

Ecosystem Based Management Human Well Being Indicators 2006 Baseline Report – Final

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Disclaimer

This report was commissioned by the Ecosystem-Based Management Working Group (EBM WG) to provide information to support full implementation of EBM. The conclusions and recommendations in this report are exclusively the authors', and may not reflect the values and opinions of EBM WG members.

Indicator Highlights

The Ecosystem Based Working Group has developed a monitoring program to measure human well being (HWB) in North and Central Coast (Coast areas). The monitoring program takes stock of the level of HWB in Coast communities to help inform the implementation of Ecosystem Based Management (EBM) on the Coast. This monitoring program will be incorporated in the EBM Adaptive Management Framework.

This is the first HWB monitoring report. It establishes the baseline for monitoring various aspects of HWB on the coast. The baseline report provides a reference point for monitoring change to levels of HWB. The baseline reporting year is 2006.

The 2006 HWB baseline report contains 29 indicators that are organized into the following seven categories:

1. Population
2. Economics
3. Governance
4. Culture
5. Health
6. Education
7. Recreation

Population

Population drives demand for housing, public services, land, water, energy, and other resources.

How are we doing?

Population Size & Growth

- The population in the Central Coast communities was 3,979 in 2006. They experienced a cumulative negative growth rate of -5.2% over the period of 1996-2006. The population in the North Coast was 15,848. It experienced a cumulative negative growth rate of -16.9% over the same period.

The economic outlook of a community should accommodate a wide range of ages and income brackets. In addition, establishing a diverse economy is seen as means to increase stability and resilience to economic downturns.

How are we doing?

Employment

- In 2008, the Government Sector was the largest employer for most communities in both the Central and North Coasts, including the Nuxalk, Heiltsuk and Wuikinuxv Nations in the Central Coast and in all reported communities, except for Prince Rupert in the North Coast.
- The largest age group in the labour force is the 15-24 years in several Central Coast communities, including the Nuxalk, Heiltsuk and Kitasoo members living on reserve. Conversely, in the North Coast, there are fewer community members in the 15-24 age group than in other age groups. The majority of the labour force in all communities, except Metlakatla, is under 45 years.
- The labour force distribution by occupation varied between each community in both the Central and North Coasts. Occupations in business, finance and administration are employing the largest proportion of the labour force in all of the reported communities in the Central Coast. Occupations in social science, education, government and religion were also common in Central Coast communities. Occupations in sales and service are predominant in Prince Rupert, Port Edward and Metlakatla and occupations that are unique to primary industry, such as fisherman, and fish farm technician are dominant in Metlakatla, Kitkatla and Hartley Bay.
- In 2008, the employment rates in Central Coast communities ranged from 92% employment in Wuikinuxv to 25% employment in Gwa'sala 'Nakwaxda'xw communities. In North Coast communities, the employment rate ranged from 68% employment in Hartley Bay to 31% employment in Lax Kw'alaams.
- The majority of people in the Central Coast who are not employed are not actively seeking employment, except in Kitasoo communities where 25% of the labour force is seeking employment. In the North Coast, the proportion of the labour force actively seeking employment is over 40% in Kincolith, Lax Kw'alaams, and Kitkatla.
- There are 1.09 and 1.22 jobs per thousand cubic metres of timber harvested in the Central and North Coasts. The number of jobs in the North Coast is similar to the Queen Charlotte Islands and the Sea-to-Sky corridor at 1.18 jobs. The number in the Central Coast is slightly lower, at 1.09

jobs.

- There are 3,389 and 666 potential jobs in forestry and wood processing in the Central and North Coast, respectively, based on the Annual Allowable Cut (AAC) available in the plan areas as of September, 2008. The difference between these potential numbers and the actual numbers indicates that 82% and 75% of the total potential number of jobs have been realized for the North and Central Coasts. Due to a number of conditions (market demand, exchange rates, labour and trade disputes for example), harvesting at the full AAC level is not always feasible.

Wages and Income

- The median household income in coast area communities varied significantly, although households in non-reserve communities generally had higher median household incomes than those in reserve communities.
- The individual income distribution in coast area communities varied significantly, with non-reserve communities in the North Coast generally having higher percentages of income earners in the higher income brackets than reserve communities. In the Central Coast, the difference between earners in reserve and non-reserve communities is less marked.
- In the North Coast, non-reserve communities had significantly higher proportions of total income coming from employment sources, while reserve communities were dependent on transfer payments for almost half of their total income. In the Central Coast, reserve communities reported approximately 65% of their income from employment. In the 2006 census results, these communities were below the regional and provincial averages.
- The proportion of the labour force receiving Employment Income (EI) in the Central Coast was 22% for Bella Bella, 23% for Central Coast D and 20% for Kingcome (non-reserve). For the North Coast communities where 2006 data was available, 20% to 23% of the labour force was on Employment Insurance. Port Edward was the exception having the highest percentage (29%) of its labour force collecting EI. Across the board, these figures were higher than for the province as a whole (11%), but consistent with the Regional Districts from which the area is comprised.
- Communities that have achieved higher levels of education, tend to have higher median household income levels in the Coast areas.

Access to Resources

- 20% of aquaculture tenures are locally owned.
- 99.9% of mineral exploration tenures are non-locally owned.
- There are 178 commercial fish licences held in the Central coast communities and 614 commercial fish licences held in the North coast communities. The Central Coast represents 2% and the North coast represents 8% of the

total number of licences held in the province (7,503).

- In 2006, 12 Forest and Resource Agreements were in place on the Coast. These accounted for a total of 32.3 million dollars over 5 years, averaging to approximately 6.5 million dollars per year. Provincial revenues for the Coast in 2006 were approximately 18.6 million dollars indicating that First Nations received up to 35% of the total provincial revenues for the region.
- The forestry industry is much more active in the Central coast than in the North coast. The approximate volume of timber harvested in the Central and North coasts in 2006 was 2.4 million and 140,000 cubic metres, respectively. The volumes harvested in these two areas account for a very small portion of the coastal and provincial totals, which were 20 million and 85 million cubic metres in 2006, respectively.
- Backcountry tenures, guide outfitter tenures and sport fishing lodge licenses are all primarily held by non-residents in both the North and Central Coast areas.
- Power generation tenures are almost all in the investigative stage with 18 tenures currently assigned for windpower and ocean energy investigation in the Central Coast and 31 for windpower in the North Coast. Two of these tenures in the Central Coast are in the development phase.
- 56% of quarry tenures are owned locally in the North Coast, and 38% of quarry tenures are locally owned in the Central Coast.
- The Economic Diversity Index (EDI) for the Central Coast was 60 (on a scale of 100 where 100 is the most diverse), reflecting smaller and more isolated communities typically dependent on resource industries, government and transfer payments for employment income. Prince Rupert had an EDI of 66. The provincial mean was 67. The EDI for both areas are surprisingly high given that there is not much diversity in the economies of Coast communities.¹
- The number of ferry departures on the Inside Passage ferry route (which runs year round) was highest in the communities of Port Hardy (which is outside the study area), Bella Bella and Prince Rupert – their regularly scheduled ports of call. For the summer route, the highest number of sailings departing was in the communities of Bella Bella and Bella Coola, with significant numbers of sailings leaving from Shearwater, Port Hardy and Ocean Falls.
- In the North coast TSA (timber supply area) and Mid coast TSA, 0% of the total committed volume was harvested by

¹ This statistic may not be updated in the future as it is not a standard program report generated by BCStats, therefore may not be useful for tracking progress but was included since it was part of the list of Schedule C/G indicators.

First Nations and local communities by December 31, 2006, despite having 24,972 metres cubed committed. This indicates that given the market conditions and other circumstances in 2006, First Nations could not find a profitable way to harvest the committed timber.

Coast areas tend to have less economic diversity, particularly in regions that are reliant on resource extraction (logging, fishing, and mining) and have not developed secondary industries to add value and keep more wages and value from product generated within the region before export. In addition, both the logging and fishing industry are experiencing a number of challenges. In the forestry sector, there has been among other things, the loss of traditional markets and low return on investment. For the fisheries, there are declining fish stocks due to over-fishing, changing ocean conditions, a concentration of tenures away from coastal communities, and impacts from climate change.

The North and Central coast areas are experiencing an increase in tourism visits to the region, but these jobs are often seasonal and the operations are often owned by investors outside the plan areas. The challenge will be for locals to take advantage of opportunities to set up their own businesses and keep themselves and their neighbours working in order to keep wages and revenues in the community.

Governance

Governance indicators can show the level of involvement in a range of issues. In this report, the indicator selected to show progress on governance is how many coast areas are covered by (Provincial) Government to (First Nations) Government Agreements.

How are we doing?

Coast areas covered by government to government agreements

- 76% and 79% of the land base in the Coast areas are covered by Strategic Land Use Planning Agreements (SLUPAs)
- Conservancies currently cover 20% of the Central Coast and 24% of the North Coast total land base.
- Conservancies with CMAs (Collaborative Management Agreements) currently cover 54% of the Conservancies in the Central Coast and 40% of the Conservancies in the North Coast.

The government to government agreements are intended to be a means for the province to work together with First Nations to ensure the long-term ecological and cultural integrity of the lands and resources in First Nations' traditional territories. The intended result of the agreements is collaborative land use management planning to ensure Aboriginal people share in the economic and social development of British

Columbia. Management planning is currently underway for 20 conservancies in the Central Coast, with the first plan approvals expected in the summer of 2008.

Culture

The support for and participation in cultural activities can contribute to a strong sense of cultural identity. This may contribute positively to economic growth, social cohesion, and the acceptance and encouragement of diversity, and creative thinking in a range of areas.²

How are we doing?

Percentage of First Nation community members speaking tribal languages

- In 2006, the Central Coast reserve communities of Bella Bella had 9% and Kitasoo had 11% of individuals of aboriginal identity reporting knowledge of traditional languages. Regionally, the Central Coast Regional District reported 9% and Mount Waddington Regional District reported 18% of individuals of aboriginal identity reporting knowledge of traditional languages.
- In the North Coast, 40% of aboriginal individuals in Kincolith and 9% of aboriginal individuals in Prince Rupert reported knowledge of aboriginal languages in 2006. Regionally, the Kitimat-Stikine Regional District reported 23% and Skeena-Queen Charlotte Regional District reported 10% of individuals of aboriginal identity with knowledge of traditional languages.

Number of salmon returning to key waterways

- In the North Coast, salmon returns have been variable, with a decline in the years 2004-2006.
- In the Central Coast, there was variability in returns from 1996 to 2000, and significant declines since 2000.

Unique markers of cultural identity such as language and availability of traditional foods such as salmon reinforce pride and contribute to a sense of place. Continuous support for language programs and fisheries protection and enhancement will contribute to a greater sense of cultural well-being that can spread positively to other aspects of coastal life.

Health

Average life expectancy and infant mortality rates are indicators of the level of health of a population and the effectiveness of a health care system for service delivery. These indicators can be affected by a variety of economic, social and geographic factors. In resource communities such as ones found in the Coast communities workers may be susceptible to a higher rate of work-related injuries,

which can contribute to lower life expectancies. For infant mortality rates, economic circumstances combined with living in remote communities where there is less access to health care and support services, can be factors attributed to higher infant mortality rates.

How are we doing?

Life expectancy at birth

- Life expectancy at birth tends to be lower on average by one year (79.9 years) compared to the provincial average of 80.9 years. However, the range is from 70.4 years in the Central Coast to 79.2 years in Kitimat.

Infant mortality rate, by Local Health Area

- Infant mortality in the coast areas appears to vary significantly, particularly with respect to urban centres and more isolated regions. Local Health Areas (LHAs) with smaller, more remote communities such as LHA 49 Bella Coola Valley, LHA 85 North Vancouver Island and LHA 92 Nisga'a had higher rates of infant mortality (12.3, 13.6 and 13.9 deaths per 1,000 live births respectively). Compared to more urban LHAs, such as Prince Rupert and Kitimat, which had 5.1 and 5.8 infant deaths per 1,000 live births, and the provincial average of 4.2 deaths per 1,000 live births. Infant mortality rates in small, remote communities are more than twice as high as the provincial average.

The challenge for Local Health Areas in the Coast communities is to devise better service delivery models for medical and support services for remote communities. Improvements to health services will influence average life expectancy and infant mortality rates in these communities.

Education

Education when cross-referenced with other indicators such as employment statistics can provide more insight into a community's well-being and its ability to attract and retain a skilled labour force. Based on the remoteness and low population of many of the communities on the Coast, residents are often forced to leave their communities for training.

How are we doing?

Education Attainment

- Education attainment in the Central Coast communities decreased between 2001 and 2006, with higher portions of the labour force having no formal education. Some North Coast communities saw minor improvements in the level of education attained (e.g., Prince Rupert increased from 29% to 33%), but most communities saw minor decreases or very

² Cultural indicators for New Zealand. 2006. Statistics New Zealand and the Ministry for Culture and Heritage. http://www.stats.govt.nz/NR/rdonlyres/65AFBAD3-DC5F-4DC2-9D90-EBEC0E7284FF/0/SNZculturalindicatorsreport_1Augustversion.pdf (accessed August 2008).

minimal change over the same five year period.

Skills Training

- Despite the lack of locally accessible trades and apprenticeships or college educational opportunities, the proportion of the labour force with trades and apprenticeship or college educations in coast area communities has, in most cases, been consistent with the provincial average.

Increased opportunities for education and skills outreach by regional education authorities would be a benefit to all coastal communities, particularly remote communities.

Recreation

Increased opportunities for recreation are viewed as an important indicator of human well-being. They offer opportunities for respite, relaxation and re-charge. This indicator measures the Recreation Opportunity Spectrum (ROS) classes, which are determined by three basic criteria of remoteness, size and evidence of humans. There are seven classes of recreation opportunities identified, as follows: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Roaded Modified, Rural and Urban.

How are we doing?

Percent of recreation area in each recreation opportunity spectrum class

- In the North Coast, 68% of the areas surrounding identified recreational sites are in semi-primitive motorized (SPM) areas. Other recreational experiences in the North Coast are in the urban (16%) and roaded modified (13%) classes. In the Central Coast, roaded natural areas are available 36%, followed closely by semi-primitive motorized (32%) and roaded modified (26%).

Tracking lands surrounding recreation areas will show how the recreation experience may change over time, as development increases. This indicator will highlight those changes.

Future Updates

It is recommended that the next HWB Report be prepared and released in 2013. This will incorporate data from the 2011 Census of Canada. This five-year report will contain the full suite of indicators that is presented in this baseline report.

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1 INTRODUCTION

1.1 Background

In 2006, First Nations from the North and Central Coast of BC and the provincial government signed agreements committing to the implementation of an Ecosystem Based Management (EBM) approach that involves maintaining the ecological integrity of terrestrial resources and enhancing human well being (HWB) in the North and Central Coast areas (Coast) of British Columbia. For the purposes of the Coast areas, EBM is defined in the Government-to-Government Agreements between the various First Nations and Province of British Columbia as:

"...an adaptive, systematic approach to managing human activities, guided by the Coast Information Team EBM Handbook, that seeks to ensure the co-existence of healthy, fully functioning ecosystems and human communities."

An EBM Working Group (EBM WG) was established to develop recommendations on EBM research priorities and on the application of research results to the implementation of EBM on the Coast, oversee research related to uncertainties or knowledge gaps in EBM implementation and coordinate and manage related data to March 31, 2009. The EBM WG membership includes members from First Nations and the provincial government, as well as stakeholder representation from the conservation sector, economic interests, the forest industry, and local communities.

One of two overarching goals of EBM is the achievement of increased HWB, where HWB is "a condition in which all members of society can determine and meet their needs and have a large range of choices and opportunities to fulfill their potential." The other overarching goal is to maintain the ecological integrity (EI) of terrestrial, and freshwater systems. The goal to maintain EI defines an overarching context for achieving increased HWB, primarily because it implies a commitment to sustainable resource use. To achieve the goal of increased HWB, the CIT identified six core objectives³:

- Recognize and accommodate Aboriginal Rights and Title, and interests;
- Achieve the health, wealth and education status required for a high quality and secure life for both aboriginal and non-aboriginal people;
- Build stable, resilient, well-serviced, and peaceful communities in coastal British Columbia;
- Create a strong, diverse economy and mix of businesses in communities and across the region;
- Create a strong and diverse mix of non-profit and voluntary organizations and a vibrant set of traditional, cultural, and non-market activities within communities and across the region;
- Ensure a fair distribution of benefits, costs and risks across all parts of coastal British Columbia, including aboriginal and non-aboriginal people.

³ Coast Information Team. 2004. *Ecosystem-based Management Framework*: pp. 5 & 13.

The EBM Working Group (EBMWG) commissioned Rubus EcoScience Alliance to establish a practical HWB monitoring framework based on the most current available science to measure impacts of land use decisions, agreements, EBM and other strategies on HWB. The project utilized socio-economic goals and objectives outlined in Schedule C of the Turning Point Protocol (North Coast area) and "Schedule G" of the KNT Agreement in Principle (Central Coast area) as a starting place.

1.2 Project Overview

In February 2008, The Sheltair Group was retained to develop a HWB baseline report for the year 2006. The baseline report provides a comparison for assessing EBM as well as providing a reference point for monitoring change to levels of HWB.

The objective of this project is to develop a methodology for measuring human well being and establish a baseline of these measures along with recommendations on how to set targets for these indicators.

The work entailed:

- conducting a review and assessment of the indicators identified in Schedules C and G and the full set suite of indicators compiled by Rubus EcoScience Alliance;
- selecting and documenting a set of human well being indicators;
 - this work incorporated input from the EBM WG project steering committee and EBM stakeholders;
- developing a data collection methodology for updating the indicators in the future;
- collecting data and reporting on the selected indicators; and
- outlining a target setting methodology.

This report highlights each component above and provides a snapshot of each of the HWB indicators. It is intended that this reporting structure be incorporated into the EBM Adaptive Management Framework.

1.3 Report Structure

This report is structured into five sections following this introduction.

Section 2 describes indicators in general and their strengths and limitations.

Section 3 explains how the set of indicators were selected and how they will be used on the Coast.

Section 4 presents the baseline for each of the HWB indicators on the Coast.

Section 5 describes the purpose of setting targets and a proposed methodology for setting targets for the indicators.

Section 6 outlines recommendations for future updates to the baseline indicators.

Appendix A presents the Quick Facts that accompany the set of human well being indicators. They provide a summary of key variables that are primarily an at-a-glance profile in nature. The Quick Facts are basic statistics that provide information that is simpler than an indicator but add additional context for measuring human well being in the areas.

Appendix B presents a tabular comparative of Schedules C/G, Rubus Eco-Science recommendations and EBMWG Program Steering Committee final recommendations that guided the completion of this report.

A separate technical report contains detailed descriptions of the data for each indicator (also known as the metadata).

2 HUMAN WELL BEING INDICATORS AND REPORTING GEOGRAPHIES

2.1 Performance Indicators and their Importance in Monitoring

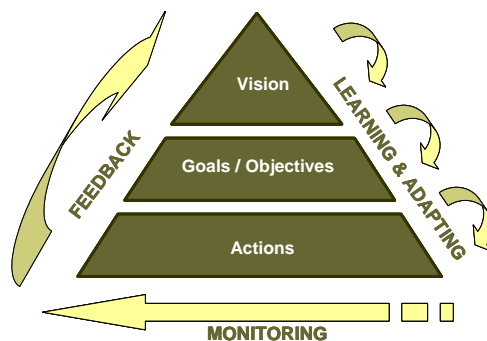
Indicators are tools that help track changes over time and are a yardstick for measuring future change relative to a baseline. An indicator is a measure that reveals a condition, a trend, or an emerging issue. Its purpose is to reveal the direction that the issue being studied is moving in. More specifically, HWB indicators can show if communities on the Coast are moving towards increased human well being.

Indicators also provide an opportunity to identify policy gaps, shortfalls in implementation, or trends that may affect EBM. The communication of indicators and trends help decision makers and residents to see where changes are needed and desired.

In their book, *Reinventing Government*, authors David Osborne and Ted Gaebler (1992) suggested four reasons why indicators are important for progress to occur:

"What gets measured tends to get done. If you don't measure results, you can't tell success from failure. If you can't recognize success, you can't reward it. If you can't recognize failure, you can't learn from it."

Monitoring is a critical activity as it shows changes over time and identifies things that are working (what we should celebrate and protect) and areas where we are not making progress (where we need to direct more resources). The HWB indicators provide feedback on how communities are doing through ongoing monitoring and feedback. Feedback in itself does not facilitate change as it merely indicates past performance; learning from the feedback is required to allow "course correction" by modifying and adjusting actions.



The first part of the learning process involves developing awareness of performance and trends. This HWB baseline is a vehicle for building awareness about current performance. It highlights the successes and focuses attention on the areas that need work. In this light, it serves as a useful tool for decision-makers to address priority areas and to develop initiatives and actions over time.

2.2 The Limitations of Indicators

There are limitations to the use of indicators. An area of geography such as the Coast comprises many subsystems with complex relationships and social and economic interdependencies. Indicators are simplified representations and can only report on one item within an individual system. They do not explain the workings of that system,

causality or the reasons for a particular condition or trend. Many of the indicators are too crude to capture any type of site-specific condition or qualitative condition. They also rely on “after-the-fact” information. As such, they are useful in providing basic information, but should be supplemented by observation, studies, survey research, and more detailed assessment and analysis.

Where an indicator is showing a perceived problem or unintended effect associated with some aspect of HWB, a more in-depth review or analysis may be warranted to determine why the trend of an indicator is moving in a particular direction.

2.3 Reporting Geographies

There are various reporting geographies that are used in this 2006 Baseline Indicator Report. The specific geographic area used for reporting indicator results depends on the nature of the indicator and data sources. The following describes the various levels of geographies used:

Coast areas: There are two land use zones under EBM: North Coast and Central Coast. Figure 1 outlines the two land use zones in shades of red. These land use zones are referred to as areas in the baseline indicator write-ups reporting at this level of geography.

Communities: There are several communities within each area. Baseline data was collected for the following communities, when available:

Central Coast Communities:

- Kitasoo (reserve)
- Bella Bella (reserve)
- Shearwater*
- Bella Coola (reserve)
- Hagensborg*
- Wuikinuxv (reserve)
- Kingcome (reserve)

North Coast Communities:

- Kincolith (Nisga'a village)
- Lax Kw'alaams (reserve)
- Metlakatla*
- Prince Rupert
- Port Edward
- Kitkatla*
- Hartley Bay (reserve)

Note: * indicates that data for regional district electoral areas were used for these communities because community specific data was not available

Figure 1 illustrates where these communities are located within the defined areas. These communities were selected because they have a population base that meet minimum requirements for reporting data. The community of Kincolith, although technically outside the North Coast area was selected because it is a good proxy community for populations in the surrounding region which lie within the area boundaries.

Figure 1. Coast Areas and Communities



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Communities: There are several communities within each coast area. Baseline data was collected for the following communities, when available:

Central Coast Communities:

- Kitasoo (reserve)
- Bella Bella (reserve)
- Shearwater*
- Bella Coola (reserve)
- Hagensborg*
- Wuikinuxv (Katit reserve)
- Kingcome (reserve)

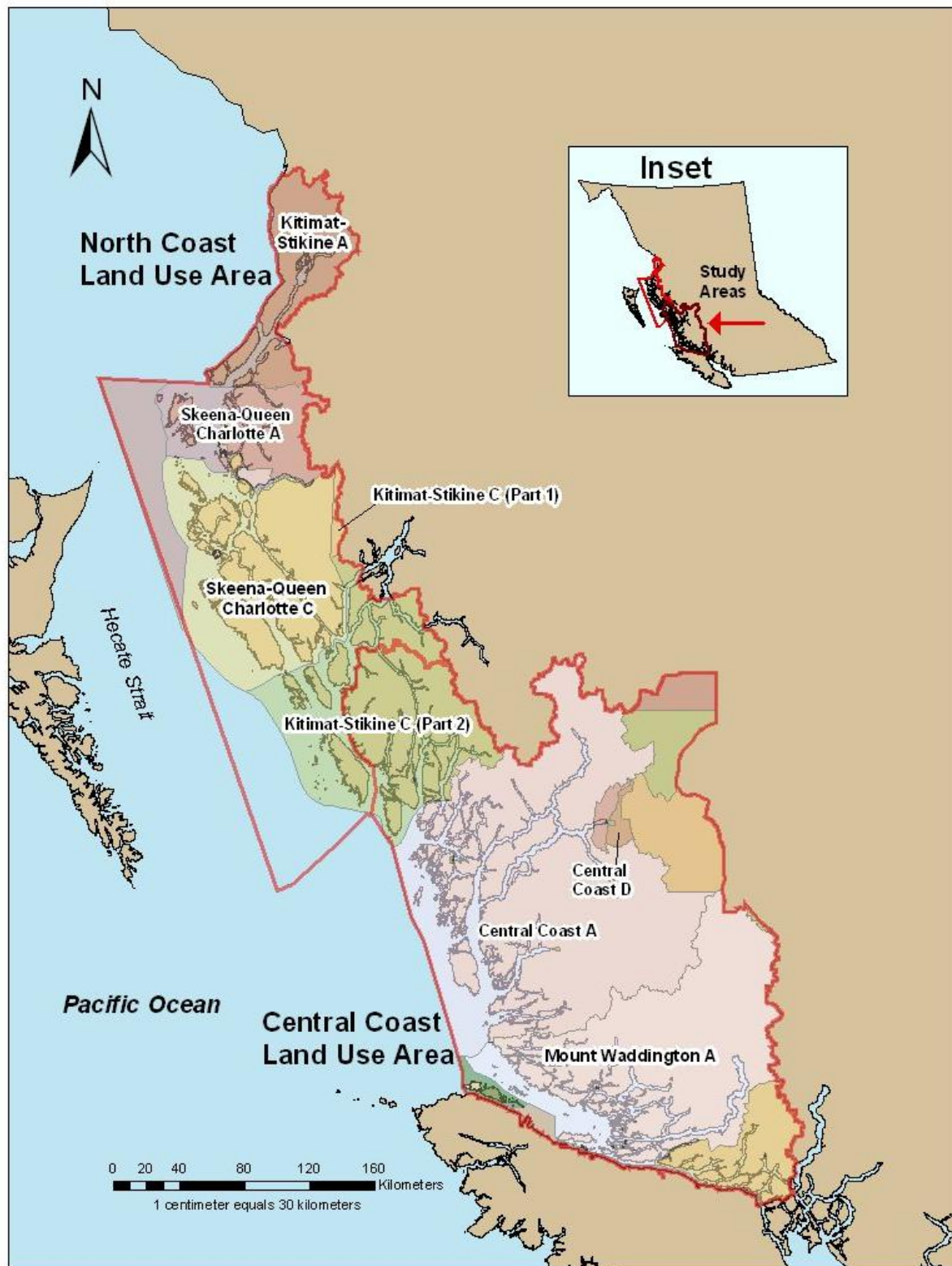
North Coast Communities:

- Kincolith (Nisga'a village)
- Lax Kw'alaams (reserve)
- Metlakatla*
- Prince Rupert
- Port Edward
- Kitkatla*
- Hartley Bay (reserve)

Regional District Electoral Areas: There are six regional district electoral areas used in some of the indicators. The boundaries for these areas are defined by Statistics Canada and although regional, they were used as proxies for community scale data when community data were not available. Figure 2 outlines these areas. These regional district electoral areas are:

- Central Coast A includes non-reserve populations south of Kitasoo in the Central Coast area such as Shearwater, Dawsons Landing, Kilbella Bay, Shearwater, Namu, Ocean Falls;
- Central Coast D includes non-reserve populations adjacent to Bella Coola, including Hagensborg in the Central Coast area;
- Mount Waddington A includes non-reserve populations in the south portion of the Central Coast area;
- Kitimat - Stikine C (Part 2) includes non-reserve populations south of Hartley Bay in the North Coast area as well as non-reserve populations north of Kitasoo in the Central Coast area;
- Skeena - Queen Charlotte A includes non-reserve populations south of Lax Kw'alaams and north of Port Edward; and
- Skeena - Queen Charlotte C includes non-reserve populations south of Prince Rupert and north of Hartley Bay in the North Coast area.

Figure 2. Map of Regional District Electoral Areas in Coast Areas

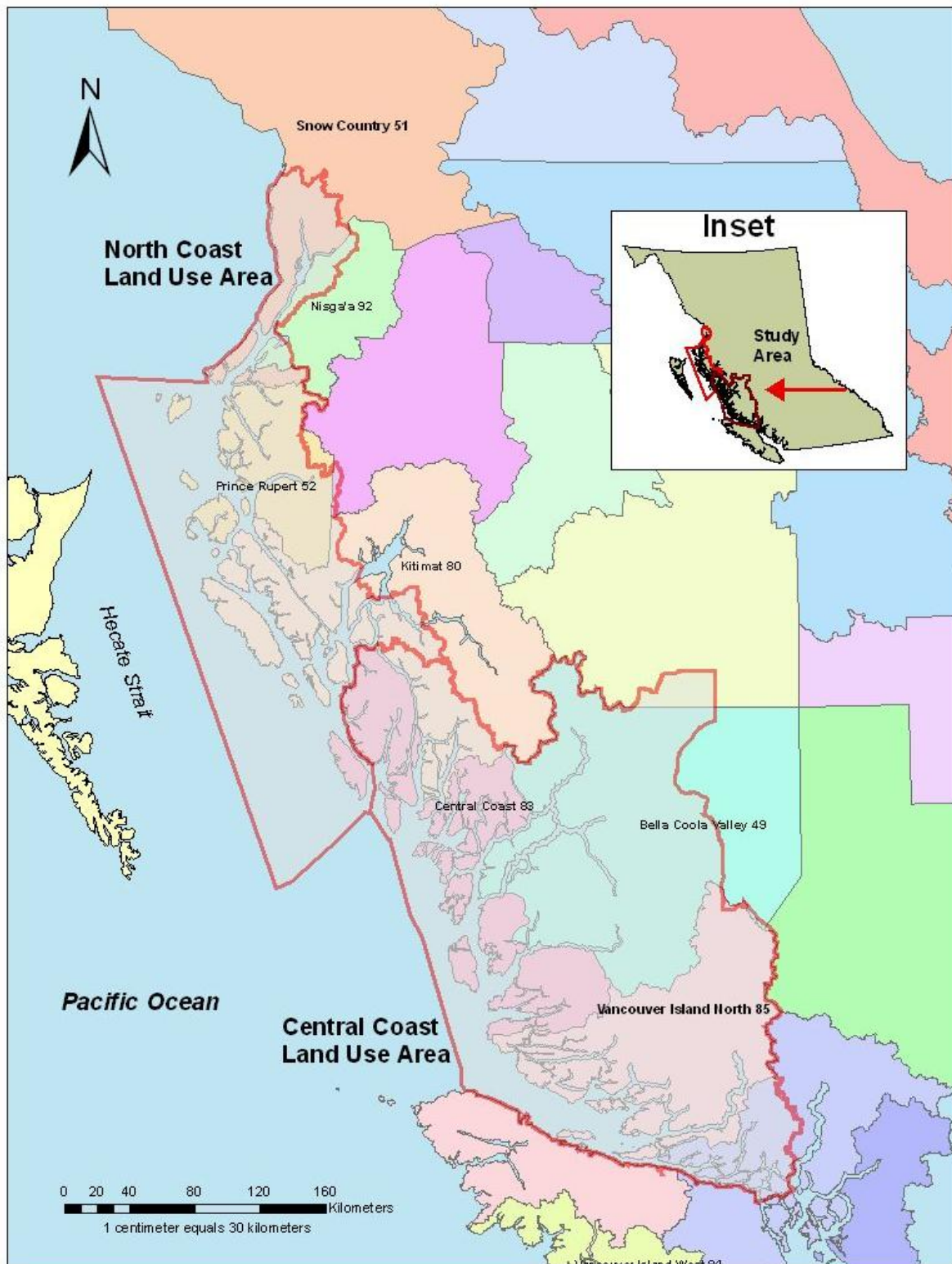


Source: Statistics Canada and BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Local Health Areas: There are six local health areas used in some of the indicators. These areas are defined by BC Stats and although regional in scale, they were used as proxies when community scale data were not available. Figure 3 outlines these areas. These health areas are:

- North Coast area: 52 Prince Rupert, 92 Nisga'a and 80 Kitimat
- Central Coast area: 49 Bella Coola Valley, 83 Central Coast and 85 Vancouver Island North.

Figure 3. Map of Local Health Areas in Coast Areas



Source: BC Stats and BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Regional Districts: There are four Regional Districts in the areas. These regional districts are used as benchmarks for several indicators. A benchmark compares an indicator from one region (or community) to similar regions (or communities) or to other reference points, such as provincial and national comparisons. This context is powerful because it makes the indicator meaningful and understandable by showing how the communities are performing relative to their peer groups. For example, the Regional District of Skeena-Queen Charlotte is used as benchmark for communities in the North Coast.

Figure 4. Map of Regional Districts in Coast Areas



Source: Statistics Canada and BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

3 INDICATOR SELECTION PROCESS AND OUTCOMES

The following is a description of the iterative process used to select the indicators.

At the outset, a list of indicators was created by combining the indicators identified in Schedules C and G of the Turning Point Protocol and the KNT Agreement-in-Principle and the indicators recommended by Rubus in 2007. In addition, a variety of relevant indicator reports and databases were reviewed to supplement the list of indicators. These additional sources include: the Canadian Index of Wellbeing; GPI Atlantic indicator reports; Maple Ridge, Pitt Meadow, Katzie Community Profile; The British Columbia Health Atlas; the British Columbia Atlas of Wellness; and the Sustainable Forestry Management Indicator Knowledge Base. This review helped identify gaps in the list of indicators.

The list of indicators was organized by theme areas and sub-themes. Six theme areas were identified:

1. Population
2. Economics
3. Governance
4. Culture
5. Health
6. Education

The economics theme area was divided into three sub-themes: employment; wages and income; and access to resources.

The first draft of the list of indicators was reviewed in a workshop format with EBM Working Group members and stakeholders in March 2008. One of the main objectives of the workshop was for Working Group members and stakeholders to provide input on the indicator selection process. From the workshop, a draft short list of indicators was identified, as were the above theme areas and subthemes. The indicators were then further refined after review by the EBM WG Project Steering Committee (PSC) in April 2008.

The approach for selecting indicators focused on answering three main questions:

1. Does the indicator relate directly to EBM?
2. Is the indicator relevant to community members?
3. Is the data measurable and readily available?

Additional selection criteria were used to evaluate each indicator:

- Is the indicator recommended by Rubus?
- Is the indicator listed in Schedule C and G?
- At what scale is the data available?
- Is the indicator easily understood by a broad range of readers and audiences?
- Is the indicator comparable to indicators used by other organizations, regional districts, or municipalities?

Another criterion was to have a manageable set of indicators that would be practical to update.

The final list of recommended indicators includes 29 indicators, 17 quick facts and five indicators for future consideration.

Seventeen of the original 18 Schedule C/G indicators are included in the final list of indicators. The one indicator not recommended was *Assessed property values for area(s) and by municipality*. It was not included because it did not meet the selection criteria. The short comings of this indicator and rationale for its exclusion were outlined in the Rubus report (p.xvii): "assessment of property values is limited mainly to freehold land of which there is very little in the Central Coast and only slightly more (primarily Prince Rupert) in the North Coast. The value of the assessed property has much more to do with the general economy, e.g., Prince Rupert's new container port, than provincial land use policy. The same will hold true for the freehold land in the Bella Coola valley if a major development takes place in or near the coast areas. In addition a large portion of the Central Coast population lives on lands that are not individually assessed (Indian Reserves). The same holds true for most communities in the North Coast excluding Prince Rupert."

The PSC and EBM WG members identified several important indicators that were not included in the final set of indicators in the Baseline Report. This is because data is not readily available and community surveys need to be employed to gather the data. In particular, there were five indicators that were short listed but were not included. These indicators can be completed in the future if resources and time are available. These indicators are:

1. Number of businesses and employment per employer in each of the key basic and non-basic sectors
2. First Nation and local community tourism revenues and employment
3. Percent of population participating in voluntary community service organizations
4. Percent of cedar harvested relative to forest cover species profile
5. Number of First Nation community members using traditional cultural resources for non-commercial purposes

Appendix B outlines the Schedule C/G indicators and how they compare to the Rubus recommended indicators and the final set of indicators and quick facts recommended by The Sheltair Group.

4 HUMAN WELL BEING INDICATORS

4.1 Indicator List

This section presents the 29 Human Well Being Indicators selected for this baseline report, organized by theme and sub-theme. Table 1 shows the list of the 29 indicators including the indicator code.

The indicators are organized by the theme areas. Each indicator is assigned an indicator code that consists of a code for the theme area and a number. For example, indicator EMPL-1 is the code for the indicator on the labour force by sector as part of the Economics theme area and Employment sub-theme. The coding system facilitates referencing particular indicators and is also used for data management.

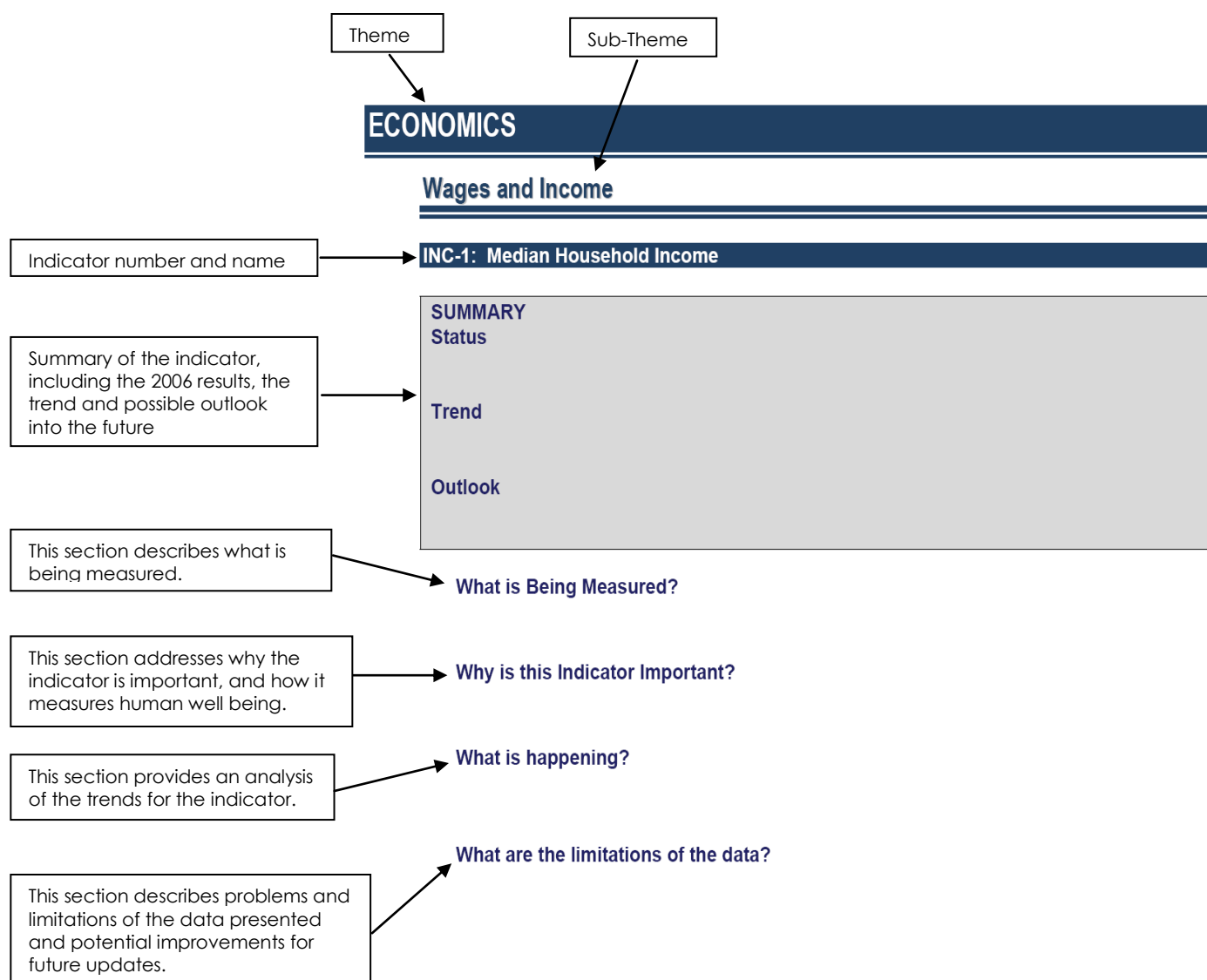
Table 1. Human Well Being Indicators for the Central and North Coast of BC

Ref #	Indicator
Population	
POP-1	1a) Total population and growth rate, by community and plan area; and 1b) Percent of the population that is Aboriginal
POP-2	Demographic Breakdown, by age cohort
POP-3	Rate of population turnover
Economics	
Sub-Theme: Employment	
EMPL-1	Labour force a) by sector, b) by age cohort, c) by occupation
EMPL-2	Employment Rate
EMPL-3	Number of jobs in forestry and wood processing per cubic meter harvested in land use area
Sub-Theme: Wages and Income	
INC-1	Median Household Income
INC-2	Individual Income distribution
INC-3	Breakdown of Total Income by Source
INC-4	EI Recipients as % of Labour Force
Sub-Theme: Access to Resources	
ACC-1	Percent of aquaculture tenures owned by plan area residents and percent of productive activity by plan area residents
ACC-2	Percent of Mineral Exploration tenures owned by plan area residents and percent of productive activity by plan area companies
ACC-3	Number of commercial fish licences held locally and non-locally, number of First Nations fish licenses, and percentage of productive activity by plan area companies and First Nations
ACC-4	First Nation and local community forest sector revenues and employment
ACC-5	Timber Harvest Level
ACC-6	Percent of Backcountry Tenures, Guide Outfitter Tenures, Sport fishing lodge licenses owned by plan area residents and percent of productive activity by plan area companies
ACC-7	Number of power generation tenures
ACC-8	Number of other natural resource tenures, by sector, held locally and non-locally and percentage of productive activity by plan area companies
ACC-9	Economic Diversity Index
ACC-10	Ferry Ridership and Service
ACC-11	Percent of allocated timber harvested by communities and First Nations
Governance	
GOV-1	Number and percent of Plan Areas covered by Government to Government Agreements
Culture	
CUL-1	Percent of First Nation community members with knowledge of tribal languages
CUL-2	Number of returning salmon to key waterways in plan areas
Health	
HEA-1	Life expectancy at birth
HEA-2	Infant mortality rate
Education	
EDU-1	Education Attainment
EDU-2	a) Number of locally delivered skills training programs; b) number of people enrolled in skills training programs/courses
Recreation	
REC-1	Distribution of recreation opportunity classes

4.2 Guide to the Indicator Sheets

Each indicator is documented in 4 pages or less, in an easy to read format and covers basic information about the performance measure, including summary information. The diagram below shows how the indicator sheets are organized (Figure 5).

Figure 5. Guide to the Indicator Sheets



4.3 Indicator Sheets by Theme and Sub-Theme

This section presents the 29 Human Well Being indicators organized by theme and sub-theme.

POPULATION

Population indicators, including total population, population growth rate, age structure and rate of turnover, help to explain the size and composition of a given population (e.g., a community). Size, growth and age structure have an impact on a population's development prospects, specifically on prospects for raising the standard of living. Population indicators also provide context that helps to understand trends in other indicators, such as those related to health (e.g., birth rates) and economics (e.g., EI claimants as a percentage of the labour force).

POP-1: a) Total population and growth rate; b) Percent of population that is aboriginal

SUMMARY

Status

Between 1996 [or 2001] and 2006, the total populations in coast area communities have generally decreased, with larger communities experiencing moderate losses. However, some communities with a small population base have experienced significant growth. The Central Coast experienced an overall 5% decrease in population between 1996 and 2006. Changes in population in the Central Coast ranged from increases of 55.8% in Kingcome (reserve) between 2001 and 2006 (however, the absolute increase was just over 50 people), to 43.4% decreases in Central Coast A for the period from 1996 to 2006. In the North Coast, there was a net population decline of 16.9%. This was a result of population changes ranging from an increase of 372 people (or 826.7%) in Skeena-Queen Charlotte C, which includes Kitkatla to a decrease of 33.4% in Lax Kw'alaams.

The population in the largest community on the North Coast, the City of Prince Rupert (13,588 people in the 2006 Census), declined by approximately 18% between 1996 and 2006. There was a 12% decline in population in Bella Bella (1,066 in the 2006 Census), the largest community in the Central Coast.

Aboriginal peoples comprise almost the entire population in reserve communities, and make up approximately 31% to 32% of the population in the non-reserve communities of Prince Rupert and Port Edward.

Trends

Both regions experienced a net decrease in population over the last decade, with most significant losses from Prince Rupert, larger communities, and non-reserve communities. Some small communities experienced significant increases in population, but most had either slight increases or slight decreases overall from 1996 to 2006.

Outlook

BC Stats develops population projections for British Columbia using area-specific assumptions relating to migration, fertility and mortality. These are based on past conditions, modified to take

into consideration possible future changes, and should be regarded as one possible future scenario. Due to the statistical instability of areas of small population size, such as the Central and North Coasts, the projections should be used with caution.

For the period 2006 to 2036, the population of the Central Coast Regional District is projected to increase 0.61%, from 3,280 to 3,300 with relatively minor fluctuations over the 30-year period. For the North Coast Development Area, including the Regional District of Skeena-Queen Charlotte and the Regional District of Kitimat-Stikine, the population is projected to decrease slightly over the same 30-year period. The population in Skeena-Queen Charlotte is projected to decrease by 2.55% and the population in Kitimat-Stikine is projected to decrease by 6.03%⁴.

What is Being Measured?

This indicator provides data on total population, population change and % population change over a 10-year period, derived from both BC Stats population estimates and census data for North and Central Coast communities. It also presents the percentage of the population that is aboriginal.

Why is this Indicator Important?

Population growth brings both benefits and challenges to a community. A growing population is integral to building a strong local economy. As the population grows more jobs are created to meet the demand for housing, retail goods and services. The challenge of a growing population is managing the growth in such a way that the values of the community remain strong and present. Knowing the Aboriginal portion of the population helps people to better understand the cultural demographic composition of communities.

What is happening?

In 2006, the population in the areas was approximately 4,000 in the Central Coast and 15,900 in the North Coast regions. There was a net 5% decrease in population in the Central Coast and a net 17% decrease in the North Coast from 1996 to 2006, with some smaller communities experiencing significant population growth, while most communities experienced a moderate decline in population.

Central Coast

Population and population growth rates for the Central Coast communities are shown in Table 2 for the period from 1996 to 2006, with the exception of the reserve community of Kingcome where population data for 1996 was not available. The community of Wiukinuxv experienced the largest growth rate, with an increase of 28.8% between 1996 and 2006 (however, this community had a small population base). The reserve community of Kingcome experienced the largest increase in population over the period from 2001 to 2006, with a growth rate of 55.8%. In Mount Waddington A, which includes, the non-reserve community of Kingcome, experienced a very slight overall decrease in population (0.1%), going from 1,052 inhabitants in 1996, to 886 inhabitants in 2001, and back up to 1,051 inhabitants in 2006. In general, the larger communities in the Central Coast had more significant declines in population, with Bella Bella declining 12% from 1,211 to 1,066, and Bella Coola falling 9.7% from 873 to 788 over the ten-year period. All the Central Coast communities reported in the area were reserve communities, with the majority of their populations comprised of First Nations peoples.

⁴Projected percentage increases in population were calculated using sub-provincial population projections (e.g., by Regional District and Development Region) from BC Stats. The projections can be accessed at <http://www.bcstats.gov.bc.ca/data/pop/pop/popproj.asp>.

Table 2. Population, Central Coast Communities, 1996 – 2006

Time Period	Wuikinuxv (reserve)	Bella Bella (reserve)	Bella Coola (reserve)	Kitasoo (reserve)	Kingcome (reserve)	Central Coast A	Central Coast D	Mount Waddington A	Total
1996	66	1,211	873	311	n.a.	244	439	1,052	4,196
2001	96	1,253	910	295	95	143	516	886	4,194
2006	85	1,066	788	282	148	138	421	1,051	3,979
1996-2006 Growth Rate	28.8%	-12.0%	-9.7%	-9.3%	55.8%*	-43.4%	-4.1%	-0.1%	-5.2%
2006 % Native Population	88.2%	95.2%	94%**	97.5%	100.0%	7.2%	4.8%	20.9%	44.3% **

Source: Statistics Canada Census of Population: Community profiles.

Notes: * indicates growth rate is based on the population change from 2001 to 2006, as data for 1996 was not available.

**The Native population for Bella Coola was not available for 2006. The 2001 proportion of the population is presented as a proxy under the assumption that the Native proportion of the population remained similar. The total % native population (44.3%) does not include Belle Coola.

North Coast

The population trends experienced on the North Coast from 1996 to 2006 were similar to the Central Coast, with the total population declining over that period. As shown in Table 3, larger communities like Prince Rupert and Port Edward experienced moderate population declines (18.7% and 17.6% respectively). Smaller communities and jurisdictions tended to experience increases in population, with the exception of Skeena – Queen Charlotte A (which includes Metlakatla) and Lax Kw'alaams which experienced a decline of 19.5% and 33.4% respectively, between 1996 and 2006. Skeena – Queen Charlotte C experienced significant growth over this same period (which includes Kitkatla), with the population going from 45 in 1996, to 368 in 2001 and 417 in 2006. Both Hartley Bay and Kincolith had slight increases in population (1.3% and 7.2% respectively), reaching 157 and 339, respectively. Aboriginal peoples comprised approximately 31% to 32% of the population in the two non-reserve communities of Prince Rupert and Port Edward, while the remaining communities studied were reserve communities and were almost entirely populated by Aboriginal peoples.

Table 3. Population, North Coast Communities, 1996 – 2006

Time Period	Kincolith (reserve)	Lax Kw'alaams (reserve)	Prince Rupert	Port Edward	Skeena – Queen Charlotte A	Skeena - Queen Charlotte C	Hartley Bay (reserve)	Total
1996	318	1,019	16,714	700	113	45	155	19,064
2001	341	667	15,282	659	52	368	162	17,531
2006	339	679	13,588	577	91	417	157	15,848
1996-2006 Growth Rate	7.2%	-33.4%	-18.7%	-17.6%	-19.5%	826.7%	1.3%	-16.9%
2006 Native Population	100.3%	96.8%*	32.9%	31.2%	11%*	98.3%	98.7%	32.6%*

Source: Statistics Canada Census of Population: Community profiles.

Notes: *The Native populations for Lax Kw'alaams and Skeena-Queen Charlotte A were not available for 2006. The 2001 proportion of the populations are presented as a proxy under the assumption that the Native proportion of the population remained similar. The total % native population (32.6%) does not include either of these communities.

Regional Districts

At the regional district level the overall trend is similar; populations are declining. As shown in Table 4, all regional districts experienced population declines ranging from 7% in Kitimat-Stikine to a decline of 9.4% in Skeena-Queen Charlotte, to 5.7% (in the Central Coast) during the period from 2001 to 2006. Population data was not available for 1996.

Table 4. Population, Regional Districts, 2001 – 2006

Time Period	Skeena - Queen Charlotte (RD)	Kitimat - Stikine (RD)	Central Coast (RD)	Mount Waddington (RD)
2001	21,693	40,876	3,781	13,111
2006	19,664	37,999	3,189	11,651
2001-2006 Growth Rate	-9.4%	-7.0%	-15.7%	-11.1%
2006 Native Population	40.6%	32.3%	62.4%	23.4%

Source: Statistics Canada Census of Population: Community profiles.

What are the limitations of the data?

The main limitations encountered with this indicator, were the availability and consistency of population data for communities in the areas; particularly for the smaller communities. For some communities, such as Shearwater and Hagensborg, data was not available at all. Regional district electoral area data was reported, as a means of filling in these data gaps (e.g. Central Coast A and D). For other communities, such as the reserve community of Kingcome, data was not consistently available for all census years from 1996 through to 2006.

SUMMARY

Status

Age demographics for non-reserve communities in the Central Coast are reflective of an aging population, with nearly two-thirds of the population over 40 years of age. Aboriginal communities in the Central Coast were generally younger, with all communities having more than half their populations under the age of 40 years. The North Coast communities studied were generally younger, with more of their populations distributed in the age groups below 40 years and no clear distinctions between reserve and non-reserve communities.

Trends

Age demographics in the Central and North Coast follow the trend of age demographics in British Columbia, in that the Aboriginal population is much younger than the non-Aboriginal population. According to BC Stats, over 47% of the First Nations population, and 44% of the Métis population in British Columbia are under the age of 25, compared to 29% of the non-Aboriginal population being under the age of 25.⁵

Outlook

Since the mid-1990's, overall population growth in the province has been due to an increasing number of individuals in the 45 to 64 and 65+ age groups (the "baby boom" cohort). Declining birthrates and increased life expectancies account for much of this growth (in-migration accounts for some) and have important implications for the labour force and delivery of services to the public.⁶ However, for Aboriginal populations in the province, the opposite is true. The median age of the First Nations population is 27.2 and for the Métis population, 29.7.⁷ Given these statistics, the relative size of the labour force in Aboriginal communities should be better positioned to meet the demand for services within those communities.

What is Being Measured?

This indicator provides data on the age structure of the population. The population has been divided into five groupings: Children 0-14 years; Young Adults 15-24 years; Adults 25-39 years; Middle Aged Adults 40-64 and Seniors 65+.

Why is this Indicator Important?

Tracking demographic breakdown by age has many important implications, ranging from the relative size of the labour force, to school enrollment, to the demand for and delivery of health services. This indicator is used to measure the diversity and distribution of age groups among residents. These trends are useful for determining the 'age-based' needs of the residents, which can vary with respect to housing, social and public services, and other resources.

⁵ BC Aboriginal Identity Population – Age Distribution. 2006 Census Fast Facts. Issue 2006 – 10. BC Stats. June 2008. <http://www.bcstats.gov.bc.ca/data/cen06/facts/cff0610.pdf> (accessed July 2008).

⁶ B.C.'s Interprovincial Migrants: A Changing Age Distribution. Migration Highlights, June 2008. BC Stats. <http://www.bcstats.gov.bc.ca/pubs/mig/miq081sf.pdf> (accessed July 2008).

⁷ BC Aboriginal Identity Population – Age Distribution. 2006 Census Fast Facts. Issue 2006 – 10. BC Stats. June 2008. <http://www.bcstats.gov.bc.ca/data/cen06/facts/cff0610.pdf> (accessed July 2008).

What is happening?

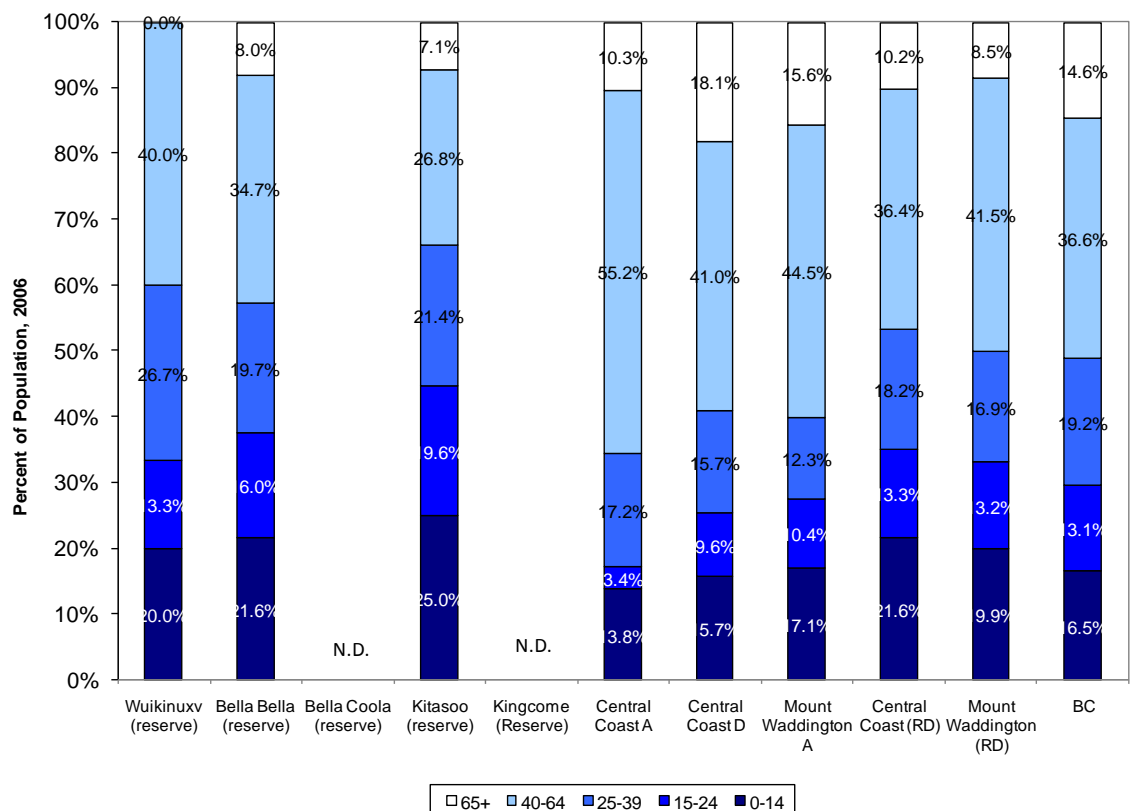
Central Coast

The communities in the Central Coast are generally aging, with people between the ages of 40 to 64 representing significant proportions of the population. Figure 6 shows more than half the population in Central Coast D (which includes Hagensborg) and Mount Waddington A (which includes the non-reserve community of Kingcome) to be over the age of 40 years (58% and 60% respectively) in 2006. The 15 to 24 year age groups were significantly smaller in these communities as well (3% and 10% respectively).

The opposite is true in the reserve communities of Wuikinuxv, Bella Bella and Kitasoo, where more than half the population is under the age of 40 (60%, 57% and 66% respectively). In these communities, populations were more evenly distributed between the younger age groups. The majority of this under 40 population fell into the under 14 and the 25 to 39 year age groups.

In the Regional Districts within the Central Coast, the trends in age demographics generally reflect an aging population. The 40 to 64 year age group comprised 36% to 42% of the populations in the Central Coast (RD) and Mount Waddington (RD), respectively, while approximately half the population (between 50% and 53%) was distributed between the age groups under 40 years.

Figure 6. Demographics Breakdown by Age, Central Coast Communities, 2006



Source: Statistics Canada Census of Population;

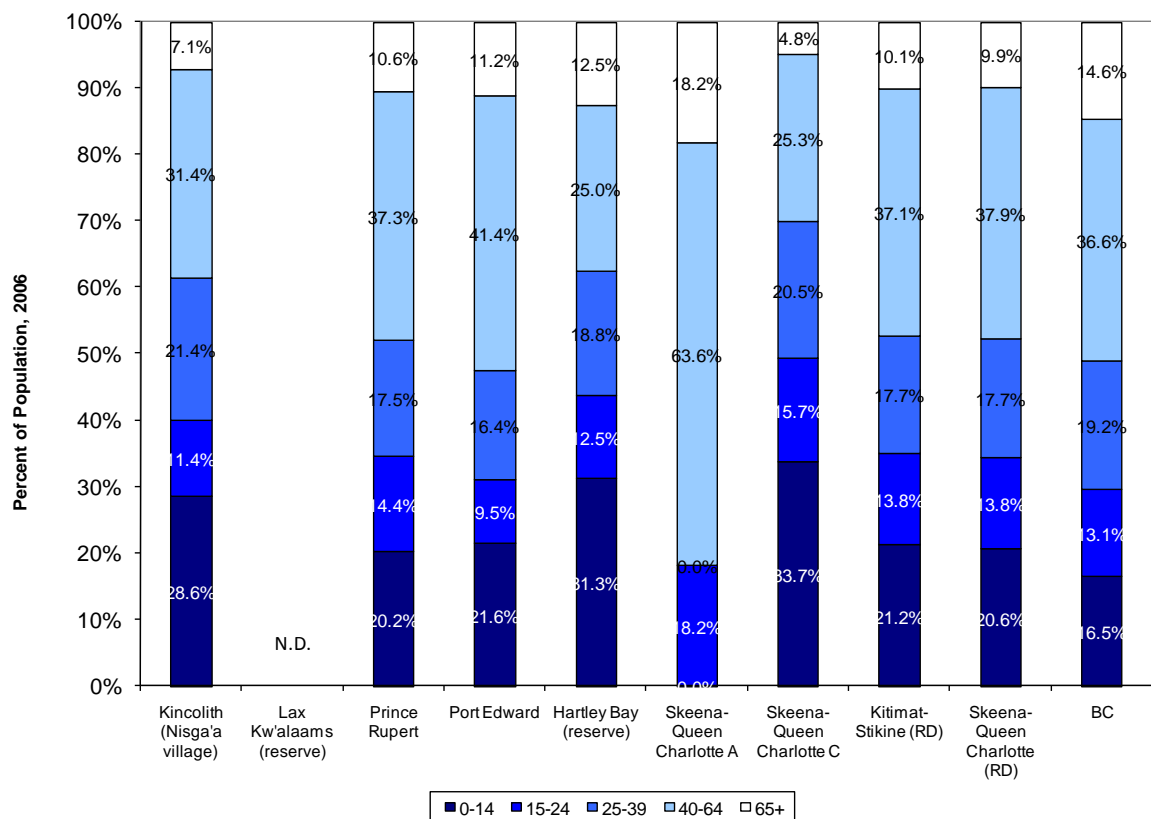
Note: N.D. = no data (data suppressed due to small sample size)

North Coast

As shown in Figure 7, the populations in the North Coast communities and jurisdictions were generally younger, with only Skeena – Queen Charlotte A and Port Edward having more than half their populations over the age of 40 years (82% and 53%, respectively). In Skeena – Queen Charlotte A (which includes Metlakatla), the only age group represented under 40 years of age was the 15 to 24 year olds, which comprised the remaining 18% of the community. The under 14 year age group made up at least 20% of all the communities and jurisdictions studied except for the Skeena – Queen Charlotte A. This age group had the largest portion of the populations in Skeena – Queen Charlotte C, which includes Kitkatla (34%) and Hartley Bay (31%). The two jurisdictions had the majority of their populations under the age of 39 years (71% and 63%, respectively). Data was not available for Lax Kw'alaams.

Similarly to the Central Coast, the trends in age demographics in the Regional Districts of the North Coast reflect an aging population. The 40 to 64 year age group comprised 37% and 38% of the populations in Kitimat-Stikine (RD) and Skeena-Queen Charlotte (RD), respectively, while approximately half the population (52%) was distributed between the age groups under 40 years.

Figure 7. Demographic Breakdown by Age, North Coast Communities, 2006



Source: Statistics Canada Census of Population

N.D. = no data (data suppressed due to small sample size)

Since 2001, the Central Coast communities have experienced significant increases in the proportion of their populations between 40 to 64 years of age, and smaller increases in the proportions over 65 years of age. There have been corresponding decreases in the 25 to 39 year

age group, and to a lesser extent in the age groups under 25 years.⁸ In the North Coast, the trend is harder to pinpoint. Some communities experienced significant increases in their older age groups between 2001 and 2006, and others experienced large increases in their youth populations.⁹ This suggests that conditions vary from community to community, and trends are not necessarily driven by region wide factors.

Overall, Aboriginal populations have grown in the period between 1996 and 2006. As previously mentioned, demographic factors such as birthrates play a role in this growth. At the same time, more individuals are identifying themselves as an Aboriginal person and the number of incompletely enumerated Indian reserves has decreased since 1996.¹⁰

What are the limitations of the data?

Data was not available for all coast area communities, such as Bella Coola, Kingcome (reserve), and Lax Kw'aalams, or not consistently available for all census years. The data for these communities was likely suppressed due to the small sample size, though the statistics for these communities are reflected in the data collected at the Regional District level.

⁸ Statistic Canada. 2001 Community Profiles.

⁹ Ibid.

¹⁰ *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census*. The Daily, January 15, 2008. <http://www.statcan.ca/Daily/English/080115/d080115a.htm> (accessed July 2008).

SUMMARY**Status**

There has been net migration out of the Regional Districts from which the areas are comprised. The North Coast regions have experienced significant movement of people away over the last twelve years, although the number of people migrating annually has been decreasing steadily in recent years. Movement of people away from the Central Coast has been less significant (i.e., fewer numbers of out-migrants) and more consistent (i.e., less fluctuation from year to year). Overall, the net migration from both areas is higher than the natural increase in population therefore there is an overall decline in the population.

Trend

In recent years, the areas have experienced minimal fluctuations in migration and decreasing rates of turnover. Given that migration is indicative of local conditions and that people tend to move to areas where there are economic opportunities, the migration patterns in the Plans Areas may point to increasing economic opportunities in these regions.

Outlook

Population turnover rates may be stabilized through increased and sustained economic development programs in the Central and North Coast regions. Given the relatively youthful population in these regions (see POP-2 indicator), programs of this nature may present a particular opportunity now and in the future.

What is Being Measured?

This indicator provides a measure of population change and the direction of movement (in-migration and out-migration) in the Regional District in the areas.

Why is this Indicator Important?

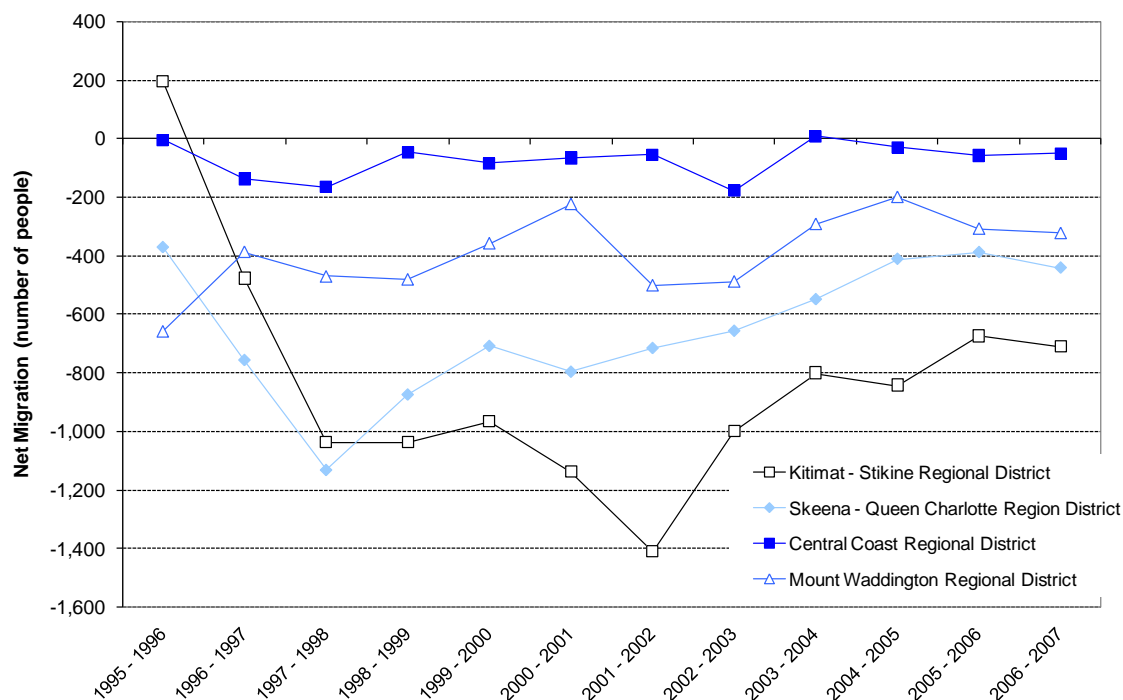
The rate of population turnover reflects the number of people moving into or out of an area on an annual basis. Generally speaking, this indicator reflects the capacity of the people living in a particular area to have their needs met within that particular area. The more people moving into an area is indicative of the area being a desirable place in which to live with sufficient employment opportunities to make a living. The more people moving out of an area is indicative of a less desirable place in which to live or of a lack of economic opportunities.

What is happening?

As shown in Figure 8, there has been general out-migration from the Regional Districts comprising the areas over the 12 year period between 1995 and 2007. The Central Coast Regional District had the most consistent changes in population, ranging between losses of 179 people to gains of 8 people. Migration from the Mount Waddington Regional District fluctuated between 500 to 200 people year to year, with the exception of 1995/1996 when 658 people left in one year. Migration from North Coast regions was more significant, with year to year losses in the Skeena-Queen Charlotte Regional District increasing from 371 people in 1995/1996 to 1133 people in 1997/1998, before steadily decreasing to 411 people over the following decade. The Kitimat – Stikine Regional District had 194 people move into the area in 1995/1996 before significant migration of 478 people out of the region the following year. The movement of people

away from the Kitimat – Stikine Region continued to increase until reaching a one year loss of 1,411 people in 2001/2002. Since then, migration out of the region has steadily decreased to an annual loss of 711 people in 2006/2007.

Figure 8. Population Turnover per Year, 1995 – 2007



Source: BC Stats British Columbia Regional District Migration Components

A 2006 BC Stats report provides information on migration patterns in Northern British Columbia, which is defined as the northernmost development regions (DR) of BC. Included in this area are the Cariboo DR, the North Coast DR, Nechako DR and the Northeast DR. Statistics indicate that, compared to Southern BC, the North has a higher proportion of migrants from within its existing population. This means that people move from one Regional District in the North to another Regional District in the North (i.e. Northern BC residents tend to stay in the North), which may help to explain the minimal fluctuations in migration over the period from 1995 – 2007.

The migration away from the areas may be indicative of local conditions and economic opportunities. People tend to move to areas with heightened economic activity or away from areas where the economy is more cyclical in nature, such as in resource-based communities. Access to higher levels of education may also be a driver for migration to or from a region.

What are the limitations of the data?

Data is available only at the Regional District level, covering a significantly larger area and a number of communities outside the areas. Due to a lack of migration statistics for the communities in the areas, detailed analysis on the rate of population change at the community level is impossible. As many different factors play a role in migration (e.g., employment, education, access to services, etc), further explanation of the reasons for population turnover at the Regional District level, would require a more detailed analysis of statistics related to employment, wages and income, access to resources, and education, to name a few.

ECONOMICS

Economic indicators, such as those related to access to resources, employment, wages and income, allow for the analysis of economic performance within a geographic area. While historical trends may be derived from these indicators, their utility in economic forecasting depends as much on the user's knowledge of their limitations as on the indicators themselves. A greater understanding of a population's economic performance is gained when indicators are cross-referenced (i.e. income with educational attainment, and labour force with the age structure of a population).

Employment

EMPL-1: Labour force a) by employment sector, b) by age cohort, c) by occupation

SUMMARY

Status

Central Coast

In 2008, the government sector was the largest employer for the Nuxalk, Heiltsuk and Wuikinuxv Nations, (29%, 25% and 38% of the labour force, respectively). The Health and Education sector predominates as an employer in several of the communities, including Nuxalk (20%), Heiltsuk (26%), Kitasoo (19%) and Gwa'sala 'Nakwaxda'xw (33%). The Fisheries sector employs the majority of the Kitasoo Nation living on reserves (41% of the labour force).

In terms of the age distribution of the labour force, community members between 15-24 years make up the largest age group for the Nuxalk, Heiltsuk and Kitasoo Nations living on reserve, (31%, 28% and 39% of the labour force respectively). These communities also have the majority of their labour force population under 45 years (74% for the Nuxalk; 66% for the Heiltsuk, and 80% for the Kitasoo, respectively).

The labour force distribution by occupation varied between each community. Occupations in business, finance and administration are employing the largest proportion of the labour force in all of the reported communities in the Central Coast (36% for Nuxalk, 41% Heiltsuk 34% for Kitasoo, and 39% Wuikinuxv, respectively). Occupations in social science, education, government and religion are employing the second largest proportion of the labour force in most of the reported communities in the Central Coast (16% for Nuxalk, 19% Heiltsuk, 21% for Kitasoo, and 15% Wuikinuxv, respectively).

North Coast

The Government sector employs a large proportion of the labour force (over 19%) in all communities except Prince Rupert. The Fisheries sector is also a predominant employer in several of the communities, including Lax Kw'alaams (30%), Metlakatla (22%), Kitkatla (17%) and Hartley Bay (16%).

Overall, labour force populations are fairly evenly distributed between age groups. However, there are fewer community members in the 15-24 age group than in other age groups. This is an indication that youth in these communities are living elsewhere. The majority of the labour force in all communities, except Metlakatla, is under 45 years (57% in Kinsolth and Prince Rupert, 61% in Lax Kw'alaams, 45% in Metlakatla, 63% in Kitkatla and Hartley Bay, 51% in Port Edward, respectively).

The labour force distribution by occupation varied between each community. Occupations in sales and service are predominant in Prince Rupert, Port Edward and Metlakatla (26%, 20% and 27%, respectively). Occupations that are unique to primary industry, such as fisherman, and fish

farm technician are dominant in Metlakatla, Kitkatla and Hartley Bay (21%, 27% and 27%, respectively).

Trend

The data for this indicator is largely based on the results of a community survey that was conducted for the first time in 2008, making 2008 (a proxy for 2006) the baseline year. Future reports will be able to indicate the trends over time in the labour force, assuming the community survey is repeated.

Outlook

A resilient economy is based on a diverse economy that employs the local population across a variety of industry sectors. People of all working ages are able to find work in their community and have the resources available to develop the skills for different types of jobs.

In the Central Coast, recent efforts have been made to expand the fisheries and forestry sectors. Pilot projects are underway for shellfish farms and low-impact logging. A log export licence was issued to the Heiltsuk First Nation to help establish a log sort north of Bella Bella that will enable small-scale commercial logging.¹¹

In the North Coast, there are more large scale construction projects, which are expanding the Technical and Trades sectors. The development of the Port of Prince Rupert will likely create the most jobs, with predictions for 1,000 new jobs per year until 2010.¹²

What is Being Measured?

The labour force includes all community members *residing in the community* between the ages of 15 and 64 years¹³. This indicator is comprised of three measures of the labour force. The following outlines the components that are measured in this indicator:

a) Labour Force, by employment sector

This indicator measures the percentage of employed people that are working in each sector as an indication of the employment diversity in the region. The sectors are defined using the North American Industry Classification System (2002) and include the following:

- Fisheries
- Forestry
- Construction & Manufacturing
- Transportation
- Business Services
- Finance, insurance or real estate
- Health & Education
- Government
- Other

¹¹ Fletcher, Tom. 2007. "Time ripe for B.C.'s Natives to end their dance with dependency." Cowichan News Leader Pictorial - February 17, 2007.

¹² Welcome BC – North Coast Employment. www.welcomebc.ca/en/regions/north_coast/employment.html (Accessed January 2009).

¹³ Community members living both on and off reserve in Metlakatla, Kitkatla and Hartley Bay are included in the data as well.

b) Labour Force, by age group

This indicator shows the distribution of the labour force by the following age groups:

- 15-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years

c) Percentage of the labour force, by occupation

This indicator measures the percentage of employed people according to their occupations as an indication of the skill diversity in the region. The occupations are defined using the North American Industry Classification System (2002) and include the following:

- Management
- Business/Finance/Administration
- Natural & Applied Science
- Health
- Social Science, Education, Government, Religion
- Art, Culture, Recreation
- Sales & Service
- Trades & Transport
- Unique Primary Industry
- Unique Processing/Manufacturing

Please note that the reporting areas for the Central Coast in this indicator (and EMPL-2) differ from other indicators in this report. The communities reported in this indicator are an aggregate of the various reserve communities for each of the First Nations in the Central Coast.

Why is this Indicator Important?

This indicator shows the various components that make up the labour force and helps in understanding the underlying economic health of communities.

Understanding which job sectors are employing people, the age distribution of the work force and the types of jobs people have can help when developing employment strategies and in identifying economic vulnerabilities. For example, a predominance of people working in one employment sector could mean the community's economic prosperity is tied to the sector. Alternatively, a well distributed labour force across sectors increases resiliency to economic downturns. By looking at the changing proportions of employment in each sector, and their occupation can reveal how the underlying economic health of the communities is changing and the skill set of the community. The age of the labour force is an important consideration when developing economic strategies to attract and retain people to the area, and focusing on developing particular business sectors that will integrate with the existing economic infrastructure and enhance it.

When tracked over time, this indicator will measure whether communities are increasing the diversity of its labour force.

What is happening?

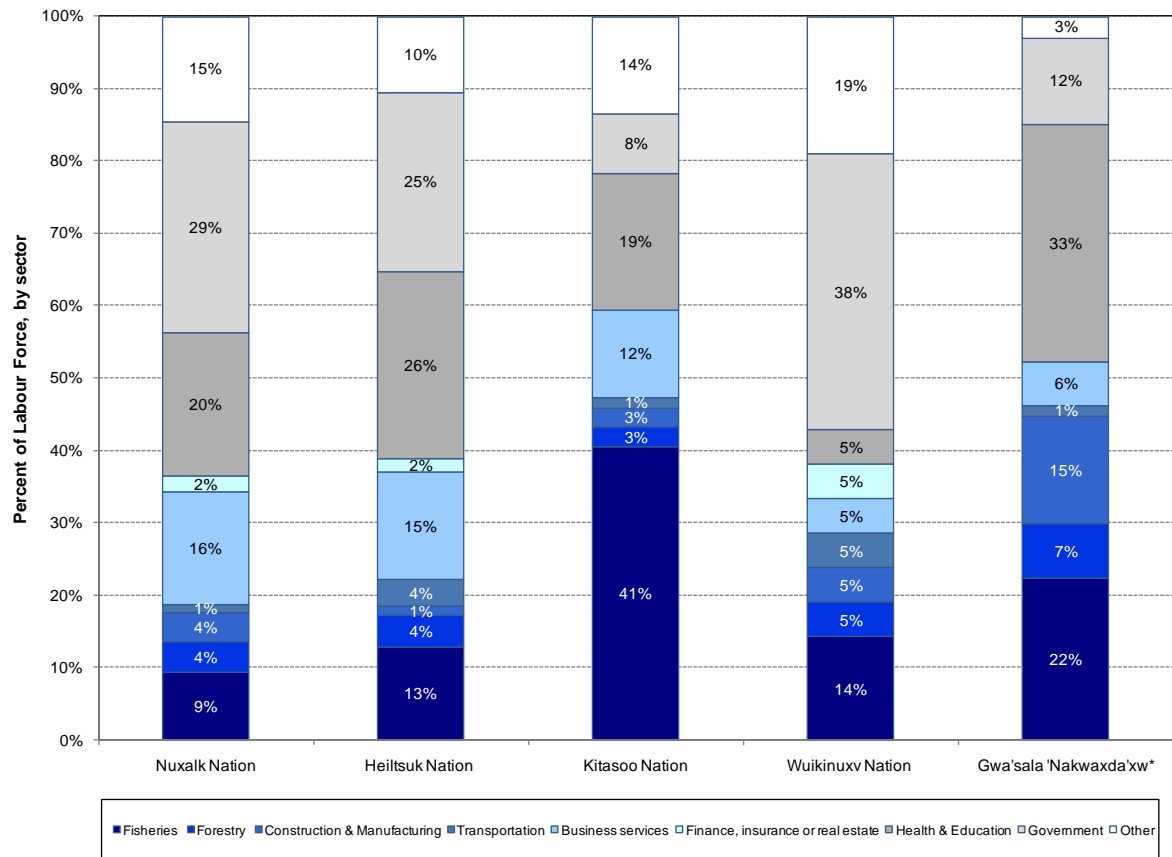
1. *Labour force, by employment sector*

Central Coast

In 2008, the labour force distribution by employment sector varies between each community, as shown in Figure 9. The Government sector is the largest employer for the Nuxalk, Heiltsuk and Wuikinuxv Nations, (29%, 25% and 38% of the labour force, respectively). The Health and Education sector is also a predominant employer in several of the communities, including Nuxalk (20%), Heiltsuk (26%), Kitasoo (19%) and Gwa'sala 'Nakwaxda'xw (33%). The Fisheries sector employs the majority of the Kitasoo Nation living on reserves. They employ 41% of the labour force. The Business Services sector is also another significant employer for the Nuxalk (16%), Heiltsuk (15%) and the Kitasoo (12%). There is also significant employment in other sectors in all communities.¹⁴

¹⁴ Other employment sectors include: Farms (and support activities for farms), Mining and Oil and Gas extraction, Utilities, Wholesale Trade, Information and Cultural Industries, Professional, Scientific and Technical Services, Management of Companies and Enterprises, Administrative and Support, Waste Management and Remediation Services, Arts, Entertainment and Recreation, Postal Service, Couriers and Messengers, Warehousing and Storage.

Figure 9. Labour Force, by employment sector, Central Coast communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

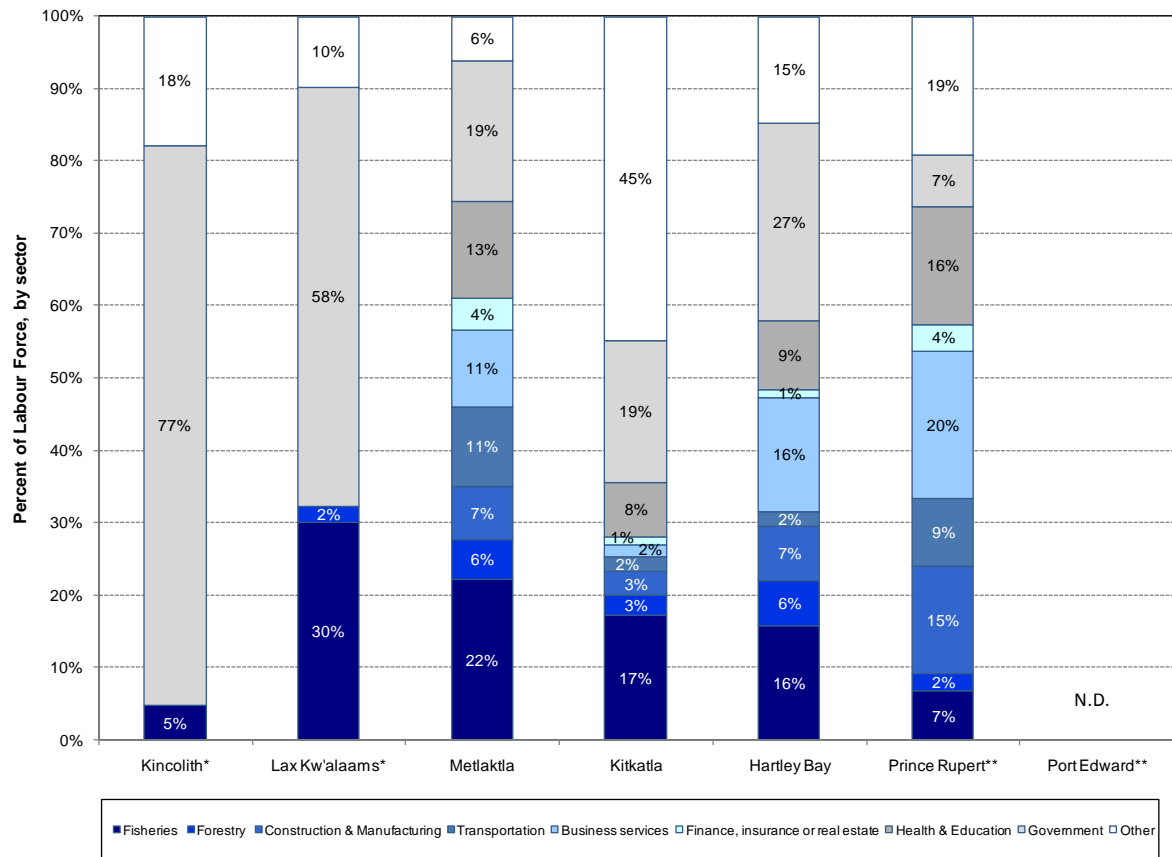
b) Communities denoted with a *: 2008 Gwa'sala 'Nakwaxda'xw Proxy Survey

North Coast

The labour force distribution by employment sector varied between each community. As shown in Figure 9, the Government sector employs a large proportion of the labour force (over 19%) in all communities except Prince Rupert. Employment in this sector is highest in Kincolith and Lax Kw'alaams communities (77% and 58%, respectively). The Fisheries sector is also a predominant employer in several of the communities, including Lax Kw'alaams (30%), Metlakatla (22%), Kitkatla (17%) and Hartley Bay (16%). Business Services, Construction & Manufacturing and Health & Government sectors employ a significant portion of the labour force in Prince Rupert, employing 20%, 15% and 16% of the labour force, respectively. There is also significant employment in other sectors in all communities.¹⁵

¹⁵ Other employment sectors include: Farms (and support activities for farms), Mining and Oil and Gas extraction, Utilities, Wholesale Trade, Information and Cultural Industries, Professional, Scientific and Technical Services, Management of Companies and Enterprises, Administrative and Support, Waste Management and Remediation Services, Arts, Entertainment and Recreation, Postal Service, Couriers and Messengers, Warehousing and Storage.

Figure 10. Labour Force, by employment sector, North Coast communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

b) Communities denoted with a *: 2006 SNDS Labour Market Survey

c) Communities denoted with a **: 2006 Census, Statistics Canada.

Notes: Data for this indicator were not available for Port Edward.

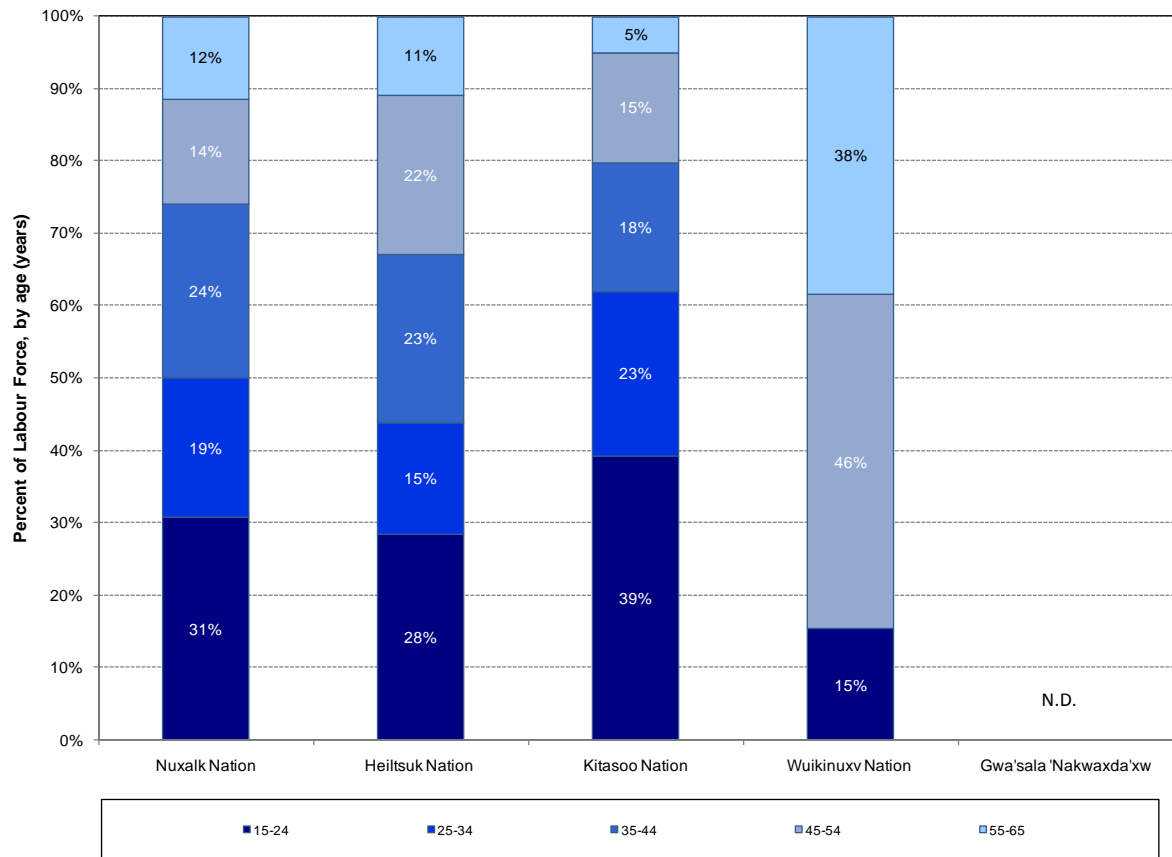
The employment sectors reported the SNDS Census data (data for Kincolith and Lax Kw'alaams) did not fully overlap with the defined employment sectors, as a result several sectors report zero employment but are likely included in the 'other' sector category. completely with . in Since data use

2. Labour Force, by age

Central Coast

The age distribution of the labour force is shown in Figure 11 below. Community members between 15-24 years make up the largest age group for the Nuxalk, Heiltsuk and Kitasoo Nations living on reserve, (31%, 28% and 39% of the labour force respectively). These communities also have the majority of their labour force population under 45 years (74% for the Nuxalk; 66% for the Heiltsuk, and 80% for the Kitasoo, respectively). In contrast, the majority of the labour force population for the Wuikinuxv Nation (living on reserve) are between the ages of 45 and 64 years.

Figure 11. Labour Force, by age, Central Coast communities



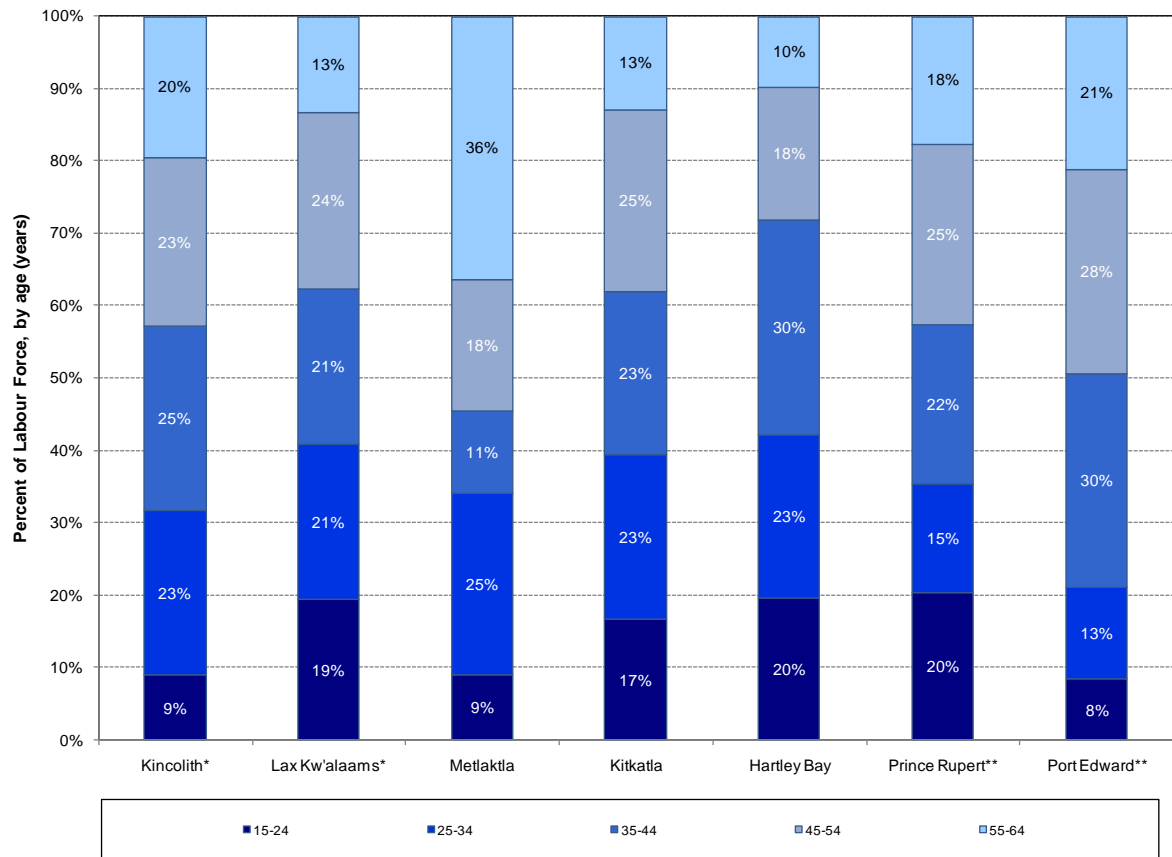
Source: 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

Notes: Data for this indicator were not available for Gwa'sala 'Nakwaxda'xw.

North Coast

The age distribution of the labour force is shown in Figure 12 below. Overall, labour force populations are fairly evenly distributed between age groups; however, there are fewer community members in the 15-24 age group. Labour force population for this age group are less than 10% in Kincolith, Metlakatla and Port Edward. This is an indication that youth in these communities are living elsewhere. In all communities, except Metlakatla, the majority of their labour force population is under 45 years (57% in Kincolith and Prince Rupert, 61% in Lax Kw'alaams, 45% in Metlakatla, 63% in Kitkatla and Hartley Bay, 51% in Port Edward, respectively).

Figure 12. Labour Force, by age, North Coast communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

b) Communities denoted with a *: 2006 SNDS Labour Market Survey

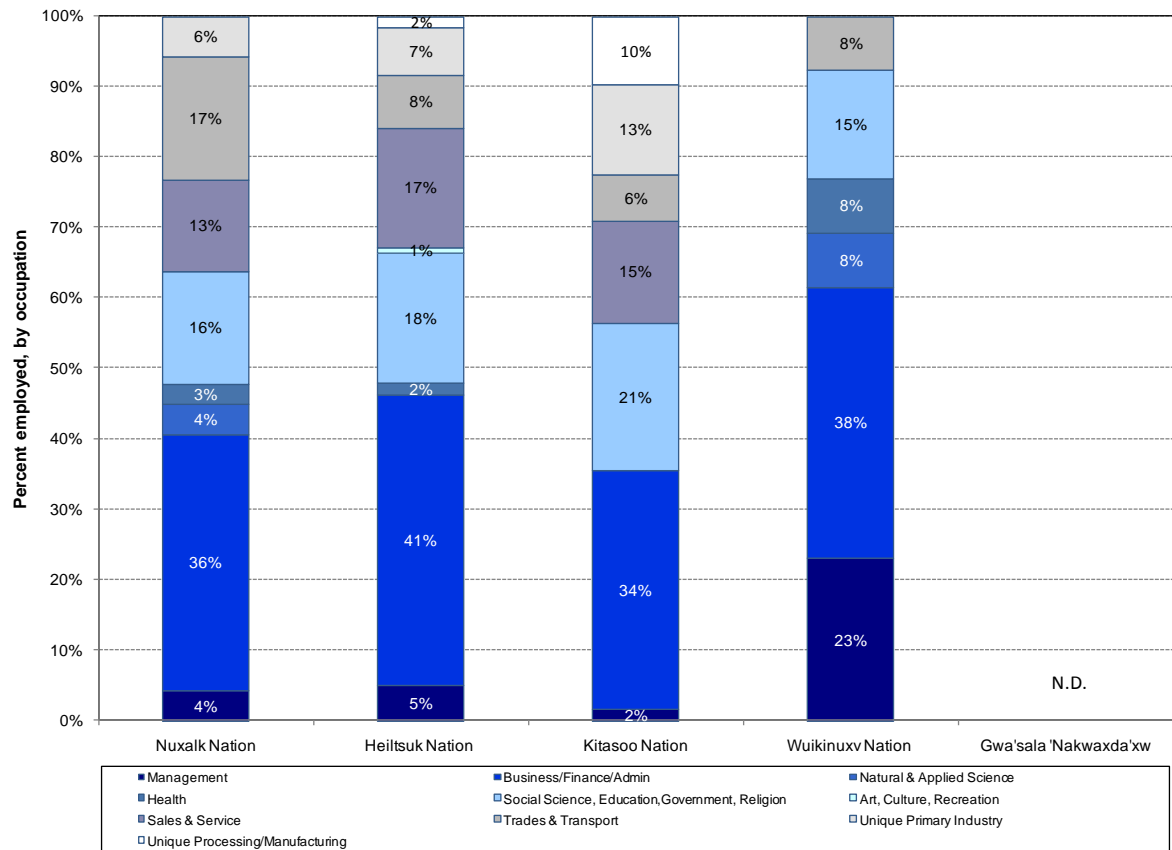
c) Communities denoted with a **: 2006 Census, Statistics Canada.

3. Labour Force, by occupation

Central Coast

In 2008, the labour force distribution by occupation varied between each community, as shown in Figure 13. Occupations in business, finance and administration are employing the largest proportion of the labour force in all of the reported communities in the Central Coast (36% for Nuxalk, 41% Heiltsuk 34% for Kitasoo, and 39% Wuikinuxv, respectively). Occupations in social science, education, government and religion are employing the second largest proportion of the labour force in most of the reported communities in the Central Coast (16% for Nuxalk, 19% Heiltsuk 21% for Kitasoo, and 15% Wuikinuxv, respectively). Other occupations that are common are: management positions in Wuikinuxv communities (23% of the labour force); Trades and Transport jobs in Nuxalk communities (17% of the labour force) and Sales and Service jobs in Heiltsuk communities (17% of the labour force).

Figure 13. Labour Force, by occupation, Central Coast communities



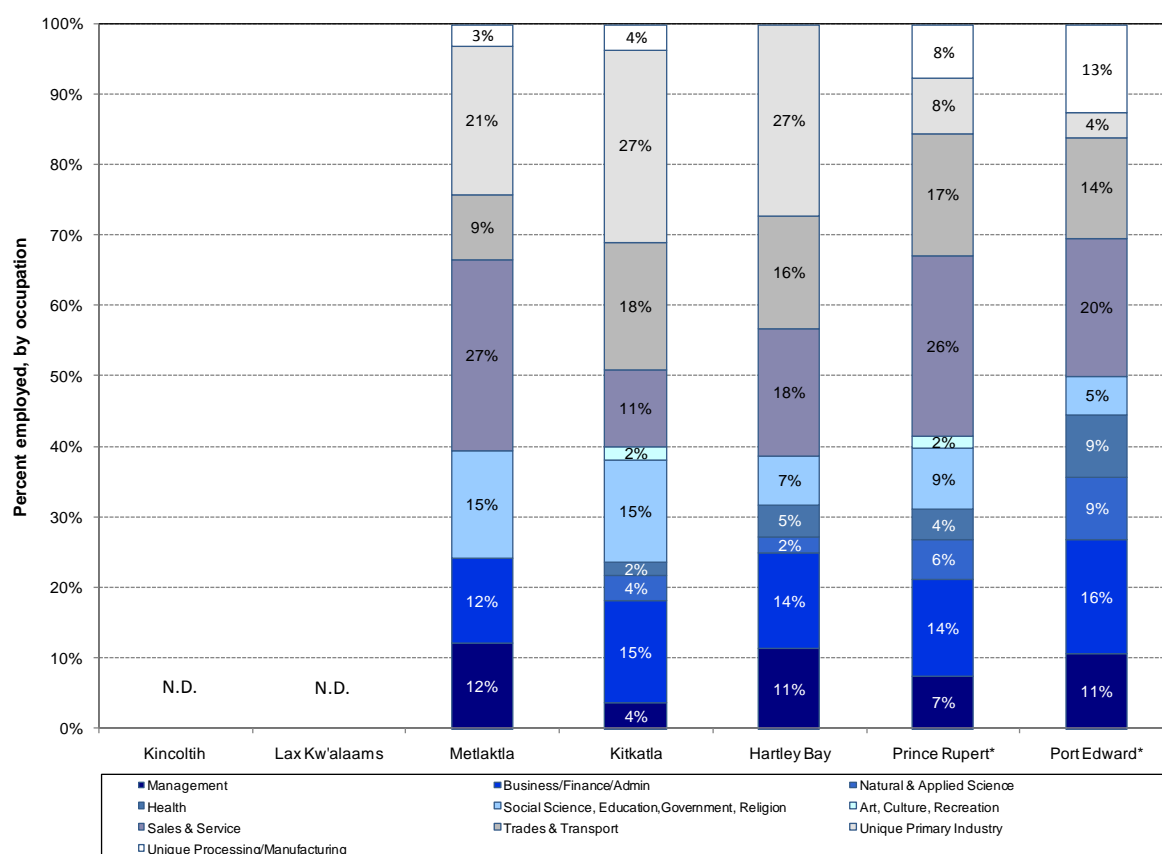
Source: 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

Note: Data for this indicator were not available for Gwa'sala 'Nakwaxda'xw.

North Coast

The labour force distribution by occupation varied between each community, as shown in Figure 14. Occupations in sales and service are predominant in Prince Rupert, Port Edward and Metlakatla (26%, 20% and 27%, respectively). Occupations that are unique to primary industry, such as fisherman, and fish farm technician are dominant in Metlakatla, Kitkatla and Hartley Bay (21%, 27% and 27%, respectively). Occupations in business, finance and administration are reported in similar proportions across all of the reported communities in the North Coast (12% in Metlakatla, 15% in Kitkatla, 14% in Hartley Bay, 14% in Prince Rupert and 16% in Port Edward, respectively).

Figure 14. Labour Force, by occupation, North Coast communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

b) Communities denoted with a *: 2006 Census, Statistics Canada

Note: Data for this indicator were not available for Kincolith or Lax Kw'alaams.

What are the limitations of the data?

There are three limitations to the data used for this indicator that are important to note:

1. Challenges in streamlining the employment sectors and occupations

The majority of the data were taken from the results of the 2008 Community Survey, conducted for Turning Point for the Integrated Marine Use Plan in the Pacific North Coast Integrated Management Area. This survey was designed without this report's indicators in mind. As a result, assumptions about the categorization of the responses for employment sectors and occupations were made in order to fit the results into the North American Industry Classifications (NAICs) for employment sectors and occupations. In the future, if the community survey is to be repeated, it is recommended that the NAICs classifications are used. This will allow responses to be compared not only to Prince Rupert and Port Edward but other communities in the province.

2. Data gaps resulting from using the proxy survey method

An effort was made to collect employment data in the South Central Coast using a proxy survey method. This method was based on the SNDS Labour Market Census survey method. Data was

only collected for employment by sector and not the other components of this indicator. In the future, it is recommended that the Community Survey tool be expanded to include South Central Coast communities so that the results are statistically significant and based on a survey that samples individual community members.

3. Use of multiple data sources

The 2008 Community Survey did not survey members of Kincolith, Lax Kw'alaams, Prince Rupert or Port Edward. To fill this gap, data for these communities were taken from the 2006 SNDS Labour Market Census and the 2006 Census conducted by Statistics Canada. In the future, to improve comparability between communities, one survey method should be used. It is therefore recommended that the 2008 Community Survey be expanded to include representative communities across both the North and Central Coast Areas.

SUMMARY**Status**

In 2008, the employment rates in Central Coast communities ranged from 92% employment in Wuikinuxv to 46% employment in Gwa'sala 'Nakwaxda'xw communities. The majority of people in the Central Coast who are not employed are not actively seeking employment, except in Kitasoo communities where 25% of the labour force is seeking employment.

In North Coast communities, the employment rate ranged from 68% employment in Hartley Bay to 31% employment in Lax Kw'alaams. The proportion of the labour force actively seeking employment is over 40% in Kincolith, Lax Kw'alaams, and Kitkatla.

Trend

The data for this indicator is largely based on the results of a community survey that was conducted for the first time in 2008, making 2008 (a proxy for 2006) the baseline year. Future reports will indicate the trends over time in employment, assuming the community survey is repeated.

Outlook

One of the major challenges in small communities is creating an increase in job numbers. An increase in the number of jobs would not only boost employment rate numbers but also have the potential of addressing the issue of under-employment. While fishing and forestry-related activities have been declining in economic importance, there have been significant investments related to transportation, tourism, mining and energy.¹⁶ These investments, if successful, will demonstrate increases in the employment rate.

What is Being Measured?

This indicator reports the employment rate. Employment rates are based on the number of people reporting they are employed as a proportion of the total labour force (people who are between the ages of 15 and 64 years).

A person is considered employed if they fall under the following categories:

- Employed, full time (30 or more hours per week)
- Employed part-time (less than 30 hours per week)
- Self-employed
- Seasonally employed

A person is considered unemployed but active in the labour force, if they fall under the following categories:

- On temporary lay-off but will be returning to work
- Unemployed but currently looking for work

Not all people included in the total labour force are active in the labour force. For the purposes of this indicator, several employment statuses are not considered as being active in the labour force. These include people who reported their employment as:

- Not employed and not looking for work
- On disability or sick leave

¹⁶ Ference Weicker & Company. 2008. Social and Economic Assessment and Analysis of First Nation Communities and Territorial Natural Resources for Integrated Marine Use Planning in the Pacific North Coast Integrated Management Area – Detailed Work Plan. p.16.

- On maternity leave or parental leave
- Attending school full-time
- Retired
- Other (that do not fit into the definition of employed)
- Don't know/no response

Why is this Indicator Important?

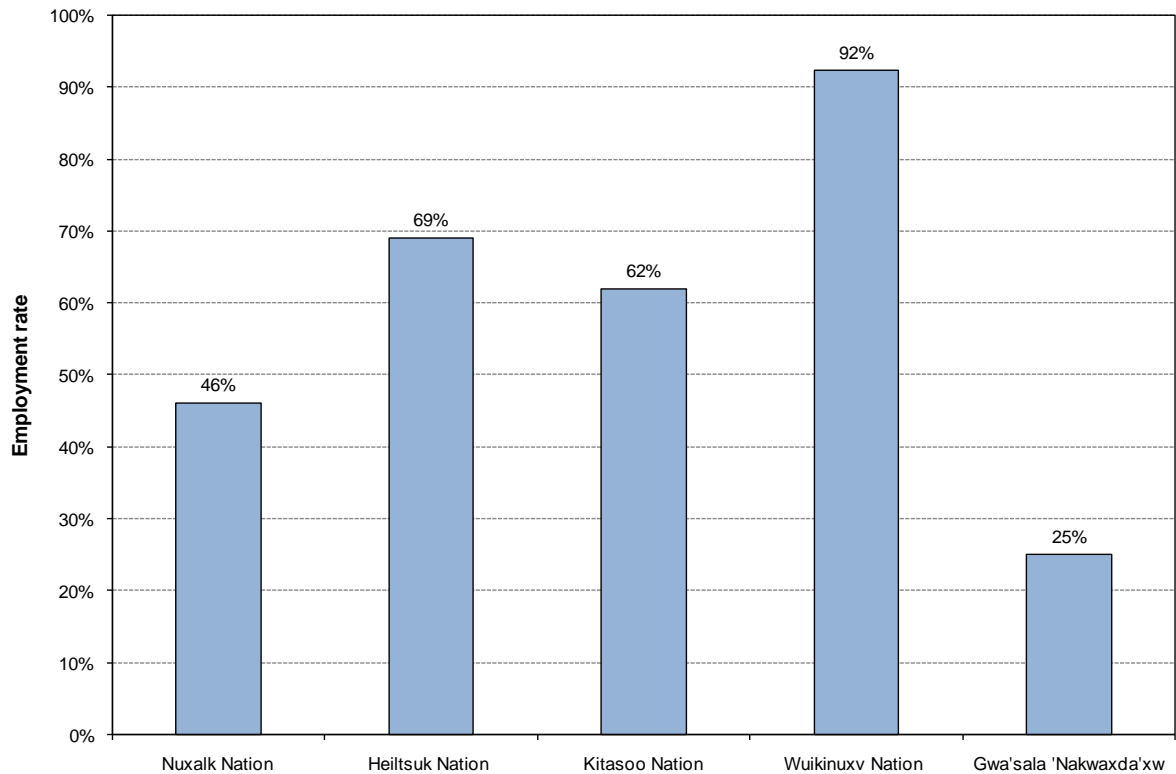
The employment rate within a community is a measure of how many people currently have jobs as a proportion of all those in the working age range (15-64 years). Since employment is the way most people earn a living, the employment rate is a measure of how the economy is doing in providing opportunities to support community members and their families. A high employment rate is a strong indication of a healthy economy.

What is happening?

Central Coast

In 2008, the employment rates in Central Coast communities ranged from 92% employment in Wuikinuxv to 46% employment in Gwa'sala 'Nakwaxda'xw communities. Figure 15 illustrates the employment rates in Central Coast communities. Not all people who are unemployed are actively seeking work. The proportion of unemployed people actively seeking work is as follows: 17% in Nuxalk communities; 13% in Heiltsuk communities; 25% in Kitasoo communities; and 8% in Wuikinuxv. What these figures indicate is that there are a low percentage of people looking for work; the remainder of unemployed people are not actively looking for work.

Figure 15. Employment Rates in Central Coast Communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area

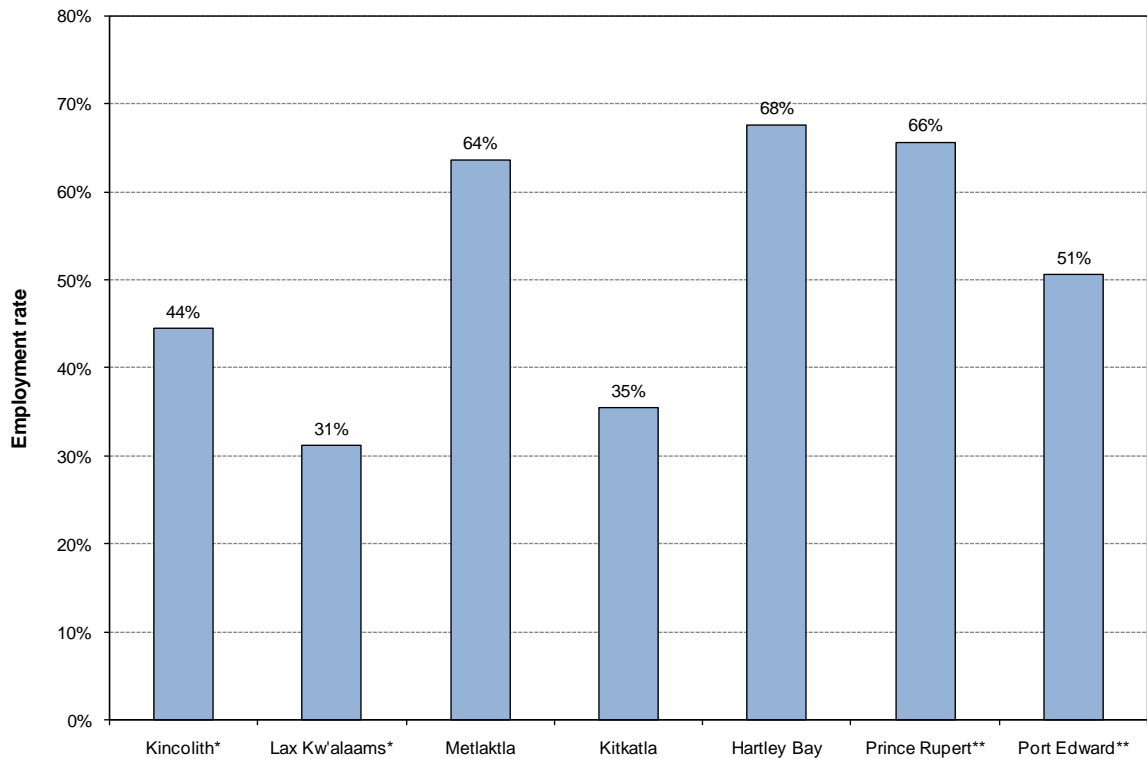
b) Gwa'sala 'Nakwaxda'xw data are based on the 2008 Gwa'sala 'Nakwaxda'xw Proxy Survey.

Note: Total Labour Force data for Gwa'sala 'Nakwaxda'xw was not available through the Proxy Survey. The total labour force was estimated based on 2001 INAC Workforce data. In 2001, 60% of the population was included in the Labour Force Population. 60% of the 2009 INAC data was used as an estimate of the current labour force population.

North Coast

The employment rates in North Coast communities ranged from 68% employment in Hartley Bay to 31% employment in Lax Kw'alaams. Figure 16 illustrates the employment rates in North Coast communities. Not all people who are unemployed are actively seeking work. The proportion of unemployed people actively seeking work is as follows: 44% in Kincolith; 73% in Lax Kw'alaams; 14% in Metlakatla; 48% in Kitkatla; 18% in Hartley Bay; 10% in Prince Rupert; and 14% in Port Edward. What these figures indicate is that there are a low percentage of people looking for work; the remainder of unemployed people are not actively looking for work.

Figure 16. Employment Rates in North Coast Communities



Sources: a) 2008 Community Survey, Turning Point – Social and Economic Assessment and Analysis for the Integrated Marine Use Plan in Pacific North Coast Integrated Management Area
 b) Communities denoted with a *: 2006 SNDS Labour Market Survey
 c) Communities denoted with a **: 2006 Census, Statistics Canada.

What are the limitations of the data?

What is not captured in the employment rate is the issue of under employment, where people are classified as employed but are working very little. A more in depth analysis on employment would explain how many people are employed full-time or are under employed.

Another limitation to this indicator is that, like EMPL-1, this indicator uses multiple data sources. The 2008 Community Survey did not survey members of Kincolith, Lax Kw'alaams, Prince Rupert or Port Edward. To fill this gap, data for these communities were taken from the 2006 SNDS Labour Market Census and the 2006 Census conducted by Statistics Canada. In the future, to improve comparability between communities, one survey method should be used. It is therefore recommended that the 2008 Community Survey be expanded to include representative communities across both the North and Central Coast Areas.

SUMMARY

Status

There are currently 1.09 and 1.22 jobs per thousand cubic metres of timber harvested in the Central and North Coast, respectively. Over time, these numbers will track the amount of employment generated per unit harvested to indicate the amount of value-added industry being created out of timber harvested in the coast areas. The data is summarized from surveys of forest licensees in the region. Similar surveys have been conducted in the Queen Charlotte Islands and the Sea-to-Sky corridor. For both these regions there are 1.18 jobs per thousand cubic metres of timber harvested, which is a comparable number to the North Coast, but slightly higher than the Central Coast figure.

There are 3,389 and 666 potential jobs in forestry and wood processing in the Central and North Coast, respectively, based on the Annual Allowable Cut (AAC). 82% and 75% of these potential jobs are filled for the North and Central Coasts, based on available employment data. Due to market conditions, harvesting at the full AAC level is not always feasible.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The BC government has committed to increasing the amount of value added activity in the forest industry. As a signatory to the Canadian National Forest Strategy 2003-2008, BC is committed to creating and maintaining policies that "encourage human capacity, investment, productivity, innovation and competitiveness in existing and potential primary and value-added timber industries." As more value is added to products locally, more jobs will be created. Making these improvements is however challenging when facing rising energy costs, a lack of renewed investment, limited access to transportation, skills training and new technologies, and shrinking timber supplies.¹⁷ Canada's next forest strategy: A vision for Canada's Forests – 2008 and beyond is currently being developed to provide a national-level vision and priorities for sustainable forest management, including continuing to encourage innovation and investment in value-added timber industries.

What is Being Measured?

This indicator shows the number of jobs in forestry and primary processing per cubic meter harvested in each coast area and the overall potential for jobs, based on the AAC. The number of jobs is reported from a survey conducted by Pierce Lefebvre Consulting in 2006 that focused on employment in timber harvesting and processing in the central and North Coast of BC.¹⁸ The results of the survey were used to calculate direct employment coefficients averaged annually over a three-year period from 2003 to 2005.

The volume of wood harvested per coast area is also reported from the Lefebvre report for the same years the employment survey was conducted. The estimated volume of wood harvested is based on a combination of data from the Ministry of Forest Resources' (MoFR) Harvest Billing System and survey results. Similarly, the AAC for each coast area were estimated in the Lefebvre report and used in this indicator.

¹⁷ British Columbia Value-Added Wood Policies: A Case Study. Sierra Club BC, June 2006.

¹⁸ BC Central Coast and North Coast Timber Harvesting and Processing Employment Survey Final Report. Pierce Lefebvre Consulting, August 2006. Presented to BC Ministry of Agriculture and Lands.

Why is this Indicator Important?

The purpose of this indicator is to not only measure employment in the forestry sector but also track the amount of value added forestry activities, like wood processing, resulting from logging in the North and Central Coasts. By signing the Canadian National Forest Strategy 2003-2008 the Government of BC has committed to promoting a healthier forest industry with increased value added manufacturing. This indicator helps monitor this commitment and changes in the local forest industry. Even as volumes of harvest change with fluctuations in the economics of the industry, this indicator will continue to provide insight into how many jobs are created per unit of timber harvested.

There are obvious economic benefits to the province by increasing the amount of employment per unit of natural resource extracted from the land. In addition to increasing employment, there are also opportunities to diversify local economies to be less dependent on a single industry. A more diverse economy will not be as deeply affected during times of economic downturn in the forest sector, as has been experienced over the last several years.

This indicator considers the change in employment generated from coast area timber harvesting both as a total for all workers in BC and as a subtotal for local residents of the coast areas. By tracking the indicator at the coast area level, insight is gained about the amount of value added employment generated locally, which also indicates the level of diversity of employment within the forest sector in the coast areas.

The potential number of jobs in forestry is also estimated, based on the AAC. The difference between the potential numbers and the actual numbers of jobs gives an indication of the lost potential for forestry jobs in the coast areas if the full AAC is being harvested. However, due to market conditions, harvesting at this level is not always feasible.

What is happening?

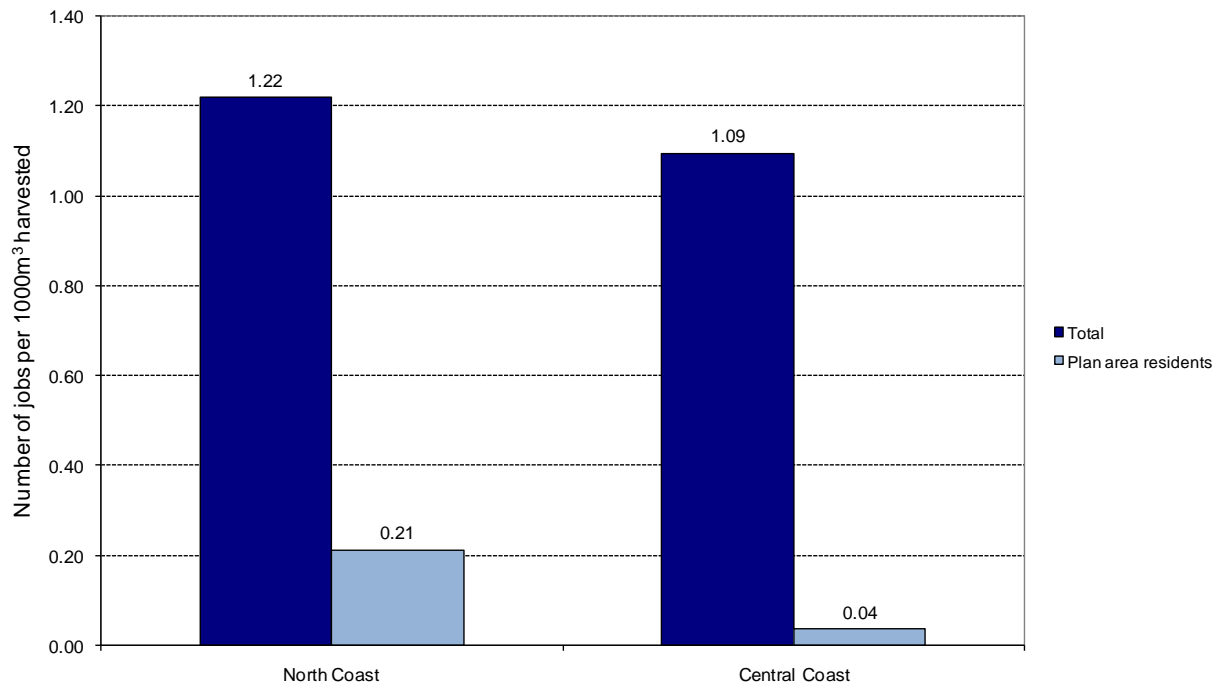
As shown in Figure 17, over a three-year period between 2003 and 2005, there were an average of 1.09 forestry and wood processing jobs per thousand cubic metres harvested in the Central Coast and 1.22 forestry and wood processing jobs per thousand cubic metres harvested in the North Coast. Approximately 17% of North Coast forestry jobs are held by residents, but less than 4% of Central Coast jobs are held by residents. The remaining jobs are held by non-locals. This is likely due to the closer proximity to skilled workers living on Vancouver Island where almost 80% of Central Coast harvesting workers reside.

At this point in time, all of the local employment is in harvesting and silviculture. Almost all of the wood and pulp & paper processing takes place in southern BC, either on Vancouver Island or in the Lower Mainland. The largest challenge in bringing wood processing / value-added production facilities to the Central and North Coast is the economies of scale, since harvesting is not substantial enough on the coast alone. The industry is also currently experiencing rising energy costs, a lack of renewed investment, limited access to transportation, skills training and new technologies as factors limiting potential development on the Coast.

Pierce Lefebvre Consulting has conducted similar studies in the Queen Charlotte Islands and the Sea-to-Sky corridor. The results of both studies indicate that over 3-year averages there are 1.18 jobs per thousand cubic metres of timber harvested. These results are in line with those seen in the Central and North Coasts, though the Central Coast is noticeably lower than the other regions.

This is due to the Central Coast's closer proximity to Vancouver Island where there are established forestry operations around Campbell River and Port McNeill. This equates to easier access to fuel, equipment and other supplies needed to support the forestry industry. In contrast, the remoteness of the north coast areas requires a higher effort to access the wood, and also to transport the wood to market.

Figure 17. Jobs in Forestry per Volume Harvested (3 year average - 2003 to 2005)



Source: Pierce Lefebvre Consulting - BC Central Coast and North Coast Timber Harvesting & Processing Employment Survey Final Report and BC MoFR Harvest Billing System

There are 3,389 and 666 potential jobs in forestry and wood processing in the Central and North Coast, respectively, based on the Annual Allowable Cut (AAC). The difference between these potential numbers and the actual numbers indicates that 82% and 75% of the total potential number of jobs are filled for the North and Central Coasts. The most likely limiting factor for reaching the full potential of jobs in 2006 is that the market conditions for timber were not ideal.

What are the limitations of the data?

Because this indicator is based on survey results, there is no data readily available for comparison in future years without conducting a similar survey (refer to the accompanying Technical Report for details on the methodology used to conduct the survey). Furthermore, because harvest data was collected at the licence level rather than timber mark level, several assumptions were required to produce an estimate for timber harvest in the coast area in order to exclude Vancouver Island harvest from certain licenses and/or management units. In future it is recommended that harvest levels be determined using timber marks for greater accuracy.

Wages and Income

INC-1: Median household income

SUMMARY

Status

The median household income in area communities varied significantly, although households in non-reserve communities generally had higher median household incomes than those in reserve communities. In 2006, median household incomes were \$34,746 in the Central Coast RD and \$49,754 in Mount Waddington RD. In 2006 median household incomes were \$50,441 for the RD of Kitimat-Stikine and \$46,002 for the RD of Skeena-Queen Charlotte.

Trend

Between 2001 and 2006, median household income in area communities varied significantly, ranging from decreases of 24%, to increases of up to 35% in some communities. In BC, the median household income increased by 13% between 2001 and 2006. On average, median household income was between \$10-20,000 higher than those in Coast communities. Prince Rupert however was on par with BC's median household income.

Outlook

To better understand these trends and in an attempt to provide a forecast for this indicator, it is helpful to look at the EDU-1 indicator, level of educational attainment. In communities where the level of education attained is higher, the median household income also tends to be higher. For example, of the Central Coast communities and jurisdictions for which data was available, Central Coast D had the highest median household income in 2006 (\$55,000). At the same time, 35% of the population of Central Coast D (which includes Hagensborg) had achieved a high school education and another 35% had achieved a post-secondary education. Educational attainment levels for the North Coast communities of Prince Rupert and Port Edward are slightly higher than those in Central Coast D and again, the median household incomes are among the highest in the area (according to available data). Given this, it is assumed that median household incomes will increase with the level of education attained in area communities.

What is Being Measured?

This indicator shows the median income of households in the areas. Median household income is the amount which divides the household income distribution into two equal groups, half having income above that amount, and half having income below that amount.

Why is this Indicator Important?

Household income is an indicator of a household's economic well-being or of its ability to meet its needs.¹⁹ The median household income provides a measure of how area residents are able to provide for themselves and is indicative of economic health within the community.

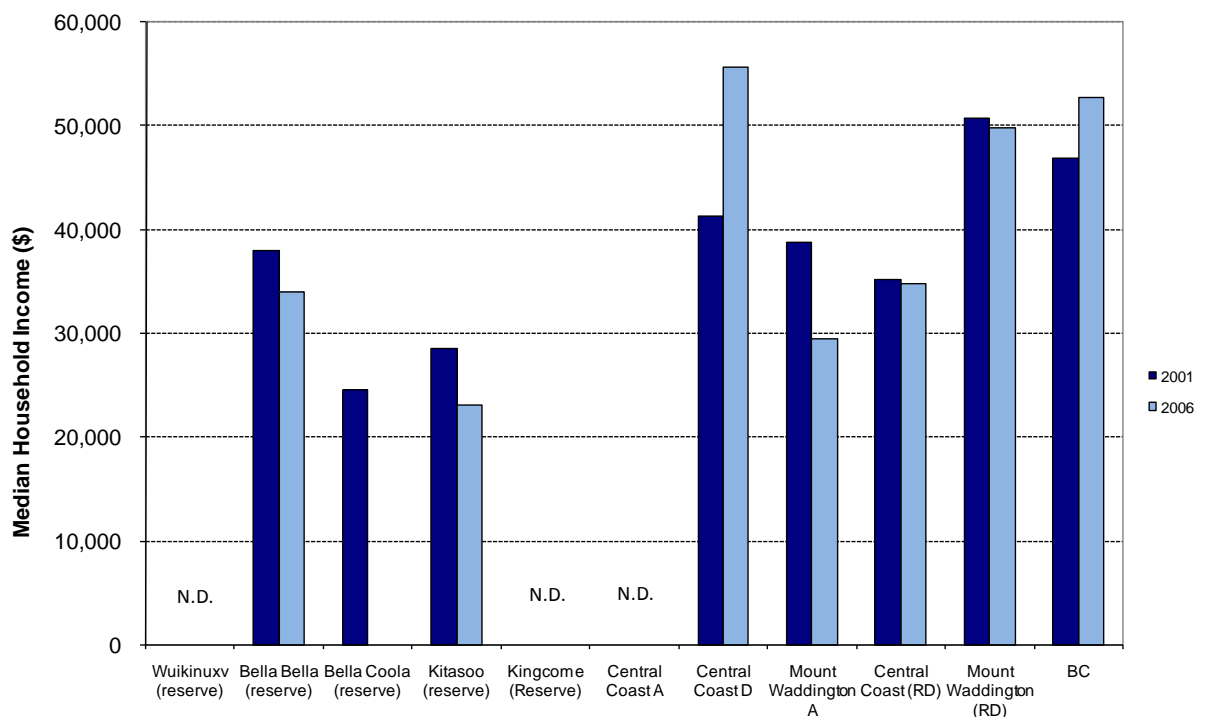
¹⁹ Needs can vary by community – costs related to heating, maintenance and repair, energy consumption, and other attributes vary by remoteness. Also, incomes may not need to be as high to maintain a standard of living when provided and maintained by a Band administration which allows community members to provide for themselves very well on less of an income.

What is happening?

Central Coast

The median household income in area communities varied significantly, although households in non-reserve communities generally had higher median incomes than those in reserve communities. Of the communities in the Central Coast for which data was available (Figure 18), Central Coast D, which includes Hagensborg, had the highest annual median household income at \$55,600 in 2006. This high median household income is likely directly related to the level of education in the community. As shown in the EDU-1 indicator (education attainment), Central Coast D has the highest proportion of residents over the age of 15 with a high school certificate or more (70%). 2006 median household incomes in Bella Bella, Kingcome and Kitasoo were \$33,900, \$29,500 and \$23,100, respectively. Changes in median household income between 2001 and 2006 varied from community to community. Over a five year period, the median household income decreased by 11% in Bella Bella, 19% in Kitasoo and 24% in Kingcome, but increased 35% in Central Coast D.

Figure 18. Median Household Income, Central Coast Communities, 2006



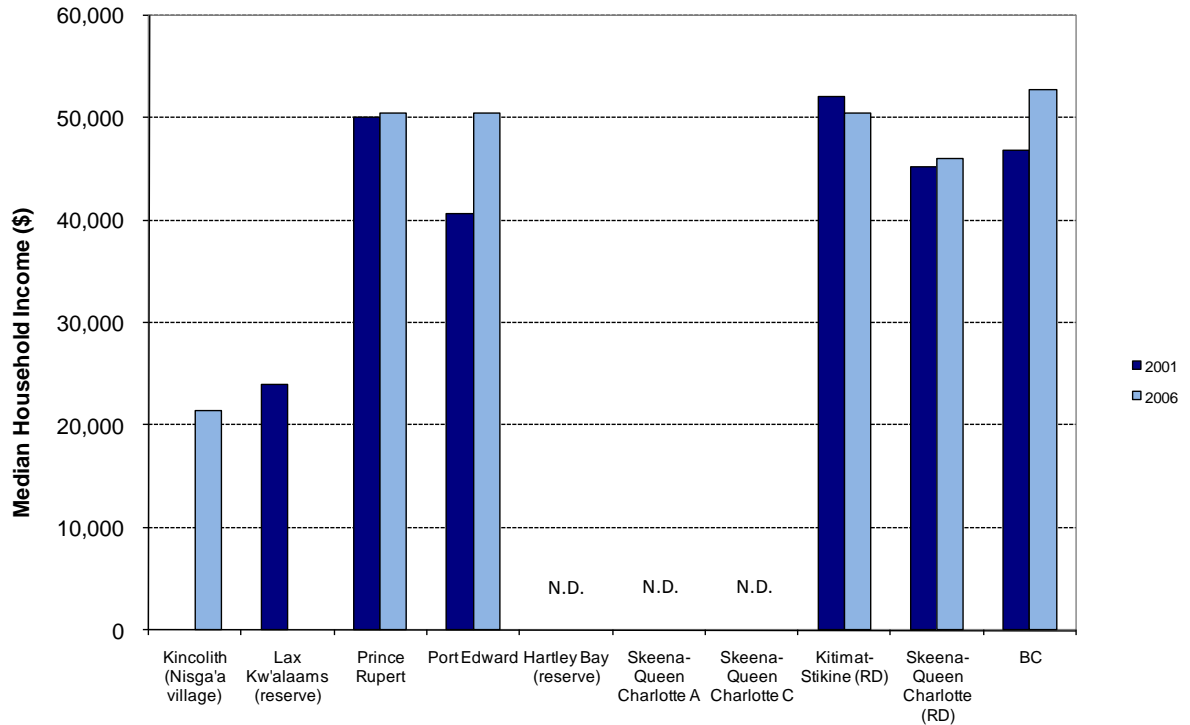
Source: Statistics Canada Census of Population: Community profiles

Note: N.D. = no data (data suppressed due to small sample size)

North Coast

As shown in Figure 19, data for North Coast communities was only available for Prince Rupert, Port Edward and Kincolith. The median household income in the two non-reserve communities was \$50,400 and in Kincolith, \$21,400. The difference between household incomes in these communities can likely be attributed to the fact that larger communities tend to be economic centres for the region, while smaller communities may have limited economic activity. Over the five year period from 2001 to 2006, median household income increased by only 1% in Prince Rupert to \$50,000 but went up by 24% in Port Edward to about the same overall level as Prince Rupert.

Figure 19. Median Household Income, North Coast Communities, 2006



Source: Statistics Canada Census of Population: Community profiles;

Note: N.D. = no data (data suppressed due to small sample size)

Median household income in the regions from which the areas are comprised was generally lower than that of the province as a whole, where the median household income in 2006 was \$53,000. Income for non-reserve communities in both the North and Central Coasts was generally reflective of the median household income in their respective Regional Districts. Whereas, median household income figures in reserve communities tended to be lower than the figures for the Regional District as a whole.

What are the limitations of the data?

Data was not available through Statistics Canada for several communities in the areas and not consistently available for all census years. For some communities and jurisdictions such as Skeena-Queen Charlotte C and Hartley Bay, data was suppressed due to the small sample size. Regional District data was reported, as a means to fill in these data gaps. In addition, income data is often regarded as very sensitive in most First Nation communities. As a result, it is more likely that income is under reported. Results from this indicator should therefore be used with caution.

INC-2: Individual income distribution

SUMMARY

Status

The individual income distribution in area communities varied significantly, with non-reserve communities in the North Coast generally having higher percentages of income earners in the higher income brackets than reserve communities. In the Central Coast, the difference between earners in reserve and non-reserve communities is less marked. The percentage of individual income earners in the Central Coast concentrated in the lowest income bracket (<\$15,000) and according to 2006 census data, ranged from 36% in both Central Coast D and Mount Waddington, to 84% in Kitasoo. In the North Coast, the percentage of individual income earners in the lowest income bracket ranged from 100% in Skeena-Queen Charlotte C to 34% in Prince Rupert.

Trend

Between 2001 and 2006, individual incomes in the area generally varied within a range of 10 percentage points in both the North and Central Coast communities for which data was available. The exception was Bella Bella, which experienced a significant increase in the percentage of the population earning less than \$15,000 per annum. The trend towards declining percentages of the population within the lowest income bracket is consistent with the provincial statistics. The exception was the community of Bella Bella, where the number of residents who were in the lowest income bracket of income earners grew significantly from 25% in 2001 to 79% in 2006.

Outlook

Due to the location of the study areas, it is useful to examine income dependency as a factor that contributes to individual income. Income dependency data is not available for all of the area communities; however, data for Local Health Area 52 Prince Rupert can be used as an example of what is occurring within the study areas. The data shows that income is largely dependent on forestry (24% versus the provincial average of 8%) and fishing & trapping (11% versus 0%²⁰ for the province). Local Health Area 52 also relies heavily on the public sector for 30% of its employment income, compared with the provincial average of 27%. This characterizes a less economically-diverse area compared with the provincial breakdown of income dependency by economic sector.²¹ If the dominant economic sectors in the area were to experience a change or downturn (e.g., pine-beetle infestation in the forestry sector), further disparity between provincial economic trends may result.

What is Being Measured?

The individual income distribution divides income distribution into six categories, which shows where the majority of income earners are concentrated in a given range, in this case from \$0 to \$100,000 and over. Individual income is an indicator of an individual's ability to meet their own needs and is used to analyse the income diversity of residents and the ability of the local economy to support its residents. Trends in this indicator reflect economic conditions and help to assess the range in incomes that may be required to foster a diverse and resilient community.

²⁰ On a provincial scale, income from fishing and trapping makes is very small and as a result is reported as 0%. At the time this report was published, the actual percentage was not readily available.

²¹ 2006 income dependency data compiled by BC Stats for Local Health Area 52 Prince Rupert. http://www.bcstats.gov.bc.ca/data/sep/lha/lha_52.pdf (accessed July 2008).

Why is this Important?

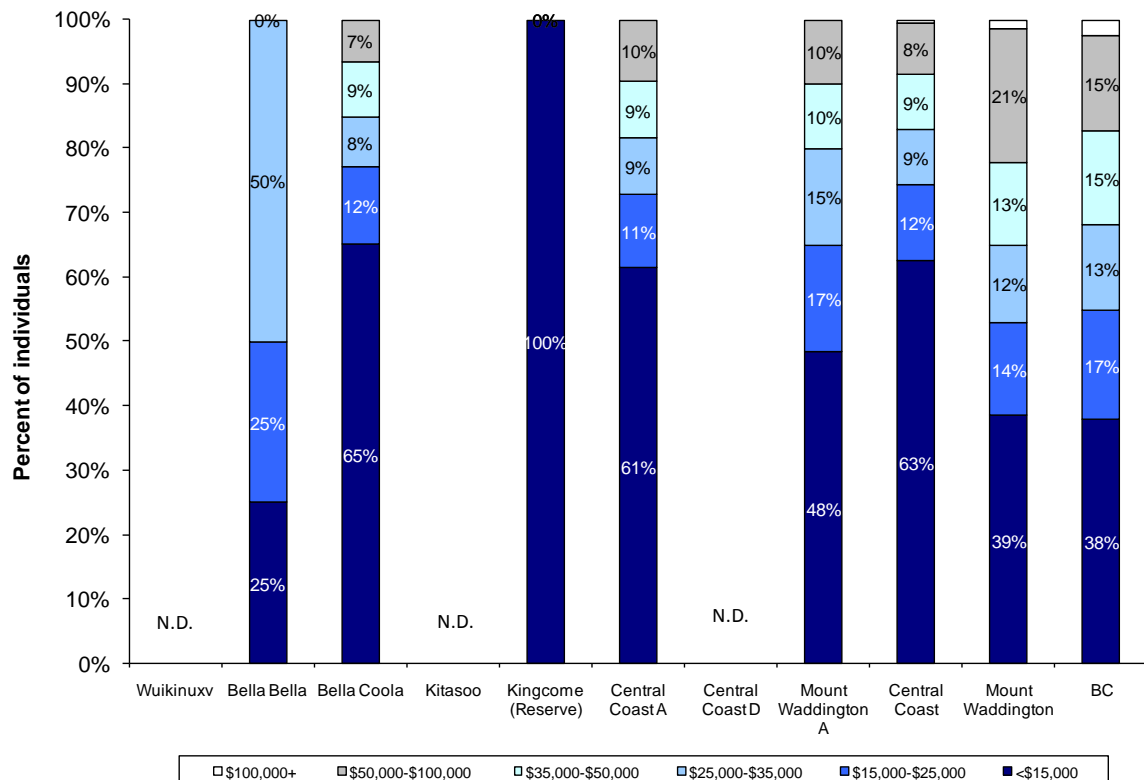
The individual income distribution indicator can assist in providing guidance on income and emerging economic trends that are occurring within a community and the area as a whole.

What is happening?

Central Coast

Figure 20 illustrates individual income distribution in the Central Coast for 2006. For the communities where data was available for analysis, the picture is extremely varied from community to community. Those communities with the greatest diversity of income earners across income brackets and the lowest percentage of income earners in the lowest income bracket are Mount Waddington A and Bella Bella. The distribution for Mount Waddington A is similar to the provincial average. Those that are least diverse and have a very high percentage of low income earners are Bella Coola and Central Coast A.

Figure 20. Individual Income Distribution, Central Coast Communities



Source: Statistics Canada Census of Population: Community profiles;

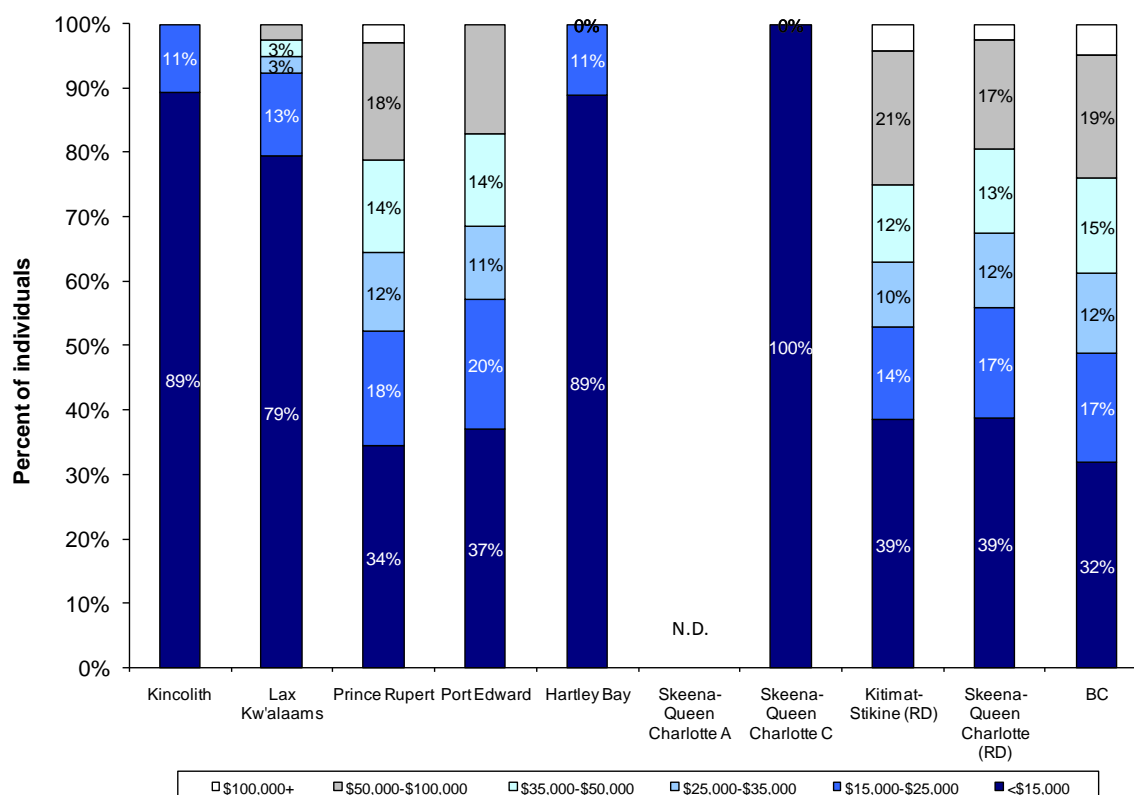
Note: N.D. = no data (data suppressed due to small sample size)

North Coast

Figure 21 illustrates individual income distribution in the North Coast for 2006. For the communities where data was available for analysis, the picture is varied. Higher percentages of low income earners tend to be found in reserve communities such as Kincolith, Lax Kw'alaams, and Hartley Bay. Port Edward and Prince Rupert tend to have the most diverse and also lowest

percentage of income earners in the lowest income bracket, which is more in line with the provincial average. Skeena-Queen Charlotte RD, Kitimat-Stikine RD also have similar income distributions to the provincial average.

Figure 21. Individual Income Distribution, North Coast Communities (2006)



Source: Statistics Canada Census of Population: Community profiles;

Note: N.D. = no data (data suppressed due to small sample size)

Between 2001 and 2006, individual income in area communities generally varied within a range of 10 percentage points in both the North and Central Coasts communities for which data was available. Overall, the data represents a decrease in the percentage of the population earning less than \$15,000 (the lowest income bracket), which is consistent with the provincial decrease from 38% to 32% over the same five-year period. The exception was the community of Bella Bella, which experienced a significant increase in the number of residents who were in the lowest income bracket of income earners. In 2001, 25% of income earners in Bella Bella were earning \$15,000 or less and in 2006, 79% were earning \$15,000 or less.²²

What are the limitations of the data?

This indicator is generally accepted to be a less meaningful indicator of economic trends than household income, because it measures an individual's ability to support themselves rather than the income of the entire household. Since household income is not available at either the

²² 2001 data compiled by Statistics Canada. 2001 Census of Population, Community Profiles (not shown in figures)

community or regional electoral district, individual income distribution was reported instead for individual area communities.

In addition, income data is often regarded as very sensitive in most First Nation communities. As a result, it is more likely that income is under reported. Results from this indicator should therefore be used with caution.

INC-3: Breakdown of total income, by source

SUMMARY

Status

There were distinct differences in sources of income between North and Central Coasts, and between reserve and non-reserve communities. In the North Coast, non-reserve communities had significantly higher proportions of total income coming from employment sources, while reserve communities were dependent on transfer payments from almost half of their total income. Employment income in 2006 comprised 75% of Prince Rupert's total income, but only 31% of Hartley Bay's total income. Central Coast communities were consistently below regional and provincial averages with respect to income sourced from employment, with employment income ranging between 59% of total income in Mount Waddington A and 65% of total income in Bella Bella and Bella Coola.

Trend

Employment income generally stayed relatively stable in non-reserve communities between 2001 and 2006, with reserve communities in the Central Coast generally reporting more income from government transfer payments and most North Coast reserve communities experiencing increased income from employment. Decreases in employment income in Central Coast communities ranged from 6% in Mount Waddington A to 24% in Bella Bella. The North Coast reserve communities of Kincolith and Lax Kw'alaams saw increases in employment income of 14% and 11%, respectively, while Dolphin Island experienced an 8% decrease. Regional and provincial statistics generally changed very little between 2001 and 2006, with the exception of Mount Waddington Regional District which saw a 5% decrease in employment income.

Outlook

The data shows that most of the communities studied are more dependent on transfer payments than regional and provincial averages. The distinct disparity between reserve and non-reserve communities reflects potential economic and educational differences within the Coast Areas, and with rest of the province.

What is Being Measured?

This indicator measures the percentage of total income that comes from three categories of income sources: employment, government transfers and other money. Earnings include employment and self-employment income; government transfers include benefits from all levels of government such as Employment Insurance and Old Age Security pension; and other money includes all other income such as retirement allowances, child support, income from abroad and bursaries.

All income sources for this indicator are reported on by residents rather than at the household scale.

Why is this Indicator Important?

This indicator measures the sources income of the coast area resident population. A disproportionate amount of income from government sources or investments could leave the economy open to vulnerability.

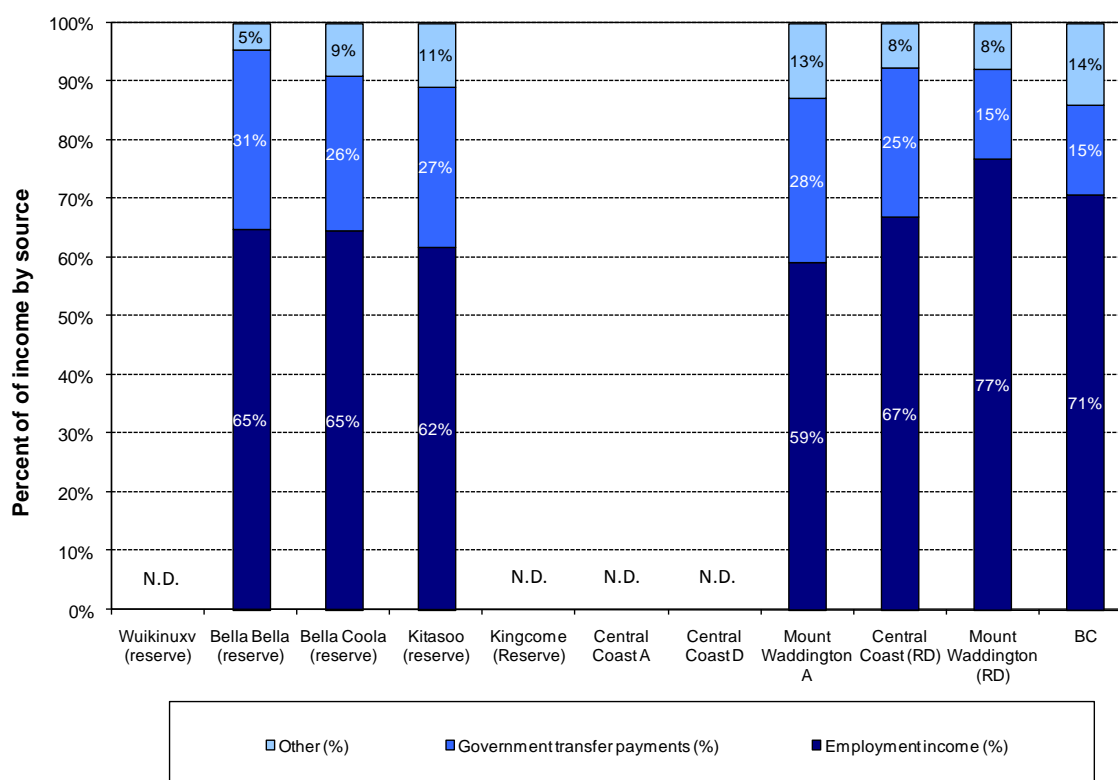
How are We Performing?

The average amount of income from earnings in BC is 71%, which is generally higher than all reserve communities in the North and Central Coast regions, but slightly lower than the non-reserve communities of Prince Rupert and Port Edwards.

The 2006 distributions of income sources for Central Coast Plan Area communities are shown in Figure 22. Mount Waddington A had the lowest proportion of income from earnings (59%) while Bella Bella and Bella Coola had the highest proportion (65%) amongst coast area communities for which data was available. Government transfer sources of income were the highest in Bella Bella (31%) and lowest in Bella Coola (26%). Income from other sources ranged from 5 to 13%.

Overall, the proportion of income from earnings for most Central Coast communities studied is lower than regional and provincial averages. The income source distribution for the Central Coast Regional District is similar to the coast area communities, while the Mount Waddington Regional District has a substantially higher proportion of total income coming from employment. This indicates that substantial portions of the economy are reliant on assistance or other income, which is reflective of possible socio-economic conditions in the region.

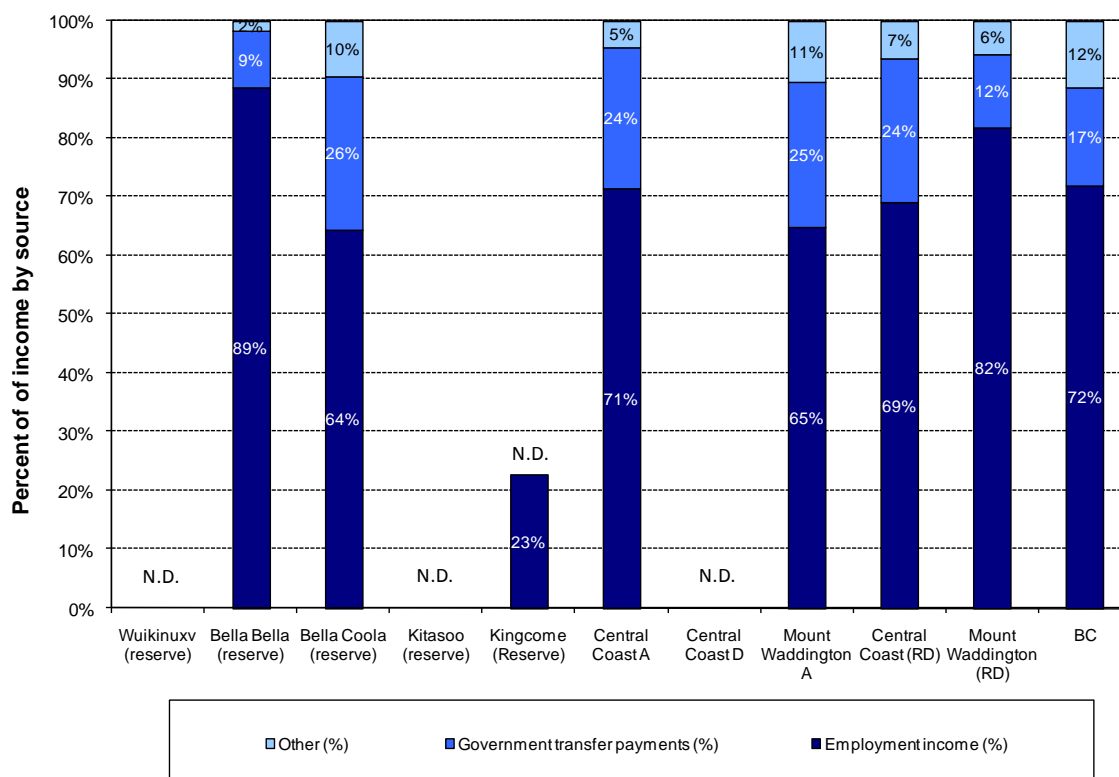
Figure 22. Percentage of Total Income by Source, Central Coast, 2006



Source: Statistics Canada Census of Population, 2006

Corresponding data for Central Coast communities in 2001 are shown in Figure 23. There have been significant decreases in the proportion of total income from employment since 2001 in Bella Bella and Mount Waddington A, dropping from 89% to 65% and 65% to 59%, respectively. This has been accompanied by a 22% increase in transfer payments in Bella Bella, and a 3% increase in transfer payments in Mount Waddington A from 2001 to 2006. This change is reflected in a 5% drop in employment income and a 3% increase in transfer payments in the Mount Waddington Regional District between 2001 and 2006.

Figure 23. Percentage of Total Income by Source, Central Coast, 2001

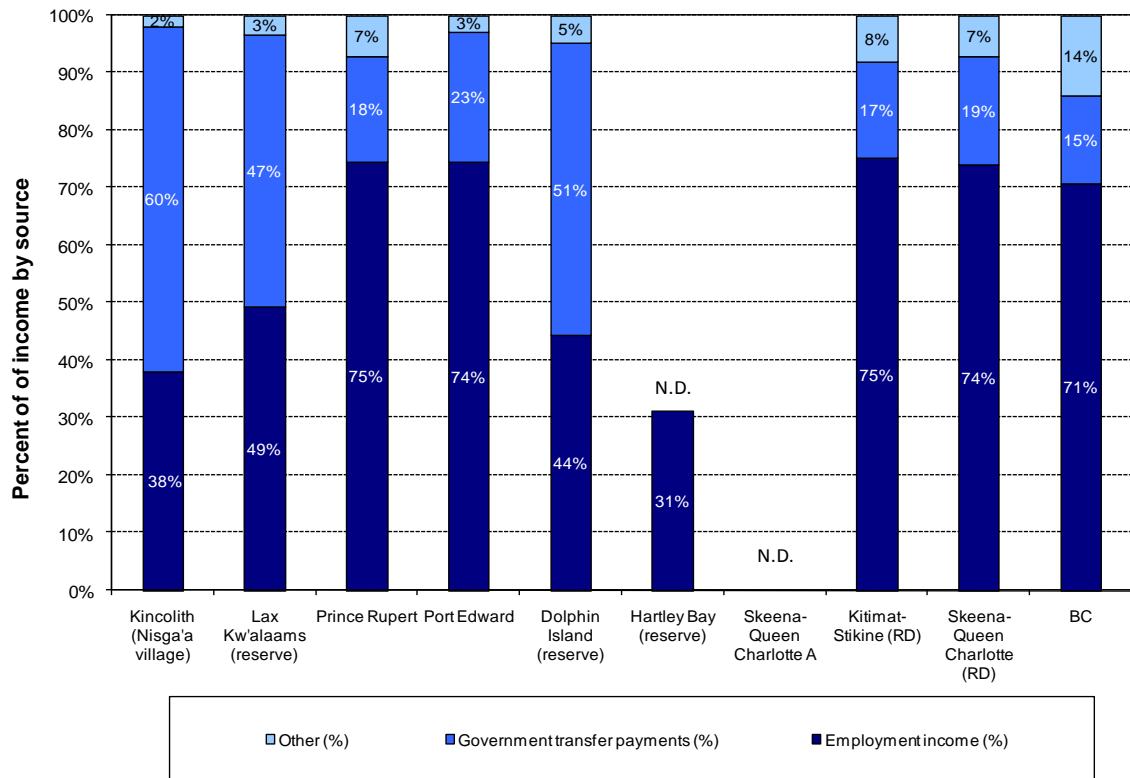


Source: Statistics Canada Census of Population, 2001

Income source distributions shown in Figure 24 highlight differences between reserve and non-reserve communities in the North Coast. The non-reserve communities of Prince Rupert and Port Edwards had significantly higher portion of total income coming from employment (75% and 74%, respectively) than all other communities studied in the region. Reserve communities in the North Coast had employment income comprising between 31% and 49% of total income, with Hartley Bay having the lowest proportion and Lax Kw'alaams having the highest. Kincolith had the highest dependency on transfer payments, comprising 60% of total income, while Prince Rupert had the lowest with 18%.

The income source distribution of the Kitimat–Stikine Regional District and Skeena–Queen Charlotte Regional Districts in the North Coast Plan Area are more reflective of the non-reserve communities that comprise a higher proportion of the population.

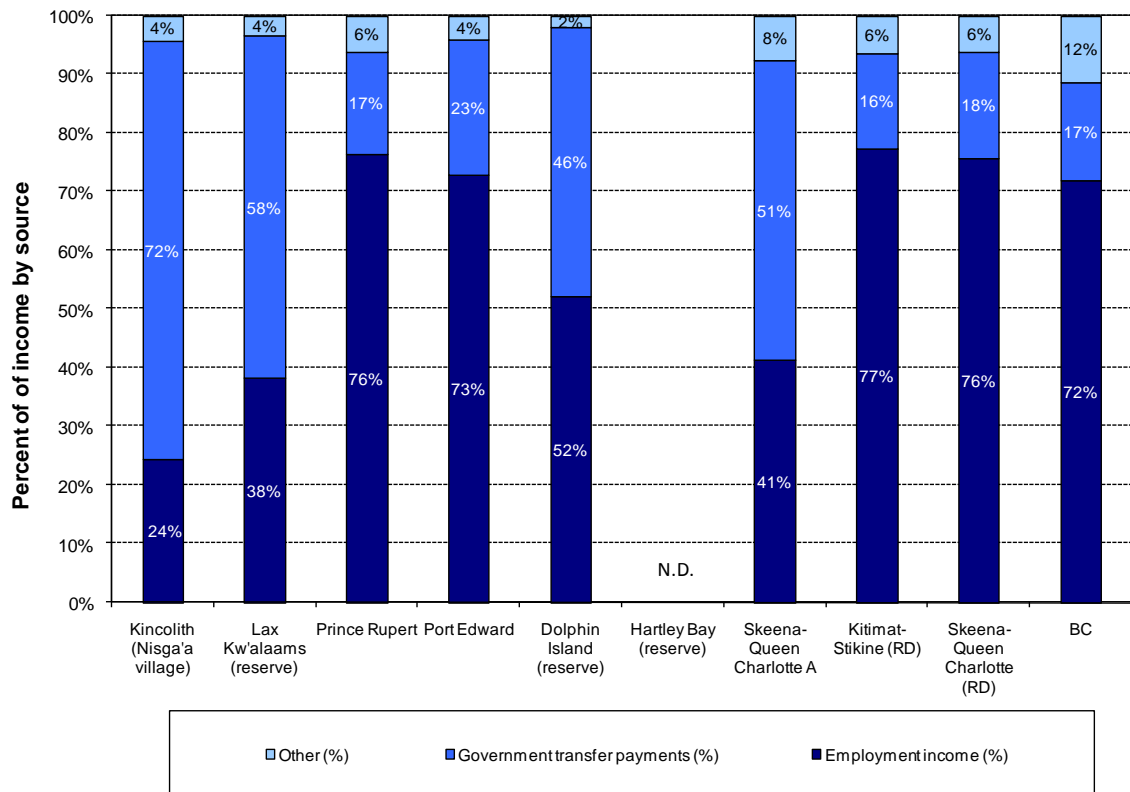
Figure 24. Percentage of Total Income by Source, North Coast, 2006



Source: Statistics Canada Census of Population, 2006

As shown in Figure 25, the income source distribution in the non-reserve communities of Prince Rupert and Port Edward remained relatively stable between 2001 and 2006. The reserve communities of Kincolith and Lax Kw'alaams experienced increases in employment income from 24% to 38% and 38% to 49%, respectively between 2001 and 2006. This was accompanied by corresponding decreases in dependence on transfer payments from 72% to 60% and 58% to 47%, respectively between 2001 and 2006. The reserve community of Kitkatla saw income from employment decrease 8% between census years, with a corresponding 6% increase in transfer payments during the same period.

Figure 25. Percentage of Total Income by Source, North Coast, 2001



Source: Statistics Canada Census of Population, 2001

What are the limitations of the data?

This indicator is generally accepted to be a less meaningful indicator of economic trends than household income, because it measures an individual's ability to support themselves rather than the income of the entire household. Since household income is not available at either the community or regional electoral district, individual income distribution was reported instead.

In addition, income data is often regarded as very sensitive in most First Nation communities. As a result, data was unavailable for many of the coast communities, and it is likely that income is under reported. Results from this indicator should therefore be used with caution.

SUMMARY

Status

Data was not available for many of the communities in the areas. For the Central Coast, 2006 data was available for the communities of Bella Bella, Central Coast D and Kingcome (non-reserve). In these communities, Employment Income (EI) recipients made up 22%, 23% and 20% of the labour force, respectively. For the North Coast communities where 2006 data was available, 20% to 23% of the labour force was on Employment Insurance. Port Edward was the exception having the highest percentage (29%) of its labour force collecting EI. Across the board, these figures were higher than for the province as a whole (11%), but consistent with the Regional Districts from which the area is comprised.

Trend

Due to the lack of available census data for years prior to 2006, it is difficult to analyse trends in this particular indicator. The SNDS 2006 Labour Market Census offers reasons for the unemployment rates in the North Coast communities. These include: a soft job market (no real sustainable job base), a lack of an economic foundation to support employment (no method of creating wealth), an absence of property rights to capitalize on wealth creating businesses, a lack of job skills that the market requires, and dependency on the social structure or safety net (e.g., EI payments).²³

Outlook

To overcome the trend towards unemployment, the SNDS emphasizes the role that local governments can play in stimulating a business climate that fosters a free market economic base and the entrepreneurial spirit of individuals.²⁴

What is Being Measured?

This indicator shows the percentage of the labour force that is reliant on Employment Insurance (EI) for its income. EI offers people who are unemployed, short term financial assistance based on the level of their previous income.

Why is this Indicator Important?

This indicator shows the proportion of the labour force that is collecting EI (i.e. that is unemployed), versus those participating in the labour force. A disproportionate amount of the labour force reliant on government assistance leaves the economy open to vulnerability. When a large portion of a community's labour force is on EI there is less disposable income available to support the local economy and its community services.

What is happening?

Data was not available for many area communities, but the percentage of the labour force reliant on EI in the communities where 2006 data was available, was between 20% to 23% in 2006. As shown below in Figure 26, Central Coast data for 2006 was available for Bella Bella (reserve)

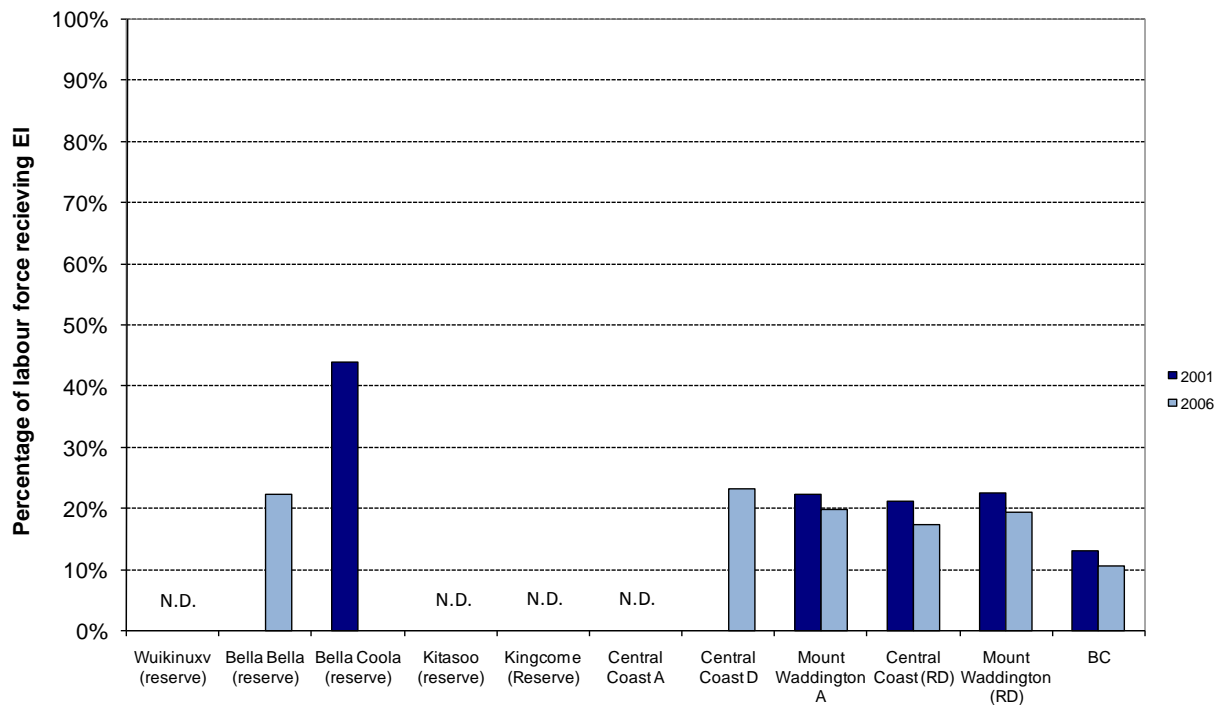
²³ 2006 Labour Market Census. Executive Summary. Skeena Native Development Society. <http://www.snds.bc.ca/lmc06.htm> (accessed July 2008).

²⁴ 2006 Labour Market Census. Executive Summary. Skeena Native Development Society. <http://www.snds.bc.ca/lmc06.htm> (accessed July 2008).

(22%), Central Coast D (23%) and Mount Waddington A (which includes the non-reserve population of Kingcome) (20%).

Central Coast communities had slightly higher proportions of their labour force on EI than the Regional Districts, in which 17.4% to 19.5% of the labour force was collecting EI in 2006. The percentage of the labour force receiving EI was also higher in the Regional Districts than for the province as a whole, where the average was at 11% in 2006.

Figure 26. EI Recipients as a Percentage of the Labour Force in the Central Coast, 2006



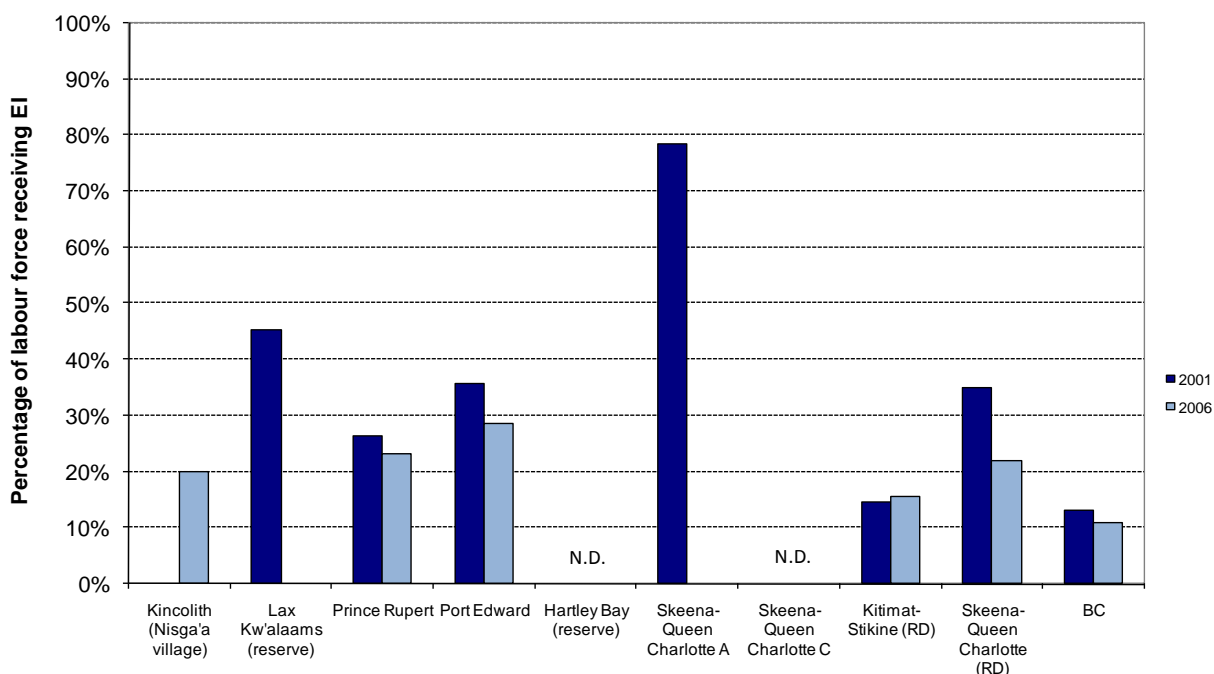
Source: Statistics Canada Census of Population and BC Stats Taxfiler Labour Force Income profiles;

Note: N.D. = no data (data suppressed due to small sample size)

Data for North Coast communities was only available for Prince Rupert, Port Edward and Kincolith in 2006. As shown in Figure 27, the proportion of the labour force on EI in these communities was 23%, 29% and 20%, respectively.

North Coast communities also had slightly higher proportions of their labour force on EI than the Regional Districts, in which 15.5% to 21.8% of the labour force was collecting EI in 2006. Similarly to the Central Coast, the percentage of the labour force receiving EI was again higher in the Regional Districts of the North Coast than for the province as a whole in 2006.

Figure 27. EI Recipients as a Percentage of the Labour Force in the North Coast, 2006



Source: Statistics Canada Census of Population and BC Stats Taxfiler Labour Force Income profiles

Note: N.D. = no data (data suppressed due to small sample size)

Overall, the percentage of the labour force on EI appeared to be independent of community size and type (reserve or non-reserve community).

What are the limitations of the data?

Data was not available through Statistics Canada and BC Stats for most area communities and not consistently available for all census years. Data was not reported by Statistics Canada due to small sample sizes. Regional scale data is reported in this baseline to help fill this gap.

As noted in the other income indicators, income data is often regarded as very sensitive in most First Nation communities. As a result, it is more likely that income is under reported. Results from this indicator should therefore be used with caution.

Access to Resources

Access to resource indicators provide insight into the level of local ownership of resource-based economic activities in a region. There are typically greater economic benefits to the community as a whole with increased local ownership of resource activities, particularly in rural economies. With local ownership of resource activities there is more likely to be re-investment within the region. Furthermore, local ownership over resource activities may lead to other benefits including less opposition to resource development where communities can manage resources in a way that preserves areas of particular cultural and ecological significance.

In the north and central coast areas several initiatives are currently in-progress that encourage a transition toward community ownership of resource activities²⁵. These initiatives are particularly focused in the forest industry and commercial fisheries where resource access rights are being reallocated to coastal communities. There are also emerging opportunities for residents with shellfish aquaculture, independent power production, and possibly non-timber forest product sales. Other more established resource-based activities in the region include finfish aquaculture and tourism, both of which have a degree of local involvement. Mineral exploration is a potentially growing industry that is almost exclusively non-local.

These indicators do not attempt to represent ownership of land on which the tenures exist, but instead focus on the economic activities associated with the tenures that have been allocated by the provincial government in aquaculture, mineral exploration, forestry, tourism and quarrying, as well as licences allocated by the federal government for commercial fisheries.

ACC-1: Percent of aquaculture tenures owned by coast area residents and percent of productive activity by coast area residents

SUMMARY

Status

In the Central Coast there are 37 tenures; 30 are non-locally owned (80%), five are owned by Kitasoo Aqua Farms under the Kitasoo/Xaisxais Nation, and two are owned by the Syrjala family, residents of the coast area. However, looking at current tenure ownership alone does not fully explain the operation of the aquaculture tenures. In practice, the Kitasoo/Xaisxais have a collaborative agreement with Marine Harvest Canada to operate several of its tenures. Marine Harvest Canada and its affiliated companies own 27 of the 30 tenures that are non-locally owned. These active tenures are however, currently operated by the Kitasoo/Xaisxais. Therefore, there are only 3 non-locally operated tenures, none of which reported production for 2006.

There are four aquaculture tenures in the North Coast; three are owned by Kitkatla Gold Seafoods under the Tsimshian Nation, and one is owned by William Mounce, a resident of the North Coast area.

First Nations and locally owned tenures produce 39% of the total farmgate value reported for both coast areas combined. Again, due to the collaborative agreement, the remaining 61% is partially being operated through the agreement with the Kitasoo and is contributing to the local First Nations economy.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

²⁵ These initiatives have been identified in a report to the EBM Working Group by Pierce Lefebvre Consulting entitled "Inventory of Economic Development Initiatives in the BC Central and North Coast Region", May 2008.

Outlook

Due to the agreement between the Kitasoo/Xaixais band and Marine Harvest Canada Ltd, there is a transition from non-local to local ownership of aquaculture tenures in the Central Coast. The North Coast is already exclusively owned by local residents and First Nations.

Simultaneously, the aquaculture industry is currently under pressure from environmental groups, consumers, and some First Nations to move away from open-system farms towards self contained, closed systems and on land farms. There are diverse opinions in regards to the benefits and risks of open pen fish farms among different coastal First Nations people. Some Nations people would like to see fish farms removed from their traditional territories, while other people within Nations are interested in owning and running their own farms. Environmental campaigns surrounding this issue are strong and have led to a suspension of open-system finfish aquaculture in part of the North Coast. The continuation of these campaigns and public education outreach project could continue to negatively impact the future of open-system farms in the Central Coast as well.

Although the majority of aquaculture tenure on the coast is in finfish sites, there is a growing transition from finfish to shellfish aquaculture in the north and Central Coast areas due to pressures on finfish open systems and the expected profitability of shellfish aquaculture. There are several shellfish aquaculture sites currently under investigation – both through the Coastal First Nations and the Tsimshian Stewardship Committee. Shellfish production in the North Coast is currently hindered by the lack of processing capacity. Operating a processing plant becomes much more viable with the successful implementation of several of these investigative sites, and therefore improves the ability for existing tenure holders to increase production as well. Prohibitive transportation costs may be reduced by an increase in production in the region due to economies of scale in processing and delivering the fish products.

What is Being Measured?

This indicator shows the level of ownership of aquaculture tenures among local residents and First Nations and the proportion of the economic activity in aquaculture production done by local and First Nations companies, as indicated by the reported farmgate value.

Why is this Indicator Important?

Aquaculture is becoming increasingly important in local economic activity, in particular as economic activity associated with commercial fisheries declines. However, with increased pressures from environmental groups, consumers and some First Nations, the future direction of the aquaculture sector is somewhat uncertain. Despite this uncertainty, aquaculture tends to be more locally controlled than other sectors, and therefore has the potential to contribute significantly to the local economy.

Aquaculture accounts for less than 1% of the provincial GDP, although it is gaining importance in the provincial economy. In 2006, aquaculture production increased 9% in BC, with a 27% increase in value.²⁶ The North and Central Coast areas account for 17% (73.5 million dollars) of the total BC production (428.9 million dollars) based on reported farmgate values.²⁷

There are currently several shellfish sites under investigation, with promising results thus far. Therefore, this indicator is likely to gain in importance regarding the total economic activity in the coast areas that is controlled locally, with particular importance to the Kitasoo/Xaixais and the Tsimshian nations, in addition to some local non-native residents who have shellfish operations.

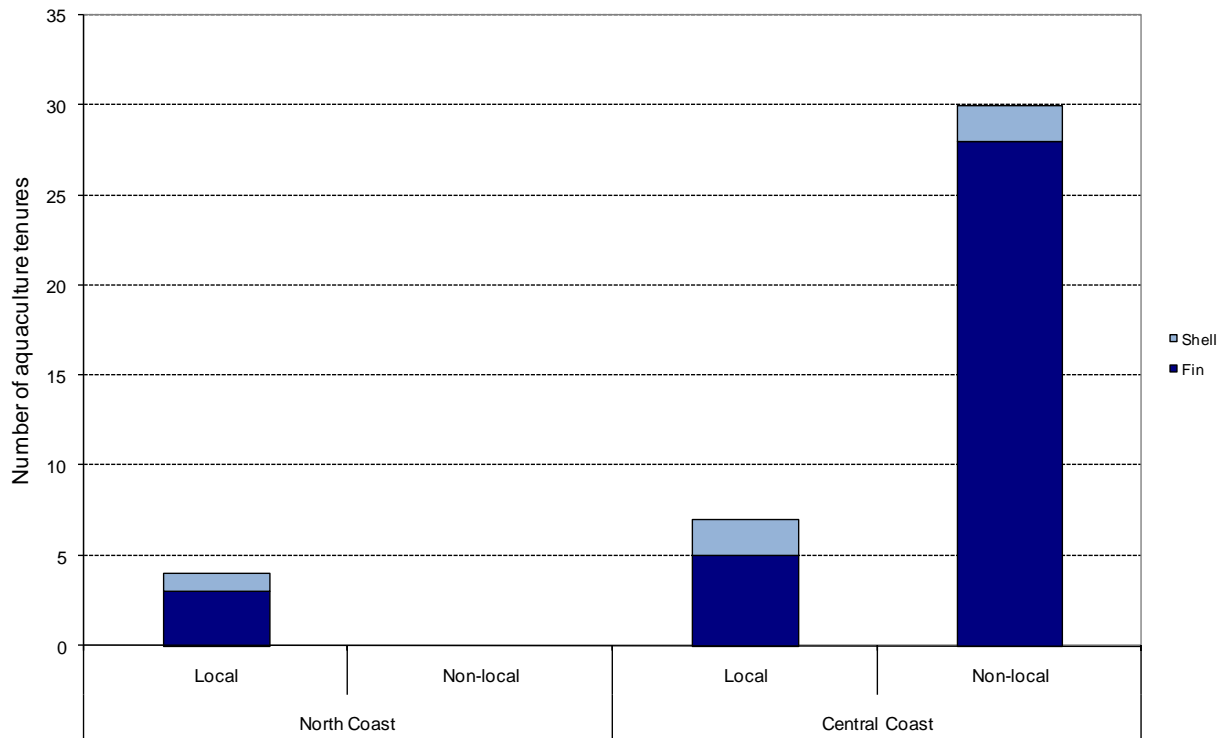
²⁶ <http://www.env.gov.bc.ca/omfd/reports/YIR-2006.pdf>, p8

²⁷ <http://www.env.gov.bc.ca/omfd/fishstats/aqua/index.html>

What is happening?

All four aquaculture tenures in the North Coast are held by residents of the coast area and First Nations, as shown in Figure 28. In the Central Coast, there are significantly more tenures held by non-local companies (30) than are held by local residents and First Nations (7). However, four of these non-local companies have merged into one larger entity (Marine Harvest Canada Inc, Nutreco Canada Inc, Pan Fish Canada Ltd, and 1331735 Ontario Ltd) and are working cooperatively with the Kitasoo/Xaixais. Combined, these four companies hold 27 of the 30 non-local tenures. Residents of Vancouver Island own two of the three remaining non-locally held tenures, and the third is owned by a large international company based in Norway (Grieg Seafood BC Ltd).

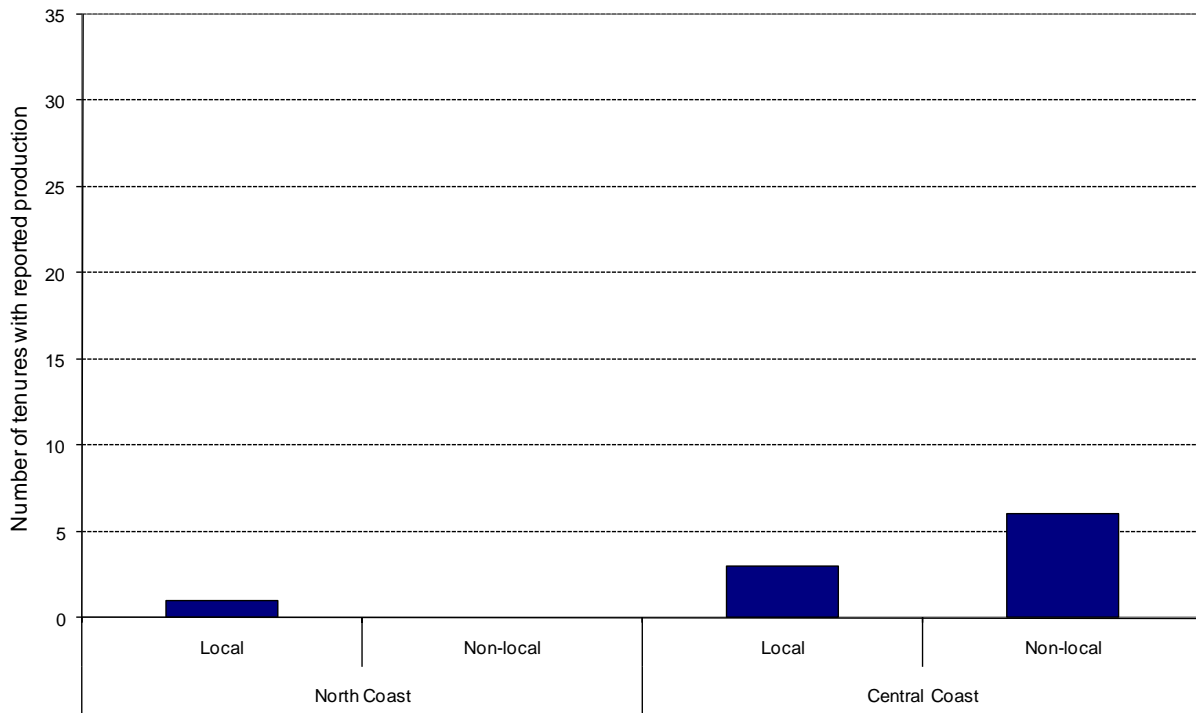
Figure 28. Number of Aquaculture Tenures Held Locally and Non-locally



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Not all tenures are actively producing seafood products each year. As shown in Figure 29, only one tenure reported production in the North Coast, and only nine in the Central Coast in 2006. Three of the nine tenures that reported production in the Central Coast are owned by local residents and First Nations. The remaining six are owned by the merged companies and are operated with the Kitasoo/Xaixais band.

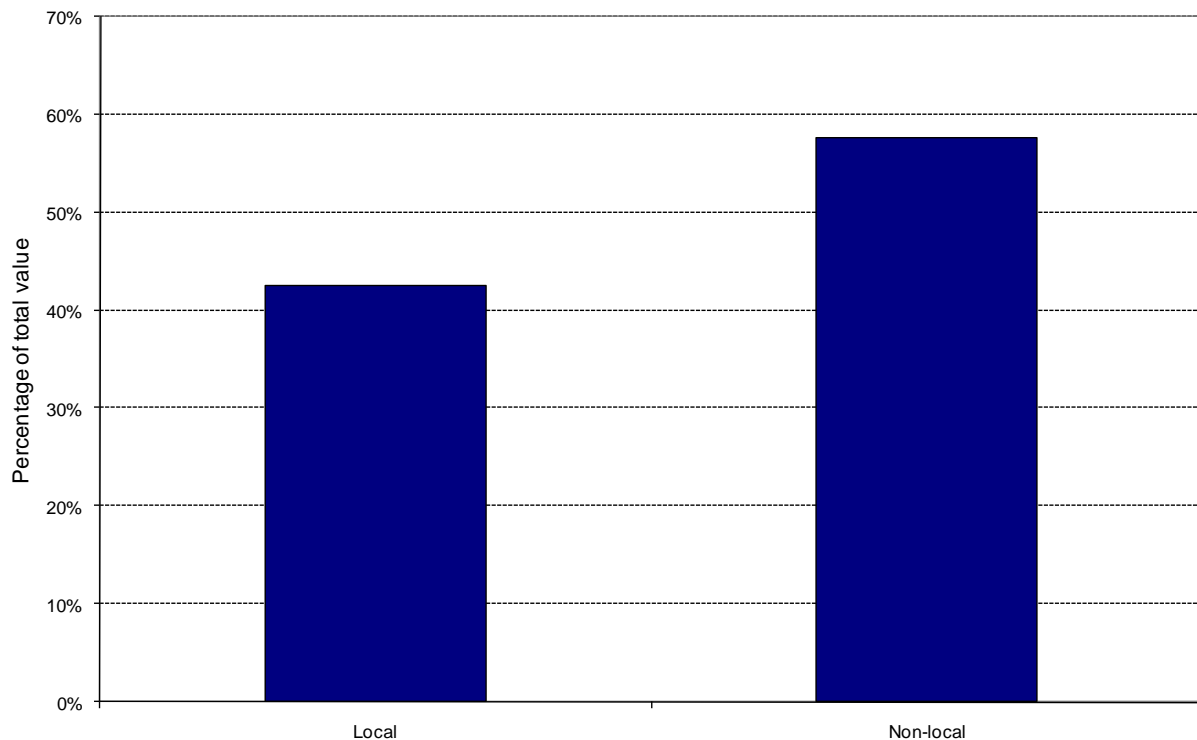
Figure 29. Number of Tenures Held Locally and Non-locally with Reported Production for 2006



Source: BC Ministry of Environment – Oceans & Marine Fisheries Branch

The total farmgate value produced in 2006 is used to represent the amount of productive activity occurring in locally held tenures compared to non-locally held tenures. Due to privacy concerns, First Nations production cannot be reported separately. Therefore, production from locally owned tenures includes both native and non-native residents of the coast areas. Locally owned tenures produce 39% of the total value reported for 2006 for both coast areas, as shown in Figure 30. Furthermore, values are reported for both coast areas together due to the low number of tenure holders. The local value produced totalled 31 million dollars, compared to a total of 42 million dollars produced by non-local companies in both plan areas combined.

Figure 30. Percentage of Total Value Produced



Source: BC Ministry of Environment – Oceans & Marine Fisheries Branch

What are the limitations of the data?

Privacy concerns do not allow the production values to be reported by coast area because there are less than three tenure owners reporting production in the North Coast. For the same reason, production values cannot be separated for native and non-native operations. Therefore, values have been aggregated into “local owners” which includes both native and non-native residents in the coast areas. A resident of Sointula, which is just outside the Central Coast area boundary, is included in the “local” category in order to ensure a minimum of three tenure-holders when obtaining the production values.

In future, if more tenures are held by different parties, production values should be obtained for each coast area separately, and ideally, for native and non-native residents separately as well.

Currently fish processing is not considered under this indicator, but may be a valuable addition in future in order to obtain a more complete view of the economic impact of the aquaculture sector in the coast areas. For example, Kitasoo Seafoods is currently the largest employer in the Kitasoo/Xaisxais nation and is vital to their local economy.

ACC-2: Percent of mineral exploration tenures owned by coast area residents and percent of productive activity by coast area companies

SUMMARY

Status

Although there are no active mines in the coast areas, there is mineral exploration activity. The exploration activity is focused primarily in the northern tip of the coast region, and also around Porcher Island. Some additional exploration is spread across the two coast areas.

The mineral exploration tenures are owned almost exclusively by non-locals. There are 1,369 tenures in the north coast, 4 of which are held by locals living in Prince Rupert. In the central coast 19 of 368 tenures are held by locals living in Hagensborg and Bella Coola.

There were no ARIS expenditures reported for the locally owned tenures between January 2006 and June 2007, thus indicating that locally owned tenures account for 0% of the total productive activity. ARIS reports give a general indication of the level of activity in the region, but there is no direct way to gauge the expenditures in one particular year without conducting a survey with the operating companies.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

Mineral exploration activity has been increasing over the last few years in both the central and north coast regions²⁸ with particular focus in the northern tip of the north coast region. However, mineral exploration does not currently contribute to the local economy. There is potential for First Nations involvement in future mining operations in the area, however, First Nations are likely to be cautious due to historical contaminations on native land in other areas of BC.

Also, due to the inaccessible nature of the region, large exploration projects are unlikely to develop in the foreseeable future.

What is Being Measured?

This indicator shows the level of local ownership of mineral exploration tenures and the proportion of the expenditures done by local companies in exploration.

Why is this Indicator Important?

Non-local operators currently conduct all mineral exploration activity in the region, and non-locals almost exclusively own the mineral tenures. This indicator demonstrates that a potentially significant economic sector for the region is being operated without local involvement. Exploratory work tends to involve skilled, experienced workers that fly into the region from other areas, primarily the lower mainland of BC.

In the event that active mining begins in the coast area, there may be considerable impacts on residents living in the area. Mining projects require road-building, disposal of waste materials, appropriate containment of mine tailings, and many other activities which may have substantial impacts on the social and environmental well-being of residents. These risks likely contribute to the current hesitancy of locals to support mining in the region.

²⁸ http://www.em.gov.bc.ca/DL/GSBPubs/Expl-BC/2006/2006_NW.pdf and http://www.em.gov.bc.ca/DL/GSBPubs/Expl-BC/2006/2006_SW.pdf and personal communication with Paul Wodjak, Regional Geologist, EMPR, May 2008.

It is also important to monitor mining activity as there are also potential opportunities for local communities if mining becomes active.

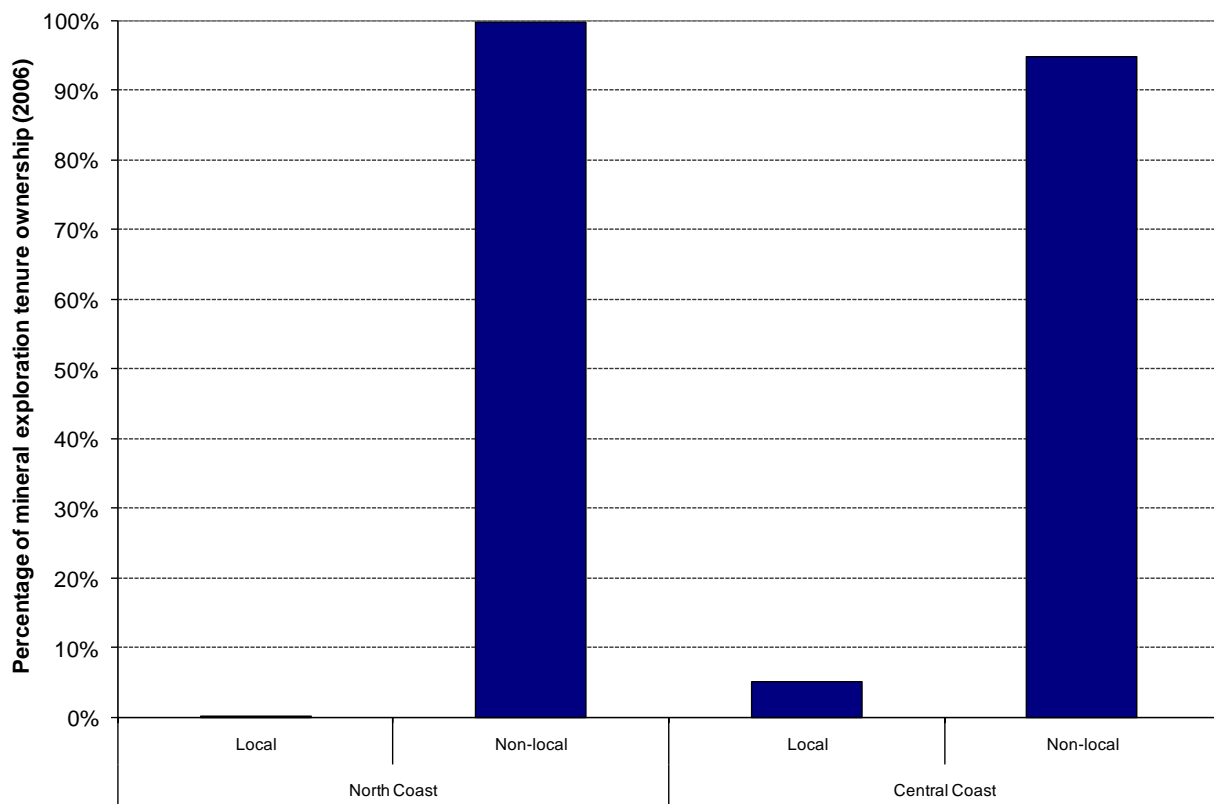
What is happening?

Over the last 10 years, mineral exploration has been at a low level. The reasons are likely related to a perception in the mining industry that environmental groups opposing forestry activities are also anti-mining and this opposition may adversely affect mining operations.²⁹ There is also an awareness of new protected areas and the limitations these pose on future mining potential.

Mineral exploration is not evenly distributed across the coast areas. Tenures are heavily focused in the northern tip of the north coast area with some additional activity around Porcher Island. In the Central Coast there are two small pockets of tenures focused in the south and east of the coast areas.

There are 1,369 currently held mineral exploration tenures in the north coast, 4 of which are owned by residents of the coast area. In the central coast, there are 368 tenures and 19 are locally owned. Of the non-locally owned tenures, companies and individuals based in BC hold the majority.

Figure 31. Percent of Mineral Exploration Tenures Held Locally and Non-locally



Source: BC Ministry of Energy, Mines and Petroleum Resources

²⁹ Personal communication with Paul Wojdak, Regional Geologist, BC Ministry of Energy, Mines and Petroleum Resources, May 2008.

Despite the large number of mineral tenures held in the coast areas, particularly in the north coast, the number of assessment reports (ARIS) filed over the last ten years has been quite low. Assessment reports are an indication of the level of activity happening in the region, because each tenure is required to file an assessment report within one year of obtaining a tenure in order to maintain it. After the report is filed and examined by EMPR, the tenure is extended up to 10 more years. None of the locally owned tenures in either coast area filed assessment reports for their tenures between January 2006 and June 2007.³⁰

Finally, a significant portion of the north coast region is primarily high grade metamorphic rock and has low potential for economic mineral deposits.

More recently there has been a slight increase in activity, and this may be reflected in future updates to this indicator.

What are the limitations of the data?

Mineral exploration tenure owners are required to submit an ARIS report to the BC Ministry of Energy, Mines and Petroleum Resources (EMPR) within one year of acquiring a tenure. Based on the expenditures and validity of the work, EMPR will extend the expiration of the tenure by up to ten years. During this period there is a work requirement per unit year, but all the work may be done in as little as a few months, or extended over the period. Thus there is no direct quantification of the total productive activity occurring in those tenures in a particular year.

³⁰ June 2007 was the most recent month of ARIS report release at the time of writing this report. Assessment reports are held in confidence for 12 months before being released.

ACC-3: Number of commercial and First Nations fish licences held locally, and total of productive activity by coast area companies

SUMMARY

Status

There are far more commercial fish licences held in the North Coast than in the Central Coast, due to a very high number of licences that are held in Prince Rupert. There are 178 licences held in the Central coast communities and 614 licences held in the North coast communities. The Central coast represents 2% and the North coast represents 8% of the total number of licences held in the province (7,503). In 2006, the cumulative landed values for the North and Central coast were \$25 million and \$3 million, respectively. These landed values are based on the Vessel Registration Numbers (VRNs) associated with licences in each community.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The Department of Fisheries and Oceans (DFO) has recently created the Pacific Integrated Commercial Fisheries Initiative (PICFI) which was launched in 2007. The program objectives are to achieve environmentally sustainable and economically viable commercial fisheries where conservation is priority and First Nations' involvement are supported. The Government of Canada has committed \$175 million over five years to implement the initiative. The largest financial component of the program is to support greater First Nation participation in integrated commercial fisheries. The program will support greater certainty for fisheries access and allocation, as well as provide exit strategies for commercial fishers who want to retire from the fishing industry.

What is Being Measured?

This indicator measures the total number of commercial licences held in communities in the North and Central coast areas. The total number of licences includes those held by non-native community members, native community members, and bands. The data needed to report the number of licences held by First Nations separately was not available.

In addition to numbers of licences held, this indicator measures the total landed values reported in the North and Central coast areas. The landed values are recorded by Vessel Registration Numbers (VRNs), and these are linked to licences. The total landed values for all licences with associated VRNs that belong to North and Central coast communities are reported. Licences held by First Nations bands are tracked differently, and therefore these landed values could not be included in the totals.

This indicator tracks the amount of economic activity undertaken by licences registered to each community, based on the postal codes of licencees. The actual harvest caught by these licences is not limited to the coastal region and may take place anywhere in BC. Likewise, licence holders from elsewhere in the province are not restricted from fishing in the coastal region. Therefore, this indicator does not attempt to track the proportion of fish caught in the coast area that contribute to the local economy, but rather the total fish caught by vessels registered in the coast area.

Why is this Indicator Important?

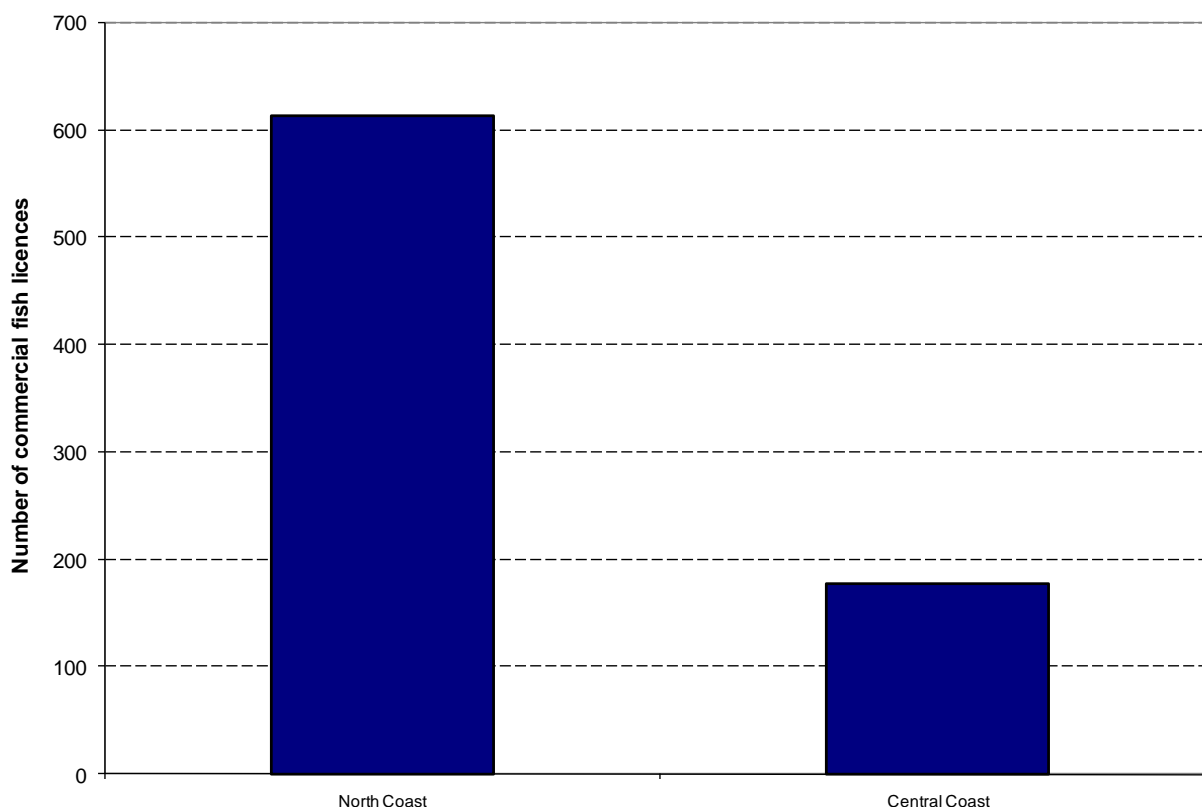
The importance of fishing as a major economic driver for the Coast areas cannot be overstated. Commercial fishing on the Pacific Coast has been an important economic activity for more than a hundred years and a major food staple for Aboriginal peoples for thousands of years. In the past,

canneries, long since defunct, were owned by non-local companies. Fishing licences were expensive because they guaranteed such a high rate of return on time and investment, and were therefore out of reach for many aboriginal people. While many fisheries are currently experiencing low returns, initiatives are being launched to conserve these resources. Having access to these resources as licensees is the most direct way of realizing economic benefits for local people. Fish is a high quality product that can be sold locally and is in demand all over the world.

What is happening?

There are far more commercial fish licences held in the North coast than in the Central coast, due to a very high number of licences that are held in Prince Rupert. As shown in Figure 32, there are 178 licences held in the Central coast communities and 614 licences held in the North coast communities. The Central coast represents 2% and the North coast represents 8% of the total number of licences held in the province (7,503).

Figure 32. Number of commercial fish licences held by coast area in 2006

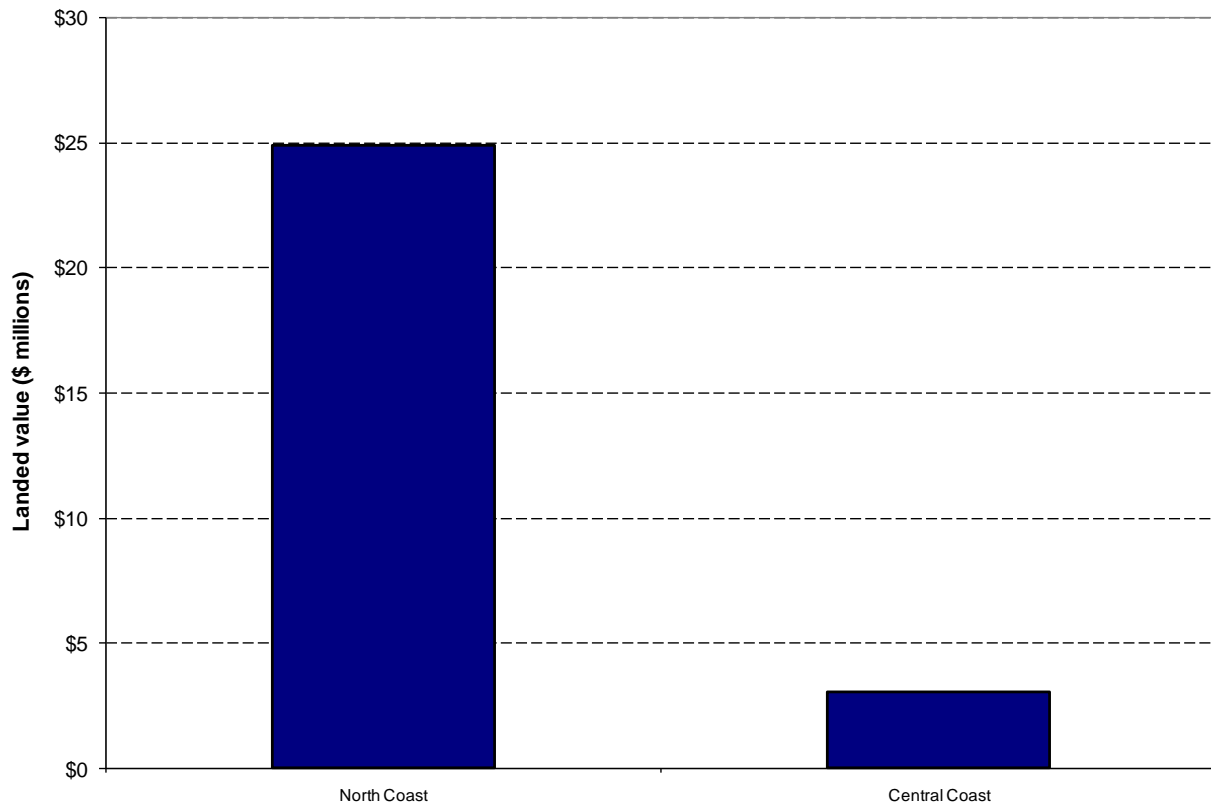


Source: Department of Fisheries and Oceans, Licencing

The total landed values reported for the North coast are also significantly higher than the Central coast, again due to the overwhelming influence of fisheries in Prince Rupert. In 2006, the cumulative landed values for the North and Central coast were \$25 million and \$3 million, respectively (shown in Figure 33). These landed values are based on the Vessel Registration Numbers (VRNs) associated with licences in each community. Because First Nations band licences are tracked in a different way, the landed values associated with these licences are not included in the reported totals. Note that in the North coast, 81% of licences are included in the

landed values total, while in the Central coast, only 41% of licences are included in the landed values.

Figure 33. Landed value of commercial fisheries by coast area in 2006 (millions of dollars)



Source: Department of Fisheries and Oceans, Licencing

What are the limitations of the data?

The total number of licences reported by coast area includes native (band and individual owned) and non-native licences. Although attempts were made to get the number of licences held by First Nations as a separate total, the data was not forthcoming for this report. The landed values reported are totals of the values recorded by licences linked to VRNs. Licences held by First Nations are not tracked in this manner, and therefore these landed values are not included in the totals. Attempts were made to attain this information from individual band offices, but the data was not made available for this report.

ACC-4: First Nation and local community forest sector revenues, compared with revenues to the province

SUMMARY

Status

Forest and Range Agreements (FRAs) that are in place on the Coast provide revenue sharing opportunities for First Nations whose traditional territories contain harvesting activity. Each of these agreements span a 5-year period. In 2006, 12 FRAs were in place on the Coast. These accounted for a total of 32.3 million dollars over 5 years, averaging to approximately 6.5 million dollars per year. Provincial revenues for the Coast in 2006 were approximately 18.6 million dollars indicating that First Nations received up to 35% of the total provincial revenues for the region.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

Forest and Range Agreements ensure revenue sharing occurs over a period of 5 years. The provincial government has continued to put into place more agreements with First Nations since 2006.

What is Being Measured?

This indicator measures the amount of forestry revenues received by First Nations through Forest and Range Agreements as compared to the forestry revenues received by the provincial government through collection of stumpage fees.

Why is this Indicator Important?

Some First Nations have signed agreements with the provincial government to ensure that they receive a portion of the revenues the province is currently collecting for harvesting that is taking place on traditional territory. It is important to identify the total revenues received by the province in this area, and the total monies that are dispersed to First Nations with traditional territories in the area. Forestry is the largest industry in the coastal region, and it is important that First Nations living in the region also receive benefit from the activities taking place in their traditional territories.

What is happening?

Between October 2003 and January 2008, the province had signed 12 revenue sharing agreements with First Nations that have traditional territories on the Coast. Each agreement is specific to the First Nation's territory and population. As shown in Table 5, local revenue sharing payments from the province total 32.3 million dollars over 5 years, an average of 6.5 million dollars per year³¹. See Appendix C for further details and comments for each agreement. For the 2006 year, the provincial revenues from stumpage fees were approximately 18.6 million dollars for the coast region³². The province dispersed approximately 35% of the total revenues for the region to First Nations through the signed FRAs.

³¹ Pierce Lefebvre Consulting, May 2008. *EBM Working Group – Inventory of Economic Development Initiatives in the BC Central and North Coast Region*.

³² Calculated from the Ministry of Forest and Range Harvest Billing System.

Table 5. Forest and Range Agreement revenue sharing between the province and First Nations on the coast

Date Signed	First Nation (by order of date signed)	FRA Revenue Sharing, over 5 years (\$ million)
2003/10	Gitga'at	1.57
2003/10	Lax Kw'aalams	6.85
2003/12	Metlakatla	1.73
2004/02	Heiltsuk	5.17
2004/02	Kitasoo	1.2
2004/02	Wuikinuxv	0.625
2004/02	Haisla	3.79
2004/09	Kitkatla	3.99
2004/12	Xwemalhwu	1.06
2005/02	Namgis	3.8
2005/03	Wewaikai	2.1
2006/04	Da'naxda'xw Awaetlatla	0.436
TOTAL		32.3

Source: *Pierce Lefebvre Consulting(2008)* EBM Working Group – Inventory of Economic Development Initiatives in the BC Central and North Coast Region, Final Report – May 31st, 2008

What are the limitations of the data?

See ACC-5 data limitations for an explanation on why approximately 9% of the total provincial revenues are not accounted for at this time. The FRA revenue sharing numbers are for a 5-year period and all begin and end on different dates. The exact amount dispersed in 2006 is therefore unavailable and the amount quoted as being dispersed each year is an estimate based on all the agreements currently in place.

SUMMARY**Status**

Timber harvest levels are much higher in the Central coast than the North coast, though both combined account for a very small portion of the total harvest in the BC coastal region. The Central and North coasts harvested 2.4 million and 140,000 cubic metres of timber, respectively in 2006. In the same year, the harvest in the whole coast was 20 million cubic metres³³. Harvests are likely limited by the remoteness of the Central and North coastal forests, and the generally lower access to equipment and labour.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The BC Ministry of Forests and Range's State of BC's Forests report in 2006 forecasts that timber supply in the coast region is decreasing by 12% or more for timber supply areas and tree farm licences, based on current harvestable land base and management practices³⁴. With changing management practices in the North and Central coasts and reallocations of forest resources to local community members and First Nations, this indicator may show a decrease in the total timber harvested over time, though there is likely to be an increase in the portion that is harvested locally.

What is Being Measured?

This indicator shows the volume of wood harvested for each region. The volume is calculated from the BC Ministry of Forest and Range (MoFR) Harvest Billing System (HBS). The HBS tracks all timber that is cut from provincial Crown land by timber mark. Tracking the harvest by timber mark allows it to be spatially identified so that a volume for each coast area can be calculated. This system tracks all types of harvesting, including, TFLs, woodlot licences, BC Timber sales, Forestry licences to cut, etc.

Why is this Indicator Important?

Tracking the change in harvest level in the coast area indicates the amount of activity taking place in the forestry sector over time. This provides a measure of the current strength of the forestry industry in the region. Although the provincial government dictates the volume of timber that can be cut for most licenses through the apportionment of an Annual Allowable Cut (AAC), the actual volume of timber harvested may be significantly lower than the AAC. Several factors combine to dictate whether or not that volume will be cut, with prevailing economic conditions being the primary contributing factor. These conditions include global market competition and the value of the Canadian dollar relative to the US. Other factors include accessibility of the timber, availability of labour and equipment.

What is happening?

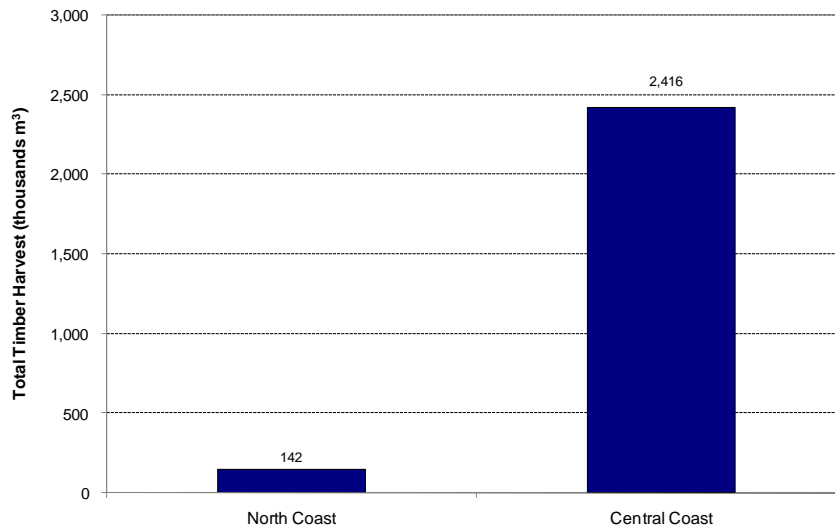
The forestry industry is much more active in the Central coast than in the North coast. As shown in Figure 34, the approximate volume of timber harvested in the Central and North coasts in 2006

³³ Ministry of Forest and Range Annual Report 2006/2007:
http://www.for.gov.bc.ca/hfd/pubs/docs/mr/annual/ar_2006-07/for.pdf, p.11

³⁴ BC MoFR State of British Columbia's Forests – 2006: <http://www.for.gov.bc.ca/hfp/sof/2006/13.htm>

was 2.4 million and 140,000 cubic metres, respectively. This is likely an underestimate because some of the volume reported in the Harvest Billing System for the coast could not be located spatially. See the data limitations section below for details. The volumes harvested in these two areas account for a very small portion of the coastal and provincial totals, which were 20 million and 85 million cubic metres in 2006, respectively³⁵. The green zone of the map in Figure 35 shows the MoFR coastal region.

Figure 34. Volume (1000 m³) of timber harvested in 2006 by coast area



Source: BC Ministry of Forest and Range, Harvest Billing System

What are the limitations of the data?

The BC MoFR Revenue Branch provided all volumes and values of timber harvested for each timber mark in the coastal region. Because the forest districts have different boundaries than the study areas for this report, the timber marks were linked to a GIS file provided by MoFR to identify the timber marks falling within the Central and North coast areas. Several timber marks (314 out of 1283) were not included in the provided GIS file, and thus could not be determined as in or out of the study area. These timber marks account for approximately 25% of the total volume (but only 9% of the total value) reported in the HBS for the coast in 2006.

³⁵ Ministry of Forest and Range Annual Report 2006/2007:
http://www.for.gov.bc.ca/hfd/pubs/docs/mr/annual/ar_2006-07/for.pdf, p.11

Figure 35. BC Ministry of Forests and Range Coastal Region



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

ACC-6: Percent of Backcountry Tenures, Guide Outfitter Tenures, Sport fishing lodge licenses owned by coast area residents and percent of productive activity by coast area companies

SUMMARY

Status

Backcountry tenures, guide outfitter tenures and sport fishing lodge licenses are all primarily held by non-residents in both the North and Central Coast areas.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The backcountry tourism industry is currently growing and gaining importance in local economic activity. Although the majority of backcountry tenures, guide outfitter tenures and sport fishing lodge licenses are currently owned by non-residents, this industry provides an opportunity for increasing local ownership over a natural resource-based economic activity.

What is Being Measured?

This indicator measures the level of local involvement in tourism activities in the coast area. Three aspects of tourism are considered: backcountry adventures, guided outfitting (hunting), and sport fishing lodges. The percentage of tenures held by coast area residents for each of these activities is identified. Furthermore, measures of productivity are identified for each of the activities as follows.

Backcountry adventures include all extensive use commercial recreation tenures. The types of activities include: guided nature viewing, guided saltwater recreation, heli-hiking and heli-skiing. Extensive use backcountry tenure owners are required to file annual reports that include the number of person days taken on guided tours, as this information serves as the basis for determining the rent paid to maintain the tenure. This data is not yet available electronically and will not be reported in the baseline year.

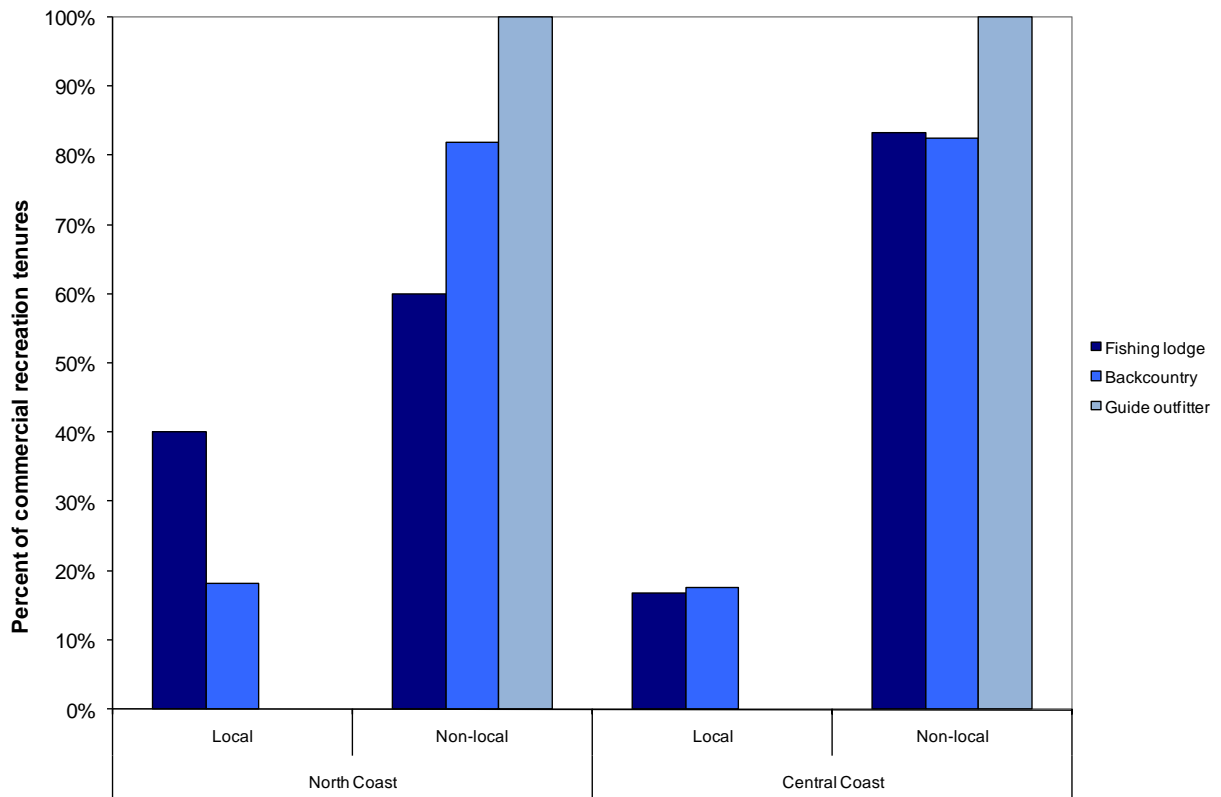
Guide outfitter tenures are allocated to individuals taking people out on guided hunting trips. Guide outfitters report to the BC Ministry of Environment after every excursion the number and type of animals trapped, and the number of people days on the excursion. Either of these pieces of information can be used to measure productivity in future updates.

Fishing lodges include those in freshwater areas, categorized as "Fish Camps", and those in coastal areas, categorized as "Tidal Sports Fishing Camps". These are considered intensive use tenures, and must report the number of beds in the facility to ILMB. The number of beds can be used as an indication of the size of the lodge, though it does not provide a direct measure of productivity. Sport fishing licences acquired by each lodge would provide a better indication of productivity, though this was not possible for the baseline year due to protection of privacy.

Why is this Indicator Important?

The tourism and commercial recreation industry is a well-established component of the local economy in the North and Central Coast areas. This industry is much more accessible to local involvement and ownership than other resource industries that may require investment in technologies such as forestry, aquaculture and mining, making it an important indicator to track for local ownership.

Figure 36. Percent of commercial recreation tenures held locally and non-locally, by coast area



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

The tourism sector has been growing over recent years as interest in eco-tourism activities, such as kayaking, backcountry hiking and cultural tours, increases. The cruise ship industry is also increasing in size and contributes to front country tourism in the north coast through organized tours when passengers are in port. Although most of the tourism is seasonal, it is contributing to greater economic diversity for the region.

What is happening?

As shown in Figure 36, non-residents are the primary owners of backcountry tenures, guide outfitter tenures and fishing lodge licences in both coast areas. In the North Coast, 25% of backcountry tenures are held by local residents, while in the Central Coast local residents own 17%. All of the guide outfitters that have tenures in the North and Central Coasts reside outside the coast areas. Out of the five sport fishing lodge licences in the north coast, two are currently owned by coast area companies, while two of the 10 lodge licenses in the Central Coast are owned by coast area companies.

Therefore, although this sector may provide seasonal employment opportunities to residents, not very much of the ownership is locally based. There are currently initiatives underway among some First Nations to take more ownership over this growing industry, particularly in relation to increasing cultural and backcountry wilderness tours³⁶.

³⁶ Recent initiatives are listed in the report "EBM Working Group – Inventory of Economic Development Initiatives in the BC Central and North Coast Region" by Pierce Lefebvre Consulting, May 2008.

What are the limitations of the data?

This indicator considers activities occurring in lodges and in the backcountry, but it does not look at general tourism occurring in the front country, such as that associated with the increasing cruise ship industry around Prince Rupert.

Data to measure the productivity of backcountry tenures is not yet available electronically and was not be reported in the baseline.

As the eco-tourism industry grows, a future consideration for this indicator is to track ownership and activity in other wilderness lodges (i.e. "Eco-lodges"). There is currently only one lodge listed as an eco-lodge in the coast areas.

ACC-7: Number of power generation tenures

SUMMARY

Status

Power generation tenures are almost all in the investigative stage, with 18 tenures currently assigned for windpower and ocean energy investigation in the Central Coast and 31 for windpower in the North Coast. Two of these tenures in the Central Coast are in development phase.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

With provincial government policy changes that allow selling power to the grid, new opportunities are emerging for independent power producers across the province. This may create local economic opportunities in the future, and should be tracked once these tenures begin producing energy.

What is Being Measured?

As local power generation moves from the investigation stage to development, this indicator will show the level of local ownership of power generation tenures.

Why is this Indicator Important?

The independent power generation sector is a growing sector. As it grows it may lead to improved access to cleaner energy for residents in the region, and create local economic opportunities. This sector is not likely to provide major employment opportunities directly, except during the development phase.

What is happening?

Power generation tenures are almost all in the investigative stage with 18 tenures currently assigned for windpower and ocean energy investigation in the Central Coast and 31 for windpower in the North Coast. Two of these tenures in the Central Coast are in development phase.

What are the limitations of the data?

Power generation tenures were not evaluated for the baseline year because there are no active projects at this time. These tenures should be reassessed at the next indicator update.

ACC-8: Number of other natural resource tenures, by sector, held locally and non-locally and percentage of productive activity by coast area companies

SUMMARY

Status

This indicator summarizes the activities in natural resources that are not addressed by other indicators. These activities include quarrying for aggregates, and collection and sale of non-timber forest products.

Although there are no active mineral extraction mines in the north and Central Coast areas, there are 17 aggregate quarries. There is more local ownership of quarrying tenures and activities then is seen in mineral exploration. In the Central Coast, 3 out of 8 quarrying tenures are locally owned, while in the North Coast 5 out of 9 tenures are locally owned. The total production per mine is not readily available, however, an approximation is made based on the size of each mine. With this approximation, local companies extracted 50 per cent of the materials by weight in the Central Coast, and 30 per cent of the materials in the North Coast.

Non-timber forest products (NFTP) are not currently regulated and cannot easily be tracked for indicator purposes. At this point there is insufficient data available to report on the extent of local and non-local productivity in NFTP.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The quarrying sector in coastal BC relies primarily on demand for aggregates in California.³⁷ There continues to be large demand for aggregates in California, however, the low value of the US dollar, and limited access to ports for aggregate delivery may impede this market over the coming years. Availability of appropriate aggregate material in the coast is not a constraining factor.

NFTP is now considered an emerging and growing sector in BC. Over 200 species are harvested for sale, with mushrooms and floral greenery the largest "crops." There is increasing interest in the potential of the wild-harvested nutraceutical and bio-products sub-sectors.³⁸ It is unclear what the potential is for the NFTP sector in the local economy without data specific to the Central and North Coast available. NFTP are seen as a potential source for replacing some lost jobs and revenues and a way to help create a more diversified local economy. However, there is very little known about how to manage non-timber products along with timber production in order to increase total economic return from the forest.³⁹

What is Being Measured?

This indicator shows the level of local ownership of quarrying tenures and the proportion of the total production done by local companies in sand and gravel extraction.

Why is this Indicator Important?

37 http://www.em.gov.bc.ca/Mining/MiningStats/Market_Analysis/overview.htm

38 Non-Timber Forest Products, Ministry of Forest and Range – Research Branch. Website: <http://www.for.gov.bc.ca/hre/nftp/> (Accessed July/08)

39 Canadian Model Forests. Canadian Model Forests Network. www.modelforest.net/cmfn/en/forests/special_project_areas/vancouver_island/ (Accessed July/08)

This indicator shows the amount of diversity in economic activity beyond the primary industries of forestry, fishing, recreation and aquaculture. Over time, some of these other natural resources may gain importance and warrant their own tracking.

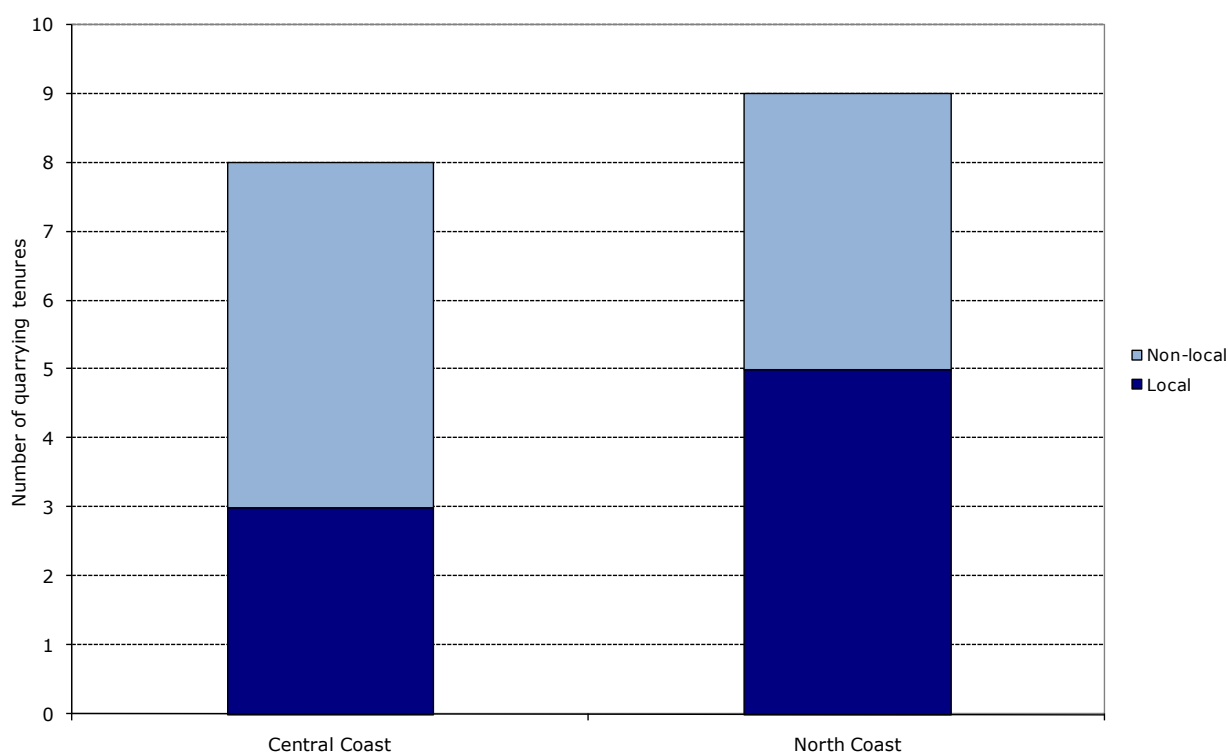
Aggregate quarries have a higher proportion of local involvement, through ownership and employment, than other mining activities. They currently account for approximate revenues of 1 million dollars in the Central Coast, and 4 million dollars in the North Coast.

Non-timber forest products (NTFP) is now considered an emerging and growing sector in BC and will contribute to creating a more diversified economy in the coast areas. For First Nations, NTFP continue to be an important part of community. Opportunities for economic and cultural revitalization exist in the enhancement and development of NTFP.

What is happening?

There are 17 aggregate quarries in the North and Central Coast that are active as of 2004, according to Ministry of Energy, Mines and Petroleum Resources (EMPR) records. In the Central Coast 3 out of 8 quarries are owned by local companies, and in the North Coast 5 out of 9 quarries are locally owned, as shown in Figure 37.

Figure 37. Number of quarrying tenures held locally and non-locally by coast area



Source: BC Ministry of Agriculture and Lands – ILMB and BC Energy, Mines and Petroleum Resources

Although EMPR does not currently maintain records of production, estimates were provided for the annual production for each quarry by EMPR. These estimates can provide a general guideline only, as they are not based on actual production, but on a survey to estimate quarry size conducted by EMPR in 2004. Given this estimation, approximately 50 per cent of Central Coast and 30 per cent of North Coast production can be attributed to locally-owned companies.

The Swamp Point Sand and Gravel quarry, which is operated by a Vancouver-based company, dominates the North Coast quarry production. The Swamp Point operation employs roughly 22 full-time equivalent positions, which tend to provide local employment opportunities.

What are the limitations of the data?

The information used to assess relative production of the quarries is an estimate only, as the actual production is not reported to EMPR per mine. The initial estimate was based on a survey of the mines conducted by EMPR in 2004 that determined their relative size and categorized each mine as small-seasonal or small. This estimate was then updated based on current knowledge of a minerals economist in the Mining and Minerals Division of the EMPR who is familiar with most of the mines. All smaller mines that he is unfamiliar with are assumed to produce 10 000 tonnes annually. EMPR plans to update this information more regularly. Therefore, future updates to the quarrying portion of this indicator should have more recent and consistent data to work from.

Non-timber forest products were not evaluated due to the lack of data available regarding collection and sale of the products and in what quantity. Royal Roads University has a Centre for Non-Timber Resources and should be contacted in future to determine if more information becomes available that can be used for this indicator. Currently, mushrooms are the only NTFP with commercial activity.

SUMMARY

Status

The Economic Diversity Index (EDI) for communities in the areas indicates an economic dependence on a limited number of industries and therefore, increased vulnerability to economic volatility. The EDI for the Central Coast was 60 (on a scale of 100 where 100 is the most diverse), reflecting smaller and more isolated communities. Prince Rupert had an EDI of 66. The provincial mean was 67. The EDI for both areas are surprisingly high given that there is not much diversity in the economies of Coast communities.⁴⁰

Trend

The Economic Diversity appears to be decreasing for the province as a whole, but more significantly for the Coast areas. This may be an area of concern given what appears to be increasing dependence on a limited number of industries and the current climate of economic volatility.

Outlook

A 2008 report by Ference Weicker and Company Ltd. highlights key recent and planned investments in the Central and North Coast regions which may help to diversify the industry base and spur economic activity in the region. The projects range from an expansion of port facilities in Prince Rupert, to the construction of pipeline storage facilities, to hydroelectric projects and other energy generation facilities, to the construction of residential developments and improvements to road infrastructure.⁴¹ These planned investments should help to stabilize or increase the EDI, with direct or indirect impacts on the community.

What is Being Measured?

The Economic Diversity Index provides a measure of the diversity of the industry base of a community. The higher the index number (0-100), the more diverse a community's economy is presumed to be. On the one end, a community is assigned a 0 if the area is entirely dependent on one sector, and on the other end they are assigned 100 if it was equally dependent on all sectors. Sectors include: Forestry, Mining, Fishing and Trapping; Agriculture and Food; Tourism; Public Sector, Transportation; Other Non-employment Income; and Transfer Payments.

Why is this Indicator Important?

Economic diversity is an important indicator of the stability and resiliency of regional economies. Dependency on a single industry makes that economy extremely vulnerable to economic downturn. BC Statistics developed an Economic Diversity Index (EDI) that rated 20 smaller BC communities in 2001. The higher the number (on scale of 0-100) the more diverse a community's economy is presumed to be. Although diversity is generally thought to be good, it is by no means a guaranteed indicator of prosperity as in the case where a single industry-dependent town that loses that industry will probably have increasing diversity as it struggles to develop a new economic base.

⁴⁰ This statistic may not be updated in the future, therefore may not be useful for tracking progress but was included since it was part of the list of Schedule C/G indicators.

⁴¹ *Social and Economic Assessment and Analysis of First Nation Communities and Territorial Natural Resources for Integrated Marine Use Planning in the Pacific North Coast Integrated Management Area.* Ference Weicker and Company Ltd. May 2008.

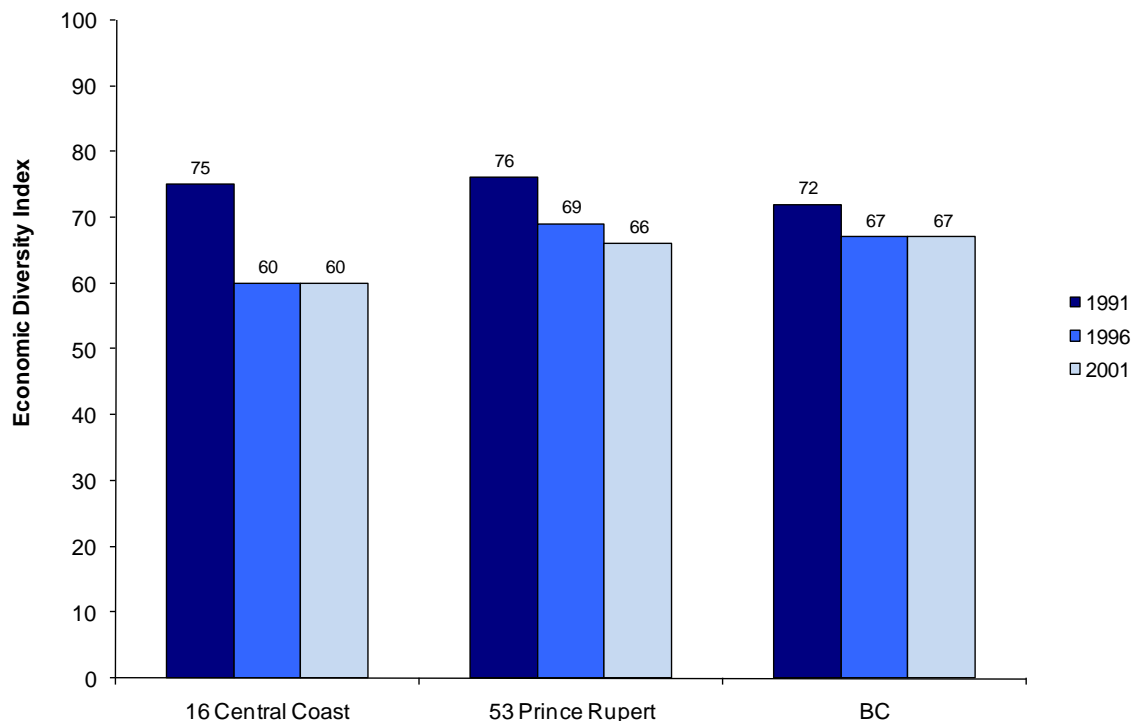
What is happening?

Economic Diversity Indices (EDI) were available for the Central Coast region and Prince Rupert only. Many communities in the coast area are small and dependent on a small number of primary industries. It should be noted that there have typically been strong correlations between economic diversity and population size, especially given that many coast area communities are limited in size and are relatively isolated. There is also the consideration that a diversified economic base will provide a community with more stability in volatile economic times. The Central Coast had an EDI of 60, while Prince Rupert had an EDI of 66, indicating that Prince Rupert has a more diverse economic structure. Although Prince Rupert is still subject to the regional dependency on primary resource industries, it is a larger urban centre which has more secondary industrial activity supporting the local economy.

Figure 38 shows that the economic diversity of the province as a whole decreased from 1991 to 2001. However, decreases in the EDI are more pronounced on the Coast. The Central Coast decreased from an EDI of 75 in 1991 to an EDI of 60 in 1996. The EDI remained at 60 in 2001. Prince Rupert's EDI has steadily declined from 76 to 66 over the same ten year period. The provincial mean has remained steady at 67 from 1996 to 2001 after decreasing from 72 in 1991. The differences between 1991 and the other two years may have resulted from methodological differences between the 1991 calculations and those for 1996 and 2001.

Unfortunately data is not available for 2006 and it is unclear if BC Stats will report on these indices in the future.

Figure 38. Economic Diversity Indices of Coast Areas (1991, 1996, 2001)



Source: British Columbia's Heartland At the Dawn of the 21st Century 2001 Economic Dependencies and Impact Ratios for 63 communities

What are the limitations of the data?

Data was only available for the Central Coast and Prince Rupert and was published in a report that may not be repeated. The compilation of EDI data has not occurred since 2001 and it is uncertain whether the EDI will be compiled again in the future. In addition, diversity is a complicated indicator, and may make comparing trends challenging.

SUMMARY**Status**

Travel options to and from the North and Central Coast are limited, thereby creating a barrier between Coastal communities and other parts of British Columbia. Many communities are boat access only, and rely on BC Ferries to provide ferry service. Other alternate ways to travel to the Coast areas rely on charter float plane service and private boats, which were not tracked here, but may be added in future reports. The number of ferry departures on the Inside Passage ferry route was highest in the communities of Port Hardy (which is outside the study area), Bella Bella and Prince Rupert. For the summer route, the highest number of sailings departing is in the communities of Bella Bella and Bella Coola, with significant numbers of sailings leaving from Shearwater, Port Hardy and Ocean Falls.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

Based on rising fuel costs and low levels of population, it is unlikely that additional sailings will be added to the ferry service, unless there is a significant increase in demand, which would likely be in the summer months for tourism and leisure activities.

What is Being Measured?

This indicator measures the number of passengers travelling on ferry routes and the number of sailings to the North and Central Coast.

Why is this Indicator Important?

Travel routes to the Coast areas are limited, and many of the Coast area communities are boat access only. Measuring the number of passengers on ferry trips and the number of sailings is an indicator of the number of people travelling to and from these communities on an annual basis. Limited access to and from these communities can impact economic opportunities in the region because it can restrict the movement of goods and services.

There is one route to the coasts on the Inside Passage in the fall, winter, and spring and an additional route in the summer to accommodate the tourism industry. Transportation access data is very important, and is one way of tracking travel in and out of these communities. In future, other ways of travel into these communities may be reported.

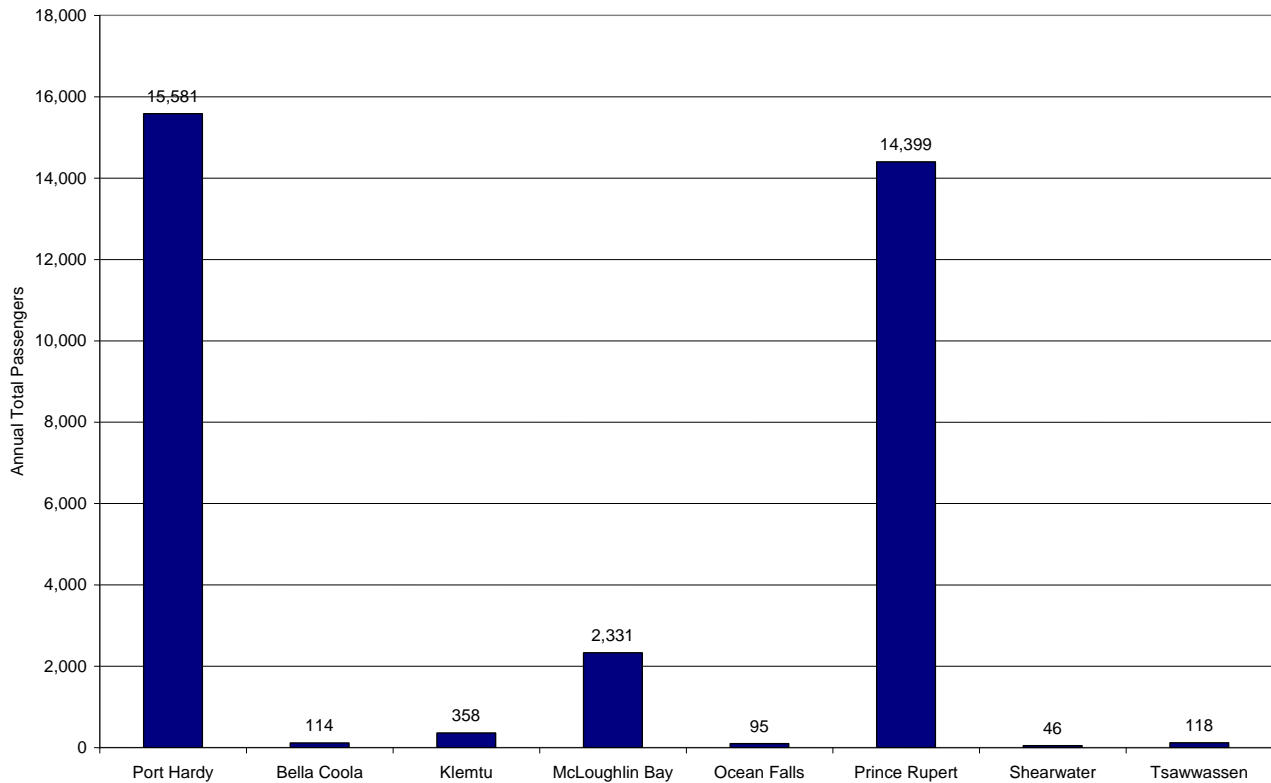
Access to remote communities is a constant challenge for residents and visitors alike, putting a strain on the movement of goods, services and people. This can have a significant impact on the economic health of a region, from getting goods to market, to finding agreeable options for tourists to access destinations, to forcing residents to leave the region to access skills training opportunities. Tracking the increase or decrease in access over time to these communities will indicate either an increase or decrease in demand that justifies a change in ferry service.

What is happening?

As shown in Figure 39, the number of passengers leaving points of departure is highest in the communities of Port Hardy, and Prince Rupert. This is due to the fact that Port Hardy is the main

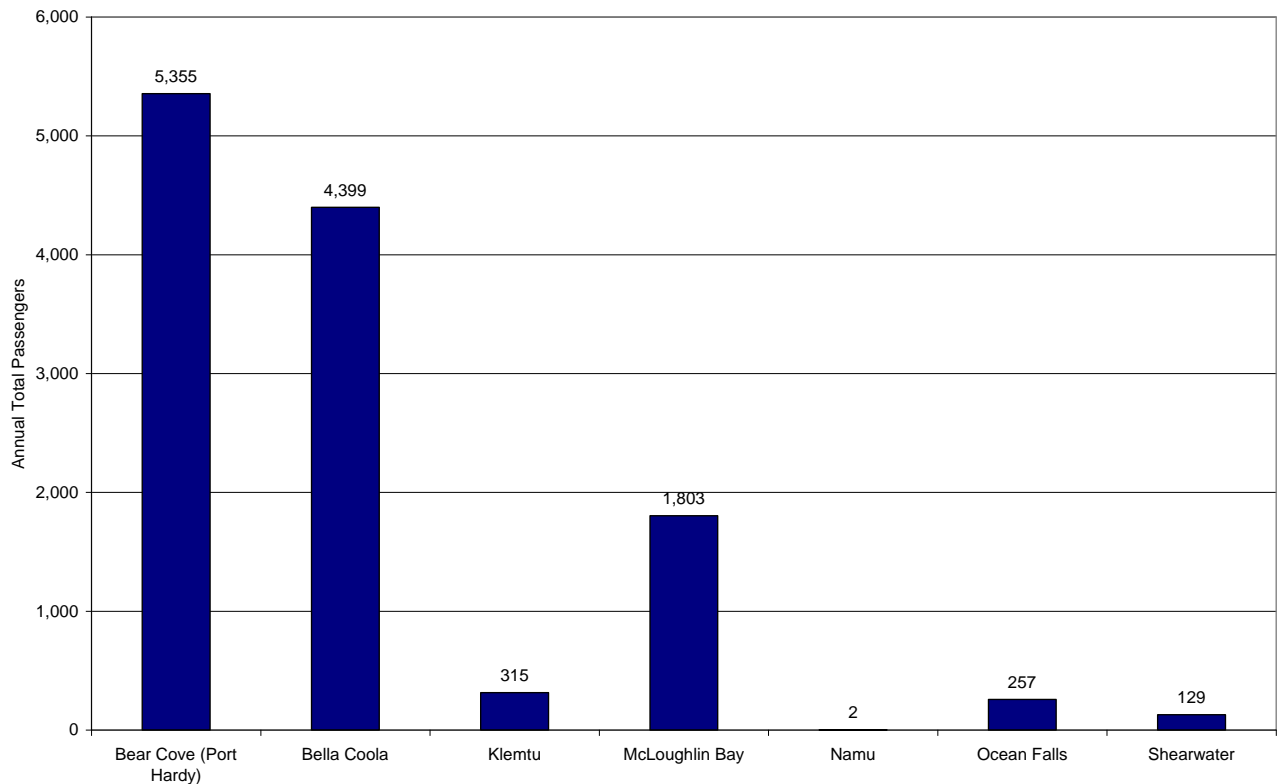
nautical gateway to the North, while Prince Rupert is the gateway to the North Coast and other destinations in the area. The third highest number of departing passengers was from McLoughlin Bay (Bella Bella). There were fewer departing passengers from Bella Coola, Klemtu (Kitasoo), Ocean Falls and Shearwater reflecting the small populations in these communities. As shown in Figure 40, on the summer route running from May to September, the highest numbers of departure passengers are from Port Hardy on Vancouver Island and Bella Coola.

Figure 39. Annual number of passengers to the North and Central Coast (the Inside Passage Fall/Winter/Spring Route 10), 2006



Source: BC Ferries

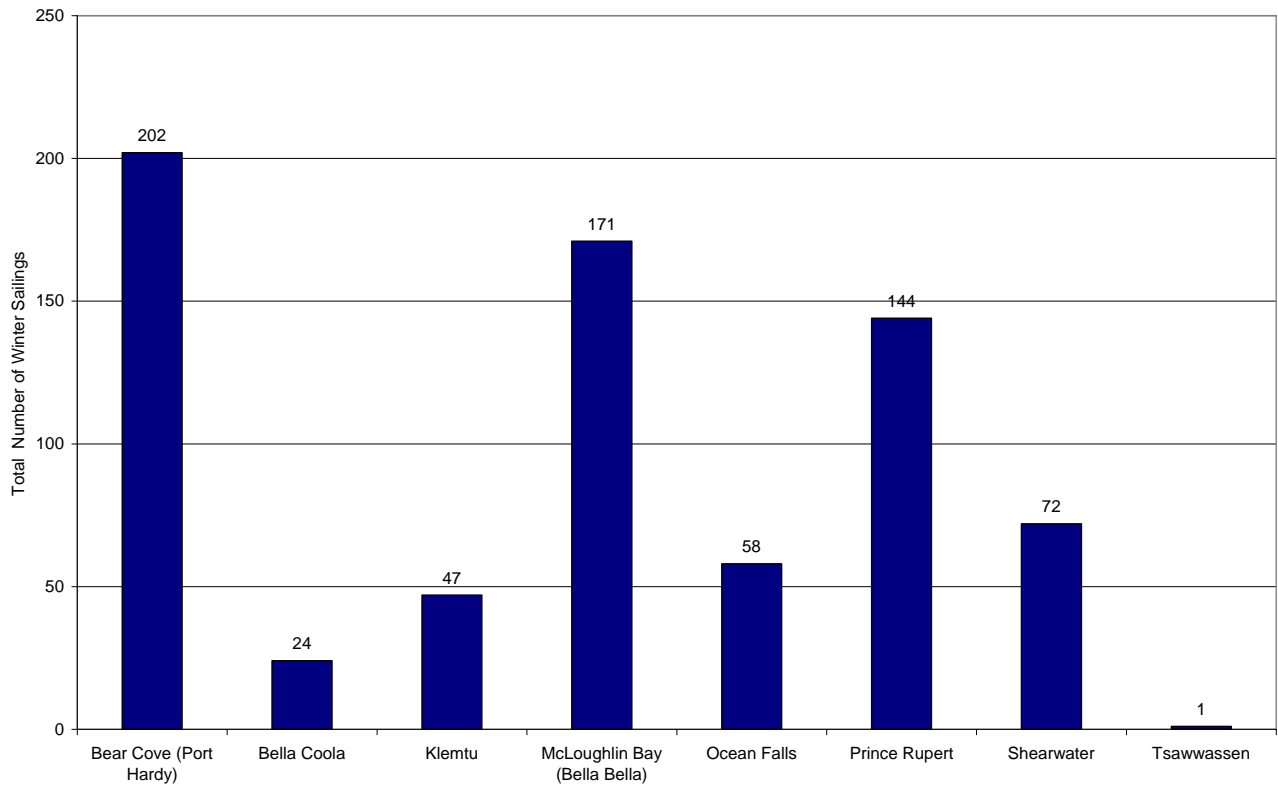
Figure 40. Annual number of passengers to the North and Central Coast (Summer Route 40), 2006



Source: BC Ferries

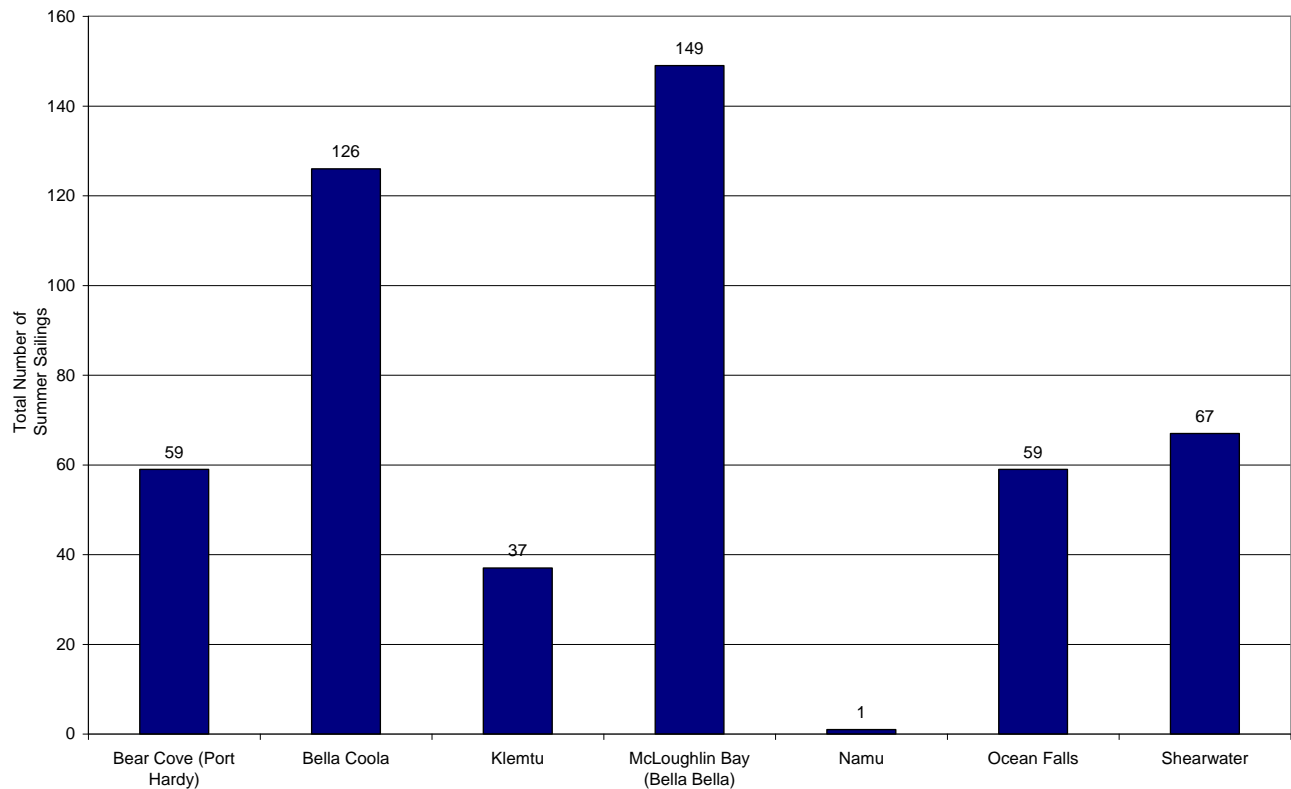
As shown in Figure 41, the number of ferry departures is highest in the communities of Port Hardy (which is outside the study area), Bella Bella and Prince Rupert, with lower numbers of sailings in the smaller communities. For the summer route (Figure 42), the highest number of sailings departing is in the communities of Bella Bella and Bella Coola, with significant numbers of sailings leaving from Shearwater, Port Hardy and Ocean Falls.

Figure 41. Annual number of sailings per community: Inside Passage Fall/Winter/Spring Route 10, 2006



Source: BC Ferries

Figure 42. Annual number of sailings per community: Summer Route 40, 2006



Source: BC Ferries

What are the limitations of the data?

This ferry data was provided by BC Ferries for passengers travelling to and from the North and Central Coast. There is however no way to tell which passengers are local and which passengers are tourists. The assumption is that an increased number of passengers in the summer are likely passengers travelling to the region for tourism and leisure activities.

SUMMARY

Status

In the North Coast TSA (timber supply area) and Mid Coast TSA, 0% of the total committed volume was harvested by First Nations and local communities by December 31, 2006, despite having 24,972 metres cubed committed⁴². This indicates that given the market conditions and other circumstances in 2006, First Nations could not find a profitable way to harvest the committed timber.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The provincial government is currently allocating larger percentages of the total volume of timber available to First Nations and local communities when possible. However, there are several factors that inhibit First Nations and local communities from obtaining licences and actually harvesting the timber. When the market conditions for lumber improve, First Nations and local communities should have more volume available to harvest. Despite this, there are many other factors that may continue to hinder these groups from harvesting their full allocations. Primarily this includes a lack of infrastructure in place to ensure the harvest is profitable.

What is Being Measured?

This indicator measures the percent of committed volume to First Nations and local communities that has been harvested. Committed volume refers to volume that has been placed under license by the Ministry of Forest and Range. It should be noted that not all volumes allocated to First Nations have been committed to licenses. This indicator measures the harvest relative to the committed volume.

Although the data was not available at the time of writing this report, this indicator is also intended to compare the volume committed to First Nations and local communities to the total committed volume in the area.

Why is this Indicator Important?

Comparing the volume harvested to the volume committed indicates how successful the First Nations and local communities are in meeting their license commitments. There are many factors that inhibit First Nations and local communities from meeting their commitments, including market conditions and access to infrastructure to harvest, process, and bring the product to market. First Nations typically work with other licensees because these licensees already have the appropriate FSPs (Forest Stewardship Plan) and infrastructure in place. Over time, this indicator is intended to demonstrate whether or not barriers to harvesting committed volumes are being reduced.

Furthermore, comparing the volume committed to First Nations and local communities to the total committed volume in the area demonstrates whether the proportion of volume available to these groups is changing.

⁴² Personal communication with Julian Grzybowski, RPF, Tenures Forester with Ministry of Forests and Range - Coast Forest Region

What is happening?

At the time of writing this report, only partial data was available for this indicator. In the North coast TSA (timer supply area) and Mid coast TSA, which primarily covers the North coast for the context of this report, First Nations harvested 0% of the committed volume. It should also be noted that only 5.9% (24,972 metres cubed) of the total volume allocated to First Nations (425,650 metres cubed) had been committed by December 31, 2006⁴³. Therefore, a much higher volume is available than has been harvested at this time.

The forestry sector on the coast experienced a rough year in 2006. With an economic decline in the US, housing starts declined leading to lower demand. Simultaneously, the Canadian dollar increased relative to the US dollar, and until October 2006, anti-dumping fees were applied to all timber exported to the US due to the softwood lumber trade dispute. These factors combined to cause a slow-down in the forestry activity.

This slow-down, however, afforded the opportunity to increase the apportionment of forest resources to First Nations and local communities along the coast⁴⁴. In the 2003 Forestry Revitalization Plan, 20% of volumes for long term tenures are to be reallocated to BC Timber Sales, First Nations and communities. The Ministry of Forest and Range Annual Report for 2006/2007 also indicates that apportionment to First Nations and communities is increasing⁴⁵. Furthermore, two Community Forest Agreements with the Nuxalk First Nation and Bella Coala Resource Society were created, though no harvest took place in either of these during 2006. Poor market conditions were the primary reason cited for the lack of harvest in a study conducted in October 2007.

What are the limitations of the data?

At the time of writing this report, the complete data could not be obtained for this indicator. The data was obtained only for the North coast TSA and Mid coast TSA due to the complexity of splitting volumes allocated to First Nations territories in the Kingcome and Strathcona TSAs which include northern Vancouver Island.

⁴³ Personal communication with Julian Grzybowski, RPF, Tenures Forester with Ministry of Forests and Range - Coast Forest Region

⁴⁴ BC Ministry of Forest and Range Annual Report 2006/2007:

http://www.for.gov.bc.ca/hfd/pubs/docs/mr/annual/ar_2006-07/for.pdf

⁴⁵ http://www.for.gov.bc.ca/hfd/pubs/docs/mr/annual/ar_2006-07/for.pdf

GOVERNANCE

Governance indicators provide a measure of the state of governance in a given area. These types of indicators are generally focused on measuring specific issues related to governance, including: electoral systems, corruption, human rights, public service delivery, civil society, and gender equality. In this report, the number and percent of coast areas covered by (Provincial) Government to (First Nations) Government Agreements is used as a measure of governance in the coast areas. This indicator shows the amount of land that is managed collaboratively to ensure the long-term ecological and cultural integrity of First Nations' traditional territories.

GOV-1: Number and percent of coast areas covered by government to government agreements

SUMMARY

Status

The BC provincial government has entered into Strategic Land Use Planning Agreements (SLUPAs) with 10 First Nations on the Coast. First Nations traditional territories currently under SLUPAs cover 76% of the Central Coast and 79% of the North Coast total land base⁴⁶.

Each SLUPA contains an agreed upon list of conservancies that protect biological diversity and natural environments, and preserve and maintain social, ceremonial and cultural uses for First Nations.⁴⁷ Conservancies currently cover 20% of the Central Coast and 24% of the North Coast total land base.

Some First Nations have entered into Collaborative Management Agreements (CMAs) with the provincial government that outline how each the Nation will manage conservancies in its territory. Conservancies with CMAs currently cover 54% of the Conservancies in the Central Coast and 40% of the Conservancies in the North Coast.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The Government to Government agreements are intended to be a means for the province to work together with First Nations to ensure the long-term ecological and cultural integrity of the lands and resources in First Nations' traditional territories. The intended result of the agreements is collaborative land use management planning to ensure Aboriginal people share in the economic and social development of British Columbia. Management planning is currently underway for 20 Conservancies in the Central Coast with the first plan approvals expected in the summer of 2008.

What is Being Measured?

This indicator shows how much of the land base is covered by current Government to Government land use agreements between the BC provincial government and First Nations in the North and Central Coasts. There are three components to this indicator.

⁴⁶ Following submission of this draft report, the provincial government signed an agreement with the Lax Kw'alaams making the total number of SLUPAs 11 on the Coast. Due to the timing of this report, the Lax Kw'alaams territory is not included in the calculations or discussion as having signed the agreement.

⁴⁷ <http://coastalfirstnations.ca/EBM/protectedareas.aspx>

Number and area covered by Strategic Land Use Planning Agreements (SLUPAs)

The area covered by Strategic Land Use Planning Agreements (SLUPAs) is measured by calculating the land area covered by the traditional territories of First Nations that have signed SLUPAs, at the time of data collection. SLUPAs provide guidance and direction on the management of land and resources within the traditional territories. While some of the traditional First Nations territorial areas overlap in the data provided, the land base is only counted one time, ensuring the land base being reported does not exceed 100%.

Number and area covered by conservancies

Conservancies have been designated under the provincial Park Act as areas that protect biological diversity and natural environments, and preserve and maintain social, ceremonial and cultural uses for First Nations. This is a special park designation currently only used in the North and Central Coast of BC.

Number and area covered by conservancies under Collaborative Management Agreements

Collaborative Management Agreements (CMAs) between First Nations and the Province of British Columbia provide a framework for government to government working relationships. The agreements also describe First Nations' involvement in areas such as management planning, permitting, research and inventory, cultural resources management, and low impact economic development within protected areas.

Why is this Indicator Important?

This indicator provides some insight into the level of involvement of First Nations in land and resource planning for the Coast land base. This indicator does not speak to the status of the land ownership, but instead focuses on the involvement of First Nations in decisions about the future direction and uses of the resources on the land. Although there are outstanding land claims to traditional territories in the coast areas, the provincial government continues to manage and plan for resource use in the region. First Nations that signed the KNT Agreement in Principle and the Turning Point Land and Resource Protocol agreement, which subsequently led to the Strategic Land Use Plans (SLUPAs), have agreed to government to government discussions about the management of the resources in their territory, without giving up rights associated to their underlying Aboriginal Title.

What is happening?

Number and area covered by Strategic Land Use Planning Agreements (SLUPAs)

In 2006, 18 coastal First Nations and the BC provincial government signed agreements to serve as the basis for future land management in the Central and North Coasts. Some of the First Nations then signed individual Strategic Land Use Planning Agreements (SLUPA) that will guide land management in its territory. As shown in Table 6, of the 16 First Nations that have signed SLUPAs in the coast areas, 14 have traditional territories in the Central Coast and 6 have traditional territories in the North Coast areas. This represents 76% and 79% of the land base in the Central and North Coast, respectively (Figure 43).

There remain several First Nations that have not signed SLUPAs that have traditional territories within the coast areas. Given the current data available through the Integrated Land Management Bureau (ILMB) in the Ministry of Agriculture and Lands, there are six in the Central Coast First Nations and two with traditional territories in the North Coast that have not signed SLUPAs. One of these is the Nisga'a, who have signed a treaty and their resource management is dictated through the treaty. Other nations include: Gwawaenuk Tribe; Tsawataineuk; Ulkatcho; Kwicksutaineuk-Ah-Kwaw-Ah-Mish; Nuxalk Nation and Comox First Nation in the Central Coast area and Lax Kw'alaams (see note at beginning of indicator) in the North.

Number and area covered by Conservancies

The BC government amended the Park Act in 2006 to define a new type of park for the Coast called Conservancies. Since 2006, a total of 116 conservancies have been defined, with 70 in the Central Coast and 46 in the North Coast areas (Table 6). This represents 20% and 24% of the land base in the Central and North Coast, respectively (Figure 43).

Number and area covered by conservancies under Collaborative Management Agreements

Since defining these Conservancies, some First Nations have also signed Collaborative Management Agreements (CMAs) with the province to outline how the First Nations will manage the land area in the Conservancies in their traditional territories. As shown in Table 6, in the Central Coast 37 of the Conservancies have a CMA while in the North Coast, 24 of the conservancies have a CMA. This represents 54% and 40% of the total conservancy area in the Central and North Coast, respectively (Figure 43).

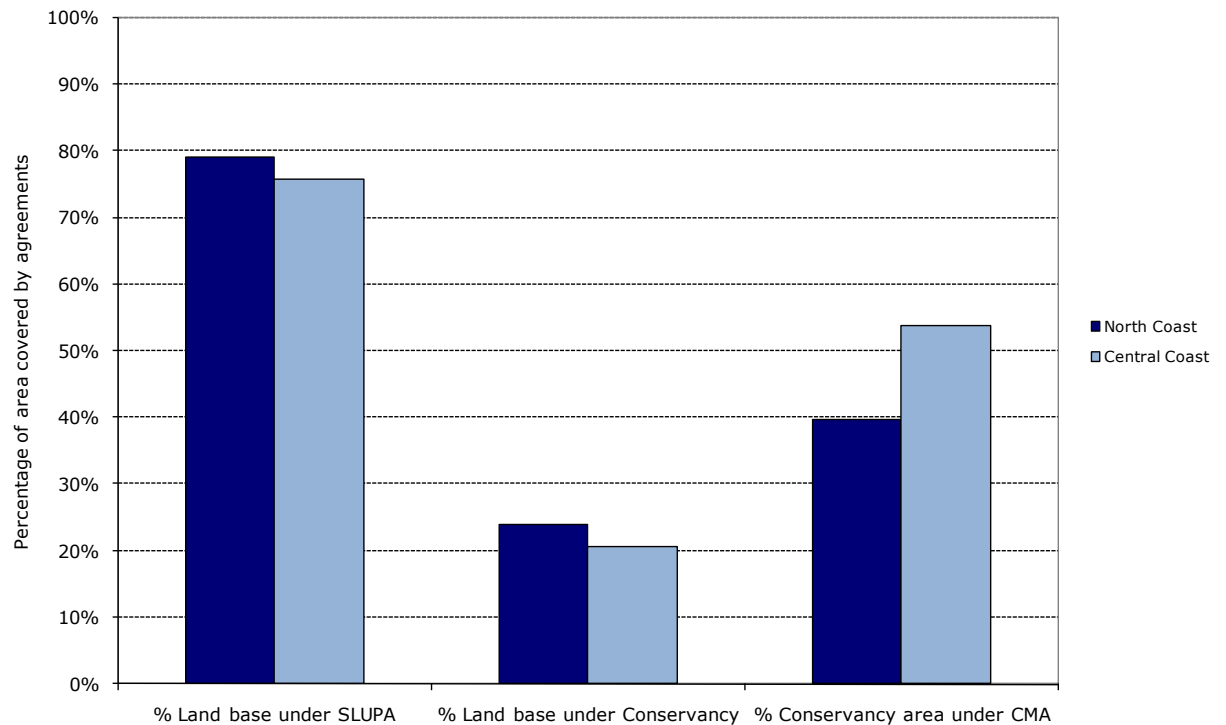
While it is acknowledged that some areas located under Conservancies have overlapping First Nations territories contained in them, only the number of Conservancies that have at least 1 CMA are reported for this indicator. This prevents Conservancies with more than one CMA from being double counted.

Table 6. Number of Government to Government Agreements by Coast Area, 2008

	Number of traditional territories with SLUPAs	Number of Conservancies	Number of Conservancies with CMAs
North Coast	6	46	24
Central Coast	14	70	37
Total	16	116	61

Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Figure 43. Land Base Covered by Government to Government Agreements, by Coast Area, 2008



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

What are the limitations of the data?

This indicator only considers land areas that are covered by Government to Government agreements. In future, the indicator could be expanded to consider water-based agreements, as ownership and use of resources in the foreshore areas is of high importance to First Nations culture and traditions. An integrated marine use planning process is currently underway in the Pacific North Coast Integrated Management Area that can inform this.

CULTURE

Culture indicators provide a measure of the degree of support for culture-related activities as a dimension of everyday life within a given population (i.e., a community). Access to and participation in these activities can also provide an indication of fairness and social equity within the community. A strong sense of cultural identity may contribute positively to economic growth, social cohesion, the acceptance and encouragement of diversity, and creative thinking in a range of fields.⁴⁸ The indicators reported here (percent of First Nation community members in areas speaking tribal languages and number of returning salmon to key waterways in areas) measure key aspects of First Nations culture.

CUL-1: Percent of First Nation community members in areas speaking tribal languages

SUMMARY

Status

In 2006, the Central Coast reserve communities of Bella Bella had 9% and Kitasoo had 11% of individuals of aboriginal identity reporting knowledge of traditional languages. At the regional scale, the Central Coast Regional District reported 9% and Mount Waddington Regional District reported 18% of individuals of aboriginal identity reporting knowledge of traditional languages.

In the North Coast, 40% of aboriginal individuals in Kincolith and 9% of aboriginal individuals in Prince Rupert reported knowledge of aboriginal languages in 2006. At the regional scale, the Kitimat-Stikine Regional District reported 23% and Skeena-Queen Charlotte Regional District reported 10% of individuals of aboriginal identity with knowledge of traditional languages.

Data was not available for several communities including: Bella Coola, Wuikinuxv, Kingcome (reserve), Central Coast A and D as well as Mount Waddington A in the Central Coast and Lax Kw'alaams, Hartley Bay, Port Edward, Skeena-Queen Charlotte A and C in the North.

Trend

It is difficult to identify trends in knowledge of aboriginal languages given that a) data was not consistently available between 2001 and 2006 in many communities and b) this indicator only reports data over a five year period. In the future, monitoring this indicator over time will provide a better picture of the knowledge of aboriginal languages.

Based on the limited available data, there were however a few communities demonstrating declines in knowledge of aboriginal languages.

In the Central Coast, Bella Bella demonstrated an 11% decline in reported knowledge of aboriginal languages and a 17% decline in Kitasoo. At the regional scale the declines were less significant: the Central Coast reported a 2% decline and Mount Waddington reported a 1% decline.

In the North Coast, Prince Rupert was the only community that had aboriginal language data available for both 2001 and 2006. During this time Prince Rupert demonstrated a slight decrease of 1%. This trend is also seen in the Skeena-Queen Charlotte Regional District, which reported a 1% decline, as well. Conversely, knowledge of traditional languages has increased from 20% to 23% in the Kitimat-Stikine Regional District. This significant increase in knowledge of aboriginal languages is likely the result of traditional language programs being implemented in communities to support and enhance the learning and transmission of languages.

⁴⁸ Cultural indicators for New Zealand. 2006. Statistics New Zealand and the Ministry for Culture and Heritage. http://www.stats.govt.nz/NR/rdonlyres/65AFBAD3-DC5F-4DC2-9D90-EBEC0E7284FF/0/SNZculturalindicatorsreport_1Augustversion.pdf (accessed August 2008).

Outlook

The long-term survival of Aboriginal languages remains to be seen however recent programs and initiatives aimed at supporting and enhancing aboriginal culture in communities will likely help to carry traditions on to the next generation.

What is Being Measured?

This indicator measures the percentage of First Nation community members that have reported knowledge of traditional tribal languages. The indicator is reported at the community scale where data was available and at the regional electoral scale where community data was not available.

Why is this Indicator Important?

Language is often recognized as the essence of a culture. First Nations language programs have often linked the continuation and use of tribal languages with the survival of First Nations cultures. This indicator measures reported knowledge of aboriginal languages to help monitor the transmission of cultural information from one generation to the next. The Royal Commission on Aboriginal Peoples has stated that the revitalization of traditional languages is a key component in the creation of healthy individuals and communities.⁴⁹ The number of First Nation community members learning and speaking tribal languages is directly linked to the sense of connection to First Nation culture. Language is “not only a means of communication, but a link which connects people with their past and grounds their social, emotional and spiritual vitality”.⁵⁰

What is happening?

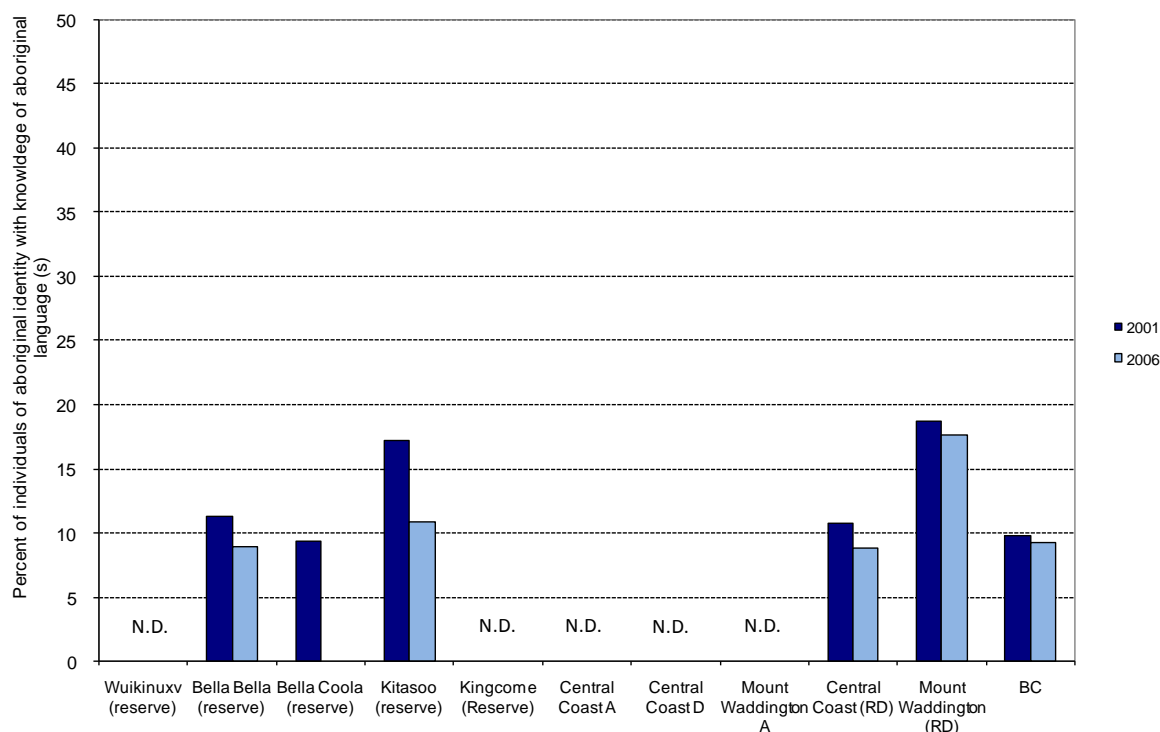
Central Coast

As shown in Figure 44, in 2006, the Central Coast reserve communities of Bella Bella had 9% (11% decline) and Kitasoo had 11% (17% decline) of individuals of aboriginal identity reporting knowledge of traditional languages. At the regional scale, the Central Coast Regional District reported 9% and Mount Waddington Regional District reported 18% of individuals of aboriginal identity reporting knowledge of traditional languages. Knowledge of traditional languages at the regional district scale was higher than the province as a whole, but has declined between 2001 and 2006. In particular, the Central Coast reported a 2% decline and Mount Waddington reported a 1% decline. Data was not available for several communities and regions, including Bella Coola (2006), Wuikinuxv, Kingcome (reserve), Central Coast A and D and Mount Waddington A. Data was likely suppressed due to the small sample sizes.

⁴⁹ Royal Commission on Aboriginal Peoples 1996. Report of the Royal Commission on Aboriginal Peoples: Perspectives and Realities Vol. 4: 163. Minister of Supply and Services Canada. Cited in Aboriginal Peoples Survey 2001 – Initial findings: Well-being of the non-reserve Aboriginal population. Statistics Canada. 2001.

⁵⁰ Norris, M. 1998. “Canada's Aboriginal Languages.” Canadian Social Trends. Winter 1998 No. 51:8. Ottawa. Statistics Canada. Cited in Aboriginal Peoples Survey 2001 – Initial findings: Well-being of the non-reserve Aboriginal population. Statistics Canada. 2001.

Figure 44. Percent of Individuals of Aboriginal Identity with Knowledge of Aboriginal Languages in Central Coast Communities and Regional Areas



Source: Statistics Canada Census of Population: Aboriginal Peoples Community Profiles

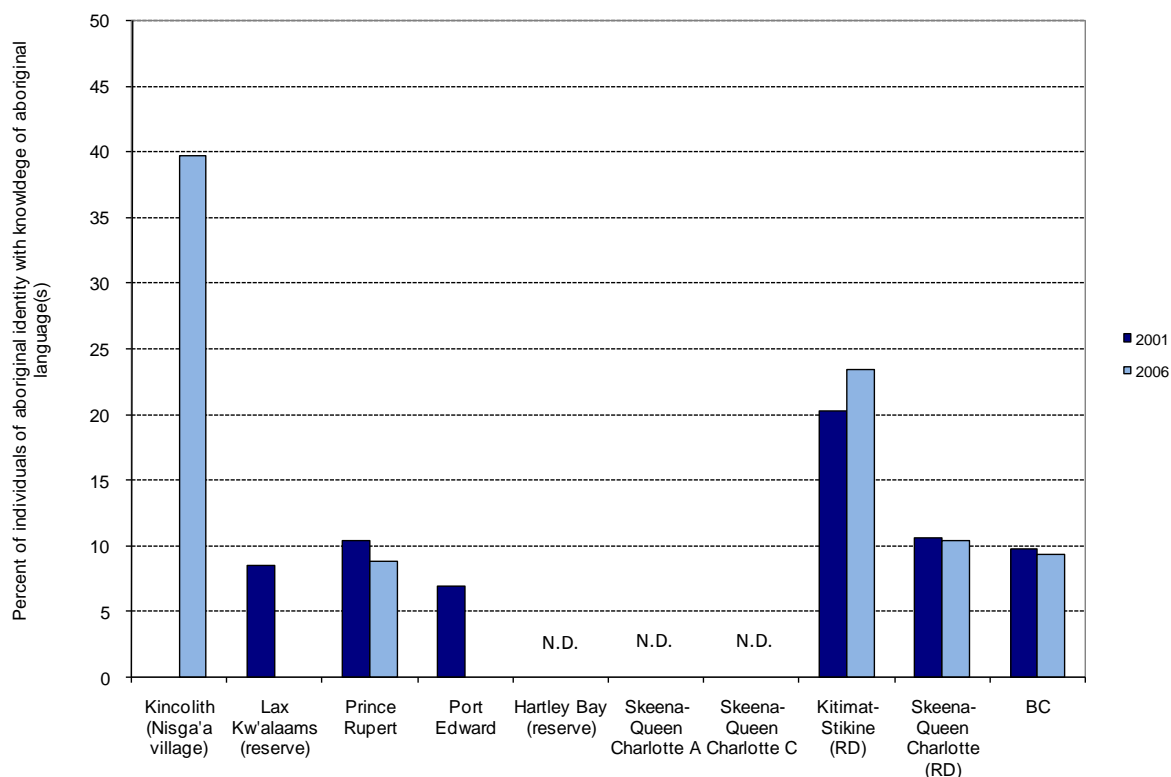
Note: N.D. = no data (data suppressed due to small sample size)

North Coast

Reported knowledge of aboriginal languages in North Coast communities is shown in Figure 45, with 40% of aboriginal individuals in Kincolith and 9% of aboriginal individuals in Prince Rupert reporting knowledge of aboriginal languages in 2006.

At the regional scale, the Kitimat-Stikine Regional District reported 23% and Skeena-Queen Charlotte Regional District reported 10% of individuals of aboriginal identity reporting knowledge of traditional languages. Prince Rupert was the only community that had aboriginal language data available for both 2001 and 2006. Between 2001 and 2006 knowledge of aboriginal languages in aboriginal individuals has decreased slightly in Prince Rupert (1%). This trend is also seen in the Skeena-Queen Charlotte Regional District, which reports a 1% decline between 2001 and 2006 in aboriginal individuals reporting knowledge of aboriginal languages. Conversely, aboriginal knowledge of traditional languages has increased from 20% to 23% in the Kitimat-Stikine regional district, during the same period of time. Data was not available for Kincolith (2001), Lax Kw'alaams (2006), Hartley Bay, Port Edward (2006), Skeena-Queen Charlotte A and C.

Figure 45. Percent of Individuals of Aboriginal Identity with Knowledge of Aboriginal Languages in North Coast Communities and Regional Areas



Source: Statistics Canada Census of Population: Aboriginal Peoples Community Profiles

Note: N.D. = no data (data suppressed due to small sample size)

Many Aboriginal communities across Canada have sought to counteract the loss of their ancestral languages. With the help of government agencies, museums, and universities, communities have launched programs to retain and promote their languages and cultures. Details on what efforts are being made to retain and promote aboriginal languages in Central and North Coast communities were not identified for all communities in this baseline study. In 2006, the community of Kincolith reported 40% of individuals of aboriginal identity with knowledge of aboriginal languages. This high rate of reported knowledge is likely a result of the efforts being made to educate and maintain the use of Nisga'a in the community. One such notable effort is that the community school is teaching Nisga'a daily to its students.

What are the limitations of the data?

Data was not available for several communities and regional electoral areas, including: the communities of Wuikinuxv, Kingcome, Lax Kw'alaams (2006), Port Edward (2006) and Hartley Bay and the regional electoral areas of Central Coast A, Mount Waddington A and Skeena – Queen Charlotte A and C. It is unclear why this data is not available however for some communities the data was suppressed due to small sample sizes. Furthermore, the availability of data for certain communities was not consistent between census years. In the future, communities may want to consider collecting this data themselves through a community survey in order to better monitor the preservation of their language.

SUMMARY

Status

In 2006 the number of salmon returning to waterways on the Coast was very low compared to historical returns. Low returns of adult salmon for spawning have been a concern for several years. These lower returns have been linked to many contributing factors including impacts of forestry, agriculture and development on spawning channels, Atlantic salmon finfish farms, rising ocean temperatures and over fishing. Salmon is vital to the culture of First Nations living on the Coast, and is important to track in the context of changing management practices.

Important fisheries watersheds are identified in the South Central Coast and the Central and North Coast Land use objectives. These watersheds are used in this indicator to track the change in numbers of returning salmon over time.

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

Salmon returning to the Coast include Chinook, Chum, Coho, Pink and Sockeye. Each species have varying outlooks in their expected escapements. There have been significant changes in fisheries management over the last decade due to concerns over declining stocks. These efforts may contribute to increased salmon escapement numbers over the short term; however, there are significant other factors that may hinder escapement numbers. Some of these factors are influenced by land management practices in the area, while others are influenced by global practices that impact ocean temperatures and habitability for salmon.

What is Being Measured?

This indicator shows how many adult salmon are returning to spawn in important fisheries watersheds in each area. The important fisheries watersheds used in this indicator were identified in both Schedule 3 of the Central and North Coast Land Use Order objectives and Schedule 2 of the South Central Coast Land Use Order⁵¹. As shown in the map in Figure 46, there were ten important watersheds identified in the North Coast and 93 in the Central Coast. The numbers of adult salmon returning are based on escapement estimates from the Department of Fisheries and Oceans (DFO) for each year from 1996 to 2006.⁵² Only natural returning adults are included in the totals for all species of salmon combined.

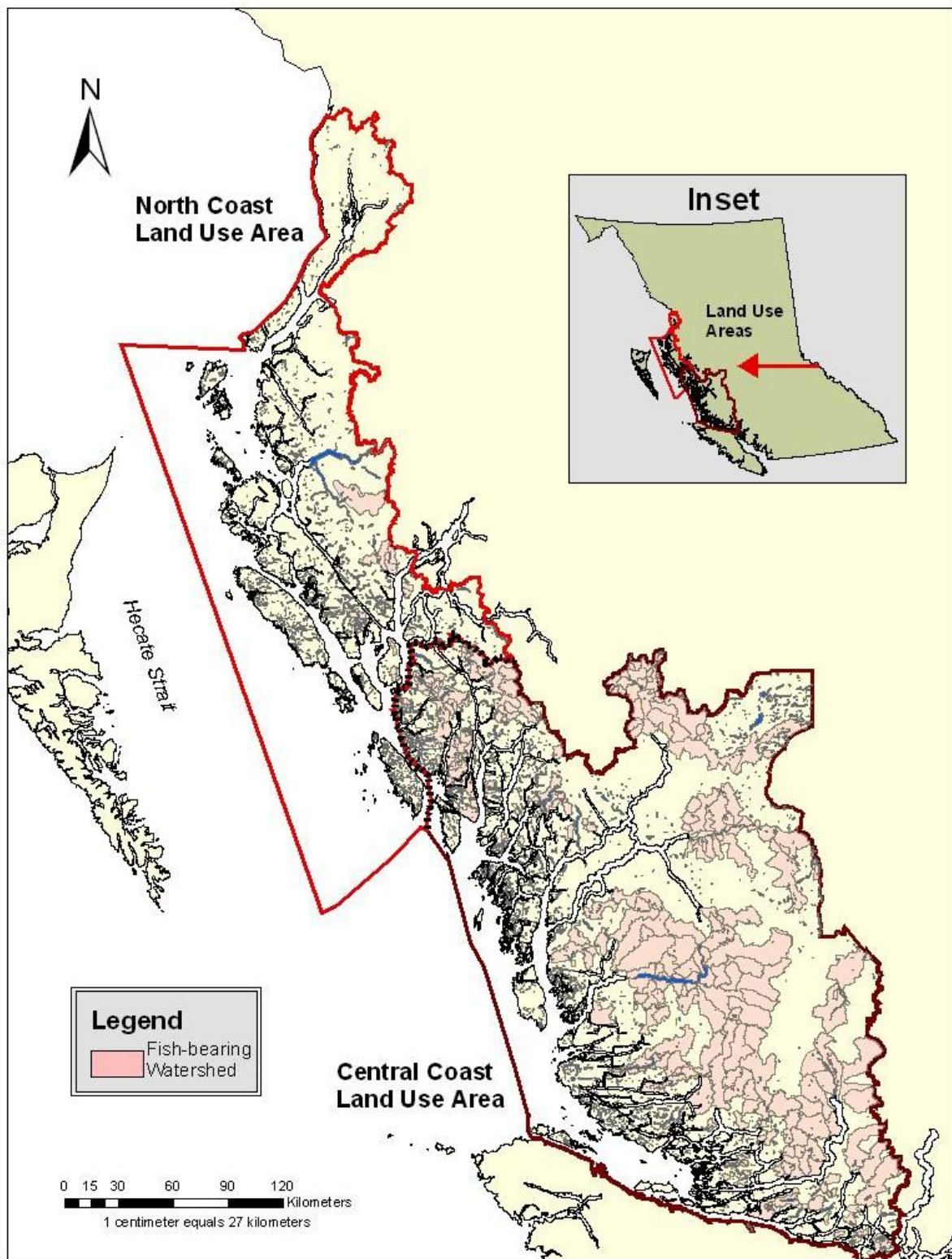
Why is this Indicator Important?

Salmon is an important aspect of all First Nations coastal communities and culture. Numerous songs, dances and oral histories are connected to salmon in coastal First Nations communities. Legends have derived from this important cultural identifier. Historically, salmon also provided the main source of food for many coastal First Nations. Salmon is still an important country food and protein staple for coastal First Nations communities. It is often dried or canned to ensure a year round supply of food for remote First Nations communities.

⁵¹ <http://ilmbwww.gov.bc.ca/slrp/lrmp/nanaimo/cencoast/plan/objectives/index.html>

⁵² Fisheries & Oceans Canada. NuSEDS V2.0 Regional Adult Salmon Escapement Database. All species: 1996-2006. Retrieved June 27, 2008.

Figure 46. Important Fisheries Watersheds identified in the LRMP process



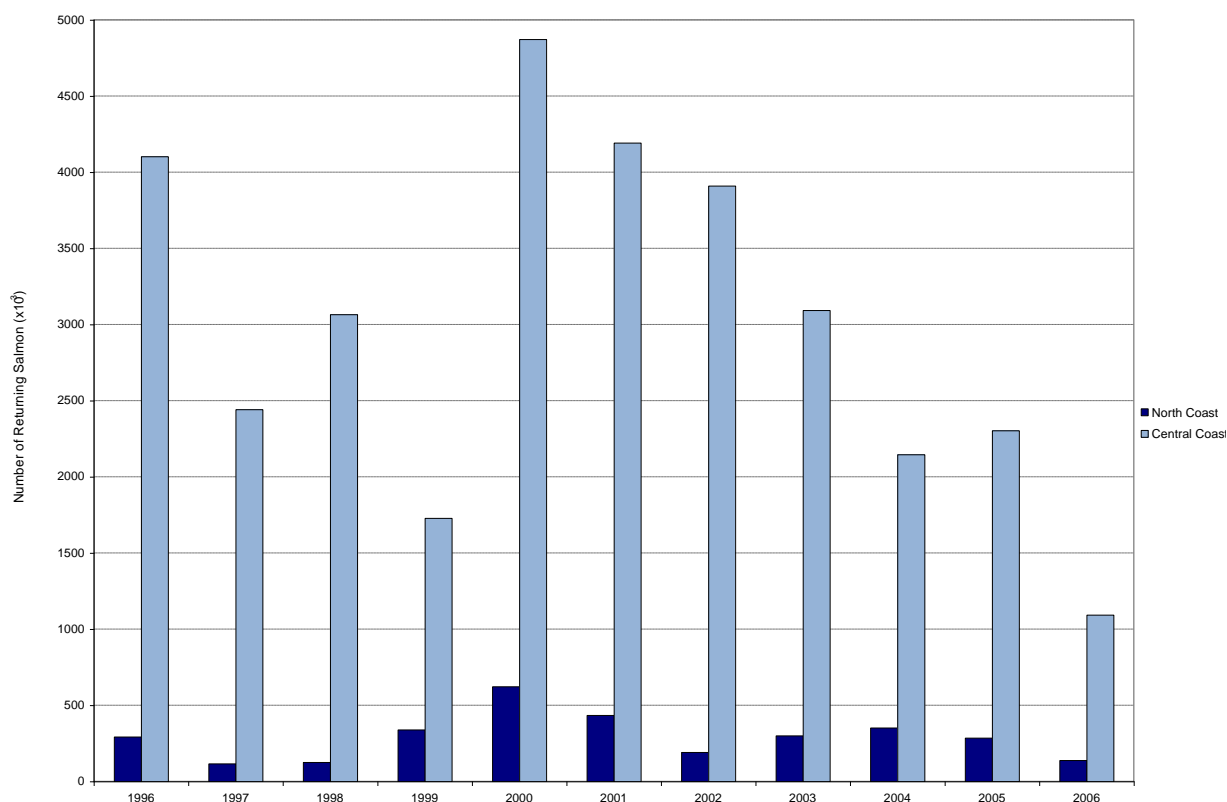
Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

Since salmon are an integral part of First Nations culture, it is important to measure and track the returning salmon populations in these key watersheds as an indicator of cultural well being.^{53,54}

What is happening?

Over the last six years there has been a significant decline in adult salmon returns in Central Coast watersheds, while North Coast watersheds have shown variability, but also some decline over the last few years. As shown in Figure 47, 2006 was a particularly poor year for returning salmon. The declines in returning salmon have both cultural and economic impacts on the First Nations living in the coastal region.

Figure 47. Salmon Returning to Important Fisheries Waterways, 1996-2006.



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

⁵³ The important fisheries waterways were identified through the LRMP process. In the Central Coast, the identification of key waterways was based, in part, on input from First Nations. Several key watersheds identified by First Nations were omitted because the scale of the map used to identify the watersheds was at 1:50,000. At this scale, some watersheds were too small to be identified and therefore were not included. As a result, salmon counts are not available for some relevant waterways. (Personal Communication with Ken Dunsworth, Ministry of Environment)

⁵⁴ At the time of writing this report background information on the involvement of First Nations in the selection of important waterways in the North Coast was not available and it is assumed that the watersheds hold some relevance to First Nation communities in the area.

What are the limitations of the data?

Collection of salmon escapement data by the Department of Fisheries and Oceans (DFO) is only useful for comparison over several years, as there is annual variability in coverage and ability to get accurate counts.

As noted earlier, the important fisheries watersheds were identified in consultation with First Nations for the Central Coast. However, the watershed atlas used for identification was at a scale of 1:50 000, and therefore excludes any smaller watersheds, even if they have cultural significance. In future, consideration should be given to identifying the culturally significant watersheds at the 1:20 000 scale, now that watershed maps are available at that scale.

HEALTH

These indicators provide a measure of the health of the population and an indication of the effectiveness of the health care system for a given population. An understanding of how daily life circumstances and human biology influence health and wellness outcomes for a given population is an important one for policy makers. The indicators reported here (life expectancy at birth and infant mortality rate) can help to further this understanding, especially when cross-referenced with other indicators such as those related to population (e.g., age structure) and economics (e.g., median household income).

HEA-1: Life expectancy at birth

SUMMARY

Status

The average life expectancy for Coast area communities was between 70 and 79 years. The average life expectancies at birth in area communities are generally lower than the provincial average of 81 years. Urban centres had higher life expectancies than more remote communities in both North and Central Coast regions.

Trend

Between 2002 and 2006, life expectancies increased in the Central Coast and remained generally unchanged in the North Coast, as compared to data for the previous reporting period (1997 to 2001).

Outlook

Life expectancies result from numerous factors relating to health, environment, social and economic conditions. For example, primary resource development industries may have higher degrees of occupational hazard, which impact life expectancy. Additionally, the geographic isolation of remote communities can have direct impacts on reducing life expectancy, while factors such as income and social well-being have indirect impacts. All of these factors are relevant to the area communities and, when combined, can help to forecast future conditions related to this indicator.

What is Being Measured?

Life expectancy is a statistical measure of the average life span (average length of survival) of a specified population. This indicator represents the average number of years of life remaining to an individual at birth. The calculation is based on the present mortality structure across all ages for the present population. Data are presented as 5 year averages.

Why is this Indicator Important?

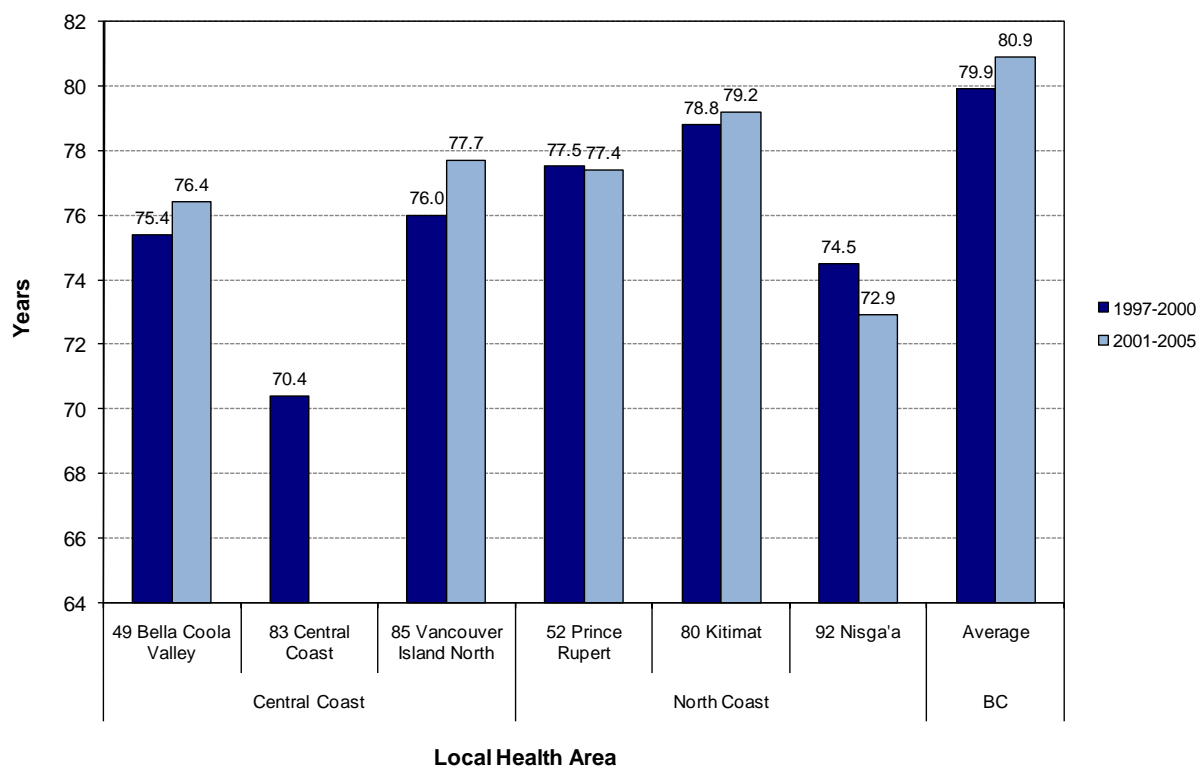
Life expectancy at birth reflects the overall socio-economic health of individuals living in the areas. This is an outcome of a combination of many factors (including the present mortality experience of a population) and is an indicator that is recognized internationally as important for comparing socio-economic conditions and well-being of human populations.

What is happening?

Life expectancies at birth in the areas are generally slightly lower than the provincial average of 81 years, as seen in Figure 48. In the Central Coast, life expectancies in the Bella Coola Valley and Vancouver Island North Local Health Areas (LHAs) were 76 and 78 years, respectively. Data for the Central Coast LHA was unavailable for the period 2002 to 2006. Life expectancies for the North Coast LHAs of Prince Rupert, Kitimat, and Nisga'a were 77, 79 and 73, respectively. Comparisons to data from the previous data collection period (1997 to 2001) show small improvements in life expectancy in the Central Coast, generally no changes in urban centres in the North Coast (Prince Rupert and Kitimat), and a small decrease in Nisga'a.

To provide context to the life expectancy figures, the British Columbia Health Atlas makes comparisons to international life expectancy figures (for the period from 1997 to 2001). Life expectancy figures for the North Coast LHAs of 80 Kitimat (79 years) and 52 Prince Rupert (78 years) are comparable to average life expectancy figures for Germany (77.7 years) and Canada (79.3 years). For the Central Coast LHAs, including 49 Bella Coola Valley (75 years), 83 Central Coast (70 years), and 85 Vancouver Island North (76 years), life expectancy figures are comparable to those in Mexico (73.7 years), China (71.1 years) and Cuba (76 years).⁵⁵

Figure 48. Life Expectancy at Birth by Local Health Area



Source: BC Stats - Socio-economic profiles by local health areas (LHA)

⁵⁵ *The British Columbia Health Atlas: Second Edition*. May 2004. Centre for Health Services and Policy Research. College of Health Disciplines, University of British Columbia.
<http://www.chspr.ubc.ca/files/publications/2004/chspr04-12.pdf> (accessed July 2008).

What are the limitations of the data?

Data was suppressed for LHA 83 Central Coast in the 2002 to 2006 data collection period. The boundaries for the LHAs are not entirely aligned with the area boundaries, and the data collected includes communities not within in the scope of this report. These two limitations combined result in a lack of data specific to the communities in the areas.

SUMMARY

Status

Infant mortality rates in the areas tend to be higher than the provincial average of 4.2 infant deaths per 1,000 live births, with distinct differences between urban centres and more remote regions. Infant mortality rates in remote communities are more than twice the provincial average, though the urban Local Health Areas (LHAs) of Kitimat and Prince Rupert also had higher infant mortality rates than the province as a whole in the period 2001 to 2005. Access to health care and support services may be significant factors affecting infant mortality in the North and Central Coasts.

Trend

Over the reporting period, there were significant increases in regional infant mortality rates in most LHAs. In some LHAs, the number of infant deaths per 1,000 live births doubled over the previous reporting period. Bella Coola Valley was the only LHA that experienced a decrease in infant mortality, while the provincial average increased by five percent over the reporting period.

Outlook

Infant mortality is reflective of a composite of different factors, ranging from birth rates, birth weights, births by teenage mothers, access to health care and support services. The increasing infant mortality rates reported here may indicate that these factors have had (and will continue to have) a significant impact on the health of infants, especially within the smaller, more remote communities in the area. Statistics Canada reports the Aboriginal birth rate as one-and-a-half times greater than the overall Canadian birth rate. With a greater number of births, it follows that the infant mortality rate would also increase. The large Aboriginal population in the area communities and the higher birth rates associated with Aboriginals, in combination with the factors mentioned above, has resulted (and may continue to result) in higher than average infant mortality rates in some area communities.⁵⁶

What is Being Measured?

This indicator represents the number of deaths of infants (one year of age or younger) per 1,000 live births. The data for this indicator is presented as five-year averages, based on the periods 1997 to 2000, and 2001 to 2005.

Why is this Indicator Important?

Infant mortality reflects a combination of factors, including environmental, socio-economic and health conditions during pregnancy and in the first year of life of newborns. As infants can be more sensitive to their environments, infant mortality is indicative of general conditions affecting well-being.

⁵⁶ *Aboriginal Peoples of Canada: 2001 Census of Canada*. Statistics Canada website: <http://www12.statcan.ca/english/census01/Products/Analytic/companion/abor/canada.cfm#1> (accessed July 2008).

What is happening?

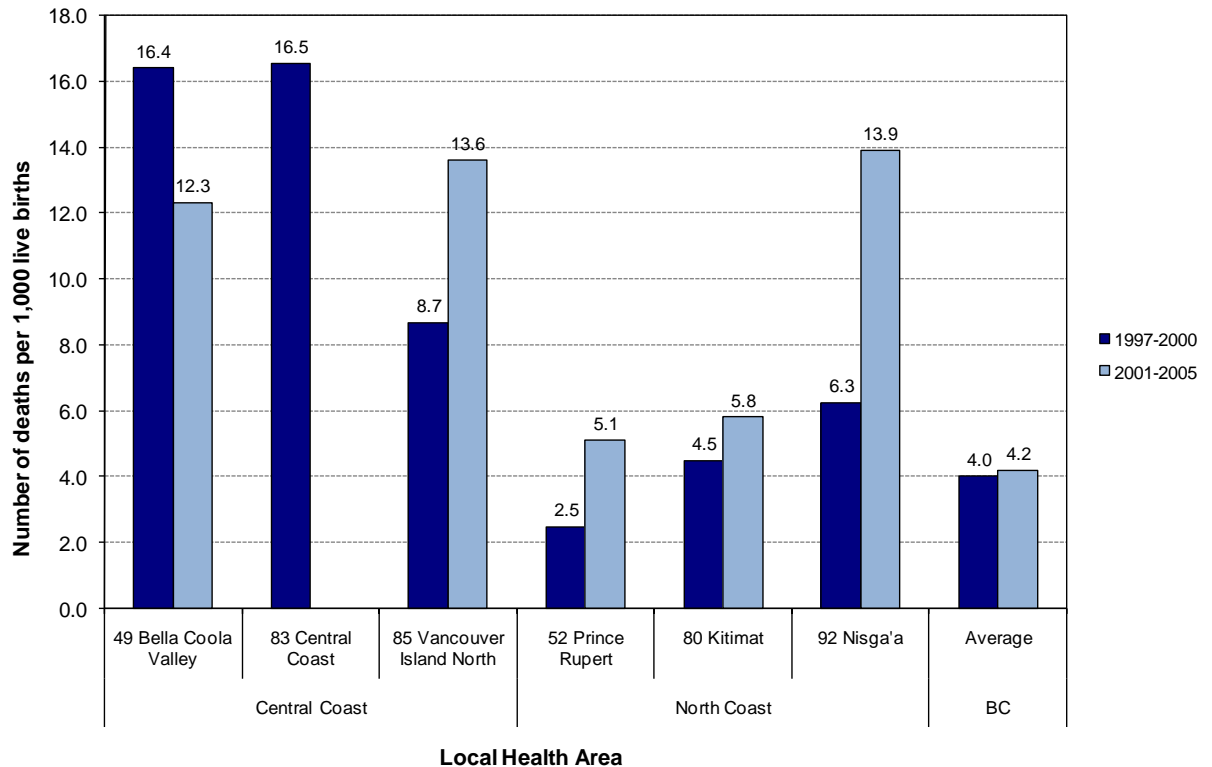
Infant mortality in the areas appears to vary significantly, particularly with respect to urban centres and more isolated regions. As shown in Figure 49, Local Health Areas (LHAs) with smaller, more remote communities such as LHA 49 Bella Coola Valley, LHA 85 North Vancouver Island and LHA 92 Nisga'a had higher rates of infant mortality (12.3, 13.6 and 13.9 respectively). Compared to more urban LHAs, such as Prince Rupert and Kitimat, which had 5.1 and 5.8 infant deaths per 1,000 live births, and the provincial average of 4.2 deaths per 1,000 live births, the infant mortality rates in small, remote communities are more than twice as high.

Of concern is that the number of infant deaths in most area communities has increased significantly between the first (1997 – 2000) and second (2001 – 2005) reporting periods. The infant mortality rate has more than doubled in Prince Rupert and Nisga'a, while increasing 56% in North Vancouver Island, 29% in Kitimat and 5% in the province as a whole. The Bella Coola Valley LHA was the only region where infant mortality decreased by 20% over the same period.

To provide context to the infant mortality rate figures, the British Columbia Health Atlas makes comparisons to international infant mortality rates (for the period from 1997 to 2001). Infant mortality rates in the North Coast LHA of 52 Prince Rupert (2.5) is lower than that of Sweden (3.0), which is recognized as having among the lowest infant mortality rate in the world. The infant mortality rate in the North Coast LHA of 80 Kitimat (4.5) falls between the averages for British Columbia (4.0) and Canada (5.1). The Central Coast LHAs of 49 Bella Coola Valley (16.4), 83 Central Coast (16.5) and 85 Vancouver Island North (8.7) have higher infant mortality rates, which compare with those of Poland (9.7), Costa Rica (11.9), Jamaica (15.2), and Argentina (18.5).⁵⁷

⁵⁷ *The British Columbia Health Atlas: Second Edition*. May 2004. Centre for Health Services and Policy Research. College of Health Disciplines, University of British Columbia.. <http://www.chspr.ubc.ca/files/publications/2004/chspr04-12.pdf> (accessed July 2008).

Figure 49. Infant Mortality Rate, by Local Health Area



Source: BC Stats - Socio-economic profiles by local health areas (LHA)

What are the limitations of the data?

Data was suppressed for LHA 83 Central Coast in the 2001 to 2005 data collection period. The boundaries for the LHAs are not entirely aligned with the area boundaries and the data collected includes communities not within in the scope of this report.

EDUCATION

Education indicators shed light on a host of issues, from access to education and equity of resources to the quality of the education system and its outputs. These indicators provide policymakers with measures to assess their education systems' performance and a basis from which to identify potential strategies to improve achievement and system outputs. The indicators reported here, including education attainment and skills training, are helpful in this regard, and when cross-referenced with other indicators, can provide a broader understanding of a community's well-being (e.g., cross-referencing with employment statistics gives an indication of a community's ability to attract and support a skilled labour force).

EDU-1: Education attainment

SUMMARY

Status

Levels of education attainment in the North and Central Coast areas are generally lower than those in the province as a whole. Significant portions (ranging from 18% to 79%) of the labour force (above 15 years of age) had no formal education. Post secondary education is distributed generally evenly between trades, college and university levels. Education attainment in the Central Coast region is more consistent across communities and reflective of education attainment at the regional level. Attainment levels in the North Coast are more variable between communities, perhaps indicating that access to education may be influenced by circumstances unique to each community.

Trend

Education attainment in the Central Coast communities decreased between 2001 and 2006, with higher portions of the labour force having no formal education. Some North Coast communities saw minor improvements in the level of education attained (e.g., Prince Rupert increased from 29% to 33%), but most communities saw minor decreases or very minimal change over the same five year period.

Outlook

The generally lower levels of education attainment in the Coast areas may be indicative of a lack of access to educational opportunities within these regions or inconsistencies between traditional educational opportunities and cultural circumstances. For cultural or familial reasons, certain populations may be less inclined to leave their communities in pursuit of educational opportunities, and few programs may be offered locally. Regional economic conditions may also affect the ability of residents to afford tuition and other costs associated with moving away to pursue educational opportunities. Finally, economic conditions within the Coast area may not be favourable enough to attract people back who may have left to pursue educational opportunities, nor to attract or retain skilled labour from elsewhere.

What is Being Measured?

This indicator shows the distribution of education levels attained by Coast area residents within the labour force.

Why is this Indicator Important?

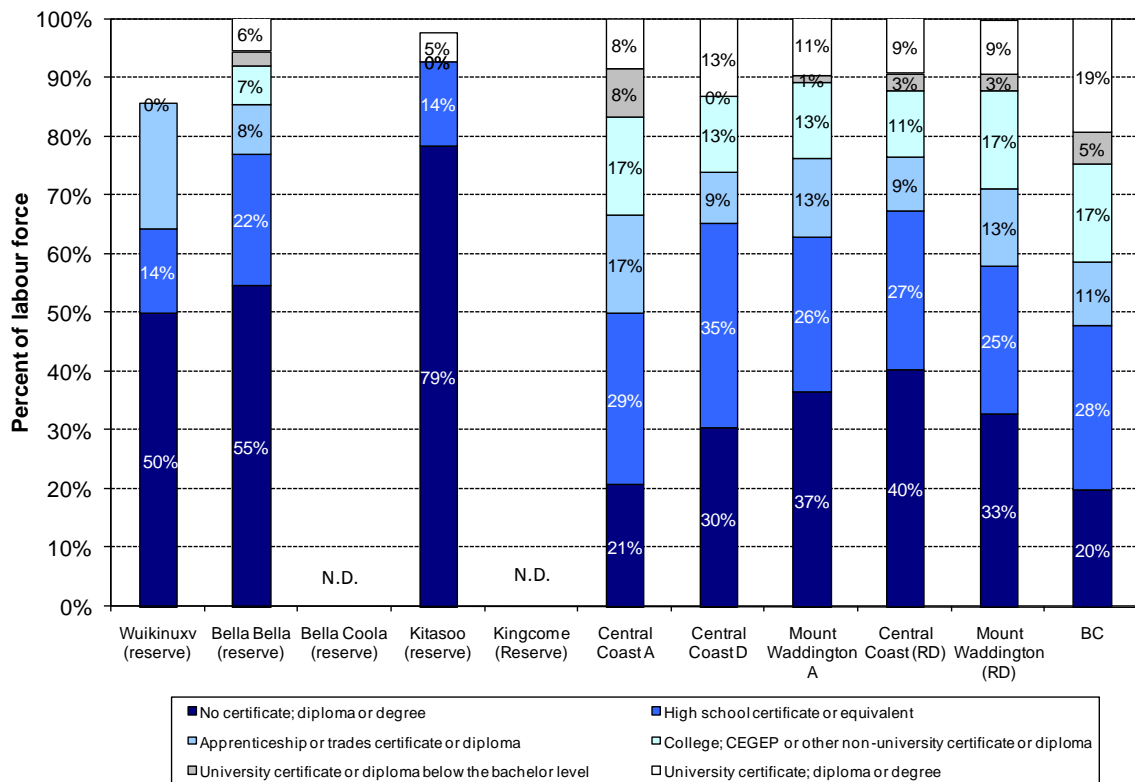
Education is important to the capacity of a population to pursue and develop social and economic opportunities. The distribution of education attainment in a community is reflective of a population's ability to access education and skills training programs, and of the community's ability to attract and/or support a skilled labour force.

What is happening?

The Central Coast generally had lower levels of education attainment than the province as a whole, with higher proportions of the population having no certified education, and fewer people having a university level education. The percentage of the labour force (population over the age of 15 years) with high school equivalencies or trades and college certificates in the Central Coast was similar to BC averages.

As shown in Figure 50, the labour force with no formal education in 2006 ranged between 30% and 55% in most communities and districts within the area; the exceptions being Central Coast A electoral district at 21% and Kitasoo at 79%. The percentage of the labour force with high school certificates or equivalencies ranged between 22% and 35%, in most communities. The exceptions were Wuikinuxv and Kitasoo, where 14% of the labour force had high school certificates or equivalencies. The distribution of post-secondary educational attainment was generally split evenly between trades certificates, college or non-university certificates, and university level certificates. The exceptions were Wuikinuxv, where the labour force with post-secondary education was comprised only of trades or apprenticeship certificates, and Kitasoo, where university certificates at or above the bachelor degree level were the only educational attainment levels above high school. Education attainment levels for communities in the Central Coast area were generally lower (i.e., greater proportions of the population with no certificate, diploma or degree) than those in the Regional Districts, which were generally lower than the provincial average.

Figure 50. Education Attainment of Labour Force, Central Coast, 2006

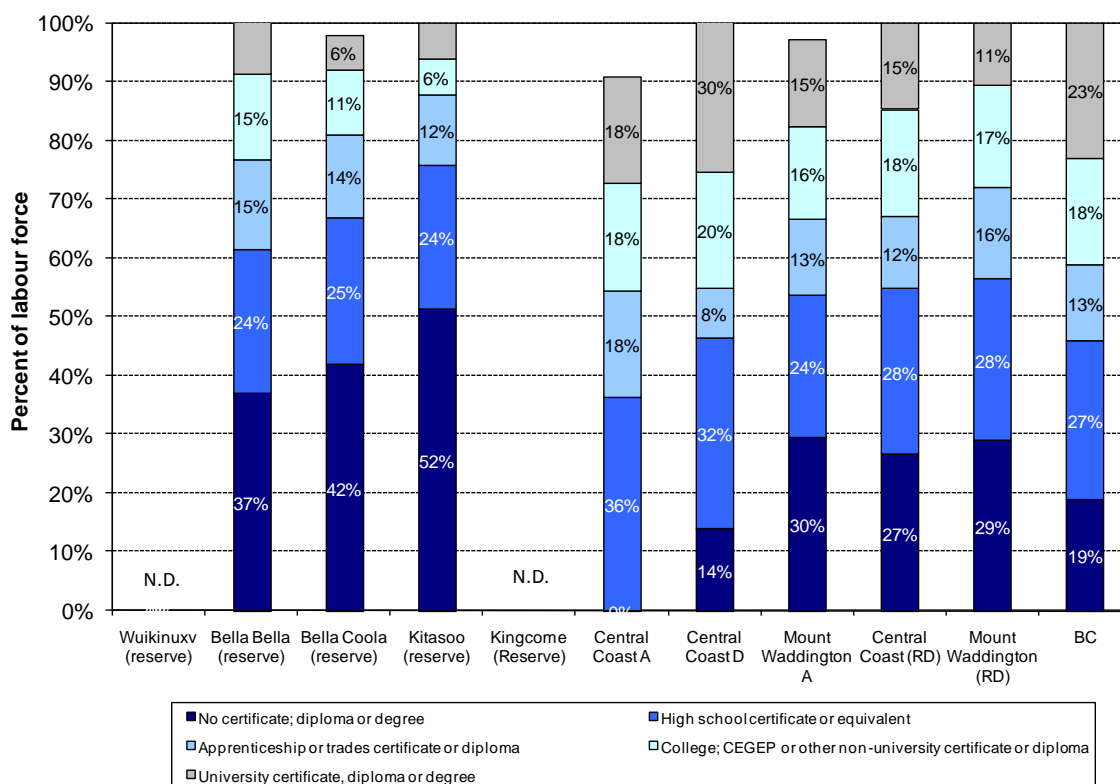


Source: Statistics Canada Census of Population: Community Profiles

Note: N.D. = no data (data suppressed due to small sample size)

2001 education attainment levels for the Central Coast are shown in Figure 51, with education attainment across the region decreasing between 2001 and 2006. Over that five-year period, higher proportions of the labour force were without certified education, and less people had post-secondary education of any type.

Figure 51. Education Attainment of Labour Force, Central Coast, 2001

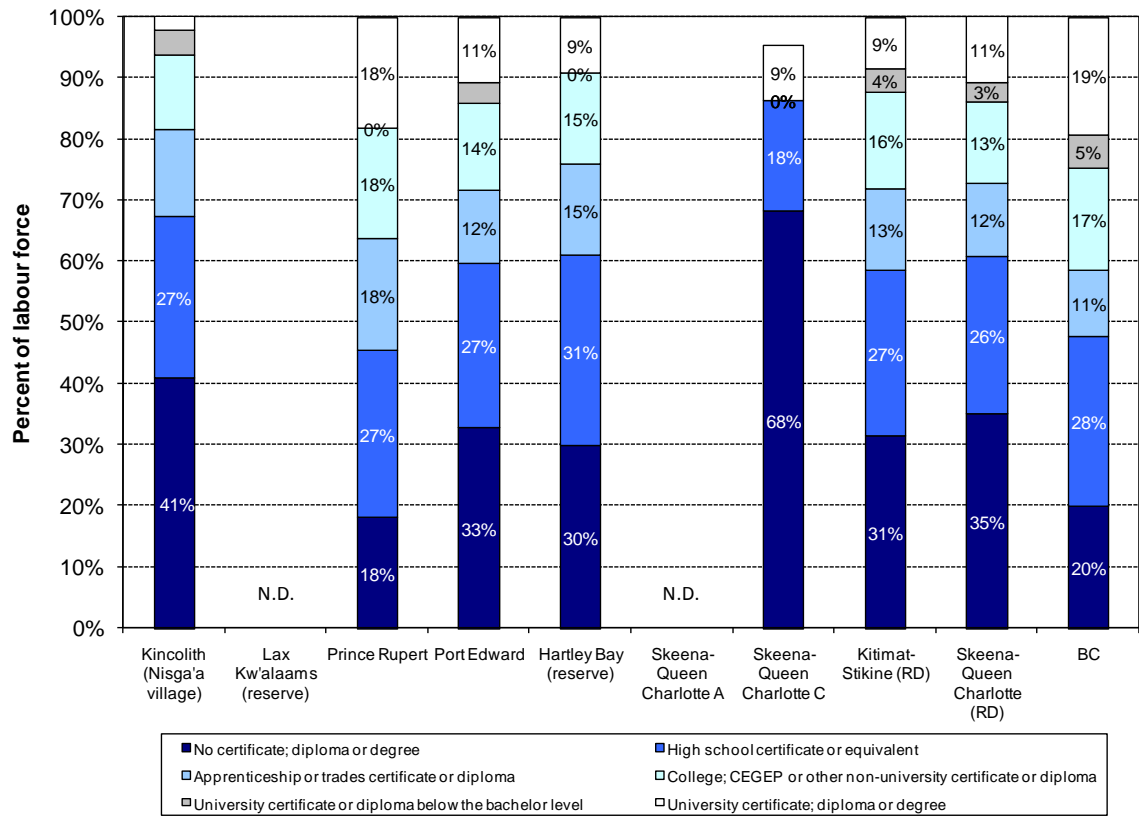


Source: Statistics Canada Census of Population: Community Profiles

N.D. = no data (data suppressed due to small sample size)

Education attainment in the North Coast was lower than in the province as a whole, with Hartley Bay and Kincolith having higher percentages of the labour force without any formal education (68% and 41%, respectively). The proportion of the labour force with only high school equivalencies in the North Coast communities ranged between 18% and 41%, which was similar to the figures for the Regional Districts within the North Coast (31% and 35%). Post-secondary education in the North Coast labour force was distributed generally evenly between trades, college and university levels. Hartley Bay was the exception, with post secondary educations comprised entirely of university graduates. In Prince Rupert, education attainment levels are mostly consistent with the Regional Districts of the North Coast and with the provincial average, while there seems to be more variation between area communities and the Regional Districts. This suggests that individual communities may have unique circumstances affecting access to education.

Figure 52. Education Attainment of Labour Force in the North Coast, 2006

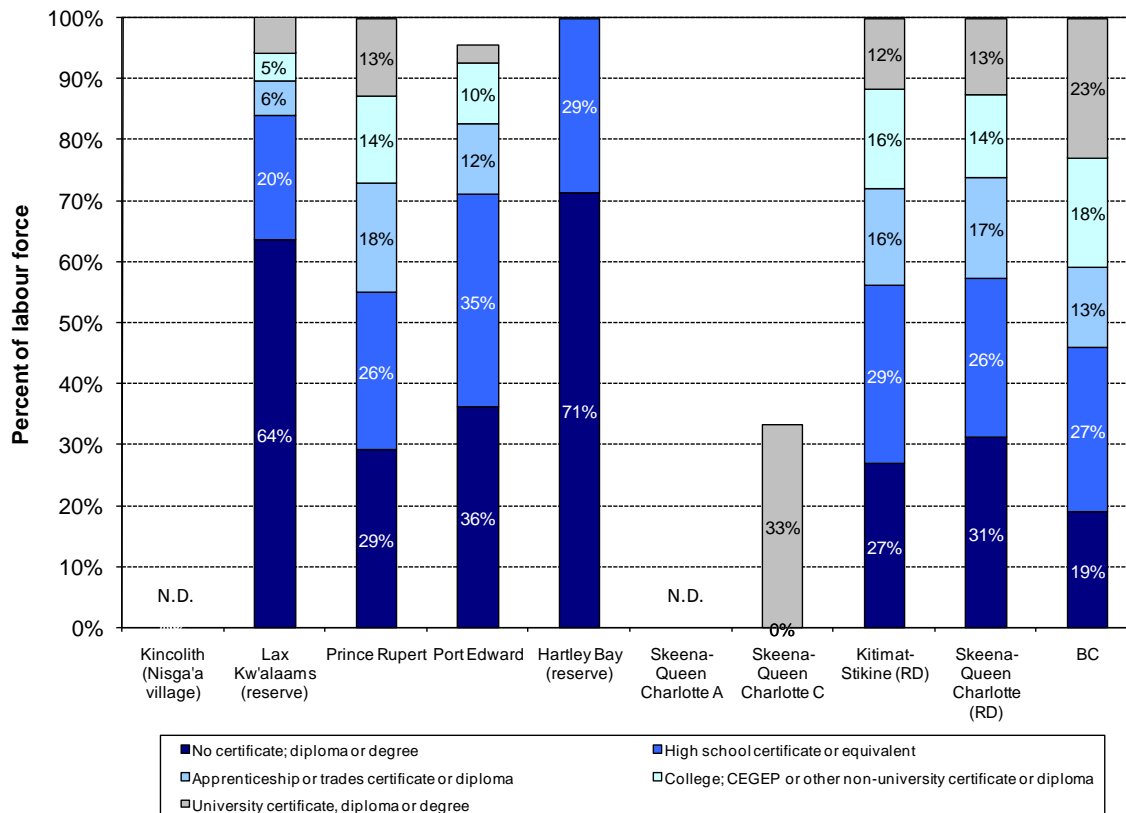


Source: Statistics Canada Census of Population: Community Profiles

Note: N.D. = no data (data suppressed due to small sample size)

While there were some improvements in the education levels attained in Kincolith and Hartley Bay between 2001 and 2006, Figure 53 shows that education attainment levels in the North Coast communities either increased or decreased slightly over the five-year period, while the Regional Districts from which the North Coast area is comprised saw little change over the same period.

Figure 53. Education Attainment of Labour Force in the North Coast, 2001



Source: Statistics Canada Census of Population: Community Profiles

Note: N.D. = no data (data suppressed due to small sample size)

What are the limitations of the data?

Data was not available for all area communities, such as Port Simpson, Skeena-Queen Charlotte Regional District Electoral Area C (encompassing Kitkatla and Porcher Island), Bella Coola, and Kingcome (reserve). The data for certain communities was also not consistently available for all census years. Further considerations for data accuracy and availability include the fact that data for some communities is aggregated with larger census subdivisions and data for certain communities was suppressed to protect residents' privacy.

SUMMARY

Status

The data for this indicator was obtained qualitatively, through telephone conversations with a few area organizations and institutions providing educational opportunities to local residents. As a result of its anecdotal nature, the data presented here and the trends inferred from it should be used with caution.

The availability of locally provided skills training programs was limited in the organizations and institutions contacted. Most institutions focus on the provision of high school equivalency and university transfer programs. Despite this lack of locally accessible trades and apprenticeships or college educational opportunities, the proportion of the labour force with trades and apprenticeship or college educations in area communities (ranging from 6-18%) has, in most cases, been consistent with the provincial average (13%) (see EDU-1).

Trend

Local organizations and institutions focused on the provision of educational programs note that opportunities for skills training have decreased as a result of declining populations in area communities eroding support for comprehensive and consistent programming. Greater demand for high school equivalency and university level education further diverts available resources from the provision of skills training programs.

Outlook

With populations in the Coast area being either relatively stable or in slight decline (see POP-1), the trend towards a decline in locally delivered skills training opportunities can be expected to continue. Another factor that would impact the local delivery of skills training opportunities is local economic development and the presence (or absence) of industry in the area. As discussed in ACC-8 (Economic Diversity Index), the economic diversity in the area is also in decline. Again, if the economic diversity or industrial base of the area continues to decline, the demand for locally delivered skills training programs may also continue its downward trend.

What is Being Measured?

This indicator qualitatively measures the number of locally delivered skills training programs and the participation in such opportunities.

Why is this Indicator Important?

Skills training programs support the development of a skilled labour force, which is important in contributing to a stable and healthy economy. Locally developed and delivered programs can better reflect local social and economic needs, and are accessible by populations that may be more averse to travelling abroad for educational purposes, either for socio-economic or cultural reasons.

What is happening?

The following information is based on conversations with some of the educational organizations and institutions in the areas. This information is anecdotal in nature and should be used with caution.

There are few formal organizations dedicated to providing skills training programs in the areas, and many locally delivered opportunities are provided as single instance programs determined by need or demand. The populations in Coast area communities are generally insufficient to support educational institutions that specialize in providing comprehensive trades and skills training. Most educational institutions and organizations in the area are focused on providing high school equivalency or university transfer programs in response to the demands of the local population. Local institutions and organizations have stated that declining populations in Coast area communities have eroded the population base needed to support the provision of appropriate skill training programs on a consistent basis.

In the Central Coast reserve community of Bella Coola, the majority of skills training programs are delivered through the Nuxalk Nation Band Office, with support from Nuxalk College and the Mid Coast First Nations Training Society. Programs are offered based on the perceived local need or demand and often through the initiative of individuals within the community. Training services in Bella Bella are provided similarly through the Heiltsuk Nation Band Office. In the North Coast, Northwest Community College offers a limited array of skills training programs via campuses throughout the region.

The focus of local educational institutions and organizations is reflective of the greater need for high school equivalency and university level educations. However, the proportion of the labour force with trades and apprenticeship or college educations in area communities (see EDU-1) is consistent with the provincial average, despite the lack of consistent, locally available and easily accessible skills training programs. This suggests that local populations readily travel abroad for skills training and/or that area industries are supported by skilled labourers that are trained elsewhere and are willing to relocate to the area.

What are the limitations of the data?

Quantitative data was not available as most program offerings are not organized on a consistent and comprehensive basis. Qualitative data was collected through telephone conversations with local organizations and institutions, including: Nuxalk Nation Band Office, Nuxalk College, Mid Coast First Nations Training Society, Heiltsuk Nation Band Office, and Northwest Community College. The development and enrolment of programs offered on an individual basis has not been tracked by these organizations. In some cases, privacy concerns were an issue given that programs have often been initiated by individuals in the Coast area communities.

RECREATION

Recreation is defined as refreshment in body or mind, by some form of play, amusement, or relaxation⁵⁸ and is seen as an important indicator of human well-being. Recreation can help to counteract stress and as a result, contributes to the quality of life, health and wellness of human beings. The indicator reported here – percent of recreation area in each Recreation Opportunity Spectrum (ROS) class – identifies, classifies and spatially delineates recreational opportunities in the areas based on their level of remoteness, naturalness and expected social experience. This gives an indication of the type and accessibility of recreation opportunities to coast area residents.

REC-1: Percent of recreation area in each recreation opportunity spectrum class

SUMMARY

Status

Recreation opportunities in the North Coast are primarily in areas with high opportunities for solitude and closeness to nature; 68% of the areas surrounding identified recreational sites are in semi-primitive motorized areas. In the Central Coast, recreational opportunities are more evenly distributed between roaded natural areas (36%), semi-primitive motorized areas (32%) and roaded modified areas (26%).

Trend

This is the baseline year. Future reports will be able to indicate the trend over time.

Outlook

The Recreation Opportunity Spectrum (ROS) classes are determined by considering the three basic criteria of remoteness, size and evidence of humans. These criteria give a picture of the experience that an individual might expect from the recreation area. Given this, increased development activity or the creation of protected areas would likely impact the experience of recreation opportunities in the Coast areas. Increased development activity might result in more recreation opportunities with "moderate to high interaction with other people," whereas an increase in protected areas might result in more experiences with "moderate to high opportunity to experience solitude, closeness to nature, self-reliance and challenge."

What is Being Measured?

This indicator provides a measure of the recreation area that falls within each class of the Recreation Opportunity Spectrum (ROS). Recreation areas include the area within a 500 metre radius around identified recreation locations. These identified locations include: kayak campsites and destinations, dive sites, marinas, moorage locations, boat launches and forest recreation sites.

The ROS inventory was completed in 2002/2003 by the Ministry of Forests. The purpose of the inventory was to identify, spatially delineate, and classify the province for recreational opportunities based on their level of remoteness, naturalness and expected social experience⁵⁹. One variation of the inventory from the provincial standard is that boat traffic on waterways was considered within the road category when the inventory was completed.

⁵⁸ Definition of "recreation" from online dictionary. <http://www.yourdictionary.com/recreation> (accessed August 2008).

⁵⁹ <http://ilmbwww.gov.bc.ca/risc/pubs/culture/ros/ros98-ric-01.htm#preface>

There are seven classes of recreation opportunities identified, as follows:

P = Primitive
SPNM = Semi-Primitive Non-Motorized
SPM = Semi-Primitive Motorized
RN = Roaded Natural
RM = Roaded Modified
R = Rural
U = Urban

Why is this Indicator Important?

Identified recreation locations have been linked to the ROS inventory in order to provide a representation of the type of recreation experience available within each of the areas. The type of recreation experience is described by the level of remoteness attributed to the area in the ROS inventory. Over time, areas in the immediate surroundings of key recreation locations may change by becoming more developed, and thus also cause a change in the recreational experience available. This indicator will be able to give a general sense of the changing experience over time. This indicator can only provide informative comparisons if the ROS inventory is kept updated, and if the majority of available recreation locations are identified.

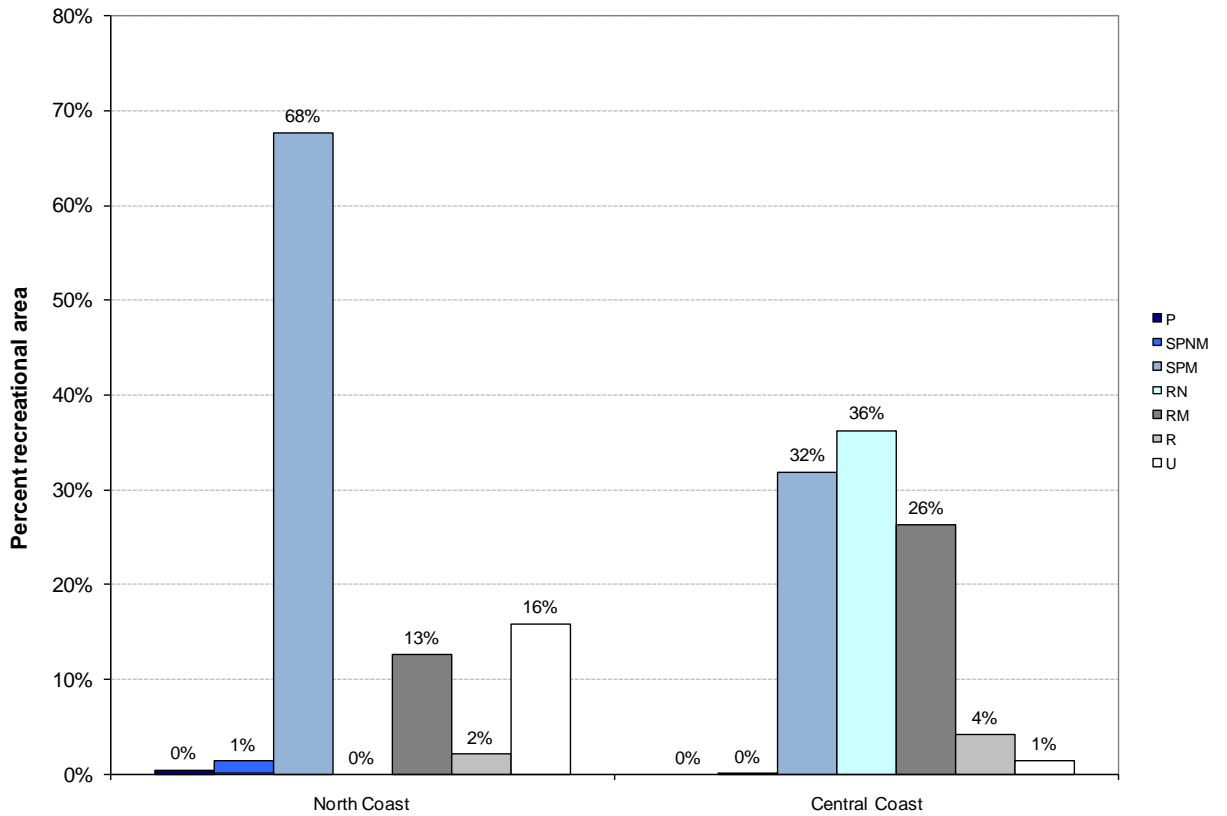
What is happening?

The recreation experiences available in the North Coast are primarily in the semi-primitive side of the spectrum, while the experiences available in the Central Coast are fairly evenly distributed between the semi-primitive and roaded classes in the middle of the spectrum. In the North Coast, 68% of the areas surrounding identified recreational sites are in semi-primitive motorized (SPM) areas. The experience expected in these areas is described as having a "high opportunity to experience solitude, closeness to nature, self-reliance and challenge"⁶⁰. Other recreational experiences in the North Coast fall in the urban (16%) and roaded modified (13%) classes. These experiences will provide lower opportunities for solitude and closeness to nature, as they are located closer to settlements, particularly around Prince Rupert. There are also limited recreation opportunities in very remote locations (2%) in the North Coast area.

In the Central Coast, roaded natural areas describe the primary type of recreation experience available (36%), followed closely by semi-primitive motorized (32%) and roaded modified (26%). Roaded natural areas are described as having a "moderate to high opportunity to experience solitude, closeness to nature, self-reliance and challenge", while roaded modified areas have "low to moderate opportunity" for these experiences and "moderate to high interaction with other people". There are fewer rural (4%) and urban (1%) experiences available in the Central Coast than in the North Coast.

⁶⁰ <http://ilmbwww.gov.bc.ca/risc/pubs/culture/ros/ros98-ric-05.htm>, Table 5.

Figure 54. Percent of Recreation Areas within each Recreation Opportunity Spectrum class



Source: BC Ministry of Agriculture and Lands – Integrated Land Management Bureau

What are the limitations of the data?

The Recreation Opportunities Spectrum (ROS), completed in 2002/2003 is a static inventory, a snapshot in time of the current landscape. It does not attempt to measure the actual activity level occurring across the spectrum. For example, although almost 70% of the recreation areas available fall in the semi-primitive motorized category, it is quite possible that the majority of recreational activity occurs in the areas classified as urban.

In order to track this indicator over time, it will be necessary to obtain an updated ROS inventory.

5 IMPLICATIONS FOR TARGET SETTING

A HWB baseline for the year 2006, comprised of 29 indicators, was established as one of the first steps in defining how increased HWB will be achieved in communities. This baseline provides a reference point for monitoring change and progress towards achieving increased HWB and can be used as a comparison point for assessing the impact of EBM over time. One of the next steps is to define targets for HWB and work towards influencing the performance of the communities on the targets. A target is the desired state or value of an indicator at some point in the future. Setting targets for HWB in EBM areas and communities will provide a way of determining, *in measurable terms*, whether HWB is moving in its stated desired direction over a specified period of time.

Measuring HWB against targets can help answer the following key monitoring questions for EBM communities and areas:

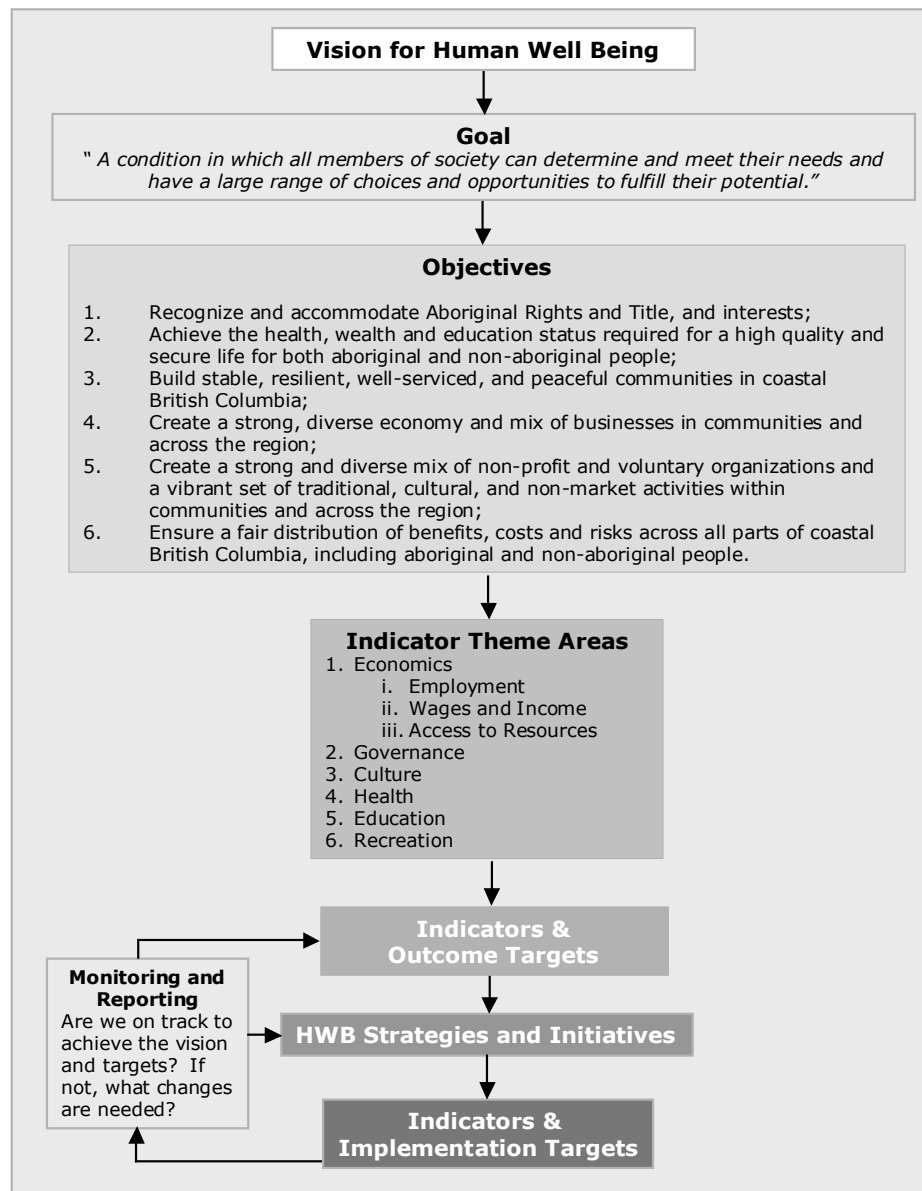
- Are we doing what we said we would do?
- Are we moving toward achieving our targets?; and
- Are we making a difference in terms of improving quality of life and human well being?

Establishing targets and monitoring how well the targets are being met will enable the Central and North Coast communities, the provincial government, and other stakeholders to determine whether EBM is successful at increasing HWB and provide feedback for making changes to EBM, where necessary.

To achieve increased HWB in coast communities, it is important to monitor and report on the progress of EBM. Figure 55 illustrates the role of targets, monitoring, and reporting on HWB in EBM and the monitoring process. Monitoring provides critical feedback to adjust the EBM to ensure the targets are being achieved. As Figure 55 illustrates, selected indicators and targets are directly linked to the high level vision, goal and objectives. Monitoring and reporting is critical for defining strategies and initiatives to help ensure that the vision and targets can be met.⁶¹

⁶¹ It is important to note that Schedules C and G identified targets however it is recommended that the relevant targets be reworked so that they conform to the prescribed definition of a target so that it includes both a target level and timeframe (see below).

Figure 55. Role of Targets and Monitoring in Improving Human Well Being

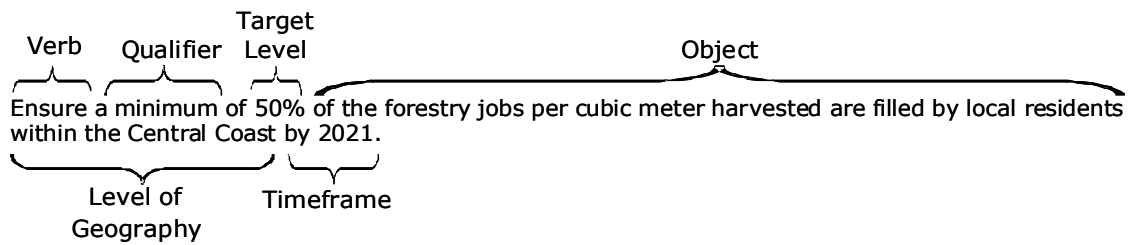


The purpose of this section is to propose a methodology for setting targets, including suggested criteria for establishing targets for HWB along with a list of recommended HWB indicators suitable for target setting.

5.1 Components of a Target

A target is described through a statement that contains a verb, a qualifier (minimum or maximum), a target level, an object, a level of geography, and a timeframe. Figure 56 illustrates the components of a target statement with a hypothetical example of a target.

Figure 56. Components of a Target Statement



Timeframe

When determining the timeframe of a target, it can be defined as short, medium or long term. It is recommended that a short term target be defined as falling within five years of the baseline (i.e. 2011), medium target is within ten years from the baseline (i.e. 2016) and a long term target is fifteen years or more years after the baseline (2021, etc.). Using Census reporting years (2006, 2011, 2016, etc.) when defining the target year is good practice since contextual and comparable data from the Census can be used in future reporting and monitoring efforts.

Qualifier and Target Level

The qualifier is a qualification of the quantitative target level. In the above example, instead of stating the target as “ensure 50% of the forestry jobs per cubic meter harvested are filled by local residents in the Central Coast”, it is qualified with “ensure a *minimum* of 50% of the forestry jobs per cubic meter harvested are filled by local residents in the Central Coast.” If the target is exceeded, then this is perfectly acceptable and the qualification of the statement makes that clear.

Levels of Geography

Targets can be defined for different levels of geography. It is important to define the level of geography that the target applies to, as the target may vary depending on where it is set. There are several levels of geography for the HWB targets: Central Coast and North Coast areas, Regional Areas, Local Health Areas, and the community level. The level of geography at which the target is set should correspond to the scale at which the indicator is being measured and what actions can be taken at that level of geography to shape or influence the area's performance on that indicator.

Central Coast and North Coast areas: There are two land use areas under EBM: North Coast and Central Coast. See Figure 1, which outlines the land use areas.

Regional Areas: There are six regional district electoral areas used in some of the indicators, including:

- Central Coast A includes non-reserve populations south of Kitasoo in the Central Coast area such as Shearwater, Dawsons Landing, Kilbella Bay, Shearwater, Namu, Ocean Falls;

- Central Coast D includes non-reserve populations adjacent to Bella Coola, including Hagensbourg in the Central Coast area;
- Mount Waddington A includes non-reserve populations in the south portion of the Central Coast area;
- Kitimat – Stikine C (Part 2) includes non-reserve populations south of Hartley Bay in the North Coast area as well as non-reserve populations north of Kitasoo in the Central Coast area;
- Skeena – Queen Charlotte A includes non-reserve populations south of Lax Kw'alaams and north of Port Edward; and
- Skeena – Queen Charlotte C includes non-reserve populations south of Prince Rupert and north of Hartley Bay in the North Coast area.

Local Health Areas: There are six Local Health Areas used in the health indicators, including:

- North Coast area: 52 Prince Rupert, 92 Nisga'a and 80 Kitimat
- Central Coast area: 49 Bella Coola Valley, 83 Central Coast and 85 Vancouver Island North.

Communities: Within each area there are several communities. Baseline data was collected for the following communities, where available:

Central Coast Communities:

- Kitasoo
- Bella Bella
- Shearwater
- Bella Coola
- Hagensborg
- Wuikinuxv
- Kingcome

North Coast Communities:

- Kincolith
- Lax Kw'alaams
- Metlakatla
- Prince Rupert
- Port Edward
- Kitkatla
- Hartley Bay

5.2 Types of Targets: Outcome versus Implementation and Visionary versus Pragmatic

There are two types of targets – outcome and implementation targets:

Outcome Targets focus on long term outcomes of strategies and initiatives that are not fully under the control of decision makers. These targets establish, in measurable terms, when the vision will be met. Outcome targets are high level and are largely influenced by multiple strategies and initiatives. Employment rate targets are outcome targets because employment rates are dependent on various strategies where changes are only seen over a longer period of time.

Implementation Targets focus on the implementation of strategies and initiatives and can be influenced directly by decision makers. These targets are set based on an examination of the expected outcomes of existing strategies and initiatives and as such, provide an indirect measure of when the vision is met. One example of an indicator

suitable for setting an implementation target is the number of jobs forestry companies can commit to local residents. Implementation targets are influenced by specific, short to medium term initiatives.

The key difference between the two types of targets is that the former is set as a means of measuring long term outcomes and the latter is set based on expected outputs of current strategies and initiative. Outcome targets are far reaching and best used for measuring long term goals, whereas implementation targets are best used for measuring short to medium term goals that can be directly influenced by decision makers.

Outcome and implementation targets define at what point in time the target should be reached. When setting either outcome or implementation targets, it is also important to consider if the quality of the target, that is, if it will be visionary or pragmatic. Table 7 illustrates the key difference between these two types of targets. Setting an employment rate target that matches the BC average (62%) in a community with a current employment rate of 23% would be considered a visionary target. It is visionary because it is what needs to be achieved to meet the vision; however, it is unclear how it can be achieved. Visionary targets are generally easier to reach consensus on because they help to achieve the long term goal. There is however more comfort in establishing pragmatic targets since they are grounded in the current initiatives underway and their potential outcomes.

Table 7. Visionary versus Pragmatic Targets

Visionary	Pragmatic
Top down (meets our goal)	Bottom up (built on action)
"Go for it"	"Sounds reasonable to me...."
Informed, yet ambitious	Based on detailed analysis
How do we do it? Go figure it out.	Based on these projects we can achieve this...

5.3 Indicators Suitable for Target Setting

Not all indicators are conducive to target setting. The number of targets should be focused and limited to the most important aspects that influence key determinants of HWB, and determine whether a high level of HWB is being achieved.

The following criteria are recommended for selecting which indicators are suitable for target setting. The indicator should be:

- able to be influenced by public policy and EBM and stakeholders;
- able to be influenced by specific actions with measurable results;
- relevant to achieving the objectives of HWB (see Section 1.1);
- measurable and have a reliable, replicable, and accurate data source, either an existing data source or one likely to be developed and available in the near future;
- easy to understand by the public, First Nation councils and local government elected officials, and government staff; and
- comparable to data from other communities or regions where appropriate.

Based on the above criteria, 10 of the 29 baseline indicators were identified as being suitable for target setting (see Table 8). 9 of these indicators could be used to set outcome targets and 1 indicator could be used to set implementation targets.

Table 8. Recommended Indicators Suitable for Target Setting

Indicators suitable for outcome targets	Indicators suitable for implementation targets
<ol style="list-style-type: none"> 1. Total population or minimum population levels 2. Number of jobs in forestry and wood processing per cubic meter harvested in land use area 3. Breakdown of Total Income by Source (with a greater proportion of total income from employment income rather than government transfers) 4. Employment rate 5. First Nation and local community forest sector revenues and employment 6. Percent of areas covered by Government to Government Agreements 7. Percent of First Nation community members speaking tribal languages 8. Life expectancy at birth 9. Education Attainment 	<ol style="list-style-type: none"> 1. a) Number of locally delivered skills training programs and b) number of people enrolled

The list of indicators suitable for targets was limited to the baseline indicators. The indicator identified as suitable for implementation targets was chosen because it measures activities that directly fall under the influence of decision makers and relates to specific initiatives. Conversely, those indicators identified as suitable for outcome targets were selected because they measure long term outcomes.

Additional indicators could be identified for target setting purposes. In particular, there are likely multiple, relevant implementation related indicators for the various socio-economic initiatives underway. These indicators were not included in the original list of HWB indicators because they are too detailed and are more indirectly related to HWB than those short-listed.

5.4 Proposed Target Setting Methodology

Setting measurable targets requires judgment and is not an exact science. There are two key questions that need to be answered in order to set targets that are meaningful and achievable:

1. Where are we now?
2. Where do we want to be?

Where are we now?

A baseline is required for each of the indicators that have an associated target. Baseline data is basic information gathered before a program, policy, or development begins. The baseline data is used to provide a comparison point for assessing the impact of the EBM, as well as providing a reference point for monitoring change and progress towards achieving a target.

The baseline year for the HWB Indicators is 2006 for most of the indicators, which is the closest census year to the implementation of EBM. For some indicators, the baseline year varied because 2006 data was not available.

With a baseline established, the next step is to identify benchmarks.

Benchmarks compare indicators from one community to similar communities, or to other reference points, such as provincial and national comparisons. Benchmarks are values of the same indicator observed in other jurisdictions. They provide guidance about what can be achieved and what other communities have accomplished.

Some of the criteria for selecting benchmarks include:

- Comparable data is available for the benchmark jurisdiction.
- The community or region is of a similar population size.
- The community is of a similar type (e.g. urban, rural, reserve, etc.).
- The benchmark is an area with a similar settlement pattern with a similar economic structure.

A few benchmark comparisons were researched along with the baseline indicators selected; however, it is recommended that a more extensive benchmarking exercise be conducted before targets are set. Suitable benchmarks include:

- Comparable communities in BC with similar populations and resource base (e.g. communities on N. Vancouver Island, Haida Gwaii, the interior, etc.)
- Regional District averages: Skeena-Queen Charlotte; Kitimat-Stikine and Central Coast (where data was not collected in the baseline)
- BC average (where data was not collected in the baseline)
- Canadian average (where relevant)
- Other comparisons on an indicator by indicator basis

Where do we want to be?

Once there is clarity on the baseline, it is then possible to start answering the question, where do we want to be?

There are two different methodologies for setting targets, one for outcome targets and another for implementation targets. For either type, it is recommended that a SMART approach be used when defining the targets. A SMART target is:

- Specific – each target specifies a geographic area and focuses on key elements of HWB

- Measurable – the indicator associated with the target is quantitative and measurable to enable the measurement of progress over time
- Achievable – each target is thought to be achievable within the specified timeframe based on the available or anticipated resources of the HWB, stakeholders, and communities
- Realistic – the target is based on a determination of what is thought to be realistic in comparison to other similar regions, or best performers, but can also be a “stretch” to achieve
- Time-bound – the target specifies a date by when the target is to be achieved

Approach for Outcome Target Setting

1. Establish benchmarks to clarify how communities compare to others, if not included in the baseline. As explained above, this point of comparison helps determine what targets are realistic. Some benchmarks have already been identified and included in this report and can be used as a starting point.
2. Conduct a review of land use plans and current initiatives to identify what measurable outcomes have already been outlined by the plans. These outcomes can then be used in setting targets, where appropriate, and relevant to the selected indicators.
3. Conduct a visioning session with First Nations, community representatives, stakeholders and the EBM WG to answer the question “Where do we want to go from here?” The baseline, benchmarks and expected outcomes of the strategic plans should be used to guide the discussion. More specifically, the session should answer the following questions:
 - Given the objectives of the land use plans, how do we compare to others and what current initiatives are underway, in measurable terms, what should we be trying to achieve?
 - How many targets should we establish? (i.e. what are our priorities?)
4. Define a process, involving key decision makers, to review, refine and approve targets (in principle or in full).
5. The resulting outcome targets should be consistent with the priority action areas identified in the strategic plans. Responsibility for achieving targets needs to be allocated to the appropriate person/organization/sector.

Approach to Implementation Target Setting

The approach to setting implementation targets differs from outcome targets because the measures can be directly influenced by decision makers.

1. Benchmarking is not necessary for these types of targets because the measures are specific to what is possible under the local conditions.
2. Establish an inventory of current initiatives and determine the inherent targets of these initiatives (e.g. how many new jobs can be created?).
3. Identify any gaps in current initiatives:

- Are there any additional initiatives that need to be implemented? (These gaps can be based on the outcomes of a visioning session that responds to the question, “what should we be trying to achieve?”)
4. Conduct a target setting workshop with First Nations and key stakeholders, including decision makers and industry representatives. The workshop should review the potential implementation targets and gaps in the current initiatives and define realistic measures of success. The workshop should answer the following questions:
 - a. Given the current initiatives underway and possible additional initiatives, in measurable terms, what can we achieve?
 - b. How many targets should we establish? (i.e. what are our priorities?)

Note: It is likely that new indicators will emerge in this process since most of the 2006 baseline indicators are not suitable for implementation targets. When selecting new indicators for the implementation targets ensure data is readily available.

See Figure 56 for an example of a target.

5. Define a process, involving key decision makers, to review, refine and approve targets (in principle or in full).
6. Responsibility for achieving targets needs to be allocated to the appropriate person/organization/sector.

Reporting on Progress Towards Achieving the Targets

The consultant team recommends that 5-year monitoring reports be prepared to track trends in HWB for the region. It is estimated that that the report will take about 20-30 days of full time work to complete. The 5-year reports are the appropriate location for reporting on progress towards achieving the HWB targets.

Reporting on the targets has several uses:

- it provides an update on the implementation of EBM and its effectiveness;
- it acts as a feedback mechanism to policy-makers on what is working and what needs improvement; and
- it promotes public education and outreach on EBM and HWB in the region.

The selection, setting, monitoring and reporting of progress towards achieving targets is key to achieving increased of HWB in the region. The clear articulation of HWB indicator targets will facilitate data collection and reporting in an objective and meaningful manner. The targets will help provide a feedback mechanism to ensure EBM is working and moving towards realizing the regional vision.

6 RECOMMENDATIONS FOR FUTURE MONITORING

The following recommendations are proposed for future updates of the HWB indicators:

1. Incorporate the HWB indicators and monitoring program into the EBM Adaptive Management Framework.
2. Update indicators every five years. The data collection period should follow the release dates for the census data. Census data is released approximately 2-years following each census. The first 5-year report would therefore be developed in 2013.
3. When selecting staff or consultants to update the indicators, ensure that they have access to GIS software and are able to work with GIS data.
4. Try to maintain this list of indicators over time and limit adding and amending the measures. The indicators need to be consistent from reporting year to reporting year so that a trend in the indicator can be tracked.
5. Use the existing community survey tool (see the accompanying Technical Report) and build on it so that community scale data can be collected for most of indicators. Data for the following indicators could be collected through an amended community survey:

Ref #	Indicator
Population	
POP-1	1a) Total population and growth rate, by community and plan area; and 1b) Percent of the population that is Aboriginal
POP-2	Demographic Breakdown, by age cohort
Economics	
Sub-Theme: Employment	
EMPL-1	Labour force a) by sector, b) by age cohort, c) by occupation
EMPL-2	Employment Rate
Sub-Theme: Wages and Income	
INC-1	Median Household Income
INC-2	Individual Income distribution
INC-3	Breakdown of Total Income by Source
INC-4	EI Recipients as % of Labour Force
Culture	
CUL-1	Percent of First Nation community members with knowledge of tribal languages
Education	
EDU-1	Education Attainment
EDU-2	b) number of people enrolled in skills training programs/courses

Note: The current community survey should be amended to include questions for the indicators highlighted in yellow.

6. INC-2 should be amended to measure Household Income Distribution, rather than individual income. As discussed in the write-up for INC-2 (see p.50), household income distribution is a more meaningful measure.

7. Several of the indicators are based on GIS data and are reported at coast area scale. In the future, it would be worthwhile exploring ways of reporting these indicators at a community scale. These indicator include the following:

Ref #	Indicator
Economics	
Sub-Theme: Employment	
EMPL-3	Number of jobs in forestry and wood processing per cubic meter harvested in land use area
Sub-Theme: Access to Resources	
ACC-1	Percent of aquaculture tenures owned by coast area residents and percent of productive activity by coast area residents
ACC-2	Percent of Mineral Exploration tenures owned by coast area residents and percent of productive activity by coast area companies
ACC-3	Number of commercial fish licences held locally and non-locally, number of First Nations fish licenses, and percentage of productive activity by area companies and First Nations
ACC-4	First Nation and local community forest sector revenues and employment
ACC-5	Timber Harvest Level
ACC-6	Percent of Backcountry Tenures, Guide Outfitter Tenures, Sport fishing lodge licenses owned by coast area residents and percent of productive activity by area companies
ACC-7	Number of power generation tenures
ACC-8	Number of other natural resource tenures, by sector, held locally and non-locally and percentage of productive activity by area companies
Governance	
GOV-1	Number and percent of areas covered by Government to Government Agreements
Culture	
CUL-2	Number of returning salmon to key watersheds in areas
Recreation	
REC-1	Distribution of recreation opportunity classes

8. As discussed in Section 3, there were several indicators that were identified as being important, yet were not included in the baseline because they were outside the scope of this study. These include:
- Number of businesses and employment per employer in each of the key basic and non-basic sectors
 - First Nation and local community tourism revenues and employment
 - Percent of population participating in voluntary community service organizations
 - Percent of cedar harvested relative to forest cover species profile
 - Number of First Nation community members using traditional cultural resources for non-commercial purposes

To collect the data, these indicators require additional surveys and resources. In the future, funding should be secured to explore ways to collect the data.

9. Identify additional, appropriate indicators for implementation targets – see proposed target setting methodology (p. 128) for details.

APPENDIX A – HUMAN WELL BEING QUICK FACTS

Social

	Health Service Delivery Area			
	North West	North Shore / Coast Garibaldi	North Vancouver Island	BC
Family connectedness for youth	78.34	79.65	78.07	78.02
School connectedness for youth	66.14	67.49	64.29	66.72
Sense of belonging to local community	79.04	69.32	70.23	67.32
Social support index	45.93	49.51	49.43	48.76

Health

	BC Local Health Areas						BC
	North Coast			Central Coast			
	52 Prince Rupert	80 Kitimat	92 Nisga'a	49 Bella Coola Valley	83 Central Coast	85 Vancouver Island North	
Potential years of life lost: natural and accidental (per 1000 population)	55	44.4	90.8	110.1	N/A	62.2	41.8
Potential Years of Life Lost Due to Suicide/Homicide (per 1000 population)	6.3	1.7	22.2	7.5	N/A	10.8	4.3
Teen Pregnancies (per 1000 women age 15 – 17)	43.3	11.6	55.6	50.5	N/A	46.5	17.8

	Health Service Delivery Area			
	North West	North Shore / Coast Garibaldi	North Vancouver Island	BC
Percent of total population (18 and older) that is obese/overweight	56.5	39.3	47.6	45.2
Percent of population considered active or moderately active (burning more than 1.5 kcal/kg/day)	59.6	63.4	64.1	57.7

Economic

	BC Regional District				BC
	North Coast		Central Coast		
	49 Kitimat - Stikine	47 Skeena – Queen Charlotte	45 Central Coast	43 Mount Waddington	
Tourism Room Revenue (\$ thousands)	11,193	17,108	2,167	7,511	1,967,921

Education

	BC School District					BC
	North Coast		Central Coast			
	52 Prince Rupert	82 Coast Mountains	92 Nisga'a	49 Central Coast	85 Vancouver Island North	
High School Graduation (% of eligible grade 12 students)	89	89	53	100	95	93
Percent of student test scores that are below the provincial average in:						

Grade 4 reading, writing, and math	33.3 / 15.6 / 25.4	30.7 / 15.2 / 22.8	57.4 / 21.3 / 47.2	54.5 / 31.1 / 33.9	30.7 / 12.6 / 20.9	20.1 / 8.8 / 12.9
Grade 7 reading, writing, and math	33.5 / 21 / 26.4	33.8 / 22.2 / 31.4	72 / 36 / 72.7	64.6 / 41.5 / 52.8	44.7 / 29.5 / 32.3	23.4 / 11.2 / 17.1
Public expenditure per full time equivalent (FTE) students	10,305	9,458	14,883	18,318	11,500	8,026

Family Structure & Housing

	BC Local Health Areas (LHA)						BC
	North Coast			Central Coast			
	52 Prince Rupert	80 Kitimat	92 Nisga'a	49 Bella Cooola Valley	83 Central Coast	85 Vancouver Island North	
% of Total Families with Children at home	68.9	65.8	78.6	65.9	N/A	62.5	60.5
% of Families with Children that are Couples	68.2	76.1	70.1	67.5	N/A	72.2	74.3
% of Total Families without Children	31.1	34.2	22.2	34.6	N/A	37.3	39.5

Natural Environment & resources

	North Coast	Central Coast
% of land base protected as parks and protected areas	26.9	28.9

APPENDIX B – INDICATOR SELECTION PROGRESSION

The table below lists the Schedule C/G indicators and how they compare and relate to the indicators recommended by Rubus and the final set of indicators and quick facts recommended by The Sheltair Group.

Table 9. Indicator Selection Progression

Schedule C/G	Rubus Recommended	Sheltair Recommended
Population		
Population changes in Plan Area(s) and local Plan Area(s) communities	Total population by community and plan area	POP-1: Total population and growth rate by community and plan area
		POP-2: Demographic Breakdown, by age cohort
		POP-3: Rate of population turnover
Economics		
Sub-Theme: Employment		
		EMPL-1: Labour force by sector, by community, by age cohort
Employment levels and unemployment rates in the Plan Area(s) and communities in the Plan Area(s).		EMPL-2: Employment Rate
	Number of businesses and employment per employer in each of the key basic and non-basic sectors	Number of businesses and employment per employer in each of the key basic and non-basic sectors
	Number of jobs in forestry and wood processing per cubic meter harvested in land use area	EMPL-3: Number of jobs in forestry and wood processing per cubic meter harvested in land use area
Sub-Theme: Wages and incomes		
Average income per tax filer and average family income	Number of individuals with formally reported incomes	INC-1: Median household income
	The number of individuals with formally reported annual income above \$25,000 annually (adjusted for inflation)	INC-2: Individual Income distribution
	Number of income earners in the lower two income brackets (less than \$15,000 and \$15,000 to \$24,999 annually) as a percent of number of income earners for the plan areas or the number of middle income earners (\$35,000+ and \$50,000+ categories)	
El claimants as % of population aged 19-64 vs BC overall rates		INC-3: Breakdown of Total Income, by source
"Long-Term" El claimants as a % of population aged 19-64 vs BC overall rates		INC 4: El claimants as % of Labour Force
Sub-Theme: Access to Resources		
Shell fish aquaculture expenditures and /or number of tenures.	Percent of aquaculture tenures owned by plan area residents and percent of productive activity by plan area residents	ACC-1: Percent of aquaculture tenures owned by plan area residents and percent of productive activity by plan area residents
First Nation and local community shellfish revenues and employment.		

Mineral exploration expenditures	Percent of Mineral Exploration tenures owned by plan area residents and percent of productive activity by plan area companies	ACC-2: Percent of Mineral Exploration tenures owned by plan area residents and percent of productive activity by plan area companies
		ACC-3: Number of commercial fish licences held locally and non-locally, number of First Nations fish licenses, and percentage of productive activity by plan area companies and First Nations
First Nation and local community forest sector revenues and employment		ACC-4: First Nation and local community forest sector revenues and employment
Timber Harvest by species and grade		ACC-5: Timber Harvest Level
Schedule C/G	Rubus Recommended	Sheltair Recommended
# and % of tenures held by Plan Area(s) communities, First Nations and individuals who live and work in the Plan Area(s)	Number and volume of productive activity for Backcountry Tenures, Guide Outfitter Tenures, and Sport fishing lodge licenses by plan area residents Percent of Backcountry Tenures, Guide Outfitter Tenures, Sport fishing lodge licenses owned by plan area residents and percent of productive activity by plan area companies	ACC-6: Percent of Backcountry Tenures, Guide Outfitter Tenures, Sport fishing lodge licenses owned by plan area residents and percent of productive activity by plan area companies
# and % of tenures held by Plan Area(s) communities, First Nations and individuals who live and work in the Plan Area(s)	Percent of other natural resource tenures owned by plan area residents and percentage of productive activity by plan area companies	ACC-7: Percent of other natural resource tenures owned by plan area residents and percentage of productive activity by plan area companies
Economic diversity index	Economic diversity index (compared with North Island and province)	ACC-8: Economic diversity index (compared with province)
Tourism room revenue	Tourism room revenue	Tourism room revenue (Quick Fact)
	Number and percent of workers in the plan area who are permanent residents	
	Commercial loan levels	
	Commercial equity investment	
	Percent of AAC held by plan area residents and communities	
Annual resource revenues to First Nations.	Annual resource revenues to First Nations, compared with revenues to province	
Annual resource (stumpage, etc.) revenues to Province.		
	Public infrastructure investment	
First Nation and local community tourism revenues and employment		First Nation and local community tourism revenues and employment
Assessed property values for Plan Area(s) and by municipality		
Governance		
		GOV-1: Number and percent of Plan Areas covered by Government to Government Agreements
		Percent of population participating in voluntary community service organizations

Culture		
	Number of First Nation community members in the plan area learning and speaking tribal languages	CUL-1: Percent of First Nation community members in the plan area speaking tribal languages
	Number of returning salmon to key waterways in plan area	CUL-2: Number of returning salmon to key waterways in plan area
First Nations' harvest levels of cultural / traditional resources.		Percent of cedar harvested relative to forest cover species profile
Identification of First Nations' cultural / traditional resources	Number of First Nation community members using traditional cultural resources for non-commercial purposes	Number of First Nation community members using traditional cultural resources for non-commercial purposes
Schedule C/G	Rubus Recommended	Sheltair Recommended
	Number of new archaeological studies or Traditional Use Studies conducted and number reviewed by First Nations	
	Number of hectares protected/managed specifically for enhancement of cultural resources	
	Number of hours of First Nation community member participation in the plan areas involved in traditional cultural activities	
Health		
	Life expectancy at birth	HEA-1: Life expectancy at birth
	Infant Mortality Rate	HEA-2: Infant mortality rate
	Potential years of life lost natural and accidental	Potential years of life lost natural and accidental (Quick Fact)
	Potential Years of Life Lost Due to Suicide/Homicide	Potential Years of Life Lost Due to Suicide/Homicide (Quick Fact)
	Teen Pregnancies	Teen Pregnancies (Quick Fact)
		Percent of total population (18 and older) that is obese/overweight (Quick Fact)
		Percent of population considered active or moderately active (burning more than 1.5 kcal/kg/day) (Quick Fact)
Education		
	Education Attainment	EDU-1: Education Attainment
		EDU-2: Skill Domain
		EDU-3: Number of locally administered and delivered skills training programs and number of people enrolled
	Percent of graduates from Grade 12 as a percentage of those in Grade 12	High School Graduation as % of eligible grade 12 students (Quick Facts)

	Number and percent of adult population who complete Grade 12, certified job skills training, trades, college (diploma), University Degree, or Master Degree	
	Percent of students who enter Grade 8 but do not complete Grade 12	
		Percent of student test scores that are below the provincial average in (Quick Facts): Grade 4 reading, writing, and math Grade 7 reading, writing, and math
		Public expenditure per full time equivalent (FTE) students (Quick Facts)
Recreation		
		REC-1: Distribution of recreation opportunity classes
Family Structure and Housing		
		% of Total Families with Children at home (Quick Fact)
		% of Families with Children that are Couples (Quick Fact)
Schedule C/G	Rubus Recommended	Sheltair Recommended
		% of Total Families without Children (Quick Fact)
Natural Environment and Resources		
		% of land base protected as parks and protected areas (Quick Fact)
Social		
		Family connectedness for youth (Quick Fact)
		School connectedness for youth (Quick Fact)
	Average index score for generalized trust (level of trust in people)	Sense of belonging to local community (Quick Fact)
	Commitment to place (average scores on commitment-to-place survey question)	
		Social support index (Quick Fact)

Note: Indicators shaded in yellow require surveys to collect the data and are currently outside the scope of this project. These indicators should be revisited in the future when the baseline is updated.

APPENDIX C – FOREST AND RESOURCE AGREEMENTS ON NORTH AND CENTRAL COAST

Date signed	First Nation (by order of date signed)	Region	Location	FRA Revenue Sharing (\$million)	FRA Timber Vol. m3 (000)	Comment
2003/10	Gitga'a't	Coast (North Coast TSA)	Hartley Bay	1.57	290	10 yr license (290,000 m3 per Gitga'a't; MOFR web: 190,000 m3) - took over 2 yrs to negotiate chart area; waiting for markets to improve
2003/10	Lax Kw'aalams	Coast	Port Simpson	6.85	650	So far nothing has been harvested on FRA; harvest on band owned TFL 1 & FL 16835 was 212,000 m3 in 2006 & 400,000 m3 in 2007; band owned forest company is Coast Tsimshian Resources Ltd.
2003/12	Metlakatla	Coast	Prince Rupert	1.73	210	Harvested 50,000 m3 in 2007; likely limited or no harvest in 2008 due mainly to poor markets and lack of viable chart areas
2004/02	Heiltsuk	Coast	Bella Bella	5.17	485	Have forest company; harvested about 45,000 m3 in 2007
2004/02	Kitasoo	Coast	Klemtu	1.2	115	Have forest company; harvested 100,000 m3 on BCTS license in 2007; will harvest FRA in 08/09
2004/02	Wuikinuxv (Oweekeno)	Coast	Port Hardy	0.625	60	Hope to purchase 200,000 m3 license in 08; harvest was 130,000 m3 in 04, 40,000 m3 in 05 and 47,000 m3 in 06
2004/09	Kitkatla	Coast	Kitkatla	3.99	375	Nothing has been harvested; 4 years into the agreement, chart areas that were given cannot be logged profitably under current market conditions
2004/12	Xwémalhkwu (aka Homalco)	Coast	Campbell River	1.06	79	Have harvested timber on reserve lands, non-renewable licenses and other since early 1990s. Harvested 40,000 m3 in 2005, 20,000 m3 in 2006 and 60,000 m3 (complete FRA) in 2007.
2005/02	Namgis	Coast	Alert Bay	3.8	410	FRA is entirely on Vancouver Island; are in process of setting up, no harvest so far. Traditional territories on Central Coast are no harvest areas
2005/03	Wewaiikai (Cape Mudge)	Coast	Quathiaski Cove	2.1	102	Also have Area Based Tenure (woodlot) associated with agreement
2006/04	Da'naxda'xw/Awaet lala	Coast	Alert Bay	0.436	47	Will likely harvest FRA in 2008; have approx. 5 local residents working in forestry on a part-time basis
2007/02	Nuxalk	Coast	Bella Coola	3.31	311	Have forest company; in process of setting up harvesting on FRA but no harvest so far; also have community forest license
2008/01	Tsawataineuk	Coast	Kingcome Inlet	1.26	73	Includes woodlot and other licenses up to a maximum AAC of 14,670 m3 per yr for 5 years
2004/02	Haisla	Northern Interior	Kitamaat	3.79	360	Have joint venture with logging contractor (last 2 years); 6 to 10 Haisla people work in logging mainly road crew, etc. Also, a few members are fallers but work outside band. Some 10 to 15 PYs at Eurocan P&P
TOTAL				36.9	3,567	

Source: This table is from *Pierce Lefebvre Consulting(2008) EBM Working Group – Inventory of Economic Development Initiatives in the BC Central and North Coast Region, Final Report – May 31st, 2008*