

# OCEAN RANCHING

*NATIVE BROTHERHOOD OF BRITISH COLUMBIA  
(NBBC)*



**A Pre-Feasibility “Business Case” Assessment of a  
British Columbia Ocean Ranching Strategy**

**November 2004**

**Supported by: Western Economic Diversification**

# WHY AN OCEAN RANCHING INITIATIVE?

The NBBC was mandated by a number of coastal First Nations to ask a strategic question:

**'IS OCEAN RANCHING AN UNREALIZED OPPORTUNITY FOR BRITISH COLUMBIA'S COASTAL COMMUNITY DEVELOPMENT?'**

To move forward on this mandate, the NBBC had three initial focus questions:

1. **Why has there never been a comprehensive economic and social benefit/cost assessment of the potential of ocean ranching for all British Columbians?**
2. **Why have ocean ranching and salmon farming not been rigorously compared in terms of their respective impacts on wild fish, clean waters, a viable commercial fishery and healthy coastal communities**
3. **Perhaps most important, the Alaska ocean ranching initiative is solidly grounded upon a mutually beneficial partnership developed between the government and all the vested interests. Why can't this be done in BC?**

# OCEAN RANCHING INITIATIVE CONTEXT

Given their mandate and the focus questions, the NBBC facilitated the review and assessment of ocean ranching:

- As a potential economic generator for coastal community development; and
- As a promising alternative to fish farms in some coastal British Columbia waters

The NBBC recognizes ocean ranching is no panacea, is not for everyone or is not suitable for every location

# PROJECT PURPOSE

The NBBC study was designed to with the following basic purpose in mind:

**“Considering the Alaska experience and from the perspective of the interested parties, is Ocean Ranching a viable and desirable option for British Columbia to which we should devote more time, money and effort - YES or NO?”**

# PROJECT OBJECTIVES

Given the purpose, the specific objectives of the NBBC project at the pre-feasibility level were to:

1. Establish a partnership based Ocean Ranching Project Steering Committee to initially examine all the factors that bear on the feasibility of ocean ranching in BC;
2. Assess the ocean ranching business case; and
3. Develop a partnership based "Ocean Ranching Joint Working Paper."

# WHAT IS OCEAN RANCHING

1. Ocean ranching is enhanced production of salmon done by a partnership of commercial, First Nations, and community interests
2. Ocean ranched salmon can be viewed as 'Free Range' fish that are reared in a controlled, environment, released to "graze" in the wild for most of their lives, then caught for commercial use
3. When the term ocean ranching is used in this presentation, it refers to a community-based system of enhancing fish stocks with the best available scientific knowledge and management practices.
4. By way of comparison, farmed salmon are reared in net pens most of their lives by private sector owned fish farms, then are harvested from these pens for commercial use.

# ALASKA vs BRITISH COLUMBIA

An Ocean Ranching Comparison & Contrast

# THE ALASKAN MODEL

The NBBC mandate was based in part upon an overview assessment of the results to date of the Alaskan ocean ranching model, and its potential applicability to BC

1. The Alaska initiative has resulted in millions more fish for the troll, gillnet, seine and recreational fishing sectors, with 70% or more of the ocean ranched fish designated as common property
2. The program now contributes over 35% of the total Alaska salmon harvest
3. The initiative is specifically tailored to provide direct economic and social benefits to the Alaskan coastal communities and peoples
4. It is managed through non-profit societies that have broadly representative Boards of Directors. The initiative is private sector/business based, and is designed to be financially self sustaining

# **THE ALASKAN MODEL - NSRAA**

**The Northern Southeast Regional Aquaculture Association (NSRAA) is a non-profit organization**

- 1. Over its 22 year history, it has achieved results that have enhanced the viability of fishermen, the salmon resource and the coastal communities within their region**
- 2. Through an innovative partnership with the State of Alaska and largely self-financed by the fishermen (\$22 million over 20 years), they have increased the value of the common property harvest by \$122 million**
- 3. Moreover, they have accomplished this while protecting the integrity of the wild stocks and enhancing community viability**

# THE ALASKAN MODEL- NSRAA

(cont'd)

Dramatic results have been achieved, economically, socially and environmentally by the NSRAA:

1. The \$5+ million in original capital cost has been paid off by the NSRAA.
2. They are meeting the target of 70% of the fish being harvested as a common property resource. Over the past 10 years they have averaged 80-85%.
3. Annual operating costs and some capital improvement are being covered by Cost recovery (10% of the total annual return) and enhancement tax revenues. Five percent of the total return is used for brood stock.
4. They have a \$1.5 million capital reserve set aside.
5. They have a 1.5 year reserve set aside to finance operations.

# THE ALASKAN MODEL- NSRAA

(cont'd)

6. NSRAA has 23 full time employees, and a further 20 to 30 seasonal and part Time employees. Positions include: biologists; fish culturalists; maintenance engineers, hatchery managers, tagging supervisors and general labourers. There are also administrative, accounting and shipping facilitator positions.
7. Of significant importance, the self-imposed tax of \$22 million levied between 1980 and 2000 has yielded a harvest value of \$122 million.
8. They are successfully continuing to access soft money to supplement ongoing expansion under the banner of their mission to maximize fish availability to common property users.
9. They have developed an organizational culture that is based on addressing fishermen and community needs

# APPLICABILITY OF ALASKAN MODEL TO BC?

From the NBBC perspective, it is time to move on this opportunity, to do the homework needed and to get on with enabling a prudent and systematic approach to BC ocean ranching development

1. The initial pre-feasibility review of the Alaskan ocean ranching model has led the NBBC to conclude that ocean ranching has the potential to make a significant contribution to the long term viability of our coastal communities
2. It is important to understand, however, that ocean ranching cannot be considered as THE ONLY solution to the BC fishery woes, but that it could become a very important part of the solution.

# APPLICABILITY TO BC - THE ISSUES

The pre-feasibility assessment of the results of the NSRAA suggest that the Alaskans, based upon their quarter century of experience, have identified and satisfactorily addressed most, if not all, of the key issues and concerns that British Columbians have raised about ocean ranching.

Specific issues of possible concern to British Columbians include, but are not limited to:

- Common Property versus Private Ownership
- Ocean Ranching and First Nations rights
- Impact of Ocean Ranching on Wild Fish Genetics
- Fisheries Management Costs
- Interception of BC Ocean Ranched Fish
- International Cooperation and Leverage

# APPLICABILITY TO BC - THE ISSUES

(cont'd)

- Marketing
- Benefit Streams
- Ocean Carrying Capacity
- Environmental Organizations
- SEP and Existing Hatcheries

# ISSUE REVIEW FRAMEWORK

Given these issues, seven categories were utilized to facilitate review and assessment, and to provide a basis for presenting what was learned and to suggest what should happen next:

1. Awareness and Support
2. Who Pays?
3. First Nations
4. Marketing and Prices
5. Wild Salmon Protection
6. Institutional Context
7. Pilot Projects

# AWARENESS & SUPPORT

## ALASKA

There is a high level of awareness and support

## BC

Ocean ranching is poorly understood

DFO has been opposed to ocean ranching

# WHO PAYS?

## ALASKA

Commercial fishers through a self imposed tax on their salmon catch

Private Non-Profit Associations (PNP's) through cost recovery harvests

The State of Alaska through a revolving loan fund and leased state hatcheries to PNP's

## BC

SEP instead of ocean ranching

SEP is not financially self-sustaining and DFO is significantly reducing their involvement

# WHO PAYS? - BC OPTIONS

1. Royalties or landing taxes
2. First Nation development corporation(s)
3. Private non-profit stakeholder associations
4. For profit joint ventures
5. A revolving loan fund
6. Processor contracts and investments
7. Sport fishing license fees and/or investments
8. Adapting suitable SEP facilities
9. Philanthropic donations

# FIRST NATIONS

## ALASKA

First Nations constitute one half of the rural population

Treaty is mostly settled

First Nations have basically integrated into the commercial fishery

## BC CONSIDERATIONS

A focus on subsistence fishing

Treaty not settled - but there are fishery rights

Separate pilot sales fisheries

Significant involvement in the commercial fishery

Geographically strategically located

Lack of meaningful co-management participation



# MARKETING & PRICES

## ALASKA

There is a shift from a producer to a market driven industry

There is generic marketing of wild & ocean ranched fish

The same fishers and processors access both

Ocean ranching operations are diversified

There is sustainability certification

## BC CONSIDERATIONS

Low Prices for salmon - farmed fish competition

Small scale generic marketing

Lack of certification

Counterproductive anti-fish farm propaganda

Modest quality increases

Operations capital intensive with 10 year horizon

# WILD SALMON PROTECTION

## ALASKA

Ocean ranching is generally viewed as an appropriate activity with certain precautions

In partnership with interested parties, the State has developed and implemented comprehensive "*Private Non-profit Salmon Hatcheries Statutes and Regulations*"

These Regulations include: "*Fish stocks in the state shall be managed consistent with sustained yield of wild fish stocks and may be managed consistent with the sustained yield of enhanced stocks*"

The State supports ocean ranching with laboratories that analyze salmon genetics, salmon diseases, and collect information from salmon that have been specially marked by hatcheries

# WILD SALMON PROTECTION

## BC CONSIDERATIONS

There are several potentially serious wild salmon and environmental protection related issues associated with a “made in BC” ocean ranching initiative that must be taken into consideration and ways found to effectively deal with them.

1. All key stakeholders must be involved, and there must be a high level of support to move forward in a manner that ensures a minimal but acceptable level of risk
2. Government management agencies must be assured that moving forward on ocean ranching in BC can be done in a manner that ensures a minimal but acceptable level of risk
3. The environmental and wild salmon protection elements of an ocean ranching strategy must be placed within a stewardship context that will be supported by First Nations

# WILD SALMON PROTECTION

## BC CONSIDERATIONS (con't)

What are the key questions and issues that must be addressed to secure the required support to move forward in a manner that ensures a minimal but acceptable level of risk associated with a "made in BC" ocean ranching initiative?

To help set a context, the NBBC has prepared a draft Discussion Paper "*Ocean Ranching - Environmental FAQ's (Frequently Asked Questions)*".

# WILD SALMON PROTECTION

## BC CONSIDERATIONS (con't)

There are 18 important questions addressed in the Paper. These include:

1. What are the economic and conservation benefits of ocean ranching?
2. Can ocean ranched fish pass disease to wild salmon?
3. Will ocean ranched fish displace and compete with wild salmon?
4. What about carrying capacity and density dependent competition?
5. Why is genetics so important?
6. How can we regulate ocean ranching, and how can regulations be enforced?
7. Will ocean ranching violate the priority on conservation of wild salmon?

# INSTITUTIONAL CONTEXT

## ALASKA

Alaska had a very solid institutional context to build an ocean ranching program on. Several forces converged in Alaska to bring about ocean ranching in the form it took.

1. State/single jurisdiction over the fishery, and a State enabled program
2. Good prices in the 1970's, combined with low production
3. Co-management of program where commercial fishers invested time and \$
4. A conservation ethic to protect wild salmon that is embedded in statutes and regulations
5. State divested hatcheries
6. ADF&G scientific and information support
7. Surplus oil revenues to invest

# INSTITUTIONAL CONTEXT

## BC CONSIDERATIONS

The historic, legal, jurisdictional and corporate - or “institutional” - context within which a ‘made in BC’ ocean ranching initiative must fit is a serious concern. The question is - could it be done given the ‘real world’?

1. Multiple jurisdictions - e.g. wild salmon (DFO) and salmon aquaculture is jointly managed with the Province
2. First Nation treaty not settled with regard to fisheries
3. DFO Salmonid Enhancement Program did not have ‘cost recovery’ as an original goal
4. DFO has done studies on potential ocean ranching sites
5. The Province (MAFF) is interested in possibly playing a supportive role
6. New federal policies and initiatives such as the Pearse MacRae Report, Wild Salmon Policy and Species at Risk

# WHERE DO WE GO FROM HERE?

The Alaska legislature enabled ocean ranching coast-wide from the beginning by creating a review process and a loan fund. The State then left it up to the initiative the fishers in each region to form non-profit associations and bring specific proposals to the State

## BC CONSIDERATIONS

1. It is not reasonable to expect government to enable ocean ranching coast-wide all at once
2. Given the results of the NBBC pre-feasibility assessment it is more realistic to secure support for experimenting with the concept
3. It is also reasonable to propose that this be done through two or more pilot projects
4. With this in mind, several well crafted proposals could be presented
5. It would be very difficult for DFO not to take them seriously if they had broad stakeholder support, showed the potential to be economically self sustaining, and allowed for the protection of wild salmon

# WHERE DO WE GO FROM HERE?

## PILOT PROJECTS

What are the key elements to a partnership based ocean ranching pilot project approach? They could include:

1. Securing a broad basis of support from stakeholders and government through a consultation and communication strategy
2. Establishing a vision and associated principles
3. Establishing an institutional and statutory context
4. Identifying suitable hatchery and release site locations and bloodstock sources
5. Business plan development that takes into consideration 'who pays', marketing and prices, and environmental and wild salmon protection

# PROJECT CONCLUSIONS

The following conclusions were developed from the NBBC "*B.C. Ocean Ranching Pre-Feasibility Assessment*":

1. YES - more effort should be devoted to moving forward on a 'made in BC' ocean ranching initiative
2. Although the assessment suggests that it is worthwhile to proceed, there are a number of issues and questions that need to be explored in considerably more detail e.g. institutional constraints and marketing
3. The next step should be a partnership based BC ocean ranching feasibility study that would include a pilot project approach

# PROJECT RECOMMENDATIONS

Given the conclusions of the NBBC "*B.C. Ocean Ranching Pre-Feasibility Assessment*", the following recommendations are presented for consideration:

1. Supported by the Ocean Ranching Project Steering Committee, an NBBC facilitated Phase III B.C. Ocean Ranching Consultation and Support Proposal be developed
2. Key elements of this proposal should include, but not be limited to:
  - a) Undertaking the dialogue required to secure formal endorsement of Steering Committee membership at the Board/Executive level;
  - b) Undertaking a series of stakeholder coastal ocean ranching workshops utilizing the project power point presentation as a focus, followed by a Conference;
  - c) Confirming a pilot project approach to address identified issues and concerns; and
  - d) Undertaking dialogue with DFO and the Province to secure the required support

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~END~

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