

Aquaculture Development

An Economic Opportunity for BC Coastal First Nations

Prepared for: **The Special Committee on Sustainable Aquaculture,
Legislative Assembly of British Columbia**

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EXECUTIVE SUMMARY

According to Indian and Northern Affairs Canada, many First Nations people live in Third World conditions. As a result of substandard housing - together with inadequate availability of dietary and health options – First Nations communities face rates of suicide, diabetes, tuberculosis and HIV/AIDS that far exceed the Canadian average. Many of these challenges can be directly related to the lack of jobs and economic opportunities available to First Nations. Unemployment rates for aboriginals continue to be at least double the rate of the non-aboriginal population - while the average individual income of aboriginals is only 50% of that for non-aboriginals.

Within BC, the average unemployment rate for aboriginals living in reserve communities exceeds the non-aboriginal rate by over 300%. Within some BC First Nation communities, unemployment rates continue to exceed 75% - despite the fact that in many cases over half of the band members have been forced to leave their community due to the lack of housing and employment opportunities. Those individuals forced to leave their communities face equally bleak prospects of finding employment in urban areas.

In an effort to create vital communities where their people can live and work in healthy environments, some BC coastal First Nations have taken a long and careful look at the potential of aquaculture development. Those First Nations proceeding with aquaculture development within their traditional territories have arrived at their decision with the utmost respect for time-honored cultural principles which emphasize that all human activities should be conducted in an environmentally sustainable manner.

As revealed in this submission, the capacity of aquaculture development to significantly impact the economies of First Nations communities is a documented fact. What is equally important is that First Nations aquaculture projects – including partnerships with large corporations – reveal that respect for the environment and economic prosperity are NOT mutually exclusive. In fact, they can proceed hand-in-hand. The involvement of First Nations in aquaculture is therefore creating a unique – and revolutionary – model for the development of natural resources in BC.

For non-aboriginals, environmental sustainability often becomes a buzzword. For First Nations people, it is a way of life – a principle that has guided their culture for thousands of years. Given that many First Nations are adopting aquaculture as a primary solution to the economic crises facing their communities – and because BC's aquaculture development will occur within First Nations traditional territories – the Province of BC has an undeniable obligation to allow aquaculture policy development to be guided by a substantial input from those First Nations that are basing the survival of their communities and their cultures upon this industry.

A. THE ABORIGINAL AQUACULTURE ASSOCIATION

Mission Statement

The continued decline of the traditional resource industries of forestry, fishing and mining has resulted in extremely high unemployment rates in BC First Nations communities. In the face of dwindling economic opportunities within the resource sectors, a cross section of BC aboriginal leaders gathered in 2003 to consider how their communities could be revitalized. During their careful consideration of various possibilities, these leaders found that aquaculture was one of the fastest growing sectors of the BC economy. In 2004, aquaculture generated farmgate revenues of \$228.1 million and almost 4000 production jobs - plus jobs in support industries¹. The aboriginal leaders concluded that various forms of aquaculture had the potential to restore coastal First Nations to thriving, self-sustaining communities through increased employment, revenue and control over the ancestral territories. They therefore established the Aboriginal Aquaculture Association to serve as the focal point for First Nations to work together to develop renewed community economies based on sustainable, responsible aquaculture.

The mission of the Aboriginal Aquaculture Association is to promote aquaculture development that respects and supports First Nation communities, culture and values.

Resource for Informed Decision Making

The Aboriginal Aquaculture Association (AAA) is a Not-for-Profit Organization with membership comprised of First Nations, First Nation individuals and companies, and non-First Nation companies and individuals (supporting members). The association recognizes that aquaculture will not provide economic renewal opportunities for all BC First Nations. For BC First Nations that feel aquaculture may hold potential for their people, the AAA serves as a resource to increase their understanding of sustainable aquaculture development by providing accurate, scientifically-sound information. Based upon this information, individual FN communities are empowered to make more informed decisions regarding the economic opportunities offered by aquaculture.

The association also recognizes the freedom of each First Nation to implement economic revitalization initiatives that are compatible with its goals, aspirations and values. As a result of community consultation, the wisdom and guidance of the Elders, and scientific information, individual First Nations may - or may not - choose to pursue revitalization through aquaculture development initiatives.

For those First Nations that arrive at a community consensus to develop their marine resource via aquaculture, the AAA has produced a "Getting Started in Aquaculture" booklet – as well as a report on how to improve access to aquatic resources by First

¹ The 2004 BC Seafood Industry Year in Review. www.agf.gov.bc.ca/fish_stats/pdf/seafood_industry_yir_2004.pdf

Nations. Since the coordination of First Nations aquaculture projects depends upon open communication among First Nations and other aquaculture stakeholders, the AAA also organizes regional and national forums, and technical workshops – as well as providing up-to-date information through its website, newsletters and mail-outs.

Through these publications and activities, the AAA supports the development of opportunities for First Nations aquaculture projects by facilitating:

- Opportunities assessments for aquaculture projects
- Research and technology transfer
- Training and skills development
- Access to financing
- Partnership negotiations

Supporter of Environmental Sustainability

The Aboriginal Aquaculture Association recognizes that the development of aquaculture in BC has been faced with controversy regarding its environmental stewardship. Similar to early agriculture, forestry and fishing practices, early aquaculture practices did not fully recognize the importance of environmental sustainability. However, in response to pressure from First Nations, environmental groups and government, the AAA believes that the aquaculture industry has now developed farm management practices that are allowing them to achieve a high degree of environmental sustainability. It further feels that advances in farm husbandry and management practices will improve the environmental sustainability of the industry even further. The AAA will continue to demand that all forms of aquaculture implement husbandry and management practices that are based upon the most recent and credible scientific information.

To ensure that all First Nations aquaculture projects are environmentally sustainable, the AAA is developing an Aboriginal Certification of Environmental Sustainability program (ACES). The ACES program will incorporate:

- An Environmental Code of Practice for Aboriginal aquaculture ventures
- A mechanism for monitoring and enforcement of sustainable farming practices
- Policies that address food safety issues
- Incentives and sanctions for compliance

B. SITUATIONAL ANALYSIS OF FIRST NATIONS COMMUNITIES

Canadian First Nations Communities

According to an Indian and Northern Affairs Canada (INAC) study², many First Nations people live in Third World conditions. Factors contributing to the INAC assessment of First Nations living conditions include:

- Health Canada states that - as of May 2003 - 12% of First Nations communities had to boil their drinking water and approximately ¼ of water treatment systems on-reserve pose a high risk to human health
- Housing density in First Nations communities is twice that of the general Canadian population³
- Almost half of the existing housing stock in First Nations communities requires renovations. Much of this housing is substandard and rapidly deteriorating⁴
- Mold contaminates almost 50% of First Nations households⁵

As a result of these living conditions - together with inadequate availability of dietary and health options – First Nations communities face rates of suicide, diabetes, tuberculosis and HIV/AIDS that far exceed the Canadian average^{6,7,8,9}.

Many of these challenges can be directly related to the lack of jobs and economic opportunities available to First Nations. Unemployment rates for aboriginals continue to be at least double the rate of the non-aboriginal population. Among Registered Indians 15 years of age and over who were in the labour force, the unemployment rate stood at 23.3% in 2001 - as compared to 7.4% for the total Canadian population 15 years of age and over¹⁰.

For First Nations, the average individual income is only 50% that for the Canadian population as a whole¹¹. In 2000, 40.5% of Registered Indians indicated that government transfer payments were their major source of income¹².

² Indian and Northern Affairs Canada (INAC), 1998. The Human Development Index examines per capita income, education levels and life expectancy to compare the world's countries.

³ First Nations Centre, National Aboriginal Health Organization, Preliminary Findings of the First Nations Regional Longitudinal Health Survey 2002-2003, November 2004

⁴ 2003 Report of the Auditor General of Canada

⁵ Regional Longitudinal Health Survey, National Aboriginal Health Organization

⁶ Health Canada, Health Sectoral Session Background Paper, October 2004

⁷ Health Canada, Diabetes Among Aboriginal People in Canada: The Evidence, March 2000

⁸ Health Canada, A Statistical Profile on the Health of First Nations in Canada, March 2003

⁹ Health Canada, FNIHB Community Programs Annual Review 1999-2000, August 2000

¹⁰ Indian and Northern Affairs Canada, 2005. Comparison of Socio-economic Conditions, 1996 and 2001. Catalogue: R32-163/2001E-PDF

¹¹ Indian and Northern Affairs Canada, 2005. Comparison of Socio-economic Conditions, 1996 and 2001. Catalogue: R32-163/2001E-PDF

¹² Indian and Northern Affairs Canada, 2005. Comparison of Socio-economic Conditions, 1996 and 2001. Catalogue: R32-163/2001E-PDF

BC First Nations Communities

In 2001, the unemployment rate for BC aboriginals living in reserve communities was 28.9% (note: higher than the national average of 23.3%) – while the BC non-aboriginal rate was 8.0%. Table 1 presents the aboriginal and non-aboriginal unemployment rates for areas of BC where some of the First Nation communities have access to marine resources as part of their traditional territory¹³.

Table 1. Comparison of unemployment rates for BC aboriginals and non-aboriginals

Area*	Unemployment Rate (%)			
	Aboriginal		Non Aboriginal	% Difference**
	On reserve	Off reserve		
North Island				
15yrs +	27.2	23.6	11.2	143
20-24	40.6	31.9	19.3	110
25-34	29.0	27.3	11.7	148
35-54	23.6	19.0	9.2	157
Northwest				
15 yrs+	35.5	32.5	10.7	232
20-24	51.3	32.5	15.4	233
25-34	38.3	36.3	12.6	204
35-54	31.3	28.9	7.7	306
Malaspina				
15yrs +	27.0	22.3	9.8	176
20-24	39.1	26.2	17.2	127
25-34	28.1	28.9	11.1	153
35-54	24.4	16.8	7.5	225
Capilano				
15yrs +	21.6	10.9	5.9	266
20-24	31.8	18.9	12.4	156
25-34	21.9	9.5	6.7	227
35-54	18.4	10.4	4.2	338

* Areas defined by BC community college service areas.

** % difference in employment rates between on-reserve FN and non-aboriginals

¹³ BC Stats. www.bcstats.gov.bc.ca/data/cen01/abor/ap_main.asp.

As revealed in Table 1, aboriginal unemployment rates in all of these areas significantly exceed non-aboriginal rates - in some cases by as much as 300%. The table also reveals that aboriginal unemployment rates are high across all age groups – including young adults who may therefore see little hope of ever obtaining employment within their community. The high off-reserve unemployment rates shown in Table 1 suggest that the potential of finding work by leaving the reserve is equally bleak.

In Focus: Skeena Native Development Society Labor Market Census¹⁴

Since 1994, the Skeena Native Development Society (SNDS) has conducted a labor market census for its service area that encompasses nine separate and distinct Tribes. The SDNS service area covers 25 villages and 7 urban areas. Communities within this service area include Old Massett, Skidegate, Lax Kw'alaams, Metlakatla, Kitkatla, Hartley Bay, Kitamaat, Kitselas and Kitsumkalum. The total population of the SNDS service area is 28,841 – with 64.5% of the population residing off-reserve due to the lack of housing and employment opportunities.

The SDNS labor market census considers the employment statistics for the First Nations labour force population, ages 15 to 65, residing in one of the 25 First Nations communities. The census reveals that - between the years 1994 and 2000 - the average unemployment rate within these communities remained relatively stable at over 60%. During this period, unemployment rates within some of the communities reached as high as 83%. In 2003, the average unemployment rate dropped to 54.1%. While this decrease may be seen as an improvement, unemployment rates still remain unacceptably high: unemployment rates in some communities continue to exceed 75%.

The continued high unemployment rates in SDNS First Nations rural communities is even more sobering when it is recalled that 64.5% of members live off-reserve in urban areas. Given that Table 1 reveals that off-reserve unemployment rates for BC aboriginals are also extremely high, it must not be assumed that those individuals leaving the rural communities are finding employment.

The decreased 2003 unemployment rate cannot be attributed to economic revitalization in the private sector. Nor can it be attributed to an expansion in the resource industries. For example:

- In 2003, 13.1% of the employed labor force was involved in the wild fishery. This figure remained unchanged from 2000.
- In 2003, 10.5% of the employed labor force was involved in forestry. This figure represents a decrease of ~2% from 2000.
- Mining and tourism sectors have experienced very minor changes. In both cases (particularly the tourism sector), there have been continuous expectations for an

¹⁴ Skeena Native Development Society. www.snds.bc.ca/

increase in activities. However, as of 2003, this increased activity had not occurred.

Rather than resulting from a revitalized private sector, the reduction in the unemployment rate is related in part to an expansion in the public sector (band administration etc). Between 2000 and 2003, public sector employment increased by ~2.5% to reach 56.23%. The SDNS census report views this expansion of public sector employment - rather than private sector employment – with some concern. The report indicates that there is a growing body of literature suggesting that a private sector employment base would provide for a more stable and sustainable economy.

C. POTENTIAL OF AQUACULTURE FOR ECONOMIC DEVELOPMENT

In an effort to create vital communities where their people can live and work in healthy environments, some BC coastal First Nations have taken a long and careful look at the potential of aquaculture development to renew the economies of their communities. During their considerations, these First Nations have followed an open, inclusive, transparent and respectful process. They have listened to the guidance of their Elders – and have enlisted the support of scientific and environmental experts – in order to allow the community members to arrive at an informed consensus decision regarding aquacultural development options.

As described by Chief Moses Martin at the Tofino hearings of the Special Committee on Sustainable Aquaculture, many First Nations' discussions of aquacultural development options have been guided by principles that the Nuu-chah-nulth people refer to as *Hishuk-ish ts'awalk* and *iisaak*. Taken together, these principles teach that the cycle of life includes all animate and inanimate forms on earth – including humans. And human activities within this life cycle must be conducted with full respect for all aspects of the cycle.

Those First Nations proceeding with aquaculture development within their traditional territories have arrived at their decision with the utmost respect for these principles. And they are basing all of their aquaculture activities upon these principles. As required by these principles, aquaculture activities are evaluated not only in terms of their potential impact upon the specific First Nation implementing them – but also in terms of their potential impact upon other First Nations who share common resources (e.g. fish stocks).

In addition to potential economic returns, First Nations are pursuing aquaculture development options due to the many compatibilities that exist between aboriginal communities and aquaculture. For example:

- The harvesting of fish for food and cultural purposes is a longstanding practice deeply rooted in aboriginal communities. Aboriginal communities are, therefore, very familiar with seafood resources and already have extensive experience in harvesting. This historical relationship provides an ideal foundation for moving into commercial development.
- Aquaculture provides an opportunity to generate economic activity that can be organized in accordance with family and community groupings that traditionally came together to fish.

Guided by community consensus, BC First Nations are investigating – and/or have initiated - a range of aquaculture options involving both shellfish and finfish culture.

Shellfish Aquaculture

Economic studies have consistently declared that shellfish aquaculture could contribute significantly to the revitalization of BC's rural coastal communities. For example:

- In a 1996 report commissioned by Western Economic Diversification, Coopers and Lybrand predicted that the BC shellfish industry had the potential to grow from a \$12 million to a \$100 million industry over 10 years – and could thereby create 1000 new jobs. Given that the skill sets, lifestyle and location of shellfish aquaculture are compatible with the fishing industry, the increase in employment opportunities projected by Coopers and Lybrand offers very realistic opportunities for displaced First Nations fishers¹⁵.
- A 1998 report by Cormier and Tillapaugh suggested that 2/3 of an indirect job is created for every direct job in the aquaculture industry¹⁶. It has been estimated that 700-1000 direct jobs can already be attributed to the BC shellfish aquaculture industry. Based upon this estimate of direct employment, there are already 450-650 indirect jobs related to shellfish aquaculture. Moreover, the industry expansion projected by Coopers and Lybrand could bring an additional 660 indirect jobs. The nature of the shellfish farming industry is such that this increase in spin off employment will be located in rural coastal communities.
- According to a 2002 report by Praxis Research & Consulting Inc.¹⁷: while automation and improved technology has been increasing in the industry, most shellfish culture is still highly labour intensive. Expansion of the shellfish industry would therefore require a large pool of available workers situated in BC rural coastal communities.
- According to a 2002 report by Kingzett and Salmon: compared to other industries, a higher percentage of each dollar made in shellfish farming goes to jobs. On a percentage basis, the industry spends more on wages than other sectors such as terrestrial agriculture and fishing¹⁸.
- According to a 2002 Ecotrust Canada report¹⁹, shellfish aquaculture within Clayoquot Sound could become a \$2 million industry within 3-5 years.
- In May 2002, the Vancouver Island Economic Developers Association (VIEDA) identified shellfish culture as its highest priority for economic development in rural coastal communities. VIEDA is currently conducting an international marketing campaign to promote BC rural coastal communities as a desirable location for investment in shellfish aquaculture.

¹⁵ Coopers and Lybrand. 1997. Economic Potential of the British Columbia Aquaculture Industry. 49 pp.

¹⁶ Cormier and Tillapaugh. 1998. Canadian Aquaculture Industry Profile and Labour Market Analysis.

¹⁷ Praxis Research & Consulting. 2002. Situational Analysis of the Aquaculture Industry of Canada. 99pp.

¹⁸ Kingzett and Salmon. 2002. First Nations Shellfish Aquaculture Regional Business Strategy: BC Central And Northern Coast. 254pp.

¹⁹ Ecotrust. 2002. Nuuchahnulth Tribal Council Fisheries Shellfish Market Survey. 30pp

To facilitate the achievement of the economic potential identified by the 1996 Coopers and Lybrand report, the Province of BC announced the Shellfish Development Initiative in November 1998. This initiative set a goal of doubling the amount of foreshore Crown land to be made available for shellfish aquaculture. Coastal First Nations were identified as specific target groups to benefit from the initiative. The Province's plan to expand land for shellfish aquaculture included a commitment to enter into agreements with aboriginal communities to reserve sites within their traditional territories for their exclusive future use. To date, the Province has entered into memoranda-of-understanding (MOU) with a significant number of coastal First Nations through Land and Water BC. These MOU's reserve specific foreshore Crown land sites under section 17(1) of the Land Act for the exclusive use of First Nations for future shellfish development. The identified sites are reserved from all other uses for a period of ten years, during which time the First Nation must provide a shellfish development plan for the areas under reserve.

First Nations with completed agreements are now actively engaged in applying for tenures on sites identified. The tenure application process involves the development of shellfish management plans as well as undergoing the process of required referrals to the Department of Fisheries and Oceans and other agencies. If a tenure application is not successful, there is a provision in the MOU's for a substitute site to be added. As such, the MOU's provide First Nations along the coast with the assurance of securing areas within their own traditional territories for the development of shellfish aquaculture.

Of the 104 new tenures issued since 1998, most have gone to First Nations. Table 2 includes those tenures currently held by First Nations as can be identified on the BC Ministry of Agriculture and Lands website (Note: this list changes frequently. As a result, this may not be a complete list).

Table 2. Shellfish aquaculture sites held by First Nations

Licensee	Landfile #	Location
Ahousaht FN (in trust for)	1404219	McKay Island, Ross Passage
Chemainus First Nation	1411101	Ladysmith Harbour
Halalt First Nation	1409807	Halalt Island
Halalt First Nation	1411166	Willy Island
Huu-ay-aht First Nation	1404939	Trevor Channel, Barkley Sound
Huu-ay-aht First Nation	1409398	Numukamis Bay, Barkley Sound
Huu-ay-aht First Nation	1409399	Poett Nook, Numukamis Bay
Ka:yu'k't'h/Che:k'tles7et'h FN	1411050	Cachalot Inlet
Ka:yu'k't'h/Che:k'tles7et'h FN	1411051	Cachalot Inlet
Ka:yu'k't'h/Che:k'tles7et'h FN	1411059	Malksope Inlet
Ka:yu'k't'h/Che:k'tles7et'h FN	1411060	Malksope Inlet
Klahoose First Nation	1411163	Squirrel Cove, Cortes Island

Klahoose First Nation	1411174	Turn Point
Klahoose First Nation	1411164	Gold mine beach
Mowachaht/Muchalaht First Nation	1411045	Bodega Island, Thasis Channel
Mowachaht/Muchalaht First Nation	1411063	King Passage, Muchalat Inlet
Nuchatlaht First Nation	1411094	Espinosa Inlet
Nuchatlaht First Nation	1411097	Espinosa Inlet
Nuchatlaht First Nation	1411098	McBride Bay
Nuu-Chah-Nulth Shellfish Devel Corp	141107	Mosquito Harbour
Nuu-Chah-Nulth Shellfish Devel Corp	1411076	Mosquito Harbour
Penelakut Seafoods Incorporated	1411079	Kuper Island
Penelakut Seafoods Incorporated	1411080	Kuper Island
Penelakut Seafoods Incorporated	1411081	Kuper Island
Pentlatch Seafoods Ltd.	1411091	Unnamed Islet N of Sandy Is. Prov. Park
Pentlatch Seafoods Ltd.	1411104	Gartley Point, Baynes Sound
Pentlatch Seafoods Ltd.	1411103	Coal Beds, Baynes Sound
Pentlatch Seafoods Ltd.	1411093	Base Flat, Baynes Sound
Pentlatch Seafoods Ltd.	1411109	Seal Islets, Denman Island
Snuneymuxw First Nation	1407040	Dodd Narrows
Snuneymuxw First Nation	1407041	Stuart Channel, Mudge Island
Snuneymuxw First Nation	1407176	F/S False Narrows Between Gabriola/Mudge
Snuneymuxw First Nation	1403492	NW Portion of Degnan Bay
Sliammon First Nation	244192	Lund
Sliammon First Nation	1411073	Head of Okeover Inlet
Sliammon First Nation	1411075	Lancelot Inlet
Sliammon First Nation	1411070	Theodosia Inlet
Sliammon First Nation	1411074	Theodosia Inlet
Sliammon First Nation	1411069	West side of Okeover Inlet
Sliammon First Nation	1411071	Thors Cove
Tla-O-Qui-Aht First Nation EDC	1400691	Lagoon Island, Meares Island
Toquaht First Nation (In Trust For)	1411099	Refuge Island, Toquart Bay
Toquaht First Nation (In Trust For)	1411086	Toquart Bay
Tseshah First Nation (In Trust)	1411042 U/F	Equis Beach, Barkley Sound
Uchucklesaht First Nation(In Trust)	1411044	Useless Inlet, Barkley Sound
Uchucklesaht First Nation(In Trust)	1411127	Snug Basin, Uchucklesaht Inlet

Salmon Aquaculture

Salmon is the largest and most important aquaculture sector in BC in terms of both production levels (61,800 tonnes) and farmgate value (\$212.2 million). In 2004, the sector contributed 87% of the total aquaculture harvest and 93% of the value²⁰. The industry generates more than 4,000 jobs throughout the Coast and contributes over \$600 million annually to the BC economy²¹. Over 90% of this aquaculture employment is based in remote communities where other well paying employment opportunities are limited.

Salmon aquaculture is providing First Nations with new opportunities for growth and prosperity. Salmon aquaculture employs members of First Nations in communities such as Campbell River, Klemtu, Alert Bay, Port Hardy, Fort Rupert, Port Edward, Kitkatla, Tofino and surrounding villages in Clayoquot Sound.

²⁰ The 2004 BC Seafood Industry Year in Review. www.agf.gov.bc.ca/fish_stats/pdf/seafood_industry_yir_2004.pdf

²¹ <http://www.greenspirit.com/logbook.cfm?msid=86>

D. FIRST NATIONS INVOLVEMENT IN AQUACULTURE DEVELOPMENT

Case Study - Pentlatch Seafoods Inc., Comox First Nation

Shellfish Aquaculture Initiative

Pentlatch Seafoods Inc. is a shellfish harvesting company that is 100% owned by the Comox First Nation. The incorporation of Pentlatch Seafoods in 2004 was the culmination of the Comox Band's shellfish aquaculture initiative that began in the spring of 1992. Recognizing that the beaches within their tradition territory were prime shellfish habitat, the Comox Band hired IEC International – a marine research and development company – to provide information regarding the potential of shellfish aquaculture to serve as a vehicle for economic development. The information provided by IEC convinced the Band leadership and elders – as well as the majority of band members – that shellfish aquaculture would be economically rewarding – as well as compatible with their culture and traditions.

As one of the first steps of the shellfish aquaculture plan, IEC was requested to implement a 6-week training program for the Band. This training included a mentorship training program for two Band members, Richard Hardy and Katherine Frank. Mr. Hardy and Ms. Frank have now assumed management of Pentlatch – with continued mentorship from IEC. The management team – Mr. Hardy, Ms. Frank and an IEC mentor – report quarterly to a Board of Directors comprised of the Chief, Band Council and Elders.

Strategic Plan

As part of their strategic development plan, the Band initiated the MOU process necessary to secure shellfish aquaculture tenures. Initially, the company sought to establish an MOU for 60 hectares – and later added an additional 20 hectares. Following the establishment of an MOU with the Provincial government, Pentlatch completed the tenure application process. To date, the company has acquired 7 tenures with a total area of 65 hectares.

Pentlatch Seafoods is currently culturing both Manila clams and Pacific oysters. To develop the production capacity of the beaches under tenure, Pentlatch is following a 3-year seeding and husbandry plan. As stipulated in the Manila clam seeding strategy, beaches will be seeded with: 7 million Manila seed in Year 1; 15 million in Year 2; 24 million in Year 3. The Pacific oyster seeding plan is currently entering its third year; 3.5 million oyster seed will be seeded in Year 3.

Case Study cont'd. - Pentlatch Seafoods Inc.,

Revenue Generation

During the 3-year seeding period, the company is able to harvest and sell residual stock. In 2005, revenues from the sale of residual stock totaled \$400,000. Revenues for Jan-May 2006 exceeded \$275,000. Following completion of the seeding/husbandry phase of the business plan, Pentlatch Seafoods anticipates the harvest of Manila clams to approach 500,000 lb annually; at 2004 farmgate prices, this harvest would generate revenues of approximately \$1.1 million.

Pentlatch Seafoods presently employs 20 individuals full time. In addition to creating jobs, the success and expansion of the company has become a great source of pride for Band members.

Environmental Responsibility

Pentlatch Seafoods has taken a proactive role to attaining the highest level of environmental responsibility and food safety. To ensure that water quality on and around shellfish tenure sites is maintained (if not enhanced), the company has implemented an environmental stewardship program. Through its proactive approach to environmental responsibility, Pentlatch Seafoods has fostered good working relationships with the Canadian Food Inspection Agency, Department of Fisheries and Oceans, and Environment Canada - as well as many provincial government agencies.

Case Study: Kitasoo Seafoods / Kitasoo Aquafarms

Having relied for decades on an economy based on the commercial salmon fishery, the Kitasoo First Nation faced extreme economic hardship when the industry collapsed. The Kitasoo dealt with their changing economic circumstance by developing an economic revitalization plan focusing on aquaculture, forestry and tourism.

The leadership of the community has always believed in community decision-making based on consensus. Therefore, the movement to these new sectors involved considerable community discussion and debate. The positive and negative aspects of every development, every proposed logging cutblock, and every significant tenure application was examined - and granted or revoked by the people based on factual information and case study. This inclusive process reviewed developments from an economic, cultural, environmental and social perspective. The community's review of salmon aquaculture took over 1 ½ years to reach consensus.

Kitasoo Seafoods Ltd.

The Kitasoo Band Council formed Kitasoo Seafoods Ltd. in 1985 to construct and operate a new processing plant. This modern processing plant specializes in spawn on kelp, farmed salmon and sea cucumber. The company also manages fishing vessels and commercial fishing licenses for various types of seafood.

Kitasoo Seafoods is managed by the Kitasoo Development Corporation. The Board of Directors of Kitasoo Seafoods Company holds all shares in trust for the Kitasoo Band members. Kitasoo Seafoods, Kitasoo Development Corporation and Kitasoo Aquafarms are all wholly owned and operated by the Kitasoo Band.

The day-to-day operations of Kitasoo Seafoods Company is under the direction of a management team that is supported by a corporate lawyer, an accountant and a bookkeeper. The Kitasoo Development Corporation Directors make all major company decisions such as investments and major capital purchases. The processing plant is capable of processing a large variety of seafood products. Since 1985, it has processed frozen geoducks, sea cucumber, red urchin, wild salmon (fresh and frozen), salmon roe and herring roe on kelp. In September 2000, Kitasoo Seafoods began processing farmed salmon.

The processing plant offers the following services:

- ❑ Custom seafood processing
- ❑ Harvest and transport of seafood
- ❑ Aquaculture support services including freight, anchoring, counting, size grading and color grading
- ❑ Disposal of seafood waste products
- ❑ Leasing of commercial seafood licenses
- ❑ Operation of commercial seafood licenses
- ❑ Crew accommodation

Case Study cont'd. – Kitasoo Seafoods/Kitasoo Aquafarms

The Kitasoo Seafoods Company employs 30 full time equivalent jobs when processing is at full operation. The operation of this plant has been an economic boon to the community – contributing approximately \$1,000,000 in wages to the village economy in 2002. This success has been the result of an intensive training process to bring the crew up to competitive efficiencies of operation.

Kitasoo Seafoods Company is also in the following joint venture with Kitasoo Aquafarms and Marine Harvest Canada:

Kitasoo Aquafarms Ltd.

Kitasoo Aquafarms Ltd. was created to direct the development of a salmon aquaculture industry for the Kitasoo people. From its inception, Kitasoo Aquafarms struggled with economic challenges: in 1993, the farm was forced to suspend operations due to low fish prices and a rapidly changing industry.

To save their enterprise, Kitasoo Aquafarms began to seek a multinational partner with a large capital base and investment potential. In 1997, Kitasoo Aquafarms began negotiations with Nutreco Canada (Marine Harvest Canada), one of the largest salmon and salmon-feed producing companies in the world. In late 1998, Kitasoo Aquafarms signed an agreement with Nutreco: Kitasoo Aquafarms owns the tenures to two fish farm sites in Jackson Pass and provides the labor for the farms; Marine Harvest Canada owns the fish farm equipment. This agreement has created an additional 15 full time equivalent jobs for Kitasoo First Nation members worth \$450,000 in wages per year.

Benefits Of The Kitasoo Seafood / Kitasoo Aquafarms / Marine Harvest Joint Venture

By the spring of 2001, the plant had processed 1,000,000 lbs. of farmed salmon - generating approximately \$260,000 in gross revenues that was primarily paid out as wages to Kitasoo Band member employees. During 2002, the Kitasoo harvested and processed more salmon each week at the band-owned processing plant than was produced in an entire year at the pre-partnership farm. The plant currently processes 1.4 million pounds of farmed salmon each month; at 2004 farmgate prices, this production generates gross revenues of approximately \$2.2 million monthly.

Kitasoo Chief Percy Starr says “The benefits of our partnership with Nutreco have been significant — increased employment, capacity building and a recognition that the salmon farm is an important contributor to the community. Kitasoo Aquafarms Ltd. is an important step towards our economic self sufficiency”.

Of the 100 Kitasoo employed full-time in the community, 47 are employed in salmon farming. The partnership with Nutreco has also brought greater capacity to the community: Nutreco, the Kitasoo and North Island College deliver a customized and accredited six-month aquaculture training program in the community. Twelve Kitasoo

Case Study cont'd. – Kitasoo Seafoods/Kitasoo Aquafarms

people have graduated from the program and are now working on the salmon farms. According to Chief Starr, band members are given opportunities and training to rise to management positions at the farms.

Environmental Sustainability of Joint Venture

The site selection for the farms was subject to an intensive community consultation process to ensure that there would be minimal impacts on traditional food harvesting sites. In addition, the agreement with Nutreco contained strict environmental monitoring requirements and limits on overall development. Chief Starr says “While deeply aware of the need to provide jobs for our people, the Kitasoo also embrace the important environmental, cultural and ecological values of our territory”.

Kitasoo Aquafarms has taken the responsibility for commissioning ongoing environmental monitoring of the two fish sites in Jackson Pass. The Kitasoo Fisheries program provides a trained fisheries diving crew and a professional biologist to do this monitoring. This monitoring is above the standards set by government agencies and is conducted independently of Marine Harvest Canada. The monitoring also includes regular sampling of local seafoods (clams, prawns, sea cucumbers) which are sent to CFIA and Health Canada for contaminant determinations. To date, there have been no significant impacts reported. While Marine Harvest Canada has policies in place to control sea lice in the farm fish stocks, Kitasoo Aquafarms is collaborating with UBC to develop survey and study techniques for an analysis of the sea lice-farmed salmon-wild salmon relationships in the area. Kitasoo Aquafarms is committed to closing down the farm sites if negative impacts are demonstrated.

The Kitasoo have also addressed the environmental concerns regarding the accumulation of fish waste: all fish waste is transported to Vancouver Island to be composted into garden fertilizer.

Conclusion

While the involvement in finfish aquaculture is controversial, the benefits to the Kitasoo First Nation have been considerable. The increase in jobs, (a total of 47 people working full time) has brought not only increased wealth into the village but it has increased self esteem and self confidence in the young Kitasoo workers. For the first time, they feel that they have some options for the future, as many of the skills that they acquire will be transferable to other jobs.

In Focus: Naut'sa mawt Member Nations

As a result of their on-going wild fisheries and aquaculture enterprises, the Naut'sa mawt member nations are significant players in the BC Manila clam industry. Naut'sa mawt Nations currently hold 18 shellfish aquaculture tenures totaling approximately 165 hectares. In 2003, Naut'sa mawt Nations harvested 221,000 kg of cultured Manila clams valued at over \$1.1 million from these tenures. This harvest of farmed Manila clams represented 15% of the total 2003 BC production of farmed Manila clams²².

The Naut'sa mawt member nations have access to new aquaculture sites through the provincial MOU program and the tenure application process. Once the new tenures are approved, annual clam production through increased aquaculture activity could reach 1,350,000 kg with a value of over \$6.8 million. Additional revenues could come from further development of deepwater shellfish culture - in particular Mediterranean (Gallo) mussels, and Pacific oysters.

It has been estimated that expansion of shellfish aquaculture among Naut'sa mawt member nations could provide an additional 100 fulltime jobs for community members²³.

In Focus: Kitkatla First Nation

With an unemployment rate of 90%, the Tsimshian people of Kitkatla were desperately seeking economic development opportunities for their community. Recognizing that their traditional territories offered ideal locations for aquaculture development, the community leaders carefully studied the most current information regarding the potential benefits and costs of aquaculture – as well as available options – to allow them to provide well informed guidance to their community. As a result of this fact-gathering process, salmon farming was identified as the form of aquaculture that offered the greatest potential for the community.

The community therefore entered into discussions with Omega Salmon Group Ltd. (now Pan Fish Canada Ltd.) to explore the potential of collaboratively developing salmon aquaculture within their territory. Over the 4 year discussion period, the Kitkatla people emphasized that they were well aware of the concerns around salmon farming – and that they would not accept the mistakes of past salmon farming practices within their territory. Because of the community's strong commitment to environmental sustainability, Pan Fish has signed a development agreement that meets most of the conditions demanded by the Kitkatla people. This agreement contains an exit clause that the Kitkatla can exercise if their conditions are not met to their satisfaction.

The excitement that the community feels about the economic potential of salmon aquaculture is evident from the amount of interest in North Island College's salmon

²² Kingzett, B.C., K. Bear, and S. Richards. 2006. Developing a Sustainable First Nation Shellfish Culture Industry, Overcoming Capacity and Governance Issues. Blue Revolution Consulting Group Inc. Nanaimo, Canada Prepared for Naut'sa mawt Tribal Council. 89 pp.

²³ Kingzett, B.C., K. Bear, and S. Richards. 2006. Developing a Sustainable First Nation Shellfish Culture Industry, Overcoming Capacity and Governance Issues. Blue Revolution Consulting Group Inc. Nanaimo, Canada Prepared for Naut'sa mawt Tribal Council. 89 pp.

aquaculture training course. In first year that the course was offered, the College received a total of 86 applications for the 10 available spaces within the course! Upon graduation, 8 of the students were immediately hired by Pan Fish as fish farm technicians (note: of the two who were not employed by Pan Fish, one is in Vancouver and the other one is ill). The college has now graduated two additional groups of students. The Kitkatla hope that as many as 100 band members will eventually be employed within their salmon aquaculture industry.

In Focus: First Nations of Central Coast, North Coast and Haida Gwaii²⁴

As indicated in the SDNS Case Study, the First Nations of BC's North Coast face extremely high levels of unemployment. The First Nations of the Central Coast, North Coast and Haida Gwaii are therefore seeking to extend their economic development ambitions beyond the traditional resource industries. After careful study and analysis of economic development possibilities, the North and Central Coast First Nations agreed that shellfish aquaculture would not only provide a high quality, high value, sustainable harvest from the ocean - but it would also provide a significant number of employment opportunities for their people. The jobs created by shellfish aquaculture would offer community members the opportunity to generate an income that would enable them to provide for their families – and reduce the need for community members to seek work elsewhere.

The North and Central Coast First Nations (including the First Nations communities of Wuikinuxv, Heiltsuk, Kitasoo, Haisla, Skidegate, Old Massett, Lax Kw'alaams, Metlakatla, Gitxaala, Gitga'at, Kitselas and Kitsumkalum) are therefore collaborating to develop a First Nations driven regional shellfish industry. Occurring on and in the water, shellfish aquaculture appeals to the knowledge and skills of displaced or marginalized commercial fishermen. The shellfish initiative will therefore allow local individuals to remain economically and culturally tied to the marine environment.

According to the comprehensive business plan developed by the cooperating First Nations, individual farms will be owned and operated independently by each First Nation community. Modeling has shown that economies of scale are achieved in farms of between 6 and 7 production hectares. Assuming 12 farms, the total area required will only encompass 78 hectares in production - which requires 234 hectares minimum of lease area. Each farm is expected to employ 12 people in different positions - from unskilled labour positions to technicians, crew supervisors, site managers and general managers. Additional employment will come from construction, nursery operations, and other associated secondary and service related employment. In addition, the farms will generate approximately 65 jobs in the processing sector. These jobs are outside the salmon season - and therefore will provide an opportunity for year-

²⁴ Central and North Coast Shellfish Aquaculture Business Plan. 2004. Prepared on behalf of the First Nations of the Central and North Coast of British Columbia by Ecotrust Canada, Kingzett Professional Services Ltd., Larry Greba & Associates, TNBC Consulting & Prince Rupert Economic Development Commission

round employment in the plants. Finally, the centralized administrative jobs in accounting, marketing and sales, quality control, etc., will provide another 14 skilled and managerial-level full-time, year-round positions.

Table 3. Potential jobs in North/Central Coast Shellfish Initiative

Sector	F/T Positions
Community Farms	144
Processing	80
Freight	10
Hatchery Production	10
Shellfish Development Corporation Admin.	14
Marketing	4
Intertidal Clam Fishery	20
Total	282

Total projected annual wages and salaries from direct employment creation will approach \$7.5 million. Annual wages are projected to total \$312,000 per farm, for a total of \$3.7 million in farm wages for all 12 communities. Annual transportation wages are estimated at \$225,000 to \$275,000. Annual processing wages total \$1.75 million. Annual administrative salaries total \$.7 million. Annual wages for other potential employment such as hatchery positions, marketing and the intertidal clam fishery can be expected to be \$1.02 million.

In Focus: Tla-o-qui-aht Tribe of the Nuu-chah-nulth First Nation

The Tla-o-qui-aht tribe has 900 members. However, 540 members have been forced to leave the community in search of housing and employment. Despite this huge exodus, the unemployment rate within the community remains at 60%.

To create a community where its members can live and work, the Tla-o-qui-aht entered into an agreement with Creative Salmon Ltd. which allowed the company to establish salmon farms within the Tla-o-qui-aht traditional territories. This agreement is based upon the Nuu-chah-nulth principles of *Hishuk-ish ts'awalk* and *iisaak*. *Hishuk-ish ts'awalk* reflects the Nuu-chah-nulth recognition that all life forms are connected in a circle that includes not only the mountains, the forests on them, the rivers, the fish in them, and the ocean – but also human life as well. The principle of *iisaak* teaches the Nuu-chah-nulth that if they are going to impact anything within that circle of life, they must do it with respect.

Guided by these principles, the Tla-o-qui-aht/Creative Salmon agreement is bringing new economic opportunities to the community – while at the same time honoring the

Nuu-chah-nulth respect for the environment. In 2005, Creative Salmon injected in excess of \$2.3 million into the local economies of Tofino and the surrounding communities of the west coast through wages and benefits. Creative Salmon currently provides direct employment for 44 full-time staff members – of which 20-30% are First Nations people. In addition, Creative Salmon relies on the local supply and service sectors (e.g. processors, harvesters, trucking, diving, vessel maintenance and repairs, fuel suppliers, ship chandlers, salmon farm equipment and suppliers, feed suppliers, etc.) to support its activities. This provides additional jobs and economic opportunities in the local community. In total, the company spent an excess of \$9.6 million on supplies and services in 2005.

Lions Gate Fisheries Ltd. in Tofino is an example of a service company that is directly benefiting from the Tla-o-qui-aht/Creative Salmon agreement – and in turn is bringing further economic benefit to the Tla-o-qui-aht. Once one of many processors that serviced the west coast fishing industry, Lions Gate Fisheries is the only one that has survived the decline of the fishery. Faced with the prospect of economic failure, Lions Gate built a small salmon dressing line in 1986 – and became the first processing plant servicing salmon aquaculture on the west coast. Today, custom processing of Creative Salmon's farmed chinooks represents 80% of Lions Gate's business – and allows Lions Gate to provide 24 year-round jobs. The majority of these jobs are filled by First Nations people from the Tla-o-qui-aht and neighboring Ahousaht bands.

In Focus: Cape Mudge Band - We Wai Kai Nation

The Cape Mudge Band of the We Wai Kai First Nation has an historic association with the culture of shellfish as a means to provide a safe food supply for Band members. The Band is currently investigating opportunities to expand their historic shellfish culture experience into economic development activities in sustainable aquaculture. To guide these development activities, the Band Council is creating a long term plan for aquaculture development and management. This plan calls for initial aquaculture development to be modest in nature - and to focus primarily on shellfish aquaculture. To support this initial phase of development, the Band has enlisted the support of the Aboriginal Aquaculture Association in establishing an MOU with the Province in order to secure future access to their aquatic resources. Band representatives have met with the Lummi Band in Washington State to ensure the availability of shellfish seed once their tenures are approved.

Future aquaculture development opportunities being considered by the Cape Mudge Band include: a depuration/processing facility situated on Quadra Island, sablefish aquaculture, geoduck aquaculture, and ocean ranching.

In Focus: Ahousaht First Nation

In an effort to bring economic revitalization to their community, the Ahousaht First Nation entered into a agreement with Mainstream Canada that permitted the company to establish salmon farms within Ahousaht traditional territory. This agreement places no monetary requirements upon Mainstream – rather it requires the company to: 1) operate in a manner that respects and cares for the environment; and 2) assist the community in developing employment opportunities.

Mainstream has become the community's largest full-time employer. Currently, the company directly employs 140 workers – 42 of these (30%) are First Nations people. In 2006, Mainstream will expense \$50 million in the local area. In addition, the company is encouraging capacity building within the community by encouraging the development of a supply and services sector. This expansion of capacity is creating additional jobs for First Nations people.

In Focus: Sechelt Indian Band

The resource department of the Sechelt Indian Band has been investigating the potential of aquaculture development for many years due to the continued depletion of wild stocks. This investigation has focused on identifying aquaculture activities that are environmentally sustainable. Now satisfied that improved aquacultural practices have been developed to ensure sustainability, the Band is currently considering the potential of various coastal sites for the culture of sablefish and halibut – as well as shellfish.

Other First Nations Involvement

Other First Nations that have also launched aquaculture investigations or initiatives include:

- Sliammon First Nation
- Snuneymuxw First Nation
- Klahoose First Nation
- Nuu-chah-nulth Shellfish Development Corporation (involving 12 Nuu-chah-nulth member Nations)
- Halalt First Nation
- Chemainus First Nation
- The Hul'qumi'num Treaty Group
- Mowachaht/Muchalaht First Nation
- Ucluelet First Nation
- T'Souke First Nation
- Cowichan Tribes

- Tlowitsis Tribe
- Gwa'Sala-Nakwaxda'xw First Nation
- Huu-ay-aht First Nation
- Songhees First Nation
- Ka'yu:'l'h/Che:k:lles7et'h First Nation
- Quatsino First Nation
- Kwakiutl Band Council
- Mamalikulla-Qwe'Qwa'Sot'Em First Nation
- Nanoose First Nation
- Penelakut First Nation

E. SUMMARY: IMPORTANCE OF FIRST NATIONS INVOLVEMENT IN BC AQUACULTURE DEVELOPMENT

Historical Perspective Of Resource Development

The Aboriginal Aquaculture Association – and those First Nations currently exploring the potential of aquaculture – recognize that aquaculture has become a very controversial topic in BC. Increasingly, discussions of aquaculture have evolved into highly polarized debates that pit proponents of the environment against proponents of economic development. Given the often volatile nature of the debate, this polarization of perspectives appears to be simply further fanning its flames – rather than contributing to its resolution.

The origin of the aquaculture controversy can be readily traced to the model of resource development that has been applied to many of Canada's natural resources since the arrival of non-aboriginals. This resource development model emphasized the maximization of short term economic returns - with no regard for long-term environmental sustainability. Because of the vastness of Canada's natural resources, the long-term impacts of this model were not fully recognized for many years. However, it is now clearly evident that this 'exploitation' model of resource usage has often had long term detrimental effects that have limited - or eliminated – the future use of the resource. The current state of the BC salmon fishing industry provides a classic case study for the long-term impact of the exploitation model. As Chief Moses Martin described to the Special Committee on Sustainable Aquaculture at its Tofino meetings, the salmon fishing technology became so highly sophisticated that it became almost impossible to NOT catch fish. The industry became so focused upon maximizing catches (and thus short-term economic gain) that it failed to recognize that the cycle of life requires that sufficient adults must survive and spawn to produce the future generations. Application of the exploitation model to timber and water resources further impacted the ability of salmon to spawn.

An overview of the environment impacts of the salmon fishing industry – as well as the impacts of most of Canada's resource based industries – suggests that it is not resource usage *per se* that creates the problem. **It is the exploitation model that is applied to the resource that creates the problem.** And it is important to note that Canada's aboriginal peoples had little – if any – input into the creation or application of this exploitation model to any of the traditional resource industries.

First Nations Decision Making Process

Many of BC's initial aquacultural initiatives were clearly implemented according to the exploitation model of resource development. However, the development of aquaculture in BC came at a time when the general BC population had become aware of the environmental impacts of the traditional resource industries – and was dedicated to

protecting the remaining natural environment of the province. The real – and perceived – impacts of aquaculture therefore raised the ire of many people in BC – including many First Nations and First Nations individuals. Some of these First Nations continue to reject all forms of aquacultural development in BC. In keeping with the First Nations tradition of respecting freedom of choice, the Aboriginal Aquaculture Association recognizes and honors the decision of those First Nations that choose not to pursue aquacultural development within their traditional territories.

However – in an effort to create vital communities where their people can live and work in healthy environments – some First Nations have taken a long and careful look at the potential of aquaculture development to renew the economies of their communities. During their considerations, these First Nations have followed an open, inclusive, transparent and respectful process. They have listened to the guidance of their Elders – and enlisted the support of scientific and environmental experts – in order to allow the community members to arrive at a consensus decision regarding aquacultural development options.

As described by Chief Moses Martin at the Tofino meeting – and presented in this document – many First Nations discussions of aquacultural development options have been guided by principles that the Nuuchahnulth people refer to as *Hishuk-ish ts'awalk* and *iisaak*. Taken together these principles teach that the cycle of life includes all animate and inanimate forms on earth – including humans. And human activities within this life cycle must be conducted with full respect for all aspects of the cycle.

Those First Nations proceeding with aquaculture development within their traditional territories have arrived at their decision with the utmost respect for these principles. And they are basing all of their aquaculture activities upon these principles. As required by these principles, aquaculture activities are evaluated not only in terms of their potential impact upon the specific First Nation implementing them – but also in terms of their potential impact upon other First Nations who share common resources (e.g. fish stocks).

New Model For Resource Development

The case studies cited in this document clearly demonstrate that the exploitation model of resource development is not the only model that will create jobs and prosperity. First Nations aquaculture development projects – including partnerships with large corporate businesses – reveal that respect for the environment and economic prosperity are NOT mutually exclusive. In fact, they can proceed hand-in-hand. The success of the Kitasoo First Nation project demonstrates that the environment need not be sacrificed in the name of economic gain. By holding firm to their respect for the environment, the Kitasoo people – as well as the Kitkatla people - are teaching their corporate partners about the importance of recognizing the cycle of life – and how a healthy cycle of life will assure *long term* economic viability and productivity. The existence of a clause in the Kitkatla partnership agreement – which allows the Kitkatla to end the agreement due to

environmental violations by its corporate partner – reveals the willingness of corporate partners to recognize the guiding principles of First Nations culture.

As revealed by the Kitasoo case study – as well as the other First Nation partnership agreements described in this submission – First Nations with corporate partners are not victims of corporate capture. They have arrived at their decision based on a sound, open, democratic and inclusive process that invites all stakeholders to participate. The openness of this process was evident in the statements of Chief Clifford White (Kitkatla First Nation) at the June 19 committee hearing meetings. As described by Chief White, as part of the Kitkatla First Nation's negotiation with Pan Fish, a barge was dedicated as a research platform to conduct investigations into potential impacts of their fish farms. An open invitation was extended to ENGO's to participate in this environmental impact research. The failure of any ENGO to accept this offer continues to perplex Kitkatla representatives.

Development of Aquaculture Policy

The involvement of First Nations in aquacultural development is therefore creating a unique – and revolutionary – model for the development of natural resources in BC. To encourage the involvement of First Nations in aquaculture is to encourage all aquaculture stakeholders to recognize and adopt the more balanced, holistic model of First Nations. The fact that a significant proportion of aquaculture development will occur within First Nations' traditional territories will further ensure the development of an environmentally sustainable aquaculture industry in BC. It will ensure that recognition of the environment is not simply empty words and promises – but rather it will become the living, breathing guiding principle of aquaculture development.

During the development of policy that will enable the creation of an environmentally sustainable aquaculture industry, the BC Provincial government will need the guidance of more than scientific experts, policy experts, environmental experts and the non-aboriginal general public. After all, the government had the input of all of these groups during the implementation of policies that supported the exploitation model of resource development. What the government has lacked in its development of previous policies is an openness to receive guidance from BC's First Nations. This lack of openness has undoubtedly contributed to some of the environmental and economic challenges that the Province now faces.

For non-aboriginals, environmental sustainability often becomes a buzzword. For First Nations people, it is a way of life – a principle that has guided their culture for thousands of years. Given that many First Nations are adopting aquacultural development as a primary solution to the economic crises facing their communities – and because BC's aquaculture development will occur within First Nations traditional territories – the Province has an undeniable obligation to allow aquaculture policy development to be guided by a substantial input from those First Nations that are basing the survival of their communities and their cultures upon this industry.