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British Columbia Regions

Economic Zoning for Diverse Forest Values

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SYNTHESIS PAPER: SP 05-04

March 2006

Synthesis Paper: 05-04

British Columbia Regions: Economic Zoning for Diverse Forest Values

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Prepared for:



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1. Introduction

The wood processing sector in British Columbia is widely distributed across every region of the province. The current network of sawmills, pulp and paper mills and other facilities evolved through an extended development period beginning on the coast in the early part of the last century. The impetus was an abundant, quality timber supply from publicly owned forest lands. The industry expansion was promoted and shaped by conscious government policy and regulatory framework. Pursuit of the public policy objective rested on the view that locating processing facilities near to the harvest area is a competitive advantage. That is, an economic condition (i.e. comparative advantage) was the foundation for attainment of the government's regional economic development priorities.

In the early part of this decade, in response to a number of factors including increasing global competition, changing public values with regard to provincial forest management, and the long simmering trade dispute with the United States, the provincial industry entered a sustained period of declining returns and profitability. The natural consequence of this instability was disinvestment in production, mill closings and an inability to adopt new techniques and technologies. In an attempt to restore confidence and profitability, the provincial government responded with policy changes that included disassembling the policy framework that had for the better part of 50 years linked together communities and the forest industry. It became increasingly reluctant to have companies operate manufacturing facilities in specific communities as a condition for owning harvest rights to Crown timber, primarily due to profitability problems within industry, particularly on the coast. In other words, it was recognized that regional comparative advantage no longer supported the government's regional economic development policy instruments.

Wood manufacturing in BC was founded on one main competitive advantage – access to an inexpensive, quality timber supply. That advantage is no longer as significant as it once was: the quality declined (although it is still an advantage in many regions) and costs increased just as new processes, sources of supply and substitution effects raised the level of competition in key product markets. The industry itself matured and by taking advantage of labour-saving technologies, improved transportation infrastructure and economies of scale needed to compete with offshore competitors began reducing its footprint in local communities. Government steps to remove restrictive forest policies that were preserving a manufacturing status quo no longer considered viable, contributed to the inevitable round of mill closures, downsizings and rationalizations we still see occurring on the coast and more recently, in the interior. They also raised questions about what the future might look like now that companies were allowed to respond more openly to market forces. Presumably, an openly competitive wood manufacturing sector will either rationalize its operations in regions with comparative advantages or move their facilities and timber to locations where returns can be maximized.

It is a central premise of this paper that the wood manufacturing sector can regain its competitiveness by adapting to the economic and forestry strengths and weaknesses of its individual regions, but only if it is enabled by changes in provincial forest management policies and assisted through the adoption of regional (or zonal) economic development strategies. The overall approach is unchanged from the earlier policy framework that attained its objectives consistent with the forest industry's comparative advantage; however, now that the character of BC's advantage relative to its competitor has changed, the way in which this policy is framed requires changing. This would involve government reforming how it values and manages timber, including property rights and forest stewardship, such that regions are encouraged to pursue economic development efforts that are aligned with their own unique set of forestry and broader economic

characteristics. In this context, zoning for more diverse forest values is conceived as an economic development program (i.e. where regions are encouraged to competitively develop and diversify their forest sectors) rather than a land use one (i.e. where specific forms of use are mandated for Crown timber). Considerable economic potential, diversity and vitality can be gained by the Crown acting as a rent maximizing resource owner, and sharing that advantage with the regions.

2. A Brief History of Forest Resource Management in BC

In BC, early disposals of public lands granted freehold ownership, including all timber rights, to the buyer. By 1865, land ordinances, by which individuals or companies could acquire timber rights without buying the land, became popular. The Land Act of 1884 formalized land ordinances and made future sales of forestlands difficult. Over the next 94 years, the government permitted timber harvesting on public lands through a number of timber and pulp leases or licence arrangements, initially without charges to encourage development, but later with levies. Through four Royal Commissions (Fulton 1910, Sloan 1945 & 1956, Pearse 1976), statute creation and changes and numerous policy amendments, other controls that defined the management and use of Crown forest lands at the end of the 20th century, including harvest rates and forest practices, were successively established.

Prior to WWII, forest policy focused primarily on forest management and industry development with the assumption that the forest lands would remain in public ownership. As early as 1906 there was a law that required timber cut on public lands to be processed in BC, effectively eliminating offshore millers that would be willing to pay more for logs than BC mills. It was during the post-war forestry boom that provincial objectives for industry development became intertwined with regional economic development. The promotion of industrial forestry and security of wood supply was seen as necessary preconditions for attracting private sector investment. When Tree Farm Licences (TFLs) were introduced in 1958, licensees were required to operate processing facilities in specific locations within or adjacent to the timber. Up until the late 1990s, many TFLs and Forest Licences (FLs) required that the Crown harvest be processed locally or regionally (appurtenancy). Cut control ensured relatively stable periods of harvesting and processing (and thus employment in communities) even during poor market cycles. The stumpage system, where fees were assessed on the assumption that logs would be delivered to the closest mill, favoured local processing even in cases where higher values might have been obtained by rationalizing regional log flows to other, better suited mills.

The net effect of these policies was the creation of a network of manufacturing facilities whose employment and other operating inputs gave impetus to population growth, business development and community wealth to many regions of the province, first on the Coast and then the Interior after WWII. Technological advancements, improvements in utilization and operating efficiencies (and thus increased harvest levels), concentration and vertical integration of companies, and a rapidly expanding housing market in the United States propelled the industry forward. The foundation that made this evolution possible was the low cost and high quality of the timber for which customers around the world were willing to pay a premium. So long as this premium continued to exist, industry could earn a profit while satisfying government's economic development objectives. The benefit of this accrued to the industry workforce, and the communities in which they lived, manifesting in high incomes and growing standards of living.

As early as the late 1970s, concerns were being expressed about the long-term sustainability of the forest economy in the province because harvests were considered too high. In 1979, the overhaul of the Ministry of Forests Act, the Forest Act and the Range Act, happened to coincide with the emergence of new issues, including the future expected “falldown” in the provincial AAC and backlogged reforestation programs. When the recession of the 1980s occurred, forest companies began a process of mechanization and the incorporation of new technologies that increased labour productivity. Even though the number of facilities remained relatively stable, declining employment levels began to affect the economic base of communities across the province.

By the 1990s, the wood manufacturing sector was showing signs of distress. It had evolved through a period of expanding wood supply and benefited from a substantial inventory of high quality, old growth timber. It used these assets to successfully compete in relatively low value commodity product markets. When reduced quality timber supply, increased environmental expectations, persistent regulatory burdens and ongoing trade disputes converged, it became difficult for companies, who were operating in a mature industry, to maintain the competitiveness of their mills. The long-term downtrend in commodity prices that had eroded the premium traditional customers were willing to pay for our wood, and the fact that it was not being used for higher value products, contributed to the low profitability and market difficulties of industry.

3. Recent Trends in the Primary Wood Processing Industry

Sawmill activity data for the Coast and Interior regions during the 15 year period ending in 2004 is presented in Figure 1 and Figure 2. During this time, the number of wood processing facilities in the province has been declining, but output capacity is rising. Differences within sub-sectors were apparent, with the number of sawmills down but capacity up, the number of panel facilities and output capacity up significantly, while pulp mills suffered a decline in both number of facilities and output capacity. Most of the facility losses have been in coastal communities.

Capacity utilization fluctuates year to year in response to market conditions. In the Interior it is much higher than on the Coast, but both regions have seen an upward trend, especially in the last few years. On the Coast, capacity utilization dropped markedly from 1994 to 1998, but has been increasing each year since 2001.

The lumber recovery factor (LRF) is increasing over time, again especially in the Interior. The lumber recovery factor for the Coast is lower partly because of species differences and the more diverse range of lumber products manufactured on the Coast as compared to the Interior.

The declining number of mills, increasing capacities and increasing efficiencies are signs of a maturing industry and by themselves do not represent a threat to the manufacturing base. It is the financial, marketing and competitive forces underlying this change that may be of more concern. The long-term future price of the industry’s most important products, lumber and pulp, is expected to be lower than the average historical price, implying a secular decline in real prices (Roberts et al. 2005). External market obstructions arising from the loss of the Japanese hemlock market, a large share of the European market base and the ongoing US softwood lumber dispute are exacerbated by internal obstructions such as environmental campaigns against forest companies (Pearse 2001). The arrival of low cost competitors in the southern US, South America and Asia, as well as a highly competitive European sawmill sector pose challenges that industry

must address. The current cost and price squeeze leads to poor industry profits, low returns on capital and a drag on capital investment. Between 1998 and 2003, BC ranked in the bottom half of world regions for return on capital employed, with BC pulp producers notably lagging because of the relatively small size and advanced age of their facilities (Roberts et al. 2005). As long as return on capital remains below the cost of capital, the industry will be discouraged from making new investment, a key ingredient to the industry's future profitability.

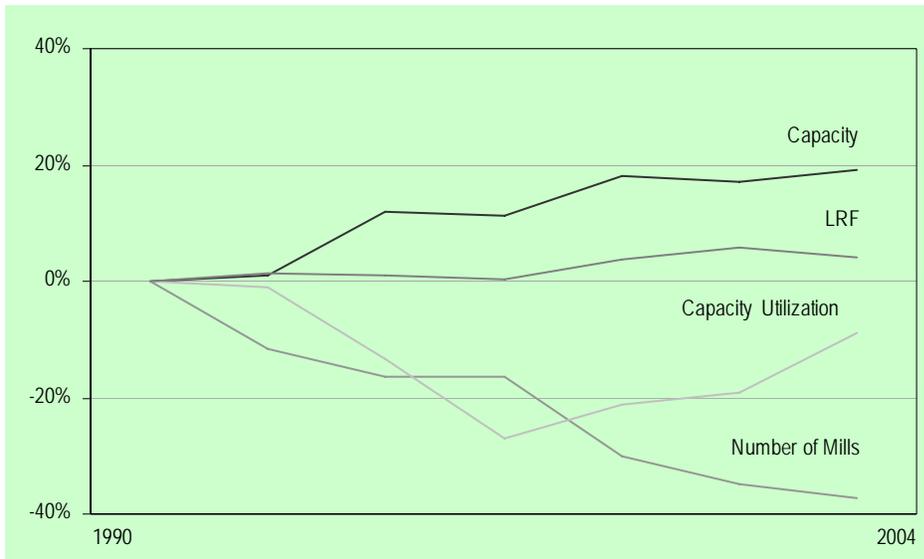


Figure 1: Percent Change in Sawmill Activities, Coastal Industry, 1990-2004
Source: Ministry of Forests

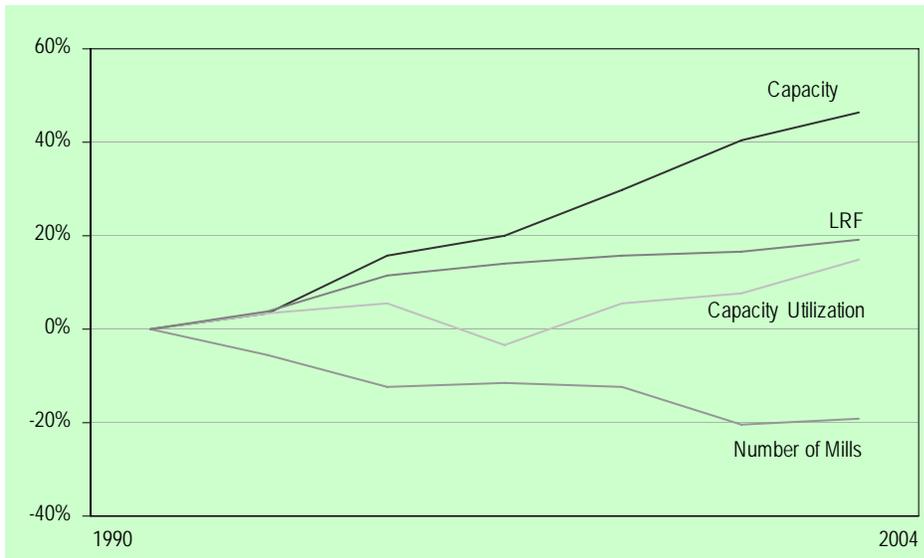


Figure 2: Percent Change in Sawmill Activities, Interior Industry, 1990-2004
Source: Ministry of Forests

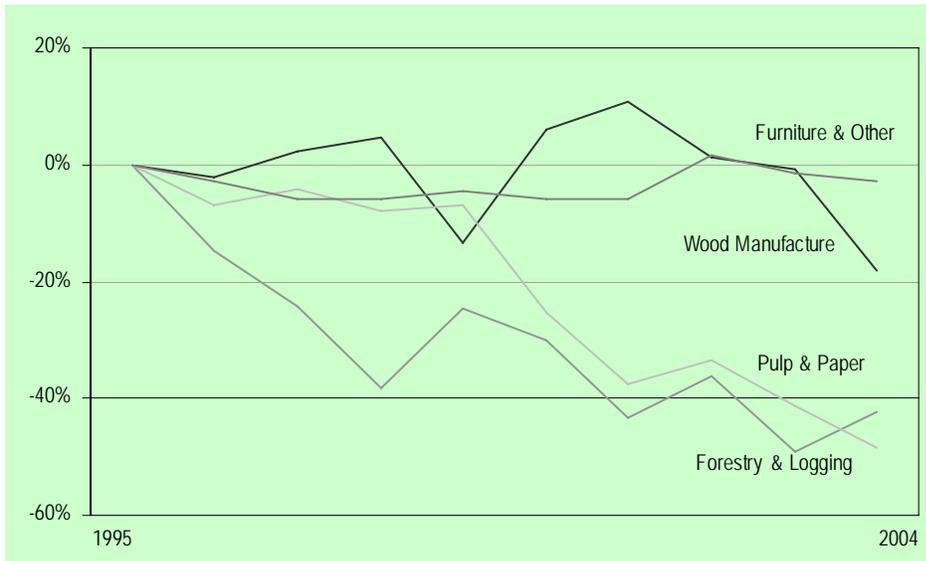


Figure 3: Percent Change in Labour Force, Coastal Region, 1995-2004
Source: Statistics Canada

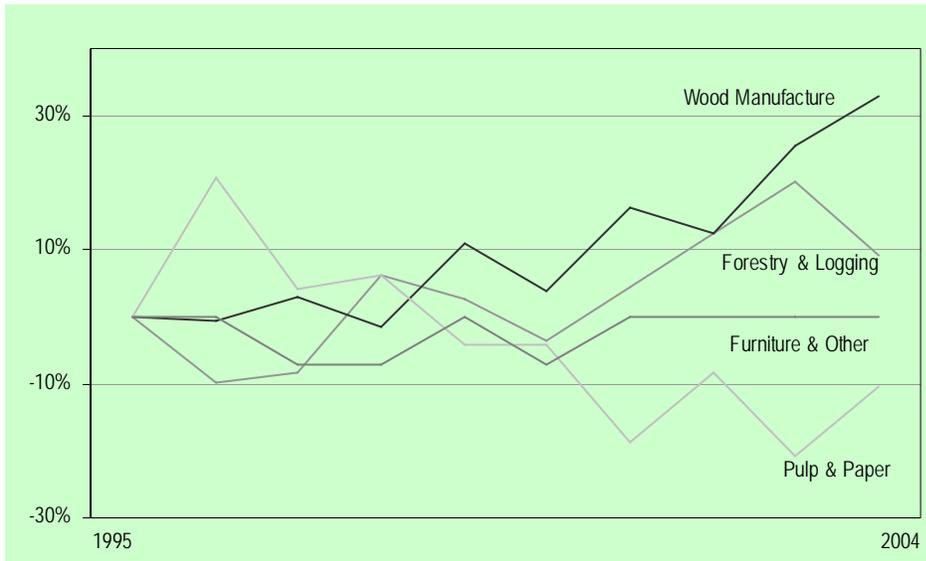


Figure 4: Percent Change in Labour Force, Interior Region, 1995-2004
Source: Statistics Canada

The concentration of manufacturing capacity in order to gain economies of scale in commodity lumber production is a manifestation of profitability concerns by millers. The share of production now enjoyed by the top five lumber, panel and pulp producers is the highest it has been in recent history as the number of large forest companies shrink due to mergers and acquisitions. Driving consolidation of manufacturing assets is the search for efficiencies and profits that can be attained without a sacrifice in market position. The primary response to industry's current problems is to seek out new areas of cost advantage in existing

markets as an alternative to new business models, products and markets. The easy entry, difficult exit nature of wood manufacturing, especially in smaller, rural communities where the low opportunity cost of labour encourages government to support the ongoing operation of the industry's more marginal facilities, has contributed to this problem.

While the recent government initiative to diversify forest tenure holdings and move to market based stumpage system would appear to favour forest land holders, the shrinking number of log buyers (i.e. mills) means that market power remains with mills, and their vested interest in maintaining a low cost source of input material.

4. The Government's Response to Changing Industry Conditions

The provincial Liberal government was sworn into office on June 5, 2000, with an ambitious mandate for policy change. In forestry, their "New Era" campaign document contained a 12-point plan designed to restore competitiveness to the sector (Hoberg and Paulsen 2004). The other three forces driving the policy reform agenda included budget cuts and the associated core review, the softwood lumber trade dispute with the United States, and forces of nature that were affecting forest health.

Out of the Core Services Review emerged the Defined Forest Area Management initiative, which was designed to transfer a significant amount of responsibility, and the costs that go along with fulfilling those responsibilities, from government to licensees. Beginning with the Fall 2002 legislative session, government has introduced more than 19 Bills amending or creating new forestry legislation. Significant legislative changes were made in land use planning, tenure pricing and administration, timber sales and pricing and First Nations participation. The Working Forest, designed to maintain access to Crown land and define opportunities for investment, was created and Forest Renewal BC disbanded, and replaced by a new infrastructure called the Forest Investment Program.¹

Many of the policies considered anathema to industry profitability were either repealed (i.e. appurtenancy) or substantively amended (forest practices administration, cut control, utilization standards, licence transfers, timber pricing, fee in lieu of manufacture).

Under the **Forestry Revitalization Act of 2003**, about 20 per cent of timber held by major licensees was to be taken back, with provision for compensation, and re-allocated to create opportunities for new entrants to the forest sector, including small business, value-added entrepreneurs, community forests, woodlots and First Nations. BC Timber Sales (BCTS) was created to transform the Small Business Forest Enterprise Program (SBFEP or small business program) and thus became the largest licensee in the province, with the added power of setting benchmarks for costs and timber pricing. The intent here was to create competitive timber markets, by redistributing quota, and market value pricing (through the Market Pricing System).

Mountain Pine Beetle (MPB) management programs are having a ripple effect on these and other forest policy areas. The salvage rights being given by government to combat the problem are charging the legal minimum stumpage rate of 25 cents per cubic metre, clearly below the market value of the wood and a

¹ Many of the "New Era" legislative changes never did proceed as "orders in council" and thus were never implemented, primarily because of lack of support from the forest industry.

potential barrier to further timber pricing reform and a resolution of the softwood war with the Americans.² The province has established and funded Beetle Action Coalitions in the Cariboo and Omineca regions for the purposes of assisting communities with beetle impacts.

In addition to forest policy changes, the government has embarked upon several economic development initiatives. The new Ministry of Economic Development (MED) is tasked with enhancing the investment climate, marketing and promoting BC, enhancing economic development and hosting the 2010 Olympics Secretariat. MED collaborates with other economic development initiatives, including the BC Heartlands Economic Strategy, the BC Competition Council, the BC Progress Board, Leading Edge BC and numerous sector-specific strategies. Considerable public funds have been poured into the provinces regional development initiatives, initially the Northern Development Initiative Trust, and subsequently similar trusts for the Southern Interior and North Island-Coast. These boards are tasked with making strategic investments in forestry, pine beetle recovery, transportation, tourism, mining, energy, 2010 Winter Olympic and Paralympic Games opportunities, small business and economic development.

The BC Heartlands Economic Strategy for forestry is known as the Forestry Revitalization Plan. While most of the initiatives in the Plan consist of the forest policy changes discussed above, other programs designed to assist worker transition and the marketing of BC's forest products have been instituted. For example, government has allocated funds to the Forestry Innovation Investment program and established numerous industry partnerships to promote BC forest practices and support market development in key markets around the world.

The relationship between the province and First Nations in forestry development is also changing. Due to landmark BC Court of Appeal rulings involving the Haida and Taku, the provincial government has been obligated to properly consult with and accommodate the interests of First Nations concerning development within their traditional territories. As a result, many First Nations have signed interim measures agreements on forestry-related matters, which are meant to provide a greater degree of stability for investment and development while treaty negotiations continue. Some of these agreements have spurred joint venture and training opportunities between forest companies and First Nations (BC Treaty Commission).

Ongoing changes in provincial forest and economic development policy are inevitable. Many of the initiatives mentioned in the foregoing are under examination at time of writing and key events such as the US-Canada softwood discussions will undoubtedly result in further adjustments.

² At time of writing, the Ministry of Forests was considering amending log grades in the Interior to more accurately reflect the quality of beetle-attacked wood.

5. The Challenge for Manufacturing Development in the Regions

Forestry employment and economic dependency trends in the regions essentially reflect conditions unfolding within industry. Mill closures, employment losses and declining community incomes attributable to forestry on the Coast stand out in contrast to new mill investments and stable or rising forestry employment and economic dependencies in the Interior, particularly in the north to expedite MPB salvage. This suggests that the differences that exist between the Coast and the Interior industries have distinct causal factors and therefore different challenges for regional development. However, many of the positive indicators for Interior regions noted above are directly related to the MPB uplift which may be temporarily masking long-term industry trends.

The MPB may be delaying the emergence of problems in the Interior now besetting the Coast by flooding the industry with inexpensive, under-valued wood. Harvest uplifts have sparked the economies of some Interior regions of the province, particularly the Cariboo and Central Interior, but the winding down of temporary uplifts and increasing competition in key markets like the US may force capacity reductions. A recent study by the Canadian Forest Service has shown that once the beetle harvesting programs wind down early next decade, the AACs, forestry employment and forestry incomes in three out of the four TSAs with existing uplifts will decline (Patriquin et al. 2005). The BC Progress Board is a bit more sanguine. In its most recent report it speculates that tremendous uplifts in the AAC in the short-term will lead to a boom but it will be followed by economic, employment and ecological busts unless new uses of beetle-kill wood are found and promoted along with economic and ecological diversification (BC Progress Board 2005). The Wood Products Industry Advisory Committee of The BC Competition Council (led by the province's largest forest companies) recently admitted that "there is significant uncertainty about what scale of manufacturing ... will be able to survive the post-beetle era" and that huge amounts of capital and innovations in new forest tenures will be required (BC Competition Council 2006).

It is too early to gauge the effects of the New Era forestry and economic development policies, as they now stand, on the wood products manufacturing sector. If the past is any indicator, they may end up reinforcing the status quo. Government and industry efforts in the 1990s to diversify or recapture markets, develop new technologies and product innovations and expand the value-added wood manufacturing sector met with only limited success. Government programs such as the Canada-BC Partnership Agreement on Forest Resource Development (FRDA I & II), Forest Renewal Plan, Forest Renewal BC and Jobs and Timber Accord may have facilitated more value-added activity, but the industry as a whole is still largely commodity-oriented and as market-dependent on a single customer (i.e. the US) as it ever has been in recent times. The Coastal industry has made some adjustments to recover but is still considered in "crisis" and highly susceptible to ongoing changes in the volatile pulp and newsprint markets, in which it has a diminishing competitive footing. Value-added production and shipment volumes have experienced strong growth in recent years, but this sector appears to be growing more strongly in the least forest-dependent regions of the province where the primary wood processing sector is a diminishing player (Wilson et al. 2001).

6. A Different Vantage Point for the Diversification of Wood Manufacturing

The macroeconomic fundamentals of BC's regions have influenced economic development not just in forestry but in other economic base sectors. The economy of the Northeast is as different from that of the Thompson-Okanagan as it is from the Southwest. The same can be said for the other regions and indeed individual communities. The attribute most critical to this development path has been the availability of natural resources, whether they be timber, minerals, agriculture or energy. But as resource industries mature, its future growth depends not so much on primary processing activities, but on the use of technology, infrastructure, and human capital inputs, etc. to add value to the natural resources. These factors are what drive cluster development³ and encourage companies to move their production up the value chain. This is why a value-added wood manufacturer halfway around the world can afford to import BC cedar then ship it back to this province in finished form to be sold by Home Depot.

The ability to take those factors into account in building a stronger forest manufacturing sector is hampered by current forest policy, which is centralized and does not allow regions to adapt to their unique set of natural, human and built resources. This is because the resource in question, timber, is still managed to deliver in-kind rents to the province, if not to individual regions as was the case prior to 2001. This inhibits decentralized decision making, which would result in a diversified industry development approaches that emphasize regional strengths.

The value of timber, like most commercially occurring resources (such as energy and metals), includes a "resource rent". Given competitive log markets, the rent for standing trees is the maximum price a logger would be willing to pay the timber owner. The value of the rent, termed stumpage as the timber is valued "at the stump", will rise and fall with changing costs and market prices. However, unlike a manufacturing process, where free entry of firms will bring prices down to a competitive return on capital, the value of resource rent will persist over the long term, potentially enriching its resource owner.

A challenge for the Crown in managing the province's forest is to recognize the incentives and consequences to economic development in how it chooses to manage the economic rent from the timber harvest. By definition, the stumpage belongs to the resource owner. Neither the logger nor the saw miller requires it to harvest or manufacture the timber. The Crown has generally elected to distribute a share of its resource rent to industry by not selling the timber to the highest bidder, if that would involve the log being exported, either out of the region or the province. While this may appear to be a financial gain to industry and to stimulate employment, it has the effect in private investment decisions of undervaluing the timber. This leads to less than optimal economic harvesting practices, too much capacity invested in wood processing, and a distorted mix of capital, labour and wood in the industry. In the BC economy generally, and its regions in particular, where the forest industry has such a dominating influence, this misallocation of scarce economic resources lowers the province's income potential. Chronic problems with excess processing capacity, idle facilities, backlogged silviculture obligations and overall community instability in the North Coast region of the province is a case in point.

³ The term cluster refers to a physical grouping of companies and supporting organizations that function within a network characterized by elements of cooperation and competition. Clusters are often informal and are not precisely defined. They can be categorized by geography, end product or service, organizational structure or as "virtual". The term was popularized by Michael Porter in his seminal works on national competitiveness (see Porter 1990).

Amidst the current forest reform lie at least two fundamental forest policies that remain essentially intact, the effective curb on log exports and a tenure system that does not promote long-term strategic forest stewardship. These policies will continue to influence the future growth path of our wood manufacturing industry even in the event it returns to profitability.

If regions were allowed to assume the viewpoint of a resource owner, they would want to maximize resource rents and determine how they could be applied to improve their own capacity for wealth creation. Rather than continuing to participate in rent distribution, they would target a value focused forest economy that created new rents. In the short term, this would involve acknowledging the growing gap between the value domestic mills can extract from the timber, relative both to the delivered log cost and its international competitors, and finding ways to increase value. It would address chronic problems such as the fact that valuable wood is still left in the forest as waste, or converted into sawdust and lower valued products in manufacturing. It would address the economic dislocation of entire regions that for one reason or another have never functioned properly under the current policy regime. These rents are now entirely lost to our economy.

The new focus for regional economic development would involve managing the land base to maximize value, and flow back a share of the revenue to the communities rather than managing for in-kind payments (i.e. local employment) which are dissipating in any case as our industry wilts under global competitive pressures. Specific areas of forest reform would include continued pursuit of viable log markets, fair timber pricing, long-term investment in the forest resource and commercialization of non-timber forest resource activity that took better advantage of local opportunities. The increased rents create the opportunity to reinvest into productive uses, thereby raising GDP and incomes above current levels. It also has the opportunity to return these monies to the regions where the productive uses would occur. Such an approach would obviously require the consent of the provincial government, as well as cooperation by industry, but equally important would be leadership at the local political level, which would have to be encouraged to look beyond the status quo (e.g. keep the local mill going at all costs) toward a longer-term view of industrial development.

7. The Competitive Position of BC's Regions

If the timber resource were managed to return the best value to the resource owner (i.e. province), the wood manufacturing sector might look different than it does today, especially if it were able to adapt to regional competitive advantages (and disadvantages). An overview of the competitive positions of the province's eight development regions, as they relate to forestry, is presented on the following pages. The inherent short-comings in attempting to summarize the workings of regional economies in such a short space is fully recognized. The purpose of the overview is to draw some high-level distinctions between regions, not to present a rigorous or detailed account of cluster and competitiveness factors that is clearly beyond the resources and scope of this report.

A map of the development regions is shown in Figure 5. Regional forestry indicators and trends that accompany the analysis can be found in the appendix.

- | | | | |
|---------------------|----------------------|----------------|--------------|
| 1. Vancouver Island | 3. Thompson-Okanagan | 5. Cariboo | 7. Nechako |
| 2. Southwest | 4. Kootenays | 6. North Coast | 8. Northeast |

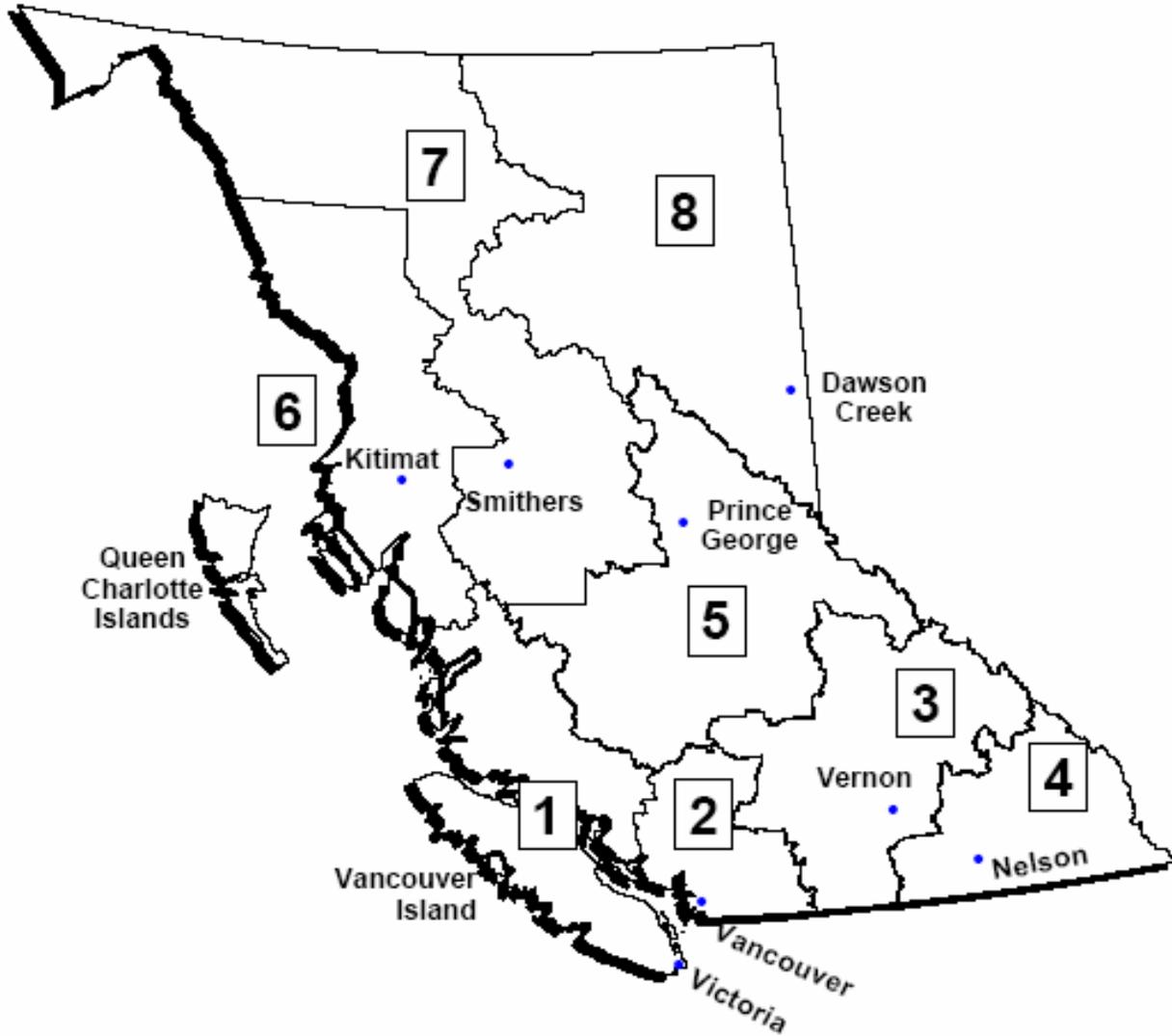


Figure 5: BC's Eight Development Regions

SOUTHWEST REGION

The Southwest is unique among the development regions of the province because it is primarily an urban area and economy. It is home to approximately half of British Columbia's population and its centre for commerce, trade and finance. Population growth is higher here than elsewhere in the province and the labour force is well educated, well skilled and diverse. The Southwest tends to be a major beneficiary of inter-provincial immigration, drawing in new residents from other regions, mostly among the younger cohort. It is essentially a service-based economy with a critical mass of company headquarters, industry associations, educational and research institutions, port and transportation infrastructure and cultural activity. It is a Canadian and North American gateway to Asia.

The role forestry plays in the Southwest economy is a study in contrasts. Over the last 15 years, it has lost more mills, capacity and employment than any other region. Surrounding rural areas like the Lower Sunshine Coast, Squamish/Whistler and the Fraser Canyon have lost all of their large-scale lumber producers and are down to one pulp mill. Only a handful of municipalities in the Greater Vancouver and Fraser Valley regional districts have primary facilities left. One reason for this loss of capacity is the opportunity cost of operating on land with rising property values, and higher and better uses.

This notwithstanding, forestry still constitutes a fair share of the Southwest's economic base. Logging and harvesting is a major employer in the surrounding regional districts and there are large manufacturing clusters in Delta, Surrey, Ridge-Meadows, Mission and Abbotsford. The majority of value-added wood manufacturers are based here because of the presence of cluster-like conditions, including the accessibility of key inputs such as raw materials (including the Vancouver log market), skilled labour, management, marketing expertise, research capacity, capital and business services. Many of the industries supporting the primary industry are located here as well.

In addition to its status as the leading value-added region of the province, the Southwest region is best positioned for the technology inputs needed for advanced wood manufacturing including information technologies, biotechnology, advanced manufacturing systems such as process control, energy efficiency technology, new product innovation, and machinery and equipment manufacture.

VANCOUVER ISLAND

The Vancouver Island Coast Region managed to retain a good share of its processing facilities and capacity over the last 10 years, but employment has dropped off considerably, in the order of 30 percent. Despite consistent talk of AAC falldowns, the total harvest has remained virtually unchanged, partly due to activity on private land, which is a significant contributor to the region's fibre supply. The economic dependence on forestry has also declined, though mostly in larger centres such as Victoria and Nanaimo. Port Hardy, Campbell River, Port Alberni and Cowichan Valley are among the most forest dependent areas in the province and are susceptible to future industry downsizing, particularly in pulp and paper.

Industry consolidation on the Island in recent years has been rapid with locally-based mid-sized companies like Doman displaced by much larger, integrated international firms.

The two major problems for forestry in this region are that it bears one of the highest delivered log costs in the world and its processing facilities are old, inefficient and not well adapted to process the second growth timber profile. The loss of market position in Japan, Europe and the US has hit companies on the Island particularly hard.

The primary advantage is its supply of unique, high-valued species such as red cedar, yellow cedar and high-grade clear Douglas fir, which are priced high in commodity form and provide excellent opportunities for secondary manufacturing processes. These species contain the most valuable clear and near-clear lumber produced in North America. Vancouver Island and coastal BC Douglas fir-logs have a strength advantage when compared to other Pacific Northwest species and Douglas-fir grown in Washington and Oregon. Douglas fir veneers peeled from Vancouver Island and coastal B.C. demand a strong market preference and advantage in structural strength applications.

The presence of the Vancouver log market, access to the coast-wide harvest because of low cost water borne log transport, available labour supply and reasonable land costs in comparison to the Lower Mainland are advantages for manufacturers but there are transportation constraints as certain value-added shipments must be trucked or railed to Vancouver for furtherance, thereby resulting in additional costs.

Pearse (2001) indicated that, based on the experience of Washington and Oregon, mills designed to efficiently process second growth timber consume between 650,000 to 800,000 cubic metres per year. He went on to say that between 11 and 14 mills would be needed on Vancouver Island, most of which would have to be newly constructed.

Remaining old growth timber could be processed by some of the existing mills or through the expansion of smaller, more flexible and more customer focused "custom cutting" sawmills, or exported if higher priced markets are available. The more successful value-added manufacturers in the region are the companies focused on extracting additional product value from the region's unique species.

Vancouver Island has the most productive forest land in the province, but like the Southwest this land is being subjected to development pressure. Some private lands that used to be managed for timber are gradually being converted to other uses, mostly residential and commercial real estate.

The Vancouver Island Coast region is best positioned for developing new internationally competitive primary facilities with dry kiln, lumber sorting and grading lines to meet market demand in a variety of markets. There is good potential in specialty primary mills either for taking advantage of second-growth timber or coastal old growth valued by specialty markets.

NORTH COAST

Nowhere in the province are the ill effects of a forest industry in crisis more evident than on the North Coast. High logging costs, low quality fibre, poor market conditions, uncertainty on the land base and a chronically weak manufacturing base demonstrate how ineffectual public policy can be in dealing with unique regional conditions. Numerous mills closures have contributed to collapsing harvest and employment levels due primarily to the troubles of the former Skeena Cellulose and its corporate predecessors. Over 50% of the AAC has been undercut in recent years. The forest economy of some sub-regions, particularly the Hazelton and Kitwanga, have virtually collapsed. If not for West Fraser Timber, the industry could scarcely be said to exist here. Yet, the region is exporting logs and the acquisition of the Prince Rupert pulp mill by Sun Wave Forest Products may bring new capital and activity to the region.

The problems on the North Coast are not just of recent vintage. There is a long line of chronically underperforming operations from Columbia Cellulose, through to Westar, Repap and finally Skeena

Cellulose, often with some level of direct government assistance. In 2000, the former Chief Forester, Wes Cheston, asked the government for the enabling legislation to create a special economic zone for the entire region. Many of Cheston's recommendations mirrored those contained in the 2001 Pearse report for the Coast, stating that, given current forest policy, harvesting in many areas of the North Coast was simply not economically viable (Cheston 2000). The subsequent collapse shows that it was not viable, at least at prices domestic mills were willing and able to pay for the logs.

The problem for the North Coast is that, unlike the Southwest and Vancouver Island, there has been very little activity occurring in other economic base industries that could offset the employment and income losses from the forest sector. In fact, the other mainstay of many coastal communities, the commercial fishery, itself collapsed in the 1990s when federal buy back programs were instituted. Some improvement is on the horizon as the tourism, minerals, energy, pipeline and transportation sectors are either rebounding or showing promise. One of the most significant competitive advantages of this region is its proximity to Asian markets, which has been leveraged in recent years through the commitment of CN Rail and the ongoing development of port facilities in Prince Rupert.

The First Nations population component on the North Coast is the highest of any region of the province and they have strong historical ties to the forest industry. In the Nass sub-region, the Nis'ga have self government and opportunities for the commercial development of many resources, including timber. The Haida are engaged in litigation over the transfer of forest tenures between licensees on the Queen Charlotte Islands.

Continued expansion of Prince Rupert as a forest products port would benefit all manufacturers in northern BC by providing alternative transportation options and access to emerging markets in Asia. This area also has exceptional potential in non-timber forest products. First Nations ownership and participation in forest land stewardship is inevitable and will have to be embraced in the future.

NECHAKO

The forest industry in the Nechako benefits from resource characteristics enjoyed by the Interior forest region of which it is a part. An excellent timber profile and relatively flat topography (in BC terms) have encouraged an efficient and dynamic sawmilling sector. The forest stands are generally of uniform size and high in the saw log component.

Lumber recovery factors are high and the costs of delivered logs low. In contrast to the Coast, mills here are much larger and productive. The typical mill is modern, well capitalized and built for SPF dimension output. The average mill capacity is approximately 600,000 bf/day and top tier mills are double that size. They provide an example of how efficient, low-cost and profitable sawmills have evolved in the BC Interior. Companies have made continuous improvements utilizing state of the art technology, access to a large secure log supply and access to the huge US dimensional lumber market. Facilities continue to evolve to achieve optimum performance and maximum profits. In 2004, Canfor's Houston sawmill became the world's largest, with a capacity of 600 million board feet annually

Forest health issues are the major concern in the Nechako as they are in the majority of the Interior. The MPB has been on the notice board since the early 1980s but had become a primary management concern only in the late 1990s when it was evident the infestation was expanding exponentially. The AACs in the region increased 30% between 2000 and 2005 in response to beetle wood management strategies. However, the amount of timber that can be harvested is now restricted by milling capacities.

At one time, government tried to encourage companies in adjoining forest districts to transfer some of their harvesting capacity into heavily attacked beetle stands. This strategy option became impractical once the beetle had spread into most other Interior operating areas. An oversupply of sawlogs (and wood chips) is now anticipated to continue for the rest of this decade, unless new manufacturing capacity is constructed, very cold winter weather halts the beetles, or market conditions and restrictions into the USA are removed.

Some recent timber sales have resulted in new plant announcements in the Vanderhoof area. In the summer of 2005, Ainsworth Lumber announced it would spend \$400 million on two oriented strand board plants, one in Vanderhoof, after securing two large beetle salvage rights licences. These should be viewed as a solution to an immediate problem, but whether this new capacity is a feature of the region's longer term manufacturing base remains to be proven.

Despite having access to large volumes of low cost lumber, the secondary wood processing sector in the Nechako is remarkably small, mostly small-scale independent mills producing low value-added products. Despite the quality of the timber supply, few high value-added products exist. In the future, major opportunities for what to do with the many millions of cubic metres of salvageable timber that have not been harvested will exist. Wood waste will be a concern and current discussion of pellet production for European energy markets may lead to new investment in this area.

The Nechako enjoys relatively good rail and road connections east to US markets and west to offshore ones. Any expansion of Prince Rupert or Kitimat port infrastructure stands to benefit the region. However, the population and the economic base of the Nechako are small. There is no community larger than 5,000 and considerable volumes of wood, and other economic activity, tend to gravitate towards Prince George.

Primary wood manufacturing is a strength of the Nechako region, but current and future uses of beetle-kill wood would be a research priority. An examination of the potential conversion of lands to mixed use where appropriate (e.g. grazing and forest) may help to identify options for increasing land and resource values.⁴ The after-effects of the beetle infestation will create opportunities for reforestation and the rehabilitation of the affected areas.

CARIBOO

The Cariboo region is the heart of the province's Interior forest industry and the largest lumber producing region in Canada. Like the Nechako, the most important commercial tree species are spruce, pine and fir (SPF). The uplifts in the harvest levels to combat the MPB problem have given the Cariboo the largest harvest in the province. Delivered log costs are reasonable by international standards and the wood quality excellent at this point, though this will decline as the attacked pine ages.

The forest processing base is comprised of high volume, modern mills and the presence of the largest, most profitable BC lumber producers. There is a diversified mix of products in lumber, pulp and panel products, though still high volume/low profit margin commodity orientation. According to a recent report, the sawmill sector here is among the most profitable in the world (PriceWaterhouseCoopers 2006). The plant closures that have befallen other regions of the province have not occurred here. Although the number of facilities

⁴ At time of writing, the Omineca Beetle Action Coalition was engaged in numerous studies aimed at reducing the economic impacts of the beetle in north central BC.

was down slightly during the 10 year period ending in 2005, output capacity in the sawmill and panel sectors increased 30% and 50%, respectively. Employment has increased in the range of 25% and now accounts for close to one in five jobs in the regional labour force.

The regional economic dependency on forestry is high and rising. The increased harvesting and processing activity associated with beetle wood will likely push up dependency over the next 10 years. The Cariboo also has the largest forest-dependent communities in the province. Prince George, Williams Lake and Quesnel all have large processing sectors. Transportation infrastructure is good, especially in Prince George where there are intersecting highway and rail networks to the industry's major markets. As a service centre for northern BC, Prince George has the size and capacity to draw in and keep young and mobile workforce participants. The University of Northern BC has considerably enhanced the region's capacity for research and development in the resource sectors. Economic development agencies are reasonably well organized and are cooperating on forest issues under the auspices of the Cariboo and Omineca Beetle Action Coalitions. The Cariboo is one of the three provincial regions (the others being Vancouver Island and the Thompson-Okanagan) where there would be local organizational capacity for devising and implementing regional forestry development strategies.

The secondary processing sector is small but growing. The region is perhaps best positioned to respond to the opportunities in the Ready to Assemble housing market. The after-effects of the beetle infestation will create opportunities for reforestation and the rehabilitation of the effected areas.

As the centre of primary wood manufacturing in the province, the Cariboo appears best suited as a region of excellence in primary production, a region where new investigations in sawmilling technologies and uses of beetle-kill wood would assist with product and market diversification. Biofuels and cogeneration could be commercially viable alternative uses of beetle wood. This region is also perhaps best suited for engineered wood products that require primary inputs such as lumber, plywood and OSB.

THOMPSON OKANAGAN

The Thompson-Okanagan has a diversified timber profile because of its mix of Interior SPF stands and Interior wet belt zones in the Shuswap-Columbia and North Thompson sub-regions. These regions produce a diversity of high quality species that are valued by the primary and value-added sectors. The beetle problem is nowhere near the scale of the Interior because of the mixed species forests, but the Merritt TSA was given an uplift of its AAC of one million cubic metres in 2005. However, the future AAC of the Merritt TSA will not change significantly, unlike the Cariboo and Nechako regions, where the future falldowns will be significant.

Forestry and wood processing represent one of the larger sectors in the economic base of the Thompson-Okanagan (see appendix). The industry consists of a diversified mix of primary processing facilities, lumber, panels and pulp and paper, as well as a strong collection of secondary wood manufacturing firms undertaking value-added activities. The number of primary processing facilities has remained stable while capacity has climbed slightly in the sawmill and pulp sectors. Panel capacity has increased close to 50% since 1995.

Employment growth has been strong and the economic dependencies are rising, but overall, the region is not forestry dependent and is experiencing strong population growth and an economic expansion in non-forestry sectors. In the Okanagan Valley, the most recent labour force trends show a decline in conventional harvesting and primary milling employment, but significant increases in engineered wood production. There

are sizeable niche sectors in log homes, EWP, mobile homes and furniture. The top 30 value-added wood manufacturers in the region employ over 2,000 workers.

There are some exceptions to the generally positive trends in the region. Smaller peripheral areas such as Lumby and the North Thompson Valley have borne the brunt of mills closures and along with Princeton, remain vulnerable.

The main strengths of the region are its strong, growing communities, notably Kamloops, Kelowna, Penticton and Vernon, young, skilled work force and attractive quality of life, which makes it easier to attract entrepreneurs, management personnel and families. Growth pressures have resulted in a scarcity of industrial land within the boundaries of the larger communities though this has not deterred value-added manufacturers from setting up shop. Outside of Kamloops and the Shuswap corridor, rail infrastructure is not as good as the Cariboo or the Southwest, but highway connections to Alberta, the Southwest BC and the US are good. The region has a growing education and research base with University of BC – Okanagan and Thompson Rivers University.

Environmental issues are front and centre here, with water scarcity and the recognized susceptibility of the Okanagan Valley to air pollution leading the way. Water is a scarce commodity in the Okanagan and the airshed susceptible to air pollution. New industrial enterprises that require water as a major input or where air and water disposal is an issue are likely to meet with public resistance.

The Thompson Okanagan is similar to the Lower Mainland in that its core of entrepreneurs are a source of management and capital for value-added manufacture.

KOOTENAYS

Like the Thompson-Okanagan, the Kootenays share aspects of the Interior and Coastal industries. At roughly 4.4 million cubic metres, its AAC is one of the smallest in the province. The timber profile is diversified with high value species as well as SPF and ranks from favourable to excellent in terms of quality, with the exception of the cedar-hemlock forests where high levels of decay create challenges.

The number of facilities has remained stable in recent years, but sawmill capacity has climbed 15% since 1995 and panel capacity almost doubled. Pulp production at the two mills has also grown. The industry is small scale and fragmented, although it retains a relatively inflexible commodity focus.

Employment has increased, as have economic dependencies, but the communities here are not considered highly vulnerable. The region is home to a number of family-run, primary breakdown facilities that have successfully avoided direct competition with the large, low-cost primary producers by finding and exploiting niche markets. There is a small, but flexible value-added sector. The Kootenays have developed expertise in niche areas including community forest operations and designed wood products such as furniture.

Given the close proximity to Washington State, wood waste disposal is not a problem as energy companies and panel facilities make for a ready market for chips and sawdust. The exception to this situation is hemlock which continues to present problems for operators.

The Kootenay region's transportation infrastructure is not advantageous, but there is good proximity to regional markets in Spokane and Calgary.

Like the North Coast, the Kootenays could be a model incubator for small-scale value-added, cooperative harvesting and manufacturing networks and the development of niche markets.

NORTHEAST

The northeast is the energy hub of the province providing more than one third of hydro-electric generating capacity and almost all of its oil and gas production. Outside of the Lower Mainland, this region of the province is the least focused on the forest industry, as Chetwynd would be the only community that could be classified as being dependent on forestry.

The AAC of less than five million cubic metres is stable and there are large volumes of under-utilized aspen, although this imbalance may change with the new Canfor/Louisiana Pacific OSB plant in Fort St. John. With its purchase of Slocan, Canfor has become the dominant licensee in the region. The value-added sector is the smallest among the regions.

The pace of development in the South Peace oil & gas and coal fields could be classified as frantic. Investment is running in the billions of dollars and the economic base of key centres such as Fort St. John Fort Nelson, Dawson Creek and Tumbler Ridge is clearly focused on energy and mining. This, and proximity to the booming Alberta oil patch, means labour is in very short supply, and the availability of skilled trades practically zero. Business supply and services are hard to come by. The former advantage the region enjoyed because of low rates of unionization is no longer a factor due to labour shortages.

The advantages of this region are its long-term timber supply, relatively modern plants, proximity to Asian markets and overall good business climate, which, even in the midst of poor industry economics, has managed to attract new investments such as the OSB plant.

8. Proposed Economic Zoning

BC's development regions are diverse in their forest resources as well as their economic and community characteristics. The current "one size fits all" approach to forest and economic development policy does not recognize these differences and the potential for creating new sources of economic wealth. Forest policy in particular makes it difficult for regions either to explore their unique advantages or take steps to correct structural weaknesses impeding economic development.

When we refer to economic zoning for diverse forest values, we are not speaking in terms of a top-down land and resource management planning, where, for example, specific geographic zones of the province are given a unique mix of forest policies. Such a command-control approach to forestry development would be highly complex administratively and most likely impractical were it to become a factor in trade discussions. Moreover, this approach is already used at the provincial level and, as noted by Pearse, is primarily responsible for driving the coastal industry into its current retrenched state.

Zoning would work, however, if it were to focus not on regional forest policies but on regional economic development strategies that targeted competitiveness issues. Rather than developing another command-control program or agency, the zoning would encourage regions to approach forestry development from

the strategic perspective of the land owner who wished to be more responsive to market forces and in the context of competitive advantage in other economic sectors.

The old formula of foregoing economic rent to create an incentive for regional economic development is losing its power to influence. Rather than trying to shape forestry and wood manufacturing through centralized planning, the new focus would be on creating a positive development cycle that favours innovation and investment and not just on protecting the status quo, which is unsustainable in any case.

A proposed zoning for BC's development regions is shown in Table 1. Each of the four zones would emphasize the different challenges and issues facing forestry, wood manufacturing and economic development.

In the first zone (Cariboo, Nechako, Northeast), the major Interior regions would pursue excellence in primary manufacturing. The industry is already competitive here and has been making significant investments in new facilities to process beetle wood. The value-added sector here is small. Communities are highly forest-dependent (except in the Northeast) and have some capacity for zoning implementation through the various beetle coalitions. Research on the future use of Crown lands now being devastated by the MPB is required. Conventional silvicultural treatments may end up directing the next timber crop to a similar fate in the future. An investigation of alternatives might identify other uses of the land that can create value sooner. A closer examination of new mill models and the intended use of facilities once the MPB uplifts are over are also priorities. The Interior, because of its wood supply and costs, may be the best location for investigating and testing new forms of manufacturing. For example, European sawmills, which are more flexible than existing Interior mills and can produce commodity or specialty orders of lumber in variable sizes and lengths, have had great success remaining market focused and aligning themselves to regional supply conditions.

Vancouver Island, the second zone, would emphasize species values and try to take better advantage of the region's valuable timber profile. This would include creating more market access to, and getting higher value from, old growth timber in areas where the transition to commercially viable second growth forests is already underway. On the Coast, the conversion of mills to handle second growth will create inefficiencies for handling old growth timber. Rather than wasting this resource, it should be priced at world levels and directed to companies best able to extract maximum values. Encouraging better supply chain integration for linking primary, secondary and value-added processes would also be a priority.

Table 1: BC's Proposed Economic Zones

Zone	Regions	Theme	Strategic Focus
1	Cariboo, Nechako, Northeast	Excellence in primary manufacture	Process and product technologies
	Planning Priorities	<ul style="list-style-type: none"> • Uses of beetle wood. • Exploration of new sawmilling models. • Adaptive reuse of current capital investments. 	<ul style="list-style-type: none"> • Silviculture treatments. • Exploration of non-timber Crown land uses. • Uses of under-utilized hardwoods
2	Vancouver Island Coast	Maximizing species values	Optimizing use of the timber resource
	Planning Priorities	<ul style="list-style-type: none"> • Separate old growth and second-growth strategies. • New processing technologies and market development for key species. 	<ul style="list-style-type: none"> • Supply chain management - optimizing fibre flow to extract high species value. • Log exports (especially from private land)
3	Southwest, Thompson-Okanagan	Value-added clustering	Building the value-added sector
	Planning Priorities	<ul style="list-style-type: none"> • Build economic infrastructure. • Accessible technology. • Adaptable human resources. 	<ul style="list-style-type: none"> • Available capital. • Management expertise. • Market and trade research
4	North Coast, Kootenays	Innovations in Community & Cooperative Development	Communities and land
	Planning Priorities	<ul style="list-style-type: none"> • Direct community participation in management and use of the Crown land base (native and municipal). • Log exports to produce cash flow and encourage stewardship. 	<ul style="list-style-type: none"> • Multiple use tenures to encourage exploration of other commercial values. • Certifications: forest and product quality. • Best practices of community forests.

In the Southwest and the Thompson-Okanagan, the strategy and zone focus would be squarely on the value-added sector itself. The loss of primary capacity in the Southwest will continue and while the Thompson-Okanagan will fare better, it is very well positioned to take advantage of value-added activities. The vast majority of value-added enterprises exist in these two regions. The strategy would emphasize cluster-like conditions by building more economic infrastructure. There would be little, if any, attempt to integrate with the primary sector. If it were truly competitive, the value-added sector would source raw material supplies from around the world and not be dependent on internal timber or lumber.

In our final zone, which would include the Kootenays and Northeast, the strategy would not be on facilities, or species, or the value-added sector; it would be on communities and land. This is where efforts to get communities to behave and function as resource owners offers the best opportunity for long-term success. On the North Coast, First Nations would be an important component of this mix, while in the Kootenays, past experience in cooperative and community approaches to forest and resource management is a great asset. An analysis of existing Community Forest Licences and their contribution to innovation and economic diversification is a good first step. It is believed the size of the licences are too small to achieve higher order

goals such as diversification in local manufacturing. A study of the approaches and motivations to licence management may indicate barriers and opportunities for increased community participation in Crown land use. The exploration of “joint management” and “co-management” arrangements involving various types of collaborative management by governments and local communities could also be undertaken.

It is important to remember that the economic zones suggested above are not meant to be exclusive. We are not implying, for example, that value-added facilities should not be encouraged in all regions or that community forests would only be undertaken in the Kootenays and the North Coast. What the economic zones do emphasize is the basis for strategically planning for economic development in the wood manufacturing sector, making better use of comparative advantages and also correcting structural weaknesses where they are impeding development.

9. Enabling Actions by Government

We see three main priorities for the government to enable economic zoning: 1) a provincial forest strategy, 2) further policy reform, and 3) continued research on the value-added industry and regional development models.

- 1) The initial step would be the preparation of a provincial forest strategy that goes well beyond the objectives outlined in the New Era documents. The province needs to project a vision for future forestry in this province and provide the leadership, policy direction and programming to ensure it happens. There are considerable vested interests that are now protected by the current policy framework and any interruption to the status quo will result in resistance from major companies and some communities. The strategy would articulate the vision, establish achievable objectives and benchmarks, and delineate initiatives to be undertaken in five main areas, forest policy, business climate, investment attraction, infrastructure and human resources.
- 2) The second priority is continued reform of forest policy that enables regions and communities to create wealth. At present this is simply not possible – the mechanisms for regional control over the exploitation of the land and forest resource do not exist. If they did, the province could begin the process of maximizing rents and encouraging more competitive business activities. Areas where further research might prove insightful include:
 - Identification of available rents. Estimate of how much resource rent is available, its present distribution between the land owner, the harvesting and manufacturing industries and the effect of current policies on rent management.
 - Formulate methods for returning rent to regions in a manner that encourages sustainable capital investment. Other resource sectors already practise this to some degree- for example, the Fair Share and various road rehabilitation programs in the Northeast are meant to return oil and gas rents to the region for investment in municipal and transportation infrastructure.
 - Create viable log markets with log prices reflecting international competitive conditions. One objective of current policy reform was the creation of log markets but it is to be limited to domestic bidders and so far has yet to be realized. In fact, the opposite could be argued as the industry consolidates and wood flows are controlled by fewer and fewer companies. Various strategies could be examined that introduce international competition for logs.

- Investigate the feasibility of multiple use forest tenures and how they are managed. There are many other values on the land base that are neither managed nor tenured, even though they have commercial potential. Also, the multiple tenures that now exist, for example range and backcountry recreation, are managed by separate agencies with no mandate and little interest in achieving the best mix of tenured uses as a land owner would do. An analysis of the feasibility of multiple use forestry tenures that will encourage innovation and the valuation of a wide range of goods and services from the forest land base would prove enlightening. The MPB might be used as an example of the how government's one size fits all forest management falls prey to major environmental upheavals. If land had been made available historically for homesteading, agriculture or other commercial uses, the opportunity cost might be higher and options for alternative uses be more varied than they are today. Some coastal areas have diverse forest values and much greater commercial production potential for products like pine mushrooms than is now the case.
- Explore the concept of tradable property rights that will create better conditions for achieving the right balance of goods and services on the land base. Rights to a viewscape would be an example. A resort operator could negotiate view rights with the forest company that is more in line with the opportunity cost of the standing timber. Similarly a goal of carbon sequestration on Crown land may be viable if it were achieved through a profit incentive rather than coercion.
- Property rights to ecosystem services should be identified and clarified. Growing recognition of the linkages between forest cover and water quality, carbon absorption and biodiversity habitat has led policy makers and practitioners to design market mechanisms for capturing those benefits. Further legal development is needed to fill the void in property rights to environmental services.⁵
- Identify incentives to encourage a private sector approach to Crown land ownership. A comparison of the investment approach and priorities of private timber land owners on their lands compared to Crown forest would be informative.

3) Finally, continued study of the value-added sector is required. As noted in this report, production volumes and shipment values are increasing, but since the Canadian Forest Service (CFS) studies of the late 1990s very little is known about the nature of this sector, its relationship to primary wood processing sector, and its competitive strength in domestic and international markets. CFS has, however, recently commissioned new studies that will contribute to a better understanding of these issues.

In most cases, regions are poorly adapted for pursuing economic zoning and further research into how this might be managed is required. The regional trusts in the province (Northern Development Initiative, Southern Interior Development Initiative, North Island – Coast Development Initiative, Columbia Basin Trust, Nechako-Kitimat Development Fund) are primarily grant-making agencies, with limited program evaluation and would not have the mandates or skill sets for regional development. There are a growing number of economic development offices in the province, many of which collaborate on regional initiatives. However, these alliances tend to be informal and of an ad hoc nature. Recent programs from the Ministry of Economic Development to encourage regional alliances (based on the Alberta Alliance model) may hold potential. Research might focus on case analyses of regional development models and an inventory of organizations, management skills and human resources as a way of identifying capacity for (and interest in) advancing wood manufacturing. Despite the importance of forestry to the economic base, many economic development practitioners view it as a sunset industry that is beyond any local influence. A survey of economic development agencies including municipal, regional district,

⁵ For example, see Kumar 2005 and ITTO 2004.

Community Futures and other offices would solicit feedback on how the province could enable more local programming and how well suited local organizations are for implementing such programming.

An investigation of the performance of community forests might also be helpful in understanding where regions need to improve their capacity for maximizing returns from the forest resource. The track record of community forests is mixed but many have managed to succeed in spite of the challenges.

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Appendix – Forestry Indicators in the Regions

Data Sources:

Billed volumes - Ministry of Forests, Forest Revenues Branch, special data request.

Labour Force - Statistics Canada Labour Force Survey, special data request.

Forest Economic Dependency - Horne 2004.

Processing Facilities – Ministry of Forests and Range 2005.

Southwest BC Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	3,765	3,240	2,248
Percentage of Provincial Volume Billed	4.8%	4.1%	2.6%
Average Employed Forestry Labour Force	'95-97	'99-01	'02-04
1000s Workers	32.1	28.5	27.6
% of All Workers	3.0%	2.5%	2.2%
Forestry Economic Dependency *	Trendline	% Change	2001 Median
Change 1991-2001	↓	-9%	14%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbd) f)	31	2,527	21	1,895
Pulp Mills (1000s of tonnes)	3	428	3	462
Paper Mills (1000s of tonnes)	3	428	3	286
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	8	1,241	5	655

* Excludes the GVRD, except for Maple Ridge and Pitt Meadows

Vancouver Island and Coast Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	22,004	21,239	21,742
Percentage of Provincial Volume Billed	28.0%	27.1%	24.7%
Average Employed Forestry Labour Force	'95-97	'99-01	'02-04
1000s Workers	25.2	21.9	17.5
% of All Workers	8.2%	6.8%	5.5%
Economic Dependency	Trendline	% Change	2001 Median
Change 1991-2001	↓	- 41%	12%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbd) f)	18	1,450	16	1,487
Pulp Mills (1000s of tonnes)	8	3,676	7	3,124
Paper Mills (1000s of tonnes)	5	1,906	5	2,123
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	1	84	1	96

North Coast Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	5,784	4,224	1,960
Percentage of Provincial Volume Billed	7.8%	5.4%	2.2%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	-	-	-
% of All Workers	-	-	-
Economic Dependency*	Trendline	% Change	2001 Median
Change 1991-2001	↓	- 20%	21%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbd) f)	10	670	4	286
Pulp Mills (1000s of tonnes)	2	904	1	449
Paper Mills (1000s of tonnes)	1	455	1	457
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	0	0	0	0

* Data has been aggregated for the North Coast and Nechako regions.

Nechako Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	10,869	11,203	14,165
Percentage of Provincial Volume Billed	13.8%	14.3%	16.1%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	-	-	-
% of All Workers	-	-	-
Economic Dependency*	Trendline	% Change	2001 Median
Change 1991-2001	↑	+ 18%	33%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbd) f)	11	1,810	11	2,659
Pulp Mills (1000s of tonnes)	0	0	0	0
Paper Mills (1000s of tonnes)	0	0	0	0
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	1	166	1	80

* Data has been aggregated for the North Coast and Nechako regions.

Cariboo Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	10,869	11,203	14,165
Percentage of Provincial Volume Billed	13.8%	14.3%	16.1%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	14.3	14.0	17.0
% of All Workers	17.3%	17.5%	21.2%
Economic Dependency	Trendline	% Change	2001 Median
Change 1991-2001	↑	+ 3%	32%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbdf)	32	4,202	30	5,444
Pulp Mills (1000s of tonnes)	8	2,236	7	2,076
Paper Mills (1000s of tonnes)	2	273	2	351
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	5	1,166	6	1,741

Thompson-Okanagan Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	9,566	10,539	11,854
Percentage of Provincial Volume Billed	12.2%	13.4%	13.5%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	13.4	16.7	16.3
% of All Workers	6.7%	8.0%	7.5%
Economic Dependency	Trendline	% Change	2001 Median
Change 1991-2001	↑	+ 6%	13%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbdf)	28	2,130	25	2,353
Pulp Mills (1000s of tonnes)	1	426	1	466
Paper Mills (1000s of tonnes)	0	0	0	0
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	9	1,564	10	2,167

Kootenay Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	5,315	6,151	6,940
Percentage of Provincial Volume Billed	6.8%	7.8%	7.9%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	5.1	4.9	6.3
% of All Workers	7.7%	7.0%	9.3%
Economic Dependency	Trendline	% Change	2001 Median
Change 1991-2001	↑	+ 3%	15%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbdf)	16	1,320	15	1,514
Pulp Mills (1000s of tonnes)	2	628	2	681
Paper Mills (1000s of tonnes)	0	0	0	0
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	2	220	2	402

Northeast Region			
Harvest Levels	1995	2000	2005
Billed Volume (1000s cubic metres)	3,834	4,592	4,966
Percentage of Provincial Volume Billed	4.9%	5.9%	5.6%
Average Employed Forestry Labour Force*	'95-97	'99-01	'02-04
1000s Workers	3.2	2.6	2.7
% of All Workers	9.9%	8.2%	8.1%
Economic Dependency	Trendline	% Change	2001 Median
Change 1991-2001	↑	+ 4%	13%

Processing Facilities	1995		2005	
	Number	Output	Number	Output
Lumber Mill (more than 10 Mbdf)	5	624	4	750
Pulp Mills (1000s of tonnes)	1	164	2	424
Paper Mills (1000s of tonnes)	0	0	0	0
Veneer, Plywood, Panel and OSB (M sq. ft 3/8 basis)	1	373	3	1,470