2. The Descriptive Results for 2001

2.1 Income Dependencies

The fundamental premise of this work is that the economy of a community can be represented by income flows that can be classified as *basic* or *nonbasic*, depending on where the money comes from. Below, the concepts of basic and nonbasic incomes are defined. A graphical presentation of the model is displayed in Figure 2.1.
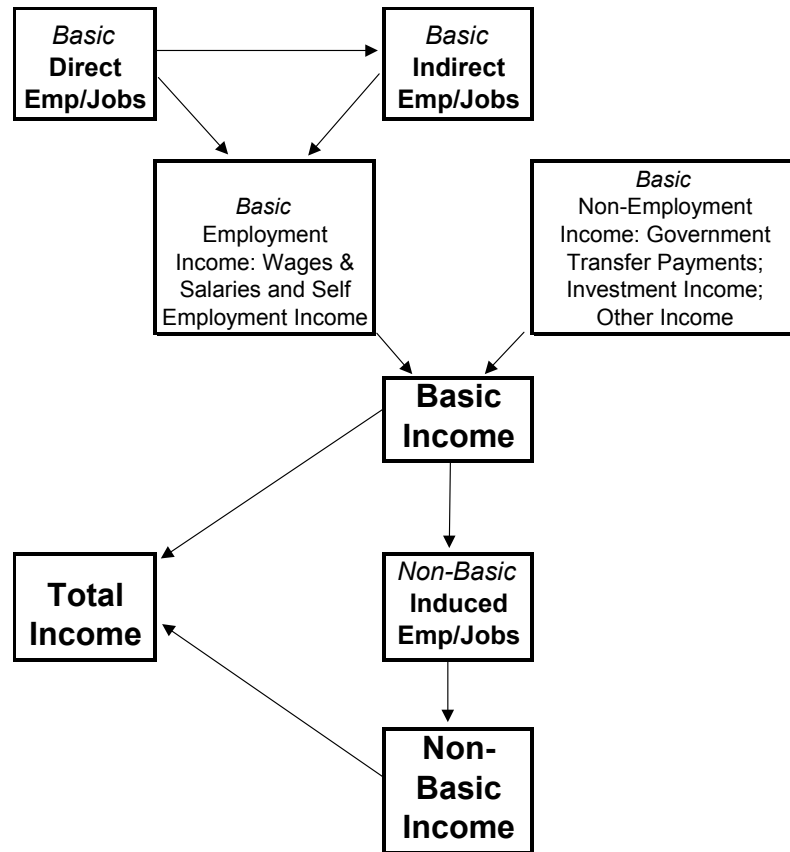
2.1.1 Basic Income

Basic income is defined as income that flows into the community from the outside world, in the form of either *employment* income or *non-employment* income.

Basic employment income flows into a community in the form of wages and salaries or self-employed income, from the following three sources:

1) From jobs that produce goods and services that are exported elsewhere.

2) From jobs that produce goods and services for the tourist sector (outsiders who spend money in the community that was earned elsewhere), or

3) From jobs in the public sector, for example, health care workers, teachers, government employees, etc., who receive their employment income from senior governments, and not directly from the local residents.

Figure 2.1 Simplified Model Flow Diagram

```
┌──────────────┐              ┌──────────────┐
│   Basic      │─────────────▶│   Basic      │
│   Direct     │              │  Indirect    │
│  Emp/Jobs    │              │  Emp/Jobs    │
└──────────────┘              └──────────────┘
        │    ╲              ╱        │
        │     ╲            ╱         │
        ▼      ▼          ▼          ▼
┌──────────────────┐   ┌────────────────────┐
│      Basic       │   │       Basic        │
│   Employment     │   │  Non-Employment    │
│ Income: Wages &  │   │ Income: Government │
│ Salaries and Self│   │ Transfer Payments; │
│ Employment Income│   │ Investment Income; │
└──────────────────┘   │    Other Income    │
              ╲        └────────────────────┘
               ╲          ╱
                ▼        ▼
            ┌──────────────┐
            │    Basic     │
            │    Income    │
            └──────────────┘
              ╱          │
             ╱           ▼
┌──────────────┐   ┌──────────────┐
│    Total     │   │  Non-Basic   │
│   Income     │◀  │   Induced    │
└──────────────┘   │  Emp/Jobs    │
            ▲      └──────────────┘
             ╲            │
              ╲           ▼
            ┌──────────────┐
            │    Non-      │
            │   Basic      │
            │   Income     │
            └──────────────┘
```

Jobs that are considered to generate basic employment income are in the following 10 sectors[2]:

- Forestry and associated manufacturing
- Mining and associated manufacturing
- Fishing and Trapping and associated manufacturing
- Agriculture and Food & Beverage Manufacturing
- Tourism
- High Technology
- Public Sector
- Construction
- Film Production and Sound Recording
- Other, which includes any direct basic activities that could not be allocated to any of the other categories[3] plus all income generated from businesses supplying goods and services to these 10 basic sectors (referred to elsewhere in this paper as basic *indirect employment*).

---

[2] See Appendix A.3 for the list of industry groupings (NAICS) that are included in each of these basic industries.

[3] See Appendix C.3 for more information.

Basic non-employment income is all income that flows into the community that is not employment income. In the model it is aggregated into two groups:

- Transfer Payments from senior governments, such as welfare payments, Old Age Security pensions, Guaranteed Income Supplements, Canada Pension Plan, Employment Insurance benefits, Federal Child Tax benefits and other income from government sources.

- Other Non-Employment Income that includes investment income, such as dividends and interest; retirement pensions, superannuation, annuities, alimony, etc.

These 10 industrial groupings plus the 2 groups of non-employment income are the 12 categories used to delineate the economic dependencies of communities.

2.1.2 Nonbasic Income (Also called Nonbasic Employment Income or Induced Employment Income)

Nonbasic income is employment income generated from jobs in the community that provide goods and services to individuals who live in the community. These jobs are often referred to as nonbasic jobs or induced employment. Examples of these include much of retail trade, local transportation services, local financial services, and personal services – local dry cleaners, barbershops and hairdressers.

Nonbasic activities, and the people engaged in them, are just as important to a modern community as the basic activities – indeed, it's arguable that they are the "glue" that holds a community together and makes it differ from a work-camp where individuals come to work and leave whenever they are not working. Nevertheless, there is a real sense that the nonbasic sector is dependent on a healthy basic sector, because without the latter the former would not exist. It is this view that makes the income dependencies presented in this section of the report different from a simple percentage breakdown of income by source for each community.

Income dependencies for the 63 local areas in 2001 are displayed in Table 2.1. The premise of Table 2.1 is that each dollar of basic community income is uniquely allocated either to one of the basic industries or to a non-employment income source. Thus the industry definitions for the column headings of this table are quite broadly defined to include not only resource extraction, but also any downstream processing that occurs locally, and also any indirect activities that are purchased locally. In Table 2.1 non-employment income is displayed in 2 columns -- government transfer payments, and Other Non-Employment Income.

Table 2.1
Percent Income Dependencies (After Tax Incomes, 2001)

		Mining & Min Proc	Fish- ing	Agric. & Food	Tourism	High Tech	Public Sector	Const	Film Prod	Other	Trans.P ay- ments	Other non-emp inc
		Forestry										
VANCOUVER ISLAND/COAST												
1	Gulf Islands	1	0	1	2	7	2	18	9	2	5	20	32
2	Victoria	1	0	0	1	6	4	41	4	0	6	16	20
3	Sooke-Port Renfrew	3	0	2	1	6	1	42	8	0	9	18	11
4	Duncan	18	1	0	2	4	1	26	5	0	5	19	18
5	Lake Cowichan	31	0	0	1	5	0	22	4	0	1	23	14
6	Ladysmith	19	0	1	2	3	2	25	4	0	5	22	17
7	Nanaimo	11	0	1	1	5	2	28	5	0	9	21	18
8	Parksville-Qualicum	8	1	1	1	7	0	18	7	0	4	25	27
9	Alberni	31	0	2	2	8	0	22	3	0	2	18	12
10	Courtenay-Comox	11	1	2	3	6	0	30	5	0	3	20	18
11	Campbell River	29	4	2	2	7	0	20	5	0	2	16	11
12	Bute Inlet	5	3	12	3	11	0	22	7	0	2	18	17
13	Powell River	27	2	1	1	4	0	19	4	0	2	21	17
14	Alert Bay	8	0	15	1	8	1	32	4	0	1	24	6
15	Port Hardy	49	1	4	2	8	0	19	1	0	0	10	5
16	Central Coast	13	0	7	1	6	0	39	5	0	1	22	5
MAINLAND/SOUTHWEST (Excluding GVRD)												
17	Hope-Fraser Canyon	14	2	0	1	11	0	22	7	2	5	25	11
18	Chilliwack	6	1	0	7	4	0	28	7	0	11	21	15
19	Kent-Harrison	6	1	0	6	12	1	28	6	0	5	21	13
20	Matsqui-Abbottsford	8	1	0	11	2	1	26	9	0	13	18	12
21	Pitt Meadows-Maple Ridge	7	2	0	3	2	3	29	10	1	19	14	10
22	Mission	12	1	0	6	3	1	27	9	1	12	18	10
23	Sunshine Coast	19	1	2	1	5	1	21	7	0	3	20	19
24	Squamish	12	1	0	0	29	1	21	11	1	7	9	7
25	Lillooet	20	0	1	3	6	0	32	7	0	6	16	9
THOMPSON-OKANAGAN												
26	Princeton	28	1	0	1	5	0	18	6	0	2	25	14
27	Oliver-Osoyoos	6	1	0	12	6	0	17	4	0	3	33	18
28	Penticton	5	2	0	3	6	0	26	5	0	6	25	20
29	Ashcroft	18	8	0	6	8	0	18	5	0	4	22	12
30	Merritt	24	5	0	4	6	0	27	5	0	1	20	8
31	Kamloops	10	6	0	2	6	0	29	6	0	10	18	13
32	North Thompson	39	1	0	2	8	0	15	4	0	2	17	11
33	Peachland	5	3	0	3	6	2	22	7	0	11	21	19
34	Kelowna	5	1	0	5	6	2	24	7	0	12	20	18
35	Vernon	10	1	0	3	6	1	24	6	0	11	23	16
36	Spallumcheen	13	2	0	9	3	0	19	8	1	8	23	14
37	Salmon Arm	11	2	0	3	6	1	18	8	0	9	24	19
38	Golden	25	1	0	1	17	0	16	8	0	10	14	8
39	Revelstoke	21	0	0	0	16	0	17	5	1	14	15	11

Table 2.1 (cont)
Percent Income Dependencies (After Tax Incomes, 2001)

	Forestry	Mining & Min Proc	Fish-ing	Agric. & Food	Tourism	High Tech	Public Sector	Const	Film Prod	Other	Trans. Pay-ments	Other non-emp inc
KOOTENAY												
40 Fernie	8	41	0	1	9	1	15	4	0	1	12	8
41 Cranbrook-Kimberley	14	9	0	1	8	0	25	6	0	5	18	14
42 Invermere	18	2	0	1	17	0	18	14	0	1	14	15
43 Castlegar-Arrow Lakes	25	6	0	0	3	1	23	9	0	3	18	13
44 Nelson	13	2	0	1	7	2	30	8	0	2	19	15
45 Creston	10	2	0	7	5	0	23	5	0	2	29	16
46 Grand Forks-Greenwood	25	1	0	4	6	0	20	5	0	3	23	13
47 Trail-Rossland	4	29	0	0	3	0	23	4	0	4	18	15
CARIBOO												
48 Williams Lake	30	2	0	3	6	0	24	6	0	3	16	9
49 Quesnel	43	1	0	2	5	0	21	3	0	2	16	8
50 Prince George	31	1	0	1	4	1	28	6	0	7	13	8
51 McBride-Valemount	30	0	0	2	15	1	18	4	0	5	16	10
NORTH COAST												
52 Queen Charlotte Island	33	0	4	1	7	0	30	5	0	4	11	6
53 Prince Rupert	23	0	11	0	6	0	30	3	0	3	18	5
54 Kitimat-Terrace	19	20	0	0	5	0	26	6	0	4	13	7
55 Hazelton	29	3	1	1	3	0	32	2	0	0	24	5
56 Stewart	9	7	3	0	5	0	41	6	0	2	22	5
NECHAKO												
57 Smithers-Houston	34	5	0	3	5	1	26	4	0	2	12	7
58 Burns Lake	37	1	0	2	5	0	25	5	0	1	15	10
59 Vanderhoof	44	5	0	2	2	0	21	5	0	1	14	5
60 Stikine	2	4	1	0	8	0	42	20	0	3	14	6
NORTHEAST												
61 Dawson Creek	16	17	0	5	4	0	25	6	0	6	15	6
62 Fort St. John	7	32	0	4	6	0	19	10	0	7	10	5
63 Ft. Nelson	31	19	0	1	8	0	17	6	0	7	6	4

Map 2.1, Dominant Basic Sectors, shows the basic sector that provides the most basic income in each local area. While this depiction indicates the leading basic sector in each area it can be potentially misleading because it does not distinguish between areas that have one dominant sector and those that have two or more strong industries. Invermere, for example, has an apparent tie between Forestry and the Public Sector (the latter "wins" only by examining the dependencies to more decimal places (17.8 to 17.7)) with Tourism and Construction not very far behind. Local areas that do not have a dominant sector should score well on the Diversity Index – see Table 2.3, Map 2.5, and the accompanying discussion later in this chapter.

The remaining maps in this section show the dependence of each area in British Columbia on a particular sector for the major sectors of Forestry (2.2), Mining & Mineral Processing (2.3) and Tourism (2.5). The darker the shading, the more dependent the area is on that sector.

2.2 The Diversity of Local Economies

Though a community with one dominant industry may be better off than one with a number of smaller ones, there is an intuitive appeal to the notion that a diversified economic base will provide more community stability in volatile economic times.

To address this issue and quantify it for application in British Columbia, the local area economic dependencies were used to construct a diversity index (DI) using the following formula:

$$DI = 100 \times \frac{SDMAX - SD}{SDMAX}$$

Where:

SD is the standard deviation of the 11 dependency values[4] for each local area,

SDMAX is the standard deviation for the least diversified case possible – an area that is 100% dependent on a single sector.

Observe that the diversity index would be zero if the area were entirely dependent on one sector (because SD = SDMAX for this case). At the other extreme, the diversity index would be 100 if a local area were equally dependent on each of the defined sectors (because then SD = 0)[5].

---

[4] For the purpose of calculating the diversity index Film Prod was considered part of Other to make comparisons with Diversity Indexes for 1991 and 1996 more meaningful.

[5] Readers familiar with the Herfindahl Index of Concentration (HI) should note that the measures are equivalent in the sense that DI will be high when HI is low and vice versa, if allowance is made for the fact that in our case only basic income sources are used for the calculation rather than all industries.
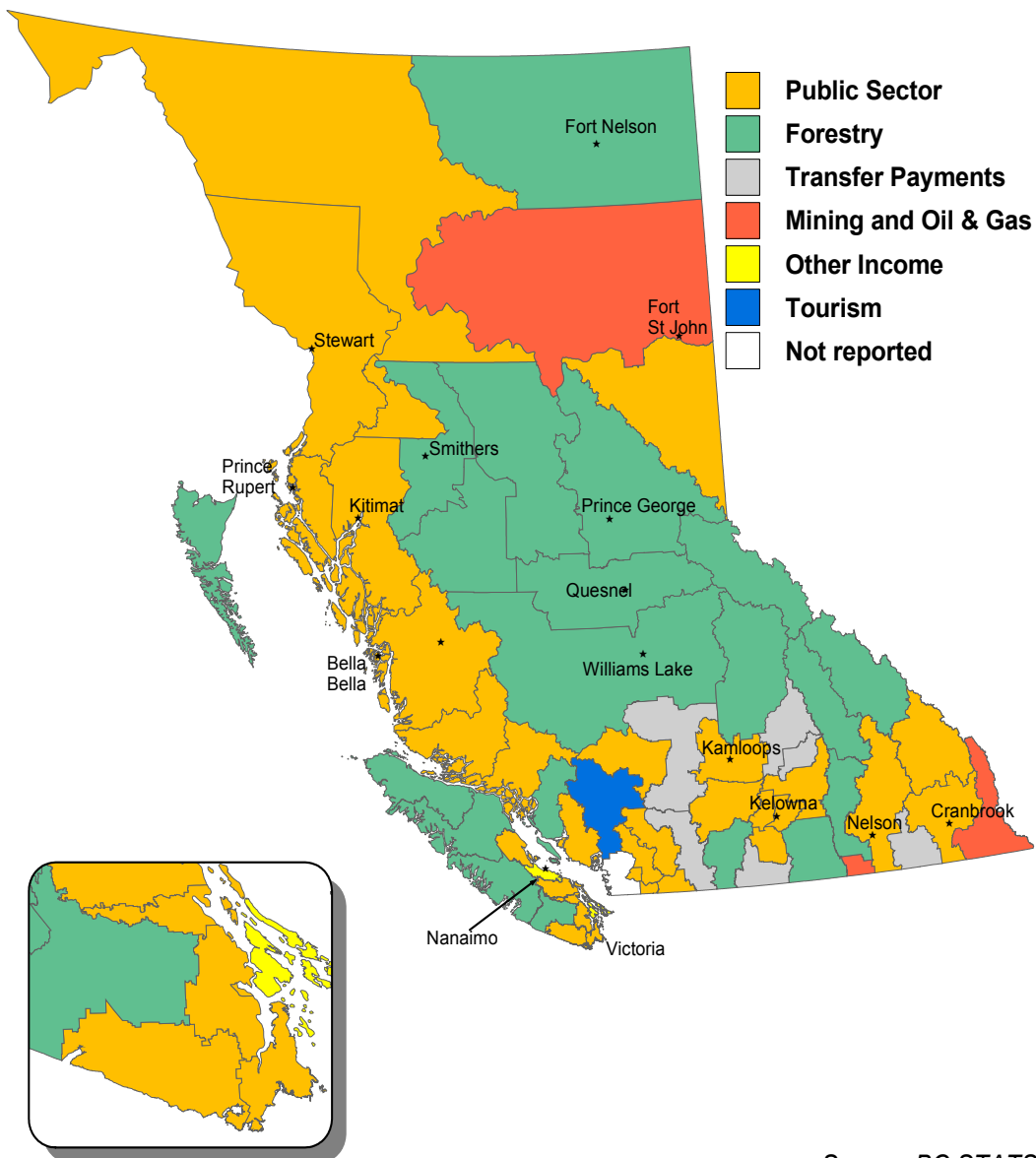
In practice the calculated diversity indices for B. C. communities tend to lie between 50 and 75.

The calculated diversity indices are given in Table 2.3 and displayed geographically in Map 2.5. The local areas having the most and least diversified economies in 2001 (by this measure) are tabulated below in Table 2.2.

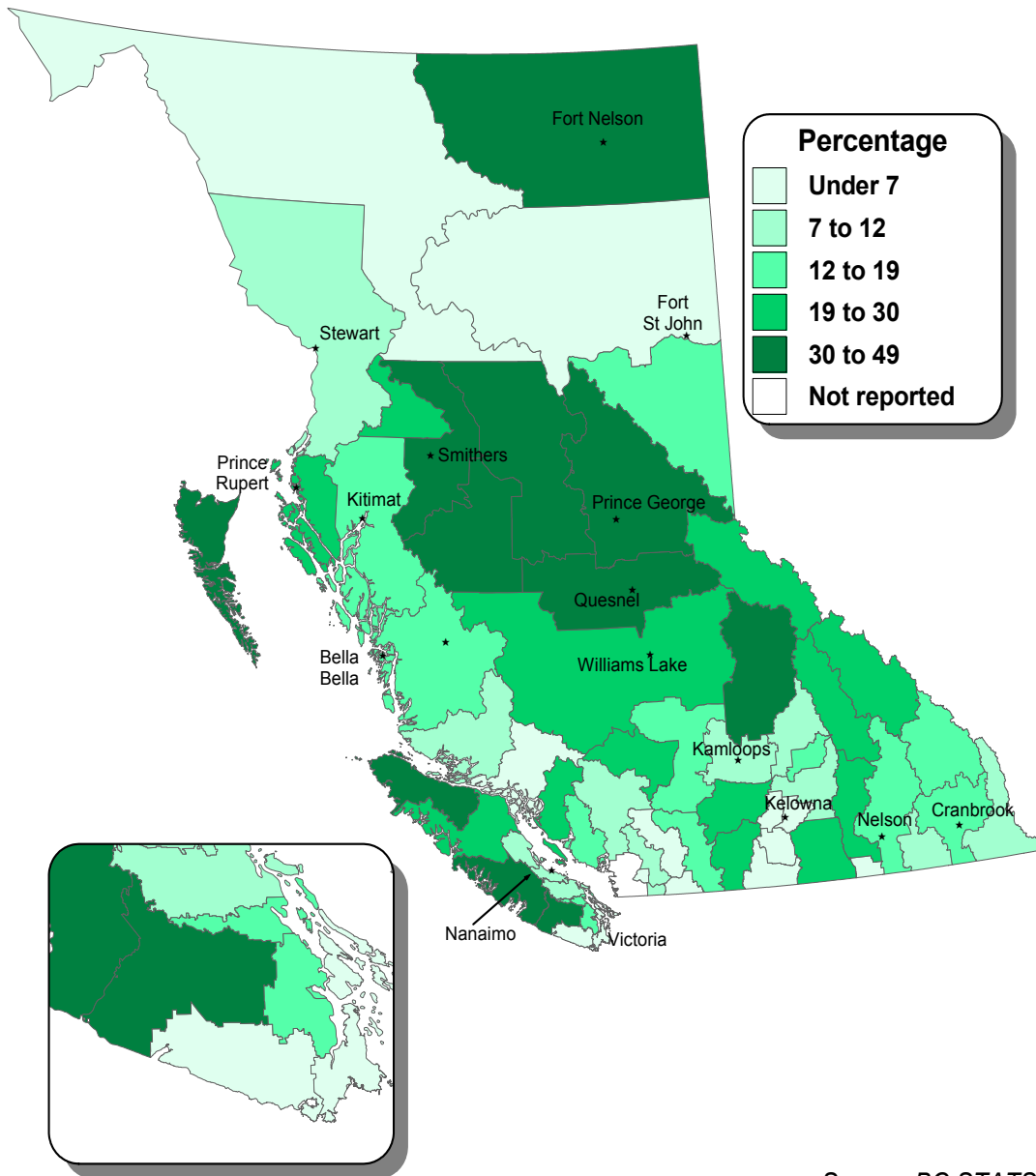**Table 2.2 Local Areas with Most and Least Diversified Economies, 2001**

Most Diversified Areas	Least Diversified Areas
Ashcroft Area 76	Port Hardy Area 52
Bute Inlet Area 75	Vanderhoof Area 56
Spallumcheen Area 75	Quesnel Area 57
Cranbrook-Kimberley Area 74	Victoria Area 58
Invermere Area 74	Stikine Area 58
Dawson Creek Area 74	

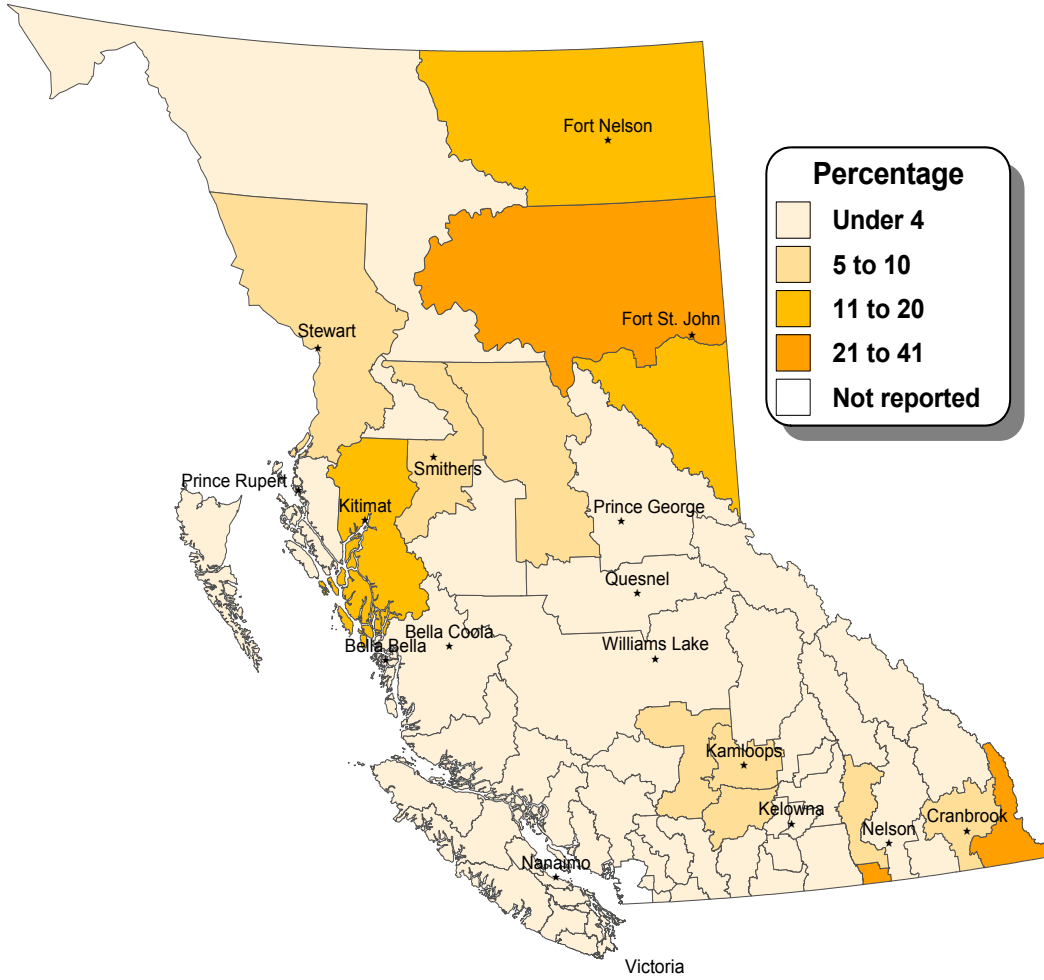# Map 2.1 Dominant Income Sources

Legend:
- Public Sector
- Forestry
- Transfer Payments
- Mining and Oil & Gas
- Other Income
- Tourism
- Not reported

Fort Nelson

Stewart

Fort St John

Prince Rupert

Smithers

Kitimat

Prince George

Quesnel

Bella Bella

Williams Lake

Kamloops

Kelowna

Nelson

Cranbrook

Nanaimo

Victoria

Source: BC STATS
November 2003

Map 2.2 Regional Dependency on Forestry

Percentage

- Under 7
- 7 to 12
- 12 to 19
- 19 to 30
- 30 to 49
- Not reported

Fort Nelson

Stewart

Fort St John

Prince Rupert

Smithers

Kitimat

Prince George

Quesnel

Bella Bella

Williams Lake

Kamloops

Kelowna

Nelson

Cranbrook

Nanaimo

Victoria

Source: BC STATS
November 2003

Map 2.3 Dependence on Underground Resources

Percentage

Under 4
5 to 10
11 to 20
21 to 41
Not reported

Fort Nelson

Fort St. John

Stewart

Smithers

Prince Rupert

Kitimat

Prince George

Quesnel

Bella Coola
Bella Bella

Williams Lake

Kamloops

Kelowna

Nelson

Cranbrook

Nanaimo

Victoria

Map 2.4 Dependence on Tourism

Percentage

- Under 5
- 5 to 10
- 11 to 20
- 21 to 41
- Not reported

Fort Nelson

Fort St. John

Stewart

Prince Rupert

Smithers

Kitimat

Prince George

Quesnel

Bella Bella

Williams Lake

Kamloops

Kelowna

Nelson

Cranbrook

Nanaimo

Victoria
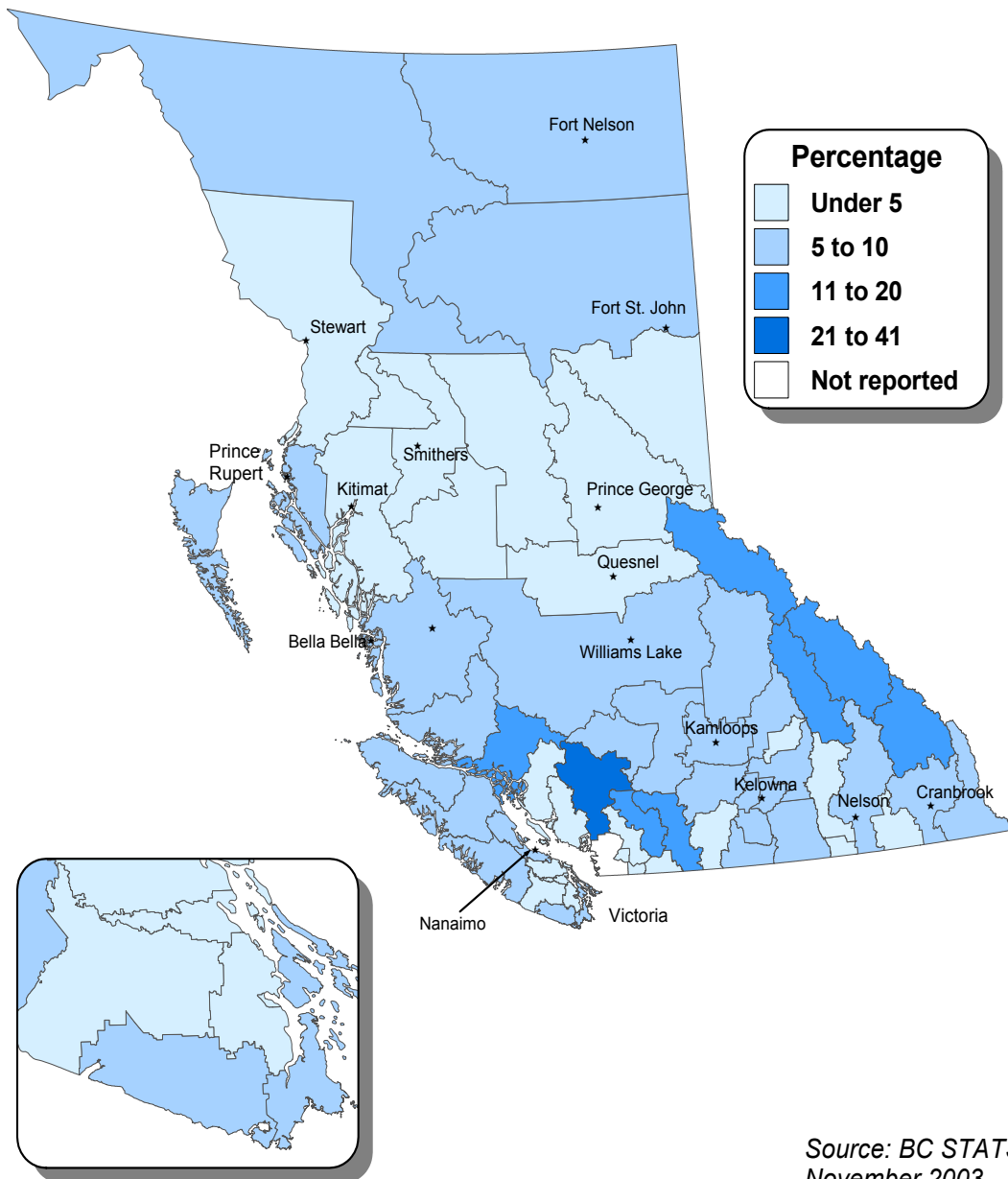
Source: BC STATS
November 2003

An interesting study by Beckstead and Brown that focuses on industrial diversity in Canadian cities has recently been released by Statistics Canada [3]. It uses a different formula for measuring diversity, adopts employment rather than after-tax income as its primary economic variable (and thus ignores non-employment as an "industrial sector"), and considers all industries regardless of whether they are basic or not. Nevertheless, the relative results for the British Columbia cities in that study are generally quite similar to those found by this study. The two places that differ significantly between the two studies appear to be Victoria and Dawson Creek.

As noted in Table 2.2, Victoria is one of the least diversified areas in British Columbia by the measure used in this study. The Statistics Canada study, on the other hand, has Victoria in third place among 20 British Columbia cities for which the calculations were done – only Vancouver and Abbotsford were estimated to have more diverse economies than Victoria. However, the Statistics Canada study excluded government, postal, health and education industries from their analysis. This probably is the main reason for the difference in results for Victoria – the dominance of government and other public sector activities in the Victoria area leads to the low diversity by our measure but is ignored in the Beckstead and Brown study.

Dawson Creek is harder to explain. As can be seen in Table 2.2 our measure of diversity suggests that Dawson Creek is one of the most diverse areas in the province. Looking at the dependencies this seems to make sense – a fairly even balance between forestry and mining with lesser but not insignificant levels of activity in agriculture and tourism. On the other hand, the Beckstead and Brown study ranks Dawson Creek in 15th place among the 20 British Columbia cities studied (and only about half as diverse as Victoria).

One possible explanation for this apparent contradiction between the two studies has to do with the size of the places studied. As part of their study, Beckstead and Brown found a strong correlation between population size and economic diversity. That finding seems logical, particularly with respect to the nonbasic sector – as towns grow local spending can support a greater array of specialized services[6]. It is quite easy to show that if the relative share of the nonbasic sector increases with population and if you include the nonbasic industries in your diversity calculations then you will automatically get greater diversity values for places having larger populations. Dawson Creek is one of the smallest places in the Statistics Canada study and this probably accounts

---

[6] It is also indicated by Table 3.5 in this report, which shows, for each local area, the total nonbasic income divided by basic income. Those ratios tend to be larger where population is high and smaller in the sparsely populated areas.
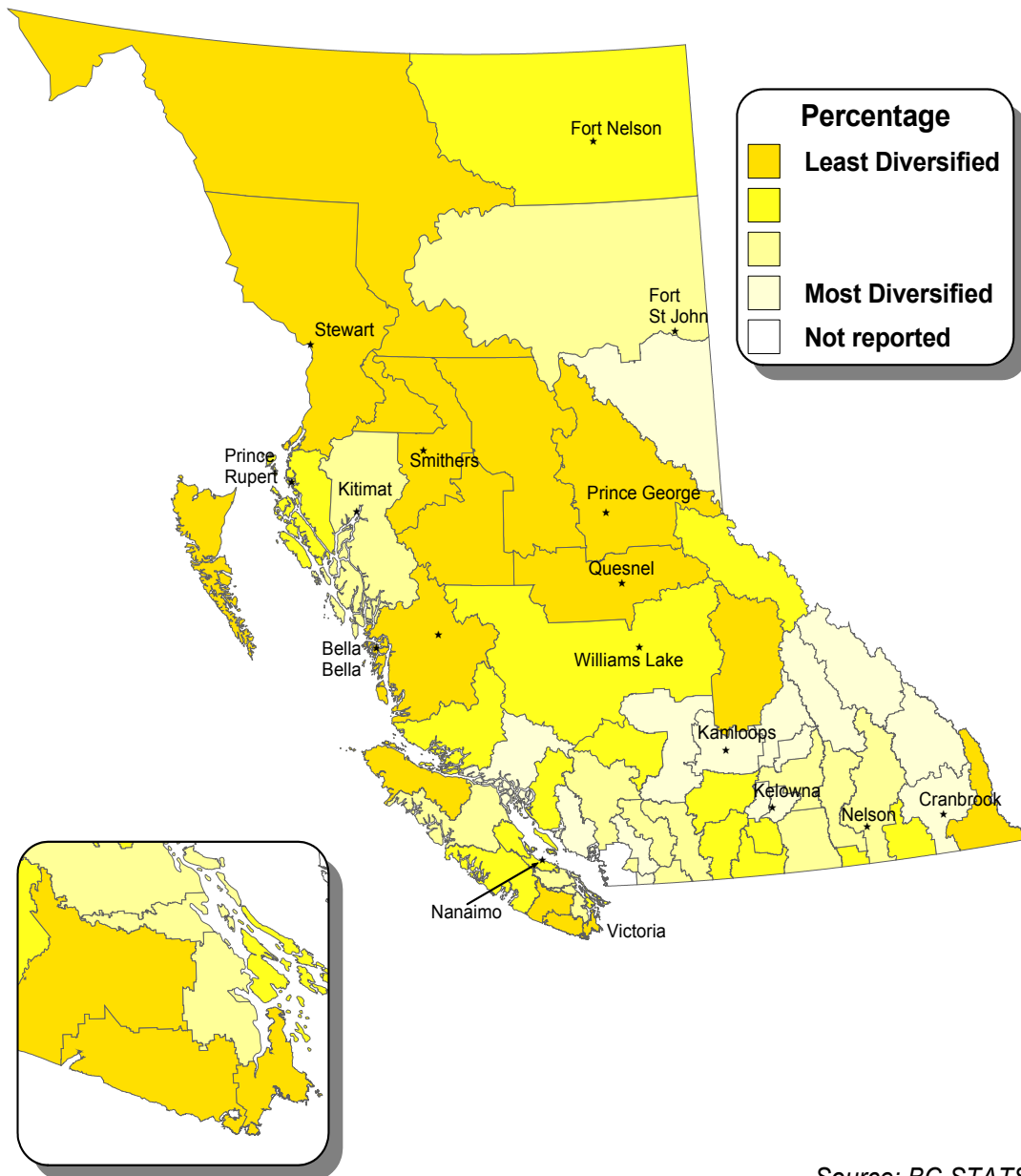
significantly for its estimated low diversity value. The present study, by omitting the nonbasic sector from the diversity calculations, considerably reduces the effect of population size on the result.

Further discussion of the ways in which the diversities of local economies have changed over time may be found in Chapter 4.

Table 2.3
Diversity Indices

VANCOUVER ISLAND/COAST	DI		KOOTENAY	DI
1 Gulf Islands	66		40 Fernie	61
2 Victoria	58		41 Cranbrook-Kimberley	74
3 Sooke-Port Renfrew	60		42 Invermere	74
4 Duncan	69		43 Castlegar-Arrow Lakes	69
5 Lake Cowichan	63		44 Nelson	69
6 Ladysmith	69		45 Creston	68
7 Nanaimo	69		46 Grand Forks-Greenwood	69
8 Parksville-Qualicum	67		47 Trail-Rossland	66
9 Alberni	65		**CARIBOO**	
10 Courtenay-Comox	68		48 Williams Lake	67
11 Campbell River	70		49 Quesnel	57
12 Bute Inlet	75		50 Prince George	64
13 Powell River	67		51 McBride-Valemount	68
14 Alert Bay	65		**NORTH COAST**	
15 Port Hardy	52		52 Queen Charlotte Island	62
16 Central Coast	60		53 Prince Rupert	66
MAINLAND/SOUTHWEST			54 Kitimat-Terrace	70
17 Hope-Fraser Canyon	71		55 Hazelton	59
18 Chilliwack	70		56 Stewart	59
19 Kent-Harrison	71		**NECHAKO**	
20 Matsqui-Abbottsford	73		57 Smithers-Houston	63
21 Pitt Meadows-Maple Ridge	70		58 Burns Lake	60
22 Mission	72		59 Vanderhoof	56
23 Sunshine Coast	72		60 Stikine	58
24 Squamish	69		**NORTHEAST**	
25 Lillooet	67		61 Dawson Creek	74
THOMPSON-OKANAGAN			62 Fort St. John	70
26 Princeton	65		63 Ft. Nelson	68
27 Oliver-Osoyoos	66			
28 Penticton	68			
29 Ashcroft	76			
30 Merritt	68			
31 Kamloops	72			
32 North Thompson	61			
33 Peachland	73			
34 Kelowna	73			
35 Vernon	72			
36 Spallumcheen	75			
37 Salmon Arm	73			
38 Golden	72			
39 Revelstoke	73			

Map 2.5 Regional Diversity

Percentage

Least Diversified

Most Diversified

Not reported

Fort Nelson

Fort St John

Stewart

Prince Rupert

Kitimat

Smithers

Prince George

Quesnel

Bella Bella

Williams Lake

Kamloops

Kelowna

Nelson

Cranbrook

Nanaimo

Victoria

Source: BC STATS
November 2003

2.3 The Vulnerability of Local Areas to the Forest Sector

British Columbia is particularly dependent on the forest sector as a driver of local economies in many parts of the province. To examine this issue, and put some numbers to it, the Forest Vulnerability Index (FVI) was developed using data from the Income Dependency Table (Table 2.1) and the Diversity Table (Table 2.2). FVI is a number the magnitude of which indicates the vulnerability of each local area to potential downturns in the forest sector. The rationale behind it is that a community will be particularly vulnerable if its dependence on the forest sector is high and if its diversity is low.

The first step in calculating the Forest Vulnerability Index is to multiply each local area's income dependence on Forestry by (100 – its Diversity Index). The larger this product is, the more vulnerable the local area is assumed to be. The remainder of the procedure is just to normalize the products so that 100 is the largest and 0 is the smallest. If we call the products F_i, and let F_{max} be the largest of them and F_{min} be the smallest, then this normalization can be effected by the formula

$$FVI_i = 100 \times \frac{F_i - F_{min}}{F_{max} - F_{min}}$$

Observe that FVI_i will be zero when $F_i = F_{min}$ and will be 100 when $F_i = F_{max}$.

The advantages of this index are that the data on which it is based is readily available from this study, and the calculations are mechanical, transparent and free of regional biases.

However, the FVI does have shortcomings, principally:

- No use is made of "on-the-ground" information – for example, standing timber inventories, or mills whose timber supply is being depleted, or changes in market demands for particular products;

- The definition of the local areas may have combined some communities that should be considered separately for this index to be most meaningful. However, see Appendix B where this difficulty is at least partially resolved.
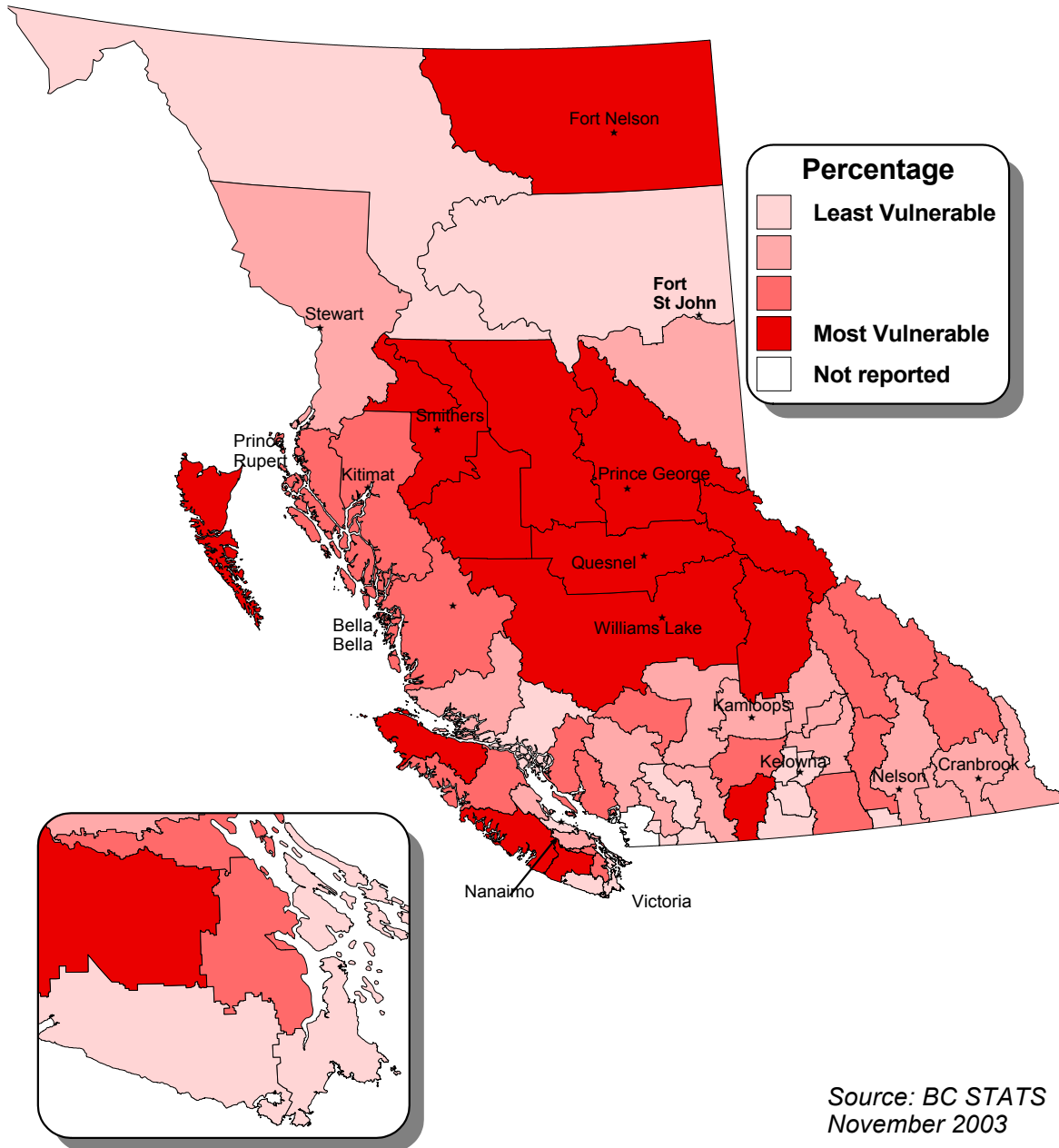
It is worth emphasizing that a high value of the Forest Vulnerability Index **does not mean** that the wood-based manufacturing facilities in that area are more likely to shut down than in other areas. Rather, a high value means that if forest sector activity in the area declines then the area will experience greater economic difficulties than other areas in the province would under the same circumstances.

The Forest Vulnerability Indices are shown in Table 2.4 and displayed in Map 2.6. Consideration and discussion of the ways in which FVI has changed over the years may be found in Chapter 4 of this report.

Table 2.4
Forest Vulnerability Indices

15	Port Hardy	100		24	Squamish	14
59	Vanderhoof	81		56	Stewart	14
49	Quesnel	78		10	Courtenay-Comox	13
32	North Thompson	65		22	Mission	13
58	Burns Lake	61		7	Nanaimo	13
57	Smithers-Houston	53		40	Fernie	12
52	Queen Charlotte Island	52		36	Spallumcheen	12
55	Hazelton	51		45	Creston	12
5	Lake Cowichan	48		31	Kamloops	11
50	Prince George	47		37	Salmon Arm	11
9	Alberni	45		14	Alert Bay	10
48	Williams Lake	42		35	Vernon	10
63	Ft. Nelson	41		8	Parksville-Qualicum	9
26	Princeton	40		21	Pitt Meadows-Maple Ridge	8
51	McBride-Valemount	40		62	Fort St. John	8
13	Powell River	36		20	Matsqui-Abbottsford	7
11	Campbell River	36		27	Oliver-Osoyoos	7
30	Merritt	32		19	Kent-Harrison	6
46	Grand Forks-Greenwood	32		28	Penticton	6
43	Castlegar-Arrow Lakes	31		18	Chilliwack	6
53	Prince Rupert	31		12	Bute Inlet	4
38	Golden	28		33	Peachland	4
25	Lillooet	28		34	Kelowna	4
6	Ladysmith	25		47	Trail-Rossland	3
39	Revelstoke	23		3	Sooke-Port Renfrew	3
54	Kitimat-Terrace	23		60	Stikine	1
4	Duncan	22		1	Gulf Islands	0
23	Sunshine Coast	22		2	Victoria	0
16	Central Coast	21				
42	Invermere	18				
29	Ashcroft	17				
61	Dawson Creek	17				
17	Hope-Fraser Canyon	16				
44	Nelson	15				
41	Cranbrook-Kimberley	14				

Map 2.6 Forest Sector Vulnerability

Percentage

Least Vulnerable

Most Vulnerable

Not reported

Fort Nelson
★

Stewart
★

Fort
St John
★

Prince
Rupert

Smithers
★

Kitimat

Prince George
★

Quesnel ★

Bella
Bella
★

Williams Lake
★

Kamloops
★

Kelowna
★

Nelson
★

Cranbrook
★

Nanaimo

Victoria

Source: BC STATS
November 2003

2.4 Tourism

A particular challenge in this work is just how to estimate numbers of tourism jobs, considering that while some of these are quite clear (resorts and campgrounds, back-country guiding, whale-watching, etc.) others are aggregated with resident services (e.g. restaurants, retail outlets, local transportation services).

Counting just the clearly tourism jobs underestimates them; on the other hand, counting all food services and retail employees as tourist-related results in an over-estimate ignoring, as it does, the fact that residents also make use of these services.

Table 2.5 makes use of the local area database[7] to address this issue. It provides, for each local area, the ratio of total direct tourism employment divided by direct employment in accommodation services. In many applications the latter number is easier to estimate. For example, it may be known that a new hotel under construction will employ 100 people. If this were the case in the Squamish area, the direct tourism ratio would suggest that there would be another 199 workers in other industries (food services, retail, transportation) that could be rightly considered as direct tourist workers.[8]

It is important to realize that the ratios in Table 2.5 are different in nature from any of the ratios provided in Chapter 3. When tourists come to an area they spend money in a variety of ways. Table 2.5 is offered here just as a way of estimating the total local employment generated by that spending from an estimate of the accommodation employment. All of these jobs would still be considered "direct" tourism jobs in the nomenclature of this study. On the other hand, indirect tourism jobs result from any local spending by the tourist industry itself, and induced (or nonbasic) jobs arise from the local spending of incomes earned by both direct and indirect tourism workers.

As an aside, and comment on Table 2.5, it looks like those areas that are known for their tourism (Invermere, McBride-Valemount, Squamish) also have low direct tourism ratios. This is probably because of the nature of comprehensive resorts that provide not only accommodation but also food services, transportation, and retail outlets (gift shops) and consequently where visitors may not spend as much of their money in the rest of the community.

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[7] Appendix A.5 explains how this database is created from existing data.

[8] Note that Table 2.5 provides estimates of the total number of tourism workers but does not say which industry those workers are actually in (e.g. food services, transportation, etc.). That information is in the model, but not in this report. If it's important to know, call BC Stats.

Table 2.5
Direct Tourism Ratios*

VANCOUVER ISLAND/COAST		KOOTENAY	
1 Gulf Islands	3.72	40 Fernie	3.30
2 Victoria	4.94	41 Cranbrook-Kimberley	4.14
3 Sooke-Port Renfrew	4.92	42 Invermere	2.91
4 Duncan	4.80	43 Castlegar-Arrow Lakes	3.82
5 Lake Cowichan	4.70	44 Nelson	4.04
6 Ladysmith	4.59	45 Creston	3.92
7 Nanaimo	4.22	46 Grand Forks-Greenwood	3.92
8 Parksville-Qualicum	4.40	47 Trail-Rossland	4.17
9 Alberni	3.36	**CARIBOO**	
10 Courtenay-Comox	4.50	48 Williams Lake	3.82
11 Campbell River	4.39	49 Quesnel	4.01
12 Bute Inlet	2.99	50 Prince George	4.38
13 Powell River	4.37	51 McBride-Valemount	2.97
14 Alert Bay	2.61	**NORTH COAST**	
15 Port Hardy	3.21	52 Queen Charlotte Island	3.83
16 Central Coast	2.49	53 Prince Rupert	4.10
MAINLAND/SOUTHWEST		54 Kitimat-Terrace	4.51
17 Hope-Fraser Canyon	3.85	55 Hazelton	4.20
18 Chilliwack	4.43	56 Stewart	2.80
19 Kent-Harrison	2.92	**NECHAKO**	
20 Matsqui-Abbottsford	5.07	57 Smithers-Houston	4.05
21 Pitt Meadows-Maple Ridge	4.66	58 Burns Lake	4.15
22 Mission	4.59	59 Vanderhoof	4.39
23 Sunshine Coast	4.45	60 Stikine	2.29
24 Squamish	2.99	**NORTHEAST**	
25 Lillooet	2.41	61 Dawson Creek	4.37
THOMPSON-OKANAGAN		62 Fort St. John	4.25
26 Princeton	4.27	63 Ft. Nelson	2.80
27 Oliver-Osoyoos	3.44		
28 Penticton	4.89	*Total direct tourism employment	
29 Ashcroft	2.64	Divided by employment in	
30 Merritt	3.56	Accommodation services	
31 Kamloops	4.06		
32 North Thompson	2.96		
33 Peachland	4.92		
34 Kelowna	4.94		
35 Vernon	4.84		
36 Spallumcheen	4.83		
37 Salmon Arm	3.97		
38 Golden	3.55		
39 Revelstoke	3.13		