

# INDUSTRY AND COASTAL COMMUNITIES

## Socioeconomic Review

Prepared for the Nuu-chah-nulth Tribal Council  
by  
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*6.18 Recognizing the important contributions of artisanal and small scale fisheries to employment, income and food security, States should appropriately protect the rights of fishers and fishworkers, particularly those engaged in subsistence, small scale and artisanal fisheries, to a secure and just livelihood, as well as preferential access, where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction.*  
*U.N Code of Conduct for Responsible Fisheries*

## **1 Introduction**

In the summer of 1997, the Area G West Coast Troll fleet faced the re-occurring problem in the harvest of their share of the commercial allowable catch. An Agreement between Industry, First Nations, local communities and the Department was signed (appendix) and the Winter Chinook fishery Pilot project was undertaken.

Included in the project was a commitment to a full review to identify problems, evaluate success and build a framework for an on-going harvest strategy.

This report presents the initial findings of the project. These findings constitute social scientific information that can be used to evaluate and consider potential outcomes of management options for the Chinook Fishery (WCVI).

This report contains conclusions and recommendations. In particular, the findings argue that the WCVI Chinook fishery moving to a full year round (all season) mixed stock fishery, using the information from this review to design fishing around conservation concerns, recognizing level of potential impact and maximizing returns.

Recent changes in the fishery have had a major impact on the fleet and the region and the ability to maintain viability and sustainability. While facing economic crisis, the changes that occurred during the period of the pilot, as identified in this report, are responsive to environmental conditions and have significantly improved the regions troll salmon fishery manageability.

### ***1.1.1 Objectives***

The objective of this review was to ensure that the WCVI Winter Chinook troll fishery:

- ? implements the vision of sustainable development established in Federal and Provincial fisheries policy and legislation
- ? implements the Federal *Oceans Act*, outlining the role of coastal communities in access to marine resources
- ? is in line with the Marine Stewardship Council (London) sustainable certification standards
- ? is in line with the Terms of Reference for the WCVI Aquatic Management Board (ratified by Provincial, Federal, Nuu-chah-nulth and Local governments)
- ? contributes to marketing quality wild salmon products from B.C.

To accomplish this vision and commitment, the objective of this report is to review the social, cultural, and economic dimensions of the fishery over the past three years, in the context of meeting the objectives.

### ***1.1.2 Methods***

Using the complementary approaches to natural resource sociology and economic geography, this report combined archival and field research to collect and analyze data on the social, economic and cultural aspects of the fishery. Archival information included landing data, logbooks, surveys and other published materials. This data was analysed to assess patterns in the regions and communities, industry and fleet, port and processor activities.

This archival information builds a foundation for the field investigations of the Chinook fisheries participants' experience.

The field component of this report entailed extensive ethnographic research including observations in fishing, landing and processing activities; key information interviews with stakeholders, departmental staff and other researchers; public meetings and a survey interview with a random sampling of stakeholders.

## 2 Background

### 1.1.3 Seafood industry in Canada

Although the public perception of Canadian fisheries appears bleak and without a future, the reality is that overall the Canadian seafood sector is stable and growing. While some species, stocks and user groups are being impacted by a variety of changes, others have not only filled the void but are providing greater than ever returns.

- ? Canadian landings declined from 1.6 million tonnes in the 1980's to 861 tonnes in the 1990's,\*
- ? Canadian landed values grew from \$1.4 billion in the late 1980's to \$1.8 billion in the 1990's†
- ? Canadian export values of seafood totaled \$3.2 billion in 1998, up about 6% from 1997 and 11% compared to 1994‡
- ? The wholesale value of all seafood products doubled from 527 million in 1981 to 950 million in 1997§
- ? In 1989, herring and salmon values dominated the BC seafood fisheries accounting for over 72% of total values. Even in 1997 with the complications surrounding the industry, salmon represented 40% of the economic value of BC Fisheries.\*\*
- ? The wholesale value of salmon in the late 1980's has dropped by half by the mid-1990's††

### 1.1.4 Landed Value of Salmon

The Landed Values of Salmon are recorded through the use of sale slips. These values are then used in the pre-season planning of the next season's fishery.

Price/salmon Series	1991			1992			1993			1994 (prelim.)		
	SN	GN	TR	SN	GN	TR	SN	GN	TR	SN	GN	TR
Sockeye	\$7.15	\$7.93	\$11.25	\$12.94	\$13.44	\$16.78	\$7.39	\$7.22	\$11.24	\$16.55	\$13.80	\$22.92
Pink	\$1.15	\$1.20	\$1.72	\$0.95	\$0.90	\$1.74	\$0.96	\$0.91	\$1.62	\$0.85	\$0.95	\$1.84
Chum	\$5.37	\$5.37	\$7.68	\$6.36	\$6.34	\$6.88	\$5.37	\$5.85	\$4.94	\$5.59	\$4.47	\$6.20
Coho	\$3.74	\$4.43	\$7.75	\$4.00	\$4.86	\$7.36	\$4.34	\$4.49	\$5.97	\$4.98	\$5.00	\$9.68
Chinook	\$15.47	\$22.14	\$35.10	\$16.35	\$22.83	\$39.03	\$15.91	\$18.86	\$24.89	\$16.66	\$21.93	\$36.15

1995			1996			1997 (prelim.)			1998 (very prelim.)		
SN	GN	TR	SN	GN	TR	SN	GN	TR	SN	GN	TR

\* CCPFH-2000

† CCPFH-2000

‡ MAFF-2000/ UFAWU/CAW Annual Report 2000

§ BC Ministry of Fisheries, Internal Document-Proposal of a Joint Canada/BC Fisheries Adjustment and Renewal Strategy, 1999

\*\* Gislason 1999/ CCPFH 1999

†† Seafood Industry Report MAFF 1999

\$8.20	\$8.90	\$12.38	\$12.91	\$13.43	\$17.37	\$7.73	\$8.24	\$9.64	15.4	16.25	29
\$0.95	\$0.95	\$1.92	\$0.79	\$0.93	\$1.19	\$0.76	\$0.84	\$1.47	0.75	0.94	1.45
\$4.72	\$4.56	\$5.42	\$4.18	\$4.40	\$5.01	\$3.77	\$3.57	\$4.84	2.76	2.95	4.16
\$4.22	\$4.88	\$7.44	\$4.80	\$4.98	\$7.02	\$4.10	\$4.28	\$8.90	5.59	3.53	0
\$10.78	\$20.25	\$32.60	\$12.54	\$23.88	\$19.05	\$15.20	\$16.51	\$29.40	13.38	21.75	35.93

Source: DFO Policy and Planning 2001

	1992-95 Average			1993-96 Average			1994-97 Average		
	SN	GN	TR	SN	GN	TR	SN	GN	TR
Sockeye	\$11.27	\$10.84	\$15.83	\$11.26	\$10.84	\$15.98	\$11.35	\$11.09	\$15.58
Pink	\$0.93	\$0.93	\$1.78	\$0.89	\$0.94	\$1.65	\$0.84	\$0.92	\$1.61
Chum	\$5.51	\$5.30	\$5.86	\$4.97	\$4.82	\$5.39	\$4.57	\$4.25	\$5.37
Coho	\$4.39	\$4.81	\$7.61	\$4.58	\$4.84	\$7.53	\$4.52	\$4.79	\$8.26
Chinook	\$14.93	\$20.97	\$33.17	\$13.97	\$21.23	\$28.17	\$13.80	\$20.64	\$29.30

Source: DFO Policy and Planning 2001

### 1.1.5 Allocation Values: "Sockeye Equivalents"

Allocation within the commercial fishing industry uses 'sockeye equivalents' as the tool for determining sharing values of different species of different values. Until 1998, sockeye equivalents were based on 4-year averages. Since 1998, the policy is to attempt to use the previous year's average prices. In many cases this is not possible as values have not been compiled before the next seasons planning commences.

Sockeye Equivalents Series																
	1988-91	1989-92	1990-93	1991-94	1992-95	1993-96	1994-97	1991	1992	1993	1994	1995	1996	1997	1998	2001
Sockeye	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1
Pink	0.13	0.13	0.12	0.10	0.10	0.09	0.10	0.15	0.11	0.15	0.06	0.14	0.07	0.12	0.06	0.06
Chum	0.66	0.62	0.64	0.48	0.46	0.42	0.38	0.67	0.51	0.71	0.30	0.54	0.29	0.41	0.20	0.23
Coho	0.63	0.60	0.67	0.62	0.61	0.61	0.70	0.88	0.66	0.74	0.52	0.81	0.51	0.95	0.39	0.51
Chinook	2.86	2.85	2.97	2.66	2.58	2.29	2.54	3.75	2.78	3.00	1.94	3.25	1.71	3.26	2.42	2.01

Source: DFO Policy and Planning 2001

Using sockeye equivalents based on artificially high values for Chinook leads to a lower allocation of other species for the Area G troll Fleet. To date this has not been a serious issue as the Department has not been delivering planned allocations to any commercial fleet on the South Coast. In fisheries Pre-season Planning and Allocation for 2001, the Department used a Chinook Value of \$29.30/ per fish, and a 'sockeye equivalent rate of 2 /1 (every Chinook allocated to Area G was worth two sockeye). The Value has been used in all the modeling of Landed Values in this Review, as the Department has established this figure.

The Area G Troll Fleet and Advisors have pointed out that this value is inaccurate. The average Landed Value for a smaller size Chinook harvested in the Winter Chinook Pilot is closer to \$14.<sup>††</sup>

### 1.1.6 Adjacency Principle and Accessibility

*WHEREAS Canada recognizes that the oceans and their resources offer significant opportunities for economic diversification and the generation of wealth for the benefit of all Canadians, and in particular for coastal communities;*

Canada Oceans Act, 1997

<sup>††</sup> This is the average price from buyers, many participants established higher value direct markets.

Canada has re-affirmed its commitments and goals in fisheries management as signatory to the U.N Code of Conduct on Responsible Fisheries Management and in the passing of the *Oceans Act* (1997). These state that the goal of in management is to ensure that adjacent communities receive economic benefits from the resource around them (Adjacency Principle).

The Chinook Pilot was consistent with these principles. The majority of the fish were landed with the region, using the existing infrastructure. Local businesses such as food stores, gear suppliers, marine ways and repair facilities, all reported positively on the benefits of the Pilot. The fishery was best suited for local resident fishermen who could take advantage of good weather. The fishery encouraged local fishermen to continue to reside in the region.

Additional benefit was the community-facilitated training of observers. This created new employment within the region. Sadly, local administration of the program was curtailed when the local delivery organization lost federal funding and no other administrative capacity existed within the region to continue to run the program

### ***1.1.7 Area-Based Aquatic Management***

About the same time as the Pilot was being implemented in 1998, the governments of Canada, British Columbia, and the Nuu-chah-nulth First Nations agreed to establish a pilot, area-based, aquatic management board for the West Coast of Vancouver Island, the area occupied by the Nuu-chah-nulth ('the management area').

The Board development process involved federal, provincial, Nuu-chah-nulth, and local government representatives working with community and other stakeholders to reach agreement on a terms of reference for the Board. A consensus was reached in October 2000. The proposed terms of reference were subsequently ratified by the governments in February 2001.

The West Coast Vancouver Island Aquatic Management Board (the "Board") is a forum for coastal communities and other persons and bodies affected by aquatic resource management to participate more fully with governments in all aspects of the integrated management of aquatic resources in the management area.

The Board represents an innovative approach to aquatic resource management in Canada. It will focus governments, communities and stakeholders on principle-based, integrated ecosystem management. The Board, and its wider management committee structure, will involve people with an understanding of local aquatic resource issues in management decision-making.

The Terms of Reference address vision, purpose, principles, objectives, structure and membership, process, decision-making, empowerment, responsibilities, geographic scope, rules of operation, administration/organization, funding, relationship to aboriginal rights, Ministers' responsibilities, monitoring and evaluation, links to external processes, and implementation.

The Board's guiding principles include: Hishtukish Ts'awalk (everything is one) and Isaak (respect), conservation, precautionary approach, adaptive management, sustainability, shared

responsibilities, area-based management, participation, full cost accounting, benefits, and flexibility.

#### **1.1.8 Community and Processing Impacts**

The magnitude of the collapse of the salmon fishery in B.C. is well documented, as are the regions most affected, which includes West Coast Vancouver Island.

After years of little to salmon being landed on the West Coast of Vancouver Island, the majority of the landed value of salmon in the region has the recent small harvest of Winter Chinook in the Pilot Project. This economic hardship has added considerable pressure in implementing to the Pilot Project.

Once home to the most significant fishing ports in British Columbia, this region is suffering from economic hardship and loss of access to the aquatic resources at its doorstep.

With the near complete closure of the commercial salmon fishery in the region, there is concern of the ability to maintain infrastructure such as docks, fueling stations and landing and storage facilities. New economic development is expensive, slow and requires capacity. There is concern that an extension of closures of the commercial fleet in the region will jeopardize of and the future rebuilding, and access to, resources.

#### **1.1.9 First Nation Impacts**

The Tribal council of Nuu-chah-nulth has an active participation in the local commercial troll fleet. There is much concern over First<sup>s</sup> Nations access to economic opportunity in fisheries. The Nuu-chah-nulth First Nations are attempting to derive economic benefit from their present participation in a commercial fishery in their local regions.

The Federal Government recently tabled a proposal at the Treaty table that offers access to stocks through commercial fishing opportunity without 'any variations from the conditions of particular commercial fisheries'. In other words, participation in the existing commercial fishery as it exists.

This has been a key point in treaty discussion. The lack of opportunity in the commercial sector in the region has affected the ability to garner support for the Agreement in Principle that was signed in 2001.

#### **1.1.10 Canada/ U.S Pacific Salmon Treaty**

When the Canadian Government ratified a treaty with the U.S. there was an allowable catch in Chinook for the northern region (Queen Charlotte Islands) and WCVI.

In the first year of the treaty, Alaska harvested 45,000 Chinook over the allowable catch and Canada did not harvest its share. This is second year of the new treaty and once again Canada will not harvest it's fair share of the resource under the new abundance based model. Fish available to these remote communities will remain unharvested and that fleet will stay tied to the

dock. This will represent over \$2 million <sup>§§</sup> and up to \$6 million direct landed values lost to these local communities.

On the West Coast of Vancouver Island, there is a harvestable abundance of Chinook, under the new model, available with a new year-end, prior to the end of September. If this fish is not harvested by the 1<sup>st</sup> of October of the given year, Canada, local First Nation, commercial fishers, and communities, forego this economic opportunity.

To date, the U.S. has exceeded their Allowable Catch, while Canada barely harvested any of its allowable share of either Chinook or coho.

### ***1.1.11 Background on the Chinook fishery***

#### *Trolling*

From the beginning, trollers have been the most independent of fishermen. Without the ties of a loan, boat or gear to a company, trollers sold their catch to the buyers of choice. Little has change today; they still get higher prices for their catch, making up in quality for prices that the net sector achieves by quantity. That spirit of independence has stayed with the troll fleet. They own and fish their own boats.

*“They and their catch are the elite of the salmon fishery”\*\*\**

Started by First Nations, they were the first to take up trading of troll salmon along commercial lines, they were joined by other fishermen and it was in 1899 that the troll fishery became regulated as part of the commercial fishery. Skimming lures over rocks fathoms astern; a strong tug indicated a strike. The ‘pull-in’ had to be handled with care so as not to loose the fish. Trolling means picking the right lure the right depth and speed, keeping a look out for sea and weather. Kyuquot was one of the first trolling centres and home to one of the first troller’s cop-operatives. Spring salmon were often fished from November to February.

*‘Four thousand fishermen were trolling off British Columbia shores toward the end of the thirties...’†††*

Although cooperation was key on the ocean, secrecy was key in maintaining your ‘hot spot’ for the season. Finding fish is the first step in making a catch. With the introduction of radios on board, ‘groups’ were formed with elaborate codes. Each member of a group would guard his decoder wheel to decipher messages on the location, species, time of day and other such information. Picking the right lure and working it takes experience. Plastic plugs, spoons, and hootchies, colours (chartreuse with pink dots or cerise with orange), plugs with different action, different sizes, and different occasions. ‘Flashers’ signal their lure to the fish. Different weights for different depths. Trolling poles spread the lines and ‘pigs’ (floats) keep them apart. Halibut and Sablefish that are sometimes attracted to the lines must now be thrown back. Once salmon are landed they are bled and gutted, rinsed and either put on ice or frozen immediately at sea. A

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<sup>§§</sup> in landed value alone, approx. \$6 million or 2.5 times that in added value

<sup>\*\*\*</sup> B.C. Commercial Fishing History, J.& A. Forrester, 1975

<sup>†††</sup> B.C. Commercial Fishing History

boat will carry several tons of flaked ice. The trollers handling of the catch pays off with higher quality product that does not go in cans.

#### *Recent changes in the West Coast Troll Fishery (Area G)*

In August 1997, it became apparent that the remaining 450 Area G troll fleet was having trouble accessing its share of the commercial allocation. Part of this problem was due to the shift from traditional fisheries to targeting sockeye only within a defined region. The Pacific Regional Director signed an agreement with the Nuu-chah-nulth and the West Coast Trollers to find alternate fishing opportunity.

To implement this agreement as soon as possible, a meeting, attended by Ed Lochbaum, Paul Sprout and Wayne Saito of the Department and representatives from West Coast Sustainability, RAMS, Nuu-chah-nulth and Area G started the planning of alternate fishing for Chinook outside the traditional summer month fishery.

This fishery had been in discussion several years already as Canada continued to discuss moving to an abundance based model for Chinook fishing (as was used in Alaska). This fishery was one of the options to find a way of ensuring Canada and the troll fleet harvested their fair share of the commercial catch while doing their utmost to protect stocks of concern.

### **3 Profiles - Community and Region**

British Columbia is a maritime province. The ocean has contributed to the traditions and character of this region's identity. The ocean has also shaped the development of distinct Aboriginal societies. The West Coast of Vancouver Island is a fertile fishing ground. People have harvested the resources of the region since it was formed. Native people have ventured out from shore to fish and hunt mammals for over 18,000 years.

Participation in the fisheries required more and more capital investments that were not available to many of the native residents of the region. The result is that most people living on the West Coast of the Island communities have limited means of participating in fisheries. As the troll fleet is community based, the loss of troll fisheries has a direct impact on the access to communities to the adjacent resources.

#### *1.1.12 Profile of the Region*

The coastal region off the West Coast of Vancouver Island is largely open ocean and home to some of the greatest fisheries resources in the world. Vast and varied schools of fish and sea mammals use this region for breeding or feeding. Many rivers, lakes and streams flow from the Island mountains, providing estuaries and tidal basins.

The coastline is fringed with lush coastal rainforest with record annual rainfalls. Summer fogs and steady breezes are followed by fierce winter storms. There is very little freezing along the shoreline while the mountains that run the length Vancouver Island are snow-peaked throughout the year.

Several towns along the coast have road access. A mountainous road connects the East Side of Vancouver Island with Ucluelet and Tofino, the two largest towns. Ucluelet is still mainly a fishing and logging community while Tofino, bordering on the National Pacific Rim Park, while still a base for some fishing and logging, is expanding into tourism. Activities include whale watching and kayaking.

Port Alberni is situated at the end of Barclay Sound and Alberni Inlet and is the largest center for the region. Other small towns like Gold River have road access but the recent shut down and sale of the mill and most of the town, have left the long-term sustainability of this community in question. Tahsis has some rough road access (weather permitting) and is still mainly a logging base. Coal Harbour and Winter Harbour have long and very rough road access to the top end of Vancouver Island.

Although this region is linked culturally and economically and there are some roads in to the region, none serves as a link within the region. There is no vehicular road that connects these coastal communities on the West Side of the island.

A ferry/ freight service is available and travels through open ocean into the mountainous inlets that make up this region. Most of these communities use the small centers as commercial and transportation hubs. Residents use these outlying communities to purchase goods or use services, such as the post office and medical services, which are not available locally, or to pass through to access road or air transport.

Air travel in floatplanes is available, weather permitting. Transportation difficulties mean that many goods are more expensive than in other regions of the country. In addition, travel between the region is expensive. This means the cost of production in the area may be higher than elsewhere.

The remote and isolated nature of the region limits employment opportunities for most residents to jobs within their communities. Commuting out of the region or even to regional centers on a regular basis is expensive and time consuming, and limited by weather.

The wage economy for the region is concentrated in several distinct areas and sectors. Most goods and services are imported. A typical small community has very limited employment opportunities. Other than the post office, local utilities, retail stores (seasonal), school and other government employment, very little exists. In fact, most of the public service positions are filled from outside the region.

### ***1.1.13 The West Coast Vancouver Island Economy***

There are several Regional Districts that govern this area. Most of these regional districts do not recognize the geographic or cultural make up of the region and tend to cover area across the island, rather than along the coast. The largest and most populated district within the region is the Alberni Clayoquot Regional District. Forestry and fishing have been the backbone of the economy for this region. Forestry has been a major industry within the region but is suffering from changes in regulations and international market pressures. The economic hardship of forestry is being compounded by the cut backs in fishing. Over 15,000 jobs in fishing were lost

in the last few years.<sup>†††</sup> Furthermore, management actions have all but closed most traditional salmon fishing within the region since 1997. Other fisheries, such as hake, have brought some temporary relief to the region, but have not been without problems. From the variety of different indicators reviewed it is apparent that rural coastal regional districts are the worst off regional districts in the Province.

Most seriously Impacted Communities- Gislason 1998

Masset and areas
Prince Rupert and area
Central Coast
<b>Bamfield</b>
<b>Tofino</b>
<b>Ucluelet</b>
Alert Bay
<b>Kyuquot</b>
Ahousat and Area

\* **Bold** indicates communities in the WCVI region

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<sup>†††</sup> Gislason Fishing for Direction 1998

**1.1.14 First Nation Profile**

Most of the region fished in the Winter Chinook pilot is within the traditional territory of the Nuu-chah-nulth Tribal Council. The tribal council is made up of 17 First Nations tribes :

1. Ahousaht
2. Ditidaht
3. Ehattesaht
4. Hesquiaht
5. Hupaꞗasath
6. Huu-ay-aht
7. Ka:'yu:'k't'h'
8. Che:k'tles7et'h'
9. Mowachaht
10. Muchalaht
11. Nuchatlaht
12. Tla-o-qui-aht
13. Toquaht
14. Tseshaht
15. Uchucklesaht
16. Ucluelet
17. Patchedaht

Fishing is very important to Nuu-chah-nulth First Nations and a major factor in Treaty negotiations. The Nuu-chah-nulth Tribal Council, the Provincial and Federal Government have been in treaty negotiations for over 5 years. The cost of negotiations to the Nuu-chah-nulth has been over \$20 million dollars. A significant part of the negotiations has been access to aquatic resources. The Federal Government's position has been that economic opportunity from aquatic resources must come through participation in the existing commercial fishery. At this time, the Nuu-chah-nulth are frustrated by the continual erosion of access and thus benefits, from adjacent and traditional resources. In the recent discussions and development of an Agreement in Principle, some are concerned that policy and access to fishing resources may have been the deal breaker.

Aboriginal communities have a historic dependence on salmon for social, ceremonial, food and economic purposes. There are 3 Aboriginal Fishing Strategy (AFS) Pilot Sales Projects in BC. One of these Pilot Sales Agreements is with the Somass tribe in the region. The Chinook Pilot did not affect any Section 35-Food, social or ceremonial fishing.

**Aboriginal Participation in Commercial Salmon Fisheries in 1998**

Aboriginal Operated	31%
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Source: Gislason 1998

First Nations participation in commercial fisheries has decreased dramatically in the last 5 years. Economic access to salmon for the Nuu-chah-nulth is predominantly through existing commercial licenses.

### Nuu-chah-nulth owned licenses- Area G Troll

1950	230 licences
1969	190 (Davis Plan)
1985	110 (Pacific Salmon Treaty- species limitations)
1996	90 (Mifflin Plan- Restructuring, Area Licensing/ single gear)
1998	48 (Buyback)
1999	31 (Buyback )-
2001	33

Source NEDC / Interviews

Recent fleet reductions from the Federal Government funded buybacks have had a visible effect on the region. While significant numbers of licenses were retired in all community categories, the numbers were disproportionately large in coastal communities distant from major urban centres where the economic impact will be much more severe. Small rural and Aboriginal communities where there are few or no employment alternatives will be especially hard hit.

### Impacts of License Buybacks

Aboriginal Communities-	
Ahousat	75% reduction
Mixed Communities	
Port Alberni	51% reduction
Tofino	75% reduction
Urban Centres	
Vancouver	47% Reduction
Richmond	47% Reduction

Source: Dr Robert Brown Institute for Fisheries Analysis, SFU

### Fishing Job Loss as % of Community Employment

Ahousat	46%
Kyuquot	76%
Provincial Average	1%

Fishing employment in the major urban centers is minimal, whereas fishing is the major contributor to these local First Nations communities. They operate processing facilities and shipyards, and provide services to the fleet. The impact of a decrease in fishing creates major economic and employment losses.

Nuu-chah-nulth have very few salmon net licenses and are predominantly trollers. Nuuchah-nulth fishermen and their Fisheries Committee have been key advisors and participants in the Pilot.

#### ***1.1.15 Fleet Profile***

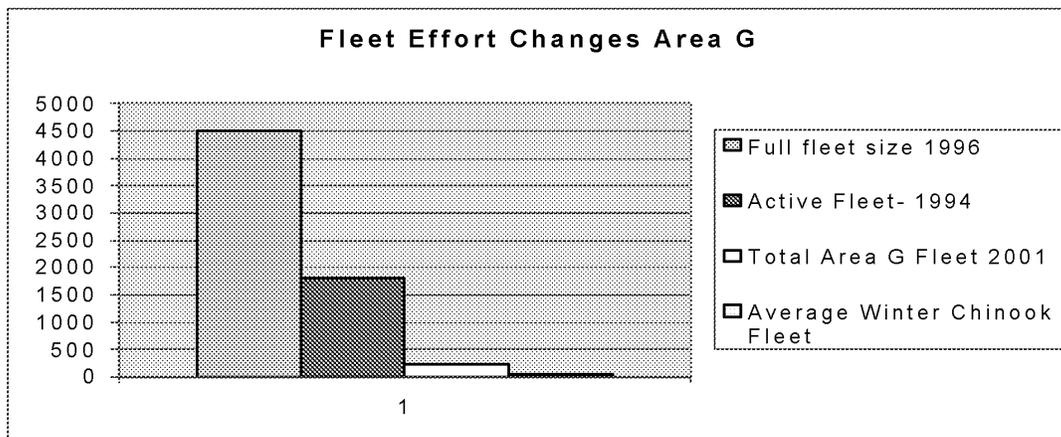
In the 1930's, between 4,000 and 6,000 vessels trolled off the B.C.Coast. In 1996, the Pacific Fisheries Restructuring Program made significant changes to the traditional salmon fishery in BC. Key elements of the Program included: single gear licensing, area licensing, and fleet reduction.

### Single Gear Licensing

Until 1996, any vessel with a commercial “A” salmon license could fish using one of a combination of gears. A seine license could seine, troll or gillnet, while troll and gillnet license could do either, but were not allowed to use seine gear. This meant thousands of vessels could at any given time participate in a fishery using whatever gear DFO specified for any fishery.

### Area Licensing

Under a new regime of Area Licensing- Area G- is a designated fishing ‘area’. Most of this newly defined fishing area is within the traditional Nuu-chah-nulth territory. Vessels must be specifically licensed to fish this area. In 1992, the troll fleet actively fishing off the West Coast of Vancouver Island comprised of over 1,800 vessels. Given the effects of the program and Federal Policy, the maximum size of the troll fishery is now 234 vessels. *At no point in the last few years has over ½ of the fleet been actively involved in a fishery at any given time.*



### Fleet Reduction- Area G 1994- 2001

Troll Effort in the WCVI Region has been reduced from a potential of over 4,000 vessels to an average participation in the Winter Chinook Fishery of 37 vessels. The active fishing fleet during the Pilot has been less than 1% of the potential fleet size only 5 years ago.

The remaining troll effort in Area G is very dramatically reduced. Today this does not seem to have taken into account in determining fishing opportunity and assessing levels of risk.

### The Remaining Fleet

The Remaining Fleet is made up of good quality vessels, well-experienced skippers who on average had the higher incomes from salmon fishing (pre- 1996). Those who remained in the fishery did so with an understanding that the average income would increase as there would be less competition.

While some skippers have been fishing for 60 years, the average number of years of experience is 26 years. A major concern is the lack of youth participation in the fishery, and the ability to pass on Local Ecological Knowledge and Traditional Knowledge (LEK/TEK).

The decrease in fishing time has changed the number of new entrants into the fishery. Many of the fishermen are nearing retirement age. Skills and experience are not being acquired and passed down in the traditional manner. The B.C. Council of Professional Harvesters and the National Council are working with Industry Canada to develop and implement training criteria and programs. Most of the remaining skippers certified as professional (Level 2 under the B.C. Council), are associated with the National Council (CCPFH) and the World Fisheries Federation.

### *Dependence on Salmon*

The concept of fishery dependence is important to understanding the potential impact of both environmental and economic variability and of fisheries regulations. The seasonality and variability year to year of some fisheries would lead most fishermen to participate in a multiple of fisheries to manage risk and uncertainty. With some variability, the troll fishery was a very reliable source of revenue until recently. The license (A) included the right to fish for a variety of other stocks (Schedule 11); this provided a buffer for years of low return without placing continual additional stress on these stocks.

In recent years, the Federal government has removed many of these opportunities from the (A) License and has implemented single species licensing on these stocks. In many cases, this has been in response to some license holders specifically targeting these stocks to record landings and benefit from a 'quota' system that favours those with 'historical landings'

The loss of access to these stocks without substantial capital outlay, reduces the ability to diversify in years of low salmon abundances without incurring significant debt. This is also creating a situation where many licenses in these fisheries are now actively being brokered and leased, undermining the owner/ operator small boat fleet viability and creating a major obstacle in the intergenerational transfer of licenses.

The troll fleet is still primarily owner/ operator with very few leases of licenses outside family operations. The troll fleet is still predominantly dependent on the (A) and attached Schedule 11 license. The nature and extent of the dependence on salmon differs; many skippers were reluctant to discuss in detail their incomes, but were willing to discuss the relative dependence on salmon. They reported that income from 'good' years was often invested outside the fishery, and this complemented staying in the industry and the ability to smooth over the variability of El Niño's and other such events. When asked, the majority reported that salmon was their most important source of income and that their landing has decreased due to management regulation rather than scarcity or market conditions.

*Existing Investment in the Industry- Fleet Infrastructure (Area G)*

Value of Remaining Area G Fleet

Vessel Values

Average value of vessels	\$120,000
<u>Value of vessels in Fleet =</u>	<u>\$29,160,000</u>

License Values

Average Value of License	\$160,000
<u>Value of Licenses Area G</u>	<u>\$38,880,000</u>

Value of Vessels and Licenses    \$68,040,000

Sources: interviews, brokers, DFO documents on economic value of the fleet 1996 (Gislason), DFO Nisgaa Settlements

There also exists a considerable investment in fishing infrastructure (ice plants, fuel docks, shipyards, suppliers, transport...) and fishing vessels in the region that need fish to be maintained and generate profits.

*Fleet Home Ports*

Fleet Home Ports

North Island (north of Nanaimo)	54 or	22%
South Island (Nanaimo south)	68 or	28%
WCVI (Port Alberni Sooke incl)	65 or	27%
Gulf Islands	7 or	2%
Mainland BC	38 or	15%
Other	5 or	2%

Source: DFO Licensing

- ? 83% of the Area G Fleet is Home- Ported (based) on Vancouver Island.
- ? Over 70% of the Area G Fleet is Rural based compared to the average 40% (source Gislason / SFU).

Unlike many other fleets, the Area G troll fleet is rural based. Dollars generated by this sector are multiplied within the region.

*Financial Profile of Area G Trollers*

Fishermen have indicated that the cost of maintaining their investment is not an option. They noted that costs put off to the future end up costing more in the long run, decrease harvest potential and are a safety risk.

<b>Financial Profile of Area G Troll Fleet</b>			
		<b>1994</b>	<b>2000</b>
Number of Vessels		1,138	243
# of days fished		78 days	12 days
Gross Income (L.V.)		73,710,000	633,000
Costs			
	Fuel	3,300	3,760
	Crew Share	21%	15%
	Food & other Trip expenses	2,760	3,760
	Gear Repairs	450	510*
	Gear Purchases	3,140	3,080
	Moorage	710	910
	Repairs & Maintenance	3,210	3,650*
	Legal/ Acct.	670	760
	License	870	990
	Insurance	1,560	1,790
	Other Goods & Services	1,117	1,400
	Interest	1,333	2,500
	<i>subtotal</i>	<i>19,120</i>	<i>23,110</i>
Average Income		64,770	2,752

Sources: Personal interviews/ DFO Cost/ Earning Survey/ ARA Reports/ Revenue Canada

\* Based on a 38 wooden foot ice Boat- Salmon fishing only.

In the 1980's and as demonstrated in 1994, a West Coast Troller was economically viable. In 1996, the Federal Government funded and implemented the Pacific Revitalization Plan and the restructuring of the Salmon industry with the stated goal of improving the industries economic viability. Since 1996, the average income to the WCVI troller has been less than 50% of pre-implementation of the Plan. Some annual variation in quantity and price is regular in the salmon industry, but it is unusual to have back to back poor years in the manner seen recently.

#### *Profile and history of WCVI Aquatic Management Board*

For thousands of years the Nuu-chah-nulth people of the West Coast of Vancouver Island (WCVI) have lived in relationship with the resources in their environment. Nuu-chah-nulth communities were sustained primarily by their intricate dependence on the sea resources, from which they drew sustenance, cultural, and economic fulfillment. Over the past two hundred years other people have settled in Nuu-chah-nulth Ha-houlthee (territories), developing a similar shared dependence on the sea resources of the area.

Today, the WCVI is home to about 40,000 people, most living adjacent to rivers and the ocean. In the past 30 years there have been significant changes to the fisheries that sustained WCVI

communities. Many species are less abundant now, and Nuu-chah-nulth and WCVI communities' access to aquatic resources has been severely eroded.

In the late 1980's the Nuu-chah-nulth Tribal Council began to examine how community-based management — giving local people a greater say in how local resources are managed — might rebuild WCVI aquatic resources and restore WCVI participation in fisheries. Nuu-chah-nulth leaders joined academics looking at other areas, such as Japan and Alaska, where local people were using community-based management to achieve similar objectives.

Nuu-chah-nulth First Nations entered into the BC treaty process in 1994. Interim arrangements associated with the treaty process attempt to provide protection for First Nations interests while treaty negotiations are taking place. A delegation of Nuu-chah-nulth Ha'wiih (Hereditary Chiefs) and leaders met with the Department of Fisheries and Oceans Canada (DFO) Regional Director General in October 1996 to outline their interest in establishing a working co-management relationship with DFO to address their concerns of diminishing involvement in WCVI fisheries.

In January 1997, the Nuu-chah-nulth formally presented their Interim Measures Agreement proposal to the Federal and Provincial governments through the BC treaty process.

During the same period, other WCVI community and fishing interests were suffering similar impacts. Nuu-chah-nulth fishermen and leaders began meeting with their neighbours to discuss their common plight. They agreed that they needed to work together to affect positive change, and formed the West Coast Sustainability Association, a locally based, native/non-native association in 1995.

The Regional Aquatic Management Society was created to help establish a Regional Aquatic Management Board for the West Coast of Vancouver Island.

The Federal, Provincial, Nuu-chah-nulth, and local governments agreed to negotiate a board, assisted by organizations affected by WCVI aquatic resource management and with an interest in establishing a management board.

Concurrent with the community-based WCVI initiative, a number of significant provincial and national policy developments recognized the fundamental importance of including substantive local input to the integrated management of aquatic resources.

1. In the “Canada – British Columbia Agreement on the Management of Pacific Salmon Fishery Issues” (1997), the Prime Minister and Premier continued their support for the principles of “bringing decision-making closer to clients and stakeholders”, and “creating effective partnerships to better manage the fishery”.

2. The Canada Oceans Act (1997) states, “Whereas Canada recognizes that the oceans and their resources offer significant opportunities for economic diversification and generation of wealth for the benefit of all Canadians, and in particular coastal communities. ... In exercising the powers and performing the duties and functions assigned to the Minister by this Act, the Minister (a) shall cooperate with ... affected aboriginal organizations, coastal communities and other persons or bodies ...”

3. In the BC Fisheries Strategy (1997), Fisheries Minister Corky Evans states “We need a solution that will bring both consensus among all sectors of the industry, and decisionmaking power closer to those most affected.”

4. In 1998, DFO Minister Anderson released “A New Direction for Canada’s Pacific Salmon Fisheries”. Principle 11 states that “Government and stakeholders will together be responsible and accountable for sustainable fisheries”. Principle 12 states that “Enhanced community, regional and sector wide input to decision making will be pursued through a structured management and advisory board system”. The explanation of this principle states “In the future, many decisions related to fisheries resources and their habitat could be made through a series of regional boards. These boards could cover a geographic area containing one or more watersheds. The scope of these boards is intended to cover a variety of issues.”

5. On February 17, 1998, the BC Aboriginal Fisheries Commission unanimously adopted a resolution at their Annual General Meeting supporting the Nuu-chah-nulth / WCVI Regional Aquatic Management Board initiative.

6. Samuel Toy, Advisor to Minister Anderson on inter-sectoral allocation issues, recommended in his report to the Minister in 1998, “You should create a new initiative the object of which is the empowering of regional management boards throughout the entire province, democratically elected, with an overarching independent tribunal. The purpose of these new creations will be to formulate advice and undertake local conservation and habitat enhancement programs, coordinate and present preseason fishing plans, assist with in-season management and ... inter- and intra-sectoral allocations and or reallocations by an independent overarching tribunal.”

7. The National Roundtable on the Environment and Economy produced “Sustainable Strategies for Oceans: A Co-Management Guide” in 1998 that recommended “Establishing a series of pilot co-management arrangements in cooperation with various users groups through departments such as the Department of Fisheries and Oceans”.

8. The government of British Columbia established Fisheries Renewal British Columbia in 1998. Its mandate includes “providing assistance and advice to government on how best to co-ordinate and deliver fisheries-related programs.” The Fisheries Renewal strategic plan identifies one of its key principles as: “Partnerships ...

?community-based involvement is essential in everything we do

?cooperative partnerships based on shared objectives are crucial to our success

?the basis for successful partnerships is mutual respect and integrity.”

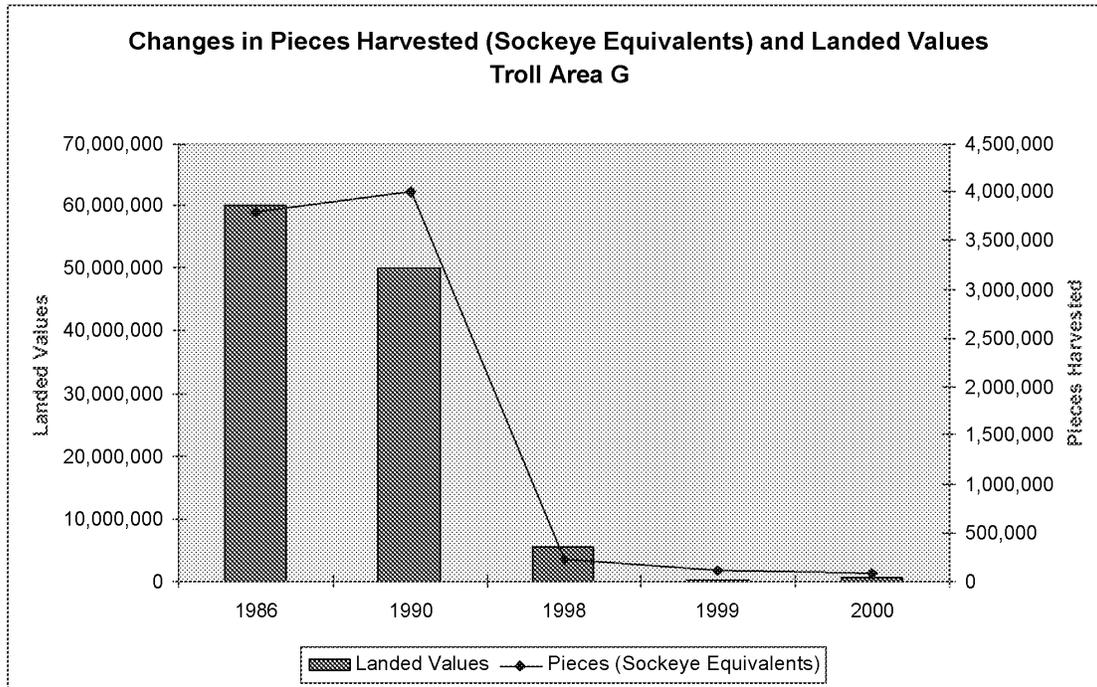
These policy developments, combined with a groundswell of community support for local participation in aquatic resource management, provided the impetus for the creation of the West Coast Vancouver Island Aquatic Management Board. The Board provides a unique forum for the coastal communities and other persons and bodies affected by aquatic resource management to participate more fully with governments in all aspects of the integrated management of aquatic resources in the management area.

## 4 The Fishery

### 1.1.16 Pre season Forecast of Catch

Using the Preseason Planning forecast and allocation model for 2000, and an extremely conservative and precautionary forecast, the anticipated Landed Value (2000) for the Area G troll Fleet was over \$2.6 million. The actual total delivered (harvested) Landed Value(2000) was \$633,000. Fishermen invested in the fishery on the anticipated preseason forecast.

Decrease in Landings and Landed Values 1986 Coastwide Troll-/ 2000- WCVI Area G.  
 Importance of the Chinook harvest to the historical landings of the West Coast Vancouver Island Troll Fleet



Source: DFO

### Average Landed Values to Individual Fishers West Coast Troll Earnings / Expenses- Area G Troll 1986- 2000

Year	Total Landed Value per license	Annual Operating Cost*
1986	\$50,000 to \$100,000	
1984	\$ 64,770	
1998	\$ 22,541	\$23,310.
1999	\$ 926	\$23,310.
2000	\$ 2,573	\$23,310.

\*Does not include crew share (15% L.V.) (Earnings include all harvest/ all species for the year). Based on DFO Allocation Model/ Sockeye Equivalent , DFO Cost /Earning Survey of Vessels, Personal Interviews.

The regulatory changes to the fishery have undermined the return on investments for the Troll fleet in WCVI over the last 5 years. The situation for many other fishers in other gear salmon types and areas is similar.

In 1999, the Commercial fleet on the South Coast had some of the lowest incomes recorded since 1877.

### **1.1.17 Weather**

Traditional Chinook fishing takes place in the peak of the summer months when weather is predictable, mild and the days are long. The anomaly of weather and the impact on harvest rate has been demonstrated in the winter fishery. The weather in 1999 allowed for less 'down days' and a higher CPUE. Some of the fishermen that fished under scientific licenses during the Pilot spent more days hiding from weather than actually fishing. This caused the vessels to run out of supplies before even having a line in the water.

*Marine weather-issued by Environment Canada for October 7/2001*

*Opening date of Fall Fishery*

*West Coast Vancouver Island North. Storm warning continued. Winds southeast 30 to gales 40 knots rising to gales 45 to Storm force 55 early this morning. Winds shifting to west 25 to gales 35 this afternoon. Rain easing to showers this afternoon. Seas 2 metres building to 5 to 6 metres this morning. Outlook. Strong westerlies backing to strong southeast. West Coast Vancouver Island South. Gale warning continued. Winds southeast 15 to 20 knots rising to 30 this morning except gales 40 north of Estevan Point. Winds veering to northwest 20 late this afternoon. Rain easing to showers this evening. Seas 2 metres building to 3 to 4 metres north of Estevan Point This afternoon. Outlook. Strong northwest winds backing to moderate southeast.*

Average winds in the traditional summer fishing season are 16 kilometers whereas wind speeds in November reach 135 kilometers.<sup>§§§</sup> Winter storms hit fast and hard. A summer storm usually passes and seas abate whereas Winter storms usually have short periods between frontal systems. Seas are often already dangerously high when a new storm approaches, increasing the risk to vessel and crew. Shorter days and more frequent poor weather reduces 'available fishing days.

### **1.1.18 Markets**

The institutional structure of the fishery entails a complex relationship between fishermen and the markets to which they deliver their catch. It is assumed that fishermen will find a market for their fish, and that the market will expand indefinitely to accommodate increased catches (though prices paid to the fishermen may also fall when supply increases). This approach, which is the basis for most fishery regulation, oversimplifies the reality in most fisheries.

Attention to the institutional structure of the fishery gives a different basis to fishery regulations than the present day regulations of fisheries.

Commercial fisheries include intermediaries between the fishermen and the consumer. The structure and function of the intermediaries is strongly affected by the behaviour of the fishery

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<sup>§§§</sup> Coast guard/ Environment Canada

and has strong affect on the economic and social structures it services. The intermediaries are important as market chains between producers (fishermen) and consumer due to the distance and number of transaction. The troll salmon fishery has been a ‘long chain’ market: The skipper sells to a buyer who sells to a broker who sells it to an exporter who sells it to an importer who sells it into a foreign domestic market and the consumer.

Our interviews identified a strong pattern of market fidelity between the fleet and the buyers.

The traditional markets for all salmon have been severely impacted by lack of product in the last few years . Management policy has resulted in the loss of valuable fishing opportunity and resulted in increased ESSR (excess to spawn- allowable catch that was not harvested). ESSR product is on the market at much poorer quality and 3% of the value. The growth of the farmed salmon production has benefited from Federal support and has benefited from the lack of wild salmon competition. The traditional wild salmon market has not been in a position to deliver product and the void has been filled with farmed product.

The Troll sector has always received a higher price for a better quality product.

The size limit has been altered and the fleet is harvesting smaller fish than previously. Not enough work has been done to evaluate the quality of the different size of fish and what the optimal size for the market would be. The concern over the quality and consistency of smaller Chinook having a longer term impact on the market has not been taken seriously by the Department in it setting of harvest size limits, even though this issue has consistently been raised by participants.

Characteristics of Chinook during winter fishery	
Average Chinook Size 1982-1996	16. 72 lb.
Average Chinook of WCVI Winter Chinook	8.7 lb.
Source: DFO	

In general, winter chinook are:

- ? Smaller in average size ( new markets required)
- ? Different Texture and Quality (depending on size/age)
- ? More varied in flesh colour (larger proportion of white and marbled- particularly in September/October)
- ? Landed in smaller quantities at a time (increase shipping handling costs)

Along with the weather and market place problems, the management of the fishery has undermined the potential value of Winter Chinook.

Marketing initiatives associated with the pilot have collapsed due to the management actions of the Department. It is impossible to inform the market of the quality and benefits of the Winter Chinook Fishery without approximately 5 weeks notice, as is provided in similar fisheries in the U.S.: example.

**Buyer's Alert:** *Columbia River Chinook: Columbia River spring chinook salmon will likely be available to buyers beginning in February.*

*The Washington Fish and Wildlife Commission on Friday adopted a plan that would open the commercial fishery in February. The plan now needs to be finalized with managers in Oregon.*

*Spring chinook are the premier salmon in the Columbia River. Upper Columbia runs bottomed out at 12,000 fish in 1995, but bounced back in 2001 to a record-high 417,000. Another huge run -- in the 300,000 range -- is anticipated in 2002.*

*The WAVE- Market information web site December 11, 2001*

Lack of certainty on fishing opportunity, short notice announcements of openings, delays and shutdowns have plagued the fishery to date.

Marketing opportunity was presented and product has been marketed during the course of the Pilot, such as:

- ? Pre-sale of Chinook and advertising campaign in Chicago for Wild Winter Chinook for a convention (March 2000) at the Pan-Pacific (short notice cancellation by DFO undermined this initiative and damage reputation as *unreliable*)
- ? Buyers and distributor set to take on a major marketing initiative in Spring of 2001- needed 5 weeks notice (Distributor waited to the last minute then bought from Alaska when DFO could not commit to the opening date).
- ? Buyer ready to take product on Oct 1st 2001, promotions ready- (fishery opening delayed without adequate notice of opening- buyer pulls investment)

The only market opportunity left for the fishery was the local or 'short market chain' for fresh (not frozen) wild product. Rather than attempt to create a market presence and continue to get a 'black eye' due to the inability to deliver;- almost all marketing initiatives have been put on hold until after the Review and a Strategic Plan are developed.

An advisory group, including representation from the BC Salmon Marketing Council, the Seafood Sector Council, the fleet, local community, Nuu-chah-nulth Economic Development, buyers and distributors, has been discussing the potential for increasing the value of this fishery.

A 'Value Chain' Workshop is planned and the BC Salmon Marketing Workshop is preparing a marketing brochure and presentation. Ongoing local market projects with key restaurants and caterers continue despite the difficulty in ensuring product availability.

Marketing (and the development of new markets) is not the work of the fishermen; their task is to catch the fish. Only a few outfits buy troll salmon. For most of these firms, salmon was their main product line. These buyers/ wholesalers/ brokers have been impacted by the recent changes in licensing and management and may not be in the position to expand, advertise and sell their product into a very difficult market. To date, these buyers have continued to receive, transport and store to assist in the development of the fishery, at times at a loss.

A significant failure in the Pilot has been the inability to move forward on marketing opportunities. Until the Department is willing to develop a strategic plan, any further to attempt to promote or increase the value of this product will continue to be undermined. In fact, there is concern that the Pilot may in fact have a negative effect on the historical reputation for quality that existed for B.C.Chinook.

The changes in the size limit during the pilot has meant that many of the fish harvested are now 2 to 3 year olds rather than 4 and 5 year olds (particularly during certain months.) The Troll Industry Advisors have recommended against taking these smaller and younger fish, but the Department over-ruled.

The texture and quality of these immature fish is considerably different and needed to be addressed as part of the fishery planning process.

Marketing cannot move forward until there is a commitment and strategic framework agreed to.

### ***1.1.19 Management***

#### *Management Objectives*

Under the Federal *Fisheries Act*, the Department of Fisheries and Oceans Canada has the authority to manage all BC Salmon Fisheries.

The *Fisheries Act* provides the legislated authority for management and regulation of the fishery. The *Canada Oceans Act* is founded on the principles of sustainable development and integrated resource management. The Act is to foster stewardship of ocean resources and is to set the stage for implementation of an Ocean Management Strategy that unifies and integrates governments, agencies, branches and stakeholders.

In keeping with the new directions outlined in the *Oceans Act*, the WCVI region has been proactive in moving forward on a co-management program. After years of negotiations, the four levels of Government (Federal, Provincial, Nuu-chah-nulth and Local) have signed off on the formation of an Aquatic Management Board.

As signatory to the international convention on biological Diversity, Canada is committed to the sustainable use of biological resources. This includes the diversity within species and ecosystems. Canada is also a signatory to the U.N Code of Conduct for Responsible Fisheries. Recent New Directions for Canada's Pacific Salmon Fisheries outline several Guiding Principles:

- ? Conservation
- ? Precautionary Approach
- ? Net Gain in productive Capacity in habitat
- ? Ecological approach will guide fisheries and ocean management
- ? Selective Fishing

### ***1.1.20 Precautionary Approach***

In managing salmon stocks in Canada, we do not have the benefit of either a Wild Salmon Policy or the implementation of a Species at Risk Act.

In the US, the Endangered Species Act (ESA) defines acceptable levels of exploitation on specific species stock groups when Limit or Target Reference Points are encountered (LRP/TRP). For most fisheries this will force a reduction in exploitation in existing fisheries. *The most extreme reduction in exploitation is usually 10%.*

The Federal Government is now starting consultations and discussions on the Precautionary approach guiding principles. In the absence of defined guidelines, there are international agreements that state that we will manage our fisheries with a 'Precautionary Approach'.

Without the guidelines on implementation or a comprehensive rebuilding strategy incorporated into a plan, the results of the management actions have so far been in response to a crisis. The impact of 'knee jerk reactions' may provide short-term relief for a specific stock but often result in unnecessary costs.

#### *Precautionary approach and undo hardship - Case: Coho: Zero Mortality*

Unlike the management model agreed to under the Canada/U.S Treaty in 1998, single species stock management now drives domestic management.

Given all the volatility of the environmental uncertainty of the 1990's and the ongoing disputes over salmon rights, then Minister of Fisheries David Anderson determined that we would manage to protect weak stocks of coho. He announced a 'zero mortality' management regime (1998).

As a zero mortality regime would have meant shutting down all fisheries, zero was interpreted as 'as close to zero as possible'. Political decisions were taken on 'acceptable levels of risk' and certain fisheries were permitted to go ahead. In the First year of the 'zero mortality' regime, the total exploitation by Canada on Thompson coho was reduced to below 5%. In 2000, using the hatchery stock from Robertson creek as the indicator, the West Coast Vancouver Island Chinook were determined to be in trouble. The Department determined to restrict fisheries and maintained the same exploitation rate for the following year.

To maintain an exploitation rate of below 5% on Upper Fraser (Thompson) coho meant dramatic closures in certain fisheries. In 2001, the management regime altered to allow some flexibility in allowing fisheries. The Department allocated coho directed catch to the sport sector, while still closing commercial fisheries for lack of allowable bycatch.

Fisheries that have been impacted or shut down completely include:

<i>Coho Fisheries</i>	1998	<i>All coho directed fisheries closed.</i>
	1999	<i>"</i>
	2000	<i>All but a few selected marked fin hatchery coho sport fisheries.</i>
	2001	<i>All but a few selected marked fin hatchery coho sport fisheries and small terminal local stock sport fisheries.</i>
<i>Sockeye /Pinks</i>	1998	<i>Restrictions to the Gulf of Georgia when stocks present. Complete closure of Juan de Fuca and West Coast Vancouver Island.</i>
	1999	<i>Shut down of any fishery that may intercept a higher abundance of coho. Complete closure of Juan de Fuca and West Coast Vancouver Island.</i>
	2000	<i>Shut down of any fishery that may intercept a higher abundance of coho. Complete closure of Juan de Fuca and West Coast Vancouver Island.</i>
	2001	<i>Shut down of any fishery that may intercept higher abundance's of coho. Small demonstration fishery in Juan de Fuca (seine) test fishery and small area of WCVI open (troll).</i>
<i>Chinook</i>	1998	<i>Complete closure WCVI (troll)/ Juan de Fuca (all gears/sectors) in spring/summer/fall.</i>
	1999	<i>Corridor closure on WCVI sport. Complete Closure during spring/summer/fall (troll).</i>
	2000	<i>Corridor closure on WCVI / inlets, Juan de Fuca etc open sport. Complete Closure during spring/summer/fall (troll).</i>
	2001	<i>Corridor closure on WCVI , inlets, Juan de Fuca etc open sport. Complete Closure during spring/summer/fall (troll).</i>

Value of the Coho Fishery

Coho	Sport	Commercial		Value (L.V.commercial only*)
		Pieces	Ib.	
1983	500,000+	4,131,000	28.9 million+	\$130,000,000+
1994	500,000+	2,555,000	17 million+	\$84,000,000+
1998		0		

\*Based on landed values (DFO) commercial fleet only

Not all Coho stocks were in trouble, although some had been severely impacted by habitat destruction and ocean conditions and therefore needed a harvest level adjustment to remain sustainable. Other stocks continued to have harvestable surpluses. The harvest of these stocks was curtailed to protect the smaller and less productive groups.

There has been no public discussion of the possible options, impacts and results of changing the exploitation rate to 10% or 15% rather than zero. There has been no public discussion on the effect of several years without interception on the shift in abundance and stock composition of healthier stock groups and potential harvest.

It is conceivable that Canada is presently forgoing the harvest of up to 28 million pounds or \$130 million dollars a year in harvestable surpluses of coho. Furthermore the impact of non-retention and zero mortality for coho on other fisheries, such as sockeye or pinks, is considerably higher.

### ***1.1.21 Application of the Precautionary Approach in the WCVI region during the Pilot***

It is difficult to determine the policy on which decisions have been made during the Pilot on acceptable levels of risk. This is particularly true in reviewing the sport and troll fisheries during this period, as they both use very similar gear- hooks and line and troll to catch.

The inconsistency appears when:

- ? Portland Point region is closed to the Trollers even during a low risk period (end of September) but open to sport fishing during high risk periods (August)
- ? A 1-mile beach corridor along the shore of WCVI provides protection from a sport fishery at the peak of the season, but a 10-mile corridor is needed when Trollers wish to fish in the lower risk time period.
- ? A Fishing Derby in the terminal area is permitted for the Sport Sector at the peak of the return of stocks of concern (Alberni Inlet) while fishing is closed to the troll fleet for the entire season to protect that specific stock.

This also raises the concern of the amount of data that is required to allow for fishing opportunities for the troll fleet as compared to the Sport or in River First Nation Fishery.

While the troll fleet has collected and sampled their catch and can provide daily information on catch and bycatch., neither the sport nor the in -river fishery are able to provide real time or accurate catch estimates. The troll fishery selective fishing projects now use ‘Kempton cages’ for in –water de-hooking and show the least stress on released fish, lowering the mortality rate from 26% to between 8 and 12% (compared to mooching (sport: up to 65%) or seine.

In examining the Chinook fishery, the unevenness in the application of the precautionary approach among user groups is very clear and causing undo hardship on the troll sector.

### ***1.1.22 Allocation***

#### ***Sectoral Allocation***

At the same time as protection of some coho stocks forced the closure of many of the abundance aggregate fisheries a new allocation policy was announced. This policy awarded ‘priority access’ to harvestable surpluses of salmon to certain groups.

After conservation goals were met, access priority was given to First Nation for Food, Social and Ceremonial purposes, followed by sport fisheries (particularly for Coho and Chinook ), then fishing would be provided for existing commercial fishers and First Nations economic fisheries.

#### ***First Nation Fisheries***

To date, the Department has been unable to explain the allocation or unregulated harvest by First Nations. The Coastal Nations have been foregoing their traditional commercial economic harvest, while the Pilot Sales bands appear to be dramatically increasing their catch.

Food Social and Ceremonial (Section 35-1) exists and is increasing in some areas but First Nations commercial participation and harvest has been decreasing since the implementation of the Pilot Sales program.

As most fisheries management and stock assessment relies on accurate and timely harvest data, the unrecorded and unquantified exploitation's in the river are leading to shut-downs on harvestable surpluses and considerable anger and concern over Management's' handle on the overall situation.

### *Sport Fisheries*

In 1998, the Federal Government announced a new allocation policy for Pacific Salmon. The policy of sport priority was based on the economic value of the fishery.

This value was established using a study on the economic value of an *additional or new* Coho and Chinook to the sport sector vs. the commercial sector. This study was based on a 'new' rather than re-allocation of fish between sectors and outlines that: '*the trade off in salmon between sectors depends critically on the sequencing of user gauntlet and the management system in place. The allocation reality may not be one to one. Furthermore the report outlines that there are significant variations in economic value across regions and within sectors. (ARA Report).*

- ? The value of Chinook to the troll sector was considerably higher than the combined value to the commercial fleet as a whole.
- ? The regional value of Chinook and coho was not taken into account in determine a coast-wide policy.

There is a lack of clarity in the interpretation and implementation of the allocation policy. Although the policy states '*This priority to chinook and coho does not suggest exclusive access since directed commercial will occur when abundance levels allow \*\*\*\**'. The interpretation and implementation as seen in the fishing plans demonstrates that priority access to coho and chinook has in fact given the sport sector *exclusive access* during the safest and most profitable time of year.

- ? Throughout the Pilot there has been harvestable abundance for the commercial troll sector (defined by Abundance Based Model)

The sport sector representatives interpreted the policy to mean that the commercial troll fleet cannot operate until the Sport fleet is fishing at maximum levels (2 per day/ possession limit of 4 chinook and 4 per day and possession limit of 8 coho) coast-wide/ year round, regardless of small area restrictions to protect a specific stock group.

This interpretation is presented by the (Sport Fishing Advisory Board (SFAB), even though they recognize that some stocks may require localized reductions in harvest rate below the 2/4, 4/8 range whereas other stocks may have considerable harvestable surpluses.

The Department has accepted this interpretation during the Pilot. However, review of the policy indicates the *intention* of the policy was to provide opportunity:

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\*\*\*\* Allocation Policy for Pacific Salmon, October 1999 DFO

*Recreational anglers are most concerned with protecting fishing time and the opportunity to fish rather than the explicit amount of fish.... This can ensure that fishing time and the opportunity to fish are protected while avoiding unnecessary adverse impacts on the commercial sector.*<sup>††††</sup>

Implementation of the Allocation Policy during the course of the Pilot has had an adverse impact on the commercial sector.

Fishing opportunity was available on AABM (outside) stocks) while limits were required to protect local (inside) stocks. These stocks were the traditional harvest of the troll fleet and negotiated as such in the treaty. Recent changes have seen the sport sector harvest exceed the commercial catch in this area and harvestable surpluses ended up in the U.S. instead of benefiting Canadians during the Pilot.

? *When harvestable surpluses are high chinook and coho will be available in directed commercial fisheries. When harvestable surpluses are lower, some chinook and coho may be caught by the commercial fisheries on a non-retention basis to allow them to prosecute their directed fisheries on other species.*<sup>††††</sup>

As the management regimes and environmental conditions change, the real value of chinook and coho is actually as an *allocation of by-catch*. Allocation of bycatch results in different benefits than a simple allocation of a new (hatchery or otherwise produced fish) as was used to determine access in the past. A recent survey by the Federal Government helps define the direction: Considering that the Allocation Policy was announced after the implementation of 'zero mortality' in most fisheries, the Department must have been aware of the difficulty in planning fisheries and anticipating levels of acceptable risk (by-catch) on stocks of concern.

### **1.1.23 Allocation of Bycatch**

#### *Value of additional Chinook (bycatch) to the Area G WCVI Troll Fleet*

Since the announcement of the Allocation Policy, the Department has been asked for the rationale behind its allocation of bycatch. Without adequate bycatch allowances, the commercial industry as a whole and the Area G troll Fleet has been forced to forego fishing and cannot be viable. This loss of fishing opportunity calls for a re-examination of the Allocation Policy in light of the dramatic changes in management and the value of lost opportunities.

The overall loss of economic benefits for the commercial sector and local communities due to the present interpretation on the allocation of bycatch has been in the millions of dollars. This foregone harvest in B.C. is resulting in increased opportunities in Washington and Oregon, beyond the treaty allocation by species. These fish are harvested by gillnet and flooding the market with cheaper poorer quality fish. The U.S is to expand their fleet by over 100 vessels to harvest this bonus fish.

***(Press Releases from a different reality)***

<sup>††††</sup> Allocation Policy for Pacific Salmon, October 1999 DFO

<sup>††††</sup> Allocation Policy on Pacific Salmon, October 1999, DFO

***Fisheries managers upgrade predictions for Columbia salmon runs***

*Columbia River fisheries managers have had to upgrade their predictions of salmon runs yet again after seeing unusually large numbers of returning fall chinook, coho and steelhead. Some runs have not been as large for decades, says Kevleen Melcher, a fishery project manager with the Columbia River management section of the Oregon Department of Fish and Wildlife (ODFW)..*

*"It's very exciting," said Melcher. "We have lots of fish. We have a large return of fall chinook, a very large return of coho, and a record return of steelhead."*

*"The return to the Bonneville will be the largest since the dam was built in 1938," she said. (Usual run of coho in system 300,000- 1.5 returned)*

*Chinook return double predicted)by Quintin Dodds, FIS America*

***Canada Newswire***

*"...comments Tom Bird of the Sport Fishing Institute of BC. Bird continues: "The 2001 season is shaping up not only as a record year of big fish and large numbers of fish being caught, in fact, more than we have seen in the last 15 to 20 years. Whether we are referring to the Queen Charlotte Islands, the Central Coast, West Coast Vancouver Island, or Georgia Strait fishing reports are exceptional. Not only do the number of fish being caught cause excitement but ocean conditions are obviously contributing to the development of larger than average fish. Quite obviously scientists were correct in their prediction that improved ocean conditions would result in some incredible returns. . Not only that, predictions for next year are even better according to Fisheries and Oceans Canada scientists."*

***Oregon Trollers Harvesting Big Numbers of Big Chinooks***

*WorldCatch News Network*

*July 20 - WorldCatch News Network - The fish are big and abundant. Some say it's the best fishing in 10 years. But no matter how you characterize the 2001 commercial Oregon chinook troll fishery, large, quality fish and more chinook showing up than expected, are luring fishermen from all over to get in on the action*

***Strong runs, low prices for Columbia River salmon***

*The second largest coho salmon run in recent history and one of the largest fall chinook salmon runs are about to fire up fisheries on the Columbia River, capping a year that has been one of the strongest in recent memory for the area's fleets.*

*"They predict a lot of fish," says Kevin Hawkins, who gillnets for salmon out of Astoria, Oregon. "It sounds like we're going to get fishing time all right." Hawkins, who has fished as a deckhand for 20 years in Alaska, opted to stay closer to home this year and fish for crab, salmon and halibut on his own boat, even buying a second boat, the Mar-C., to strengthen his hand in local fisheries. Now that his Dungeness crab season has wrapped up, salmon is next up.*

*Fishing is expected to open next week on fall chinook, with a larger*

*fishery starting in September on coho.*

*The coho catch is expected to be much larger. said Pat Fraser of the Oregon Department of Fish and Wildlife. "This year's run is projected to be the second largest on record."*

*The strong numbers are good news for the fleet, but prices have been "terrible" Hawkins said. Sharp competition from farmed salmon has combined with the usual rush of fish from Alaska this summer to soften the market for Columbia salmon.*

*FIS North America*

### *Bycatch*

By forcing the commercial sector into a Zero catch on coho, the Department has created a bycatch problem. The issue of **by-catch** and **discards** is of critical concern when developing selective fisheries. The goal of *selective fishing* was to reduce interceptions of non-target species and stock groups. Integrated management must develop fishing plans that incorporate selective fishing techniques. It must be recognized that most B.C. fisheries are mixed stock and therefore required an allowable by-catch to proceed.

### *ESSR*

It is the Departments role to manage fisheries to harvest surplus, this requires establishing allowable by-catch that are sufficient to prosecute the fishery, but that discourage waste. Recent increases in ESSR (excess to escapement) fisheries demonstrate the waste in value of fish as these fish are harvested in the terminal areas for 3 to 5% potential value.

Moving from a mixed harvest fishery to a single species fishery is creating waste. At the same time as the Department was outlawing the allowable interception to coho, to protect a stock group the overall coho abundance in the area were increase dramatically.

The Chinook fishery has been limited by coho interception, where as the odds of interception of an endangered coho has decreased. In 1998, during a year when there was an outside distribution of coho (Thompson and Gulf of Georgia coho would normally hold in the Gulf of Georgia), the expansion factor on Thompson coho in the West Coast Vancouver Island troll area in the peak summer months was .01% ( a directed harvest of 100,000 coho would have resulted in a Thompson coho bycatch of 10.) Since then, there has been inside distribution of coho and increase abundances of healthy stocks- further lowering the potential incidental catch of Thompson coho.

Given the improvements in ocean conditions and rebounding of returns to coho stocks, the Department needs to clarify it's coho strategy.

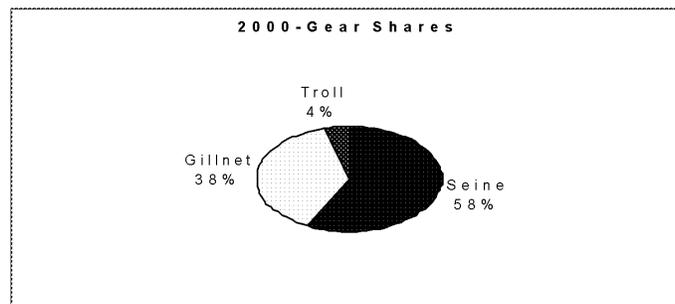
### *Inter-Sectoral Allocation*

Allocation between the commercial gear sector is to share the available catch: Seine 40%, Gillnet 42%, and 22% Troll. In contrast with the allocation premise between sectors (sport/commercial), which was based on value of the fish, the allocation between gear types appears to be based on ability to harvest or capacity.

An allocation policy that was based on value would ensure a higher harvest by the troll fleet- instead the Department delivers the majority of the catch to the lesser value fisheries based on their increased ability to harvest large volumes in short order.

Even though the Department has failed to deliver the troll allocation, the main concern with the intersectoral allocation policy at this time is not the lack of fair sharing arrangements and delivery of between sectors but rather the over-all lack of delivery of harvest to the commercial fleet.

Discussion by the fleet indicates that the harvest by the commercial sector of harvestable abundance's (fish that are available after spawning requirements) has dropped by over 50% on most runs.



The review found that

- ? the allocation policy does not respect the right of commercial fishermen to a livelihood
- ? Fish and the burden of conservation are not being allocated fairly
- ? The troll fleet is still not harvesting its' share of the Available Catch

#### **1.1.24 Consultation Process**

Regular annual fisheries planning for salmon are supposed to be addressed in a process that develops Integrated Fisheries Management Plan (IFMP). An IFMP should be a process and a document. According to DFO documentation, the primary goal is to provide a planning framework for the conservation and sustainable use of fisheries resources and the process by which a given fishery will be managed for a period of time.

As a process, it is supposed to allow for enhanced input by resource users and other stakeholders into the management and conservation measures affecting a fishery (usually via an advisory committee). It also is supposed to ensure that the expertise and activities of relevant DFO sectors (e.g. Science, Resource Management, Conservation and Protection, Aboriginal Affairs, International, Oceans, Policy, etc.) are accounted for in the management planning.

DFO develops an advisory committee comprised of representatives from the various sectors of the fishery, in this case, the South Coast Advisory<sup>§§§§</sup> and Outside Troll Advisory Committee (OTAC)<sup>\*\*\*\*\*</sup>

The role of these groups is to provide input on management strategies proposed by DFO and to serve as a consultative body for fishers. There is supposed to be provisions to consult with other concerned stakeholders.

Compared to the standard fishing plan, the IFMP document is supposed to provide a more comprehensive description of the fishery. It is to set out both long and short-term management objectives for the fishery and identify criteria for evaluating performance at the end of the fishing season.

IFMPs are to support DFO's management strategies while upholding the Department's stated basic principles identified as:

- conservation
- viability
- self-reliance

According to DFO IFMP's guidelines, they are also to support DFO's general objectives for fisheries management, described as.

1. To manage fisheries and fish habitat to conserve and protect stock abundance, to restore depleted stocks, and to maintain biological diversity.
2. To manage fisheries to contribute to an economically and environmentally sustainable, self-reliant industry and provide positive contributions to communities and the Canadian economy.
3. To achieve shared responsibility and accountability for the management of fisheries, (in land claims, co-management is legislated and the objective of shared responsibility has been largely achieved).
4. To achieve excellence in Fisheries Management's programs and people.<sup>†††††</sup>
5. To meet responsibilities to aboriginal groups in fisheries matters.

The planning process is supposed to start for Area G Troll early in the spring and includes consultation with industry, sport and First Nations representatives. This traditional planning time frame has recently been disrupted and is out of sink with the timeframe of the Chinook Fishery.

Over the course of the pilot project, the Winter Chinook fishery went through this process and furthermore included intensive consultation with the sport and Upper Fraser First Nations to address their concerns, particularly on Upper Fraser Early timed Chinook. Area G and WCSA/RAMS representatives worked closely with the Nuu-chah-nulth Tribal Council, met and communicated regularly with the Aboriginal Fisheries Commission and presented at the First Nation Summit. Members of Area G Troll Fishery, WCSA and the Nuu-chah-nulth Fisheries

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<sup>§§§§</sup> South Coast Advisory is Salmon Industry representatives, at the call of the Department.

<sup>\*\*\*\*\*</sup> OTAC: includes representation from Nuu-chah-nulth Fisheries Committee, Area G Trollers Fishery Assoc.), the Union (UFAWA), Pacific Trollers Ass., West Coast Sustainability Assoc. and local Processors.

<sup>†††††</sup> DFO IFMP Guidelines

Committee traveled to Kamloops to meet with Fraser River Bands with Brian Riddell (DFO Chinook) to discuss the fishery. The Winter Chinook fishery was developed within the broad based context of the Regional Management process.

Participants agreed that:

- ? Even though the IFMP process is to guide consultation on fishing plans, the Department has been unable to identify the framework for consultation.
- ? The consultation process is inconsistent and at the whim of the Department.
- ? Participants complain that fishery has been delayed due to the failure of the Department to consult in a timely manner<sup>++++</sup>.
- ? Rationales for decisions are not given or explained;
- ? Participants have also identified the lack of consultation with communities and the Regional Management Society members in the process.
- ? First Nation Representatives stated that there is no formal process for consultation on fishing plans
- ? For all that the Federal Government has a legal obligation to consult, neither party is able to define what this consultation looks like. Some parties assume a veto power is implied. This lack of definition is leading to delays, loss of opportunities and frustration and resentment.
- ? Sport consultation appears to be one directional. The Sports Advisory also assume they have a vet over commercial fishing plans. Sport fishing plans are not brought to the commercial sector for consultation even though the impact of a sport fishery will have a direct and substantial impact on the commercial sector. Participants pointed out a concern that the sport sector consultative process is dominated with commercial sport operators and may be misrepresentative.

The lack of a consultation framework has been identified by the Auditor General and reviewed by the Institute for Dispute Resolution. Still no improvements have been implemented.

Issues were raised that there are:

- ? No protocols for the timing or level of consultation
- ? Participants have little confidence in the decision-making process and as a result are often in conflict with the Department
- ? Advisors recommendations are often disregarded
- ? Decisions are made without explanation or rationale.
- ? Participants are not involved in designing enforcement or observer programs.

#### ***1.1.25 Observers/ Enforcement***

Recent changes in the monitoring and enforcement of the fishery include:

##### **1. Real Time Communication**

In 1997, the Area G troll fleet worked with UBC Fisheries Center to develop a real time computer modeling program. Application to the Department for funding for the original program was denied although within the year, the Department funded a similar project for the gillnet fleet. A modified version of the program was used in the Pilot. This included have

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<sup>++++</sup>Over 5 months delay on the discussion of a September 2000 fishery. Meeting finally took place on September 23<sup>rd</sup> 2000- too late for a fishery before the accounting year end (Oct. 1)

several 'platform vessels' within the fleet. These vessels were outfitted with computers and satellite communications equipment. Observers were placed on these vessels to gather and relay information directly to the DFO office. This differed from the traditional information that was gathered from random DFO patrol surveys and sales slips that were delivered to the Department after a delivery. In this manner, DFO staff would know the effort, catch, bycatch, and area of the fleet daily.

**2. Effort**

In addition, vessels participating in a fishing opening were required to hail-out when heading out onto the fishing ground, informing the Department of their intention to fish. Vessels were required to hail-in on return.

**3. Observers**

Observers were also added during the Pilot. Observers were placed on vessels to assist in the data collection and sampling and to verify information gathered through 'hails', logbooks and Satellite communications.

**4. Conference Calls**

Up to 3 times a week, the Fleet, Advisors and DFO staff had marine radio channel conference calls. This provided the opportunity to discuss the fishery, share selective fishing techniques among the fleet and report directly with the Department. Recommendations from the fleet included depth and speed variation, gear modifications and time and area alterations. In the April/May fishery 2001, the fleet was able to identify area of Chinook concentration and significantly reduce their bycatch (in the last 10 days of the fishery the total # of coho caught and released by the whole fleet was 7).

**5. Dockside Monitoring**

Having hailed their intention of leaving the fishing grounds to the Department, Dockside monitors were able to oversee the unloading of vessels and collect samples at the landing stations.

**6. Overflights/ Patrol Vessels**

Charter Patrol vessels with enforcement officers onboard were on the ground and performed random boarding during the fishery. Over-flights with charter Planes ensured accuracy of vessel count and compliance in closed or restricted areas.

**7. Logbooks**

Vessel masters were required to fill out logbooks and hail information from the logbook week and when leaving the grounds.

*Problems associated with Monitoring Program during Chinook*

- ? Programs were implemented on short notice without discussion with advisors.
- ? The satellite communication program was successful but expensive- air time for Sat-Phones is very costly and few have the equipment.
- ? Platform vessels were restricted in mobility to ensure adequate coverage in all areas, causing some vessels to lose out fish.
- ? Conference Calls were effective and provided good two-way communication. The cost of this program will decrease as familiarity with the process and a fishing framework is developed. There is good marine radio coverage of the fishing grounds.

- ? hail-in/ hail-outs This program was implemented on very short notice, so technical difficulties arose, such as, poor telephone coverage of much of the region, or inability to access radio channels or cellphone when hiding from weather.
- ? Logbooks The phone in on logbooks information was problematic for the same reason as above. Additionally, the phone line was often busy or message box full.
- ? Observers Vessels who participated in the Pilot agreed that the science collection was important and as such were willing to sacrifice in fishing efficiency to share their working area with observers for data collection. Now that the Pilot is over, vessel masters have been clear that they will not sacrifice their ability to make a living to provide science platforms for the Department. Most expressed a willingness to charter to the Department in the future. Most of the troll fleet is made up of small vessel. The living accommodations are very limited, food and drinking water storage are also limited.
- ? Most vessels have a deck-hand, often a relative, and this does not provide any room for an observer on-board. Most vessels only have enough safety equipment for regular crew and skipper.
- ? Sea conditions change quickly and many skippers were concerned with the added responsibility of an additional person on-board. Masters were particularly concerned after the Department placed observers on vessels that did not have adequate open ocean sea time on-board raising concerns over safety and liability
- ? Masters were unhappy with having an observer placed on their vessel without adequate warning- depleting food and water and adding unforeseen expenses.
- ? The Department was unable to explain the rationale on the level of observers required in any given fishing period- There are no stocks of concern in the region in October, yet there were more observers looking for vessels than there were vessels on the grounds. (Oct. 2001)

Given the reduced fleet size, the lowered exploitation level, availability of recent data and other management tools, the fleet expects that the level of enforcement and monitoring can be reduced after the pilot.

### ***1.1.26 Management and Conservation Actions during the Pilot***

Action	Improvement	Decrease	Unchanged	Observation
Selectivity	Yes			Kempton Cages/ lower mortality rate from 26% to less than 10%
Reduction of Harvest Rate	Yes			significantly
Real time (Satellite) Monitoring	yes			Computerized relay of information from vessels to DFO
Radio Conference Calls with advisors, fleet, DFO	Yes			Fleet wide calls 3 times a week provide sharing of information and immediate action recommendations on the grounds
Hail-out	Yes			Vessels hail to DFO when leaving the grounds (effort monitoring)
Hail in	Yes			Vessels hail to DFO when heading onto the fishing grounds (effort monitoring)
Dockside	Yes			Port sampling and verification

Monitoring				
Observers	Yes			Onboard sampling and verification
Over Flights			Yes	Effort and enforcement
Patrol vessel on Grounds			Yes	Effort/ enforcement and information relay
Logbooks	Yes			Data collection on catch and bycatch- time and area
DNA Sampling	Yes			Stock identification
Coded Wire Tag	Yes			Stock identification
Crew Participation in Data Collection and Training	Yes			Skippers and crew training in sample collection
Participation in PSARC	Yes			Education/ stewardship
Consultation among regional user groups	Yes			Education, stewardship/ participation and planning
Co-management Approach	Yes			Education/ stewardship/ participation and planning
Incorporate LEK/TEK	Yes			Education/ stewardship/ Participation/ planning
Training Opportunity	Yes			Education/LEK/TEK
Diversified	Yes			Providing alternate fishing opportunity (non traditional season)
Time Management	Yes			Planning process incorporates LEK/TEK timely scientific information in designing fishing opening
Area management	Yes			Planning process incorporates LEK/TEK timely scientific information in designing fishing opening
Education	Yes			Planning process incorporates LEK/TEK timely scientific information in designing fishing plan/ communication between biological staff increased/ communication among user groups increased./ on board training (time) for youth and deckhands
Bycatch/ Discards		Yes		Coho non-retention policy increased discards and wastage/ removal of halibut retention creates wastage.
Economic Benefit		Yes	Yes	For all that some economic benefit was attained in the pilot, the overall value of Chinook landings decreased due to fishing size limits and target age of species - increased overall economic pressure on harvesters.
Compliance	Yes*			*see below

Overall compliance was extremely high, 98% according to JOThomas- An exception may be the September 2001 fishery. After a Short notice shut down in May 2001, participants complained that the Department was ‘out of touch with reality’ and not listening. The closure was supposedly due to ‘coho interceptions’- this was not an accepted response as the total interception by the entire fleet had been 7 coho in a ten-day period.

The Fleet felt the Department had broken trust and was not interested in participating in a co-management approach.

Having worked as sport charter vessels, been on the ground tuna fishing, had been in communication with other vessels (shrimpers, trawlers, draggers) and having traverse the area to other fisheries, the fleet had informed DFO that the abundance's of coho for the summer has escalated far beyond their forecasts- DFO ignored and discredited them.

When the September fishery started- the fleet had been told that what their anticipated coho encounter rate would be- still dismissing their Local Knowledge (LK). Within two days of the fishery being open, on the regular conference call- the fleet on the grounds found coho abundances to be very high and asked for the fishery a directed fishery or for the fishery to be closed immediately.

The Department responded by closing the fishery and the reason for the call became obvious- the abundance of coho was indeed very high- as is evident by the record returns in almost all areas (particularlyly Oregon), far beyond expectation.

For all that the fleet was unable to avoid the large abundance of coho during this period, the situation brings forward several questions

- ? Why was DFO not aware of the extremely high abundance of coho in the region considering there had been an on-going sport fishery in the region all season?
- ? Why was the Department not allowing an in-season adjustment to their fishing plan to reflect the abundance and allow for a harvest?
- ? If abundances are this high, why was a directed coho harvest not implemented?

**1.1.27 Management: Alaska Troll Chinook Model**

In developing the WCVI Winter Chinook fishery, one of the management desires expressed by DFO managers was to come into line with the Alaska Troll fishery. Under the Canada/US Salmon Treaty, the 'year end' for accounting of Chinook Harvest is now October 1, in line with Alaska. The Abundance Based Model applies in Alaska and Canada.

In reviewing the WCVI Pilot, this report examined the Alaska troll fishery. The findings included that:

- ? participation in the Alaska Troll Fishery in SouthEast Alaska troll winter fishery (limited entry since 1976) was made up predominantly by resident fishermen (a portion of the fleet homeports in Washington state).
- ? Main restrictions in the fishery were price (market), fuel expense and weather.
- ? The fishery occurs mainly in the Sounds or semi protected waters.
- ? Average weight of Winter Caught Chinook is 20 lb.vs B.C. 8.7lbs, the size limit is 28" or 71 cm. vs B.C. 55cm.
- ? Fishery is loosely monitored for overall catch, no real time data on by-catch; sampling is done dockside not to interfere with catch on board.

S. East Alaska Troll Chinook Fishing Season is developed around 3 main seasons:

Winter	October –April	31,000	21%
Spring	May- June	20,000	14%
Summer	July- September	95,000	64%
Total Chinook		146,000	

B.C WCVI Troll Chinook Fishing Season 1999

Winter	October- April	56,000	89%
Spring	May-June	5,300	.08%
Summer	July-September	2,089	.03%
Total Chinook		63,400	

Alaska Troll fishing is a mixed stock fishery. The bulk of the harvest takes place in the summer months.

1999 Troll Accounting Year (October 1998-September 1999) Preliminary Catch Totals:

<u>Period</u>	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>
<u>Winter (October-April)</u>	31,000	0	0	0	0
<u>Spring (May-June)</u>	20,500	1,100	12,000	30,000	4,500
<u>Summer (July-September)</u>	<u>95,000</u>	<u>5,700</u>	<u>2,282,000</u>	<u>510,000</u>	<u>70,000</u>
<b>Total</b>	146,000	6,800	2,300,000	541,000	74,500

**Alaska Fish and Game 1999- Season Review:** The general summer troll fishery opened July 1. The fishery closed to the retention of chinook salmon on July 6, 1999. The estimated catch during the 6-day July fishery was 78,000 fish, with an Alaska hatchery contribution of about 3,000 fish. An assessment was made of coho run strength during the week of July 20, according to the guidelines of the current management plan, and no late-July closure was necessary for conservation.

A second assessment of the coho run was compiled on August 4. The assessment considered both conservation and Board of Fisheries allocation guidelines (target allocation of coho harvest: 61% troll, 19% purse seine, 13 % drift gillnet, and 7% set gillnet). The troll fishery was closed for 5 days, from August 13 through August 17, 1999, to achieve these guidelines. The troll fishery reopened August 18, with chinook retention allowed for 5 days. The chinook harvest was 16,500 fish, with an Alaska hatchery contribution of 700 fish. Escapement indications were good for systems throughout Southeast Alaska. Therefore, trolling was extended in most of the region south of Cape Spencer from September 21 - 30. Only 2,000 chinook salmon remained on the treaty quota, and therefore not enough for another chinook period. Coho catch rates remained high in some areas during the extension period, but inclement weather kept many trollers off prime fishing waters for at least half the 10-day period.

Source: Alaska Fish and Game reviews/ Fishing Plans/ Troll Manger and Trollers Ass.

## 5 Benefits of Pilot Project

### 1.1.28 Economic

The value of the Area G WCVI troll share of the allowable catch (under new Canada/U.S. Treaty) is between \$2 and \$3.5 million (direct landed value) annually since 1998.

#### Value of Harvest to Date

Table: Value of Chinook during period of Pilot

Period	International Available Harvest Area WCVI	Area G Available /Catch		Landed Value of International Available Harvest* to Area G Fleet	Value of Chinook harvest forgone
Oct 1998/99	115,000	75,000	10,700	\$2,400,000	\$2,057,600
Oct 1999/00	115,000	75,000	63,389	\$2,400,000	\$ 371,552
Oct 2000/2001	141,000	103,000	79,145	\$3,296,000	\$ 763,360

\*value per chinook = DFO allocation plan 2001 (Sarah Tyne/DFO Salmon Valuation Hails & Sale slip)  
(\$3,192,512 foregone)

Area G fishing fleet has had access to a portion of this reduced allocation. Over \$3 million dollars (landed Value) worth of Chinook was not harvested during the period of the pilot.

Due to the market conditions and the harvest of smaller fish, the actual landed value of fish harvested is probably closer to half of what it would have been if these fish were harvested at mature weights in the traditional summer months.

Harvested Value in Pilot Project

Period	Harvest Area G	Traditional Landed Value*	Actual landed values^
Oct 1998/99	10,700	\$313,510	\$149,800
Oct 1999/2000	63,389	\$1,857,297	\$887,446
Oct. 2000/01	79,145	\$2,318,948	\$1,108,030
Total	153,234	\$4,489,755	\$2,145,276

\*Value per chinook= DFO Allocation Plan 2001 \$29.

^Value per Chinook \$14.

Over \$2.3 million dollars in value was lost on the fish actually harvested due to the size/ colour and market condition during the Pilot.

Pounds (lbs) chinook available/ Pounds chinook harvested

# of lbs during the Pilot if harvest in traditional fishing period	4,225,100 lbs
# of lbs harvested	1,333,135 lbs

If one of the goals of the Pilot was to manage fisheries to contribute to an economically and environmentally sustainable, self-reliant industry and provide positive contributions to communities and the Canadian economy, the fishery has not yet met its objective. The economic benefit of the fishery to the fleet, the local communities and the nation was less than 1/3 what it could have been. However the Pilot did account for generating over \$2 million dollars in landed values alone.

**1.1.29 Science**

Data collected by the Pilot is valuable for management of B.C. Chinook fisheries. Much of this data was required under the Canada/ U.S. Pacific Salmon Treaty and would have cost considerably more to collect. The individual fishermen who participated in the science and data collection portions of the Pilot did so at their own expense and risk. Many spent days (and nights) hiding from weather for no financial return, only a commitment to the long-term sustainability and viability of their industry.

*Co-management*

The approach taken in this project was to be open, transparent and inclusive. Participants found the process did not meet their expectations due to frustrations in dealing with the Department. Linkages between coastal harvesters and the in-river and spawning regions were created by participants, but not encouraged or assisted by the Department. Dialogue ensured participation of Coastal and In-River First Nations. Although it was not financially possible to visit over 90 Fraser River Bands, participants attempted to attend overarching meetings (Kamloops/ Summit) and organizations (Aboriginal Fisheries Commission).

Some effort by individuals within the sport sector participated in the educational and planning portions of the pilot, overall the Sport Advisory refused to deal directly and preferred to maintain it's direct lobby position. When requested, the Department did not assist in opening the dialogue

between these groups or allow participants to participate in their discussion of the fishery with the sport sector, rather they assisted in a 'stand apart' approach.

The advisory planning process did raise community concerns and discussions with environmental groups. However, DFO did not respond to concerns raised. Department of Fisheries internal communications and processes caused problems. The pilot participants attempted to maintain contact as widely as possible but were frustrated by the lack of internal process or direction within the Department.

No formal co-management agreement was reached during the pilot.

### *Conservation*

The Pilot succeeded in lowering exploitation rates on target and non-target species and stocks dramatically from historical levels.

The Pilot succeeded in altering the fishing habits and patterns developed through years of secrecy among fishermen and creating a sharing of information throughout the fleet.

The Pilot developed new management tools providing real-time information and responsiveness to any situation that arises in season.

## 6 Background documentation

SUMMARY OF MEETING AUGUST 29,1997

*Original signed by:*

Donna Petrachenko,  
Regional Director General  
Department of Fisheries and Oceans

Kathy Scarfo  
President  
Area G West Coast Trollers

Skip McCarthy  
West Coast Sustainability

Meeting at DFO Office, Vancouver, BC follow-up on meeting with Nuuchalnuhlt Tribal Council representatives<sup>§§§§§</sup>, Federal Ministers Special West Coast Advisor<sup>\*§§§§§</sup>, Regional Director<sup>††††††</sup>, West Coast Sustainability<sup>††††††</sup> and West Coast Troll Area G<sup>§§§§§§</sup>.

Discussion resulted from El Nino and shortfalls in allocation and lack of proper avenues to address these situations.

Several areas of agreement were reached:

Regional Director agrees:

1-that DFO was committed to delivery of allocation and will make every effort to ensure that the allocation is reached,

2-that if there is a problem reaching this allocation, Regional Director and West Coast Troll Representatives will immediately look at alternate ways to ensure that Area G does not loose any of it's share. Catch up /Make up will apply and be reviewed.

3-to recognize that the troll fleet is a different sort of gear and therefore needed special management measures.

4-A commitment to working co-operatively on projects including the stock assessment project.

5-For this season the situation on upgrades and shortfalls will be monitored and solutions found working co-operatively between the RDG and the Area G Representatives.

6-the concerns on process are to be taken very seriously. The consultation process must be formalized to be efficient, effective and accountable. The long term allocation process cannot be handed over to a non-representative body such as CFIC. Terms of reference and principles need to be clearly identified in on-going processes. Operational guidelines such as recording of minutes must be apart of normal procedures.

Parties agreed to meet and develop working plans to advance this agreement.

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<sup>§§§§§</sup> Representatives: Richard Watts, Cliff Atleo, Simon Lucas and Errol Sam.

<sup>\*§§§§§</sup> Velma McColl

<sup>††††††</sup> Donna Petrachenko

<sup>††††††</sup> Skip McCarthy

<sup>§§§§§§</sup> Kathy Scarfo

Aug/97

**1.1.30 Community Profile- Regional District**

**2000 POPULATION LAND AREA POPULATION DENSITY**

Sq.Km.	Number	% of Region	Sq. Km .	% of Region	Persons per
Port Alberni	19,329	57.9%	17.8	0.2%	1085.9
Ucluelet	1,824	5.5%	7.1	0.1%	256.9
Tofino	1,540	4.6%	11.1	0.1%	138.7
Rest of Region	10,715	32.1%	7702.3	99.5%	1.4
Total Region	33,408	100.0%	7738.3	100.0%	4.3
Total BC	4,063,760				14.6

- ? Most of the Population lives within the three towns or less than .5% of the region.  
Population per sq. kil. is 1.4 vs prov average of 14.6

**Age Structure**

Region/ BC.	2000	%
0-17 years	7,945	23.8
18-24 years	3,444	10.3
25-64 years	17,885	53.
65+ years	4,134	12.4
Total	33,408	100.0
Dependency Rate (%)		
Regional	Total	56.6
BC	Total	54%

- ? Although the bulk of the population is between 25-64 years of age (work force age), there is a higher percentage of children and elderly dependents in the region than the Provincial average.

**1.1.31**

**Population Growth**

Annual average percent change (10 year average)	
Regional	0.5%
BC	2.3%

- ? Very Stable Population Size

**Family Structure**

Families with children	60%
Families without children	40%

- ? There are more and larger families with the region than the Provincial average.

**Aboriginal Identity**

Region	11.7%
BC Average	3.8%
Other ethnic minorities	
Region	6.0%
BC	17.9%

- ? The Aboriginal population in the regional is 3 times larger the Provincial average.

*Indicators of Economic Hardship*

Income Dependency (1995)

	Region	BC
Composition of Total Income		
Employment	76.3%	75.5%
Government Transfers	15%	12.7%*
Other	8.8%	11.8%
Income Dependency 1996		
Forestry	36%	20%
Mining	0	0
Fishing (& Trapping)	3%	1%
Public Sector	21%	24%

- ? Region (which includes the town of Port Alberni) is ranked 5<sup>th</sup> highest in dependence on fishing and forestry
- \* includes DIA funds

Income Assistance

% of Population receiving Income Assistance	
Region	9%
BC Average	5.4%

- ? Almost 2 X as many people are on welfare than the provincial average.
- ? Region is ranked as the 2<sup>nd</sup> highest percentage of population in B.C. receiving BC Benefits (welfare) Sept 2000
- ? Beneficiaries are staying on welfare longer than in other regions.

Income Levels

- ? A higher percentage of Families within the region have an income less than \$20,000.
- ? The Average family income has dropped below the National and Provincial average.

*Indicators of Education Concerns*

General Education

% of population without high school completion

Region	33.7%
BC	22 %

% of age 15 through 24 attending school

Region	45 %
BC	52 %

- ? Region ranks 4<sup>th</sup> highest of 25-54 age group without Post Secondary Education

Provincial Exams

- ? Region has 3<sup>rd</sup> highest ranking of students in grade 12 who did not write or pass provincial math exams in 1999/00

High School graduation

Region	45+%
BC	25%

- ? Region ranks as the second highest % of 18-year-olds that did not graduate from High School.

*Indicators of Labour Market Structure*

Unemployment

Region	4.2 %
BC	2.9 %

- ? Region ranked 6<sup>th</sup> highest of all regional districts in 2000
- ? Region had a higher % of youth (19-24) unemployed

Labour skills

University Degrees

Region	5.5 %
BC	13.6 %

- ? Less than 1/2 the BC average have University Degrees (1996)

Labour Force (1996)

Industrial Structure (%)

Goods Primary	Region	13 %	BC	5.7 %
Manufacturing	Region	17 %	BC	10 %
Construction	Region	6 %	BC	7.5 %

*Indicator of Youth at Risk*

Income Assistance/Unemployment Benefits

- ? Second highest ranking for % of youth (19-25) receiving basic BC Benefits- this is double the Provincial average
- ? A higher percentage of youth are receiving unemployment insurance assistance.

Education

- ? Grade 10 writing skills were on par with the Provincial average

*Indicators of Health Problems*

Life Expectancy

- ? Life Expectancy for the region is ranked in the top 3 worst for BC

Mental Health

- ? Potential years of life lost due to Suicide/homicide (per 1000 pop) for the Region is double provincial average

*Indicators of Children at Risk*

Crime

Juvenile (12-17) Crime rates (1997/99)

Total Serious Crime

Region 26.7% BC 9.5%

Crime Rate

Motor Vehicle Theft	Region 4.4	BC 7.7
Spousal Assault	Region 4.1	BC 2.5

Property crime is low, but personal assault is almost double the Provincial average.

Serious Drug Crime

- ? Illicit Drug deaths were close to Provincial Average but drug offenses was considerably lower, particularly among the youth.

## 7 References

- Aboriginal Fisheries Commission, AGM Vancouver, 1998
- Alaska Fish and Game, Troll Manager 2001
- U.N. Code of Conduct for Responsible Fisheries, United Nations Fisheries Committee, Rome, Italy
- Copeley and Ass. Consulting, Fisheries Communities Review, Report Prepared for the ADM's Committee on Community Transition, Dec, 1999
- Canadian Council of Professional Fish Harvesters, Ottawa Canada
- Canadian Stock Assessment Reports, May 1998, March 1999
- Ministry of Agriculture, Food and Fisheries, Provincial Government of B.C. Annual Review, 1999, 2000
- Ministry of Agriculture, Food and Fisheries, Provincial Government of B.C.. Seafood Industry Report, 1999
- BC Ministry of Fisheries, Proposal for a Joint Canada/ BC Fisheries Adjustment and Renewal Strategy, 1999
- FishBytes, The Newsletter of the Fisheries Centre, UBC
- Gislason, Gordon, Fishing For Money, prepared for the Job Protection Commission,, Vancouver B.C.1998
- Gislason, Gordon, Fishing For Answers, prepared for the Job Protection Commissioner, Vancouver B.C.1999
- Gislason, Gordon, Fishing For Direction Vancouver B.C 1998
- ARA Consulting Group, The Economic Value of Salmon, February, 1996
- ARA Consulting Group, inc, The Price of Salmon From Retail to Fishermen, prepared for the Salmon Marketing Council, 1993
- Marvin Shaffer & Ass. Ltd, An Analysis of the Economic Benefits of Recreational and Commercial Fisheries, prepared for the Department of Fisheries and Oceans, 1986
- DFO, Canada's Ocean Act (1997)
- DFO, Improved Decision Making Paper, 2000

DFO Minister Anderson, A new Direction for Canada's Pacific Salmon Fisheries' 1998

DFO, Policy and Planning, allocation information 1998

Kelly, Dale, President Alaska Trollers Association, meeting Vancouver 2001

Regional Aquatic Management Board Terms of Reference, 2001

Community Fisheries Development Centre, We'd Rather Be Fishing, A Review of Transition Programs in West Coast Fisheries April 2000

Toy, the Honourable Sam, Report to the Minister on Inter-sectoral allocation 1998

Savoie, Don, Gabrielle Filteau and Patricia Gallagher, Partnering the Fishery: Report of the Panel Stuying Partnering, 1998

Adelson Report, The Value of the Commercial Licenses, 1997 prepared for Fisheries and Oceans Canada

National Roundtable on the Environment and Economy 'Sustainable Stragetegies for Oceans: a Co-management Guide' 1998

Fisheries Renewal BC, web site 2001

Nuu-chah-nulth Economic Development Corporation, interviews 2001

Forrester J & A, B.C Commercial Fishing History, 1975

Area G newsletters, 1998, 1999, 2000

Frase, G.A. Barnes and J A Barnes The Economic Impact and Economic Values of Commercial Fishing in B.C., prepared for the Minister of Agriculature, Fisheries and Food, 1992

Coast Guard and Environment Canada 2001

Wave The, Market information Website 2000, 2001

Neis, Barbara and Lawrence Felts, Finding our Sea Legs, Institute for Social and Economic Research, 2000

Pacific Fisheries Resource Conservation Council, Annual Reports 1998, 1999, 2000

EB Economics, Compensation Valuation Study, Compensation to the Commercial Fishing Industry for the Reallocations to the Aboriginal Fishery, November 1992

- Maurstad, Anita, Fishing in Murky Waters, Ethics and Politics of Research on Fishers Knowledge, Norwegian College of Fisheries Science, Tromsø, Norway, 2001
- Powers, Melanie and Ratana Cheunpagee, Fishers and Scientists: no longer foes, but not yet friends, presentaion "Putting Fishers Knowledge to Work, International Conference Series,UBC, Virginia Institute of Marine Science, 2001
- Williams, Terry and Preston Hardison, The Legal and Institutional Context of Incorporating Indigenous Knowledge into Fisheries Management, Tulalip Natural Resources presentation UBC 2001
- SRSF, Social Research for Sustainable Fisheries), Who benefits from Research? The Need for a Fisheries Reseach Protocol, St Francis Xavier University, Antigonish, Nova Scotia,2001
- Price, Byron, Environmental Sentinels: Reframing Commercial Fishing in Pursuit of Value, Integrity and Sustainability, SARDI Aquatic Sciences, Australia, 2000
- Bedard, Marcel, The Economics and Social Costs of Unemployment, Applied Research Branch, Strategic Policy, Human Resources Canada, 1996