Co-operation incorporated: Responding to resource privatization through an Indigenous regional development corporation in British Columbia, Canada

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Abstract

In the Province of British Columbia (BC), Canada, groups of Indigenous Peoples, known as First Nations (FN), are reclaiming the right to own and govern portions of their traditional territories. Currently land treaties between the governments of BC, Canada, and various FN are nearing settlement. Therefore, BC is now considering how an approach to FN relations that maintains and encourages sustainable economic development for both parties, might operate. A strategy encouraged by the Province for the West Coast of Vancouver Island (WCVI) is the development of beach and ocean tenures for shellfish aquaculture. This move seems well-advised to some as the WCVI is known for its pristine waters and existing wild clam harvest, an activity that many coastal FN take pride in, and in recent decades, have earned seasonal income from. However, to shift from the wild harvest of clams to shellfish aquaculture requires a shift from communal to privatized use of coastline. Therefore, the paper will begin by describing how changes in harvest structure have been introduced by The Province.

Thus far shellfish aquaculture has been confronted by the Nuu-chah-nulth Tribal Council, 14 bands that inhabit the WCVI, in two ways. One, strongly influenced by the provincial government, was to independently implement shellfish aquaculture in as many bands as possible. The second focuses on co-operation and mentoring between bands and other businesses. Through nuanced, culturally-sensitive planning, the Nuu-chah-nulth Seafood Development Corporation (NSDC) is hoping to address hurdles many FN face when 'doing business' in a world that often has disparate views on the environment, family, time, and distribution of wealth. To conclude, the paper will explore the evolution of the NSDC and briefly comment upon how its current configuration was somewhat unanticipated, but potentially provides greater benefits. This work stems from interviews and the analysis of public discourse/documents.

Keywords: aquaculture; shellfish; Indigenous Peoples; entrepreneurism

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BRITISH COLUMBIA'S RESOURCE-BASED ECONOMY

British Columbia is experiencing both the best and worst of times. The economy is steady and improving and its citizens are amongst the wealthiest, healthiest, and most educated in Canada. In fact, in an overt move near the end of 2007, the governing Liberal Party, in power since 2001, changed the slogan that adorns BC websites, license plates, and letterhead that once humbly read: "Beautiful British Columbia", to boast "British Columbia: The Best Place on Earth". However, despite BC's undeniable natural and cultural amenities, and lurking beneath the carefully crafted discourse, it is possible to discern a resource-based economy suffering a bumpy transition into post-Fordism (McBride and McNutt 2007; Prudham 2007; Young and Matthews 2007) and a socio-political environment experiencing ongoing tension and inequality rooted in its British Colonial history (Willems-Braun 1997; Clayton 2000; Hayter 2003). At even closer inspection, interplay between the two comes into focus (Willems-Braun 1997; Hayter 2003; Rossiter and Wood 2005).

Seeking certainty

Unlike most other regions in Canada, First Nations' claims to traditional territory in British Columbia remain largely unresolved, and have become an increasing impediment to maintaining economic returns/growth in resource-based industry over the last 3-4 decades. In the past, force or blatant disregard for these claims allowed the Crown, and in turn, private individuals or corporations to dispossess indigenous peoples of their land and resources and/or to extract resources without due consultation or compensation. Presently, extensive consultation requirements are a bare minimum for doing business within First Nations' territory. Consultation is costly, but arguably less so than protests, boycotts, and litigation; however, all make business in BC less desirable.

In addition to the uncertainty regarding property rights at many scales that unsettled land claims create, the profitability of BC's most lucrative resources has seriously fluctuated and/or declined in recent decades, fisheries being a prime example. However fluctuations in BC fisheries are, for the most part, not the result of managerial disregard. Rather, practices in fisheries management itself have perversely led to decline in stocks and increasing coastal socioeconomic instability (Evenden 2004; Hoogensen 2007; Millerd 2007). The single-species, pro large-industry regulation of fisheries on the Pacific West Coast has meant economically efficient (yet, at times, ecologically destructive) harvests as well as the concentration of rights to BC's major fisheries away from once vibrant fishing communities (Pinkerton 1987b; Harris 2001; Grafton & Nelson 2005; Hoogensen 2007; Millerd 2007). Finally, as is the case today with many commodities, fierce competition and volatility increasingly characterizes global seafood markets

(Naylor et al. 2000; Mansfield 2003; Berkes et al. 2006, Clapp 1998), thus decreasing profit margins and post-harvest processing opportunities.

In BC, aquaculture has been presented as a way to maintain seafood production to meet global protein demands, while easing pressure on wild stocks and bringing jobs back to people in coastal communities; salmon aquaculture has led the charge. Conceptualized in this way, and as currently supported by provincial and federal legislation, funding and economic development initiatives, aquaculture could be seen as the next step in an industrial-managerial progression that places priority on ensuring certainty over nature's unpredictable tendencies (Boyd et al. 2001; Bavington 2001), while privatizing access to what were once coastal commons (Pinkerton 2006).

However, BC's foray into salmon farming has thus far not been the panacea that was anticipated. Although relatively successful from an export value standpoint, it has demonstrated a pattern of industry consolidation (Naylor et al. 2003; McDaniels et al. 2005), reduced access to entry (Naylor et al. 2003; Page 2007), and a host of environmental and ecological impacts (Naylor et al. 2003; McDaniels et al. 2005; Page 2007). Public opinion on salmon farming in BC is notoriously low, and opposition is often heated (McDaniels et al. 2005; Page 2007). Yet, shellfish aquaculture continues to be billed as a means by which shellfish production can be secured and increased, and jobs can be returned to coastal communities.

In 1997 a consultant's report predicted that the BC shellfish aquaculture industry could increase in value from \$10 million to \$100 million by 2007 through a doubling of the space available to shellfish farming. Because shellfish do not require feed² and are sessile they are said by some to be in a class separate from the culture of salmon and other carnivorous finfish (BC Shellfish Growers Association 2006), and therefore should be welcomed with open arms by those who have concern for ecosystem health. As put by the current director of the BC Shellfish Growers Association in a testimony to a BC Special Legislative Committee on Aquaculture in 2006:

"The lack of information in the world about the differentiation between finfish and shellfish is so big that I just came here today to ask the committee to make it clear. You know, we all share the ocean, but there are lots of users. Our industry is suffering from this lack of understanding by the public... I can tell you that we are the canary in the coalmine. If our industry doesn't thrive, it's because the water is in bad shape. Everybody knows that shellfish are positive uptakers and, in fact, are used to clean bays in other parts of the world."

To summarize, as a ray of light for coastal communities and in rebuilding First Nations economies, hopes for the shellfish aquaculture industry in British Columbia are high (BC Shellfish Growers Association 2006).

2

² Shellfish feed on algae that exist naturally in the waters in which they are cultured.

RESEARCH BACKGROUND AND METHODS

Thus, my work over the past three years on the West Coast of Vancouver Island (figure 1) has been in documenting tensions between wild and cultured shellfish harvests, and exploring aspects of certainty in the shellfish industry and its requirements from the perspectives of various actors. This paper presents some initial findings from research undertaken from 2005-present and represents work that will ultimately culminate in my Ph.D dissertation, which is in the preliminary stages of writing. My brevity here reflects the 'work in progress' status of my thesis, and represents only a small part of the WCVI shellfish story and its potential outcomes. I will comment upon how one group of First Nation Bands is responding to increased privatization of the shellfish commons and the entrenchment of shellfish aquaculture within their traditional territories (see also: Pinkerton 2006; Pinkerton & John 2008).

My methods are qualitative and the narrative I present stems from the collection and analysis of consultant's reports, government documents, 'expert' testimonies to various 'fact finding' committees at the Federal and Provincial levels, as well as from interviews with individuals familiar and involved with the seafood industry on Vancouver Island. Although I do not delve into it explicitly in this paper, I have spent 7 months total in the village of Kyuquot, home to the Kyuquot-Checleseht First Nation (a member band of the Nuu-chah-nulth Tribal Council), exploring shellfish related topics through interviews and participant observation³.

Figure 1: Vancouver Island. Nuu-chah-nulth traditional territory encompasses much of the West Coast of the Island, while Kyuquot falls in the centre of the highlighted area (Kyuquot-Checleseht traditional territory is shaded dark green in the box on the left).

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³ I spent the summers of 2005 and 2006 in Kyuquot as a research assistant of Dr. Evelyn Pinkerton. Interviews conducted during this period were undertaken as a team. During the fall of 2007 I spent two and a half months in Kyuquot independently conducting interviews tailored specifically to my dissertation research.



Source: wikimedia commons http://commons.wikimedia.org/wiki/Image:Kyuquot-Cheklesahht.png

DAVID AND GOLIATH?

LOCAL RESOURCES AND GLOBALIZED MARKETS

Global markets, large-scale extraction technologies, and conglomerates with high levels of capital require certainty in supply of natural resources to achieve the desired economic returns (Holling & Meffe 1996, Hayter et al. 2003). Historically, small, isolated communities supplied the much of the labour to extract resources from local ecosystems, leaving both vulnerable as a result (Hayter & Barnes 1990)⁴. In BC, the last several decades have seen many such communities either stagnate dangerously or drastically restructure to suit tourism or achieve a competitive advantage in global commodity markets (Barnes & Hayter 1994). Both bring change to their social, economic, and political fabric.

Theoretically, in resource-based economies relationships between fisher/forester and purchaser, processor, buyer, distributor play an important role in keeping resources flowing and local individuals employed. However since 1945 the tendency in BC has been towards vertically integrated firms within the fishing and

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⁴ This pattern has been of continuous concern in Canada where export of primary resource commodities or 'staples' to Britain, and then the USA, has been the backbone of the country's economic development (Hayter & Barnes 1990; Williams 1997; Hayter & Barnes 2001); a fact first noted by Harold Innis who theorized regarding the factors that combined to create Canada's unique economic characteristics and context (Hayter & Barnes 1990).

forestry sectors, the negative effects of which were most strongly felt beginning in the 1970's (Pinkerton 1987a, Hayter & Barnes 1990). Isolation adds a layer of complication as terrain is often difficult and access into many smaller communities is restricted to secondary or logging roads or, even air. These factors greatly disadvantage independent producers in their attempts to remain competitive in global markets.

Yet, the first pattern continues to apply to the shellfish industry on Vancouver Island as the shellfish commodity chain remains disaggregated and is, for the moment, composed mostly of independent growers and business persons. In fact, this has been interpreted by some as problematic for industry growth because shellfish farmers and buyers are unable to cooperate or communicate effectively enough to allow for demanding market specifications to be efficiently tailored to (Province of BC Seafood Business Assessment 2004). This may leave a momentary niche open for shellfish growers who are able to co-operate as the industry matures.

NUU-CHAH-NULTH RESPONSES TO PRIVATIZATION

In light of the above, I would now like to consider the evolution of two responses by the Nuu-chah-nulth Tribal Council to the expansion of the shellfish aquaculture industry on Vancouver Island. The traditional territory claimed by the Nuu-chah-nulth extends up and down much of the WCVI (see figure 1) and shellfish play an important role in Nuu-chah-nulth life and culture. Clams, abalone, oyster, and cockle were traditionally important items for food, trade, and ceremony and remain popular today. Additionally Nuu-chah-nulth peoples are involved in the wild commercial harvest of manila and littleneck clams on Vancouver Island, which began in the late 1950's and continues to the present. Although the wild harvest is currently in decline, it continues to provide important income to many Nuu-chah-nulth families during the winter months, especially in the northwest region of Vancouver Island. In line with my description of the shellfish commodity chain above, clam harvesters generally sell their catch to buyers who then sell to shellfish processing plants who put the clams into the market.

Encouraged by the projections for a \$100 million industry within ten years, in 1998 the provincial government of BC launched the Shellfish Development Initiative (SDI). The SDI represented a substantial commitment, or perhaps more appropriately, a desire, on the part of the province to pursue the development of a shellfish aquaculture industry as a vehicle for economic development, international export/investment and coastal employment. The SDI exists independently from, and in a sense in opposition to, the wild clam harvest in that they directly conflict for space, (potentially⁵) markets, and reflect the tension between communal property and privatization models. Shellfish tenures, which give the right to culture shellfish on a piece of intertidal zone, must be obtained by entrepreneurs wishing

5

⁵ An underlying concern in shellfish and the larger wild vs. cultured seafood debate is the potential for cheaper cultured product to flood the market, reducing prices obtained by wild product, and thus profitability to local harvesters (Sumaila et al. 2007).

to engage in the industry. Permission to culture shellfish on a given piece of intertidal (beach) or in nearshore waters must be granted by a variety of federal and provincial departments. However, ultimately applications are made and rents for tenures paid, to the provincial government.

The main two species cultured currently include the Pacific Oyster (*Crassostrea gigas*) and the Manila Clam (*Venerupis philippinarum*), with governmentally funded, BC-based R&D also focused on developing new high-end species for production including geoduck (*Panopea abrupta*), japanese scallop (*Patinopecten yessoensis*), and green sea urchin (*Strongylocentrotus droebachiensis*). Currently, 80% of BC shellfish product is exported to U.S. markets. However, the provincial government and some BC shellfish suppliers have set their gaze upon Asian markets such as Hong Kong and Japan that are said to crave unique seafood product and be willing to pay handsomely for it⁶.

In the eyes of many SDI advocates, shellfish aquaculture is also a good fit as a community economic development strategy for First Nations who are struggling to build pre- and post-treaty economies. As the past Executive Director of the BC Shellfish Growers Association put it in a 1996 testimony to a Canadian Parliamentary Committee on the potential for shellfish aquaculture in BC:

"Shellfish farming presents a unique opportunity for First Nations to develop sustainable businesses in rural coastal communities. Some of the most productive beaches suitable for culture on the coast front native reserve lands. Therefore, the involvement of first nations in shellfish aquaculture is a natural one... In addition to prime growing areas, first nations already have many of the skills required for shellfish culture, skills which rely heavily on familiarity with working in a marine environment."

However, whether intentional or not, the differences between a wild, common property harvest and a privatized, aquaculture industry were not acknowledged in the SDI (Pinkerton 2006). Thus Nuu-chah-nulth bands were left to make tough decisions regarding: a) whether or not to make a foray into shellfish aquaculture, and; b) if so, how to adopt single, entrepreneurial business models to what would essentially be enterprises owned and operated by the bodies that also conduct band governance. The Nuu-chah-nulth bands that decided to try shellfish aquaculture⁷, for the most part did so in the form of band-owned and operated ventures that functioned independently of one another.

6

⁶ BC is currently completing a major overhaul of its port facilities in order to better serve Pacific shipping routes overall, including Southeast Asia. The initiative is known as "The Gateway Project". Specific to shellfish aquaculture, my research has uncovered many references to 'Asian markets' throughout consultants reports, and I've been told stories of various trade missions to find Asian buyers for BC seafood product.

⁷ Several Nuu-chah-nulth bands began experimenting with shellfish tenures in 2001-2002.

Co-operation incorporated:

The evolution of the Nuu-Chah-Nulth Seafood Development Corporation Yet, an overarching Nuu-chah-nulth-based institutional structure did exist. In 2003 the Nuu-chah-nulth Shellfish Development Corporation was incorporated with encouragement and funding from the provincial government. The NSDC fundraised between \$2-3 million, at least \$1 million of which came in grants from the province the auspices of the SDI in order to get individual shellfish tenures licensed and operational in Nuu-chah-nulth territory, where they were desired at the band level.

Prior to incorporation, the Nuu-chah-nulth hired a well-known active shellfish farmer and aquaculture advocate from Vancouver Island to be Executive Director of the eventual development corporation. Her responsibilities included: incorporating the Nuu-chah-nulth venture, coordinating site assessments, budgetary work, and financial projections for any interested Nuu-chah-nulth First Nations. She also acted as a liaison to bands while they attempted to develop profitable tenures, provided networking and training opportunities, and ascertained copyright for the Nootka Shellfish Brand on behalf of the development corporation (see: http://www.nootka-shellfish.com/) to eventually be used when marketing locally grown shellfish product. Ultimately, the Nuu-cha-nulth Shellfish Development Corporation acted as business partner and provided some funding and collateral to each Nuu-chah-nulth band that chose to enter into shellfish aquaculture⁸. However, despite the overarching structure, there was little band-toband communication or formal cooperation encouraged between operations. outside of a longer-term plan to pool shellfish and market it under the Nootka brand once individual growing capacities reached full production⁹.

By the beginning of 2005 the economic success that had been initially predicted for the band-run operations did not seem to be on the horizon. None of the Nuu-chahnulth Shellfish Development Corporation shellfish ventures had broken even, the development corporation and its funding was in question, and the Executive Director had moved on to become the new Executive Director for the provincial shellfish aquaculture industry association (the BC Shellfish Growers Association). Concerns for returns to the investments made by individual bands were beginning to mount. The shortcomings of the tenures were informally attributed to a combination of market volatility, high transport costs, and inexperience in business and shellfish farming at the band level. However, the larger move to combine a First Nations economic development strategy with a fledgling export development industry in BC must also be called into question 10.

⁸ 8 of 14 Nuu-chah-nulth bands became involved with shellfish aquaculture in this way.

⁹ General estimates of the number of years before a shellfish tenure in BC is producing at full capacity vary from 3-5 years, while net profits are said to begin in the 5-10 year range.

¹⁰ Exploring this strategy as pursued by the provincial government and its connection to ensuring economic, political, and environmental certainty through First Nation land claim treaties is at the heart of my dissertation research.

Beginning in 2007 and unfolding currently, the Nuu-chah-nulth Shellfish Development Corporation is in the process of re-making itself. Now the Nuu-chah-nulth **Seafood** Development Corporation, it is under new leadership and is encouraging more collaboration between bands (though maintains the option for bands to keep their business operations separate) and has taken a holistic approach to increasing Nuu-chah-nulth market share in the larger BC seafood industry, as signified by the slight change in their name. The corporation identifies four central pillars to its operation:

"to build capacity through cooperation partnership and training; to increase access (to harvests and seafood) through litigation, accommodation, treaty and other avenues; to increase understanding of successful approaches elsewhere; and to increase Nuu-chah-nulth influence over management decisions affecting access and viability (of fisheries and seafood businesses). These pillars rest on a foundation of Nuu-chah-nulth values and principles. These values include a belief in balancing material, spiritual and emotional well being, including physical health and wealth" (Uu-a-thluk 2008).

CONCLUDING REMARKS

To comment on the potential for future financial success by the newly revamped NSDC would be speculative at this juncture. However, it is clear that for various reasons the original single business person, entrepreneurial model did not translate neatly onto individual shellfish aquaculture operations within traditional First Nations territory operating at the level of band governance. As identified in the four pillars of NSDC operations, there are, however, potential advantages to more cooperation and communication among bands that would have been considered 'competitors' under the original model. A shared cultural background, an outlook on business beyond the bottom line of profit (i.e. – spreading around much-needed jobs, maintaining local ecological integrity, communicating effectively between all bands with in the tribal council), in addition to the ability to efficiently take advantage of economies of scale are considered to be advantages in the seafood business (McCay 1980; Mansfield 2003, 2004).

Furthermore, by making a concerted effort to pool resources and learn from one another, combine seafood-related processing and marketing efforts, seek markets and buyers who are interested in the "Nuu-chah-nulth story" (see: http://www.ncnshellfish.com/), and remain committed to providing the opportunity for individual bands to maintain local control and decision-making authority (so as to respect local social and ecological boundaries), the NSDC is using the opportunity, and potentially the Nootka Shellfish brand name, originally provided by the SDI in the hopes of creating business opportunities that are palatable at the community level and see beyond the simple privatization of coastline to grow shellfish. There is much work to be done to turn these harmonies into profit. However, there is increasing literature that documents the willingness of consumers to pay a premium for ecologically certified and/or socially responsible

seafood (Mansfield 2003, 2004; Iles 2004; Vandergeest 2007). The utilization and representation of the coastal commons may have a role to play in achieving this, and should be explored.

In conclusion, it is important to note that the original 1998 Shellfish Development Initiative can only be interpreted as a strategic push towards privatization and industrialization and advocated a model for First Nation shellfish aguaculture development that grafted the lone individual entrepreneurial business model onto existing institutional structures for band governance. Simple assumptions were made about Nuu-chah-nulth peoples' priorities, and economic, political, and ecological certainty was sought through the privatization of coastal commons for shellfish aquaculture. The evolution of the Nuu-chah-nulth Shellfish Development Corporation into the NSDC as it stands today is a result of social learning, vision for the future and a co-operative reconfiguration of independent business ventures to better reflect indigenous needs with hopes to take advantage of the current shellfish commodity chain configuration. Ironically, this, rather than the development of independently operated, economically profitable shellfish tenures, could be considered the most beneficial and potentially enduring benefit of the SDI, and the original funding it provided for Coastal First Nations participation in shellfish aquaculture.

LITERATURE CITED

Barnes, T. J., and R. Hayter. 1994. Economic restructuring, local development and resource towns: forest communities in coastal British Columbia. *Canadian Journal of Regional Science* 17 (3):289-310.

Barnes, T. J., and R. Hayter. 2005. No "Greek-Letter Writing": Local Models of Resource Economies. *Growth and Change* 36 (4):453-470.

Bavington, D. 2001. From Jigging to Farming. Alternatives 27 (4):16-21.

- Berkes, F. 2006. From Community-Based Resource Management to Complex Systems: The Scale Issue and Marine Commons. *Ecology and Society* 11 (1).
- Berkes, F., T. P. Hughes, R. S. Steneck, J. A. Wilson, D. R. Bellwood, B. Crona, C. Folke, L. H. Gunderson, H. M. Leslie, J. Norberg, M. Nystrom, P. Olsson, H. Osterblom, M. Scheffer, and B. Worm. 2006. Globalization, Roving Bandits, and Marine Resources. *Science* 311 (1557-1558).
- Boyd, W., S. W. Prudham, and R. A. Schurman. 2001. Industrial Dynamics and the Problem of Nature. *Society & Natural Resources* 14:555-570.
- British Columbia Shellfish Growers Association. 2006. *British Columbia Shellfish Industry Strategic Plan*. Comox, BC.
- British Columbia, Province of. 2004. BC Seafood Sector and Tidal Water Recreational Fishing: A Strengths, Weaknesses, Opportunities and Threats Assessment, ed. Ministry of Agriculture, Food and Fisheries. Victoria, BC.
- Clapp, R. A. 1998. The resource cycle in forestry and fishing. *The Canadian Geographer* 42 (2):129-144.
- Clayton, D. W. 2000. *Islands of truth: the imperial fashioning of Vancouver Island*. Vancouver, BC: UBC Press.
- Evenden, M. 2004. Locating science, locating salmon: institutions, linkages, and spatial practices in early British Columbia fisheries science. *Environment and Planning D: Society and Space* 22:355-372.
- Grafton, Q. R., and H. W. Nelson. 2005. The Effects of Buy-Back Programs in the British Columbia Salmon Fishery. In *Economics and Environment Network Working Papers*: Australian National University.
- Harris, D. C. 2001. Fish, Law, and Colonialism. Toronto: University of Toronto Press.
- Hayter, R. 2003. "The War in the Woods": Post-Fordist Restructuring, Globalization, and the Contested Remapping of British Columbia's Forest Economy. *Annals of the Association of American Geographers* 93 (3):706-729.
- Hayter, R., and T. J. Barnes. 1990. Innis' Staple Theory, Exports, and Recession: British Columbia, 1981-86. *Economic Geography* 66 (2):156-173.
- ——. 2001. Canada's resource economy. The Canadian Geographer 45 (1):36-41.
- Hayter, R., T. J. Barnes, and M. J. Bradshaw. 2003. Relocating resource peripheries to the core of economic geography's theorizing: rationale and agenda. *Area* 35 (1):15-23.

- Holling, C. S., and G. K. Meffe. 1996. Command and Control and the Pathology of Natural Resource Management. *Conservation Biology* 10 (3):328-337.
- Hoogensen, G. 2007. The Canadian Fisheries Industry: Retrospect and Prospect. Canadian Political Science Review 1 (1):42-56.
- Iles, A. 2004. Making seafood sustainable: merging consumption and citizenship in the United States. *Science and Public Policy* 31 (2):127-138.
- Mansfield, B. 2003. From catfish to organic fish: making distinctions about nature as cultural economic practice. *Geoforum* 34:329-342.
- ——. 2004. Organic Views of Nature: the Debate over Organic Certification for Aquatic Animals. *Sociologica Ruralis* 44 (2):216-232.
- McBride, S., and K. McNutt. 2007. Devolution and Neoliberalism in the Canadian Welfare State. *Global Social Policy* 7 (2):177-201.
- McCay, B. 1980. A Fishermen's Cooperative, Limited: Indigenous Resource Management in a Complex Society. *Anthropological Quarterly* 53 (1, Special Issue: Marine Anthropology):29-38.
- McDaniels, T., H. Dowlatabadi, and S. Stevens. 2005. Multiple scales and regulatory gaps in environmental change: the case of salmon aquaculture. *Global Environmental Change* 15:9-21.
- Millerd, F. 2007. Early Attempts at Establishing Exclusive Rights in the British Columbia Salmon Fishery. *Land Economics* 83 (1):23-40.
- Naylor, R. L., R. J. Goldburg, J. H. Primavera, N. Kautsky, M. C. M. Beveridge, J. Clay, C. Folke, J. Lubchenco, H. Mooney, and M. Troell. 2000. Effect of aquaculture on world fish supplies. *Nature* 405 (29):1017-1024.
- Naylor, R. L., J. Eagle, and W. L. Smith. 2003. A Global Industry with Local Impacts. *Environment* 45 (8):18-39.
- Page, J. 2007. Salmon Farming in First Nations' Territories: A Case of Environmental Injustice on Canada's West Coast. *Local Environment: The International Journal of Justice and Sustainability* 12 (6):613-626.
- Pinkerton, E. 1987a. Competition Among B.C. Fish-Processing Firms. In *Uncommon Property: The Fishing and Fish-Processing Industries in British Columbia*, eds. P. Marchak, N. Guppy and J. McMullan, 66-91. Toronto, ON: Methuen.

- Pinkerton, E. 1987b. The Fishing-Dependent Community. In *Uncommon Property: The Fishing and Fish-Processing Industries in British Columbia*, eds. P. Marchak, N. Guppy and J. McMullan, 295-325. Toronto, ON: Methuen.
 - Pinkerton, E. 2006. Cadastralizing the Clam Commons: Trends in Government Policy on Clam Access and Management. *Paper read to the Conference of the Society for Applied Anthropology*. Vancouver, British Columbia.
- Pinkerton, E., and L. John. 2008. Creating local management legitimacy. *Marine Policy* 32 (4):680-691.
- Prudham, S. W. 2007. Sustaining sustained yield: class, politics, and post-war forest regulation in British Columbia. *Environment and Planning D* 25:258-283.
- Rossiter, D., and P. K. Wood. 2005. Fantastic topographies: neo-liberal responses to Aboriginal land claims in British Columbia. *The Canadian Geographer* 49 (4):352-366.
- Sumaila, R. U., J. Volpe, and Y. Liu. 2007. Potential economic benefits from sablefish farming in British Columbia. *Marine Policy* 31:81-84.
- Uu-a-thluk (Nuu-chah-nulth Aquatic Management Organization). *Nuu-chah-nulth Seafood Development Corporation Backgrounder*. http://uuathluk.ca/Nuuchanulth%20Seafood%20Development%20Corportation.doc. Accessed March 5, 2008.
- Vandergeest, P. 2007. Certification and Communities: Alternatives for Regulating the Environmental and Social Impacts of Shrimp Farming. *World Development* 35 (7):1152-1171.
- Williams, G. 1997. Canada in the International Political Economy. In *The New Canadian Political Economy*, ed. W. Clement, 408. Kingston: McGill-Queen's University Press.
- Willems-Braun, B. 1997. Buried Epistemologies: The Politics of Nature in (Post)colonial British Columbia. *Annals of the Association of American Geographers* 87 (1):3-31.
- Young, N., and R. Matthews. 2007. Resource economies and neoliberal experimentation: the reform of industry and community in rural British Columbia. *Area* 39 (2):176-185.