Clam Protocol: "Home beaches" are protected for food uses only***

Some Kwakwaka'wakw people interviewed by Heaslip (2008a) recounted that beginning in the 1930s the commercialization of the clam fishery led chiefs and elders in each village to decide that beaches in front of the villages needed to be protected for food harvesting, particularly by elders. Heaslip (2008a) considered this action to be an example of cultural adaptation to the commercialization, as well as a potential additional protocol that she labelled an order protocol. The specific details and timeline for the development of this potential protocol are limited. However, Heaslip (2008a) suggested it was in place in the Broughton Archipelago villages until the 1950s or 1960s and enforced by the Kwickwasut'inuxw Chief while he was active as the official clam buyer.

In my research, 30 participants shared their views on whether beaches in front of the villages were protected for food harvesting, particularly for elders to access. Twenty-one participants agreed with this as a protocol, one person disagreed, and eight others provided mixed responses or were uncertain. As the following quote discusses, some people were not sure how relevant such a protocol would be today, especially because of outfall sewage contamination around communities, such as Gwayasdums:

Participant 17: I haven't seen that done for a while now. When home clamming, you gotta go way inside the graveyard [beach near Gwayasdums]. Cause all the rest is garbage, hey. We used to, but not anymore. So, you gotta go across.

In some interviews, there was discussion about whether other beaches located near villages that are not contaminated should be considered home clam beaches.

Overall, interview comments provided to both Heaslip (2008a) and me suggest that this was likely a temporary protocol in place for commercial harvesting by First Nations near some villages. Based on mixed responses from participants whom I

interviewed, there is some uncertainty about how far-reaching the knowledge of this temporary protocol may have been. It appears to have been abandoned, at least in Gwayadums, after sewage systems were installed around the 1970s, which forced food harvesters to travel further from home.

Nonetheless, it is clear from participant responses and literature that ensuring access to clams for food harvesting has always been and remains a priority for the Musgamagw Dzawada'enuxw people. They continued to fight for this long after the MMRC rejected many of the Musgamagw Dzawada'enuxw leadership's requests for clam beaches to be reserved for them in the 1910s. Over time, Musgamagw Dzawada'enuxw have sought additional approaches to preserve food access. As described in the previous chapter, based on recommendations by the Kwakiutl Territories Fisheries Commission, in 1992, DFO closed a number of beaches in Musgamagw Dzawada'enuxw territories to the commercial clam fishery in order to assure First Nations' access for food, social, and ceremonial purposes (R. Harbo et al., 1997). Unfortunately, it has become increasingly difficult for food harvesters to access these beaches because boat ownership and the number of active harvesters has declined in the communities.

## **5.4. Respect for the Natural World**

Trosper (2009) observed that the worldviews of Indigenous societies in the Pacific Northwest stress three main ethics and beliefs about the natural world that supported the idea of sustainable land use: the unity of humans and nature, the importance of restraint in consumption, and the presence of a long time horizon (p. 17). The Kwakwaka'wakw consider humans as part of nature, not separate (Trosper, 2009). These ideas are expressed in comments by research participants who spoke about the importance of respect for the natural world within their worldview. Research participants spoke of the importance of showing gratitude to clams and the natural world, recognizing and respecting nature's recovery requirements, and protecting it for future generations.

### **5.4.1. Showing gratitude to the Natural World**

The Kwakwaka'wakw show their gratitude to animals through prayer before killing or eating. Nicolson (2013) explains, "In exchange for their physical bodies the

animals and fish are fed spiritually through prayer. The Kwakwaka'wakw world is one of constant transformations and exchange both physical and spiritual" (p. 235). During interviews, two participants spoke about elders and others praying to give thanks before or at the start of fishing or hunting. Both participants thought the same was likely done before clam harvesting. The first of these participants recounted seeing elders who were born before the 1900s give thanks to the first salmon of the season, and they speculated a similar level of respect would have been given to clams, though they never learned this:

Participant 31: They were in their 80s, 90s, them old guys. And they were powerful. Powerful old men. When we first catch fish up the river. They'd kill it right away. They'd leave the head and tail on, they put it in and they'd start praying. I've never seen it done after that. They'd pray. And they'd put the fish back in the river. They'd put it back in the river. The head and the tail and the bones. Don't see that anymore. They thanked the fish and everything.

Williams: Lots of respect, eh?

Participant 31: Uh-huh. They really respected the fish.

Williams: That's why there was so much of them?

Participant 31: Yeah.

Ladell: Did they have anything like that for clams?

Participant 31: Probably would have, hey, in the old days, yeah. But they didn't really talk about clams when [we] used fish, hey.

The second participant remembered watching elders saying prayers before the start of clam harvesting or a hunt:

Participant 34: I didn't really understand our language back when I was younger. I understand some of it now. But all our elders or uncles and that used to speak in Kwak'wala or stuff like that even before we started clam digging or hunting [...] Always thank the creator for providing for you what he could for the day and pretty much leave for the next generation or... But I'm not sure how the prayers went, but something along that line, I guess. We're always spiritual people. Always thank what you take and thankful for what you get.

Another person indicated that as part of revitalizing their connection with the natural world, it is important for current generations to learn the whole process of clam



harvesting as a form of respect to an area, the clams, and the creator. From learning about where to harvest and where clams are safe to eat, to what size to take, to how to prepare and preserve it.

#### **5.4.2. Recognizing and respecting the recovery requirements of the natural world**

Most participants discussed the importance of practicing harvest methods that ensure a species or habitat can continue to regenerate. These practices were frequently described as showing respect for the natural world. In relation to the Kwakwaka'wakw practices of recognizing and respecting the recovery requirements of the natural world, I consider the six potential protocols that Heaslip (2008a) labelled as stewardship protocols.

##### ***Protocol: Leave some clams behind***

The clam protocol 'leave some clams behind' that Heaslip (2008a) categorized as stewardship protocol fits with conduct that ensures a species' population can regenerate. Heaslip (2008a) recorded mentioned from 15 or 16 of her 23 Kwakwaka'wakw interviewees<sup>58</sup>. In my own research, there was nearly unanimous agreement among respondents that leaving some clams behind when harvesting is a protocol. Of the 32 responses, 31 agreed and one person recalled seeing clams left behind but they were not involved in clam harvesting long enough to be sure why that was the case. The phrase "we only took what we needed" was repeated, with some minor variations, by fourteen participants, underlining the importance of this protocol within Musgamagw Dzawada'enuxw clam and resource harvesting practices. For example:

Participant 22: Yeah, we've always been taught that. Right from my grandfather to my dad. And, you never go and just take it for the hell of it. You always leave it so that it can continue to grow. Yeah. Never take too much. You just, take what you need.

While participants generally agreed with this protocol, there was not full agreement of how many clams should be left behind. As these next two separate quotes

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<sup>58</sup> Heaslip (2008a) provided response information from her 23 interviewees in percentage only. Unfortunately, there is an error in her math in the 'leave some behind' protocol, as the 67% does not represent a whole number that divides 23.

illustrate, some participants saw capitalism and the commercialization of the clam fishery have led to some variation in how or whether this protocol was applied. The first of these two participants stated:

Participant 35: Well, since the commercial [clam fishery] has been on, nobody's been leaving anything behind. That's the thing that you need to work on. [...] I want to section the area out. You can't go dig in this area because we want the clams to grow in there. But you can go dig in this area.

The second participant stated:

Participant 18: We only took what we needed. Or, if we were doing it commercially, we would only take enough to get us through the year. We weren't looking for the almighty dollar to get rich again.

### ***Protocol: Alternate beaches***

Thirteen (56%) of the Kwakwaka'wakw people interviewed by Heaslip (2008a) mentioned alternating beaches to avoid over-harvesting clams on a beach. In my research, of the 33 participants who shared their views on this protocol, 29 participants agreed, one person disagreed, and three others provided mixed responses or were uncertain. There was some variation in how frequently participants said it was okay to harvest on a beach in a season, ranging from only once up to five times in a season. A couple of participants noted that the size of the beach could affect the frequency of harvest. Some participants also noted that communication and coordination among harvesters are important for the success of this protocol. This is discussed in the following quote, in which a participant recalls learning from older generations and makes a connection with traditional practices in species enhancement that affected their management decisions in areas of low abundance:

Participant 39: When they talked, it was all in Kwak'wala. But I understood some of what they were saying. So I talked to [two people's names]. They said, 'Oh, we just talk about we dug enough now.' You can't just keep going to the same beach over and over. And I know that's what's going on right now. Them guys went there over and over and over, same beach where there's no more clams. And so that's basically, I think, you know, to explain [to] them that it's more than just, it's not just there. It was really, we maintained, and we done lots of stuff like that with fish too. The salmon. There were things we did where we knew where the fish are strong and they'd spawn and we had back baskets that ladies made, covered with gravel. So,

they'd move it from one part of the river to the other. So clams were pretty well the same thing too.

To help ensure beaches were not overharvested in a tide cycle, clam harvesters may have also used a simple form of signage to communicate to the next harvester(s) that a beach had been dug recently. One person recalled seeing older generations put a stick in the ground on beaches to mark that the beach had just been dug:

Participant 31: The old people used to put sticks where it's been dug in the area. [...] Yeah, well some of the old people used to do that. Put a stick down, show where they'd been digging.

During community meetings and some interviews, some participants noted that communication and coordination about harvest activity was well maintained among Kwakwaka'wakw harvesters until the 1980s. The following quote from a participant provides an example of the nightly planning discussions that would take place within a community:

Participant 27: Every night, before we go clam digging, [person's name] would call all the people together, and the old people, they'd say, 'Ok, we already dug enough on this beach for this year. So, we'd leave that 'til next year, and we'll dig over here now.' And this was every night they talked about it. On the wharf in Gilford in the early '70s, right up to mid '80s. They didn't just go out and do it when they wanted.

In more recent decades, communication and coordination about people's harvest locations would have been particularly important since the loss of boats has led to commercial clam harvesters travelling in larger groups. But, some participants have observed that communication and coordination has broken down in the recent decades. As a result of the communication breakdown, three participants also noted that different groups of harvesters are unknowingly harvesting on the same beaches as one another. This adds pressure to clam stocks on those beaches.

### ***Protocol: Leave time for regeneration between diggings***

Heaslip (2008a) separated the concepts of alternating beaches and leaving time for regeneration between diggings into two different protocols. Nine (39%) of her interviewees mentioned the latter. While I was conducting interviews, it became clear that many participants saw the latter as the rationale for alternating beaches. However, the phrasing of leaving time for regeneration appeared to confuse some participants.

This may explain why of the 31 responses, eight participants provided mixed responses or were uncertain. The other 23 agreed with the protocol. Similar to responses on alternating beaches, some participants had different views on whether beaches needed a couple of tides or a year or more for clam stocks to regenerate.

***Protocol: Cultivate or “turn over” beaches through regular digging***

A potential protocol closely connected to alternating beaches that was mentioned by 14 (61%) of Heaslip’s (2008a) interviewees was to cultivate or “turn over” beaches through regular digging. Similarly, in Deur et al. (2015), *Kwaxsistalla* suggested that clam harvesters traditionally observed that clams grow better when their substrate is disturbed from time to time, allowing fine silt and clay to be washed away, and when density is thinned out to leave more space for the smaller clams to grow with less competition. Loose sediment also helps work the substrate with traditional yew-wood digging sticks and bring up clams (Deur et al., 2015). Of the protocols listed by Heaslip (2008a), I received the most comments from interview participants on this one. However, there was a range of views about it. Of the 36 participants who commented on this protocol, 20 agreed, four disagreed, and 12 provided mixed responses or were uncertain.

Participants who agreed that this is a protocol described it as a routine to maintain ideal clam habitat conditions. Among those participants, some recalled cultivating beaches or hearing elders from previous generations talk about doing it. For example:

Participant 22: Roll the beach over. Yeah, yeah. [Person’s name] used to say that they used to do that all the time. Roll the beach over so that, he said, that there's a lots here next year he used to say to me, all the time.

Ladell: So when he would do that, would he dig clams or would he just be digging up the beach?

Participant 22: Well, both. Just dig it. If he had enough, he'll still continue to roll it. Maybe he digs part of the beach. Gets enough clams, and then he'll continue to just roll it

A few participants who disagreed or had mixed views were concerned that regularly cultivating or digging a beach could lead to over harvesting or disturbing clam habitat. Example one:

Participant 3: Just because they're there doesn't mean we have to keep digging them. So I don't really agree with that part there.

In this second example, the participant is doubtful, but recommends it be studied more:

Participant 35: [Person's name], I don't believe that guy. He said 'The more you dig in that place, the more clams are coming.'  
[inaudible] I think that was just his own idea that he can go and dig over and over again, every year.

[Four minutes later in the interview]

Well maybe if we'll look at the beaches that's been dugout. Some parts are hard. And you go look at the beaches that's not been touched, it's pretty soft. Your boots will sink in some parts, up to your ankle. So, that's the thing you gotta try and figure out. What causes that?

The sample quote that accompanied the protocol statement in Heaslip's (2008a) list mentioned regular digging of a beach keep it soft, which they said clams like. In my own research, regardless of whether a participant agreed, disagreed, or had mixed views, that quote about keeping the beach soft attracted different views. At issue is the question of what sediment consistency did the speaker consider to be a soft beach. Some participants interpreted it as muddy, which is not ideal for clams and boots can sink in. Others considered soft to mean loose sand, gravel, and/or clay that is preferred by clams and easy to dig.

### ***Protocol: Leave small ones behind***

Nine (39%) of the Kwakwaka'wakw people interviewed by Heaslip (2008a) mentioned leaving small clams behind when harvesting. Small clams refers to small clams within a species, not smaller sized species, such as littlenecks, which are harvested. Heaslip (2008a) emphasized that she asked interviewees to distinguish between DFO's harvest size restrictions and Kwakwaka'wakw protocol. *Kwaxistalla* also noted this practice of leaving small clams behind in Deur et al. (2015). Through ethnographic work with Northwest Coast peoples, Turner (2005) has also documented that a size selective bivalve harvesting practice was done on clam gardens to ensure that enough small ones are always left behind to keep the populations productive.

In my research, 31 interview participants commented on this protocol, with 23 agreeing and 8 providing mixed responses or were uncertain. No one disagreed with this protocol. Some commercial harvesters who agreed were clearly influenced by DFO's

size restrictions, while some other participants commented that it had always been a practice to leave small ones behind. As one elder participant recalled, previous generations had taught this protocol to the youth:

Participant 29: Yeah, we weren't allowed to take clams that were small. But actually, that was Granny's ritual. Any time we went she picked up one and she'd pick up another one and she'd look at it. If they're both the same size she'll drop one and pick another one up until it's uneven size. And she'd tell all of us to come around her and she'd show us and sometimes she would ask us 'Which one would you take?' Just to see if we were learning from her. But when we first went out she'd pick one up and she'd say 'This is one. You see this one. Don't pick it up. Put it back in the water. Let it find its way back and around. Don't break it. Don't mistreat it.

Among the mixed responses, there was some question about what size is considered small, as some noted that on certain beaches clams would only grow to a comparatively smaller size. Also, three participants noted that a limited quantity of small butter clams is sometimes harvested for personal food use, particularly by elders, as seen in the following two separate quotes. Example one:

Participant 20: Yeah, definitely [leave small ones behind]. I mean, you would take some for steamers, but then you always left, you know, a good number, right?

Example two:

Participant 35: Depends what you use them for. You know the little clams they're good for steaming. We usually get a bucket of it.

### ***Protocol: Leave clams alone when spawning***

Nine (39%) of the Kwakwaka'wakw people interviewed by Heaslip (2008a) mentioned leaving clams alone when they are spawning. In my research, 31 participants commented on this protocol<sup>59</sup>, with 22 agreeing and nine others providing mixed responses or were uncertain. No one outright disagreed with this protocol. Responses to the question about this protocol were generally brief (e.g., 'yeah' or 'I'm not sure'). Participants who were uncertain about this protocol had limited experience harvesting clams and did not seem to have witnessed clams spawning. When agreeing with this

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<sup>59</sup> In early interviews, participants frequently referred to clams turning milky when they spawn. Williams and I subsequently added that description when asking about this protocol to reflect local terminology.

protocol, some participants referenced the commercial fishery being closed for the season when clams spawn, rather than a tradition that pre-dated the commercial fishery. One person who provided a mixed response recalled seeing people from past generations harvesting and barbecuing clams into the spawning season:

Ladell: When the clams started spawning would you...

Participant 31: No. That's when you quit.

Ladell: How would you know?

Participant 31: You could see it. You could see the beach just go white. A milk, just like the herring. It's just milk. And then, they're no more good to eat. They're all just flat.

Ladell: Green inside someone said.

Participant 31: Yeah inside, they just seem to flatten out. I always noticed that. We'd quit. We'd just looked at the ones we had. They start to spawn in the sack. We just dumped them back on the beach. Them guys [DFO] had it [the fishery] open too long. See, when it first up and starts to spawn. You'll see it when it spawns. I think [person's name] had trouble with his onetime. They went out. They had one late run [in the season]. They're opening all his clams and they spawned on them. Yeah, you see it on the beach.

Ladell: Yeah, the closings and openings are by month right now.

Participant 31: Not in old days. No, they'll leave it open right 'til it gets warm and then the clams start getting dark. But the old people still eat that when they were dark. They just barbecued it, in the old days. But now, it's different now. They have to leave them alone now. When they get dark.

This elder's comment about previous generations suggestions there may have been variation in harvest periods based on food availability and/or preference that required detailed knowledge of food safety and localized environmental conditions. Deur et al. (2015) recorded that the Kwakwaka'wakw avoided clams from early or late March to September due to risk of health risks from harmful algal blooms. However, as Heaslip (2008b) documented, Kwakwaka'wakw clam harvesters used qualitative indicators at the individual, population, and community scale to assess clam and clam beach health. So, if some people in previous generations did harvest during the spawning season or later, there is evidence to suggest that they would have held knowledge to support food safety in their harvest practices.

### 5.4.3. Protection for future generations

Consistent with respecting the recovery requirements of the natural world, research participants identified the protection of the natural world for future generations as critical. Unlike the Western concept of private property, in Northwest Coast societies, proprietorship over a territory is contingent on proper management that ensures the productivity of the natural world is not reduced for future generations (Troster, 2009). As one research participant described, Musgamagw Dzawada'enuxw are given the responsibility to share and take care of the territory in a way that respects that its provisioning services will last beyond their lifetime:

Participant 24: Here's a sack of clams. Here's a fish. I give that to you. See I'm handing you something that I've always had. But we don't own it. We share it. Just like my grandfather said at one time, 'That tree will be here longer, way longer than you and me. That'll be still standing after you and I are gone.' You look after your land, you're going to look after your resources. They're going to be here way longer. They're going to be here still after you and I are gone. That's respect. And that's what it comes down to. I got *dlixs'ala* to respect our land and our resources.

Williams: It's just like to show how sacred it is? All of it.

Participant 24: Yeah. How sacred it is. All of the sacredness to everything that we were given. Like the clams, the ducks, the geese, the fish, the deer.

Williams: The trees.

Participant 24: The trees. We respect all of what's around us. That way, that field of grass there, it's going to be way longer, it's still going to be there after you and I are buried. It's just like our resources, cause that's a part of what was given to us.

Protecting the natural world for future generations includes taking steps to avoid damaging areas and the animals within it and finding solutions to repair areas that have been damaged by human activity. For example, one participant described the need to be cautious when anchoring near beaches to avoid harm and disrespect to clams. This participant adds a cultural lesson that clams will disappear if they feel disrespected by humans:

Participant 29: [Clam beaches] weren't used roughly either. Like if you had a boat to anchor out, there was no allowed for anchorage.



Because they dropped the anchor and the bottom, it's going to hit [gesturing]. Might hit a good spot of the clam bed. [...] Our clam beaches are very, very protected. You got to look at what's all in it. Living organism. If we start killing it and disrespecting it, then the clams will disrespect us and disappear.

In Northwest Coast societies, community members have a right to punish a titleholder for harming the land or waters that they are assigned responsibility to look after (Trosper, 2009). It follows that to ensure proper care of the area the titleholder is responsible for, they can restrict access or instruct anyone with access to follow proper behaviours on the land (Trosper, 2009). Three research participants recounted stories of people being verbally shamed for causing harm to land and animal populations. Four other research participants stated that in exceptional circumstances, where someone acted disrespectfully toward the land (e.g., continuous overharvest or damage on clam beaches), they were asked or told not to harvest anymore in Musgamagw Dzawada'enuxw territories. As participant 29 put it, "They're blackballed." Another participant expressed remorse upon realizing that someone they accompanied to a beach was overharvesting:

Participant 3: I remember when I went out with my uncle and we kinda pulled up, boated up, with another guy, went to this beach. It was really sad for me to see because I really respect the clam beaches and stuff like what it has to offer to First Nations people, but you just, you could tell that that guy was just strictly clam digging on that beach for the whole tide. You know, whether it was 5 days or 7 days or whatever it was, but you could just see evidence of piles of clams all over it. And it just made me think, like why are we here? I'm not doing any good to this beach by continuing on digging. So, I didn't.

## **5.5. Actions Recommended by Research Participants**

During my fieldwork, there was consensus among research participants that the Musgamagw Dzawada'enuxw should have a role in decision-making for clam management. Many participants recommended actions for building a community-driven management approach to clams and clam beaches that respects the territories, people, and culture of the Musgamagw Dzawada'enuxw. These included both actions to be taken internally and others that require communication with DFO, neighbouring First Nations, and harvesters. These actions are captured below under general, science and

Indigenous knowledge, governance, management and access, and restoration categories.

Each action was shared by one or more research participants during interviews and/or the project meetings in Gwayasdums on February 16, 2012, and August 27, 2014. This is not a cohesive list. Some recommendations present differing views. These recommendations reflect the views of individuals only and should not be misinterpreted as the views of the Musgamagw Dzawada'enuxw Tribal Council or any individual band's leadership. Future researchers could work with the Musgamagw Dzawada'enuxw to prioritize and develop consensus on individual recommendations. However, some of these items are best left for internal community dialogue. As part of broader planning by the Musgamagw Dzawada'enuxw, the communities have undertaken some of these actions since I completed my fieldwork. Below, I have included notes about the ones that I am aware of.

### **5.5.1. General**

#### ***Secure funding***

There was a recognition amongst participants that the Musgamagw Dzawada'enuxw would need to secure funding to undertake many of these actions. Generally, each action would require medium- to long-term funding. Federal funding (e.g., DFO's Aboriginal Fisheries Strategy) was mentioned as a possible source. One participant suggested a licence fee could be paid to the Nations annually to generate some revenue.

#### ***Start small***

Some participants recommended that the Musgamagw Dzawada'enuxw should start with small steps or incremental actions, then build on the success and lessons learned. This could include a five-year plan followed by a longer-term plan. For example, they could focus on monitoring a few beaches or implementing a single protocol to start.

#### ***Interconnectedness***

While this research project focused on clams, research participants also spoke about related issues in forestry, other commercial fisheries, aquaculture, and hunting,

where the principle of *maya'xala* is not being respected. Some participants made the point that these issues are interconnected. Therefore, community discussions about clam protocols could be brought together with other resource topics.

## **5.5.2. Science and Indigenous Knowledge**

### ***Clam surveys and field science***

Research participants recommended that the Musgamagw Dzawada'enuxw conduct frequent clam surveys in their territories to build and maintain a record of clam stocks. Other field studies that participants suggested included mapping and monitoring beach conditions, particularly contaminated beaches, clam health testing, and developing an inventory of other sea resources.

### ***Cultural education***

Participants wanted to ensure that cultural knowledge and Kwak'wala fluency is not lost as older generations pass away. They stressed the importance of younger generations being taught. A couple of participants suggested hiring a cultural coordinator to run seasonal programs where youth can learn about protocols, harvesting, Musgamagw Dzawada'enuxw territories, and related cultural knowledge and practices. Since completing my fieldwork, the Musgamagw Dzawada'enuxw have founded Nawalakw Culture Camp, a project focused on cultural programming and language revitalization (Nawalakw, 2023).

## **5.5.3. Governance**

### ***Revitalization and adaptation of principles, customs, and protocols***

Work remains for the Musgamagw Dzawada'enuxw to determine which protocols they would like to be adapted and implemented, and how they would go about this. Nonetheless, there was general agreement among participants about the cultural importance of ensuring local clam management and harvesting practices respect their communities and territories.

### ***Involve elders and hereditary chiefs***

Some participants said it was essential for elders to be involved in planning and decision-making for the future of clam management and revitalizing protocols. This included a suggestion to bring elders to meetings with DFO. Elders play an important role in providing guidance based on their historical and cultural knowledge. Some participants added that hereditary chiefs should also play a role in decision-making.

### ***Internal gatherings and dialogue***

Participants suggested a variety of approaches for reaching agreement on and implementing protocols. One suggestion was that it should be up to the individual tribes. A second suggestion was that all Musgamagw Dzawada'enuxw should come together as one. A third was that an internal committee should be established. A fourth was for the elected and hereditary chiefs to meet and decide. Community Big Houses were generally seen as a desirable location to gather and agree to protocols. One participant suggested the inclusion of site visits around the territory and a community feast on a beach.

### ***Gatherings and dialogue with neighbouring Nations***

Two reasons for holding dialogue with neighbouring Nations were mentioned by research participants. First, at the time of the interviews there were some tensions with some neighbouring Nations about overlapping territorial claims that needed to be resolved to ensure protocols were complied with throughout Musgamagw Dzawada'enuxw territories. Second, some participants proposed the Musgamagw Dzawada'enuxw work with neighbouring Nations to revitalize protocols across wider Kwakwaka'wakw territories.

### ***Representation in fisheries decision-making***

Research participants who spoke about representation in clam fisheries governance and management all stated that the Musgamagw Dzawada'enuxw should be involved in decision-making. Some participants wanted a collaborative relationship established with DFO. Some participants proposed the inclusion of neighbouring Nations. Others preferred if DFO handed over the reins to the Nations entirely.

## **5.5.4. Management and Access**

### ***Monitoring and enforcement***

Many research participants stated that their Nations should build capacity to monitor clam beaches and clam harvesting activity. This includes hiring and training local guardians, as well as purchasing a boat<sup>60</sup>. Some progress on the latter has occurred since the interviews were completed. The Musgamagw Dzawada'enuxw Fisheries Group, a commercial fishing enterprise owned by the four tribes, recently purchased a crew boat for fieldwork contracts and charter service (Musgamagw Dzawada'enuxw Fisheries Group, n.d.). A few participants recommended harvesting activities be mapped on a chart or through Global Positioning System (GPS).

### ***Rotate commercial openings and medium-term beach closures***

Some participants recommended the Musgamagw Dzawada'enuxw set limits on commercial harvest quantities or a maximum number of nights for individual beaches in a season to ensure harvest activity is not concentrated on a few beaches. A few participants also suggested some beaches be closed for two or more years to support rebuilding of clam stocks.

### ***Reduce the number of commercial licences***

One participant suggested the total number of commercial clam licences for the Broughton Archipelago should be cut by more than half to 30 to avoid future overharvesting, given very few beaches have openings in recent years.

### ***Improved food security***

As discussed in the Respect for People section above, access to clams for subsistence is a priority within Musgamagw Dzawada'enuxw communities. Research participants proposed a couple of approaches to ensuring clams contribute to local food security. One approach could be to protect food access at harvestable clam beaches within a few nautical miles of the communities. In 2021, the Dzawada'enuxw First Nation self-declared the closure of all commercial and recreational fisheries throughout the

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<sup>60</sup> The Musgamagw Dzawada'enuxw Fisheries Group, a commercial fishing enterprise owned by the four tribes, recently purchased a crew boat for fieldwork contracts and charter service ([https://mdfgfisheries.ca/sites/default/files/inline-files/MDFG-Brochure%20%282%29\\_2.pdf](https://mdfgfisheries.ca/sites/default/files/inline-files/MDFG-Brochure%20%282%29_2.pdf))

entirety of Kingcome Inlet to protect food access (Musgamagw Dzawada'enuxw Fisheries Group, 2021). Another approach could be for commercial harvesters to share a portion of their harvest with a Musgamagw Dzawada'enuxw community.

### ***Communication from the Musgamagw Dzawada'enuxw to harvesters***

The application of clam protocols and associated decision-making by the Musgamagw Dzawada'enuxw would require communication with harvesters. Some research participants provided recommendations of the types of communication tools that could be helpful. One idea is to work with DFO to provide local rules (e.g., include a copy of information with the licence or fishery notices). A second idea is to create a protocol handbook for harvesters, which could also be used by harvesters to log harvest activity. A third idea was to post information at local recreational fishing resorts. A fourth idea was to post signage at main boat entry points into the territories<sup>61</sup>.

### ***Communication from harvesters***

As noted above, there were differing views among research participants about whether harvesters were historically required to communicate their presence. Nonetheless, some participants, including attendees at the two meetings in Gwayasdums, recommended that harvesters communicate their harvesting activity to a Nation's office. These participants saw this as a necessary action to monitoring and manage the clam beaches to avoid overharvesting.

## **5.5.5. Restoration**

### ***Clam mariculture***

Both traditional mariculture and commercial clam aquaculture were discussed by some research participants. A couple of people recommended the restoration and maintenance of local clam gardens. Commercial clam aquaculture drew mixed views among participants. Some were cautiously supportive of experimenting with clam aquaculture for commercial and food access on beaches with low clam stocks, while others were against the idea.

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<sup>61</sup> Dzawada'enuxw First Nation already has a territory welcome sign and copper mural on the cliff face near the mouth of Kingcome River.

### ***Revitalize clam market***

Low prices for butter clams and low stocks of littleneck clams have contributed to a decline in the number of community members who are actively harvesting. Some research participants recommended that the Musgamagw Dzawada'enuxw seek to revitalize the market by seeking out new buyers and marketing options. For several decades, there were limited commercial bivalve buyers. However, in the mid-2010s, competition increased as more buyers arrived with access to growing foreign markets, particularly in Asia and Europe (K. Vautier, personal communication, December 2016). However, these exports have slowed down recently (Fisheries and Oceans Canada, 2022). In recent years, the number of First Nations' seafood companies and partnerships<sup>62</sup> have grown in BC. These companies often use cultural branding, value-added processing, and/or an Indigenous-led supply chain collaboration to compete on national and international markets.

### ***Return clam products to beaches***

Some participants recommended a couple of actions to help sustain juvenile clam stocks. A few participants recalled hearing or witnessing occasions when DFO or a clam buyer would find undersized clams when inspecting clam sacks at the dock in Port McNeill. DFO or the buyer dumped the clams on the beach near the dock, an area that is contaminated and considered poor clam habitat. Participants considered this wasteful and disrespectful to the juvenile clams. They recommend undersized clams be returned to the area they were harvested. Another participant noted that, by not returning clam shells to the beach, the commercial clam fishery removes important habitat that helps larvae settle, which as they observed has resulted in a degradation of beaches. Previous ethnographic research by Lepofsky and Caldwell (2013) also documented other Northwest Coast peoples stating that there are enhancement benefits to returning broken shells to the beach. Interestingly, natural scientists only recently found evidence that crushed shell contributes to larval settlement (Green et al., 2013), while this elder research participant was well aware of the connection. This participant recommended that clam buyers be responsible for returning clam shells from processed clams.

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<sup>62</sup> A couple of examples of First Nations-owned seafood companies and partnerships in BC include Nuuchahnulth Seafood and Authentic Indigenous Seafood.

## 5.6. Conclusion

In the initial design of my interview guide, I was very focused on trying to answer the question of whether or not the protocols documented by Heaslip (2008a) are correct. But, as the work on this research progressed, I learned that starting by trying to identify the rules of this system overlooked the more significant component: the underlying cultural principles that guide the development, adaptation, and maintenance of protocols and customs. As the responses from research participants suggest, the rules and the customs are likely adapted by the Musgamagw Dzawada'enuxw in response to change in the system (e.g., commercialization, changes in settlement patterns and primary unit of social organization). But all these adaptations of protocols and customs have been informed by the Musgamagw Dzawada'enuxw peoples' cultural principle of *maya'xala*.

Practicing *maya'xala* in the clam fishery means showing respect for people (i.e., titleholders, community members, and harvesters) and the natural world (i.e., animate non-human kin). For someone involved in the clam fishery (e.g., titleholder, harvester, fishery manager, scientist, etc.) to respect people, they likely need to:

- build relationships with the titleholders and/or community in general,
- follow the guidance and teachings of elders, and
- share and reciprocate.

To show respect for the natural world, a person likely needs to:

- demonstrate gratitude to the natural world,
- recognize and respect the recovery requirements of the natural world, and
- protect the natural world for future generations.

Additional components of this principle and other principles may have also informed the Musgamagw Dzawada'enuxw peoples' relationship with clams and clam beaches. This is an area for further research.

As I discussed in chapter four, colonialism, capitalism, and the associated resource extraction and management practices have disrupted and suppressed Kwakwaka'wakw peoples' culture and connections with their territories. The clam fishery that has contributed to their food security, economy, and culture for millennia has



declined due to unsustainable resource management practices by the federal and provincial governments, high harvest effort, declines in market value of wild clams, contamination, and other factors. However, research participants have pointed out that clams are a fundamental part of their culture and way of life. As such, the value of revitalizing Musgamagw Dzawada'enuxw peoples' role in clam management, including regular access to, monitoring of, and maintenance of clam beaches, exceeds economic costs. More significantly, it is about an approach to negotiating reconciliation that supports and enables the reclamation of their cultural connections, rights, and responsibilities to the natural world within their territories. As some of the recommendations put forward by research participants above demonstrate, this is about using their cultural principles to find ways to reconnect with the land, manage clams and clam beaches sustainably, and support social-ecological resilience. So, for clam management in the Broughton Archipelago to be successful, my research findings suggest that *maya'x̱ala* needs to be at the heart of decision-making.

## Chapter 6.

### Conclusion

*To this day, we still hang on to the teachings of our late ancestors' self-governing ways.*

*(Research participant 29)*

This dissertation has explored key questions of how to adapt the success of Northwest Coast peoples' traditional clam governance principles and practices to current fisheries management situations. In doing so, it has analyzed how traditional clam governance around access, rights and duties, legitimacy, and social-ecological resilience worked, and how it could be adapted to create a successful shared governance system. This would require the federal government to be open to including Indigenous peoples' cultural principles, and effectively share ideas and decision-making in clam management, with the goal of reaching some form of reconciliation progress. Central to this analysis is the role of respect and cultural customs and protocols in the management of intertidal clams fisheries. Here I summarize my findings as answers to the questions around which this analysis was organized.

#### **6.1. To what extent and how have colonialism and capitalism affected the Kwakwaka'wakw peoples' relationship with and management of intertidal clams and clam beaches?**

##### **6.1.1. The Role of Indigenous Governance**

There is growing evidence that the Kwakwaka'wakw traditional governance system was highly successful in managing clam productivity for millennia within an interconnected system of marine and coastal resource management. There is evidence that this governance sustained a highly resilient and adaptable social-ecological system. This governance system was well supported by locally adapted, complex management rules and practices rooted in cultural principles of respect and communal ownership. Proprietorship remained contingent on titleholders' ability to manage the resource

sustainability and share their wealth while ensuring that a high level of legitimacy was maintained within the system.

When we look at the role of Indigenous governance since the start of colonialism, we see a gradual decrease followed by a slight rebound in their role in the overall governance of clam harvesting and beaches. The Crown did not recognize the Kwakwaka'wakw and other Northwest Coast peoples' title and decision-making authority in the management of clam harvesting and clam beaches. This decreased the role of Indigenous governance, although there is evidence that internally Kwakwaka'wakw tribes maintained some *de facto* authority throughout this period. Enforcing their governance system became challenging with the passage of time, cultural suppression, and the expansion and then contraction of the commercial clam fishery. Since the late-1980s, the cracks in the federal clam management regime, court rulings, and a growing focus on the process of reconciliation have opened some opportunities for Kwakwaka'wakw governments to influence decision-making. An agreement on power-sharing remains elusive.

### **6.1.2. Kwakwaka'wakw Access and Management Rights and Duties**

Kwakwaka'wakw access and management rights and duties are rooted in cultural principles, such as *maya'xala*. Prior to colonialism, a complex system of protocols and practices guided the sustainable harvest and management of clam beaches. Communal ownership likely contributed to a high degree of social accountability, collective responsibility, and reciprocity.

During the initial stages of colonialism, changes in Kwakwaka'wakw settlement patterns occurred in response to the population declines within the tribes. Inter-tribal conflict and the introduction of diseases from Europeans contributed to this loss of lives. The remaining populations likely reduced the frequency that they accessed and managed some beaches, having settled together in villages. Access, maintenance, and management of clam gardens was likely more focused on beaches near village sites instead of those located further away. The second half of the nineteenth century brought growing competition for Kwakwaka'wakw land and resources as the settler population, land privatization, and the resource economy expanded. This settler intrusion further threatened Kwakwaka'wakw peoples' access to and management of clam beaches.

Then the McKenna-McBride Royal Commission reinforced the loss of proprietary rights by denying Kwakwaka'wakw tribes' claims to many of these beaches and adjacent land.

As the commercial clam fishery expanded into the Broughton Archipelago, the federal government gradually asserted an increasing amount of authority over the fishery, defining the Kwakwaka'wakw as resource users not managers. This increasingly challenged the traditional access and management rights and duties of the Kwakwaka'wakw. And when DFO implemented the Davis Plan, it indirectly caused new access challenges for Kwakwaka'wakw clam harvesters, due to the loss of the salmon fishing vessels that they also used to access clam beaches.

There is evidence that the Kwakwaka'wakw continued to adapt their traditional protocols to the new commercial practices in a *de facto* manner, where possible. For a couple of decades, a hereditary Chief even played a *de facto* role in clam management as the official clam buyer. But, according to research participants, by the 1980s the traditional protocols were largely abandoned by Kwakwaka'wakw harvesters active in the commercial clam fishery. During the economic downturn of the early 1980s, butter clam landed value had declined and more non-Indigenous harvesters entered the fishery to compete with Kwakwaka'wakw harvesters for the Broughton Archipelago's limited stock of higher value littleneck clams. Confronted with an oversubscribed fishery and the waning influence of their protocols, several Kwakwaka'wakw tribes worked together to convince DFO to protect their food harvest access on some clam beaches by closing them to the commercial fishery.

Over the past two and a half decades, the Musgamagw Dzawada'enuxw and other Kwakwaka'wakw tribes have had mixed success in regaining access and management rights in the clam fishery. Kwakwaka'wakw clam harvesters have almost exclusive access to the limited entry commercial licences in Area G, but low clam stocks (littleneck) and prices (butter) have resulted in many harvesters exiting the fishery. Area G's overlap with multiple Kwakwaka'wakw tribes' territories prevents an individual tribe from being able to decide who can access beaches in their territory. A lack of boat ownership in Musgamagw Dzawada'enuxw communities has also limited their ability to access clams for food or commercially. The Musgamagw Dzawada'enuxw have worked to regain a formal role in managing the clam fishery. They contract clam surveys to gather their own data and have collaborated with DFO on some related studies. They

have also repeatedly sought a co-management arrangement with DFO, although this has never been formalized.

### **6.1.3. Resilience and Adaptability of the Social-Ecological System**

There is evidence that, prior to colonialism, Kwakwaka'wakw managed intertidal clam beaches within a complex interconnected system of marine and coastal resources. There is also evidence that this was a highly resilient social-ecological system. Habitat was extended and augmented across hundreds of beaches, resulting in highly productive clam stocks that contributed to food security. Non-walled beaches contributed to redundancy in this system and provided for flexibility in access rights. This human-clam relationship was rooted in reciprocity and respect.

Colonialism contributed to losses in population, knowledge, access, and management and changes in settlement patterns within Musgamagw Dzawada'enuxw and other Kwakwaka'wakw tribes' territories. These changes likely reduced their ability to regularly manage and maintain as many clam beaches throughout their territories. Gradually, clam productivity declined, and beaches were overharvested by the commercial fishery. Resource extraction and other destructive human activity contributed to the damage and contamination of some clam beaches. Eventually, most Musgamagw Dzawada'enuxw people no longer lived in their territories and had limited reliance or presence on the hundreds of clam beaches. By the twenty first century, there was low resilience and adaptability within this system. However, efforts to revitalize and adapt cultural knowledge, practice, and authority could help rebuild resilience of the system.

### **6.1.4. Legitimacy in the Management System**

Based on the following information, I conclude that there is high likelihood that prior to European contact there was local legitimacy for the traditional clam management system of the Kwakwaka'wakw and other Northwest Coast peoples. There is growing evidence suggesting they were successful in increasing clam productivity to support local food security and regional trade for millennia. The system aligned with Kwakwaka'wakw worldview and customs. The combined evidence of sustainable management practices and a lack of evidence to suggest overharvesting are indicators

that there was likely high compliance with the rules and duties for harvesters and titleholders. A titleholder's proprietorship of a clam beach was likely tied to their ensuring its sustainable management; otherwise they could face serious sanctions from within their tribe.

The legitimacy of this traditional clam management system is further reinforced by how the Musgamagw Dzawada'enuxw and other Kwakwaka'wakw clam harvesters adapted traditional protocols in response to the commercial fishery. Many community members participated in the commercial clam fishery, but they incorporated their own traditional protocols into the sector. This helped give some legitimacy to the federally managed fishery. But since local protocols stopped being used, the federal system has had low legitimacy among Musgamagw Dzawada'enuxw. The support that research participants indicated for their traditional clam management system further demonstrates its continued legitimacy compared to the federal system.

Throughout the commercial clam fishery's history, federal clam management likely never established itself as a legitimate alternative to Kwakwaka'wakw clam management. Overharvesting, contamination, damage to beaches, top-down management, and open access conditions all appear to have contributed to the low legitimacy of federal management. Limited progress on a power-sharing agreement and limited data collection have added to this low legitimacy in recent years.

## **6.2. How has the intertidal clam management system of the Musgamagw Dzawada'enuxw been adapted over time?**

Exploring how research participants define *maya'xala* in their relationship with other people, clams, clam beaches, and the broader natural world has provided a better understanding of the roots of the customs and protocols that they have applied and been adapted in recent generations. Some of these protocols, such as temporary protection of beaches in front of villages for home use, appear to be newer adaptations in response to developments in the commercial fishery and these are aimed at maintaining respect for people (in this example, elders and village residents) and/or the natural world. Other protocols, such as leaving some clams behind, may have been developed generations ago and the knowledge passed down.

Understanding the role of *maya'xala* as a guiding principle for the Musgamagw Dzawada'enuxw helps explain why federal clam fisheries management and efforts at co-management have yet to succeed in the Broughton Archipelago. For the Musgamagw Dzawada'enuxw, it is a fundamental element to building legitimacy within local fisheries management and governance. The absence of *maya'xala* as a principle in the federal management of the clam fishery is likely a key reason why it has never gained full legitimacy among Musgamagw Dzawada'enuxw and other Kwakwaka'wakw clam harvesters. So, it likely needs to be a starting point for dialogue on the future of the clam management system. Other cultural principles likely also shape the Musgamagw Dzawada'enuxw people's relationship with clams and clam beaches. This is an area for future research.

### **6.3. What actions do Musgamagw Dzawada'enuxw community members view as necessary to support the continued revitalization of their relationship and management of intertidal clams and clam beaches?**

Research participants recommended a wide range of actions to support the continued revitalization of their relationship with and management of clams and clam beaches. The list should be viewed as evergreen<sup>63</sup>: to be refined and revised to support an agreement within the Musgamagw Dzawada'enuxw communities. Each tribe may have its own approach. Recommendations included general considerations (e.g., funding needed to undertake many actions, scale of actions, and interconnectedness to other resource issues), improved science and Indigenous knowledge work (e.g., clam surveys, field science, and cultural education), an increased role for the Musgamagw Dzawada'enuxw in governance (e.g., protocols, involving elders and leadership, internal and external dialogue, and representation in decision-making) and management (e.g., monitoring, enforcement, reporting, communication between harvesters and First Nations, beach closures, licensing, and food access), beach restoration, and revitalization of the market for butter clams.

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<sup>63</sup> An evergreen list or document is continuously updated and edited. It is also referred to as a living document.

Fundamentally, the recommendations provided by research participants are about adapting and rebuilding a clam management system that respects them, their cultural values, and their relationship with the natural world. Their recommendations cover a more wholistic set of cultural priorities that is beyond the current federal areas of focus within fisheries management. Colonialism, capitalism, and Western fisheries management are interlinked in their impacts on Kwakwaka'wakw peoples' relationships with clams and clam beaches. So, it will take more than the jurisdictions granted to the DFO under the *Fisheries Act* to find solutions to clam management that support cultural revitalization and the process of reconciliation.

#### **6.4. “Who We Are”**

I close here with an excerpt from Percy Williams' speaking notes about this clam research collaboration for the discussion panel at the 2012 Rebuilding Collapsed Fisheries and Threatened Communities Symposium in Bonne Bay, Newfoundland and Labrador. He wrote this after reviewing and reflecting on what research participants had shared in the interviews that we conducted together in the summer of 2012.

We stand together to reaffirm that we are strong, proud, and united as Musgamagw Dzawada'nuxw people because we know who we are and the traditional territory we have always come from.

Our Potlatch system is our governing system and the foundation of our society. The Bighouse is where we carry this out. This is where we took care of everything when it came to our people, and how we took care of our territories.

We have a proud past, and our traditions continue. We were, we are, and we will always be Musgamagw Dzawada'enuxw people.

We understand our origins and the connections we have to our land through our creation story. We have always been one with our lands, waters, animals, and our people.

We believe and practice *maya'xala* (respect) amongst our people, our lands, waters, and resources, including our clams, and clam beds.

It has always been our believe to “give”, “share” amongst each other.

It's always going to be important to fulfill our role to *dlixs'ala*, to teach, to pass on our legacy.



Despite challenges and changes to our system, we will always maintain the integrity of who we are.

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## Appendix A.

### Interview Guide

1. What do the people of this community (insert community name) use clams for?
2. Has the value or importance of clams changed over time?
3. Are clams still considered an important cultural resource? If so, why?
4. Should food and cultural use of clams take priority over economic use of clams? If so which and why?

5. Do you use clams? If so, for what purposes – food, trade, ceremonies, or other uses?
  
  
  
  
  
  
  
  
  
  
6. What would you consider your connection to the clam fishery to be? For example, as a digger, buyer, processor (canning, jarring, barbequing, steaming, or other), commercial processor, vendor, manager, and/or fisheries guardian.
  - a. In the past
  
  
  
  
  
  
  
  
  
  
  - b. Today
  
  
  
  
  
  
  
  
  
  
  - c. Potentially in future?
  
  
  
  
  
  
  
  
  
  
7. On a scale of 1 to 10 (10 being the highest), can you rate the importance of clams for the livelihood of you and your family/household?
  - a. In winter
    - i. Commercial harvest

ii. Food harvest

b. In summer

i. Food harvest

8. For clam diggers (previously and currently active): How often do you go to beaches to dig?

a. In winter

b. In summer

9. Have you noticed any changes in the amount and types of clams that are harvested? If yes, what is causing these changes?

10. Are clam beaches and clam populations in good health today?
11. If not, how would you describe the condition of clam beaches and clam populations? What are the causes of these conditions?
12. What do you think of the current clam-management system? If there is any challenges what do you think are the most important? Can you rank them in order of importance?
13. We have heard about a few traditional protocols (or ways and practices) that have been mentioned by other Kwakwaka'wakw people. We would like to get your perspective each one. For each of these protocols, let us know if is it accurate or if any changes should be made.
- a. Leave some clams behind. For example, "We always ensure that there are enough left for them to reproduce."

- b. Cultivate or “turn over” beaches through regular digging. For example, “It is like a farm, you got to keep digging them (clams) and the beaches seem to stay soft and clams come back all the time when it is. They look for soft spots and burry themselves.”
  
- c. Alternate beaches. For example, “We always alternated beaches, we would dig here one or two nights, then we’d see it slowly disappearing, so we would leave it alone and go to another beach, so we won’t kill the beaches. If you over-dig them, you wipe them out, so we used to alternate beaches.”
  
- d. Leave clams alone when spawning. For example, “Leave them alone when they are spawning and let them multiply.”
  
- e. Leave time for regeneration between diggings. For example, “We figured out that, every two tides, you can go back to the beach again, that gave us an indicator of how long we could be at one beach and when we could go back.”
  
- f. Leave small ones behind. For example, “We only took the medium size and the large and left the little ones.”

- g. Indicate or communicate your presence and intention. For example, “They just asked permission to go and dig, they dug. There wasn’t really kind of a formal thing it was just kind of an understanding” and “You’d get permission. The head of the family, is the chief of the family and you would have to ask.”
  
- h. Reciprocate for privileges to use the resource. For example, “Everyone respected each other. You would bring some clams, but it wouldn’t be formal” and “You get and you give. It was just out of respect for allowing me into their territory to dig. So I thought one way to pay them back is to take them out in my boat.”
  
- i. People who are immediate members of a tribe or namima (people with primary affiliation) have preference in access to clams over others who may claim family connections to the immediate group (people with secondary affiliation). In some cases, this can include refusing access to people who are not from the community or who fail to properly look after the beaches.
  
- j. Since the start of the commercial fishery, beaches in front of a village have been protected as “home clam beaches”, accessed particularly by Elders for food uses only. For example, “Clams were not to be touched because these were for our own use, for our family. Because the old people can’t go out with their boats, so they go down on the beach and get a bucket for their supper.”

14. Do you know of other protocols that have not been mentioned here?



15. Are there some tradition protocols that are specific to this community (insert community name)?
16. How does the today's enforcement of the clam-management system compare to a more traditional enforcement system?
17. For clam management, how important are traditional protocols today?
18. For clam management, how important are traditional protocols in the future?
19. How could some of the traditional ways be restore and/or adapted to address any problems in the today's clam-management system?

20. We have heard that the loss of First Nations' commercial access to some natural resources in the area has made it more difficult for the practice of traditional ways. We have also heard that the decline in natural resources in the area has made it more difficult for the practice of traditional ways. Do you agree each of these statements? If so, how do you think that these will play a role in the restoration and adaptation of traditional ways?

21. What steps should be taken to restore and/or adapt the traditional ways of clam management?

22. Should there be different protocols set up for non-First Nations who want to come harvest clams in the territory?

23. Do you have any economic development ideas for clam uses by the community (insert community name)?

## Appendix B.

### Intertidal Clams: Total Commercial Landings for Area 12 (tonnes), 1951-2012

Year	Butter Clams	Littleneck Clams	Manila Clams (misreported by either species or area)	Mix/Unknown Clams	Annual Total
1951	603	0.1			603
1952	476	4		0.2	481
1953	636	4		4	644
1954	322				322
1955	590				590
1956	530				530
1957	473	Less than 500kg			473
1958	351				351
1959	375				375
1960	615				615
1961	354				354
1962	877	2	0.30		879
1963	518	0.5		0.2	518
1964	437	5			442
1965	490	1			491
1966	563				563
1967	624			0.5	625
1968	181	1			182
1969	177	2	Less than 500kg		179
1970	508	1	2		511

1971	248	16	2		266
1972	275	29	2		306
1973	137	14	1		152
1974	181	42	1		224
1975	378	104	2	1	485
1976	200	81	1	0.5	282
1977	207	44	4	1	256
1978	118	27	9	7	161
1979	177	94	14	8	293
1980	89	43	13	7	152
1981	4	34	12	4	53
1982		15	5	9	29
1983		60	10	6	75
1984	12	43	11	2	67
1985	102	32	6	9	148
1986	20	36	4	16	77
1987	20	69	16	1	106
1988	113	55	15	Less than 500kg	183
1989	64	87	6		157
1990		58	2	2	61
1991	6	49	6	1	63
1992	12	63	4	1	80
1993	2	62	1	1	66
1994	52	50	0.3		102
1995	47	41			88
1996	38	46			84
1997	82	50	4		136
1998	31	30	3		65
1999	122	61	2	0.5	185

2000	82	51	0.2		134
2001	19	74	2		95
2002	128	92	4		224
2003	69	104	1	0.1	175
2004	66	90	0		156
2005	103	40	1	2	145
2006	46	4	1	0.1	51
2007	48		1		49
2008	79				79
2009	79				79
2010	45				45
2011	63				63
2012	79				79

Sources: (Fisheries and Oceans Canada, 2013a; R. Harbo et al., 1997)