

Who's counting? Spatial politics, ecocolonisation and the politics of calculation in Boundary Bay

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Answering the simple question, 'who's counting', reveals much about the spatial and cultural politics of ecosystem management. In this paper, I unite the concept of 'ecocolonisation' with the body of work on the politics of calculation. I argue that political technologies – including calculative techniques such as the enumeration of contamination levels – are a form of ecocolonisation that have considerable political effects on Indigenous communities. I explore the ways that historically connected Indigenous communities are divergently impacted by shellfish regulations and water pollution through an investigation of Boundary Bay, which straddles the Canada–US border on the Pacific coast. In closing, I suggest the on-going need to decolonise our understanding of calculative techniques for ecosystem management, and offer a more nuanced interpretation of space that accounts for both traditional boundaries and connected ecosystems.

Key words: North America, ecocolonialism, politics of calculation, spatial politics, shellfish harvesting, open-ended interviews

Introduction

On a summer day in 1997, several members of the Semiahmoo band travelled to the tidal waters of Boundary Bay, a small body of water on the Pacific coast of North America, to harvest shellfish. Across the bay, members of the Lummi tribe were also harvesting shellfish. This situation was not out of the ordinary: for centuries, Coast Salish communities relied successfully on these waters as primary sources of food, with clams, crab, oysters, shrimp, and many other species readily obtainable for harvest year-round.

However, what made this situation unique and important is that, on one side of the bay, the Semiahmoo community members were breaking the law, while, on the other side, the Lummi community members were harvesting 'legally'. At the day's end, several members of the Semiahmoo band were fined for 'illegally' harvesting shellfish, while the Lummi tribe continued harvesting without interruption. The reason for this discrepancy is simple: the Semiahmoo members reside in Canada, while the Lummi reside in the United States.

These divergent experiences stem from distinctive colonial histories after the establishment of the international border on the 49th parallel, reflecting different legal regimes that were created around respective American and British interests. To this day, these different framings continue to impact how communities relate to natural resources.¹ In Boundary Bay, the tidelands have been summarily closed to shellfish harvesting since 1962 in Canada, but have been opened conditionally since 2004 in the USA as a result of monitoring and restoration (Figure 1).²

Asking the simple question 'who's counting?', both in terms of shellfish numbers and pollution inputs, provides insight into the spatial politics of ecosystem management, particularly in relation to Indigenous rights to access culturally relevant food. In this paper, I explore the ways that historically connected Indigenous communities are divergently impacted by shellfish regulations and water pollution. I describe how ecocolonialism employs a series of political technologies (including calculative techniques such as the enumeration of contamination levels) that have significant political effects on Indigenous

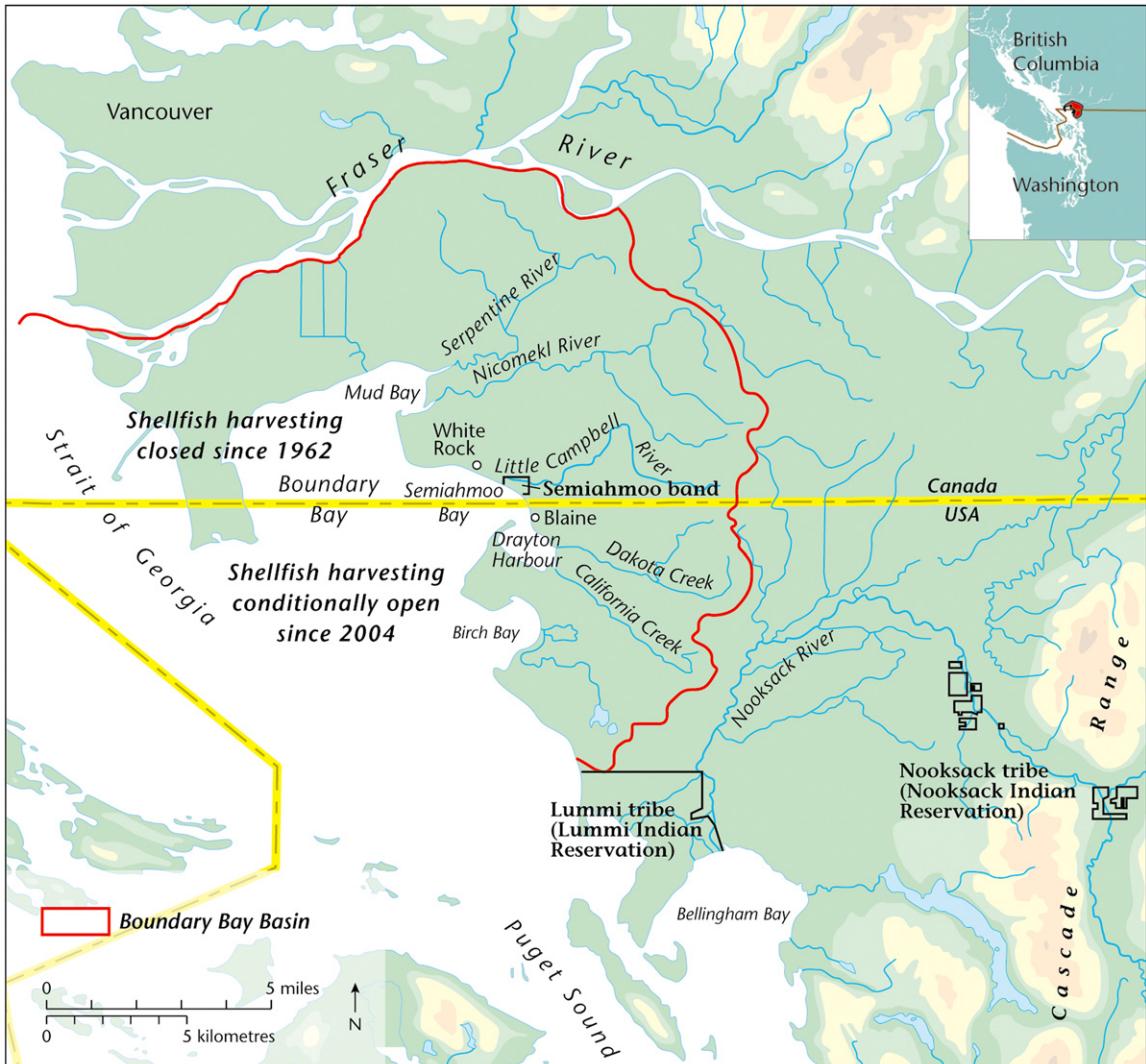


Figure 1 Waterways of Boundary Bay, Drayton Harbour, Semiahmoo Bay and Mud Bay, which all represent sites of traditional shellfish harvesting for Coast Salish Indigenous communities. The International Border Line indicates divergent harvesting policies in Canada and in the USA

Source: Cartographer: Eric Leinberger, Department of Geography, University of British Columbia

communities. Unpacking what Gregory calls 'the extraordinary power and performative force of colonial modernity' (2004, 4) helps to shed light on critical environmental justice issues tied to ecosystem protection and access to traditional food resources.

For the purpose of this paper, I employ Watson's definition of ecocolonisation: 'the process by which Indigenous people collaterally suffer the effects of the seizure and destruction of their natural resources by an outside political force' (2009, 4). This definition builds on earlier concepts of green imperialism, which link imperial

expansion to environmental degradation (Grove 1997; Griffiths and Robbins 1997).

I suggest that ecocolonisation occurs in three central ways in Boundary Bay: first, through the bordering of space that ties Indigenous communities to small parcels of land (reserves in Canada and reservations in the USA) under different political regimes, and with limited access to marine resources; second, through 'extraterritorial' pollution inputs that compromise culturally significant marine resources; and third, through the politics of calculation.

The first two points are relatively well examined in existing literature at the intersection of political ecology, environmental justice, and political and environmental geography (cf. Barman 1999; Clayton 2000; Harris 2002; Heynen 2003; Holifield *et al.* 2009; Huhndorf 2009; Kauanui 2008; Miller 2006; Simpson 2007; Sparke 1998). However, the third point, which links the politics of calculation to ecocolonisation, is less developed and is the central focus of this paper (for exceptions see Nadasdy 2004; Demeritt 2001). The use of interviews with selected individuals and participant observations of transboundary water meetings for Boundary Bay and the greater Salish Sea informs this research. My tribal college affiliation also helped situate me within the wider discussions of politics and environmental resources in Coast Salish communities.

Politics of calculation

This work stems from and enriches the existing body of geographic literature that critically examines the interrelationships between space, politics and calculation (e.g. Braun 2000; Crampton and Elden 2006; Duncan 2002; Elden 2006 2007; Ettlinger 2011; Hannah 2000 2009; Mitchell 1991 1999 2002; Rose-Redwood 2012). Mitchell (1991), in particular, helped to lay the foundation for the critical inquiry of spatial politics in *Colonising Egypt*, which relocated Heidegger's notion of enframing and Foucault's work on governmentality to a global context. Mitchell (2002) furthered his analysis in *Rule of experts* by linking the modern technologies of power with the politics of calculation (or 'techno-politics') of Egypt. Additionally, Elden (2007) described the crucial role of calculation in ordering the spaces and social processes of modernity.

The construction of 'calculating subjects' as a mechanism to create national identities and translocate value systems is a well-documented form of colonisation (Gregory 2004; Said 1978). Thus, as Crampton and Elden suggest, elucidating relations between the political and the calculative helps illuminate the political and social costs of enframing or 'othering' (2006). The distinction between quantitative methods of geography and the geographies of calculation lie in the rationalities associated with the process of enumeration (Mitchell 2002; Rose-Redwood 2012). The former utilises calculation as a geographic method, whereas the latter takes calculation itself (and its political effects) as the 'object' of critical geographic analysis. From this rich body of work, I examine the politics of calculation to inform my analysis of ecocolonisation in Boundary Bay.

The situation in Boundary Bay reflects all aspects of these imperial constructs, but particularly demonstrates the impacts of calculation on maintaining a traditional way of life in which access to marine resources is central

to identity. Enumerating and tabulating shellfish, rendering pollution inputs 'uncountable', and governing who can and cannot access these resources are exercises of state authority. This process of 'calculative rationality' resonates with Miller's (1994) observation that calculative systems (including accounting conventions) always involve the prioritisation of some criteria over others. It is the process of prioritisation that is at the heart of ecocolonisation – through which frameworks are often established and voices are privileged or overshadowed, as is the case for the Coast Salish communities in Boundary Bay.

Coast Salish peoples and connection to marine resources

Numerous scholars have contributed ethnographic details of the political and societal structure of the Coast Salish communities (Allen 1976; Angelbeck 2009; Boxberger and Miller 1997; Harmon 2000; Kennedy 2007; Suttles 1954 1974 1990; Verma 1956). These discussions help lay a foundation for examining the inconsistencies in access to marine resources for people who share a common ancestry and a long-standing connection to land and water.

One issue central to the focus of this paper is that people indigenous to the Pacific coastal area have a deep and sustained relationship with marine ecosystems, but due to contemporary political framings and extraterritorial pollution, access to these resources is limited. The traditional way of life for Coast Salish people centres on the ability to harvest resources from a marine environment. The connection to these resources is not merely economic or dietary, but rather part of a longstanding tradition that is integral to cultural identity (Suttles 1974).

The importance of this connection was continually reinforced in interviews and meetings, as indicated by the following quotes from Coast Salish community members: 'Our people have always relied on the sea for our food . . . harvesting from the sea is our way of life'; 'To us, it is not about money or jobs, it is directly related to what it means to be a Salish person'. In addition, archaeological records clearly show the overall long-term importance of shellfish in the Boundary Bay regions, dating back thousands of years (Matson 2010).

These statements and records demonstrate that severing access to traditional foods has immediate and significant impacts on the physical and cultural health of a community. Reduced access occurs through a number of stressors. Pollution inputs, global climate change and changing land use patterns all affect the quality of the marine environment, including food sources. In Boundary Bay, marine resources such as shellfish have decreased significantly since European contact, and continue to

be compromised both in terms of quality and quantity (AFN 2007; Donatuto 2008).

Shellfish harvesting: British Columbia, Canada

Closures of shellfish harvesting sites have increased steadily in British Columbia (BC) over the past three decades. As of 31 December 2004, Environment Canada reported 123 832 hectares closed to harvesting of shellfish in BC. The majority of the closures appear in the heavily populated Georgia Basin region (71 818 hectares), with some of the largest closures occurring in Boundary Bay (Figure 2). The closures result from nonpoint source pollution inputs associated with excessive runoff from the upland catchment occurring particularly after major storm

events. Although shellfish are not harmed by fecal coliform bacteria pollution, these bacteria pose a risk to human health when consumed (Picot *et al.* 2011). Due to such concerns, the intertidal shores north of the international border of Boundary Bay, Mud Bay and Semiahmoo Bay have remained closed since 1962.³

The Semiahmoo band, whose traditional territory (and modern reserve) centres around Semiahmoo Bay, has actively fought for stronger regulations to limit pollution and argued against the 'blanket' closures.⁴ The Semiahmoo have engaged in subsistence and cultural shellfish harvesting for thousands of years, and argue that rendering the tidelands summarily 'closed' without periodic review is a violation of their inherent right to harvest and has insidious impacts on the wellbeing of their people.



Figure 2 Bivalve fishing prohibited in Canada, north of the International Boundary Line in Boundary Bay, Mud Bay and Semiahmoo Bay (Area 29.2 representing 77.5 km along the perimeter and an area of 120 005 119.42 square metres) and in the waters and intertidal foreshore of the Strait of Georgia from Sand Heads to US Boundary by Tsawassen, including the Fraser River (Area 29.3 representing 112.98 km along the perimeter and an area of 214 772 438.61 square metres) as indicated by Department of Fisheries and Ocean Canada

Source: Cartographer: Eric Leinberger, Department of Geography, University of British Columbia

This sentiment was expressed in a number of interviews. As one community member noted,

Closing the tidal waters altogether means that the people have given up on the tidal waters. Protecting it and caring for it is no longer a priority. We have not given up on the water. We can't give up. This is our home and harvesting from the sea is our way of life.

Closing the areas plays into what Warry (2008) argues is an underlying politics of denial related to Aboriginal issues. For Boundary Bay, the denial acts to limit the recognition of the scope, importance and nature of shellfish harvesting for First Nations.

Ideally, habitat restoration practices and enforcement of land use policies would eliminate the need for closures altogether. However, for immediate purposes, the removal of blanket closures would allow the Semiahmoo to fulfil their right to harvest legally. Canadian First Nations' customary rights to fish and harvest marine resources are protected by a number of mechanisms, including the Constitution of Canada, court rulings, a federal Aboriginal Fisheries Strategy, as well as land and sea settlement agreements (Harris and Millerd 2010).

The Supreme Court of Canada affirmed the right to fish for sustenance, social and ceremonial uses (*R. v. Sparrow* 1990). However, the Canadian government (supported by the courts) takes the position that the rights must be proven case-by-case. The burden of proof related to customary rights lies with the First Nations and until it is proven in court, the rights remain 'potential rights' (McNeil 2008). For the Coast Salish, the extraordinary expense of litigation has proven prohibitive to bringing the shellfish issues to trial.

In addition, when closures are associated with health risks, the ability to exercise these rights is limited further. As a Department of Fisheries Oceans (BC) official noted,

The sport fishery regulation closes Boundary Bay to shellfish harvesting. There is no exception for the Semiahmoo band – it is a shellfish contamination closure and the shellfish is deemed unsafe for anyone to consume.

However, many members of the Semiahmoo community disagree with this interpretation: 'Having someone tell us where we can harvest and when goes against our inherent right to harvest'. The issue of who determines (who calculates) when an area is open or closed is wrought with power dynamics and is at the heart of ecocolonisation.

Since the federal regulatory agencies in Canada have limited funds to conduct routine water quality and shellfish toxin testing, no one is able to harvest shellfish legally in Boundary or Semiahmoo Bays. The administrative decision to uphold a blanket closure rather than

conduct on-going tests affects everyone interested in harvesting. However, this decision has disproportionate impacts on Indigenous communities such as the Semiahmoo. Framing this issue in terms of environmental justice helps to crystallise the links between contamination events, the lack of institutional capacity and fiscal priority to conduct on-going routine water quality testing, and the restricted access to a food source integral to diverse senses of well-being within Indigenous communities. Thus, the government's decision to render the Bay 'incalculable' has considerable political effects on local Indigenous communities.

This paper asserts that the inability of the Semiahmoo to harvest 'legally' – both due to environmental degradation of the waters and the lack of on-going water quality tests – is a form of ecocolonisation. This injustice is further complicated at the site of the border, where the divergent right to harvest shellfish comes down to which side of the border family members ended up on during relocation of families to reserves. To the members of these communities, the government's lack of financial priority to test the waters appears to be extremely unjust.

Shellfish harvesting: Washington, USA

The contaminated tidelands of Boundary Bay also threaten the tradition of shellfish harvesting in the USA. However, because of significant clean-up efforts on the US side of the bay (and a willingness by the state to routinely test), Drayton Harbor has been open for conditional use in Washington since 2004. This means that certain groups, including Indigenous groups and licensed commercial harvesters, are able to harvest when environmental conditions are deemed safe.

In the US, the legal right that Washington State Coast Salish people have to harvest shellfish lies within a series of treaties signed with representatives of the federal government in the 1850s. These treaties recognised legal rights for western Washington tribes to access fish in all usual and accustomed grounds (NWIFC 2010).⁵ These treaties represent a negotiation between the newcomer and the Indigenous communities, and a political structure imposed on communities with established governance systems. Since shellfish are considered fish within the meaning of treaties,⁶ they fall under the same rights as other fish such as salmon (Boxberger 1989).

Therefore, federally recognised tribes in the USA such as the Lummi are legally able to harvest shellfish for sustenance and cultural purposes in their usual and accustomed areas (Boxberger 1989 1993). These rights were upheld by US District Judge George Boldt, who interpreted 'in common with' to mean 'sharing equally the opportunity to take fish . . .' between treaty and non-treaty fisherpeople.⁷ A central aspect of the Boldt decision

in the context of Boundary Bay is not only the fixed allocation, but also the right of the tribes to manage their share (Boxberger 1989).

Although harvesting has reopened conditionally for federally recognised tribes in Washington State, the Indigenous communities remain impacted by the politics of calculation. In order to participate legally in the harvest, the tribal members must navigate a foreign bureaucracy with a matrix of rules and regulations. The particulars of when, where, how, whom and how much are all meticulously outlined and governed by state officials such as the Washington State Department of Fish and Wildlife and the Washington State Department of Health. The wording and procedures of the regulations reflect a Western scientific approach to wildlife management rather than a traditional ecological approach, which shifts the process of harvesting from an inherent right to a conditional right – a fundamental distinction (Cajete 2000; Little Bear 2000; Nadasdy 2004).

Participating in population surveys and estimates, reporting catch and providing written notification of intention to harvest are all management techniques that place the right to harvest in the context of a policed system (Nadasdy 2004). To many Coast Salish community members, the old adage, ‘when the tide is out, the table is set’ is seen as a fundamental part of the traditional family-based tenure practices for harvesting this resource. Similarly, as one fisherwoman noted in an interview,

When we needed fish for our family, we set out our nets and had food on our table in the evening. We did not need to wait for someone to *tell* us that the season was ‘open’ and then have to report our ‘catch’ to an external agency.

This continual monitoring is perceived as a form of colonisation and an affront to core values associated with what it means to be a Coast Salish person (Bierwert 1999).

The rules for harvesting are both internally and externally policed. The tribes themselves are responsible for working within the defined foreign system and reporting aberrant behaviour. For the foreign system to function within tribal territory, the tribal members have to accept or internalise the regulations, thereby reinforcing the norms of a colonial present.

Participation in surveys, calculations and reporting transforms the act of shellfish harvesting into a Western-based science. For the Coast Salish fisherman, however, distinct rules for access to resources are embedded in cultural norms and passed down through generations. In this system, in which an intricate organisational scheme exists within a tribe and inter-tribally, everyone in the community has a role in harvesting, from net mending to cooking and all family members are provided for (Boxberger 1989; Suttles 1954 1990).

However, working within the usual and accustomed system, shellfish are treated as countable objects, disconnected from traditional rights of access. This reporting system also reinforces distinct power relations in which state bureaucracies control key aspects of the harvest. The physical demarcation of political borders – the Canada-US border, reserve boundaries, and usual and accustomed harvest areas – separates cultural landscapes and further contributes to the weakening of the historical-cultural act of harvesting. Each of these bordering practices, although serving different means, are interrelated in that they create a paradigm of regulation over resources. This is problematic particularly in Washington State, where the tribes must access the tidelands through private lands.

The process of enumerating shellfish further places the harvest into a quantifiable framework, reducing the complexities of shellfish harvesting into a calculable (and manageable) quantity (Mitchell 1991 2002). This framework lends itself to regulation by the state and has significant political consequences (Demeritt 2001). As Hannah (2000) observes, the politics of calculation tend to have greater impacts on underrepresented and marginalised populations such as Indigenous people living on reservations. Such disproportionate impacts demonstrate how the internalisation of borders can manifest itself into ecocolonisation. Identifying the techniques of ecocolonisation (such as enumeration of catch and contamination levels) is an important step toward decolonising space (Harris 2002), both for the tribes and bands themselves and for the external agencies involved in resource management.

Regulations and resistance

As described above, the politics of calculation impact Indigenous communities differently, depending on which side of the international border they reside. The divergent policies put in place after the demarcation of the Canada-US border also complicates intertribal negotiations. In Boundary Bay, the communities face many hurdles to working cooperatively, despite their historical connectedness. Divergent policies in the US and Canada have perpetuated an internalisation of ‘foreign’ borders in Coast Salish communities, where differential access to limited resources based on political borders accentuates divisiveness (Thom 2010).

This division is exacerbated by the limitations to physically crossing the Canada-US border and divergent resource management practices, both of which are complicated in a post-9/11 context (Miller 1997 2006; Norman 2012). The difficulty of crossing the border is continually referenced as an impediment for living and working within the traditional Coast Salish territory. One elder noted that he tends to travel many kilometres out of

his way to go through what he considers 'a more friendly border post' than the main point of entry. Many Coast Salish community members reflected that the harassment and feeling of unease that they experience as they attempt to cross the international border has greatly limited their travel, as well as their sense of connectedness.

Furthermore, the nesting of tribal governance systems within a nation-state framework intensifies this divisiveness. One tribal employee reflected on his or her experience participating in a transboundary environmental committee:

Right now, [our tribe] is recognized by the [US] federal government as having treaty rights to harvest shellfish in what we call the usual and accustomed location. . . . And that's very important to the tribe that these rights are protected and that we want to ensure that they continue.

So when I've reported back that the [Canadian band] is trying to make overtures to work in the waters on this side of the border, too, there's a strong reaction with respect to the fact that they do not have those same federally recognized rights on this side of the border. And if they wish to secure those rights, which is not a small task, they need to be making overtures and meeting with the tribes themselves.

A discussion with me, at that table, is not adequate to do that. They have to be talking to our leaders.

Here, divergent policies in the USA and Canada have perpetuated an internalisation of 'foreign' borders within the Coast Salish communities. Differential access to limited resources based on political demarcations accentuates the reality. Though Canadian Coast Salish peoples may want to exercise traditional rights in US waters because they are not 'closed' for contaminants, the rights are not recognised across national borders, which serves as a double-exclusion for Canadian Coast Salish peoples.

However, Coast Salish leaders have made strides in reimagining a 'unified space' that provides a counter-narrative to postcolonial constructs of space. This has occurred through the creation of new transboundary governance mechanisms, such as the Coast Salish Aboriginal Council (Norman 2012), and the use of counter-mapping and critical cartography to reimagine a unified space through the 'Salish Sea' (Rose-Redwood 2011). Although the Council is limited primarily to information sharing and lobbying (and has little jurisdictional power or authority), it provides an important mechanism to start addressing issues of shared concern in a unified Coast Salish voice, rather than tribe-by-tribe, band-by-band.

For governmental employees and policy makers, this means 'seeing' the waters and tidelands of Boundary Bay as a connected ecosystem and part of the wider Salish Sea. The Coast Salish Aboriginal Council calls for increased capacity to govern and protect natural

resources such as shellfish for the benefit of historically connected cultural groups (Thom 2010). The 2010 naming of the Salish Sea as a supplement to the Georgia Basin–Puget Sound raised the political profile of such divided landscapes. This cartographic construct had a dual purpose: to honour the traditional territory of the Coast Salish communities and to acknowledge a connected aquatic ecosystem (Rose-Redwood 2011). The Salish Sea naming and the council's development may be preliminary steps in a political reimagining of the territory as a connected region, indicating a movement towards 'decolonising the landscape'. For Coast Salish community members, this means re-aligning governance mechanisms to reflect unified conceptions of place. Both the naming and the new governance structure de-emphasise the line that has made shellfish harvesting legal only to those on one side of the border, and that has reified a colonial construct counter to the Salish sense of space/place and counter to intact ecosystems. Whether these changes will translate into a re-evaluation of relevant policies and procedures in Boundary Bay is yet to be determined.

Conclusions and reflections

In this paper, I suggest that jointly examining the politics of calculation and concepts of ecocolonisation is helpful in the on-going effort to unpack the complexities of the colonial present. By investigating shellfish closures for Boundary Bay, I show that Indigenous rights to harvest traditional foods are being compromised by a polluted ecosystem, a lack of government funding to monitor tidelands and protect habitats, and calculative techniques.

I have shown that the nation-state project of occupation continues to reify and entrench borders, rules and regulations that are often incongruent with historical and cultural practices of Indigenous communities. Exacerbating these challenges is that the politics of calculation occur differently on either side of the international border. In Canada, the tidelands are deemed 'incalculable'. In the USA, the tidelands are 'open' but under strict control. In both situations, ecocolonisation occurs as the process of harvesting shifts from an inherent right to a conditional right, and extraterritorial pollution inputs and degraded habitats limit access to a culturally relevant food source.

I suggest the need to decolonise our understanding of calculative techniques as it relates to ecosystem management, and offer a more nuanced interpretation of space that accounts for both traditional boundaries and ecosystems. The following questions can serve as next steps in this project:

- How could the Aboriginal practice of shellfish harvesting be characterised as a 'right' in the Canadian context? What will it take to minimise the impacts of

- public safety problems on the exercise of these rights (i.e. increased monitoring and sampling, compensation for degraded habitat, improved access, stronger anti-contamination laws, coordinated harvesting arrangements with other First Nations)?
- Will the development of organisations like the Coast Salish Aboriginal Council and cartographic constructs such as the Salish Sea contribute to the decolonisation through discursive means?

Examining such issues would contribute to wider discussions of decolonising space, and help communities like the Coast Salish advocate for legal access to the resources that are necessary for their traditional way of life. Great need remains for revised policies, management plans and longer-term conservation planning. However, asking the question 'who's counting?' is a step towards addressing issues related to environmental justice, ecosystem management and Indigenous rights.

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Notes

- 1 Divergent settlement patterns exacerbate the differences, with greater population density north of the international border.
- 2 The closures north of the international border are enforced through British Columbia Sports Fishing Regulation (BCSFR) Sec 34(1), which is fishing for shellfish during a closed time (Sanitary Closures).
- 3 Four coordinating federal agencies direct the closures: Environment Canada, Health Canada, Canadian Food Inspection Agency, and Fisheries and Oceans Canada.

- 4 The Hul'qumi'num Treaty Group, representing Cowichan, Penelakut, Chemainus, Halalt, Lyackson and Lake Cowichan, are also involved in a shellfish safety and education projects (<http://www.hulguminum.bc.ca/pubs/Shellfish%20Safety%20Manual%20final%202007.pdf>) Accessed 10 September 2012
- 5 'Usual and Accustomed rights' refers to treaty rights to hunt and fish in locations off the reservation deemed historically significant to the tribe.
- 6 United States v. Washington, 873 F. Supp. 1422 (Shellfish I).
- 7 US District Judge George Boldt, US v. Washington, February 12, 1974.

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