KINGCOME TIMBER SUPPLY AREA
TSR 3 SOCIO-ECONOMIC ASSESSMENT

Prepared for:

Kingcome TSA Licensee-Agency Group

Prepared by:

Robinson Consulting and Associates Ltd.

Victoria, B.C.

and

Timberline Natural Resource Group Ltd.

Victoria, B.C.

Project: 4061921

September 2008

Robinson Consulting and Associates Ltd.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

The impact of timber supply adjustments on local communities and the provincial economy is an important consideration in the Chief Forester's allowable annual cut (AAC) determination. This socio-economic assessment identifies the employment and economic activity presently supported by the Kingcome Timber Supply Area (TSA) harvest, which provides the basis for projecting future levels of economic activity given the base case timber supply forecast.

This report includes:

- An overview of the Kingcome TSAs demographic and social characteristics, a description of its main communities and its primary economic drivers;
- A survey of the forest industry active in the Kingcome TSA forest industry, recent trends, and the contribution of the TSA's timber supply to local and provincial economies; and
- An analysis of the socio-economic implications of the base case timber supply forecast. TSA Profile

1.1 Overview

The Kingcome TSA covers an area of about 1.14 million hectares, mostly on the mainland from Knight Inlet in the south, northwest to Cape Caution and northeast to Tweedsmuir Park. Smaller portions of the TSA are on northern Vancouver Island. The TSA is also bounded, or close to tree farm licenses (TFLs) 6, 37, 39, 45 and 47. The TSA is within the North Island-Central Coast Forest District, with its main office located in Port McNeill and a field office in Hagensborg (Bella Coola Valley)[1] (Figure 2.1 in the *Analysis Report*).

The topography of the TSA is diverse, ranging from the coastal lowlands to the rugged Coast Range Mountains. Five biogeoclimatic zones cover the area, reflecting this diversity. Productive forest land is primarily found in two zones, the Coastal Western Hemlock (CWH) and the Mountain Hemlock (MH) zones. The former zone occurs from sea level to 1000 meters elevation. It experiences high precipitation, and is characterized by cool summers and mild winters. Western hemlock is the dominate tree species, with other species such as amabilis fir, Douglas-fir, western redcedar, Sitka spruce, maple and alder occurring depending on local conditions. The MH zone is above the CWH zone. It has a sub-alpine climate, with short cool summers and long, cool, wet winters. The deep snow pack is slow to disappear, resulting in a short growing season. Mountain hemlock is the most prevalent tree species, with amabilis fir and yellow cedar also common. While timber harvesting has a long history in the TSA, most of it has occurred in the past thirty years. (MoF, 2001).

In addition to supporting industrial timber harvesting activities, the TSA land base provides tourism and recreation opportunities, community water supply, habitats for wildlife and fish. Most of the recreation is marine oriented (*e.g*. boating, fishing, whale watching, kayaking) and is growing in popularity. The management of the various uses of the TSA's land base is addressed by the two strategic land use plans. The Vancouver Island Land Use Plan pertains to the Island portion of the TSA, and the recently announced Central Coast LRMP provides direction for the

[1] In 2003 the Port McNeill and Mid-Coast forest districts were combined to become the North Island-Central Coast Forest District. Where the information is available, it is reported at the Port McNeill District boundaries this more closely corresponds to the TSA geography.

mainland portion and the islands between Vancouver Island and the mainland. These strategic land use plans affect timber supply by the creation of protected areas over land that had been available for harvest, and by modifying timber management to address non-timber objectives.

The productive forest land base covers about 650,696 ha, or about 57 percent of the TSA's total land base when parks, protected areas and inoperable area is included. However, much less land is available for harvest. Removing, parks protected areas and the inoperable the productive land base is reduced to 376,452 ha or about 33% of the TSA's total land base. The operable forest is further reduced by 101,077 ha to address sites with low growing potential which are not considered economically operable. The remaining productive forest area is then reduced by an additional 67,201 ha to address forest management objectives and 18,996 ha to address EBM specific objectives which require land base removals.

The TSA is sparsely settled. The larger communities are Port Hardy, Port McNeill and Port Alice are on Vancouver Island. Smaller communities include Alert Bay and Sointula. There are 15 First Nations bands that have traditional territories in the TSA. The traditional territories are on Vancouver Island and the mainland, but most of the First Nations people reside on Vancouver Island due to historic relocations. The larger settlements include Fort Rupert, Tsulquate reserve, Quatsino, and Namgis.

In the following section, various statistics are used to profile the plan area social and economic trends and conditions. This includes trends in population and various social statistics relating to measures of crime, health, education. This provides the context for understanding the role the forest industry presently plays in the TSA's communities, and a basis for considering the implications of future timber supply scenarios.

1.2 Population

1.2.1 Historical Population

In 2007, the total population of the Mount Waddington Regional District was approximately 12,300 persons.[2] The population in the regional district peaked at approximately 16,000 in 1984 and has trended downward since 1993, when it stabilized at 14,350. Population recovered slightly in the mid-1990's but has once again slipped into a period of negative growth (Table 1.1). Port Alice and Port Hardy were particularly hard hit. A contributing factor to this decline is the out-migration of persons seeking better economic prospects. The economic challenges in the region will be discussed in the economic profile that follows.

[2] The Mount Waddington Regional District is used here as proxy for the Kingcome TSA. The geographical boundaries are similar. Census data is readily available for regional districts but not for the TSA geography.

Table 1.1 – Population trends in the Kingcome TSA, 1986 to 2007

Community	1986	1996	2001	2005	2006	2007	% Change 1986/2007
Alert Bay	701	637	608	607	586	584	-17%
Port Alice	1,436	1,384	1,175	1,128	880	893	-38%
Port Hardy	5,627	5,501	4,774	4,597	4,064	4,011	-29%
Port McNeill	2,652	3,046	2,944	2,928	2,771	2,740	+3%
Unincorporated Areas	5,092	4,626	4,182	4,424	4,040	4,060	-20%
Mount Waddington RD	**15,508**	**15,194**	**13,683**	**13,684**	**12,341**	**12,288**	**-21%**
British Columbia	3,004,105	3,874,276	4,078,447	4,260,246	4,320,255	4,380,256	+46%

Source: BC Stats.

1.2.2 Population Characteristics

In 2006, males made up 51.9 percent of the population, as compared to 49.0 percent in the total provincial population. The median age of the population in the Kingcome TSA is 40.0 years as compared to 40.8 years for the total province. However, as illustrated in Table 1.2, the Kingcome TSA has a significantly smaller percentage of population in the over 65 year age category than is generally observed in the province. This may reflect the tendency for older persons to move closer to urban centres that offer easier access to specialized services. The younger age profile also supports the conclusion that this community is on dependant on resource industry employment.

Table 1.2 - Age Characteristics, 2006.

Age Category	Kingcome TSA	British Columbia
0 to 29 years	37.9%	35.6%
29 to 64 years	53.6%	49.8%
65 years and older	8.5%	14.6%

Source: Statistics Canada. 2006 Census.

1.2.3 Population Forecast

The latest available population forecast for the Mount Waddington Regional District is a continuing decline from the current level. The region's population growth is expected to lag behind the province rate and that of neighbouring regions to the south (Table 1.3). It is noted that the forecast is based primarily on age of the current population, fertility rates and assumptions regarding migration. In small populations, such as this TSA, the forecast can be quite sensitive to small changes in the assumptions, particularly shifts in economic conditions that trigger migration rates exceeding those assumed in the forecast.

1.2.4 First Nation Communities

First Nation population makes up almost 25 percent of the total population in the TSA.[3] Among the First Nations, approximately half of the members live on reserve, while the remaining population lives off reserve. The total registered members of on and off reserve are approximately 5,230. Of this total the three First Nations of 'Namgis, Gwa'Sala-Nakwaxda'xw, and Kwakiutl make up approximately 58 percent of the total registered members.

Table 1.3 - Forecast and comparison of the Mt. Waddington Regional District population

Year	Persons	Avg. Change For Period		Persons
	2007	2007/17	2017/27	2027
Mount Waddington RD	12,288	-8%	-5%	10,780
Campbell River RD	108,795	+12%	+11%	134,750
British Columbia	4,380,256	+13%	+10%	5,424,730

Source: BC Stats, PEOPLE 32.

1.3 Socio-Economic Indicators

BC Stats compiles statistics related to various social conditions. The statistics relate to measures of economic hardship, crime, health, education, youth, and children at risk. BC Stats also compiles a "Hardship Index" based on a weighting of the social indicators, summing them up to obtain a relative ordering. The index numbers range from 1, the regional district that is worst-off, to 26 the regional district that is best-off. The overall rank for the Mount Waddington Regional District is 1, less than the median value for all of the social statistics, suggesting relatively difficult economic and social conditions for its residents (Table 1.4).

Table 1.4 - Index of Social Conditions, 2006

Regional District	Overall Rank	Economic Hardship	Crime	Health	Education	Children	Youth
Weighting		0.30	0.20	0.20	0.20	0.05	0.05
Mount Waddington	**1**	3	6	1	2	1	8
Comox-Strathcona	**14**	13	15	20	11	12	14

Source: BC Stats: Socio-Economic Indices
Note: Comparative Regional District. Rankings out 26, median value is 13.

The index does not tell us why a region is doing well or poorly, but rather is an indicator that identifies areas where social stress may be high.

[3] Statistics Canada. 2006 Census for the Mount Waddington Regional District.

1.4 Economic Profile

The economic profile begins by considering the size, change and make up of the local labour force. This is followed by the sources of income earned by local residents. It then proceeds to identify the basic industries that underpin the TSA economy, the relative importance of the sectors, and the trend in the sector's contribution in recent years.

1.4.1 Labour Force

Table 1.5 summarizes labour force by industry for the last two census periods for the TSA's main communities and the Mount Waddington Regional District. The table also compares the change in the Regional District labour force to that of British Columbia.

The labour force in the Mount Waddington Regional District declined by 12 percent between 2001 and 2006, losing 935 persons to 6,610 persons at the last census. Over the same period, the labour force in the province grew by eight percent.

This decline was particularly evident in the TSA's goods producing sector, which was down net 22 percent over the five year period. Again, over the same period, the provincial goods producing labour force increased by 11 percent. The forestry sector's labour force is mostly found in the primary industries (i.e. logging, reported in NASICS #11) and manufacturing (e.g. sawmilling and pulp and paper in NASICS #31-33) industry classifications. The labour forces in both industry classifications were down sharply in 2006 from their respective 2001 levels. The reduction in the primary industry work force (i.e. fishing and logging) was most evident in Port McNeill while the decline in manufacturing labour force was concentrated in Port Alice and Port Hardy likely reflecting the closure of the pulp mill in Port Alice.

There were bright spots in the region's economy over the period with Port McNeill seeing its service related labour force increase by 11 percent. Since the Census, Neucel has reopened the sulphite pulp mill in Port Alice (March 2006), renewing the operation's substantial economic contribution to the community and the North Island. It employs close to 400 workers. Currently the second growth pulp content of the TSA is directed to Neucel which is a very positive synergy providing low cost fiber.

Table 1.5 – Mount Waddington labour force and change in labour force compared to British Columbia, 2001 and 2006

NASICS	Labour Force	Port Hardy		Port McNeill		Port Alice		MWRD		MWRD	BC
		2001	2006	2001	2006	2001	2006	2001	2006	(% Change 2001 to 2006)	
11	Agr., Forestry Fishing & Hunting[1]	410	380	550	430	90	40	1,760	1,375	-%22	-3%
21	Mining and Oil and Gas Extraction	10	20	0	0	0	0	15	25	+67%	+43%
22	Utilities	20	0	10	0	0	10	40	20	-50%	-3%
23	Construction	65	95	45	35	10	30	210	300	+43%	+40%
31-33	Manufacturing	345	205	180	160	340	165	1,045	690	-34%	-3%
	Total Goods producing Sector	**850**	**700**	**785**	**625**	**440**	**245**	**3,070**	**2,410**	**-22%**	**+11%**
41	Wholesale Trade	40	85	15	60	0	30	70	190	+171%	+12%
44-45	Retail Trade	350	270	180	160	30	10	705	640	-9%	+7%
48-49	Transportation and Warehousing	215	140	110	95	10	20	455	405	-11%	+1%
51	Information and Cultural industries	30	25	0	10	10	0	55	45	-18%	-5%
52	Finance and Insurance	65	55	10	0	15	10	110	100	-9%	+5%
53	Real Estate and Rental and Leasing	40	35	20	20	15	10	75	70	-7%	+22%
54	Prof., Scientific & Technology	60	95	10	115	20	0	175	295	+69%	+19%
55	Management of Comp. & Enterpr.	0	0	0	0	0	0	0	0	0%	+126%
56	Admin. & Support, Waste Mang.	55	70	25	20	15	20	130	180	+38%	+20%
61	Education Services	250	170	80	90	30	0	495	390	-21%	+9%
62	Health care and social assistance	175	150	130	125	30	15	515	445	-14%	+7%
71	Arts, Entertainment and Recreation	30	40	10	35	15	10	125	150	+20%	+11%
72	Accommodation & Food Services	265	175	200	115	40	25	675	470	-30%	+8%
81	Other Services	95	85	45	65	15	20	235	215	-9%	+12%
91	Public Administration	150	95	90	115	15	30	540	445	-18%	-2%
	Total Service Producing Sector	**1,820**	**1,490**	**925**	**1,025**	**265**	**200**	**4,360**	**4,040**	**-7%**	**+8%**
	Industry not applicable	45	50	25	15	0	5	120	130		
	Total Labour Force	**2,715**	**2,240**	**1,735**	**1,665**	**700**	**450**	**7,545**	**6,610**	**-12%**	**+8%**

Source: Statistics Canada 2001 and 2006 Census
Notes:
1. Logging aggregated with other primary activities for confidentiality.

1.4.2 Employment Income

In 2006, the latest year data is available, employment income accounted for almost 80 percent of all income earned in the Mount Waddington Regional District, as noted in Table 1.6. The TSA relies to a greater extent on employment income than is the case for the province as a whole. That is, contribution of non-employment income sources, such as government income support payment, pension income, investment income, foreign income and the like make a smaller contribution.

Table 1.6 - Share of employment income and median employment income, 2006

Regional District	Employment Income	Median Employment Income		
	Percentage of Total	Male	Female	Total
Mount Waddington	79.4%	$37,520	$19,905	$27,215
British Columbia	71.7%	$34,935	$22,420	$27,860

Source: Canada Revenue Agency.

In the TSA, several industries dominate. The average employment income in 2000 for these important industries in the Kingcome TSA is summarized in Table 1.7.

Table 1.7 - Average income by basic industry in North Island Forest District, 2000

Industry	Average Annual Income
Logging	$45,328
Pulp and Paper	$52,735
Other Wood Manufacturing	$31,658
Fishing	$19,741
Agriculture	$26,327
Tourism	$16,422
Public Sector	$27,445
Construction	$28,830
Non-Basic	$17,770

Source: MoF Economic Dependency (Table 8)

More recent data on wage rates for the Kingcome TSA specifically is not available. At the provincial level it is known how wages in specific industries have changed between 2000 and 2007. Table 1.8 outlines the percentage change in wages for specific basic sectors and the non-basic sector between 2000 and 2007 in British Columbia.

Table 1.8 - Average change wage rates in B.C. by key sectors between 2000 and 2007

Industry	Percentage Change 2000 to 2007	Revised Sector Incomes
Logging	3.2%	$46,778
Pulp and Paper	9.3%	$57,639
Other Wood Manufacturing	3.5%	$32,766
Fishing	N/A	NA
Agriculture	27.2%	$33,487
Tourism (based on food and accommodation)	16.5%	$19,131
Public Sector	17.9%	$32,357
Construction	18.3%	$34,105
Non-Basic	17.4%	$20,861

Source: Statistics Canada, CANSIM 281-0027.

The derivation of average incomes used to estimate the income impacts of future timber supplies is summarized in Appendix A, Table A1.

1.5 Economic Dependency and Trends

There is considerable inter-dependency among industries in an economy, with businesses supplying goods and services to other industries, and the spending of their employees on consumer goods and services. Analysis by BC Stats highlights this interdependency by identifying the "basic" sectors and "dependent" sectors. A basic sector sells its output (goods or services) to customers outside the TSA, therefore bringing new revenue into the local economy where it re-circulates creating addition income and employment (termed dependent employment).

The analysis by BC Stats adds the dependent incomes to the respective basic sector income to provide a more accurate representation of the area's key economic drivers. Table 1.9 summarizes the important basic sectors in the Alert Bay and Port Hardy areas and their respective share of total area income. For example, in 2001 the forest industry accounted for 8% of total incomes in the Alert Bay area, down from 18% in 1996. The public sector and government transfers account for large proportion of total in come in this area. In the Port Hardy area, the forest sector (includes logging and manufacturing) account for about half of the local area's income (in 2001). The trend since 2001 is also estimated using the more recent 2006 Census experienced labour force data and 2005 tax filer data.

Table 1.9 - Trend in economic dependency by basic sectors (% of total area's income)

	Forest	Mining	Fishing & Trapping	Agriculture	Tourism	Public	Other Basic Industry	Government Transfers	Other Non-employment
Alert Bay Area									
Trend to 2006	Decline	Flat	Flat	Flat	Decline	Increase	Flat	Increase	Increase
2001	8	0	15	1	8	32	5	24	6
1996	18	0	19	0	3	31	9	7	3
1991	11	0	17	0	5	27	14	11	9
Port Hardy Area									
Trend to 2006	Decline	Increase	Flat	Flat	Decline	Increase	Increase	Increase	Flat
2001	49	1	4	2	8	19	2	10	5
1996	51	5	5	1	7	16	5	7	3
1991	37	13	5	1	6	15	3	11	9

Source: BC Stats, Local Area Dependencies and Taxation Statistics 2005 and 2001.
Note: Alert Bay local area consists of Alert Bay, Mount Waddington Electoral Area A and surrounding First Nation reserves.
Port Hardy local area consists of Port McNeill, Port Alice, Port Hardy, Mount Waddington Electoral Areas B,C,D and surrounding First Nation reserves.

One can also characterize the dependence in terms of employment. That is, how many other jobs are supported in the local area for say 100 jobs in the forest sector? The employment relationships are summarized in Table 1.10 in terms of the number of "spin-off" jobs supported per 100 jobs in the respective basic industry. In the Alert Bay area, 100 jobs in forestry support another 18 jobs in various supply and consumer oriented industries. In the Port Hardy area, given its larger service base, 27 jobs are supported per 100 jobs in forestry.

Table 1.10 – Indirect and induced employment per 100 direct basic industry jobs

	Logging	Pulp & Paper	Wood Mfg.	Mining	Tourism	Public	Hi Tech	Agriculture	Construction
Alert Bay Area	18	0	25	0	7	15	7	15	25
Port Hardy Area	27	76	36	60	10	18	3	18	32

Source: BC Stats, Local Area Dependencies

2.0 FOREST INDUSTRY PROFILE

The last socio-economic profile of the Kingcome TSA examined the industry's performance over the period 1997 to 2000[4]. During that period, it was estimated that the TSA harvest created 313 direct full time positions in the North Island Central Coast Forest District (in the woods and mills) and 1,364 total direct jobs in BC. Aggregate industry performance is profiled in this chapter since the time the current AAC took effect in 2002.

2.1 Kingcome TSA Allowable Annual Cut and Harvest History

The Kingcome TSA was created in 1980, and its first timber supply review set the allowable annual cut at 1.7 million cubic metres per year. At various intervals the AAC was adjusted to account for various boundary adjustments that occurred. In 1996, the AAC was set at 1.399 million cubic metres per year, a 22 percent reduction from the previous AAC. The most recent AAC determination took effect in October 2002, setting the AAC at 1.284 million cubic metres per year. This has been temporarily reduced to provide for designated area identified in the Central Coast LRMP planning process. The current order reduces the AAC by 52,000 cubic metres, or an AAC of 1.232 million cubic metres per year.

Over the most recent eight years the TSA's total harvest has averaged 80 percent of the AAC (Figure 2.1). Constrained market conditions (e.g. weak hemlock market, soft-wood dispute, stronger Canadian dollar, high energy costs) have contributed to this circumstance as well as company specific issues.

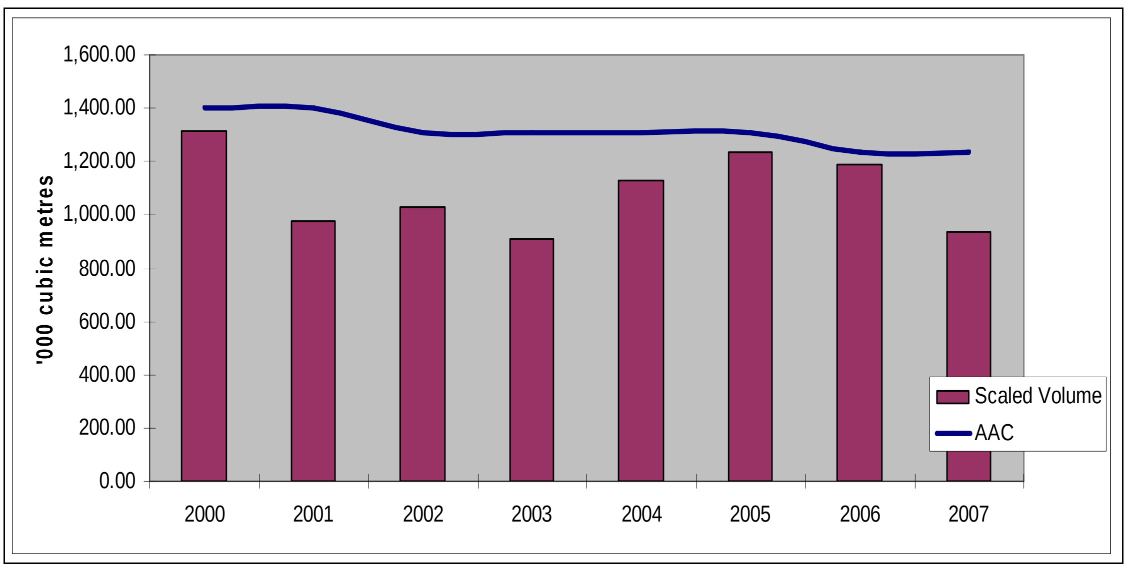

Figure 2.1 – Harvest billing history

The AAC is apportioned to various license/use categories, and then committed to specific companies. The AAC sets the maximum harvest volume of both coniferous and deciduous leading standings. Table 2.1 summarizes the apportionment of the AAC.

[4] . Ministry of Forests, 2000. *Kingcome Timber Supply Area Analysis Report*, *Socio Economic Analysis*. Chap. 8, Socio-Economic Analysis

Table 2.1 - Kingcome TSA apportionment table[1]

	Total (m^3)	Conventional	Deciduous-leading
Allowable Annual Cut (2006-09-28)	1,232,000	1,211,660	20,340
Apportionment (2005-12-19)			
Forest Licences Replaceable	772,246	772,246	
Forest Licences Non-Replaceable	94,796	75,592	19,204
Non-Replaceable Forest Licence	47,646	47,646	
BCTS Timber Sale License Non-Replaceable	28,460	28,460	
BCTS Timber Sale License	253,968	253,968	
Woodlots	18,136	18,136	
Forest Service Reserve	16,748	15,612	1,136
Total	**1,232,000**	**1,211,660**	**20,340**

Source: Ministry of Forests, Apportionment System, effect 2008-06-20
Notes:
1. includes reduction of 52,000 cubic metres for designated area, order dated September 28, 2006.

BC Timber Sales (BCTS) is an independent organization within the MoFR. BCTS makes available its apportionment through a number of timber sales that are sold at auction to registered operators. The operators are independent logging operators, who may operate a mill or other value added facility. The apportionment to forest licences (replaceable and non-replaceable) shown in Table 2.1 is committed as individual licenses.

The licensed volume is the maximum annual average harvest over the term of the cut control period. The last full cut control period was 2003-07. The actual harvest volume may diverge from the AAC as license holders have some latitude for meeting the cut-control requirements. As shown in Figure 2.1, the actual aggregate harvest has been below the maximum allowable level since 2001. A more detailed breakdown of billed harvest volume by general apportionment categories is shown in Table 2.2.

Table 2.2 – Volume harvested by type of license (m^3/year)

Licence Type	2000	2001	2002	2003	2004	2005	2006	2007	8-Year Average
SBFEP/BCTS	266,259	161,105	150,549	253,348	248,930	105,486	222,482	403,702	226,483
Forest license	1,025,582	770,051	816,612	549,344	758,378	1,074,695	882,157	451,710	791,066
Other[1]	24,000	8,881	59,605	105,708	119,248	55,037	81,763	83,355	67,200
Total Kingcome volume	**1,317,841**	**942,037**	**1,028,769**	**910,403**	**1,128,560**	**1,237,223**	**1,188,408**	**940,774**	**1,086,752**

Source: Ministry of Forests Harvest Billing Records volumes scaled
Notes
1. Includes woodlots, private land and federal land

Table 2.3 illustrates how the total volume and harvest by license type fluctuates annually. This fluctuation illustrates the range of variability in harvest as a result of all mitigating factors in the sector such as labor disputes, lumber prices and extraction costs. However, this table does not reflect licensee specific performance. Forest licensee performance relative to apportionment of harvest volume is also highly variable with some meeting or exceeding harvest allotment targets and some underperforming.

In 2005 (the most recent year the mill survey was completed by MoFR) several mills were reported operating in the North Island-Central Coast Forest District. Several mills utilize harvest from the Kingcome TSA, as well as wood from the other nearby management units (TFLs and TSAs). Both of Interfor's sawmills, Hammond and Acron, are economically dependant on volume received from the Kingcome TSA. The name and locations of the mill are summarized in Table 2.4.

Table 2.3 – Timber processing facilities in North Island-Central Coast Forest District

Type of Mill	Company Name	Location of Mill	Estimated Annual Capacity
Lumber Mills			(millions of bd ft)
	Edgegrain	Campbell River	1.0
	G. W. Milling Ltd.	Malcolm Island	1.4
	Greg Williams	Sointula	1.0
	John Salo	Sointula	0.2
	Mill & Timber Products Ltd.	Port Hardy	2.4[1]
	Port Hardy Merchandising Ltd.	Port Hardy	4.8
	Rocky Mountain Salvage	Port Hardy	1.0
Pulp Mills			(000s of tonnes)
	Port Alice Pulp Mill	Port Alice	162
Shake & Shingle Mills			('000s of squares)
	Port McNeill Shake & Shingles Ltd.	Port McNeill	24
	Taylor Contracting	Zeballos	15
	Titan Ridge	Port McNeill	96
	Vancouver Island Shake and Shingle	Port McNeill	12
Shake & Shingle Stock	John Salo	Sointula	-
Utility Pole Mills			('000s of pieces)
	Sierra Cascade Resources II LLC	Port McNeill	6

Source: B. C. Ministry of Forests. 2005. Major Primary Timber Processing Facilities in British Columbia, 2004.
Notes:
1. mill temporarily closed in late 2007

2.2 Kingcome TSA Major Licensees

An informal survey of TSA licensee was completed for this assessment, which included web search and telephone interviews where persons were available. The survey findings are summarized below.

International Forest Products is the single largest holder of Crown quota in the TSA. It holds three replaceable forest licences in the TSA, totaling 642,000 cubic metres/yr, and 17 replaceable forest licenses in the province. The company also has three TFLs. The company's total Crown quota from the 20 tenures is 3,598,591 cubic metres. [5] The management units are located on the coast and the interior. The quota from the Kingcome TSA accounts for about 31 percent of coastal crown quota being directed to the Hammond and Acorn mills and roughly 18 percent of its total Crown quota. Over the most recent 5 years, the actual aggregate harvest has been about 97% of the total quota volume (pers.comm. H. Kalmakoff) which includes 2007 data which was impacted due to the IWA strike that year. The most recent cut control data for Interfor licenses is as follows:

- FLA19238 – 101%;
- FLA77806 – 98%; and
- FLA77087 – 105%.

About 75 percent of the company's harvest from the Kingcome TSA is processed in one of its two coastal mills in the lower mainland. The Hammond Mill, in Maple Ridge, takes cedar logs and produces siding, paneling, facia, trim, decking, and cedar timbers. The products are mostly sold in North America, or to third parties for custom cutting. The company's Acorn Mill in Delta takes hemlock and Douglas-fir logs and produces lumber in sizes and grades for use in Japanese traditional housing. Some output is also sold to China (pers.comm. G. Sommers).

Mill & Timber Products Ltd. holds two forest licenses in the TSA. A replaceable forest licence for 49,817 cubic metres and a non-replaceable forest license for 76,191 cubic metres. The latter targets low sites, and is due to expire. The company also manages the Gwa'nak Resources non-replaceable license for the First Nation. The operating areas of these licenses are in the Seymour Inlet area.

The cedar harvested from the licenses account for about 30 percent of the company's mill requirements. The company operates three mills in the Lower Mainland. The company had operated a shingle mill, saw mill, pole mill and dry land sort in Port Hardy. The saw mill closed in January 2008 and the company is examining the potential for re-opening it with First Nations involvement. The dry land sort operates intermittently on a contract basis. The pole and shingle mills are closed.

Table 2.4 - Mill & Timber Products Ltd harvest and direct employment statistics

Allowable Annual Cut (2 FL's)	126,008 cubic meters
2002-07 average harvest	109,845 cubic metres
Direct Employment (jobs)	
Harvesting	81 jobs
Processing (3 mills)	195 jobs
Average Total log input	383,900 cubic metres

Source: Licensee response

Richmond Plywood Ltd holds one replaceable license in Kingcome TSA and one in the Soo TSA. The Kingcome licence is located on northern Vancouver Island, with a total volume of 47,428 cubic metres. Most of the licence harvest volume is cedar, which the company trades for

[5] Company's aggregate licence volume from MoFR Apportionment System "Linkages and Licences Report" dated 200-06-20. Accessed at: http://www.for.gov.bc.ca/hth/apportionment/Documents/Aptr041.pdf.

logs suitable for its plywood plant located in Richmond. Total log input to the mill is some 450,000 cubic metres. The company purchases the balance of its log input requirements on the open market.

Over the past five years the company's harvest has averaged about 90 percent of its license volume. It contracts about 25 persons out of Port Hardy/Port McNeill area for its woods operations (pers. comm.. T. Cole). It employs about 450 people at its plywood plant.

Western Forest Products Inc. holds one replaceable forest licence in the TSA for 24,278 cubic metres. The license quota is reduced from 63,000 cubic metres in 2002 largely because of the government's revitalization program. The company holds six forest licenses (two are jointly held) and six TFLs on the coast, with a total AAC of 7,120,981 cubic metres. WFP operates eight sawmills and four remanufacturing plants located on southern Vancouver Island[6].

Over the past five years the company has fully harvested its licence volume in the TSA. The volume has been harvested by company contractors and the fibre is processed in a company mill, or traded/sold on the open market.

Kruger Forest Products Ltd holds one non-replaceable forest licence in the Kingcome TSA to harvest deciduous stands. It also holds TFL 43 with an AAC of 39,900 cubic metres. The latter consists of three blocks. The Kingcome block is on the Kingcome River and is surrounded by the Kingcome TSA. The Homathco block is on the Homathco River, and the third block is in the Fraser Valley. The company targets cottonwood which is processed in the company's pulp mill in New Westminster, producing a wide range of tissue and paper products.

The TSA licence is nearing the end of its term. Over its term, about 85 percent of the allowable volume was harvested. Poor market conditions and the high cost of accessing the remote sites have precluded the company from harvesting the remaining volume. Kruger intends to apply for a similar licence volume, with the view that the attainment of EBM objectives on the land base can be suitably specified.

Harvesting is done by contractors on an intermittent basis. The company's logging contractor for the Kingcome area has typically come from the Campbell River area.

Weyerhaeuser Company Limited holds a non-replaceable forest license for 13,605 cubic metres targeting deciduous stands. The volume is utilized by a company subsidiary, Northwest Hardwoods. The latter operates a plant in Delta. It primary output is furniture stock. At two shifts the mill employs about 250 persons/contractors and consumes about 250,000 cubic metres of input logs. The balance of log requirements not met from its licenses is purchased. In mid-2008 the mill was reportedly not operating.

BC Timber Sales in the Kingcome TSA is managed from Port McNeill, being part of its Seaward-Tlasta Business Area. Since the BCTS volume is sold at auction, the proportion of sales won by TSA resident contractors, and the disposition of the harvest volume to TSA and non-TSA mills, will vary. Based on recent sales, 30% of the awards are won by local residents. In addition, local contractors are typically used by the timber sale licence holder to harvest and transport the sale. Over the most recent 5 years, actual harvest has averaged 246,790 cubic metres per year, or slightly below the apportionment volume. Most of the volume is processed outside the local area.

[6] See company website http://www.westernforest.com/domans/download/WFP%20Overview.pdf

Based on the survey information, the industry's recent economic contribution is summarized relative to that reported in TSR 2 (Table 2.5). Relative to the earlier analysis, the direct employment coefficients appeared to be similar to those found in TSR 2, and were adopted in this current analysis. The stumpage and income values have changed materially and update values were used. Broadly, the TSA's contribution in terms of employment and incomes has remained relatively constant since the late 1990's. Although it is noted that this is does not appear to be supported by the trends in local labour force (Table 1.5). Stumpage revenue to the Crown has fallen significantly, indicating the market pricing system's (MPS) greater sensitivity to market conditions and the low prices during the period.

Table 2.5 - Comparison of forest sector contributions

	1999[1]	**2005/07**[2]
AAC (m^3)	1,399,000	1,232,000
Average Harvest (m^3)	1,117,728	1,122,135
TSA direct employment (person-years)	313	314
Total BC direct employment (person-years)	1,364	1,369
TSA direct employment income	$14.7 million	$16.35 million
Total BC direct employment income	$64.3 million	$65.73 million
Average stumpage	$27.73 $/m^3	$13.05 $/m^3
Average stumpage revenue	$31 million	$14.65 million

Notes:
1. Table20, page 78, Kingcome Timber Supply Area Analysis Report
2. See Appendix A for coefficient values

3.0 SOCIO-ECONOMIC IMPLICATIONS OF THE BASE CASE TIMBER SUPPLY FORECAST

This section presents the implications of the Base Case timber supply forecasts in terms of employment, incomes, government revenue and community implications. These implications take into consideration the industry's current conditions as discussed in the last section and an outlook given the Base Case timber supply forecast.

The analysis focuses on the level and change in economic aggregates for the first two decades of the timber supply forecast. The method uses average forest industry values observed in recent periods. The coefficients are applied to the forecast of timber supply to derive a forecast of economic activity at both the TSA and provincial levels. It is recognized that the relationship between timber harvesting and the forest industry's economic contribution to the TSA and provincial economy is more complex than represented by this simple relationship. The industry is greatly influenced by external factors as it strives to be competitive in world markets. This will lead to changes over time, as the industry adopts new technologies and methods, changes products lines and mill locations for example. These changes would be reflected in changes in labour productivity (hence employment level and income) and likely average government revenues relative to the values adopted here. Given this, our findings should be interpreted as indicating the direction and magnitude of the trend in economic indicators given the indicated changes to future timber supply, rather than an absolute forecast of future industry conditions.

The findings are summarized in Table 3.1. The coefficient values and assumptions for estimating the economic impacts are in Appendix 1.

3.1 Employment and Income Implications in the Kingcome TSA

The Kingcome TSA employment and income impacts describe those workers that reside in the North Island–Central Coast forest district and whose jobs are supported by the TSA's harvest. Persons who reside elsewhere, but come to the TSA to work are included in the provincial level impact.

Given the average harvest level in the most recent three years, it is estimated that the Kingcome TSA supports about 191 person-years employment in the woods (logging and silviculture) and 123 person-years employment in milling, or a total of 314 jobs (line 4, Table 3.1). This is essentially unchanged from the late 1990's. Business expenditures for operations support additional local employment (termed indirect impact) as does the spending by employees on consumer goods and services (termed induced employment). These effects support some 124 person-years of employment (line 5). That is, total employment in the TSA attributed to recent harvest volume is about 440 person–years of employment.

Future increases in second growth harvesting are likely to decrease the person years of employment associated with harvest operations due to efficiencies associated with mechanized harvest systems.

The timber supply forecast indicates an average harvest volume over the first decade of slightly below the current AAC, a decline of 22,300 cubic meters, or 2 percent. In the second decade, the timber supply is expected to decline by some 128,000 cubic metres per year, or 10 percent compared to the current AAC. If that volume on average were fully taken, the employment level would be about eight positions less than the current level. Incomes follow a similar pattern.

Table 3.1 - Socio-economic impacts of the base case harvest forecast

	Current AAC	Decade 1	Decade 2
	Timber Supply (m^3/year)		
AAC	1,232,000	1,209,700	1,104,400
Cumulative Change	0	-22,300	-127,600
Kingcome TSA			
Employment (person years)			
Direct	345	339	309
Indirect/Induced	222	218	199
Total	567	556	508
Cumulative Change in total person years	0	-10	-59
Employment Income (before tax, millions)			
Direct	$17.9	$17.6	$16.1
Indirect/Induced	$6.7	$6.6	$6.0
Total	$24.6	$24.2	$22.1
Cumulative Change	$0.0	-$0.4	-$2.6
Province (includes Kingcome TSA)			
Employment (person years)			
Direct	1,503	1,476	1,347
Indirect/Induced	1,823	1,790	1,635
Total	3,326	3,266	2,982
Cumulative Change in total person years	0	-60	-345
Employment Income (before tax, millions)			
Direct	$72.2	$70.9	$64.7
Indirect/Induced	$55.1	$54.1	$49.4
Total	$127.3	$125.0	$114.1
Cumulative Change	$0.0	-$2.3	-$13.2
Provincial Government Revenues			
Provincial income tax	$36.9	$36.2	$33.1
Stumpage and Rent	$16.1	$15.8	$14.4
Other B.C. revenues	$25.7	$25.3	$23.1
Total Revenue	$78.7	$77.3	$70.6
Cumulative Change in total revenue	$0.0	-$1.4	-$8.2

Note: Columns may not add due to rounding

For comparison, the socio-economic impacts of the Pre-EBM analysis are presented in Table 3.2. The Pre-EBM AAC is estimated to be 1,398,000 cubic metres per year developed for this scenario.

Table 3.2 - Socio-economic impacts of the base case harvest forecast compared to Pre-EBM

	Pre EBM AAC	Proposed AAC in decade 1
Timber Supply (m^3/year)		
AAC	1,398,700	1,209,700
Kingcome TSA		
Direct	392	339
Indirect/Induced	252	218
Total	643	556
Cumulative Change in total person years		-87
Direct	$20.4	$17.6
Indirect/Induced	$7.6	$6.6
Total	$28.0	$24.2
Province (includes Kingcome TSA)		
Employment (person-years)		
Direct	1,706	1,476
Indirect/Induced	2,070	1,790
Total	3,776	3,266
Employment Income (before tax, millions)		
Direct	$81.9	$70.9
Indirect/Induced	$62.6	$54.1
Total	$144.5	$125.0
Provincial Government Revenues		
Provincial income tax	$41.9	$36.2
Stumpage and Rent	$18.3	$15.8
Other B.C. revenues	$29.2	$25.3
Total Revenue	$89.4	$77.3

Note: Columns may not add due to rounding

Based on the results of the Pre-EBM scenario, employment, income and provincial revenues would be about 15% higher than the current AAC (and the current harvest conditions). The reductions for the EBM Base Case are therefore more significant in comparison.

3.2 Provincial Employment and Income Implications

A large proportion of the economic impacts associated with the Kingcome TSA harvest occur outside the immediate area, either because persons living outside the North Island travel to work in the TSA (in the remote camps) and because most of the wood is manufactured in plants located on the South Island (*e.g*. Nanaimo, Ladysmith, Chemanius) or the Lower Mainland. For instance, direct employment in the TSA as noted above is around 314 person-years, or 22 percent of the total provincial direct employment of 1,369 person years (line 12, Table 3.1). Also, the relatively small local economy, and remote location of operations imply that a relatively large share of the indirect and induced economic activity occurs away from the TSA. For instance, the TSA's share of the indirect and induced employment is only about 7.5 percent of total impact .

It is estimated that the average harvest from the Kingcome TSA in recent years has supported a total of some 3,000 person-years of employment (line14) and generate an annual wage bill of some $116 million provincially (line 18).

In the first decade, if the full timber supply is harvested on average, provincial employment attributed to the TSA could increase from its current level of 3,030 person-years to 3,266, or a gain of 236 person-years of employment. In the second decade, if the available timber supply is harvested on average, the reduced volume would support total employment of about 344 jobs less than the current AAC, and 48 person-years less than the Current Conditions.

3.3 Government Revenue Implications

Government revenue is derived from all levels of economic activity stimulated by harvesting activity. Direct revenue to government includes income taxes paid by those directly and indirectly employed by the TSA harvest, stumpage paid on the harvest volume and other miscellaneous taxes (*e.g*. sales tax, corporate taxes, rental/lease and royalties).

At the average harvest volume experienced over the past three years, total government revenues associated with the TSA harvest is roughly $72 million per year. A major uncertainty in this projection is future market prices, hence the average stumpage rate. Stronger market conditions would probably support an average stumpage rate greater than the $13.05 per cubic metre assumed here. In that case government stumpage revenues might be higher than recent experience even if the harvest level is less; however, overall revenue would decline due to reduced employment.

3.4 Community Implications

The timber supply forecasts indicate the Kingcome TSA has the potential to continue contributing to the North Island economy at a level at least as great recent experience. Whether in fact that is the case will depend on the availability of skilled labour in the local labour force and company decisions with respect to its hiring of contractors and the disposition of logs. Presently a relatively large proportion of the TSA's economic impacts accrue outside of the North Island. If the communities on the North Island were able to attract a greater proportion of the associated employment (direct, indirect, or induced), then the TSA's local contribution could increase even with a reduction in total timber supply. However, workers elsewhere would be displaced if this occurred. Whereas a reduction in harvest rates is certain to exacerbate decline in the immediate areas such as Mt Waddington RD and other areas already experiencing decline as the harvest rates fall.

4.0 REFERENCES

B.C. Stats. April 2007. *South Central Coast Order.*

BC Stats. April 2008. 2006 Neighborhood Income and Demographics for BC Development Regions, Regional Districts, Municipalities and Sub-Areas. Data from Canada Revenue Agency.

________. October 2007. British Columbia Taxation Statistics 2005 – Income Groups, Source of Income, and Taxes Paid. Data from Canada Revenue Agency.

________. March 2004. British Columbia Taxation Statistics 2001 – Income Groups, Source of Income, and Taxes Paid. Data from Canada Revenue Agency.

B.C. Ministry of Forests. November 2001. *Kingcome Timber Supply Area Analysis Report.*

_____________________, *Undated. Interim Guidelines for the Preparation of Socio-Economic Assessments for Timber Supply Reviews.*

B.C. Ministry of Management Services. 2004. *British Columbia's Heartland at the Dawn of the 21st Century*

__________________________________. 2004. *2001 Economic Dependency Tables for Forest Districts.*

Persons Contacted (in alphabetical order):

Brown, Ione. Mill & Timber Products Ltd

Cole, Tom. Richmond Plywood Corporation

Davis, Steve. Reporting Analyst, Revenue Branch, Ministry of Forests and Range

Haight, Deidre. Planning Officer, BC Timber Sales

Hunchuk, Dean. First Nations Liaison Officer, North Island–Central Coast Forest District, Ministry of Forests and Range

Kalmakoff, Heidi. International Forest Products Ltd.

Kofoed, Peter. Western Forest Products Ltd.

Mardell, Christina. Stewardship Forester, Port McNeill Forest District, Ministry of Forests and Range

Sommers, Gerry. International Forest Products Ltd.

APPENDIX 1

The following table presents the values and assumptions used in the report to estimate current, and future economic impacts associated with the Kingcome TSA harvest volume.

Table A.1 - Derivation of coefficient values and assumptions

Item	TSA	BC	Comments/discussion
Direct Employment			From Table 13, MoF (2000). The harvest level is similar, the same licensees and new labour saving investments not substantial in the interval, so earlier values likely remain reasonably reliable.
Harvesting (PY's/000m^3)	0.15	0.45	
Silviculture (PY's/000m^3)	0.02	0.05	
Processing (PY's/000m^3)	0.36	0.72	
Indirect/induced (woods)	.36	1.21	Person years per one direct job. From Table 8, 2001 Economic Dependency Tables for Forest Districts, and TSR2 for provincial level
Indirect/induced (mills)	.45		
Total Employment	1.33	2.21	In multiplier form (total employment/direct employment)
Employment Income			
Harvesting and silviculture	$60,000		Average weekly earning in 2006 reported by BC Stats is $1,089 for forestry, fishing, and mining. Assumed a person year to be 44 weeks this is an annual salary of $47,921. However, data reported by industry indicated an average payroll cost of $ 62,196 in the past two years. This magnitude was considered more reflective of industry conditions, so an annual value of $60,000 was used here.
Primary Breakdown mills	$39,695		Provincial manufacturing average weekly salary reported to be $827 in 2006. A 48 week person year is assumed. In comparison, industry data for 1 mill indicated an average payroll cost of $ 36,994.
Indirect/induced	$30,221		Indirect includes trucking, suppliers, professionals, while induced would be retail and consumer services. Took the average weekly service industry wage of $698 and retail/wholesale weekly wage of $ 561, the average of the two being about $629 and a 48 week work year.
Government revenues			
Provincial/Federal average personal income tax	29%		From Price Waterhouse Coopers (2005) , industry average personal tax rate
Stumpage ($/m3)	$13.05		Simple average of average stumpage rate for years 2004-06, as shown in table B2
Other B.C. revenues ($/m3)	$20.89		From Price Waterhouse Coopers (2005), averaged over the years 2002 to '04.

Table A.2 – Harvest and stump revenue by year

	2000	2001	2002	2003	2004	2005	2006	2007
Harvest (000 m^3)	1,315.84	972.79	1,026.77	908.40	1,126.56	1,235.22	1,186.40	938.77
Stumpage ($ million)	$31.69	$25.30	$37.14	$34.57	$28.40	$10.87	$10.99	$22.01
Average Rate ($/$m^3$)	$24.08	$26.01	$36.17	$38.06	$25.21	$8.80	$9.27	$23.44

Source: Harvest Billing System, Ministry of Forests and Range, Revenue Branch.