

## **3.0 REGIONAL SETTING**

The experience of the US Minerals Management Service (MMS) and other non-petroleum industries (such as the Voisey's Bay Nickel Company Limited Mine/Mill EIS) indicates that traditional First Nations knowledge of the biological resources of an area should be incorporated into any formal assessment of a project. The process of gathering the information should be a formalized agreement with the First Nations communities.

### **3.1 Marine Coastal Biodiversity/Continental Shelf Biota**

#### **3.1.1 Ecosystems**

*The report and recommendations of the 1986 West Coast Offshore Exploration Environmental Assessment Panel describes the biophysical environment within the region of interest. The majority of this information remains valid in terms of overall ecosystems, species, and fisheries. Some changes have occurred, however, primarily related to species stocks and harvesting operations.*

The two major marine ecosystems in BC are the nearshore and continental shelf ecosystems. The main factor influencing the differences in these two ecosystems is depth. Where the nearshore ecosystem occurs in shallow waters near rocky shores, estuaries, mud flats and shallow bays, the continental shelf exists in deeper waters off shore. Because the nearshore waters are shallow, light penetrates the water, allowing vegetation such as kelp and algae to grow and become the primary producers in the ecosystem. In the continental shelf ecosystem, phytoplankton is the primary producer.

A significant feature of the continental shelf ecosystem in BC is the deep-water sponge reefs. These sponge reefs are the only known Hexactinellid sponge reefs living in the world today. They cover approximately 1,000 km<sup>2</sup> between the Queen Charlotte Islands and the mainland and are believed to be nearly 10,000 years old (GSC 2001). Evidence of damage to these reefs by trawling gear has created concern for the protection of these reefs.

#### **3.1.2 Finfish and Shellfish**

*The stocks of many species of fish have changed since the 1986 report. Species such as Pacific halibut, petrale sole, yellowtail rockfish, rock sole and English sole have been declining as a result of declining recruitment and Pacific hake stocks have been declining since the late 1980s, returning to historic, typical levels. Pacific cod have declined until 1996, when it experienced a slight increase to 1998 but*



*was expected to decline in the subsequent two years. Rockfishes such as redstripe and redeye have increased until 1995, but abundance is expected to decline until the next major recruitment. Herring stocks have increased since 1986, but are expected to decline again in the long term (DFO 2001a; 2001b; 2001c).*

*Pacific invertebrate fisheries are diverse. Geoducks and intertidal clams have had quotas reduced since 1987 and the Pacific abalone fishery has been closed for most of the 1990's due to low stocks. Restrictions were placed on the BC shrimp fishery in 1997 and crab landings also declined after 1996 due to reduced stocks (BC Statistics May 2001).*

*Since 1986, steelhead have been re-classified as a Pacific salmon (*Oncorhynchus mykiss*), thus making six species of salmon caught by commercial, recreational, and aboriginal fishers in British Columbia. The other five are: sockeye, pink, chum, coho, and chinook.*

*Sockeye and pink salmon were once the most abundant of the Pacific salmon species. Returns of Sockeye and pink salmon were at record high levels through the 1980's and the early part of the 1990s. However, more recently, returns have decreased due to extreme fluctuations in marine survival. For example, in 1995, returns of Fraser River sockeye were well below predicted levels, even though the spawning escapement in the parent year was the highest ever recorded for this cycle.*

*Chum salmon catches in British Columbia appear to be highly variable and dependent on recruitment and environmental conditions.*

*Chinook and coho salmon are highly valued by all fishers. However, marine survival rates for the 1990s have generally been low. Some runs of chinook salmon, such as those along the west coast of Vancouver Island and some parts of the Strait of Georgia, have had severe conservation measures put in place due to protect low stock levels. Coho salmon stocks have also had low returns in the Strait of Georgia and in the upper Skeena River watershed and management measures were taken in 1995 to reduce the harvest rates on Strait of Georgia coho stocks. Since the late 1990s, there has been no commercial fishery for coho salmon. Habitat degradation has also become a concern for Strait of Georgia coho, as human populations expand and demand for residential, commercial and recreational development increases.*

### **3.1.3 Seabirds**

*The Canadian Wildlife Service (CWS) has conducted a comprehensive inventory of colonial nesting seabird populations in British Columbia since 1986 (Rodway et al. 1988) and an overview of the historical and current information regarding seabird colony distributions and breeding populations has also been conducted (Rodway 1991). In general, over 5.6 million colonial birds are currently estimated to nest at 503 colony sites along the British Columbia coast (Rodway 1991). Most populations breed in high-density colonies which may contain various seabird species. In addition to the work being done by*



the CWS, the United States Fish and Wildlife Service (USFWS) has a seabird colony database and the United States Geographic Service (USGS) have a Pacific Seabird Monitoring database. The Pacific Seabird Monitoring database includes colonies in British Columbia, however, at this time, it consists mostly of raw observations and is therefore not available to the public.

Fifteen species of seabirds are known to breed on the coast of British Columbia (Table 3.1).

**Table 3.1 Status of Seabird in British Columbia and their Distribution**

Species	Estimated Numbers	Status	Distribution
<i>Fork-tailed Storm Petrel (Oceanodroma furcata)</i>	400,000	Trends unknown, believed healthy	Colonies on the Storm Islands in Queen Charlotte Strait and on Gillam Islands on the west coast of Vancouver Island support approximately 49 percent of the total provincial population.
<i>Leach's Storm Petrel (Oceanodroma leucorhoa)</i>	1,400,000	Trends unknown; believed healthy	A cluster of four colonies in Queen Charlotte Strait, plus two colonies on the west coast of Vancouver Island contain approximately 74 percent of the total population found on British Columbia's coast.
<i>Double-crested Cormorant (Phalacrocorax auritus)</i>	4,000	Blue-listed	Generally confined to the Strait of Georgia where numbers have increased dramatically since they were first recorded. Estimates in 1991 gave a total of over 2,000 nesting pairs in the Strait of Georgia area.
<i>Brandt's Cormorant (Phalacrocorax pencillatus)</i>	200	Red-listed	Nesting in small numbers on Sea-lion Rocks off the mid-west coast of Vancouver Island, the maximum numbers recorded up to 1991 was 150 nesting pairs in 1970.
<i>Pelagic Cormorant (Phalacrocorax pelagicus)</i>	9,000	<i>pelagicus</i> subspecies red-listed; other subspecies stable	Although they breed along the entire coastline, most of the nesting population occurs in the south on the east and west sides of Vancouver Island. An estimated 4,495 pairs were breeding at 85 sites in 1991, with 52 percent of the population nesting in the Strait of Georgia and 26 percent along the west coast of Vancouver Island.
<i>Glaucous-winged Gull (Larus glaucenscens)</i>	58,000	Increasing	These gulls have a similar distribution to that of pelagic cormorants. It was estimated that 28,953 pairs bred along the coast in 1991, with 48 percent of the total population nesting in the Strait of Georgia and 25 percent on the west coast of Vancouver Island. Data suggests that populations increased by as much as 30 percent in the Queen Charlotte Islands and by 48 percent along the northern mainland coast from 1975-1988.



Species	Estimated Numbers	Status	Distribution
<i>Common Murre</i> ( <i>Uria aalge</i> )	9,000	Red-listed	<i>The colony at Triangle Island is thought to support 95 percent of the breeding population (4,100 pairs in 1989).</i>
<i>Thick-billed Murre</i> ( <i>Uria lomvia</i> ),	20	Red-listed	<i>Known to breed on Triangle Island, which is the southern most known breeding site in the eastern Pacific.</i>
<i>Pigeon Guillemot</i> ( <i>Cepphus columba</i> )	9,000	Trends unknown	<i>The most ubiquitous breeding alcid in the province, nesting at an estimated 303 sites. A total of 9,345 birds were counted around colonies during the 1991 surveys.</i>
<i>Marbled Murrelet</i> ( <i>Brachyramphus marmoratus</i> )	36,000	Threatened (COSEWIC); red-listed	<i>Known to inhabit Desolation Sound.</i>
<i>Ancient Murrelet</i> ( <i>Synthliboramphus antiquus</i> ),	540,000	Vulnerable (COSEWIC); blue-listed	<i>Generally known to breed exclusively on the Queen Charlotte Islands where estimates have been as high as 543,000 birds. These numbers were probably higher in the past as current trends in population numbers show declines and colony abandonments. In 1991, British Columbia supported approximately 74 percent of the world breeding population.</i>
<i>Cassin's Auklet</i> ( <i>Ptychoramphus aleuticus</i> ),	2,700,000	Blue-listed	<i>The most abundant breeding species in British Columbia, their population is estimated to be over 2.7 million nesting at 60 sites. 73 percent of the population breed at 3 sites in the Scott Island and the rest breed in the Queen Charlotte I.</i>
<i>Rhinoceros Auklet</i> ( <i>Cerorhinca monocerata</i> )	720,000	Stable	<i>Over 720,000 breed in British Columbia at over 30 sites. This represented approximately 56 percent of the world breeding population in 1991. Most are found on two colonies in Queen Charlotte Strait, four colonies on the northern mainland coast and one colony in the Scott Islands</i>
<i>Tufted Puffin</i> ( <i>Fratercula cirrhata</i> )	78,000	Blue-listed	<i>Over 90 percent of the 78,000 breeding in British Columbia nest in the Scott Islands. Small numbers also breed throughout the coastline.</i>
<i>Horned Puffin</i> ( <i>Fratercula corniculata</i> )	60	Red-listed	<i>Their summer range appear to be expanding along the west coast of North America. They have been confirmed nesting in British Columbia only at Anthony Island at the south end of the Queen Charlotte Islands</i>

Source: Rodway 1991; Environment Canada 2000

### 3.1.4 Marine Mammals

There are 29 species of marine mammals along coastal BC (Ministry of Forests 1995). Of these 29



species, only eight are commonly seen. These include porpoises, dolphins, seals, sea lions, otter and mink (WCOEEAP 1986). There are three marine mammals on the provincial red-list, meaning they are extirpated, endangered or threatened in British Columbia. The three species on the red-list are northern right whale (*Eubalaena glacialis*), northern sea lion (*Eumetopias jubatus*) and sea otter (*Enhydra lutris*). The BC Conservation Data Centre lists 10 species of marine mammals and three populations as vulnerable: northern fur seal (*Callorhinus ursinus*), Bering Sea beaked whale (*Mesoplodon stejnegeri*), arch-beaked whale (*Meloplodon carlhubbsi*), sperm whale (*Physeter catodon*), harbour porpoise (*Phocoena phocoena*), grey whale (*Eschrichtius robustus*), fin whale (*Balaenoptera physalus*), sei whale (*Balaenoptera borealis*), blue whale (*Balenoptera musculus*), humpback whale (*Megaptera novaeangliae*) and the Northeast Pacific Resident, Northeast Pacific Offshore and West Coast Transient populations of killer whale (*Orcinus orca*) (BC CDC 2001).

*Grey whales are the first great whale to be removed from the endangered species list. As populations recover, more animals are returning to their historical British Columbia range to feed on mysid shrimp.*

*Research initiatives, such as the Coastal Ecosystems Research Foundation (CERF), have been conducting ongoing research on whales and dolphins on the coast of BC. Relevant research includes grey whale toxicology. Heavy metal and PCB levels in mysid shrimp populations, primary prey for grey whales, are being studied.*

*The Pacific white-sided dolphin is one of the most abundant cetaceans in the North Pacific, and in recent years, it has been sighted more frequently and in larger numbers in the inshore waters of British Columbia. Humpback whales have also been gradually returning to their original habitats, including Queen Charlotte Sound.*

## **3.2 Commercial Fishery**

During the 1990s, the number of fish processing plants has declined in British Columbia. Some of this decline was due, in part, by the industry consolidation. In 1990, there were 219 provincially licensed fish processing plants. By 1999, this number had decreased 13 percent to 190. Most of the reduction in plants was focused on Vancouver Island and the Sunshine Coast, where 28 and 10 plants, respectively, were shut down during the 1990s. The one area of the province with considerable growth during the 1990s was the North Coast, which experienced a 36 percent increase in fish processing facilities (BC Statistics May 2001).

Although there was a decline in commercial landings for wild salmon during the 1990s (Section 3.2.1), the export values of BC fish increased 10 percent from \$773 million in 1990 to \$853 million in 1999 (BC Statistics May 2001).

### **3.2.1 Salmon**

*Landed catch by tonne for all species of salmon has continually decreased between 1986 and 1999.*



Statistical information is not yet available for 2000 and 2001. In British Columbia, *the catch has decreased* from 103,780 tonnes in 1986 to 96,400 tonnes in 1990 to 19,900 tonnes in 1999. Landings for pink salmon decreased 66 percent between 1986 and 1999, from approximately 29,505 tonnes to approximately 10,000 tonnes. Chum landings dropped 80 percent between 1986 and 1999 (approximately 25,197 tonnes and 5,000 tonnes, respectively). Chinook landings decreased 80 percent from 5,007 tonnes in 1986 to less than 1,000 tonnes in 1999. Of the five species of Pacific salmon, sockeye landings have fluctuated the most, however, the overall trend has resulted in a 95 percent decrease between 1986 and 1991 (approximately 30,833 and 1,800 tonnes, respectively). Because of the threat to wild coho stocks, restrictions were placed on the commercial fishery in 1996 and became progressively more severe, until there were no commercial landings of coho in 1999.

As a result of the decrease in landed catch for Pacific salmon, landed values have decreased 46 percent between 1986 and 1999. Landed values for wild salmon were approximately \$265 million in 1986 and fell to approximately \$170 million in 1999 (BC Statistics 2000; 2001).

### **3.2.2 Herring**

In BC, the total herring catch by tonne, including herring spawn on kelp, increased from 1986 to 1994 (16,491 to 40,902 tonnes, respectfully), but dropped significantly in the intervening five years to 29,800 tonnes in 1999. The majority of herring is caught on the North Coast and although the landed value increased despite the down turn until 1996 (\$46,209,000 to \$99,700,000), it declined to approximately \$50,000,000 in 1999 (BC Statistics 2000; 2001).

### **3.2.3 Halibut**

The halibut catch by tonne in British Columbia has fluctuated only slightly since 1986. In 1996, the catch was slightly above the 1986 level (5,389 and 5,431 tonnes, respectfully) (BC Statistics 2000). In 1999, the catch was 5,500 tonnes. The majority of halibut is landed on the North Coast. Its value has increased from \$24,455,000 in 1986 to \$39,000,000 in 1999 (BC Statistics May 2001).

### **3.2.4 Groundfish**

Groundfish landings have fluctuated considerably during the 1990s, however, in 1999, the landed catch for groundfish was 139,000 tonnes, which is virtually the same as the 1990 catch. During the 1990s, hake was the dominant species landed, standing at 57 percent in 1990 and 67 percent in 1999. Rockfish increased slightly from 16 percent of the harvest in 1990 to 17 percent in 1999. Sole and sablefish landings decreased slightly from 4 to 3 percent. Due to the declining stocks of Pacific cod, restrictions were placed on the harvest in 1992, resulting in a decline in landed catch from 5 percent in 1990 to 1 percent in 1999 (BC Statistics May 2001).

Landed value for groundfish increased from \$67 million in 1990 to \$100 million in 1999 (BC Statistics May 2001).



### 3.2.5 Shellfish

The commercial harvest of shellfish had a dramatic increase in 1992, rising from 21,500 tonnes in 1990 to 31,500 tonnes in 1992. Landings then dropped to 24,000 tonnes in 1999. This high level of fluctuation was due to the increase in wild sea urchin landings in 1992 and the introduction of quota and area restrictions, in particular on the BC shrimp trawl fishery in 1997 (BC Statistics May 2001).

The BC shellfish fishery harvests many different species of invertebrates, however, in 1999, the largest landings were for sea urchin (6,800 tonnes), shrimp and prawns (5,200 tonnes) and crab (3,900 tonnes). Both sea urchin and shrimp harvests briefly increased in the 1990s and then decreased following restrictions put in place to protect declining stocks. The harvest of crab increased at the beginning of the decade and then declined after 1996 following management restrictions and reduced stocks. Landings for wild geoducks declined over the 1990s (approximately 4,000 tonnes in 1990 to 1,500 tonnes in 1999) due to management restrictions (BC Statistics May 2001).

### 3.2.6 Commercial Sport Fishery

*Sport fishing continues to be an important recreational activity for both residents and non-residents of British Columbia.* It is the largest industry in the fisheries and aquaculture sector in BC, with a total GDP of \$214 million in 1999. The sport fishing industry had been growing up until the mid-1990s. However, it is showing the effects of the uncertainty in salmon stocks and restrictions for resource conservation measures (BC Statistics June 2001).

### 3.2.7 Aquaculture

Farmed salmon is the primary aquaculture species in British Columbia. *Landed tonnes and value are not available from 1986* but have generally increased during the 1990's. In 1990, 15,500 tonnes of production from salmon aquaculture operations were worth \$79 million. By 1990, this increased to 49,100 tonnes worth \$292 million. Before 1993, the main salmon species farmed was chinook, but by 1993, Atlantic salmon had become the number one farmed species in BC (BC Statistics May 2001).

The salmon aquaculture industry has substantially reduced in size between the mid-1980's and the mid-1990's. There are presently sixteen salmon farming companies operating in British Columbia at seventy-nine locations. A provincial government moratorium on the issuance of new tenures has been in effect since 1995, although in 1996, several tenures whose applications had been pending for some time were issued. Salmon farming sites are typically less than 10 ha in size with a less than 200 hectares of aquatic Crown land presently allocated for salmon aquaculture purposes. The locations (by regional District) of existing salmon farm site tenures in British Columbia, including inactive tenures, as of 1996 are shown in Table 3.2.



**Table 3.2 Distribution of Active Grow-Out Sites by Regional District**

<b>Regional District</b>	<b>1996</b>
Alberni-Clayoquot	18
Comox-Strathcona	28
Mount Waddington	21
Nanaimo, Cowichan, Capital	8
Sunshine Coast & Powell River	4

Source: [www.eao.gov.bc.ca/PROJECT/AQUACULT/SALMON/Report/final/vol1/V1chp2.htm](http://www.eao.gov.bc.ca/PROJECT/AQUACULT/SALMON/Report/final/vol1/V1chp2.htm)

### 3.3 First Nations

The asserted traditional territories of a number of culturally and linguistically distinct First Nations are situated on the northern Vancouver Island, central coast and north coast areas of British Columbia within the subject area under review. The Haida (the Council of Haida Nations) are situated on the Queen Charlotte Islands (Haida Gwaii) the Nisga'a (Nisga'a Lisims Government) at the mouth of the Nass River and in the Nass Valley. The Tsimishian First Nations (Tsimshian Tribal Council), Haisla Nation, and Heiltsuk First Nation are situated on the north and central coast and the Winalagalis Treaty Group, Kwaguilth First Nations on northern Vancouver Island and the south central coast. To the south of the area of review are the Nuu-chah-nulth First Nations (Nuu-chah-nulth Tribal Council) located on the west coast of Vancouver Island and the Coast Salish First Nations of the Georgia Basin watershed south of Powell River (Sliammon First Nation).

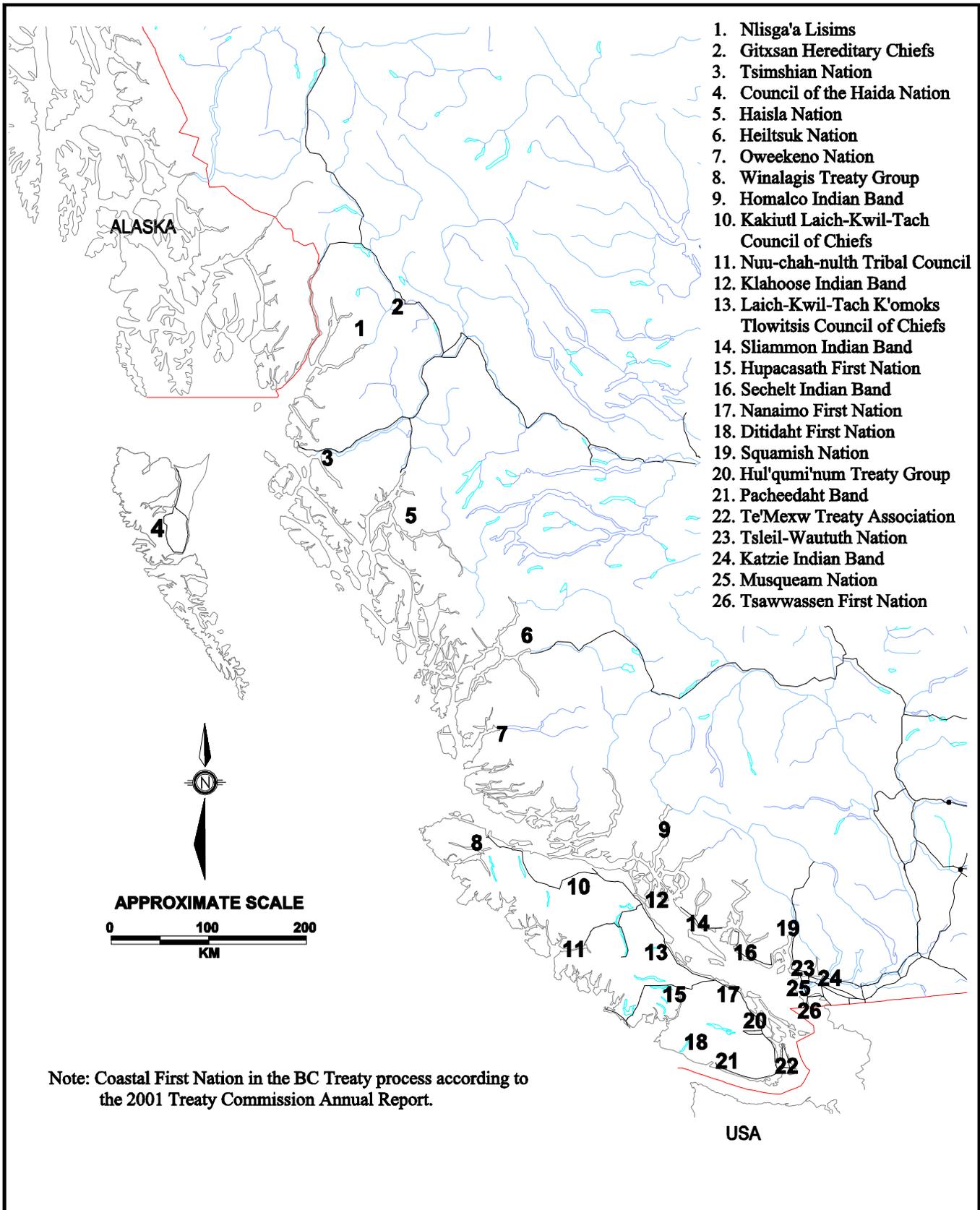
As a result of the signing of the BC Treaty Commission Agreement on September 21, 1992, tripartite negotiations are underway for most Coastal First Nations through the six stage B.C treaty process. The BC Treaty Commission's 2001 Annual Report indicates that province-wide there are 49 First Nations in 40 sets of negotiations in the treaty process. The Council of the Haida Nation is in stage 2, The Nisga'a have completed their Final Agreement and 42 First Nations are at stage 4 including the Tsimshian Nation, the Haisla Nation, the Heiltsuk Nation, the Nuu-chah-nulth Nation, and the Winalagalis Treaty Group. These latter First Nations have asserted traditional territories in the area of review. There are additional First Nations that are not participating in the treaty process that may overlap with the area of interest.

The distribution map on Figure 3.1 shows relative locations for the coastal First Nations that are currently participating in the British Columbia treaty process.

#### 3.3.1 Populations

Population numbers for the central and north coastal First Nations communities, as of month ending September 2001, indicate that there are approximately 28,500 people affiliated with these First Nations. These statistics, from Indian and Northern Affairs Canada, British Columbia Region, include population on reserve and off reserve for each community and are presented in Table 3.3 below.





<b>COASTAL FIRST NATIONS IN THE BC TREATY PROCESS</b> <b>OFFSHORE OIL AND GAS TECHNOLOGY UPDATE</b> <b>BC MINISTRY OF ENERGY AND MINES</b>	<b>DATE:</b> OCTOBER 19, 2001	<b>SCALE:</b> AS SHOWN	
	<b>JOB No.</b> BCV 50229	<b>FIGURE No.</b> 3.1	

In reviewing the population statistics by residence code presented below, the residence codes are as follows: 1 = on reserve (own band), 2 = on reserve (other band), 3 = on crown land (own band), 4 = on crown land (other band), 5 = on crown land (no band), and 6 = off reserve.

**Table 3.3 Populations of Central and North Coast First Nations in the BC Treaty Process**

First Nation	Affiliated Bands	Population by Residence Code						Total
		1	2	3	4	5	6	
Gitksan Hereditary Chiefs	Gitanmaax	714	100	0	0	0	1062	1876
	Gitsegukla	490	30	0	0	0	299	819
	Gitwangak	456	29	0	0	0	507	992
	Glen Vowel/Sikokoak	153	27	0	0	0	175	355
	Kispiox	642	72	0	0	0	619	1333
Tsimshian Nation	Hartley Bay	170	12	1	0	0	447	630
	Kitasoo	320	8	0	0	0	143	471
	Kitkatla	431	18	0	0	0	1125	1574
	Kitselas	193	11	0	0	0	265	469
	Kitsumkalum	191	9	0	0	0	404	604
	Lax Kw'alaams	1076	42	0	0	1	1629	2748
	Metlakatla	105	2	0	0	0	593	700
Council of the Haida Nation	Old Massett Village Council	733	33	0	0	0	1677	2443
	Skidegate	694	6	0	0	0	542	1242
Heiltsuk Nation		1189	39	0	0	0	841	2069
Oweekeno Nation		97	12	0	0	0	126	235
Winalagalis Treaty Group	Kwakiutl	325	11	0	0	0	264	600
	Tlatlasikwala	8	8	0	0	16	14	46
	Namgis	738	28	0	0	0	724	1490
	Quatsino	211	4	0	0	0	151	366
	Gwa'Sala-Nakwaxda'xw	406	7	0	0	0	248	661
Homalco		221	6	0	0	0	191	418
Hul'qumi'num Treaty Group	Chemainus	751	65	0	0	0	209	1025
	Cowichan	1777	213	0	0	0	1565	3555
	Halalt	84	13	0	0	0	92	189
	Lake Cowichan First Nation	12	0	0	0	0	2	14
	Lyackson	12	21	0	0	0	138	171
	Penelakut	465	26	0	0	0	266	757
Pacheedaht First Nation		101	16	0	0	0	128	245
Tlowitsis Council of Chiefs		11	35	0	0	63	233	342
<b>Totals</b>		<b>12,776</b>	<b>903</b>	<b>1</b>	<b>0</b>	<b>80</b>	<b>14,679</b>	<b>28,439</b>

Source: INAC – BC Registered Indian Population

### 3.3.2 Position Statements

Significant changes have occurred since the *Report and Recommendations of the West Coast Offshore Exploration Environmental Assessment* of 1986 that have led to greater involvement of First Nations in the management of natural resources within their traditional territories. These changes include a series



of Supreme Court of Canada decisions, Guerin (1984), Sparrow (1990), and Delegamuukw (1993, 1997), creation of the British Columbia Treaty Commission Agreement in 1992, and the Nisga'a Final Agreement, now recognized under s35 of the *Constitution Act*. More recently, the Province of British Columbia has entered into two protocol agreements with many of the First Nations having traditional territories in the area of review for the offshore oil and gas moratorium. While these agreements do not address the offshore oil and gas issue they do move the signatory parties toward a greater role in natural resource management by addressing a series of process and forestry related objectives. The agreements also include mechanisms to consider and where possible to address ecological and environmental issues and other concerns and to develop a strategic land use plan with the Province.

A number of First Nations have issued formal and informal statements on the Moratorium on North Coast Oil and Gas Exploration. The Tsimshian and Haida nations issued a joint statement on the moratorium on May 14, 2001. This statement supports retention of the moratorium citing two primary reasons: “the petroleum interests...are within the territorial seas” of the two Nations; and, “the risk of harm from an accidental oil spill or allowable discharge is not acceptable”. In a speech at the conference “The Future of Offshore Oil and Gas Development in British Columbia” on October 2, 2001, Mr. Garry Reece, the elected Chief of the Lax kw’alaams Band, clearly stated the concerns of the Lax kw’alaams Band. These included possible negative environmental effects, risk of impacts to marine resources the Band relies upon and potential negative social risk to their culture that would result from large-scale industrial activity. Based on these considerations, the Lax kw’alaams Band is opposed to any change in the moratorium. However, Mr. Reece went on to state that the Band is willing to review its position subject to full and honest dialogue with proponents, leadership roles in studies reviewing the effects of oil and gas developments and opportunities to achieve economic benefits from any development. To ensure that these opinions are understood, the Tsimshian Haida Statement on the moratorium on North Coast Oil and Gas Exploration, the Heiltsuk position and a speech by Chief Gay Reece of the Lax Kw’alaams First Nation are attached as Appendix 2.

### **3.4 Communities**

The potential for oil and gas exploration in Hecate Strait, as noted in the two previous reports (AGRA Earth and Environmental 1998 and Province of British Columbia 1986), could have significant benefits and / or impacts on local district centres of varying sizes. The following describes the state of the economy in many of the centres whose districts are adjacent to the current moratorium area. Specific reference is made to the communities, population, labourforce, and key economic sectors, including fisheries and tourism.

#### **3.4.1 People**

There are four districts identified by the provincial government, which border on the current exploration moratorium area. They are:

- Regional District 43: Mount Waddington;



- Regional District 45: Central Coast;
- Regional District 47: Skeena-Queen Charlotte; and
- Regional District 49: Kitimat-Stikine.

All districts have positive growth rates (under 1 percent per year, 10-year average) and labourforce participation rates higher than the provincial average. All districts have a significant public sector and forestry sector contribution to employment, while the mining and fishing and trapping sectors contribute less to district employment. By way of contrast, British Columbia's employment leaders are public sector (24 percent), forestry (20 percent), and tourism (7 percent).

Table 3.4 describes the income dependency by industry for the centres identified above. Income dependency refers to sector contribution to household income within the District. For comparison, provincial statistics are shown at the bottom.

**Table 3.4 Income and Sector Dependency, Selected Centres**

District	Average Household Income	Income Dependency (1996)	Percentage Share
District 43 - Mount Waddington	60,245		
		Forestry	45
		Public Sector	18
		Fishing/Trapping	7
District 45 - Central Coast	41,861		34
		Public Sector	22
		Forestry	8
		Tourism	7
District 47 - Skeena-Queen Charlotte	56,305		
		Public Sector	28
		Forestry	25
		Fishing/Trapping	13
District 49 - Kitimat-Stikine	57,636		
		Forestry	25
		Public Sector	24
		Mining	15
British Columbia	56,527		
		Tourism	6
		Public Sector	24
		Forestry	20
		Tourism	7
		Mining	5

Source: BC Stats



Table 3.5 below describes the population, growth rate, and labourforce participation rates of these Districts (including the largest centres for each Regional District).

Tourism (and ecotourism) in communities within the study is a growing industry, and is being encouraged in order to diversify a primary-producer and resource-extraction based economy, and to combat seasonal unemployment. Presently between 6-8 percent of residents are dependent on the tourism-based economy for household income.

**Table 3.5 District Population Statistics**

District	Largest Centres	Population (2000)	% District Growth Rate (10yr. Avg.)	Participation Rate (1996 ), %
43 - Mount Waddington	Port Hardy	5,228	0.3	77.5
45 - Central Coast*		4,556	1.8	71.6
47 - Skeena-Queen Charlotte	Prince Rupert	17,027	0.2	74.2
	Masset	1,266	-	-
49 - Kitimat-Stikine	Kitimat	11,533	1.1	70.8
Total, British Columbia		4,063,760	2.3	60

\* Bella Coola 1996 population - 873

Source: BC Stats

#### **3.4.1.1 Regional District 43 - Mount Waddington**

Port Hardy is the largest centre in RD 43, with a population of 5,228, which accounts for approximately 35 percent of the region's population, though the land area is only 0.2 percent of the region. Port Hardy's economy has a high reliance on forestry and the primary resources sector of the economy and the participation rate is highest in the study area.

#### **3.4.1.2 Regional District 45 - Central Coast**

The Central Coast district has port, rail, and road access at Bella Coola. The district population is lower than others in the study area. Education levels and participation rates are comparable to other districts.

#### **3.4.1.3 Regional District 47 - Skeena-Queen Charlotte**

Within RD 47, Prince Rupert and Masset account for nearly 68 percent and 5 percent of the region's population and only 0.4 percent (combined) of the region's total land area. However, their size and/or location in the region (as well as existing infrastructure) may prove advantageous for exploration activities.

#### **3.4.1.4 Regional District 49 - Kitimat-Stikine**

The city of Kitimat, with a population of 11,533, is the most strategically placed city in the district. The district relies heavily on the forest industry and public sector, both of which are currently giving way to increased tertiary industry as well as tourism initiatives.



**Table 3.6 Key Infrastructure and Major Employment Industries**

Community	Key Infrastructure/Activities/Facilities	Major Industrial Employers (# employed)
Kitimat	21 greenfield industrial sites (11 on tidewater)	Alcan Smelters (1,800+)
	11,660 ha of developable industrial land	Eurocan Pulp & Paper Co. (630+)
	quarrying opportunities	Methanex (125+)
		Pacific Ammonia Inc
	Rivtow Marine and Barging	
Masset	commercial fishing fleet	CB Island Fisheries
	2 Commercial fish processing plants	Omega Packing Company Ltd
		Graham Island Shake and Shingle Ltd
		Delmas Cooperative Association
		Greater Masset Development Corporation
	Northern Savings Credit Union	
Port Hardy	fish processing	large commercial fishery (800-1,000 operators)
	wood manufacturing	aquaculture/shellfish operations
	tourism	seafood processing sector
	forestry/silviculture	100 sportfishing charters/outfitters
	varied tourism sector	nearby Provincial Parks
Prince Rupert	780 fishing vessels; 1300 fishermen	Skeena Cellulose Inc. (600+)
	11 processing plants (up to 2,200 employed)	Canadian Fishing Company (150+)
	1,500 salmon licenses	Northern Savings Credit Union (120+)
	largest fish cannery in the world (Allied Pacific Processors)	JS MacMillan Fisheries (100+)
		Ocean Fisheries (100+)
		Prince Rupert Grain (100+)
		Ridley Terminals (70+)
		North Coast Timber (50+)
		Canadian Stevedoring (50+)

Sources: Northwest Development Corridor and Port Hardy and District Chamber of Commerce

### 3.4.1.5 Education Levels and Labour Supply

Table 3.7 illustrates the percentage of the labour supply (1996 figures) in the principle centres of the study area, as a function of post-secondary diplomas and certificates, and university degrees. Provincial figures are approximately 30 and 14 percent, respectively.

**Table 3.7 Labour Characteristics by District**

District	Education Level (Post-Secondary Diploma/Certificate), %	Education Level (University Degree), %
43 - Mount Waddington	29.4	7.9
45 - Central Coast	28.5	8.5
47 - Skeena-Queen Charlotte	27	8.1
49 - Kitimat-Stikine	27	8

Source: BC Stats



### 3.4.2 Fisheries

The fisheries in the region can be divided into four categories:

- commercial;
- commercial-recreational;
- recreational; and
- aquaculture.

The commercial fishery in British Columbia remains a key source of employment and income for the province, and is the key resource sector for many small and medium size communities, and for more remote communities along the central and north coast areas.

Statistics from 1999 show that the salmon, herring, groundfish, wild shellfish, and other fisheries accounted for 210,000 tonnes and a landed value of over \$300 Million. However, the 1999 wild salmon harvest was the lowest in 50 years, and has resulted in concerns over conservation. The decline in the salmon industry is being mitigated largely through aquaculture in B.C.

The commercial-recreational fishery in B.C. includes tourism operations of varying sizes, in populated and remote areas. Many of the communities in the study area specialize in this type of eco-tourism, offering the “whole package” to tourists by providing both the lodging and the “fishing” experience, while the industry is also expanding into incorporating other outdoor activities instead of recreational fishing. More detail is given in the Tourism section (Section 3.5.1).

Recreational sportfishing in tidal areas accounted for approximately \$315 Million in the 1999 provincial economy, provided 3,400 seasonal jobs, and put to work over 800 charter operators (BC Fisheries).

Salmon farming in B.C.’s aquaculture industry reached 49,900 tonnes in 1999, an increase in nearly 7,000 tonnes from the previous year, and contributed \$329 Million (88 percent of total aquaculture wholesale value) in wholesale value to the provincial economy (up nearly \$65 Million from 1998). Nearly 80 percent of the salmon aquaculture industry is represented by Atlantic salmon (followed by Chinook at 18 percent and Coho at just over 3 percent). Aquaculture is an expanding sector in the study area, and in some cases, is attempting to offset losses in the traditional fisheries sector.

### 3.4.3 Challenges Facing Coastal Communities

Declining salmon catches since 1986 have affected the economies of coastal communities, and continue to present a threat to the economic base of communities who rely on the harvesting and processing sectors. The key communities identified above depend on the fisheries sector for employment, as seen in the example of Prince Rupert, which has nearly 800 fishing vessels and 1,300 fishermen (similarly, Port Hardy has between 800 and 1,000 operators in the commercial fishery). Within the processing



sector, major industrial employers in these centres rely heavily on the salmon fishery (for example, there are eleven processing plants in Prince Rupert which, in total, employ nearly 2,200 people). These challenges are made worse by the lack of future prospects for the fisheries sector, and therefore the health of communities whose economy is reliant on fisheries and processing. There is no indication that the effects of depleted salmon stocks on the economy will be short-term in nature.

In the past five years, the Government of Canada has implemented measures to reduce the size of the oversized commercial fleet, as well as fund habitat restoration measures, rebuild salmon stocks, and increase resource and watershed stewardship. Furthermore, the government has funded programs to compensate vessel owners who were affected by certain strategy provisions, and to assist individuals who may have been displaced by these measures. The aim of these measures is to improve the long-term sustainability of the fisheries sector by improving habitat, which will in turn improve salmon stocks. Initiatives are still in place to increase stewardship, compensate for losses, diversify economies, and create an economic atmosphere to foster recovery of salmon stocks.

The forestry sector in the immediate area is also facing some challenges. Notably, one of the biggest issues is the economic health of Skeena Cellulose, in Prince Rupert. Skeena Cellulose was recently granted protection from creditors, with hopes of future ownership in the private sector. The sawmill in Prince Rupert, at full production, can employ over 1,300 employees, and 6,500 more are directly and indirectly employed as a result of the pulp and paper mills and log chipper and sawmill activities in other locations. The loss of Skeena Cellulose would greatly affect the economic base of the regional economy.

Competitiveness in the lumber industry is being hampered by high stumpage rates paid by northern mills and high transportation costs, as compared to other parts of Canada. There are presenting challenges to local industry which, in the key districts outlined above, economies rely heavily upon (household income dependency ranging from 22-45 percent).

### **3.5 Other Resource Use - Tourism, Sensitive Areas, Port and Shipping**

This section addresses the state of the tourism industry in the identified areas, sensitive areas (including Marine Protected Areas), and the Land and Resource Management Planning (LRMP) processes, which are active to varying degrees in the study area. Transportation in key port cities is discussed at the end of the section, outlining infrastructure and facilities for road, rail, and sea access. The tourism industry and the status of land and resource (including marine resources) planning are major factors to consider in any discussion of oil and gas exploration.

#### **3.5.1 Tourism**

Many urban centres in the study area have growing tourism industries, or are in the process of establishing tourism operations, many of which are natural-resource based. For the centres of Kitimat, Masset, Port Hardy, and Prince Rupert, the following table elaborates on the existing tourism-amenity



base and indicates the tourism strengths currently in the respective region.

How oil and gas exploration activities could affect the trend toward tourism and ecotourism in the area is unknown, as is the manner in which the industries could complement each other in community economic development.

**Table 3.8 Tourism in Selected Centres**

Municipality	Characteristics
Kitimat	sportfishing charters (20+)
	MK Bay Regional Marina
	Moon Bay Marina/Kitimat Village Marina
	Mount Layton Hotsprings Resort
	access to Kitlope Rainforest area
	18-Hole golf course
	Furlong Bay and Lakelse Lake Provincial Park
	ski trails
	Weewanmu and Bishop Bay hotsprings
Masset	sportfishing charters (9)
	freshwater and sea-fishing opportunity
	10 local hiking trails
	small craft harbour
	bird watching at Delkatla Wildlife Sanctuary
	ferry and seaplane tours
Port Hardy	sportfishing
	whale watching, sea kayaking
	scuba diving
	nearby Provincial Parks
	9-hole golf course
	nearby ski hill (Mt. Cain)
Prince Rupert	100 sportfishing charters/local outfitters
	whale watching, sea kayaking
	Pike Islands Marine Heritage Tour
	First Nations Archaeological Tours
	Centennial Golf Course
	ferry and seaplane tours

Sources: Northwest Development Corridor and Port Hardy and District Chamber of Commerce

Another aspect of tourism for coastal communities in the area is the Cruise Ship industry. Ports of call (e.g. Prince Rupert, Port Hardy, etc.) on the west coast directly and indirectly benefit from cruise ship activity<sup>1</sup>. There may be a potential for oil and gas industry activities and cruise ship activities to

<sup>1</sup> A recent study reported that cruise ship activity in British Columbia resulted in a total regional impact of \$282.3 million to the economy (CCG Consulting Group Ltd, 2000).



overlap. The requirements of these two industries may have to be addressed.

### 3.5.2 Sensitive Areas - Marine Protected Areas (MPAs)

Marine Protected Areas, a joint initiative between the Government of Canada and the Government of British Columbia (and part of the provincial Land Use Strategy), was proposed to be a comprehensive, inclusive strategy to identify sensitive areas along the Pacific coast of B.C., and to provide some level of protection for conservation and sustainability, and to address issues of resource conservation, pollution, habitat alteration, exotic species, and climate change. A discussion paper was released in 1998, but to date, the Strategy has yet to be developed. This is due, at least in part, to difficulties encountered when dealing with shared marine jurisdiction between the federal and provincial governments. The Strategy described in the 1998 discussion paper notes that minimum protection standards for marine protected areas would prohibit ocean dumping, dredging, and exploration for, and development of non-renewable resources.

There are currently ten designation types for marine protected areas in BC, at both the federal and provincial levels. In addition to the federal and provincial designations, there are municipal marine parks; however, they only offer protection for marine resources where Fisheries and Oceans Canada has established fishery closures within the boundaries of the park. There are only two instances in BC where this has occurred.

The provincial government has five designation types for MPAs: Ecological Reserves, Provincial Parks, Wildlife Management Areas, Designated Wildlife Reserves and “Protected Areas”. Agency participation and responsibility for these five types of MPAs currently rests with the British Columbia Ministry of Water, Land and Air Protection. Ecological Reserves are crown and private lands designated by the Lieutenant Governor in Council, under the *Ecological Reserve Act*. Ecological Reserves are areas suitable for research and education, representative of natural ecosystems in B.C., examples of modified environments that can be studied for their recovery or are habitats for rare, endangered or unique species. There are four marine Ecological Reserves within the north and central coast areas of B.C.

Provincial Parks are created through Order-in-Council under the *Park Act* or inclusion in a Schedule in the *Act*. The purpose of provincial parks is to set aside representative ecosystems, habitat and special landscapes and features with the broadest diversity of provincially significant biophysical resources. They also serve various recreation functions, including enhancing tourism opportunities and ensuring enjoyment by all residents of the province. There are three classes of provincial parks. Class A parks are dedicated to the preservation of natural environments for the inspiration, use and enjoyment of the public. There are fourteen Class A parks and two Class R parks (Recreation Areas) with marine associations in the north and central coasts of B.C.

Wildlife Management Areas (WMAs) are designated by the Ministry of Water, Land and Air Protection



(MWLAP). MWLAP can acquire and administer lands and designate them as WMAs, except if they are in an existing park or recreation area. Designation of land under a WMA does not affect any rights previously granted. The purpose of WMAs is to encourage appreciation of wildlife values while ensuring wildlife heritage is passed on to future generations by maintaining diversity and abundance of native species and their habitats, opportunities for the use and enjoyment of wildlife and harmony between people and wildlife. There are no marine Wildlife Management Areas on the north and central coasts of B.C.

Sections 15, 16, 17 and 101 of the *Land Act* allow the Province to reserve or transfer Crown land for various reasons in the public's interest. Designated wildlife reserves are mainly used as an interim measure before the ultimate establishment of a wildlife management area. There are 5 wildlife reserves on the north and central coasts of B.C.

The *Environmental Land Use Act* is used to designate areas with both examples of marine diversity, recreational and cultural heritage and special natural, cultural heritage and recreation features. It is used by a Land Use Committee of Cabinet to meet government's land use plan commitments and respond to concerns with the *Park Act*. The Kitlope Heritage Conservancy is the only marine "protected area" on the north and central coasts of B.C.

The federal government also has five designation types for MPAs: National Parks (Reserves), National Marine Parks (National Marine Conservation Areas), Migratory Bird Sanctuaries, National Wildlife Areas and Marine Protected Areas. Parks Canada is responsible for National Parks and National Marine Parks, Environment Canada is responsible for Migratory Bird Sanctuaries and National Wildlife Areas and Fisheries and Oceans Canada is responsible for Marine Protected Areas.

National Parks are created to protect natural environments that are representative of Canada's natural heritage. They are managed by Parks Canada to maintain their ecological integrity while providing opportunities for public understanding, appreciation and enjoyment. A national park is formally established with an amendment to the *National Parks Act*. Because coastal areas of B.C. are currently subject to treaty negotiations, final designation for Gwaii Haanas (and Pacific Rim on the west coast of Vancouver Island) National Park, therefore, it is referred to as a Park Reserve in the interim.

National Marine Conservation Areas (NMCAs) are established to protect and conserve a network of representative areas of the marine environments in Canada while providing education and enjoyment to the people of Canada and the world. The intent is to manage the parks to demonstrate how protection and conservation practices can be harmonized with the sustainable use of marine ecosystems. NMCAs are currently established under the *National Parks Act*; however, a proposed *Marine Conservation Areas Act* is currently before Parliament. An NMCA has been established at Gwaii Haanas and is currently the only NMCA on the north and central coasts of B.C.; however, Parks Canada's NMCA System Plan identifies five of the twenty-nine marine regions in Canada on the Pacific Coast: the Strait of Georgia,



the Vancouver Island Shelf, Queen Charlotte Sound, Hecate Strait and the Queen Charlotte Shelf. Both Hecate Strait and the Queen Charlotte Shelf are represented in the Gwaii Haanas NMCA.

National Wildlife Areas (NWAs) are established under the *Canada Wildlife Act* on lands subject to federal jurisdiction and the administrative control of the Minister of Environment. They may be on land, internal waters or the territorial sea. The purpose of NWAs is to set aside nationally significant habitats for the protection of migratory birds and wildlife for the purpose of research, conservation and interpretation. There are currently no NWAs on the north and central coasts of B.C.

Migratory Bird Sanctuaries are established under the *Migratory Birds Convention Act*, which empowers Canada to enact and enforce regulations to protect those migratory birds listed in the Convention. There are no migratory bird sanctuaries on the north and central coasts of B.C.

Marine Protected Areas are designated, under the *Oceans Act*, by the Governor in Council, on the recommendation of the federal Minister of Fisheries and Oceans. Marine Protected Areas are established to conserve and protect:

- commercial and non-commercial fishery resources and their habitats;
- endangered or threatened marine species and their habitats;
- unique habitats;
- marine areas of high biodiversity or biological productivity; and
- any other marine resource or habitat as is necessary to fulfill the mandate of the Minister.

While no *Oceans Act* MPAs have been formally approved, four pilot MPAs were announced in B.C. in 1998: Gabriola Pass, Race Rocks, the Bowie Seamount and the Endeavour Hot Vents.

### **3.5.3 Land and Resource Management Plans (LRMP)**

The study area includes three areas for which LRMP processes are planned, have been initiated, or are currently in progress. These are: the Central Coast Land and Resource Management Plan, the Queen Charlotte Islands - Haida Gwaii Land and Resource Management Plan, and the North Coast Land and Resource Management Plan. The LRMP process will guide the management of lands and activities which could affect the region's ecosystems, amenities, and socio-economic environment. The Ministry of Sustainable Resource Management (MSRM) and the Land Use Coordination Office (LUCCO, now the Resource Planning Division of the BC MSRM) work in conjunction with resource ministries to inform, develop, and implement LMRPs. LMRPs generally provide:

- broad land use zones defined on a map;
- objectives that guide management of natural resources in each zone;
- strategies for achieving the objectives; and,
- a socio-economic and environmental assessment that evaluates the plan. (BC MSRM, 2001)



The LRMP process is designed to be focused on ecosystem, social, cultural, and economic sustainability to determine current and future land-use. Decision-making is open and community based so that the needs of communities, the economy, and the environment inform resource management decisions. The recently initiated Central Coast Preliminary LRMP has instituted an ecosystem-based management system. Any activities related to oil and gas exploration with the potential to affect regions in the study area would necessarily have to take into account an existing LRMP or a planning process towards the establishment of a LRMP. Depending on the nature and precise location of exploration activities, one or more LRMP area may be directly involved. However, areas under the LRMP system would not include offshore or marine areas beyond the coastal zone.

The LRMP process is designed to identify sensitive and critical areas of importance to the ecosystem, local communities, and First Nations. The importance can be ecological, economic, or social in nature, and thus the LRMP process relies on stakeholder participation.

### ***3.5.3.1 Central Coast LRMP***

The Central Coast LRMP process is still underway. The provincial government has accepted the Central-Coast's land-use table, which includes portions of the Great Bear Rainforest (96,458 hectares designated as the Spirit Bear protection area), pending consultation with 17 First Nations who are currently participating in the planning process. This area is environmentally and culturally significant in the region, and has implications for local economic development stakeholders in various sectors. Completion of The Central Coast LRMP will rely on agreement with the First Nations.

### ***3.5.3.2 Queen Charlotte Islands - Haida Gwaii LRMP***

The Queen Charlotte Islands-Haida Gwaii (QCI) LRMP process has been initiated, but to date there is no LRMP in place. Consultation with the community, the First Nations in the region, and other stakeholders is being carried out. The provincial government has released a background report entitled "An Overview of Natural, Cultural, and Socio-Economic Features, Land Uses and Resources Management". The area includes 150 islands, 4,700 km of shoreline, and approximately 4,000 waterbodies of varying sizes. The area is home to over 240 species of birds, over 300 species of fish, 39 species and subspecies of plants and animals unique to the islands, and 116 exotic species.

Economically, the region is largely dependent on the tertiary/service sector (tourism and government - 68%), with 24% relying on the primary sector, mainly based on resource extraction such as logging and fishing. The Haida Nation is a strong voice in the community, and comprises a large portion of the population. There are two federally designated "Indian Reserves" in the region (Old Masset and Skidegate). The Haida Nation in conjunction with the Government of Canada cooperatively manage the Gwaii Haanas National Park Reserve, in the southern portion of Haida Gwaii. The site is a World Heritage Site which encompasses approximately 1,900 islands and islets.

It is expected that the QCI LRMP process will proceed in a manner much like the typical LRMP



process, establishing overall objectives, economic objectives, environmental objectives, and social objectives, representing values and interests from a wide variety of stakeholders.

### 3.5.3.3 The North Coast LRMP

The North Coast LRMP process is not yet initiated. Mapping provided by the Province of B.C. shows that there are many marine and inland areas that fall within the LRMP region. It is fair to say that the direction taken by the underway Central Coast LRMP process and the upcoming QCI LRMP process would dictate direction taken in this region, and the types of sensitive and/or socio-culturally significant areas in the region would be similar to those found in adjacent LRMPs.

Where LRMPs are not yet in place, there may be other planning processes undertaken by the Ministry of Sustainable Resource Management that consider aquaculture, integrated resource use, or both.

### 3.5.4 Port and Shipping Activities

The port cities of Kitimat, Masset, Port Hardy and Prince Rupert are described in Table 3.7. The table briefly highlights transportation infrastructure from land and sea.

The Port of Prince Rupert is strategically located, with the largest installed infrastructure and port capacity. Statistics from Transport Canada note that the Prince Rupert port is frequently operating at excess capacity. Grain has constituted up to 35 percent of Prince Rupert’s total export volume, and recently the port has been underutilized. Other centres selected within the study area offer shipping, storage and transportation infrastructure in various capacities, as seen in the table below.

**Table 3.9 Rail, Road and Port Infrastructure, Selected Centres**

Municipality	Rail	Road	Water
Kitimat	56 rail cars/day (avg), CN freight line extends across North America	Interprovincial Highway 37 via Highway 16 (links to Prince George and Edmonton)	container port facility (port handles 260+ vessels/year, exports over \$1 Billion (1997))
	freight and passenger service (North-South)	Established freight industry; easily expandable rail cargo capacity	space for 11 tidewater terminals and manufacturing operations
Masset	-	TransCanada/Yellow-head Hwy (Graham Island Terminus of Hwy 16 to Skidegate)	BC Ferries services (Skidegate-Prince Rupert)
Port Hardy	CN Freight line for grain export	Highway 19 links to Victoria and other island centres	BC Island ferry service
			port development for deep sea ships and barges
Prince Rupert	CN Freight line	TransCanada Hwy (Hwy 16)	BC Ferries / Alaskan State Ferries service
	BC Rail north/south passenger/freight service	Established trucking industry infrastructure	6 terminal facilities (incl. 1 cruise terminal) - cargo, coal, grain, storage facilities.

Source: Northwest Development Corridor and Prince Rupert Port Authority

