TIRED IRON: THE STATE OF THE HARVESTING SECTOR ON THE BC COAST

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THE TRUCK LOGGERS ASSOCIATION

Our strength is in our roots.

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Tired Iron: The State of the Harvesting Sector on the BC Coast

Executive Summary

British Columbians have benefitted from the province's abundant forest resources throughout the course of history and BC's forests continue to provide important economic benefits. However, over the past decade, poor market conditions, higher logging costs, changes in government policy and environmental factors have resulted in reduced forestry activity on the BC coast.

As the forest industry emerges from what has been an unprecedented cyclical trough, the risk it faces is whether the changes that took place within the different parts of the industry become structural ones that affect how well the industry will operate in the future. In particular, whether these changes have negatively affected the operating costs and productivity of the harvesting sector which supports the downstream activities associated with further processing and manufacturing of timber. The consequences could be that even as forest products markets recover, the coastal industry could miss out and longer-term be unable to attract the capital necessary to sustain itself.

What has been the net effect of these changes on the coast harvesting sector? What does the current landscape look like and what are the implications for the province and the local communities that depend on forestry? These and other questions posed by The Truck Loggers Association are the focus of this report.

Trends Over the Past Decade

The economic benefits of the forestry industry are typically emphasized in terms of employment given that it leads to an increase in spending and, consequently, an increase in economic activity. However, economic value due to employment is also generated in the form of income taxes collected along with consumption taxes. Local governments also collect taxes for the services they provide and in the case of publicly owned forests, taxes and fees are collected by the provincial government on the volume of wood harvested.

In 2011, 21,405 people were employed in the forest industry on the BC coast, of which 5,780 (27%) were employed in forestry and logging; wood product manufacturing accounted for 38% and pulp and paper manufacturing accounted for 27%. The remaining 8% were employed in support activities for forestry.

Since 1990, the Annual Allowable Cut (AAC) on the coast has fallen 23% and over the past decade, actual harvest levels, with the exception of two years, have been significantly below the AAC. This undercut reflects changes in government policy that caused delays preparing timber for harvest and poor market conditions that reduced the amount of timber that could be accessed economically. Since 2000, government revenue dropped from $340 million to $50 million (2001-2010) and total forestry employment fell by almost half.

As harvest levels have fallen, not only has total employment dropped, but there has been a shift in the composition of

the workforce. Throughout most of the coast, with the exception of urban areas around Vancouver and towns with a pulp and paper mill, the forestry and logging sector has become the larger employer in the forest industry. Further, forestry and logging employment is particularly important for rural BC, as the jobs are local and well-paying and for every 10 jobs, an additional five are created elsewhere in the community.

Three forces underlie the significant changes observed in the forest industry over the past decade. First, there have been several important changes in export markets, including the collapse of the US housing market. Second, the cost and availability of timber has meant that a significant portion of the available timber that can be accessed is now at a higher cost. Third, there have been important changes to forest policy that have resulted in a consolidation of the BC coastal industry, as larger firms purchased smaller firms and tenures.

Current Health and Future Prospects

The net effect of these changes over the past decade is that most businesses in the forest harvesting sector have been unable to reinvest in either their capital assets or their workforce. Further, most firms continue to have difficulty finding and retaining workers and many continue to experience downward pressure on contract rates. According to the contractors surveyed, the latter is due in large part to their diminished bargaining power resulting from the concentration of forest tenure into fewer hands.

Despite these trends, the opportunity for recovery and growth is significant. However, the sector's ability to take advantage of emerging opportunities depends on addressing the impacts of consolidation and restoring conditions that encourage investment in equipment and the workforce (e.g. training and retention). If the pool of available contractors is reduced to only those who are able to operate at the lowest cost, the quality of knowledge, safety and harvesting practices may deteriorate. Furthermore, if rates are not competitive, new firms will be reluctant to enter the business, and overall capacity within the sector will shrink, as equipment wears out, firms exit, and neither are replaced.

Ultimately the health of the harvesting sector will affect the downstream industries and their ability to generate economic activity and the associated economic benefits for local communities and the province as a whole. The sector's ability to take advantage of emerging opportunities depends on decisions the province makes about sustaining the forest resources and industry and the benefits derived from them. Bottom line—what happens in the harvesting sector on the coast is part of a broader issue of how we generate value from the forest resource and has significant implications for all British Columbians.

Introduction

British Columbians have benefitted from the province's abundant forest resources throughout the course of documented history. Long before James Cook repaired his ships using the plentiful timber of Nootka Sound in 1778, BC's First Nations built longhouses and made clothing, tools and utensils from forest products.

Rough, hand-sawn lumber was used to build forts at Fort McLeod, Fort St. James, Fort Langley and Fort Victoria through the early- to mid-1800s. Later, the gold rush increased demand for lumber in the interior of the province. In the late 1800s, the first steam engine mill arrived in Port Alberni. Logs were milled and shipped to England for shipbuilding.

In 1848, industrial forestry took hold when the first sawmill was constructed in Victoria, BC, by the Hudson's Bay Company.

BC's forests continue to provide important economic benefits to communities in both the coast and interior regions, ranging from employment opportunities, to revenues provided to the Crown from timber harvesting and other fees, to ripple effects on revenues and expenditures in other industries. These economic benefits accrue in different ways and at different levels; for example employment generates wages that are spent in local communities; while fees collected at the provincial level go to support provincial expenditures for health care, education and other programs.

But the forest industry has also been met with challenges in recent decades. Effects of natural hazards such as forest fires, pests (e.g. mountain pine beetle) exacerbated by climate impacts, changes in the resource base, trade barriers, market forces (e.g. the decline in the US housing market) are interacting to reduce the values generated in the forest industry from historic highs.

Indeed, we are at a critical moment in the history of the forest industry. While the well-being of many BC communities remains dependent on a healthy forest industry, the sector needs to reinvent itself and adapt to address existing challenges in order to generate the value it needs to sustain itself. As the forest industry slowly emerges from what has been an unprecedented cyclical trough, the risk it faces is whether those changes that took place within the different parts of the industry become structural ones that affect how well the industry will operate in the future. In particular, where these changes have negatively affected the operating costs and productivity of the harvesting sector, which supports the downstream activities associated with further processing and manufacturing of timber and associated co-products. The risk is that the cost structure and productivity of those sub-sectors will also be negatively affected. The consequences could be that even as forest products markets recover, the BC forest industry could miss out on the opportunity to participate in the benefits of that recovery, and longer-term since it is no longer attracting the capital to sustain itself locks itself into a lower value path in the future.

Indeed, we are at a critical moment in the history of the forest industry.

The purpose of this report is to characterize the current challenges within

the forest harvesting sector in the coast region. This information has implications for the health of the economy at the local and provincial levels and indeed for the provincial forest products industry.

We begin by identifying the importance of the BC coast harvesting sector to local economies within the region. Then, we examine trends in the sector within this region over the past decade and the implications of what have been significant changes. Finally, we assess the current health of the sector and future prospects for those businesses, including the implications for the local economies and communities within which those business live and work.

In order to understand how a particular sector contributes to regions and communities, it is important to take into account both scales and identify ways in which businesses provide benefits to those communities. Scale is especially important when we are examining local and regional economies. Twenty jobs are much more meaningful in a community with a working population of only a few hundred; assessed at the provincial level, these jobs will not have an equivalent impact (Feser and Sweeney 1999).

The same is also true when looking at the ways in which businesses offer benefits. These benefits include not only the number of jobs but also the nature of that employment, including the level of wages, where those wages are spent, and how businesses decide where to base their operations including workforce-hiring policies, all of which can have significant impacts at the local level. Businesses, business owners, and employees also contribute directly to the local economy through property taxes and other local taxes and fees. Beyond those financial contributions, owners and employees also contribute to the civic life of a community in important ways.

The report draws on both publicly available statistics as well as a series o f interviews carried out with contractors operating in the BC coast region in the month of August 2013.

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Identifying the Economic Benefits of Forestry

The economic benefits of the forestry industry are typically emphasized in terms of employment.

Jobs are not only the most visible way in which we can observe the economic roles of different firms or industries, they are also the most meaningful to us based on our own personal experiences. We understand jobs and why they are important. Both intuitively and from an economic perspective, a reduction in employment can lead to a reduction in spending and, consequently, a reduction in economic activity.

Employment also creates ripple effects because of how we earn and spend money. The economy consists of a web of interrelationships that channel economic activity and associated income flows, where some of the activity is directly linked to those aspects of the economy organized around producing a particular good (e.g. manufacturing ships, harvesting trees, milling lumber), supplying goods or services to goods-producing firms and the day-to-day expenditures of wages by people working in those firms (i.e., on retail sales, at grocery stores or gas stations, on legal services).

Economic value due to employment is also generated in other ways. Income taxes are collected, along with consumption taxes. These revenues will accrue at various points within the levels of the economy as goods and services are exchanged. Income and other taxes (e.g. sales taxes), similar to those collected from employees, are also paid by firms. Local governments also collect taxes for the services they provide, such as property taxes assessed both on individuals and firms, including appropriate permits and licenses (Davies Consulting et al 2012). Where public resources are involved, provincial governments will collect fees for their use; these may be directly related to the extraction of those resources or for the right to use those resources. In the case of publicly owned forests in BC, taxes and fees are collected by the provincial government on the volume of wood harvested (stumpage fees), rental fees

In the case of publicly owned forests in BC, taxes and fees are collected by the provincial government on the volume of wood harvested

on harvest rights linked to area or volume, as well as permits and licenses.[1]

These taxes and fees accrue to different levels of government (i.e., local, municipal, provincial and federal) to fund government expenditures on goods and services.

In addition to employment, income, taxes and fees, this economic activity also contributes to the flow of goods and services within a sector, typically assessed through measures such as contribution to GDP. It is also possible to quantify the relationships between these sectors and other parts of the economy, as a change in spending in one sector spurs changes in employment, revenue, or GDP of other interrelated sectors. These "multipliers"—the factors by which a change in one sector results in a change in another—are used to estimate the effects of changes in activity within one sector and how it affects other parts of the economy (i.e., ripple effects).

Finally, if a good or service is exported—and exports are important to the provincial or regional economy—this can also become an important measure of the effects of a sector. The reason we distinguish this is because export markets have the potential to expand the scope of our buyers and increase economic activity beyond that which may otherwise have occurred if we relied on domestic markets. This is particularly true in BC, where the provincial economy relies heavily on exports and where manufactured forest products are a key part of the export mix.

These economic indicators—employment, income, income and consumption taxes, harvesting taxes and fees, contribution to GDP and the value of exports—can be used to paint a picture of the economic activity and benefits associated with a sector. But, as noted earlier, this picture is incomplete. Understanding the limitations of these indicators becomes important when we start to examine the scale of activities within the sector. In particular, when focusing on local and regional economies, employment emerges as a more prominent factor because wages are spent locally.[2]

These indicators also fail to capture the financial benefits that businesses can provide to a local community, including civic endeavors. Smaller, local firms also appear to offer more stable employment opportunities than larger firms, in part because they have the flexibility of being able to adjust workforce policies more easily, but also because of the importance of retaining their employees where the costs of retraining or losing an employee can be much higher than for a larger firm.[3]

While it is important to bear in mind their limitations, these indicators offer ways to quantify the economic contributions from a sector and the businesses operating within it and to assess changes within that sector.

It is this set of indicators that we will now use to assess the economic contribution of the harvesting sector on the BC coast.

[1] The Province also retains specific fees on lumber shipments to the US, arising from the Softwood Lumber Agreement with the US that imposes export taxes on US-bound lumber as well as fees on logs exported from BC.

[2] Government expenditures are also an important part of local economies—whether it is direct payments (for example to public sector employees, or support for local hospitals or schools, or infrastructure projects x might be funded either Provincially or Federally)—but it is more difficult to draw a direct link between economic activity within a region and government spending, especially as one moves from the local level of government to higher levels of government and where more redistribution takes place with spending according to needs or other criteria (other than relating to where the revenue was collected).

[3] The importance of small- and medium-sized enterprises (SMEs) has been well documented in terms of key economic indicators. Statistics Canada's Labour Force Survey reports that, in 2008, 67% of employed Canadians worked for firms with fewer than 100 employees (Statistics 2009). Of greater importance is that, during the worst of the 2008-09 worldwide recession, small enterprises were only responsible for 44% of Canadian job losses; a considerably smaller proportion than their larger counterparts (Statistics Canada, 2009). SMEs' positive economic contributions are not limited to employment; in Canada, SME exports accounted for over 40% of total exports in 2010 (Statistics Canada, 2012).

The Role of the Harvesting Sector

In British Columbia, we derive economic value from our forest resources through harvesting trees and converting them into a range of manufactured products.[4]

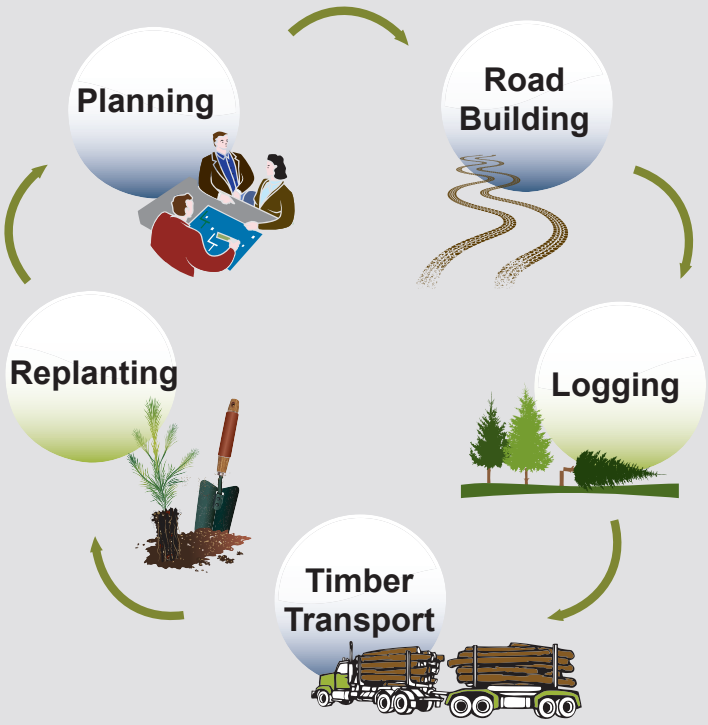


Figure 1. Phases of Timber Harvesting and Processing

Each step in this chain involves economic activity, but what is critical to note is that without harvesting, there would be no logs available for sawmills, shake and shingle mills, pole and post mills and log home manufacturers to produce any of their products. In the absence of harvesting, all other activities in the forest industry would grind to a halt.

As shown in Figure 1, harvesting involves several phases. These include planning, road building (where required), logging, timber transport (by truck or barge) and replanting. Historically, harvesting was carried out by both firms that held tenure (i.e., had their own harvesting crews) and independent contractors; however, increasingly, the road-building, harvesting and transport phases are contracted out to small, independent companies that hold no forest tenure. Indeed, the term "stump-to-dump" has been coined to describe the typical phases of a contractor's job. Other aspects, such as planning and replanting, are typically carried out by tenure holders or firms that specialize in those activities.

[4] This is largely true although there are some exceptions, including small-scale efforts to develop alternative activities that do not necessarily involve timber harvesting but generate economic activity. Examples include forest-based tourism or recreation projects, harvesting of alternative non-timber forest products (such as mushrooms and floral greenery), or new projects to manage for other forest values such as Carbon.

While some forest tenure holders still continue to conduct their own harvesting activities in-house, much of the harvesting phase is now carried out by independent contractors. Some of these contractors have long-term contracts with tenure holders and others operate on shorter contracts, or even purchase timber harvesting rights in timber sales directly or work with others to secure timber and then sell it into the domestic or export markets.

The North American Industry Classification System (NAICS) identifies the following four main classifications of the forestry industry: Forestry and Logging, Support Activities, Wood Products Manufacturing and Paper Manufacturing. Statistics Canada and BC Stats use these classifications to collect and report data about employment and income in the forest industry.

Forestry and logging, which encompass harvesting, as well as support activities are grouped together as they represent "upstream activities" because they involve all the activities required to produce logs that are then sold as intermediate products (in that they will undergo further processing and transformation). These logs may be sold either into domestic or export markets for manufacture into value-added goods.[5] These subsequent manufacturing activities in the domestic sector, including the use of logs by the pulp and paper sectors as well as mill residues such as sawdust and wood chips, are all characterized as "downstream activities".

Information is available at the provincial level for those indicators previously discussed: employment, income, income and consumption taxes, harvesting taxes and fees, contribution to GDP and the value of exports. In addition,

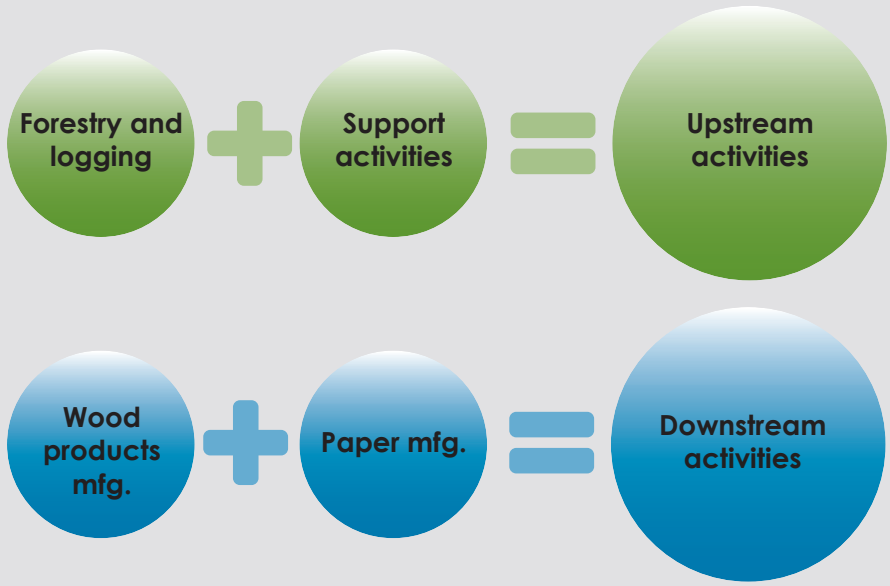


Figure 2. Industry classifications and activities within the forest industry

there is information at the provincial level that quantifies the interlinkages between different parts of the economy and how changes in one industry affect others.

However these province-wide statistics are less helpful in understanding what is happening at the regional level, where the provincial forest industry is distinguished by strong regional differences between the coast and interior regions (shown in Figure 3). Not only are the two regions characterized by marked differences in the types of forest resources they rely on, but there are also important differences in the range of products and markets for those goods.[6] The coast produces a more diverse set of forest products, including logs for the export market, and has a more diverse set of markets compared to the Interior. Harvesting costs are also on average higher on the coast relative to the Interior (Brown, 2011).

It is important to note that lumber plays a key role in the timber economies of both regions, with most logs being utilized by sawmills and residues flowing to other users (e.g. pulp and paper mills, pellet mills). Other firms, including log homebuilders, pole and post manufacturers and shake and shingle manufacturers, rely on extraction of specialized types or species of logs from stands that are being harvested primarily for lumber. Increasingly, however, export logs have become an important part of the product mix on the coast (BC Stats 2011).

In order to assess the state of the harvesting sector on the BC coast, it

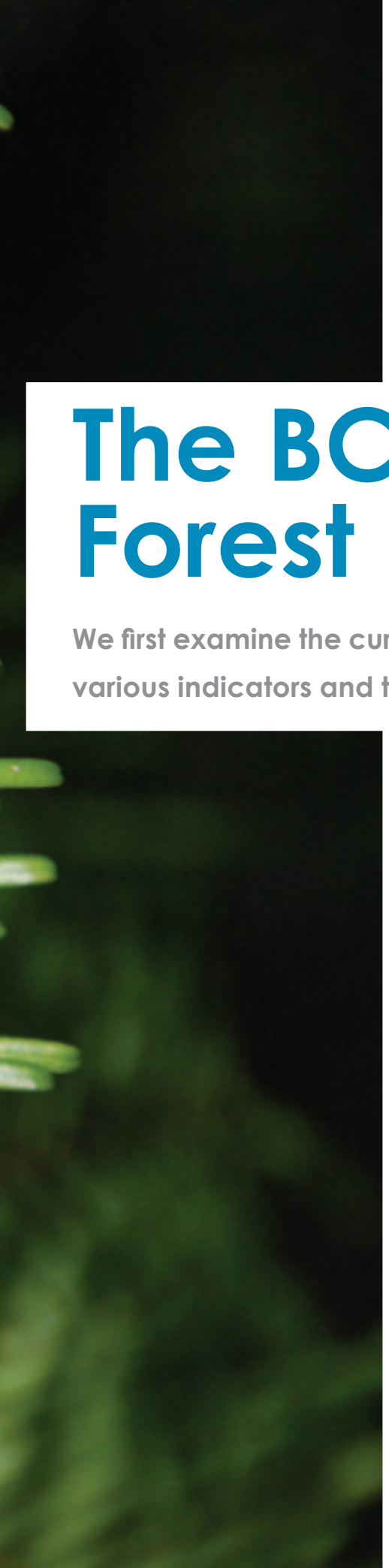
[5] *Support Activities for forestry include activities related to managing the forest resource, such as preparation for harvesting, post-harvesting and stand tending, as well as timber cruising, timber valuation, forest pest protection and replanting. The definition provided for Support Activities can be found in Appendix 1.*

[6] *Douglas fir, Western Red Cedar are the most important part of the coastal harvest profile in terms of their economic contribution (although other whitewood species such as hemlock and balsam fir increasingly make up more and more of the harvest), while interior producers rely principally on a mix of Spruce, Pine and Fir*

is necessary to examine those indicators at the appropriate regional scale; otherwise provincial level data may mask what is going within the different regions. However, regional information is more limited—the only indicators for which we have consistent historical information are employment, timber harvests, and associated timber fees. The other indicators (income, investment, contribution to GDP) are only available at the provincial level.[7]

Figure 3. The BC Coast Forest Region.

[7] *The paucity of more current regional statistics reflects two different factors: First, some information has historically been available at a more disaggregated scale, including income, but recent changes to the census form means that data quality is compromised at more disaggregated levels and therefore Statistics Canada will not publish this data at a finer scale. This includes employment information, which is no longer released for smaller towns and villages, and at more aggregated levels, income, which is now combined with other sectors (i.e., logging and forestry are now combined with farming and fishing). Second, even where the data does exist, reduced funding for the different statistical agencies (Statistics Canada and BC Stats) means that these agencies are unable to synthesize and publish the data. Further information can be found in a section discussing limitations to the analysis found in the conclusion.*



The BC Coastal Forest Industry

We first examine the current indicators for the BC coast region by examining the various indicators and then changes in those indicators over the past decade.

Trends in Harvests, Lumber Shipments, and Harvest Revenues

Collectively, the various indicators all show significant changes in the amount of economic activity, but also important shifts in the nature and type of that activity that have important regional consequences. This section concludes with a discussion of the reason for those changes. We start our investigation by examining what has happened in terms of timber harvesting on the coast.[8] Figure 4 first shows the annual allowable cut (AAC; the amount of timber that may be harvested each year in the province on public lands) on the coast and in the interior starting in 1990 and projected through 2025. The increase in AAC in the Interior reflects efforts to recover timber affected by the mountain pine beetle epidemic.

Figure 4 shows how the AAC has fallen on the coast (and is projected to fall in the Interior). The decrease on the coast from 1990 levels to date is 23 per cent. A 40 per cent drop in the same region is expected to occur by 2025, while the Interior AAC is expected to decrease by 27 per cent during the same period.

[8] *In this section, we focus on timber harvested on public land. While timber harvested on private land accounts for a significant portion of the coastal harvest, provincial forest policy does not directly regulate harvest levels nor are fees collected from harvesting activities on those private lands.*

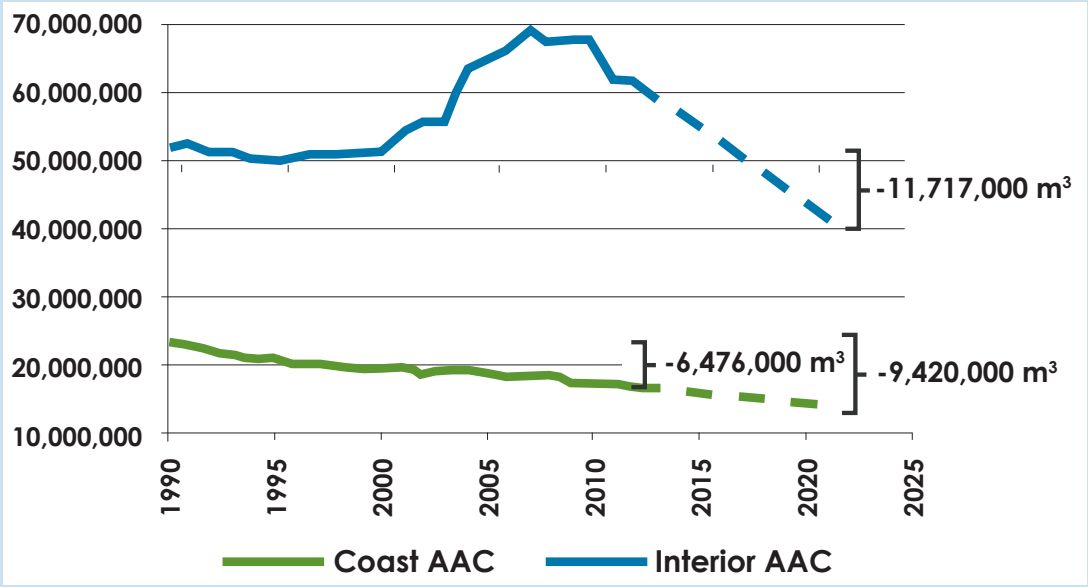


Figure 4. Allowable Annual cut, Coast and Interior Regions, 1990-2025. Source: Coast Forest Products Association.

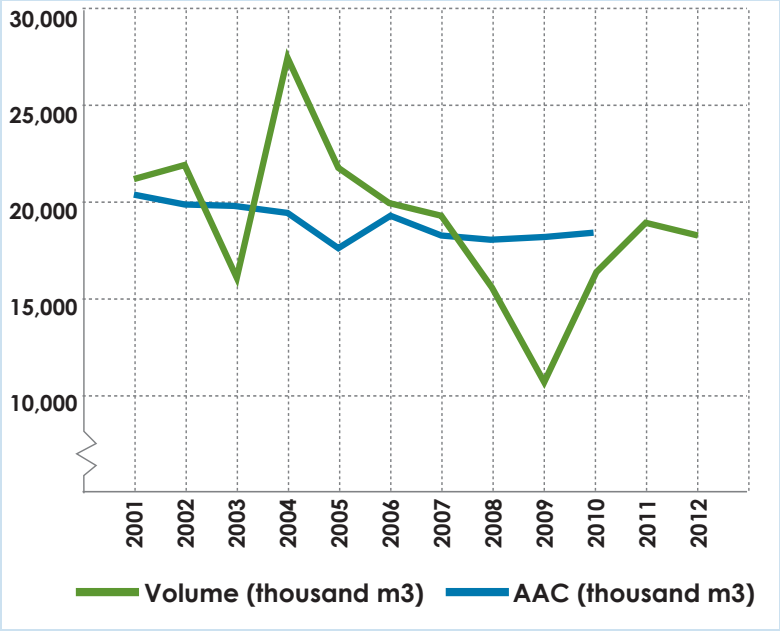


Figure 5. Harvest levels on Crown and Private Lands and AAC on Crown Lands, BC Coast, 2001-2011

Over the past decade, actual harvest levels on the coast, with the exception of a few years, have been below the AAC.[9] This phenomenon has been particularly apparent during the past several years. This undercut reflects several different forces: Changes in policy (discussed in subsequent sections) that led to a reallocation of timber and caused delays in the standard processes of preparing timber for harvest, followed by poor market conditions that reduced the amount of timber that could be accessed in an economically viable manner.

Figure 5 shows harvest volumes (public and private) on the BC coast from 2001 to 2011. Figure 5 illustrates that harvests peaked in the mid-2000s, supported by strong export markets, especially in the US, where housing markets were surging. Following the global financial crisis of 2008-09, demand for forest products fell, producing a

[9] *Actual harvest levels from year to year may be higher than the AAC because of 1) the contribution from private lands (which are not regulated by an AAC) and 2) higher harvesting levels on public lands. Timber-rights holders have the flexibility to harvest more than their AAC in ay given year, although over a longer time period their average harvesting level has to remain within that determined by their AAC.*

corresponding decrease in harvests (Schrier 2012). The coast was hit particularly hard, with harvest levels (public and private) falling from just over 27 million cubic metres (m^3) in 2004 to just under 11 million m^3 in just five years, reaching a low point in 2009 not seen for decades.[10] Some of this decrease in demand was offset by new markets opening up for log exports, especially with a shift away from the traditional markets in the US to new markets in Asia, especially China (BC Stats 2011).

A similar decline is observed for lumber produced in the coast region, the primary forest product manufactured in both regions in BC. Here, production fell from just over 6.3 million m^3 solid wood equivalent (SWE) to 2.4 million m^3 (SWE) over the same time period.

Fortunately for the industry, there have been some recoveries in demand and lumber prices in the past few years: In response harvest levels rebounded in the following year and then increasing again slightly in 2011 to 18.8 million m^3 (or 75 per cent from its low point). While lumber production has responded, it has not yet recovered proportionately, increasing to only 3.3 million m^3 in 2011 (or 38 per cent from the low).

Government Revenues from Timber Fees and Taxes

We also look at the direct government revenues collected from forestry activities in the coast region. Figure 6 shows that overall revenue declined sharply in the region over this time period, shrinking from $340 million in 2004/5 (the high point) to just over $50 million in 2009/10 before recovering slightly to $86 million for the most recent year for which data is available. Again, the decline (and recovery from the low point) is disproportionately greater in terms of revenues relative to harvest levels.

A more detailed examination shows that the composition of charges changed as well over this time period; stumpage, which had accounted for the majority of fees collected ($228 million in 2004/5), was much lower both in absolute and relative terms, falling to just over $12 million at the low point (20009/10). For the most recent year (2012/13) stumpage payments stood at just over $16 million (out of total government revenue from forestry activities on Crown land of $86 million). The main source of revenue now comes from

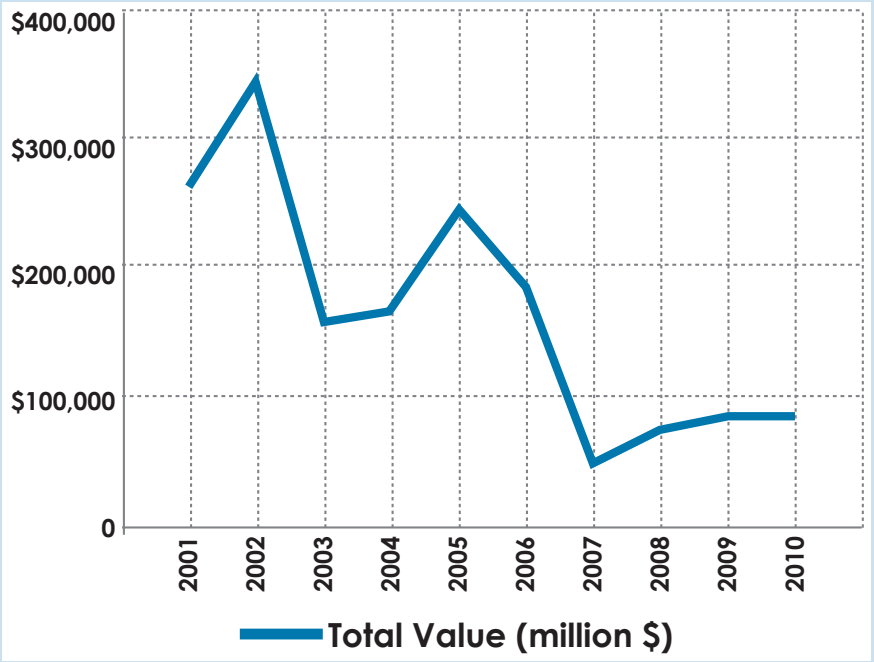


Figure 6. Direct government revenue from forestry activities on the BC Coast, 2003/4-2012/13

[10] While the drop in US housing demand also affected the interior region, some of this impact was offset by the increased AAC associated with the MPB, which created more timber harvesting opportunities, and the development of export markets for solid wood products in Asia, especially in China.

BC Timber Sales ($53 million for the most current year), while timber export fees are just under $8 million, while harvesting rents and fees account for $6.3 million.[11] Essentially, stumpage has become a minor component of revenue to the Crown.

Trends in Employment and Income

Figure 7 below shows employment in the different sub-sectors within the forest industry for the year 2011. These are derived from Census data, which represents the most detailed statistical information available at the regional scale. In 2011, 21,405 people were employed in the forest industry on the BC coast, of which 5,780 (27 per cent) were employed in forestry and logging; wood product manufacturing accounted for 38 per cent and paper manufacturing accounted for 27 per cent. The remaining 8 per cent were employed in support activities for forestry.

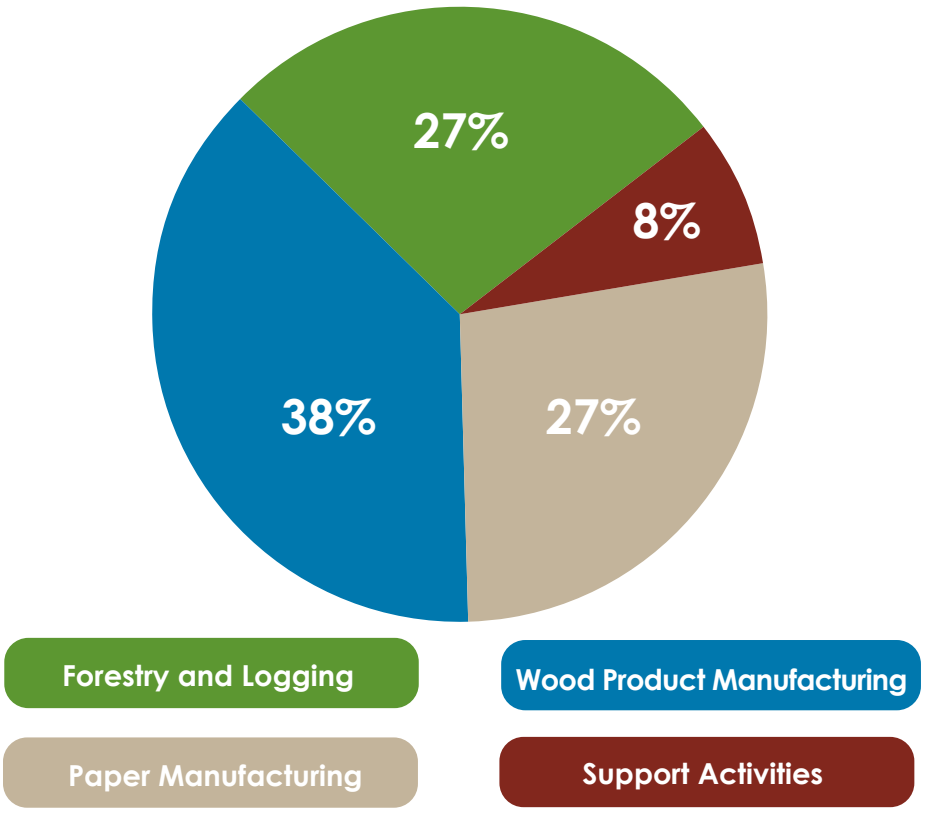


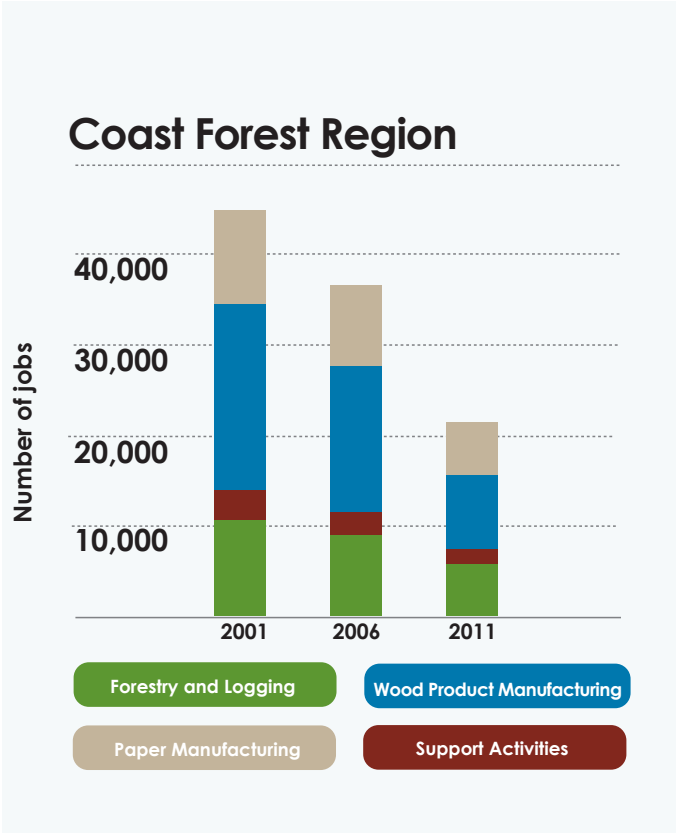
Figure 7. Employment in the BC Coast Forest Industry, 2011

This Census data can also be used to examine trends in employment shown in Figure 8, extending back to 2001.[12] As harvest levels have fallen, not only has total employment dropped, but there has also been a shift in the composition of the workforce. The harvesting sector now accounts for a much larger proportion of total employment.

Figure 8 shows how employment levels have fallen in both the upstream and downstream ends, although the decline has been greater in both absolute and relative terms in downstream activities.

[11] Border taxes collected from lumber exports to the US were just over $13 million in 2012/13, which are excluded from the $86 million total as they are reported separately.

[12] Other data is collected on an annual basis but is not broken out by region although it is available by sector.



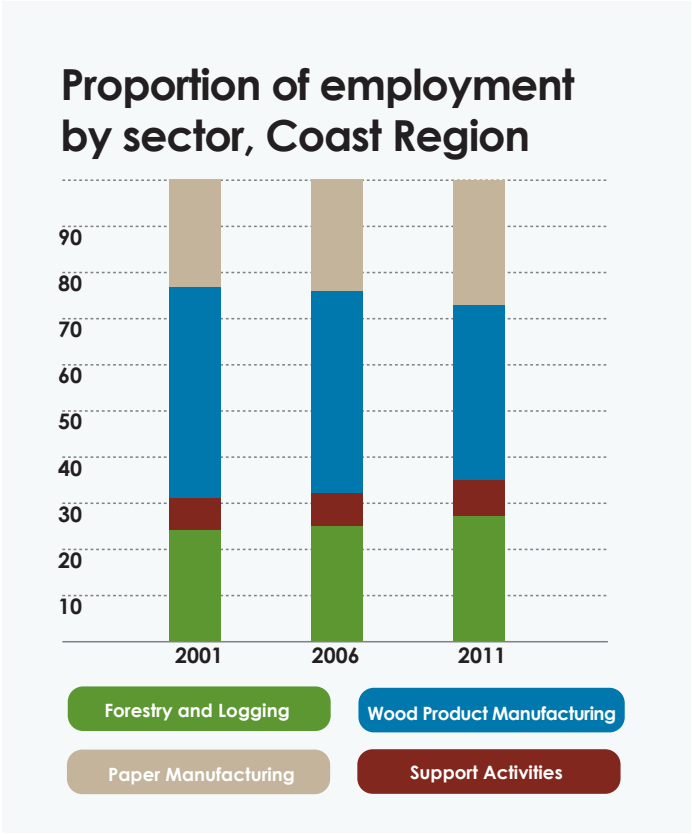
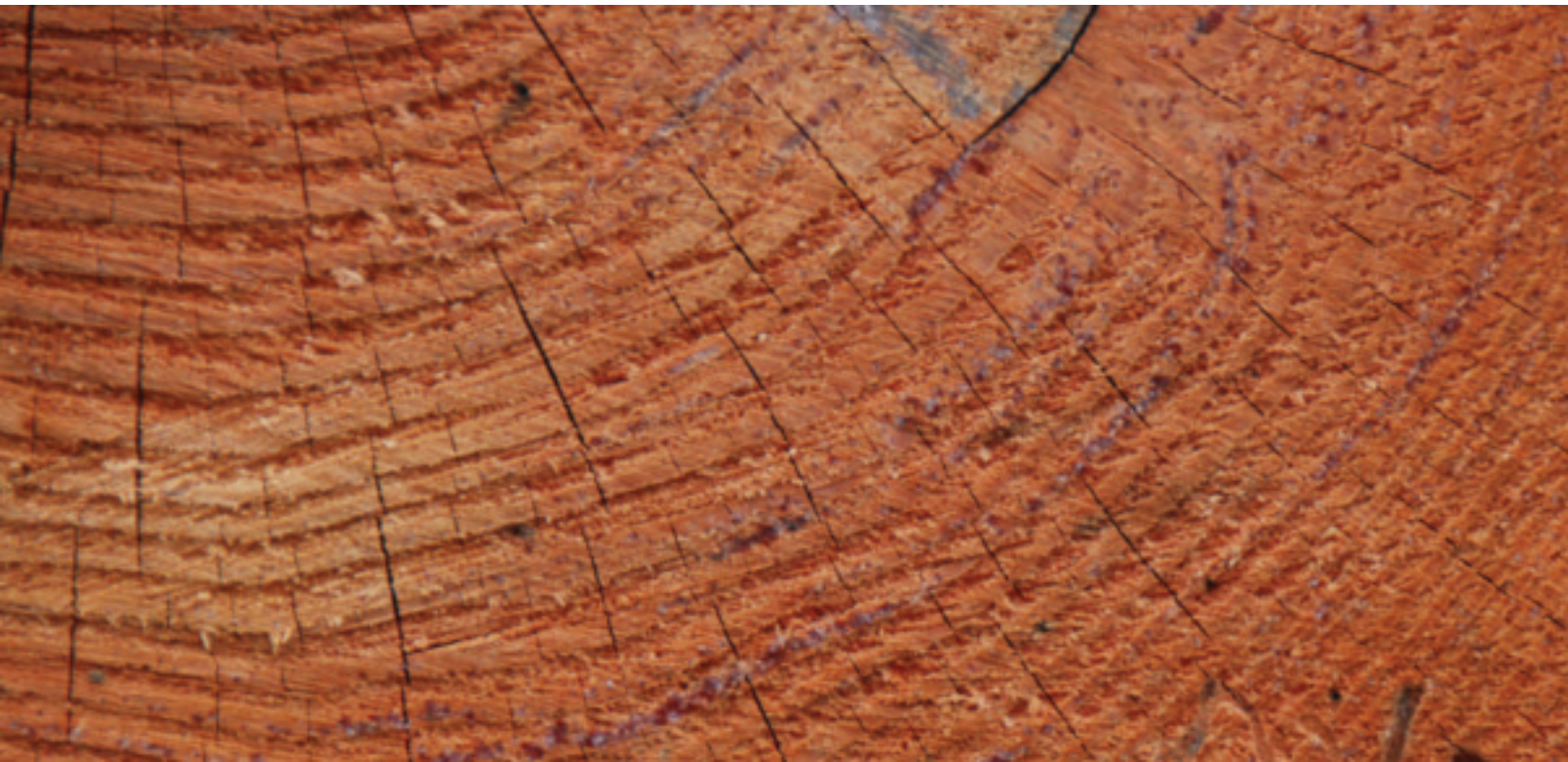


Figure 8. Trends by sector on the BC Coast, selected years, 2001-2011



One of the strengths of the available Census data for employment is that it is also available at a more detailed (i.e., Census Division) level within the region. This allows closer examination of the differences in changes within the region. Figure 9 provides a map showing the location of the different Census Divisions (CDs). Figures 10a through 10m illustrate changes in employment among the different sectors within the forest industry on the coast at the CD level.

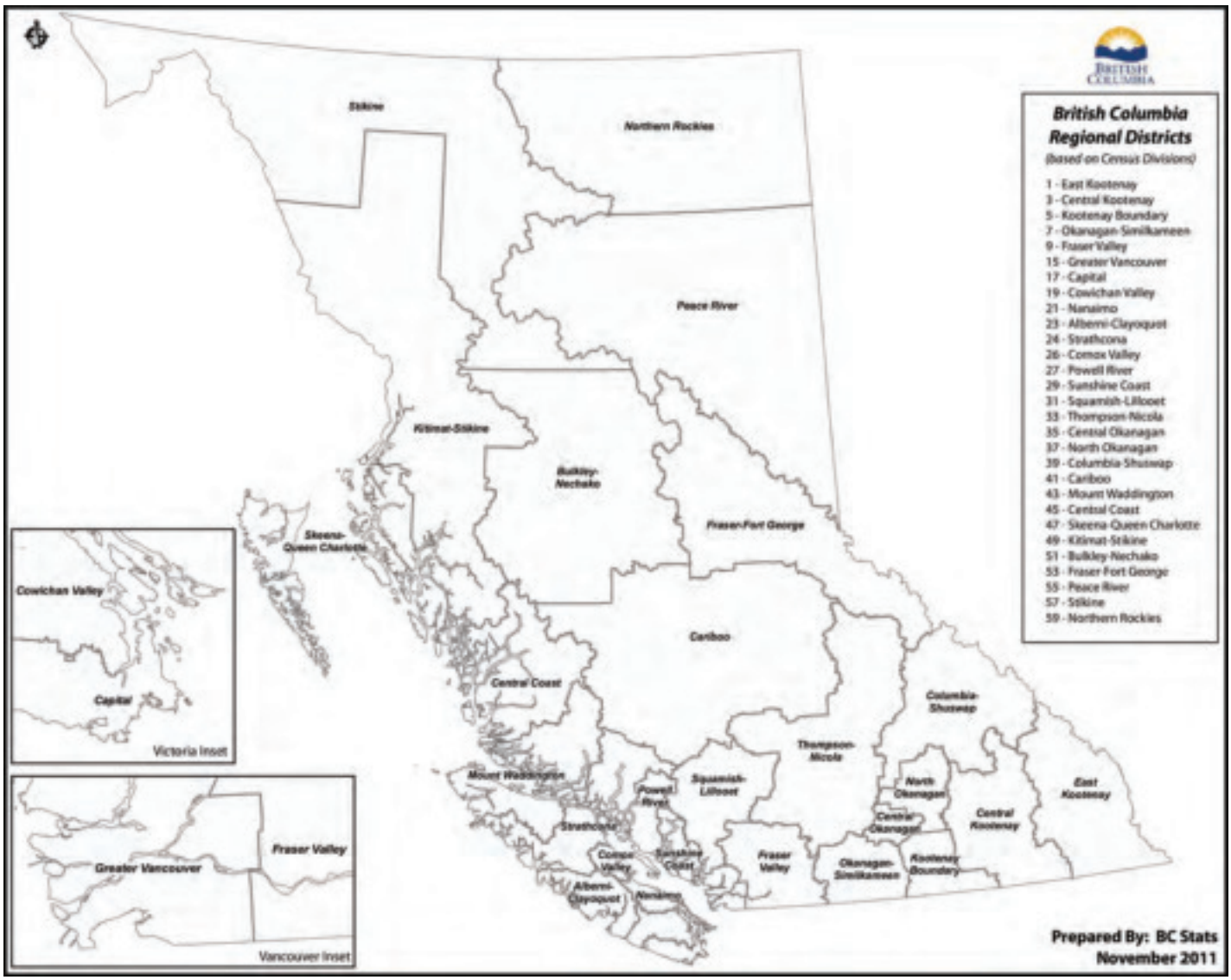
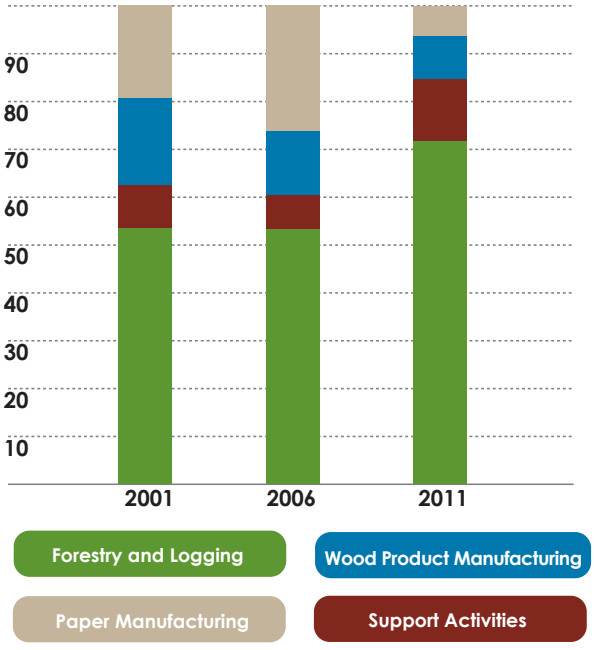


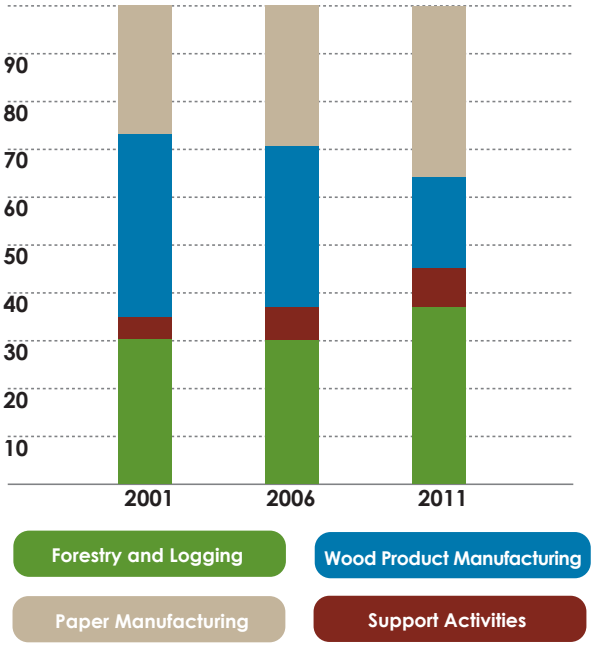
Figure 9. Census Divisions and Regional Districts, BC. Source: BC Stats.

Figures 10a-m: Changes in Forest Industry Employment in 13 Coastal Census Divisions

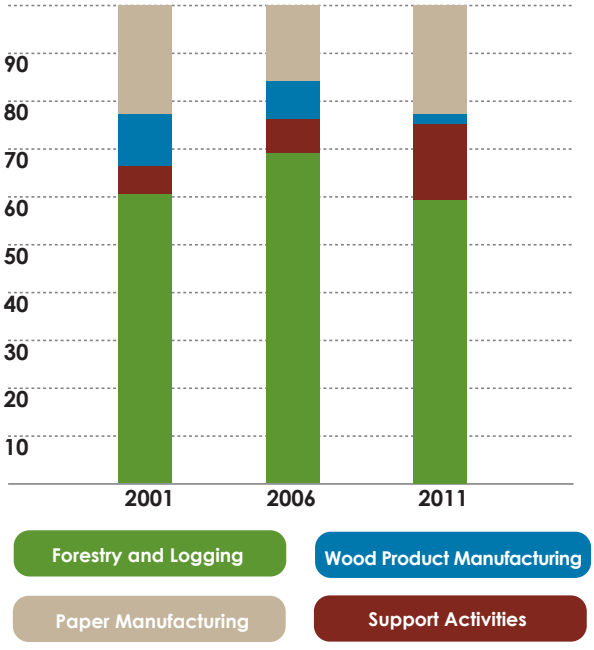
Proportion of employment by sector, Comox Strathcona



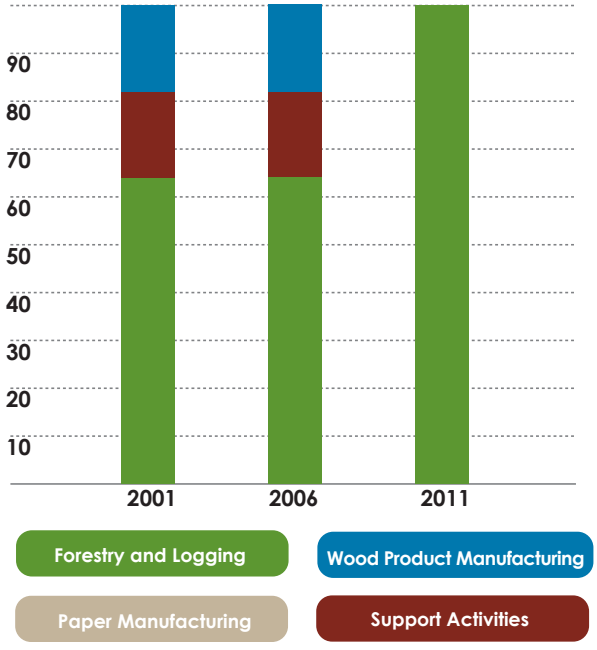
Proportion of employment by sector, Alberni-Clayoquot



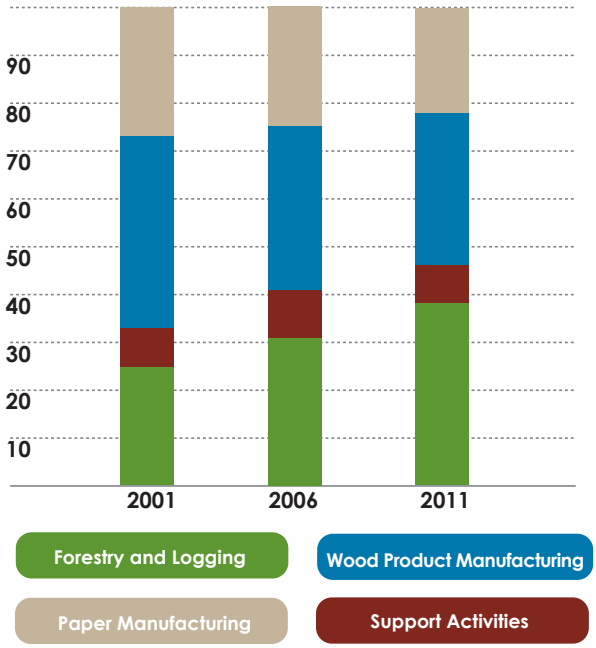
Proportion of employment by sector, Mount Waddington



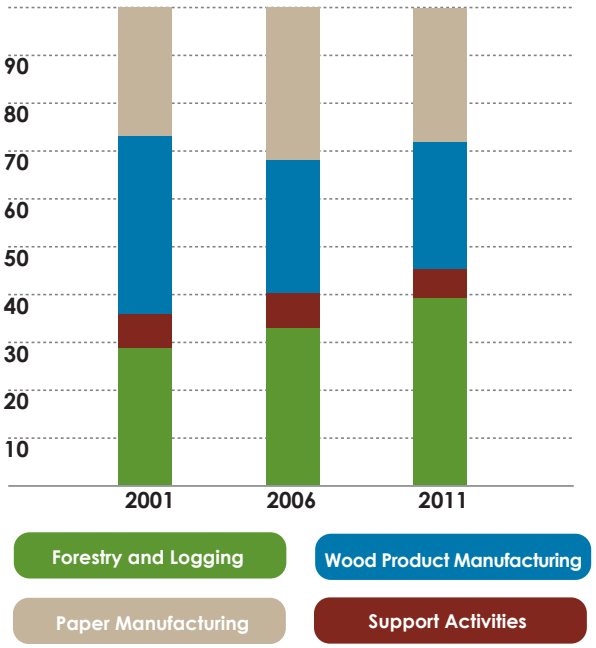
Proportion of employment by sector, Central Coast



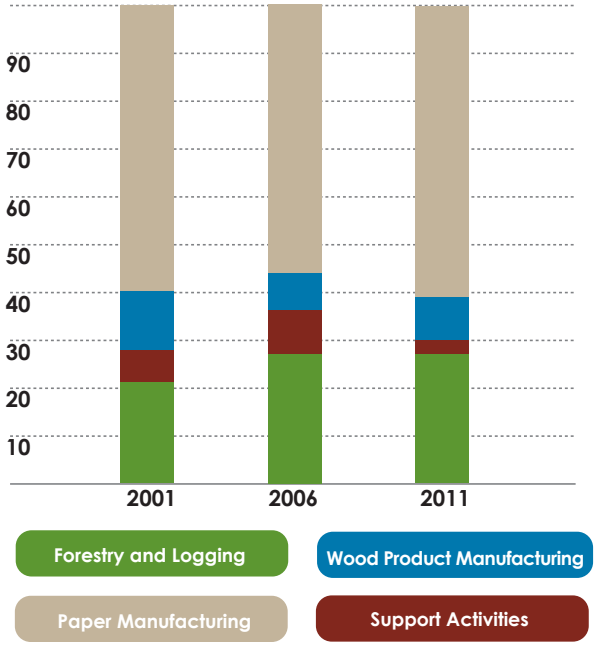
Proportion of employment by sector, Nanaimo



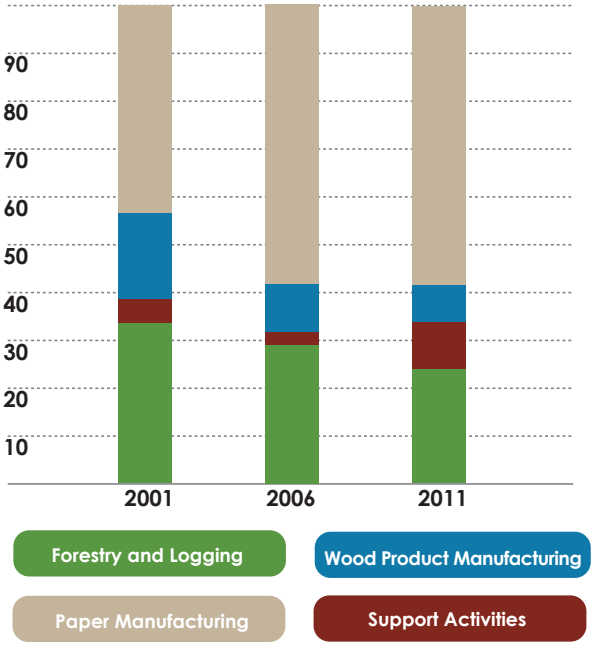
Proportion of employment by sector, Cowichan Valley



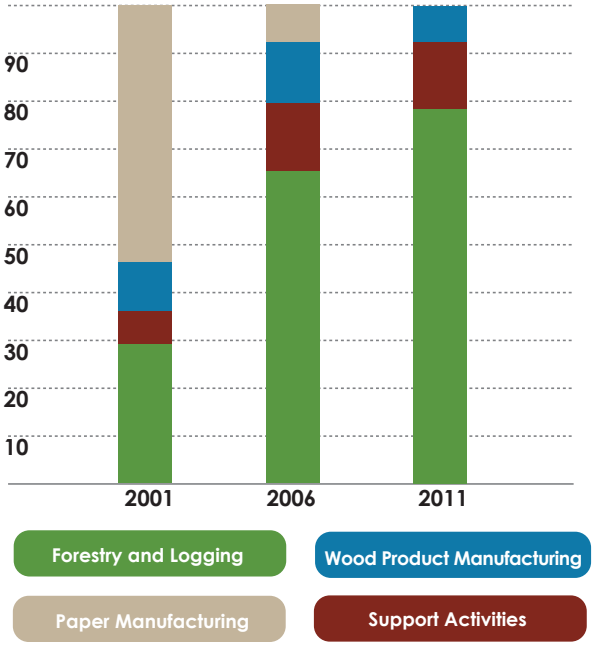
Proportion of employment by sector, Powell River



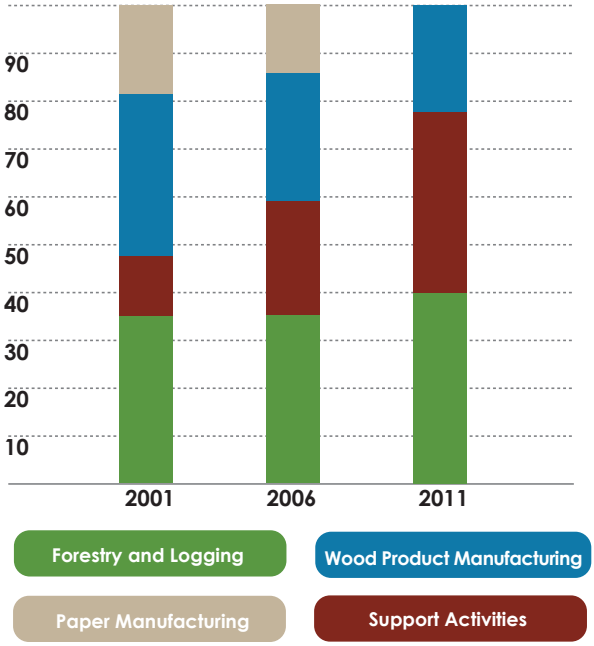
Proportion of employment by sector, Sunshine Coast



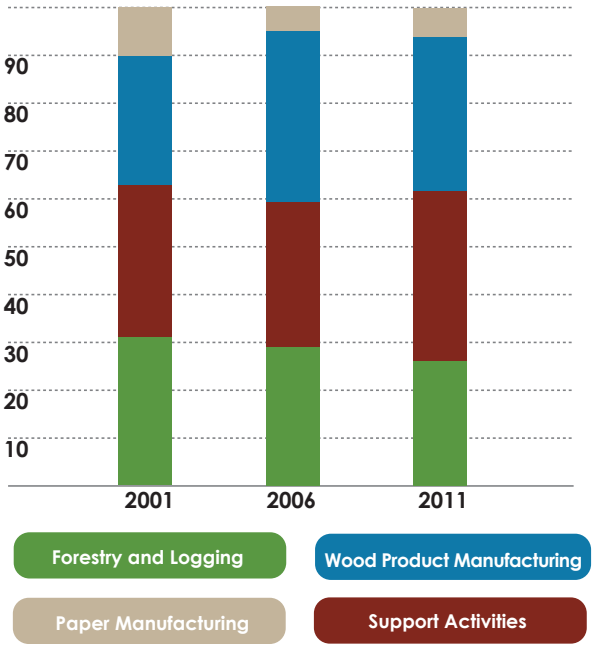
Proportion of employment by sector, Skeena-Queen Charlotte



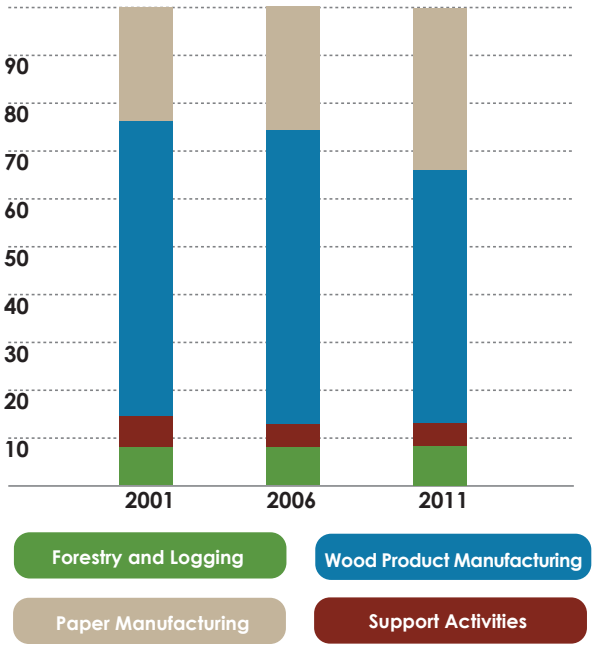
Proportion of employment by sector, Squamish-Lillooet



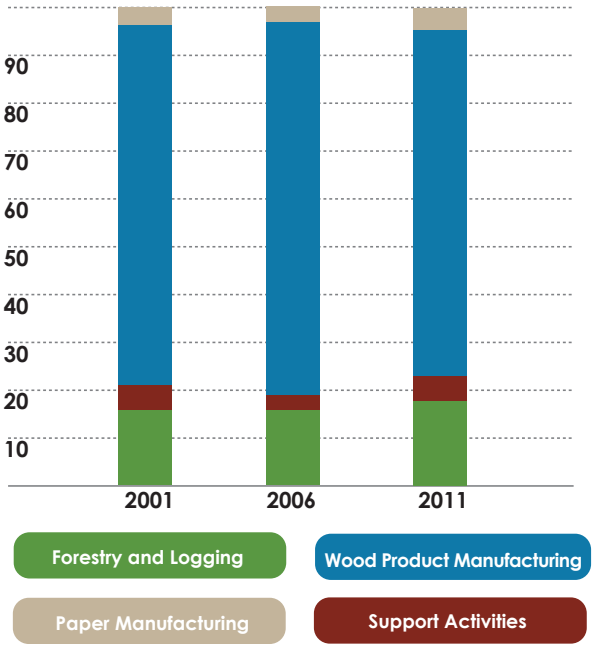
Proportion of employment by sector, Capital



Proportion of employment by sector, Greater Vancouver



Proportion of employment by sector, Fraser Valley



Throughout most of the coast, with the exception of urban areas around Vancouver and towns with a pulp and paper mill, the forestry and logging sector has become the largest employer in the forest industry. And, while employment in the wood product manufacturing and pulp and paper sectors tends to be concentrated in towns with mills, employment in forestry and logging is more dispersed throughout the coast region. The result is a less visible but significant source of employment.

Forestry and logging also plays an important role in regional and local economies because of the income it generates. Workers in the coast forest industry are among the highest earners, at an average $29 per hour, relative to administrative workers ($21 per hour) and retail workers ($13 an hour) [13].

[13] *Wage information is based on data from 2009, the most recent time period for which it is available.*

The Importance of the Forest Sector in Coastal Communities in 2006 and 2011

Prior to recent changes in the structure of the Census, more detailed information about employment and income was available at an even finer scale (i.e., Census Sub-Division level, or towns and villages) for the different sectors. This data is publicly available through 2006 and is worth reviewing as it offers the most recent, detailed snapshot from which to examine the relative importance of the harvesting sector to small communities.

Data for Census Sub-Divisions shows that forestry accounted for a significant amount of the workforce in a number of coastal communities in 2006.

At the provincial level, 1.3 per cent of people were employed in logging and support services and 3.7 per cent of people were employed in the entire forest industry.

However, in the same year (2006), the proportion of employment in forestry and logging was 22 per cent in Tahsis, 21 per cent in Gold River, 24 per cent in Port McNeil and 22 per cent in Port Clements. Even in forest products manufacturing centres, such as Port Alice, Powell River and Campbell River, forestry and logging accounted for between 4 per cent and 8 per cent of total employment. Since the changes to the Census came into effect in 2011, information is only available for larger communities such as Campbell River.

Figure 11 shows in Campbell River that in 2011, while overall employment levels in the forest industry had dropped (consistent with the regional changes), it still remained an important source of employment, although here too the composition had changed significantly where most of the employment is associated with forestry activities. Just under 5 per cent of the workforce in Campbell River is employed in forestry, logging, and support services.

Figure 12 shows similar trends in Nanaimo, a regional wood and pulp and paper manufacturing centre. Here too overall employment levels have dropped in the forest industry, but increased in absolute levels in the forestry and logging and support sectors, now making up just under 50 per cent of total employment in the forest industry within the CSD in 2011.

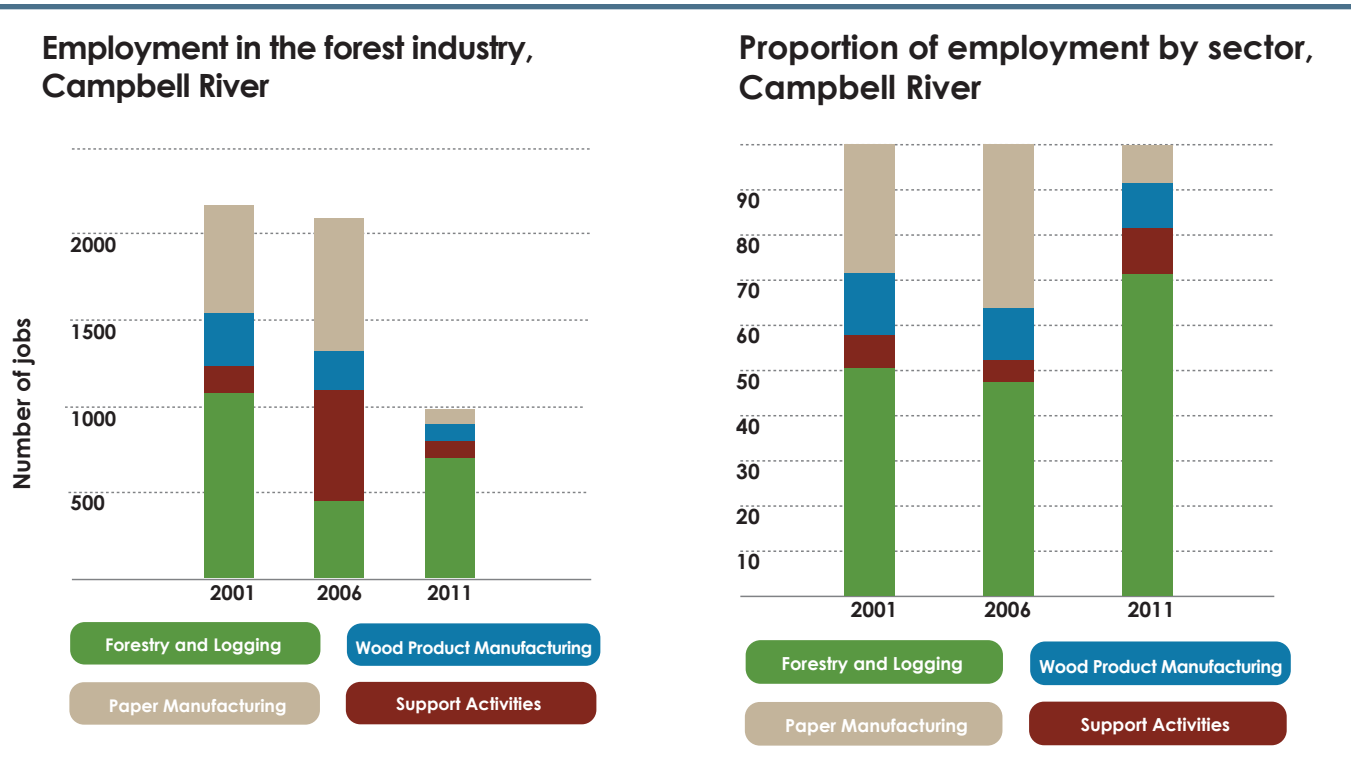
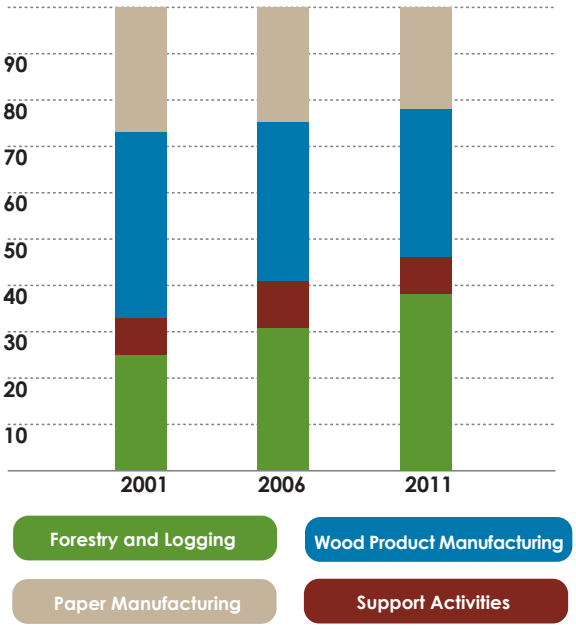


Figure 11. Forest Industry Employment in the Campbell River CSD



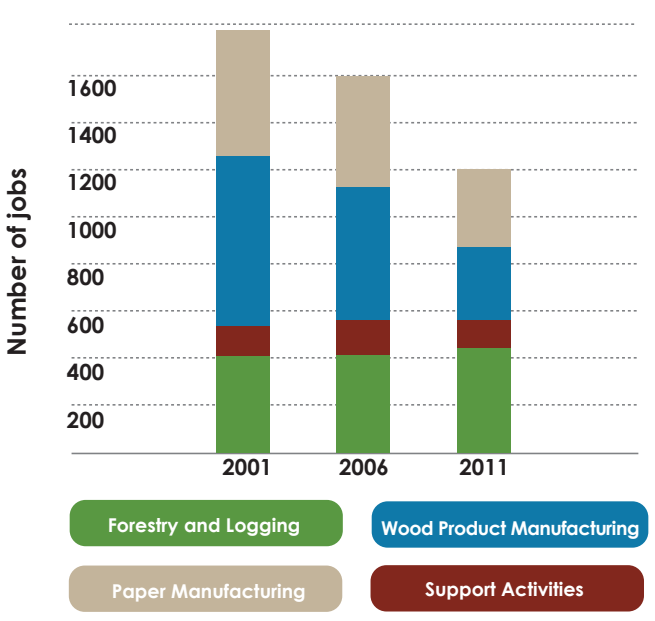


Figure 12. Forest Industry Employment in the Nanaimo CSD

Interlinkages and Multipliers

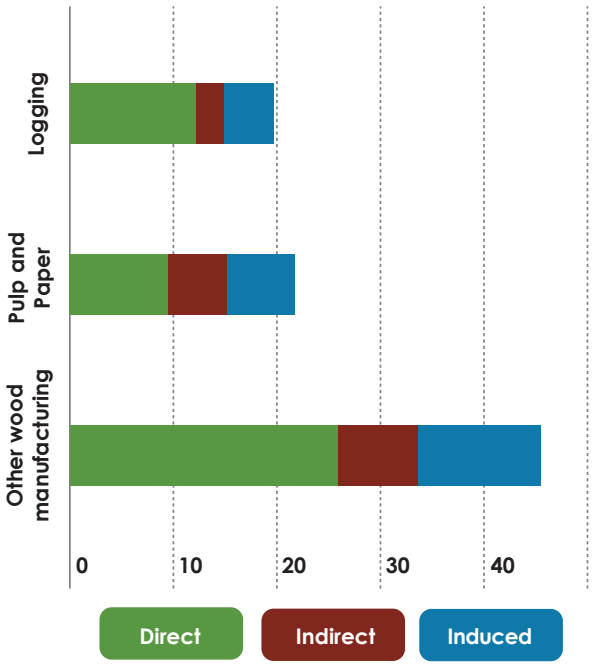
While forestry and logging generates economic value directly, through revenues to harvesting contracting businesses, it also creates value indirectly, in the form of income to other businesses in the community through purchases of goods and services, and employees spending the wages that they earn, as well as providing the logs on which the downstream industries rely and the economic activity that generates.

Information about income and employment ratios, which are used to estimate the amount of income and employment that are generated by the forest industry in other sectors through ripple effects, highlight the interlinkages within regional and provincial economies to the forest industry. Figure 9 reports three categories of employment and income: direct, indirect and induced. Direct effects describe employment and income generated within the industry; indirect effects are those that accrue to firms that supply goods and services to the industry; and induced effects encompass those of wage expenditures by employees within the broader economy (e.g. retail, services, hospitality).

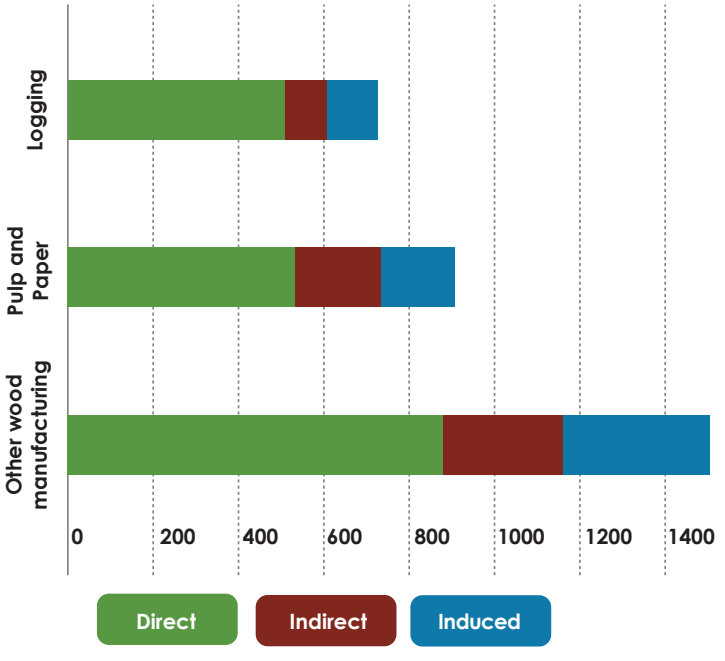
First, this data shows that direct, after-tax income earned within the region in 2006 by people employed in the forestry and logging sector totalled $508 million, compared to $878 million earned in wood product manufacturing; and $529 million in the pulp and paper manufacturing sector (Figures 13a and 13b).

Statistics Canada conducts input-output modelling to generate provincial level information on the effect of increased output in one industry on employment, income and contribution to GDP in other industries. The

Total employment in forestry, Coast Region, 2006 (thousands)



Total income earned from forestry, Coast Region, 2006



Figures 13a and 13b. Employment and income by sector on the BC Coast, 2006

factors by which a unitary increase in output generates further employment, income and economic activity within the broader economy are referred to as "multipliers" and can be used to assess how changes in one industry can cause ripples throughout the economy. Due to regional differences in the characteristics of industries, regional or local multipliers can offer more insight than multipliers produced using provincial data.

Horne (2009) quantifies the relationships for the different sectors at the community level in BC. Communities within the coast forest region are categorized into Vancouver Island/Coast, Mainland/Southwest and North Coast.

Multipliers provided for local communities suggest that each job in forestry and logging produces between .17 and .48 jobs in other industries through indirect and induced employment (referred to as effects to "non-basic" industries) effects, while employment in wood manufacturing creates .27 to .47 additional jobs and employment in pulp and paper manufacturing creates .7 to 1.05 additional jobs[14].

While indirect and induced activities are just as important to a modern community as direct activities, they are also dependent on the health of industries that generate value directly. Horne (2009) uses these relationships to quantify the importance of the forest industry to communities and regions to identify forest-dependent regions and towns in 2006; they are shown in Figure 14.

Studies have also quantified the relationships between the volume of harvesting and employment, with employment coefficients (by activity or sector) expressed as full-time jobs for one year (Person-Years, or "PY") per cubic metre (m^3) of harvest. The most recent study for the entire coast region was done in 2003 and estimated a coffecient for timber harvesting activities (which encompass logging and support activities) of .520 PY per cubic metre, although later studies show that these multipliers differ by area with in the region and can be considerably higher[15].

[14] These coefficients for forestry sectors are higher than the coefficients for employment in other sectors, including agriculture, tourism, high tech and public administration; and are similar to the coefficients for mining and construction.

[15] A study carried out in the North and Central Coast region in 2006 estimated employment generated through the various activites associated with timber harvesting at .738 Person-Years (PY) per 1,000 cubic metres of harvest (Pierce Lefevbre Consulting 2006). When logging alone is considered, the number of jobs per 1,000 m^3 falls to .48 PY (Pierce Lefevbre Consulting 2006a). A similar analysis conducted for Hadia Gwaii/Queen Charlotte Islands (Pierce Lefebvre 2006b) estimated the timber harvesting coefficient at .557. The authors also found that harvesting employment was more heavily centred locally (i.e., on the Islands) while processing took place elsewhere, which suggests that the proportion of total employment generated at the local level is greater for harvesting than for processing. A third analysis, for the Sea-to-Sky Corridor, yielded similar coefficients: .573 for timber harvesting related employment, of which .233 was directly associated with logging (Pierce Lefebvre 2006). These regional figures are consistent with a 2003 report that estimated coefficients for the entire coastal region of .520 PY per 1,000m^3 for harvesting and 1.254 for the forest industry as a whole (sawmills accounted for .346 PY, pulp and paper for .206 and other manufacturing for the balance) (Pierce Lefebvre and Ruffles Consulting 2003, viii). Thus, multipliers provided by Pierce Lefebvre and Ruffles Consulting (2003) may be used to approximate the number of jobs per unit harvest for the coast region; however, multipliers provided for the North and Central Coast and for Haida Gwaii/Queen Charlotte Islands may offer more accurate local estimates. Results from the interviews with contractors asking about harvest levels and employment yielded ratios consistent with the multipliers reported elsewhere, with an average of 0.232 directly associated with logging (compared to the 0.233 found by Pierce and Lefebvre in 2006).

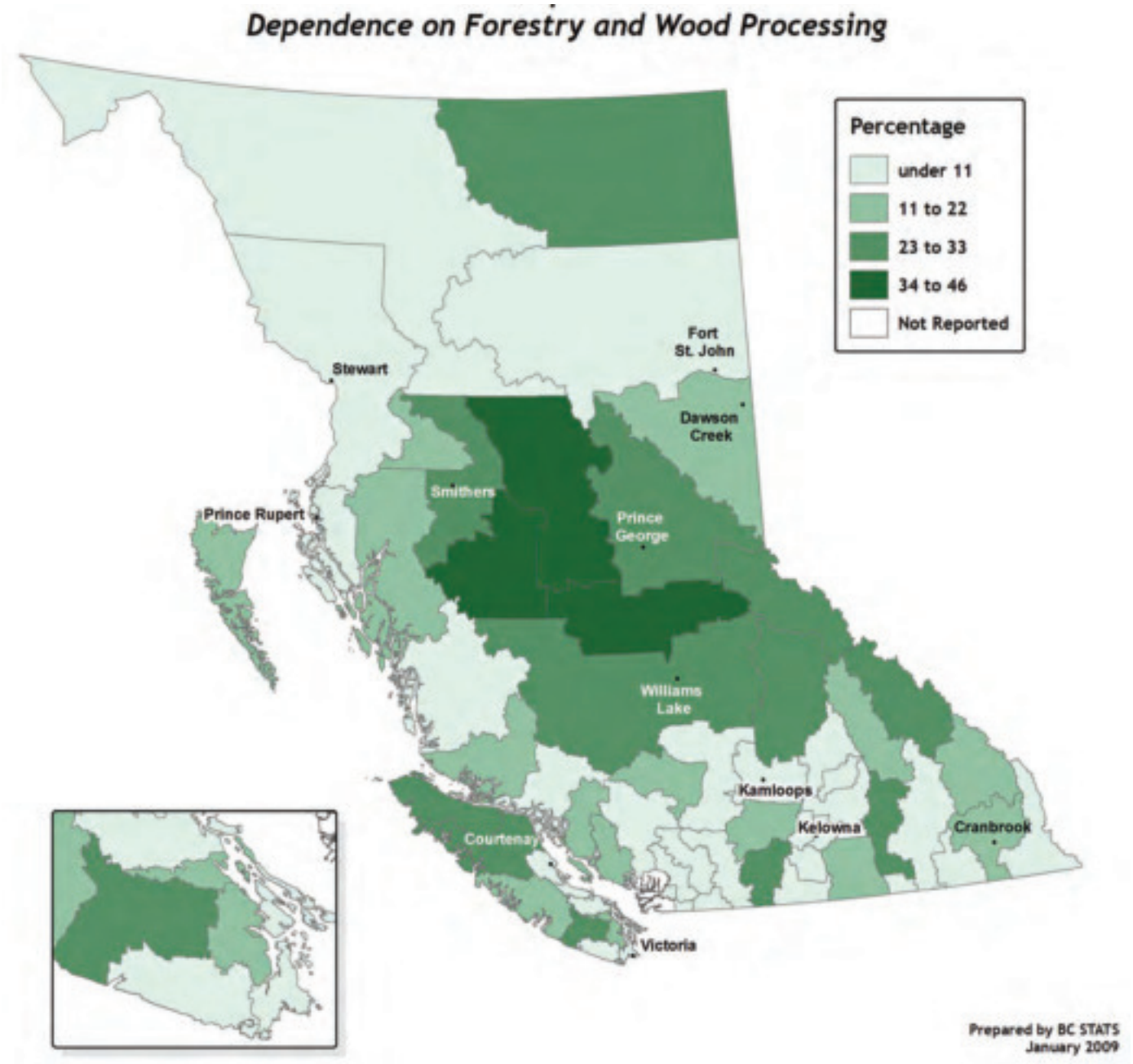


Figure 14. Dependence on forestry and wood processing. Source: Horne 2009.

Other Tax Revenue

Finally, as noted earlier, business activity (including income generated through employment) also generates local tax revenues through property taxes, sewer and water and other associated charges, and licensing fees, and tax revenues for higher levels of government through income taxes and consumption taxes. We did not assess the level of local tax revenues raised from contracting businesses, although an earlier study found that over half the industrial tax base (assessed on manufacturing firms) in the province was based on forestry firms (Davies et al 2012). Because property taxes on businesses are higher than on residential properties (Kastelen 2013) they provide an important part of the local tax base in the communities in which they are located. In terms of income and consumption taxes, these are collected at the provincial level (although specific portions such taxes raised from fuel tax revenue are reallocated back to local governments), and as such do not provide a direct source of income at the community level. Estimates of taxes raised from local sources typically rely on province-wide surveys or are imputed from existing tax rates (Horne 2009).

Industry Changes

Regional data on production capacity, collected by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), allow us to develop more detailed snapshots of activity within the manufacturing sector, including both the wood product and pulp and paper manufacturing sectors. Data on production capacity is only publicly available through 2009, although provisional draft numbers on the number of mills operating are available through 2011.

A trend toward a smaller number of mills and decreasing mill capacity is observed for all mill types on the coast, with the total number of mills (of all types in the coast region that utilize logs) falling from 155 to 107 between 2006 and 2009.

The data for sawmills, for example, show that mill capacity fell from 4 billion board feet (bf) in 2000 to 2.1 billion bf in 2009, while the number of sawmills dropped from just over 70 to just over 50.

In summary, the regional indicators that we have examined (i.e., harvest levels, revenues, lumber shipments and employment) all show reduced economic activity within the region but also important shifts in the relative contributions of various sectors on the coast. We see strong inter-regional differences, with wood product manufacturing increasingly concentrated around the urban areas of the coast and pulp and paper employment found in communities where mills still remain open. The forestry and logging sector is essentially the only remaining sector of the forest industry throughout many rural areas of the coast.

There are clear links between all of the indicators assessed: Lower harvest levels are correlated with lower lumber shipments and lower employment which, in turn, are related to reduced lumber milling capacity and reduced economic activity.

A trend toward a smaller number of mills and decreasing mill capacity is observed for all mill types on the coast

It is important to examine, however, whether these changes we observe on the BC coast are cyclical—and therefore we can expect the sector to rebound as demand grows—or instead are structural, and that these changes will influence the type of activity and mix of products that we will be producing in the future within the region. If these changes are structural and lasting, this has significant implications, not only for the harvesting sector on the coast, but more broadly for the value we will generate within the forest industry in the region.

To answer these questions, we offer a preliminary examination of important changes in resources, markets and the broader policy environment over the past decade.

Markets and Policy

As noted previously, the past decade has produced several important changes in export markets, including not only the collapse of the US housing market but also the development of new export markets; most prominently, the Chinese export market, which is also an important market for exported logs. But shifts in markets are not sufficient to explain the breadth of the changes observed in the coast forest industry. For example, harvest (and employment) data show marked decreases even before the US housing market collapsed.

There are two other important forces at play.

First, changes in the cost and availability of timber, by type, has meant that a significant portion of the available timber that can be accessed is now at a higher cost. This includes not only old growth but also second growth stands in more remote parts of the region.

Harvesting decisions are sensitive not only to the cost of harvesting but also to the economic opportunities associated with timber utilization.[16] These have changed considerably in the past decade, due to changes in both export markets (and associated changes in prices) as well as important changes to forest policy, the third important force. Together, these three forces underlie the significant changes observed in the forest industry over the past decade.

Policy changes, introduced in 2003 as the *Forest Revitalization Act* (Bill 28), were designed to provide mechanisms that would shift away from prescriptive polices and offer firms more flexibility as well as introduce more market-based tools for pricing timber and expanding market opportunities to secure wood. These changes included more flexibility in how firms could adjust harvest levels (while still regulating the overall harvest level) and the types of fibre they could harvest; increased ability to purchase or sell harvesting rights without requiring government approvals; and relaxation of the requirement to process timber for some harvesting rights. Timber rights were also reallocated away from existing license holders and toward expanding timber auctions and to First Nations and communities. With competitiveness identified as the fundamental issue facing the coastal manufacturing sector, this package of changes was expected to offer enhanced flexibility to firms and enable them to invest in their operations (Pearse, 2001).

There were also changes that took place with respect to independent contractors. Historically, many contractors had enjoyed an evergreen right to harvest a certain amount of volume associated with the tenures. These rights were supported by the policy objective that, similar to firms that invested in manufacturing requiring certainty of supply, so too did contractors need assurance of the ability to harvest. These agreements were collectively called Bill 13 agreements, reflecting the piece of legislation through which they were introduced. While the policy offered flexibility to licensees, contractors were now offered a share of the harvest rather than specified amounts, with rates to be negotiated and provisions for using market rates if agreements could not be reached. The contracting community agreed to the changes, as they saw the reallocation of tenure and move towards diversifying tenure as broadening the market and opportunities (Girvan 2013a).

Historically, many contractors had enjoyed an evergreen right to harvest a certain amount of volume associated with the tenures.

The consequences of these policy changes, however, led to a rather different outcome. The *Forest Revitalization Act* initiated a rapid restructuring of the BC coastal industry, as larger firms purchased smaller firms and tenures. The end result was a much more consolidated industry: In 2013, the top two firms held 47 per cent of the coastal AAC (Girvan 2013b). One consequence of the restructuring were changes in the market availability of logs as those firms; an important outcome then was the closure of a number of sawmills in the region (exacerbated by reduced demand) that had relied on the market to secure all or some of their log supply. This then meant that there are now fewer firms that were either harvesting timber for their own needs or had to purchase timber for their own manufacturing facilities.

[16] The AAC is determined largely by biological factors—the annual growth of timber that can be sustainably harvested over time within an area deemed capable of producing trees of a merchantable size. The undercut—the difference between the AAC and actual harvest levels—that persists today reflects the changing nature of timber supply in this region, where it is now prices and costs that limit what can be economically utilized, not the productivity of the resource and land base.

The consolidation affected the market for harvesting services, reducing rather than broadening opportunities. As noted earlier, while some firms do have their own harvesting operations, most that had tenure employed independent contractors—which may or may not operate under long-term (or Bill 13) contracts, to harvest that timber for them. Consolidation in tenure changed those opportunities, with fewer firms that have larger long-term harvesting rights, thereby reducing the size of that market.

Although the reallocation of tenure and expansion of the timber sale program, along with the entrance of some new tenure holders (who were either allocated timber or have purchased some from firms either exiting or operating in the sector) has opened up opportunities in those areas, these opportunities are oftentimes more limited, either by size and/or of shorter duration. These limitations directly flow from the underlying timber sale or short-term agreement (which may be five years or less) held by the new entrants.

Similar limitations exist for the timber sales that are made available under BC Timber Sales, the program that was expanded under the Revitalization Act. In addition, bidders are also competing in this program against the larger tenure holders, who if successful will then offer it to their own contractors thereby reducing their demand for either outside services or logs produced independently (Girvan 2013a). This further reduces the opportunity to build alternative business models around the development of longer-term markets for either timber or contracting services that do not rely on working with a large licensee.

Offsetting the reduction in domestic demand has been an increase in export demand, but accessing the export market is not straightforward as exporters first have to obtain an export permit which depends on a complex set of tests which may require an applicant to obtain permission from prospective domestic purchasers before exporting. Furthermore, one still needs to acquire an opportunity to harvest timber.

What, then, has been the net effect of these changes on the harvesting sector on the coast? What does the current landscape look like and what are the implications for the sector going forward? In the next section, we address this question through assessing the current business environment.

Assessing the Current State of the Industry

To answer this question, a short survey was developed to interview contractors working in coastal BC with a deliberate focus on those who had been operating in the industry for a decade or more.

A copy of the questionnaire can be found in Appendix 2 of this report. A total of nine contractors were surveyed, representing 3.2 million cubic metres (m^3) of harvest. Many of the contractors interviewed were the current owners of multigenerational, family-run businesses, some of which spanned four generations. The average duration that these families had been involved in their businesses was 44 years, while the owners themselves had worked in the industry for an average of 39 years.

The average annual harvest level for each business was just under 350,000 m^3. Collectively, the total payroll of these businesses was $69 million and the sum of the total assets of their businesses was $97 million.

Contractors were asked about the main business challenges they were facing; a series of questions assessed the degree of autonomy they had over decisions affecting their businesses, including negotiating over prices, and the relative importance of different factors that could influence the ongoing operations or growth of their businesses in the future.

There was a high degree of commonality in the responses across most contractors. The main problem they identified was inability to reinvest in both their capital assets (i.e., their machinery) and their workforce. Most firms were finding it difficult to attract or retain workers, especially with the prospect of better returns working in other resource industries (e.g. oil and gas) elsewhere in BC or Western Canada.

In discussions about how the business environment had changed during the past five years, all of the contractors expressed that changes in industry structure have limited their options in terms of the number of potential clients and, consequently, reduced their bargaining power. They asserted that a smaller number of companies was in control of a larger share of the total allowable harvest volume and also accounted for a larger proportion of the total manufacturing capacity. Only one respondent reported that they retained the ability to command a long-term competitive rate for their services; this individual appeared to be in a favourable position based on

his geographic location and history of operations and resulting ability to negotiate harvesting arrangements with multiple tenure holders. We also asked about their ability to negotiate rates by asking who decided the prices they received for their services on a 7-point scale, with their client (1) or themselves (7). The median response was 2 and average 2.75.[17]

In terms of the expanded timber sales program, although many had experience and had been successful in competing for timber sales, none of them saw developing a long-term business around the program. There were several reasons, where uncertainty was a key one—this included uncertainty around the sales being offered, especially within the timber sheds within which contractors most commonly worked; the ability to compete in those sales especially where values were heavily influenced by the export market.

Most, but not all, indicated that their overall returns have diminished in the past five years, and were below what was required to sustain the business long term. While reduced overall harvest volumes had some impact, respondents also noted continued downward pressure on rates that did not allow them to generate returns required to reinvest in their equipment and employees.

In terms of business prospects, participants were asked what factors would influence their growth or staying in the business and whether they intended to stay in business (including potential succession plans).

With respect to current factors affecting business prospects, there was a high degree of consensus: Most noted that the current rates are insufficient to justify investing in new equipment or to even sustain the business into the future. All of the respondents indicated that while they were still maintaining their equipment, they were not reinvesting capital in their businesses at the level they thought necessary to sustain operations going forward. Several of the respondents noted that they were running machines well past their usual life span, with the expectation at some point that this would no longer become sustainable as the equipment started to breakdown.

Most [respondents] noted that the current rates are insufficient to justify investing in new equipment or to even sustain the business into the future.

These answers were consistent with recent articles examining the state of the contracting sector in BC; both McNeill (2013) in the Interior and Girvan (2013a) on the coast found a similar environment, where rates were too low to sustain investment; firms were finding it difficult to retain employees; and firm owners were thinking about exiting the sector. Similar sets of issues have also been raised in Interior, where contractors have stated that following consolidation (that happened in both regions) rates were reduced over the past five years and contractors have had no success in renegotiating them even as prospects improve and capacity constraints start to emerge, (McNeill 2013).

Answers were less consistent in terms of whether or not the respondents planned to stay in business.[18] While several intended to continue their operations, others were in the process of transition, while still others were looking to exit or indicated that if the environment did not change soon they expected to no longer be operating in the next few years.

We also asked contractors several questions about their contribution to the local economies. On average, they estimated just under 95 per cent of their workers came from the local community; and they purchased just over 75 per cent of their supplies from those same communities. We also asked in what other ways they contributed to their communities. All of the contractors we interviewed with one exception who did not live in the community were engaged with local civic institutions in a number of different ways. These ways included membership on local chambers of commerce, providing pro bono work, engaging in local fund raising for recreation centres, participating in initiatives around addressing local homelessness to salmon restoration efforts, among others.

In summary, the data show that there has been overall contraction within the forest sector on the BC coast, with employment, income, income and consumption tax revenues, harvesting taxes and fees, contribution to GDP and the value of exports all falling over the past decade. In many rural communities, what economic activity has remained are those jobs tied most closely to harvesting. At this point, though, as we start to see some recovery in markets, and potentially improved prospects (recovering US, housing

[17] *Question 13 in the questionnaire in Appendix 2*

[18] *Anecdotally, there have been a large number of bankruptcies among harvesting contractors on the BC coast in recent years, more so than the historical average, and many of which involved operators that had been in the business for a number of years (Girvan 2013b).*

markets, supported by development of overseas markets in the past few years), the contracting sector itself is depleted. During the past five years, contracting firms have disinvested in both their physical and human capital, with the result that their capacity to operate is expected to diminish over the coming years.

It is possible that increased demand for contracting services, resulting from growing demand for forest products due to the recovery of the global economy, could raise rates for contractors on the coast. This could restore profitability to the remaining contracting firms; however, two problems remain: Concentration of power among a few forest tenure holders and loss of local expertise among contractors as existing ones exit the sector.

The first of these problems stems from the fact that the current market conditions for contracting services has become far less competitive due to consolidation and concentration. The smaller number of tenure holders with large, long-term timber rights exert considerable control over contractor rates. Thus, they are able to maintain low contracting rates below those that may prevail under more competitive conditions. Therefore, even if end product prices do recover, there is no assurance that this will result in improved rates for contractors.

The latter problem occurs when multi-generational knowledge of harvesting practices is lost as family-run firms are forced to close their doors. Knowledge about specific local harvesting conditions, practices, operating procedures and equipment configuration are critical to successful and safe harvesting operations. If the pool of available contractors is reduced to those who are able to operate at the lowest cost, the quality of knowledge, safety and harvesting practices may deteriorate. Furthermore, if rates are not competitive, new firms will be reluctant to enter the business, and overall capacity within the sector will shrink, as equipment wears out, firms exit, and neither are replaced. Ultimately this will affect the downstream sector and their ability to generate economic activity and the associated economic benefits as well.

...if rates are not competitive, new firms will be reluctant to enter the business, and overall capacity within the sector will shrink...

Limitations of this Analysis

Due to changes in the structure of the Census (i.e., cancellation of the long form), data quality is compromised and Statistics Canada no longer publishes data for smaller Census areas (e.g. Tahsis, Port Alice, Gold River). Incidentally, these communities also showed the greatest dependence on the forest sector in 2001 and 2006. Thus, starting in 2011, we are no longer able to determine the economic profiles of these smaller communities. Indeed it would be impossible to recreate the analysis performed by Horne 2009 with the 2011 data by which we could assess current forest dependency for various communities and forest districts in the province.

Data for capital investment and repair expenditures are only available at the provincial level, not at the Census Division or Subdivision level, which constrains our ability to identify trends in these variables over time at more useful scales. Information about the economic structure (e.g. number of businesses) is available for Census Divisions, but only at the NAICS two-digit level (i.e., agriculture, forestry, fishing and hunting are grouped). Bankruptcy and insolvency data is also only available at the provincial level and the two-digit NAICS industry level. Thus, we are unable to confirm, using statistical data, the degree to which consolidation, reported during interviews, has shaped investment and the number of businesses in the forestry and logging sector. While the number of manufacturing establishments using logs and total capacity are available for mills in the coast region, by forest district, this information is collected by the Ministry and therefore it cannot be directly linked to Statistics Canada data. The Ministry does not survey logging establishments.

Finally, the NAIC system itself goes through periodic reclassification that can change the scope of what is covered (see Appendix 1 for current definitions). A recent example of this was the 2007 reclassification, in which truck drivers working in the forest industry (i.e. log-hauling) were reassigned from forestry and logging activities to the transportation sector. There are no publicly available estimates as to the magnitude of this change(although interviews with some of the contractors estimated that this would account for 1 in 10 workers associated with logging activities). Finally there have been other changes too in the industry that could have implications for how statistics are reported. As an example some government employees working for BCTS would be carrying out forestry activities and it is unclear as to how they are currently categorized (i.e. as public administrative employees or forest industry employees).

The Broader Picture

We started the report by examining the role of the harvesting sector in the forest industry and its importance to the local and regional economies. It is also important to the provincial economy; and business prospects are improving. The Conference Board of Canada expects profits in the wood products industry to double in 2013 to $808 million, driven by a recovery in the US housing market and increased demand from China (Ai 2013). Profits could rise further to $1.2 billion by 2017 (Ai 2013). Since more than half of the nation's softwood lumber is produced in BC (Constantineau 2013), the effect of this growth on the provincial economy could be significant. The question becomes whether or not the BC coast and indeed the broader BC forest industry will be able to take advantage of this opportunity.

This is especially acute for the forest industry on the BC coast, which has seen significant changes in the sector, including industry structure, product mix, and harvest levels. Overall return to the Crowns from the forest resource where government revenues from the resource have been substantially diminished, and currently are less than 10% of what they were just six years ago, and the gap between what theoretically could be harvested and what can be harvested is growing.

Despite the overall drop in economic activity, however, the industry—especially those sectors centered around forestry and logging activities—still plays an important role in local communities outside of urban areas throughout the BC coastal region. Not only are the jobs well-paying, but they also have strong ripple effects—spurring employment and income elsewhere in the local economy. Even through restructuring and job loss, many of these jobs still remain and stay in those communities. Part of it is because harvesting by its nature is localized—people have to go to the forest to secure the resource. But part of it too is that many of these businesses have strong local links because of the nature of their operations. Not only do these businesses benefit from residing within these communities—which provide amenities, services, and homes—so too do the communities benefit as well. They benefit not only from the economic activity generated by these businesses, but also in how they contribute to the civic institutions within the community.

The health of these businesses, the sector, these communities and the benefits they generate for the BC economy are all bound together. These rural resource regions still drive BC's economy; forest product exports account for a third of all exports; and the expertise developed around the resource-based industry has provided the skills and knowledge that other industries—such as those developing new power generation facilities—have ben able to utilize. Forestry and logging still offer well-paying employment, and offer sustainable long-term employment opportunities-especially important in rural areas more reliant on resource extractive industries. There is also an important local dimension to these industries—as they tend to be smaller and more invested and involved in the local communities, especially for those multi-generational businesses that are seeking ways to continue operating, and their contribution goes beyond simply just the economic benefits they provide.

The *Revitalization Act* was meant to spur reinvestment in the forest industry; for a number of reasons—some policy-related, some market-related—that investment did not happen. One of the unanticipated outcomes from those changes is that the contracting sector has not been able to sustain the investment required to maintain its productive capacity. The risk becomes that at a certain level disinvestment in businesses will reach critical points, in which businesses exit, employment drops further, and communities struggling to maintain services find they no longer have the revenues, leading to a reduction in services that makes it more difficult to attract new firms or employees, thereby exacerbating further decline in rural communities (Feser and Sweeney 1999). The question we face now is whether we are at that point on the BC coast; and the broader consequences of what will happen if we lose what we have taken for granted—the physical but also human capital embedded in the harvesting sector that has sustained the BC forest industry for generations. Although the emphasis in recent years on policy development has been around developing more value-added activities around forestry, and adopting new technologies, we have to recognize that value still starts in the woods—and without the capability to continue to produce fibre safely, cost effectively, and in a way that maximizes value to the end users—we will not be able to achieve those goals. How we address those issues and what happens in the contracting sector is part of a broader issue of how we will generate value from the forest resource for the benefit of British Columbians in the future.

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Appendix 1

NAICS Definitions (Statistics Canada)

113 Forestry and Logging

This subsector comprises establishments primarily engaged in growing and harvesting timber on a long production cycle (of ten years or more). Long production cycles use different production processes than short production cycles, which require more horticultural interventions prior to harvest, resulting in processes more similar to those found in the Crop Production subsector. Consequently, Christmas tree production and other production involving production cycles of less than ten years, are classified to the Crop Production subsector.

Industries in this subsector specialize in different stages of the production cycle. Reforestation requires production of seedlings in specialized nurseries. Timber production requires natural forests or suitable areas of land that are available for a long duration. The maturation time for timber depends upon the species of tree, the climatic conditions of the region, and the intended purpose of the timber. The harvesting of timber, except when done on an extremely small scale, requires specialized machinery unique to the industry. The gathering of forest products, such as gums, barks, balsam needles and Spanish moss, are also included in this subsector.

115310 Support Activities for Forestry

Cruising timber, Forest fire fighting services, Log hauling in the bush (i.e., within the logging limits), Pest control services, forestry, Reforestation services, Timber cruising, Timber valuation

321 Wood Product Manufacturing

This subsector comprises establishments primarily engaged in manufacturing products from wood. There are three industry groups in this subsector, comprising establishments engaged in sawing logs into lumber and similar products, or preserving these products; making products that improve the natural characteristics of wood, by making veneers, plywood, reconstituted wood panel products or engineered wood assemblies; and making a diverse range of wood products, such as millwork.

322 Paper Manufacturing

This subsector comprises establishments primarily engaged in manufacturing pulp, paper and paper products. The manufacture of pulp involves separating the cellulose fibres from other impurities in wood, used paper or other fibre sources. The manufacture of paper involves matting these fibres into a sheet. Converted paper products are produced from paper and other materials by various cutting and shaping techniques.

Appendix 2

Survey Questions

Business Description

1. How many years have you owned your business? _____ year(s)
2. How many years have you worked in forestry operations (silviculture/logging/road construction/trucking)? _____ year(s)
3. How many generations of forest workers (within your family) have preceded you? (indicate 0 if none): _____ generations

Local Impact

4. How many of your employees come from the local community?
5. How much of your supplies/purchases are spent locally?
6. Are you involved in your community? (public or school administration, volunteering, club, association etc.)

_____

Business Operations

7. Excluding yourself, how many employees do you have?
   Full time employees _____ wages paid?_____
8. On average, how much work do you accomplish every year? (circle the applicable unit)

   Volume of wood harvested: _____m^3 or tonnes
   Kilometers of forest roads built:_____km or tonnes
   Volume of wood transported: _____m^3 or tonnes
   Weight of wood transported: _____tonnes

   Other (please specify): _____

9. Please indicate the approximate market value of the assets of your forestry business? (machinery, vehicles, buildings, etc.) $ _____
10. Please indicate the approximate annual gross sales for all of your businesses divided by each activity (forestry or other):

    Harvesting (cutting, forwarding, delimbing etc.): $ _____
    Transportation/trucking: $ _____
    Number of employees involved in transportation/trucking_____
    Forest road building: $ _____
    Silviculture: $ _____
    Other forestry activities (please specify): $ _____
    Revenues from sources other than forestry (i.e. restaurant business): $ _____

11. Approximately what percentage of gross sales does your principal client represent (i.e. forest product company)? _____%
12. With how many clients do you normally deal with during a typical year? _____ clients

Business Environment

13. How much management autonomy (influence/control) do you have regarding the following (elements) dimensions concerning your business. Indicate your choice by

circling a number in the following scales:

1 indicates the client has total control of the decision to 7 indicates your business has total control of the decision?							
The price of your services ($/m^3, $/ha, $/tonne etc)							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides
Choosing your employees							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides
Work conditions of your employees							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides
The type of contracts to be accomplished							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides
The way in which the work needs to be executed							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides
The equipment, tools and technology to be used to accomplish the work							
My client entirely decides	**1**	**2**	**3**	**4**	**5**	**6**	**7** My business entirely decides

14. How has your business environment changed over the past five years? 10 years?

15. What are your biggest business challenges?

16. On average, has your profit margin varied during the last 5 years?

    It remained stable
    It went down;
    It increased
    Please indicate the approximate percentage: _____%

17. What is the ideal number of employees for your business: _____ employees

    In the future, do you see hiring employees with more formal training? i.e., foresters, forest technologists, mechanic?
    Yes ☐
    No ☐

18. What is the ideal sales figure for your business: $ _____

19. For your business, obtaining capital to maintain the development of your company is (please circle your choice):

Extremely difficult	*Very difficult*	*Difficult*	*Neutral*	*Easy*	*Very easy*	*Extremely easy*

Looking Ahead

20. Do you expect to be working in the field of forest operations (including silviculture, logging, road construction, trucking) in 5 years from now?

    Yes, as leader of my business
    Yes, but as an employee of a business
    No, I'm expecting to retire
    No, I am planning to retrain for another sector
    No, other reasons (please specify):
    _____
    _____

21. Please indicate the importance of the following points that might hinder the development i.e. growth, of your business by selecting a number on the following scale:

Not important at all	*Somewhat important*	*Important*	*Very important*	*Extremely important*

	1	2	3	4	5
a		Inability to find qualified employees			
b		Too many local regulations regarding forestry			
c		Client has too much power			
d		Future of forest harvesting is uncertain			
e		Environmental laws are too restricting			
f		Length of contracts are too short			
g		Risks associated to new investments			
h		Workplace regulations too restricting			

22. Please indicate the importance of the following financial elements that might hinder the maintenance or expansion of your business by selecting a number on the following scale:

	Not important at all 1	*Somewhat important* 2	*Important* 3	*Very important* 4	*Extremely important* 5
a		Costs of operations are going up (fuel etc.)			
b		Costs of insurance too high			
c		Costs related to workers compensation too high			
d		Costs of equipment too high			
e		Costs for workforce too high			
f		Costs for social benefits too high			
g		Costs for training forestry workers too high			
h		Difficult to find financing			
i		Too much competition for the available contracts			
j		Price received for the services offered			
k		Revenues generated by the business is insufficient			

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